

IDS Bulletin

Transforming Development Knowledge

ARCHIVE COLLECTION

Volume 51 | Number 1A | May 2020

FIFTY YEARS OF RESEARCH ON PASTORALISM AND DEVELOPMENT

Editor Ian Scoones



Contents

Pastoralism and Development: Fifty Years of Dynamic Change

Ian Scoones, Jeremy Lind, Natasha Maru, Michele Nori, Linda Pappagallo, Tahira Shariff, Giulia Simula, Jeremy Swift, Masresha Taye and Palden Tsering

Article first published May 2020, IDSB51.1A

PASTORAL LIVELIHOODS

Access to Food, Dry Season Strategies and Household Size amongst the Bambara of Central Mali

Camilla Toulmin

Article first published July 1986, IDSB17.3

Gender and Livelihoods in Northern Pakistan

Susan Joekes

Article first published January 1995, IDSB26.1

INSTITUTIONS AND COMMON PROPERTY RESOURCE MANAGEMENT

Local Customary Institutions as the Basis for Natural Resource Management Among Boran Pastoralists in Northern Kenya

Jeremy Swift

Article first published October 1991, IDSB22.4

Institutional Change in the Syrian Rangelands

T. Ngaido, F. Shomo and G. Arab

Article first published October 2001, IDSB32.4

CLIMATE CHANGE AND ECOLOGICAL DYNAMICS

Climate Change and the Challenge of Non-equilibrium Thinking

Ian Scoones

Article first published July 2004, IDSB35.3

Pastoralists, Patch Ecology and Perestroika: Understanding Potentials for Change in Mongolia

Robin Mearns

Article first published October 1991, IDSB22.4

FOOD SECURITY, EARLY WARNING, AND LIVELIHOOD VULNERABILITY

Why are Rural People Vulnerable to Famine?

Jeremy Swift

Article first published May 1989, IDSB20.2

Food Security: Let them Eat Information

Margaret Buchanan-Smith, Susanna Davies and Celia Petty

Article first published May 1994, IDSB25.2

PASTORAL MARKETING

Communities, Commodities and Crazy Ideas: Changing Livestock Policies in Africa

Andy Catley, Tim Leyland, Berhanu Admassu, Gavin Thomson, Mtula Otieno and Yacob Aklilu
Article first published June 2005, IDSB36.2

Youth Participation in Smallholder Livestock Production and Marketing

Edna Mutua, Salome Bukachi, Bernard Bett, Benson Estambale and Isaac Nyamongo
Article first published May 2017, IDSB48.3

CONFLICT AND GOVERNANCE

Reconstructing Political Order Among the Somalis: The Historical Record in the South and Centre

David K. Leonard and Mohamed Samantar Article first published January 2013, IDSB44.1

Livestock Raiding Among the Pastoral Turkana of Kenya: Redistribution, Predation and the Links to Famine

Dylan Hendrickson, Robin Mearns and Jeremy Armon
Article first published July 1996, IDSB27.3

Conflict Management for Multiple Resource Users in Pastoralist and Agro-Pastoralist Contexts

Ben Cousins Article first published July 1996, IDSB27.3

This page is intentionally left blank

Pastoralism and Development: Fifty Years of Dynamic Change*†

Ian Scoones,¹ Jeremy Lind,² Natasha Maru,³
Michele Nori,⁴ Linda Pappagallo,⁵ Tahira Shariff,⁶
Giulia Simula,⁷ Jeremy Swift,⁸ Masresha Taye⁹ and
Palden Tsering¹⁰

Abstract This archive *IDS Bulletin* reflects on 50 years of research on pastoralism at IDS. Thirteen articles are introduced around six themes that have characterised IDS-linked research over this period. These are: pastoral livelihoods; institutions and common property resource management; climate change and ecological dynamics; food security, early warning, and livelihood vulnerability; pastoral marketing; and conflict and governance. Across these themes, IDS research has challenged mainstream development thinking and practice, highlighting the importance of mobility and living with uncertainty. This introductory article concludes with some reflections on research gaps and new challenges, including: the effects of climate change; new forms of pastoral mobility and livelihood; increasing patterns of commoditisation and social differentiation; and changing conflict dynamics. Although massively changed over 50 years, and despite repeated proclamations of crisis and collapse, pastoralism remains, we argue, an important, resilient source of livelihood in marginal rangeland areas across the world, from which others can learn.

Keywords: pastoralism, uncertainty, mobility, livelihoods, land and resource use, climate change, food security, livestock marketing.

1 Introduction

This *IDS Bulletin* celebrates 50 years of research on pastoralism at the Institute of Development Studies (IDS). The period starts with the commencement of Jeremy Swift's PhD, a major study of the Tuareg in northern Mali, and ends during the early stages of a major new IDS initiative, the PASTRES (Pastoralism, Uncertainty and Resilience: Global Lessons from the Margins) programme. PASTRES involves six new PhD studies – working in Amdo Tibet, China; Gujarat, western India; southern Ethiopia; northern Kenya; southern Tunisia; and Sardinia, Italy – which all build on the IDS traditions of grounded field research in marginal pastoral areas.

© 2020 The Authors. *IDS Bulletin* © Institute of Development Studies | DOI: 10.19088/1968-2020.111



This is an Open Access article distributed under the terms of the Creative Commons Attribution Non Commercial 4.0 International licence (CC BY-NC), which permits use, distribution and reproduction in any medium, provided the original authors and source are credited, any modifications or adaptations are indicated, and the work is not used for commercial purposes. <http://creativecommons.org/licenses/by-nc/4.0/legalcode>

The *IDS Bulletin* is published by Institute of Development Studies, Library Road, Brighton BN1 9RE, UK
This article is part of *IDS Bulletin* Vol. 51 No. 1A May 2020 'Fifty Years of Research on Pastoralism and Development'.

The authorship of this *IDS Bulletin* introduction reflects this generational span: from those who started their PhDs 50 years ago to those who started only 18 months ago, and a few in-between. What characterises IDS research across this half-century is a commitment to critical engagements with processes of development, informed by sustained field research on a range of themes. Publications range from academic articles to consultancy reports, sometimes the result of sustained interactions with field practice over many years. Across the 50 years, IDS work has attempted to bridge the gap between theory and practice, and to insert the new understanding of pastoralism into development planning. This has involved building a coherent analysis of policies and institutions for pastoral development, and then helping to see the results of that analysis put into practice. A companion bibliography of research conducted by IDS members – both faculty and PhD students – over the years has been published as part of the 50-year celebration (IDS 2020).¹¹ This demonstrates the scope of research undertaken, across many themes and numerous sites and together with multiple partners.

