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LAND ADMINISTRATION TO NURTURE DEVELOPMENT (LAND)

PROTECTION OF PASTORALISTS' LAND RIGHTS: LESSONS FROM THE INTERNATIONAL EXPERIENCE

DECEMBER 2013
This publication was produced for review by the United States Agency for International Development and was prepared by Tetra Tech.

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Prepared by Tetra Tech for the United States Agency for International Development, USAID Contract No. AID-OAA-I-12-00032/AID-663-TO-13-00005, under the Strengthening Tenure and Resource Rights (STARR) Indefinite Quantity Contract (IQC).

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ACRONYMS AND ABBREVIATIONS

ACHPR	African Commission on Human and People's Rights
CBRLM	Community-Based Rangeland and Livestock Management
CLS	Communal Land Support
GIS	Geographic Information System
GOE	Government of Ethiopia
GOT	Government of Tanzania
GPS	Global Positioning System
IDLO	International Development Law Organization
ITC	Community Lands Initiative (*Iniciativas de Terras Comunitárias*)
LAND	Land Administration to Nurture Development
MCA	Millennium Challenge Account – Namibia
MCA-N	Millennium Challenge Account
MCC	Millennium Challenge Corporation
NGO	Nongovernmental Organization
NRMAC	Natural Resource Management Advisory Committee
NRMUG	Natural Resource Management User Group
TGLP	Tribal Grazing Land Policy
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

Protection of pastoralist land resources has taken on a new urgency in light of the rapidly expanding global and national demand for land and land-based natural resources for large-scale commercial agricultural production, conservation initiatives, and mining. These activities threaten pastoralist land use systems. The most important measures needed to protect pastoralist land resources is restraint on the part of government in supporting such land use reallocation, and—to this end—for government to: a) take into account the very considerable trade-offs such investments often impose in terms of livestock production and damage to livelihoods of vulnerable populations; b) radically limit the extent of such reallocations both generally and in each case to realistic levels; and c) initiate reallocations only in locales where they do not undermine pastoralist land use systems.

Experience shows that such restraint is greatly facilitated where pastoralists are provided with legal and other protections for the land and other natural resources on which they depend. How to do this? Attempts to improve on range resources and their management have been a somewhat painful learning experience. Initiatives to improve pastoralist range management and protect range resources have often begun with the assumption that migratory pastoralism was inefficient and led to land degradation. They have sought to give some herders, either individually or as groups, exclusive rights in defined areas of pasture. It was hoped that with investments in water and fencing, sustainable pasture use, and increased output could be achieved by the new right-holders. However, these initiatives have had disappointing results, in particular, insignificantly improved range conditions. The institutional dimension of those projects was poorly thought through; range management requires effective management institutions.

However, studies have indicated that migratory pastoralism is both more efficient than earlier thought and has major risk management advantages. Project strategies that require or seek to facilitate abandonment of mobility and flexibility are now broadly questioned.

The challenge is then to develop a pastoralist land rights certification strategy that integrates lessons from the project experience and fosters mobility and flexibility. Some promising new directions in project development can be identified, though concrete project details would need to be developed in light of local resources and other conditions.

Earlier projects focused too narrowly on pasture resources in isolation, rather than on the full network of resources and relationships upon which migratory pastoralism relies. That network includes small but critical water holes, access to farmer crop residues, and all the customary and contractual relationships around use of resources (the “social capital” of pastoralism). Protection must broadly shield not just possession of particular resources but all the elements in such networks, including rights of access and use, mobility, flexibility, and relationships between resource users and communities.

Understanding these networks well is the first step. It will be important to identify key resources and pressure points such as those with farming communities, government forests, and neighboring countries. There also may be pastoral communities that have settled with agriculture now as their main source of livelihood.

The full network and access to its resources should at the outset receive protection in general terms. It then would be possible to identify appropriate protection strategies for each resource use and potential tenure niche in the system. Protection for some niches may involve tenure strategies and certification as employed in earlier projects, but in a more focused fashion and in ways that facilitate, rather than replace, mobility and flexibility. But it should also employ other tools, including policy reform, public education

on pastoralist land rights, public fora for policy development discussions among stakeholders, ongoing consultation on resource use among pastoralist communities, capacity building for pastoralist institutions, and effective dispute resolution emphasizing mediation approaches.

Certification would play an overarching role by recording and authenticating the diverse rights and responsibilities under the protection program. This will require adjusting the certification formats and procedures designed for sedentary farmers, but the fact that these programs have been developed on a regional basis offers a valuable opportunity to meet local needs.

INTRODUCTION

This paper reviews the international experience with projects that have sought to protect pastoralist land rights. It has been requested by USAID/Ethiopia from Tetra Tech as a contribution to the current discussions of policy and legal arrangements for pastoralist lands taking place in Ethiopia.

Ethiopia has a major ongoing program of land demarcation and land rights certification, and this paper is an input to the development of a strategy for expansion of the certification program to pastoralist regions. The authors were asked to address the questions involved from a perspective that prioritized protection of pastoralist land rights and the potential for certification of pastoralist land rights in that process. The selection of case studies is slanted toward arid land situations in which migration figures significantly, in recognition that these characterize most pastoralist systems in east and southeast Ethiopia. The authors want to caution that the recommendations in this paper are generic, and almost certainly will need significant adjustments to be really useful in the Ethiopian context.