Over time, this has involved major projects and initiatives. These have included the work in Mongolia in the post-socialist period (Policy Alternatives for Livestock Development in Mongolia (PALD), 1991–95; Swift and Mearns 1993);¹² participatory approaches to raise pastoralists' voices in policy and political debates (through the Pastoral Communication Initiative; Brocklesby, Hobley and Scott-Villiers 2010); a research project in Ethiopia, Mali, and Zimbabwe on crop-livestock integration (Scoones and Wolmer 2002); a Food and Agriculture Organization of the United Nations (FAO)-supported project on the political economy of 'pro-poor' livestock policy in the Horn of Africa (Leonard 2004); a review of strategies for resilience in East African pastoral areas (Lind *et al.* 2016); and research under the pastoralism theme of the Future Agricultures Consortium, working in the Greater Horn of Africa,¹³ which hosted the major 'Future of Pastoralism' conference in Addis Ababa in 2011 (Catley, Lind and Scoones 2013), updating earlier conferences that surveyed the field (e.g. Monod 1975; Galaty *et al.* 1981). In addition, there have been ongoing practice-based consultancy engagements with field projects, notably with Oxfam which had a substantial and influential field programme in dryland pastoral areas of Africa for many years. These have combined with policy reform efforts, including those supported by the UK's aid programme, FAO, and the World Bank, where IDS work helped to contribute to the framing of interventions.

This archive *IDS Bulletin* collects together 13 articles on pastoralism published in the *IDS Bulletin* between 1986 and 2017. The articles address six overlapping themes: pastoral livelihoods; institutions and common property resource management; climate change and ecological dynamics; food security, early warning, and livelihood vulnerability; pastoral marketing; and conflict and governance. The articles are inevitably highly selective, and do not reflect the full scope

of IDS work (see the bibliography – IDS 2020); all contributions are from experiences outside the global North, and so reflect the historically narrow focus of ‘development studies’. But, as research by IDS and others shows, including the current PASTRES programme, these themes are relevant much more widely, whether in the Mediterranean, the mountainous and hilly areas of Europe, or the Arctic.

The authors of the articles in this *IDS Bulletin* are either IDS members (current and former) or research collaborators. Much work on pastoralism at IDS has been inspired by and forged through partnerships, including in many countries across the world where pastoralism is a core livelihood. Partnerships in the UK have been important too, and two institutions deserve mention as contributing to this sustained research effort on pastoralism. One is the International Institute for Environment and Development (IIED) whose Drylands Programme established in 1987 was hugely influential in focusing on natural resource management and land tenure issues, with a major focus on francophone West Africa.¹⁴ The other is the Overseas Development Institute (ODI), which hosted the Pastoral Development Network over 20 years from 1976, with the network papers still representing an important resource for work on pastoralism.¹⁵ Today, two key sources of inspiration for work on pastoralism globally are the journals, *Nomadic Peoples* and *Pastoralism*, both with strong IDS connections.¹⁶

Over the last 50 years, both pastoralism and development have changed massively. In the 1970s, the framing of development focused on modernisation, banishing ‘backward’ ways, and improving production. Debates about pastoral development focused on how to transform pastoralism through settlement, improvement of livestock breeds, fencing rangelands, improving markets, and so on. In often newly independent states, the assertion of government authority, the fixing of borders, and the reduction of conflict were high priorities. Major investments in infrastructure, along with technical assistance on everything from veterinary care to livestock production and marketing, were the stock-in-trade of development projects from this era.

Today, many of these features persist. The political imperative to control the pastoral margins through modernist projects has not gone away. Indeed, with major investments in dryland areas – whether renewable energy projects, protected areas for biodiversity conservation, or large-scale irrigated agriculture initiatives – the transformation of pastoral areas continues, pushed by state plans and private capital. Today, debates about land grabs, corridor developments, and free, prior and informed consent around investment are hot issues across pastoral areas (Lind, Okenwa and Scoones, 2020; Chome *et al.*, 2020).

Yet over this period, pastoralism, as a source of livelihoods centred on livestock production, has changed too. In the 1970s, some of the major references were classic works by colonial anthropologists, which often provided an idealised, romantic view of archaic societies, bound by

tradition, and underpinned by cultures of equality. The exoticisation of pastoral peoples continues in some quarters, promoted by some non-governmental organisations (NGOs) and journalists, but the reality is very different today. Pastoralists are connected to global circuits of capital through diverse markets; they are influenced by state authority and subject to geopolitical influences in often sensitive border areas; and due to land use and environmental change, once traditional practices have had to adapt to new conditions (Catley *et al.* 2013).

Nevertheless, pastoralism remains an important livelihood for many. Covering around 45 per cent of the world's surface area, rangelands are an important environment, and are home to maybe 120 million people (Reid, Fernández-Giménez and Galvin 2014). These are some of the world's poorest and most marginal areas, but also some of the most innovative and enterprising, responding to environmental, market, and governance uncertainties in ways that can offer vital insights elsewhere. Mobility, as a central feature of pastoralism, challenges the standard models derived from settled systems, and so emphasises flexibility, opportunism, and improvisation as responses to uncertainty. Pastoral areas – whether in dryland, montane, or island settings – are not areas that need rescuing from 'backwardness' as the old development narratives suggested, but are often important sites for experimentation and learning; challenging development practices and reframing narratives on everything from environmental change to conflict and governance (Nori and Scoones 2019).

The articles in this *IDS Bulletin*, and the array of literature in the accompanying bibliography (IDS 2020), offer insights across various themes, building on wider debates in development, while carving out new areas specific to pastoral areas. The rest of this introduction profiles the articles in this issue and introduces the themes.

2 Pastoral livelihoods

Pastoralism is defined as a livelihood reliant on livestock – both small and large – for a majority of household income (Swift 1980; see also Krätli and Swift 2014). Pastoralists of course are rarely solely reliant on livestock alone, however, and most pastoral livelihoods are highly diversified. This is essential in often harsh, variable environments, where other income-earning strategies – from trade to natural resource harvesting to agriculture – are important (Krätli *et al.* 2013; Fratkin and Mearns 2003).

The drylands inhabited by most pastoralists are places of high environmental variability, where the nutrients on which livestock depend are widely scattered in time and space as a result of unpredictable patterns of rainfall. Pastoralists who move to take advantage of this variability can feed their animals better than those who do not. Pastoral livelihoods integrate variability into processes of production: use of inputs, breeding, land tenure, marketing strategies, and links with other livelihood systems. Mobility is a production strategy, not just a coping strategy, with important consequences for other variables such as

property rights, institutions, governance, environmental management, and conflict (Krätli 2019, 2008; Krätli and Schareika 2010).

The two articles in this first section are discussions of agro-pastoral systems, one in central Mali (Toulmin, this *IDS Bulletin*) and one in northern Pakistan (Joeques, this *IDS Bulletin*), where interactions between crop and livestock production are additionally important (*cf.* Scoones and Wolmer 2002). The articles offer nuanced accounts of how agricultural and livestock production systems intersect, and how different people compose their livelihoods. Wealth and gender differences are important, indicating an often highly socially differentiated livelihood pattern. In Mali, livelihood strategies in small and large, collective households are compared, with large household size allowing for accumulation of assets – wells and cattle – and improved resilience to climate and other risks. Meanwhile in Pakistan, inequalities within and between households are accentuated through the arrival of external interventions, such as a major highway and a regional integrated rural development project, even if overall poverty is reduced.

Several decades on, more extreme forms of social and economic differentiation are seen across (agro-)pastoral systems. Some pastoralists are able to ‘step up’ towards more commercial pastoral production systems, capitalising on growing often international markets in livestock productions, while others are simply ‘hanging in’, combining limited pastoral production with other activities (Aklilu and Catley 2010; Dorward *et al.* 2009). In many areas, the traditional transhumant pastoral systems no longer operate, or have dramatically transformed, with new forms of mobility emerging (Nori 2019; Turner and Schlecht 2019).

Both articles pick up on strong traditions of IDS research – on livelihoods and gender dynamics, and indeed the intersection between the two. Both articles illustrate attention to the detail of livelihood activities, later labelled as ‘sustainable livelihoods’ approaches (Chambers and Conway 1992; Scoones 1998). Here, a focus on different livelihood resources and how they are mediated by institutions and so deliver differential outcomes is important. Access to livelihood resources, the functioning of institutions and outcomes in relation to both poverty and environmental indicators are highly gendered, with men and women negotiating livelihoods in different ways as much IDS research in pastoral areas and beyond has demonstrated (Leach, Joeques and Green 1995; Kabeer 1994). And perhaps especially in patriarchal pastoral societies, attention to gender dynamics, alongside generational, class, and ethnic difference, becomes vitally important (Hodgson 2000; Joeques and Pointing 1991).

3 Institutions and common property regimes

The next two articles in this *IDS Bulletin* reflect on the operation of common property institutions in managing land and resources, and the challenges they face. They focus on the pastoral rangelands of northern Kenya (Swift, this *IDS Bulletin*) and Syria (Ngaido, Shomo and Arab, this *IDS Bulletin*). Based on results from a pioneering participatory research

project coordinated by Abdi Umar, Swift examines how institutional arrangements allow for effective management of common range resources in northern Kenya. These institutions often take hybrid forms, incorporating both traditional systems of management, as the Boran *deda* system in Isiolo. Ngaïdo and colleagues explain how in the early 2000s such Bedouin pastoral management systems had broken down in Syria through decades of promotion of agriculture in the rangelands, and increased land privatisation. This has resulted in growing feed shortages and major changes in Bedouin production systems.

Both articles draw on scholarship on collective action institutions and common property resource management. This directly challenges the assumptions of the 'tragedy of the commons' narrative, first promoted by Hardin (1968), and subsequently repeated endlessly in debates about rangeland degradation and desertification in pastoral areas. Pastoral rangelands have rarely been free-for-all open access regimes, subject to an inevitable tragedy of overpopulation and overgrazing. On the contrary, numerous empirical studies have shown how access is frequently carefully regulated around bounded communities, with agreed systems for inclusion and exclusion. This research took inspiration from the important work of Ostrom and colleagues (Ostrom 1990) and was central to much IDS work from the late 1980s into the 1990s, including many PhD theses, as the bibliography documents (IDS 2020).

Such detailed empirical studies in different pastoral areas also revealed variations on the ideal-type common property systems, governed by Ostrom's eight rules, which assert the requirements for agreed, stable boundaries of both resource user groups and resource territories. Ecological, social, and political uncertainties necessarily require more complex, hybrid institutions (Mehta *et al.* 1999), with flexible, negotiable, and overlapping boundaries often key features in pastoral systems. These, in turn, emphasise processual dimensions of property regimes, rather than clear, enforceable rules (Cousins 2000).

Pastoral resource management systems are not static, however. Shifts in political economies have equally resulted in increased commoditisation and privatisation of rangeland resources, reducing areas governed by common property regimes, as the article from Syria shows (Ngaïdo *et al.*, this *IDS Bulletin*). Long-term IDS-led work in Mongolia during the 1990s also showed how collective ownership under state socialism transformed into new property regimes under emerging forms of capitalism (Swift and Mearns 1993; Mearns 1996). Meanwhile, research in the rangelands of eastern Africa showed how privatisation of rangelands at a local level has combined with processes of land and green grabbing as external investors appropriate resources (Catley *et al.* 2013; Galaty 2013; Fairhead, Leach and Scoones 2012). In such conditions, institutional innovations around 'open property' regimes (Moritz *et al.* 2018) – which are neither open access nor common property – are important responses to such changes, as land control, property regimes, and forms of citizenship are transformed (Lund and Boone 2013).

4 Climate change and environmental dynamics

A focus on environmental variability has long been a concern of research on pastoralism. High levels of rainfall variability characterise dryland areas, while variations in snowfall are important ecological drivers in montane areas. For this reason, many pastoral areas can be defined as non-equilibrium environments, where coefficients of variation of rainfall amounts may exceed 33 per cent (Ellis 1994; Ellis and Swift 1988). Living with or indeed from such environmental and resource uncertainty (Krätli and Schareika 2010; Krätli 2008; Scoones 1994) has multiple implications. If livestock populations are governed more by major climatic events than by population density, then management according to fixed ‘carrying capacities’ and ‘stocking rates’ does not make sense, and an ‘opportunistic’ strategy is more appropriate (Behnke, Scoones and Kerven 1993; Sandford and Scoones 2006). Equally, blaming pastoralists for land degradation and ‘desertification’ may miss the mark, if dryland environments follow often cyclical patterns of rainfall variation over time, rather than being subject to secular decline due to human and livestock population pressures (Brierley, Manning and Maslin 2018; Swift 1977, 1996).

Such debates can inform responses to climate change, an issue that has risen up the policy agenda in the last decade. As the article by Scoones shows (this *IDS Bulletin*), insights from non-equilibrium rangeland ecology challenge climate change debates to engage with uncertainty and avoid simplistic prescriptions in the face of variable environments. One of the challenges of climate change science has been to ‘downscale’ from global atmospheric circulation models, making it difficult to predict climate change impacts at a local level (Ericksen *et al.* 2013). This means that responding to uncertainties – a capacity that pastoralists have long honed – will become even more important in the future, as climate change accelerates.

One such response is to make use of ‘patches’ of rangeland in a careful seasonal and inter-annual use of variegated grazing landscapes. Such key resource patches can be drought reserves, often ‘wetlands in drylands’ (Scoones 1991), where last-resort grazing can be found. This is vital in non-equilibrium environments as the contribution from Mearns on Mongolia in this *IDS Bulletin* shows. In the post-socialist *perestroika* period, tenure reforms that take into account traditional management systems, including mobility and locally negotiated access to key resources and other territorial boundaries, are seen to be essential.

5 Food security, early warning, and livelihood vulnerability

Pastoral areas are often extremely poor and susceptible to periods of food insecurity, exacerbated by drought, conflict, and the absence of regular support and services provided by the state. Why people are poor and how vulnerability emerges has been the subject of much IDS research over the years (Baulch 1996; Chambers 1989). Some of this has focused on pastoral areas, with major studies on pastoral livelihoods in Mali (Davies 1996; Moorehead 1997), Ethiopia

(Devereux 2006), Tanzania (Lane 1991), Italy (Forni 1998) and Kenya (van den Boogaard 2003), for example. More operationally focused work on drought contingency planning in Turkana in Kenya (Swift 1989), rooted in deep understanding of livelihood dynamics, became a template for work elsewhere. And more recently, studies on 'social protection' have also been carried out in pastoral areas (Lind *et al.* 2018; Sabates-Wheeler, Lind and Hoddinott 2013), as well as humanitarian approaches that incorporate adaptation to climate change (Mosberg, Nyukuri and Naess 2017). As with much IDS work, research in this area has been centred on on-the-ground problems, but engaging with and taking inspiration from wider academic debates, which help frame interventions.

The second article in this *IDS Bulletin* by Swift is an important attempt to explore the underlying processes that create vulnerability, reflecting in particular on pastoral cases among others. Drawing on the classic work of Sen (1981) on famine and 'entitlements', questions of access to food, rather than total food availability, are raised. Access is mediated by a range of formal and informal institutions, influenced by the 'moral economy' of sharing and redistribution within societies (Scott 1976). As the article explains, vulnerabilities arise from failures in production, in exchange (in commodity and labour markets and among kin and wider communities), as well as in access to assets (affected by investments, stores, and claims). This disaggregated framework for understanding vulnerability, the article argues, can help guide responses to reduce it, including in pastoral settings.

How to raise the alarm about impending food insecurity and famine, especially in dryland areas, has been a major development concern for decades. From the Sahel famines of the 1970s to those in the Horn of Africa from the 1980s, widespread mortality and extreme suffering has shocked the world (de Waal 1997; Devereux 1993). Famine early warning systems, involving systematic collection of data on rangeland condition, livestock health, market sales, and household livelihoods, for example, have been developed by both national governments and international agencies (Buchanan-Smith and Davies 1995). Since hunger arrives only at certain times of year, taking seasonality into account in the design of early warning systems is crucial; yet, as IDS work has long pointed out (Chambers, Longhurst and Pacey 1981; Devereux, Sabates-Wheeler and Longhurst 2013), seasonality is often a blind-spot in development thinking and practice.

The article by Buchanan-Smith, Davies and Petty (this *IDS Bulletin*) reflects on research that asked why early warning information often goes unused, and early warnings are not heeded. Much of this is to do with trust, and the relationship between populations at risk and the state or other forms of authority. With long histories of marginalisation, why should anyone trust the recommendation to destock animals, move herds, or change livelihood practices? The article recommends the creation of decentralised systems for early warning, aimed at encouraging local ownership of information and greater accountability

around response systems. The lessons from this important work are as relevant today, when ever-more elaborate early warning systems are devised, involving satellite imagery analysis offering climate information in real time via mobile phones, for example. Such information can, in turn, be linked to insurance products that pay out according to particular indices, aiming to provide market-based protection from potential droughts, so reducing vulnerability (Chantararat *et al.* 2013). Despite the sophistication of the techniques, the same issues apply. Trust, accountability, and the wider political economy of information often mean that such systems fail to provide the protection against food insecurity or herd loss envisaged, and sometimes may even act to increase vulnerabilities for some (Taylor 2016).

For this reason, the arguments for a grounded livelihoods analysis linked to local-level responses become especially pertinent. Understanding what the underlying drivers are that create vulnerabilities in the first place – from environmental change to unequal social relations, to access to land or markets, to war and conflict – is crucial. As the contributions to this *IDS Bulletin* across the years point out, rooting responses in local understandings and knowledges, and linking them to vernacular practices and moral economies, is vital.

6 Pastoral marketing

Most, but not all, pastoralist economies have been integrated into national or international markets over a long historical period. Somalia is an example. Trade in livestock and livestock products such as milk, ghee, hides and skins, as well as trade in gathered wild products such as ivory, myrrh, gum Arabic, and ostrich feathers, is documented back to at least the thirteenth century, with detailed records available since the nineteenth century. Institutions to regulate this trade, particularly the office of *abaan* or patron, who oversees market transactions and ensures that herders are not exploited, are also ancient. Reliance on markets generates cash incomes for herders, but also creates dependency on price variability, over both the long and short term. A pastoral terms of trade index (price of goods bought by pastoralists over price of goods sold or exchanged by them) showed that the purchasing power of gathered products declined catastrophically in the hundred years from 1850 to 1950; and the purchasing power of livestock also declined substantially over the same period. A rapid short-term decline in the index signals an impending food security crisis (Swift 1979).

Since the 1970s, there has been a strong emphasis among governments and development agencies alike on the commercialisation of pastoral systems and the improvement of livestock markets. This has largely been a sorry tale, especially in Africa. Formal markets were often put in inappropriate locations; attempts to improve the breeds of animals failed in the face of drought; and poor forage and attempts to upgrade value chains to global standards proved challenging (de Haan 1994). The archaeological relics of failed aid projects are strewn across pastoral areas. Yet, some pastoralists are increasingly commercialising, often

through local market connections, sometimes to lucrative international and regional markets. As a driver of social differentiation within pastoral populations, access to markets is key (Catley and Aklilu 2013).

The article in this *IDS Bulletin* by Catley and colleagues focuses on the policy changes required for African pastoralists to gain access to international trade, despite the prevalence of endemic diseases – such as foot-and-mouth disease – in pastoral areas. It tells the story of engaged research linked to policy change over many years. The proposed solution for assuring safe trade in livestock products is a 'commodity-based' system, where the commodity, not the area, is deemed free of disease. This is much more feasible in pastoral areas, where the veterinarians' ideal of territorial disease-freedom is impossible. Central to this proposal are 'community animal health workers', allowing for a decentralised, field-based system of veterinary support led by para-veterinarians who are members of the community. Despite the objection of professional veterinarians in some countries, this is more suited to pastoral settings, allowing wider and more immediate coverage, protecting herds and flocks, but also providing assurance of the health and safety of animals and their products.

A macro-focus on the plethora of veterinary health standards influencing cross-border trade is complemented in a second article by Mutua and colleagues on youth participation in livestock markets in Baringo County in Kenya (this *IDS Bulletin*). Here the emphasis is on the micro-level negotiations around market access by young people, both as producers and traders, which is affected by social norms and local-level politics. The article links to a focus on how 'real' markets work in practice (de Alcántara 1993), embedded as they are in social and cultural norms and practices that influence both generational and gendered market engagement.

In both these articles, there is an emphasis on the need for policy change, as standard approaches too often do not work in pastoral contexts. Catley and colleagues (this *IDS Bulletin*) in particular emphasise engaging with 'policy processes'. This requires influencing narratives about policy, as well as addressing the actors and underlying interests (Keeley and Scoones 2003). In pastoral areas, given the mismatch between policy interventions and local conditions and understandings, influencing policymaking at national and international level is imperative. As with all the contributions to this *IDS Bulletin*, and IDS' work on pastoralism more generally (IDS 2020), this requires a commitment to critical, engaged research, linking out to policy and practice.

7 The state, governance, and conflict

The relationship between pastoralists and the state is a crucial research theme stretching back over 50 years. In the 1970s, the focus was on state-building, creating a developmental state, aimed at establishing newly independent nations' ability to grow and prosper. As in the colonial era, how to deal with pastoralists on the margins was central.

Development aid was often deployed as part of a process of pacification and incorporation. The whole suite of development schemes – from market development to infrastructure building to settlement and villagisation – followed. Pastoral peoples very often viewed such initiatives with deep distrust, resisting actively and passively attempts to tax populations, control movement, block borders, and force particular marketing channels.

From the 1980s, the focus of development efforts shifted towards liberalisation and economic reform, such as under International Monetary Fund/World Bank ‘structural adjustment’ programmes in Africa. These saw a retreat of the state and an emphasis on market solutions. This created more autonomy at the margins, but humanitarian crises in many pastoral areas in this period saw a flood of different types of external intervention, in the form of famine relief and food aid, alongside numerous NGO projects focusing on everything from restocking to milk marketing to community conservation and tourism initiatives. Yet, in practice, the state was distant from the day-to-day life of pastoralists in many places. Still, while the role of the state was often minimal, as well as contested, pastoral areas were highly governed through various non-state and informal channels (Leonard and Samantar, this *IDS Bulletin*; Lind 2018).

The classic debates in development studies around the role of states and markets (Colclough and Manor 1993) were central to IDS work in this period, as well as the politics of economic reform in China and post-socialist states (White 1993). Such reforms have particular consequences in pastoral areas, rarely explored in the mainstream literature. In the pastoral areas of Mongolia or China, these transitions took on particular forms as collectivised arrangements were disbanded in favour of more private arrangements. The theme of how states and markets frame pastoral development are not directly addressed by the articles in this section but are certainly implied. For example, the article by Leonard and Samantar on Somalia (this *IDS Bulletin*) is very relevant. Somalia represents a highly functioning pastoral economy, with strong export links, but for long periods operating effectively without a state (Little 2003). As the article shows, political order has emerged in very different ways in the south and in Somaliland and Puntland in the north, where a social contract both with a wider polity and within local structures was brokered. Negotiating post-conflict governance in pastoral areas is challenging, particularly in conditions where the formal state is weak or absent and where standard ‘good governance’ and ‘market-based’ development interventions are meaningless. But, despite the historical specificities of different parts of Somalia, the conclusions of this article have wider resonance, indicating the need to build public authority from below.

Governance reforms, including decentralisation in many countries, has been important in many pastoral areas as the state, and associated services, has been brought closer to pastoral populations. But this has

downsides too, as the politics of decentralisation, especially if not supported by resources, results in antagonism and resentment, as Lind's (2018) work shows on devolution and the shifting dynamics of conflict in pastoral northern Kenya.

Decentralisation was a major focus of IDS research in the 1990s (Crook and Manor 1995), but again did not filter through to articles on pastoralism in the *IDS Bulletin*, although significant work was undertaken in Africa on political economy of 'pro-poor' livestock policy (Leonard 2004). Decentralisation results in a refashioning of authority in pastoral areas, and so the striking of new relationships between the local state and informal sites of rule and political order, including through traditional leaders and local elites. The result is always overlapping forms of hybrid governance – combining the 'traditional' and 'modern' – and frequently resulting in contestation between them over land access, markets, and political control.

Conflict in pastoral areas has been a central theme of research over the past 50 years in IDS and beyond. In the past, however, pastoral conflict was seen as somehow distinct, rooted in cultural norms, linked to contests between clans and 'tribes' as part of ritualised raids and feuds, aimed at regulating a cultural-ecological 'balance'. This framing, however, fails to locate pastoral conflict in wider understandings of conflict dynamics, including the role of small arms in pastoral areas; the processes of territorialisation and border-making, and the inherent flexibility and negotiability of boundaries in many pastoralist settings, which create disputes; the importance of politically motivated religious fundamentalism in mobilising discontent; and the wider geopolitical influences on pastoral areas that help fuel conflict (Lind, Mutahi and Oosterom 2017; Haggmann and Mulugeta 2008; Mkutu 2007). The article by Hendrickson, Mearns and Armon (this *IDS Bulletin*) takes such a broader view of livestock raiding in pastoral East Africa, and shows how, while rooted in longstanding cultural practices, raiding has shifted from a 'redistributive' function to a more 'predatory', and often violent one set within a wider context of insecurity.

A focus on 'vernacular' conflict and peace-building, as developed in an important strand of IDS research (Lind and Luckham 2017; Luckham and Kirk 2013), emphasises the flexible, local practices associated with conflict, rather than a simplistic assessment of static interest positions. Such work highlights the overlapping, contested, and hybrid nature of conflicts, particularly where resources overlap and are highly variable. As Cousins argues in his article (this *IDS Bulletin*), negotiating conflicts among multiple resource users requires attention to procedural mediation and arbitration, rather than regulation and control. This in turn shines a light on the institutional 'messy middle', where solutions between competing claims can be found (Mehta, Leach and Scoones 2001; Leach, Mearns and Scoones 1999). The argument here is not for a resort to state or market control or complete local autonomy, but for a hybrid arrangement whereby different players must negotiate resource

conflicts. Such arrangements may be modelled on vernacular systems, where traditional practices of resource management always have had to respond to variability, uncertainty, and complexity.

8 Conclusion

The six themes and 13 articles in this virtual *IDS Bulletin* cover a wide range of topics, and IDS research even more, as the bibliography shows (IDS 2020). But what is missing? Certainly, as already noted, a focus on social difference – and the dynamics of class, gender, age, and ethnicity, for example – is under-represented in research on pastoralism. Perhaps this is a hangover from earlier studies that assumed a more homogenous society, distinct from agrarian settings. However, increasing inequalities are generating new forms of pastoralism, very different to a ‘traditional’ (if it ever existed) lifestyle. The penetration of capital and state authority, as we have discussed, is crucial to this, as pastoral areas become increasingly incorporated in a globalised political economy. Future research will surely focus on such dynamics, linking more concretely to debates in critical agrarian studies (Caravani 2019).

Such differentiation, in turn, generates a new politics of elite pastoralism, as some pastoralists engage in land speculation, absentee commercial herd management, and investment in enterprises based in burgeoning small towns, alongside engagement in local politics. Such processes of wider economic and political engagement result in changes in economic infrastructure – including processes of urbanisation in pastoral areas – as well as settlement patterns, as people sedentarise and demand services, such as health and education. Settlement, in turn, has impacts on the nutrition and health status of pastoral populations as dietary access changes. Cultural shifts occur too, often through the growing influence of world religions and variations of these, including political Islam and evangelical Christianity, as well as strong assertions of indigeneity and cultural heritage in the face of perceived dilution by the forces of globalisation. Research on all these areas is being undertaken, but again, we suggest, will feature more centrally in studies of pastoral areas in the future.

Reflecting back on the 50 years since 1970, much has changed. But there are also important continuities. The ‘end of pastoralism’ was proclaimed widely in the 1970s (and before), yet, as a successful, resilient livelihood adapted to some of the harshest environments on the planet, pastoralism has survived, even if it has changed radically. A romantic idealisation of the past is no help; instead – as pastoralists must do – facing future uncertainties is essential, reconfiguring strategies to suit new circumstances.

Continuous innovation and adaptation, however, may not be enough. Changes in environmental, economic, and political circumstances mean pastoralists are increasingly squeezed. This arises from many intersecting forces, whether from climate change resulting in more frequent livelihood shocks; from the extension of capital into the

rangelands through large investment projects; from the continued marginalisation of pastoralists by states eager to expand frontiers and secure borders; or from the changes of markets for meat, as diets in the West shift.

All these processes are having major structural consequences for the survival of pastoral populations. So, in another 50 years, will we be looking back at the end of pastoralism? We think not. The doomsayers in the past were proven wrong; and will be again. Indeed, the capacity to respond to today's turbulent world, to make productive use of marginal environments, to make use of mobility to respond to heightened uncertainty, and to adapt and innovate are all features of pastoralism that can be important in meeting wider, global challenges. As the PASTRES programme argues, pastoralism may be an important site for learning about dealing with financial volatility, managing critical infrastructures, responding to mass migration flows, or formulating policies for disease outbreaks and natural disasters (Scoones 2019; Nori and Scoones 2019). In 2070, perhaps development professionals will be looking to pastoralism, not as an archaic, 'backward' lifestyle, but as quintessentially modern and mobile, and the source of inspiration for addressing future uncertainties.

Notes

- * The writing of the introduction, curation, and online publishing of this archive *IDS Bulletin* has been made possible by funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No. 740342), supporting the PASTRES programme (www.pastres.org), as well as from IDS.
- † Special thanks must go to Camilla and Jeremy Swift for use of their beautiful garden in Wales for the discussions that provided the outline for this introduction in July 2019, and to Ben Cousins and Robin Mearns for conducting reviews. Thanks also to Alison Norwood, Beth Richard, and Dee Scholey for providing production and copy-editing support.
- 1 Ian Scoones, Professorial Fellow, Co-Director STEPS Centre, Principal Investigator PASTRES, IDS, Sussex.
- 2 Jeremy Lind, Research Fellow, IDS, Sussex.
- 3 Natasha Maru, PhD student, IDS, Sussex.
- 4 Michele Nori, PASTRES researcher, European University Institute, Florence.
- 5 Linda Pappagallo, PhD student, IDS, Sussex.
- 6 Tahira Shariff, PhD student, IDS, Sussex.
- 7 Giulia Simula, PhD student, IDS, Sussex.
- 8 Jeremy Swift, Emeritus Fellow, IDS, Sussex.
- 9 Masresha Taye, PhD student, IDS, Sussex.
- 10 Palden Tsering, PhD student, IDS, Sussex.
- 11 See <https://pastres.wordpress.com/bibliography-fifty-years-of-research-on-pastoralism-and-development/>.

- 12 See PALD list of publications at <https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/2400/List%20of%20Publications%20Oct%202015.pdf>.
- 13 From 2005–14, see www.future-agricultures.org/category/themes/pastoralism/.
- 14 The IIED Drylands Programme was established in 1987 by Camilla Toulmin, and published Drylands Issues Papers and the magazine, *Hararmata*, until 2009–10 (www.iied.org/archive-completed-drylands-pastoralist-projects).
- 15 The ODI hosted the Pastoral Development Network from 1976 and published regular papers until 1996 (www.odi.org/publications/4375-pastoral-development-network-papers). The network was led by Stephen Sandford, Clare Oxby, Jon Morris, and Roy Behnke.
- 16 *Nomadic Peoples* (www.whpress.co.uk/NP.html, currently edited by Saverio Krätli) and *Pastoralism* (<https://pastoralismjournal.springeropen.com/about>, currently edited by Carol Kerven and Roy Behnke).

References

- Aklilu, Y. and Catley, A. (2010) *Mind the Gap: Commercialization, Livelihoods and Wealth Disparity in Pastoralist Areas of Ethiopia*, Boston MA: Tufts University
- Baulch, B. (1996) 'Editorial: The New Poverty Agenda: A Disputed Consensus', *IDS Bulletin* 27.1: 1–10, <https://bulletin.ids.ac.uk/index.php/idsbo/article/view/2754> (accessed 8 January 2020)
- Behnke, R.H.; Scoones, I. and Kerven, C. (1993) *Range Ecology at Disequilibrium: New Models of Natural Variability and Pastoral Adaptation in African Savannas*, London: Overseas Development Institute
- Brierley, C.; Manning, K. and Maslin, M. (2018) 'Pastoralism May Have Delayed the End of the Green Sahara', *Nature Communications* 9
- Brocklesby, M.A.; Hobley, M. and Scott-Villiers, P. (2010) *Raising Voice – Securing a Livelihood: The Role of Diverse Voices in Developing Secure Livelihoods in Pastoralist Areas in Ethiopia*, IDS Working Paper 340, Brighton: IDS
- Buchanan-Smith, S. and Davies, S. (1995) *Famine Early Warning and Response: The Missing Link*, London: Intermediate Technology Publications
- Caravani, M. (2019) "'De-Pastoralisation" in Uganda's Northeast: From Livelihoods Diversification to Social Differentiation', *Journal of Peasant Studies* 46.7: 1323–46
- Catley, A. and Aklilu, Y. (2013) 'Moving Up or Moving Out? Commercialization, Growth and Destitution in Pastoralist Areas', in A. Catley, J. Lind and I. Scoones (eds), *Pastoralism and Development in Africa: Dynamic Change at the Margins*, Abingdon: Routledge
- Catley, A.; Lind, J. and Scoones, I. (eds) (2013) *Pastoralism and Development in Africa: Dynamic Change at the Margins*, Abingdon: Routledge

- Chambers, R. (1989) 'Editorial Introduction: Vulnerability, Coping and Policy', *IDS Bulletin* 20.2: 1–7, <https://bulletin.ids.ac.uk/index.php/idsbo/article/view/1821> (accessed 8 January 2020)
- Chambers, R. and Conway, G. (1992) *Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*, IDS Discussion Paper 296, Brighton: IDS
- Chambers, R.; Longhurst, R. and Pacey, A. (eds) (1981) *Seasonal Dimensions to Rural Poverty*, London: Frances Pinter
- Chantararat, S.; Mude, A.G.; Barrett, C.B. and Carter, M.R. (2013) 'Designing Index-Based Livestock Insurance for Managing Asset Risk in Northern Kenya', *Journal of Risk and Insurance* 80.1: 205–37
- Chome, N.; Gonçalves, E.; Scoones, I. and Sulle, E. (2020) "'Demonstration Fields", Anticipation, and Contestation: Agrarian Change and the Political Economy of Development Corridors in Eastern Africa', *Journal of Eastern African Studies* 14.2: 291–309
- Colclough, C. and Manor, J. (eds) (1993) *States or Markets? Neo-Liberalism and the Development Policy Debate*, Oxford: Clarendon Press
- Cousins, B. (2000) 'Tenure and Common Property Resources in Africa', in C. Toulmin and J. Quan (eds), *Evolving Land Rights, Policy and Tenure in Africa*, London: DFID/NRI/IIED
- Crook, R.C. and Manor, J. (1995) 'Democratic Decentralisation and Institutional Performance: Four Asian and African Experiences Compared', *Journal of Commonwealth and Comparative Politics* 33.3: 309–34
- Davies, S. (1996) *Adaptable Livelihoods: Coping with Food Insecurity in the Malian Sahel*, Basingstoke: Macmillan
- de Alcántara, C.H. (1993) 'Introduction: Markets in Principle and Practice', in C.H. de Alcántara (ed.), *Real Markets: Social & Political Issues of Food Policy Reform*, Abingdon: Frank Cass
- de Haan, C. (1994) *An Overview of the World Bank's Involvement in Pastoral Development*, Pastoral Development Network Papers 1994–1995, London: Overseas Development Institute
- de Waal, A. (1997) *Famine Crimes: Politics and the Disaster Relief Industry in Africa*, Bloomington IN: Indiana University Press
- Devereux, S. (2006) *Vulnerable Livelihoods in Somali Region, Ethiopia*, IDS Research Report 57, Brighton: IDS
- Devereux, S. (1993) *Theories of Famine*, London: Harvester Wheatsheaf
- Devereux, S.; Sabates-Wheeler, R. and Longhurst, R. (eds) (2013) *Seasonality, Rural Livelihoods and Development*, Hoboken NJ: Taylor and Francis
- Dorward, A. *et al.* (2009) 'Hanging In, Stepping Up and Stepping Out: Livelihood Aspirations and Strategies of the Poor', *Development in Practice* 19.2: 240–47
- Ellis, J. (1994) 'Climate Variability and Complex Ecosystem Dynamics: Implications for Pastoral Development', in I. Scoones (ed.), *Living with Uncertainty: New Directions in Pastoral Development in Africa*, London: Intermediate Technology Publications

- Ellis, J.E. and Swift, D.M. (1988) 'Stability of African Pastoral Ecosystems: Alternate Paradigms and Implications for Development', *Rangeland Ecology and Management/Journal of Range Management Archives* 41.6: 450–59
- Ericksen, P. *et al.* (2013) 'Climate Change in Sub-Saharan Africa: What Consequences for Pastoralism?', in A. Catley, J. Lind and I. Scoones (eds), *Pastoralism and Development in Africa: Dynamic Change at the Margins*, Abingdon: Routledge
- Fairhead, J.; Leach, M. and Scoones, I. (2012) 'Green Grabbing: A New Appropriation of Nature?', *Journal of Peasant Studies* 39.2: 237–61
- Forni, N. (1998) 'Herders, Common Property and the State in the Abruzzi Highlands of Italy', PhD dissertation, University of Sussex
- Fratkin, E. and Mearns, R. (2003) 'Sustainability and Pastoral Livelihoods: Lessons from East African Maasai and Mongolia', *Human Organization* 62.2: 112–22
- Galaty, J.G. (2013) 'Land Grabbing in the Eastern African Rangelands', in A. Catley, J. Lind and I. Scoones (eds), *Pastoralism and Development in Africa: Dynamic Change at the Margins*, Abingdon: Routledge
- Galaty, J.G.; Aronson, D.; Salzman, P.C. and Chouinard, A. (eds) (1981) *The Future of Pastoral Peoples*, Ottawa ONT: International Development Research Centre (IDRC)
- Hagmann, T. and Mulugeta, A. (2008) 'Pastoral Conflicts and State-Building in the Ethiopian Lowlands', *Afrika Spectrum* 43.1: 19–37
- Hardin, G. (1968) 'The Tragedy of the Commons', *Science* 162.3859: 1243–48
- Hodgson, D.L. (2000) *Rethinking Pastoralism in Africa: Gender, Culture and the Myth of the Patriarchal Pastoralist*, Oxford: James Currey
- IDS (2020) *A Bibliography on Pastoralism Research at the Institute of Development Studies, Sussex, 1970–2020*, Brighton: IDS, <https://pastres.wordpress.com/bibliography-fifty-years-of-research-on-pastoralism-and-development/> (accessed 13 February 2020)
- Joekes, S. and Pointing, J. (1991) *Women in Pastoral Societies in East and West Africa*, IIED Drylands Network Programme Paper 28, London: International Institute for Environment and Development
- Kabeer, N. (1994) *Reversed Realities: Gender Hierarchies in Development Thought*, London: Verso
- Keeley, J. and Scoones, I. (2003) *Understanding Environmental Policy Processes: Cases From Africa*, London: Earthscan
- Krätli, S. (2019) *Pastoral Development Orientation Framework: Focus on Ethiopia*, Aachen: Bischöfliches Hilfswerk MISEREOR e. V
- Krätli, S. (2008) 'Cattle Breeding, Complexity and Mobility in a Structurally Unpredictable Environment: The WoDaaBe Herders of Niger', *Nomadic Peoples* 12.1: 11–41
- Krätli, S. and Schareika, N. (2010) 'Living off Uncertainty: The Intelligent Animal Production of Dryland Pastoralists', *European Journal of Development Research* 22.5: 605–22
- Krätli, S. and Swift, J. (2014) *Counting Pastoralists in Kenya*, Nairobi: DLCI/REGLAP

- Krätli, S.; Huelsebusch, C.; Brooks, S. and Kaufmann, B. (2013) 'Pastoralism: A Critical Asset for Food Security under Global Climate Change', *Animal Frontiers* 3.1: 42–50
- Lane, C. (1991) 'Alienation of Barabaig Pasture Land: Policy Implications for Pastoral Development in Tanzania', PhD dissertation, University of Sussex
- Leach, M.; Joekes, S. and Green, C. (1995) 'Editorial: Gender Relations and Environmental Change', *IDS Bulletin* 26.1: 1–8, <https://bulletin.ids.ac.uk/index.php/idsbo/article/view/1554> (accessed 8 January 2020)
- Leach, M.; Mearns, R. and Scoones, I. (1999) 'Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resource Management', *World Development* 27.2: 225–47
- Leonard, D. (2004) *The Political Economy of International Development and Pro-Poor Livestock Policies: A Comparative Assessment*, PPLPI Working Paper 12, Rome: Pro-Poor Livestock Policy Initiative/Food and Agriculture Organization of the United Nations
- Lind, J. (2018) 'Devolution, Shifting Centre-Periphery Relationships and Conflict in Northern Kenya', *Political Geography* 63: 135–47
- Lind, J. and Luckham, R. (2017) 'Introduction: Security in the Vernacular and Peacebuilding at the Margins; Rethinking Violence Reduction', *Peacebuilding* 5.2: 89–98
- Lind, J.; Mutahi, P. and Oosterom, M. (2017) 'Killing a Mosquito with a Hammer': Al-Shabaab Violence and State Security Responses in Kenya', *Peacebuilding* 5.2: 118–35
- Lind, J.; Okenwa, D. and Scoones, I. (eds) (2020) *Land, Investment and Politics: Perspectives from East Africa's Pastoral Drylands*, Woodbridge: James Currey
- Lind, J.; Sabates-Wheeler, R.; Hoddinott, J.F. and Taffesse, A.S. (2018) *Targeting Social Transfers in Pastoralist Societies: Ethiopia's Productive Safety Net Programme Revisited*, IFPRI Paper 124, Washington DC: International Food Policy Research Institute
- Lind, J. et al. (2016) *Changes in the Drylands of Eastern Africa: Case Studies of Pastoralist Systems in the Region*, Brighton: IDS
- Little, P.D. (2003) *Somalia: Economy without State*, Bloomington IN: Indiana University Press
- Luckham, R. and Kirk, T. (2013) 'Understanding Security in the Vernacular in Hybrid Political Contexts: A Critical Survey', *Conflict, Security and Development* 13.3: 339–59
- Lund, C. and Boone, C. (2013) 'Introduction: Land Politics in Africa – Constituting Authority over Territory, Property and Persons', *Africa* 83.1: 1–13
- Mearns, R. (1996) 'Community, Collective Action and Common Grazing: The Case of Post-Socialist Mongolia', *Journal of Development Studies* 32.3: 297–339
- Mehta, L.; Leach, M. and Scoones, I. (2001) 'Editorial: Environmental Governance in an Uncertain World', *IDS Bulletin* 32.4: 1–9, <https://bulletin.ids.ac.uk/index.php/idsbo/article/view/1231> (accessed 8 January 2020)

- Mehta, L. *et al.* (1999) *Exploring Understandings of Institutions and Uncertainty: New Directions in Natural Resource Management*, IDS Discussion Paper 372, Brighton: IDS
- Mkutu, K.A. (2007) 'Small Arms and Light Weapons Among Pastoral Groups in the Kenya–Uganda Border Area', *African Affairs* 106.422: 47–70
- Monod, T. (ed.) (1975) *Pastoralism in Tropical Africa*, Abingdon: Oxford University Press
- Moorehead, R. (1997) *Structural Chaos: Community and State Management of Common Property in Mali*, London: International Institute for Environment and Development
- Moritz, M. *et al.* (2018) 'Emergent Sustainability in Open Property Regimes', *Proceedings of the National Academy of Sciences* 115.51: 12859–67
- Mosberg, M.; Nyukuri, E. and Naess, L.O. (2017) 'The Power of 'Know-Who': Adaptation to Climate Change in a Changing Humanitarian Landscape in Isiolo, Kenya', *IDS Bulletin* 48.4: 79–92
- Nori, M. (2019) *Herding Through Uncertainties – Regional Perspectives: Exploring the Interfaces of Pastoralists and Uncertainty: Results from a Literature Review*, Robert Schuman Centre for Advanced Studies Research Paper RSCAS 68, Florence: European University Institute
- Nori, M. and Scoones, I. (2019) 'Pastoralism, Uncertainty and Resilience: Global Lessons from the Margins', *Pastoralism* 9.1: 1–7
- Ostrom, E. (1990) *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press
- Reid, R.S.; Fernández-Giménez, M.E. and Galvin, K.A. (2014) 'Dynamics and Resilience of Rangelands and Pastoral Peoples around the Globe', *Annual Review of Environment and Resources* 39.1: 217–42
- Sabates-Wheeler, R.; Lind, J. and Hoddinott, J. (2013) 'Implementing Social Protection in Agro-Pastoralist and Pastoralist Areas: How Local Distribution Structures Moderate PSNP Outcomes in Ethiopia', *World Development* 50: 1–12
- Sandford, S. and Scoones, I. (2006) 'Opportunistic and Conservative Pastoral Strategies: Some Economic Arguments', *Ecological Economics* 58.1: 1–16
- Scoones, I. (2019) *What is Uncertainty and Why Does it Matter?*, STEPS Working Paper 105, Brighton: IDS
- Scoones, I. (1998) *Sustainable Rural Livelihoods: A Framework for Analysis*, IDS Working Paper 72, Brighton: IDS
- Scoones, I. (ed.) (1994) *Living with Uncertainty: New Directions in Pastoral Development in Africa*, London: Intermediate Technology Publications
- Scoones, I. (1991) 'Wetlands in Drylands: Key Resources for Agricultural and Pastoral Production in Africa', *Ambio* 20.8: 366–371
- Scoones, I. and Wolmer, W. (eds) (2002) *Pathways of Change in Africa: Crops, Livestock and Livelihoods in Mali, Ethiopia and Zimbabwe*, Oxford: James Currey
- Scott, J.C. (1976) *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia*, New Haven CT: Yale University Press

- Sen, A. (1981) *Poverty and Famines: An Essay on Entitlement and Deprivation*, Oxford: Oxford University Press
- Swift, J. (1996) 'Desertification: Narratives, Winners and Losers', in M. Leach and R. Mearns (eds), *The Lie of the Land: Challenging Received Wisdom on the African Environment*, Oxford: James Currey
- Swift, J. (1989) 'Planning against Drought and Famine in Turkana: A District Famine Contingency Plan', in T.E. Downing, K.W. Gitu and C.M. Kamau (eds), *Coping with Drought in Kenya: National and Local Strategies*, Boulder CO and London: Lynne Rienner
- Swift, J. (1980) *Livestock Production and Pastoral Land Use in Mali and the Sahelian Countries*, ILCA Mali Programme Working Paper, Bamako: International Livestock Centre for Africa
- Swift, J. (1979) 'The Development of Livestock Trading in a Nomad Pastoral Economy', in *Pastoral Production and Society: Proceedings of the International Meeting on Nomadic Pastoralism, Paris 1-2 Dec 1976*, Cambridge: Cambridge University Press
- Swift, J. (1977) 'Sahelian Pastoralists: Underdevelopment, Desertification, and Famine', *Annual Review of Anthropology* 6: 457-78
- Swift, J. and Mearns, R. (1993) 'Mongolian Pastoralism on the Threshold of the Twenty-First Century', *Nomadic Peoples* 33: 3-7
- Taylor, M. (2016) 'Risky Ventures: Financial Inclusion, Risk Management and the Uncertain Rise of Index-based Insurance', in S. Soederberg (ed.), *Risking Capitalism*, Bingley: Emerald Group Publishing
- Turner, M.D. and Schlecht, E. (2019) 'Livestock Mobility in Sub-Saharan Africa: A Critical Review', *Pastoralism: Research, Policy and Practice* 9.1: 1-15
- van den Boogaard, R. (2003) 'Food Insecurity and Entitlements among Turkana Pastoralists, Northern Kenya', PhD thesis, University of Sussex
- White, G. (1993) *Riding the Tiger: The Politics of Economic Reform in Post-Mao China*, Basingstoke: Macmillan