The review comes at a time when there is renewed interest in, and concern with regard to, the land resources that provide pastoralist livelihoods. A decade ago, the trend toward market-driven incursions into pastoralists' lands was gradual, but the speed and scale of land takings has increased significantly, reflecting the global rush for large-scale agricultural holdings and conservation areas. Tanzania is an early instance of displacement of pastoralists by large-scale agriculture (reviewed in Annex 1). The search by governments and investors for "available land" often targets land used by pastoralists. The grazing lands they utilize are extensive—often used seasonally or sporadically—thus appearing unused for much of the year. Moreover, pastoralists often lack state-recognized rights in the pastures they use, and that lack of recognition of customary rights is positively correlated with takings of land for large-scale agriculture (World Bank, 2010; Alden Wily, 2011; Galaty, 2011).

In the case of proposed investments in pastoralist lands, there has been a consistent tendency to underestimate the economic trade-offs (not to mention social and cultural trade-offs) involved in such investments. The benefits of the proposed investment are often overstated and seem greater than the benefits of the resource immediately affected to grazers and the larger economy. This is in part a reflection of chronic underestimation of the contribution of pastoralist production to the national and regional economies. It also misses an important point—pastoralist land use systems are fragile. The networks cover extensive areas, but their viability can depend upon access to a key point resource, for instance, a given water source. Pulling that link out could compromise the network. In the event that it is possible to reconfigure the network, the costs in terms of efficiency may be great. Recent USAID land policy guidance stresses the need to strictly limit such land reallocations in pastoralist contexts (Behnke, 2011).

This pattern of appropriation of lands on which pastoralists depend has an alarming potential for creating conflict. In recent years in central Sudan, pastoralists barred from their traditional migratory routes by mechanized sorghum production shot at tractors. In Jordan, Bedouins angered by rapid erosion of their lands resort to civil disobedience, using their camel herds to block the national highway between Amman and the tourist resources at the Gulf of Aqaba (Bruce and Holt, 2011 and 2013).

How can pastoralist land rights best be protected? Restraint and care by government in allocation of pastoralist land to projects and investments for other uses are critical. But experience shows that more than cautionary exhortations are needed to produce restraint. Restraint is facilitated by solid legal and other protections of pastoralist land rights. Recognition and registration of rights is a formula that may serve well for farmers and other sedentary land users, but the mobility that characterizes pastoralist land

use and the diversity of the resources upon which they depend complicate the issue. Any program to protect pastoralist rights using tenure reform and certification strategies must develop a strategy for addressing the following key issues.

First, what is the nature of the rights pastoralists and their communities hold? Most often, these are customary rights. They may or may not be recognized by the state's law, but they are nonetheless part of the social reality. There will be individual and household rights, as well as community rights in pasture commons, but the picture is far more complex. There are also often secondary customary and contractual rights of access to resources, for instance, rights of way held under custom by neighboring communities, and negotiated rights of access to neighbors' land. Who exactly holds those rights? Are they held by individuals, households, clans, tribes, community land boards, voluntary user groups, collectives, cooperatives, or associations? If we say "community," what do we mean? Often society consists of a number of levels of communities—smaller communities are nested within larger communities through tribal networks, and decisions must be made as the level at which community rights vest. Are these existing rights to be taken as given, or does successful protection of pastoralist land rights require their reform?

Second, who manages the resource? For some resources (e.g., a residence, a home garden, or a herd of sheep), the answer may be an individual or household. For a pasture commons, a traditional institution may manage the resource—a chief or a committee of elders or a clan. Do these institutions have the capacity to more effectively manage the resource concerned? If not, is there a way to form and develop new community institutions for this purpose, or to provide supports that will enable them to perform their management roles more effectively? As one moves into areas used by pastoralists periodically or sporadically, who manages the relationships with other groups with whom they share those resources?

Third, what is the scope of the protection effort? Is it to deal with a few key resources or extend its reach to the whole of the network of resources and relations over resources of migratory pastoralists? A repeated critique of projects for pasture management, it will be seen, is that they have focused too narrowly on improving use and management of major pastures and ignored the importance of many of the more specialized resources and relationships pastoralists benefit from by virtue of their mobility. What does security mean with respect to mobility and this wider range of resources?

This paper seeks to address these issues in the following fashion:

- An introductory discussion of pastoralist land use systems and some economic models used to analyze and reform them.
- Reviews of a number of projects that have addressed pastoralist land use and rights. Unfortunately, as will be seen, the projects often had disappointing results, and few can be called "best practices."
- A fundamental critique of tenure approaches to pasture management, stressing the importance of continued mobility in the face of environmental uncertainty. In light of that critique, lessons drawn from the project experience and the literature include:
  - Tenure approaches: rights and right-holders;
  - Management: communities and their institutions; and
  - Scope of protection: which resources?
- Suggestions for general directions for future efforts at protection of pastoralist lands.

1.0 THE NATURE OF PASTORALIST LAND USE

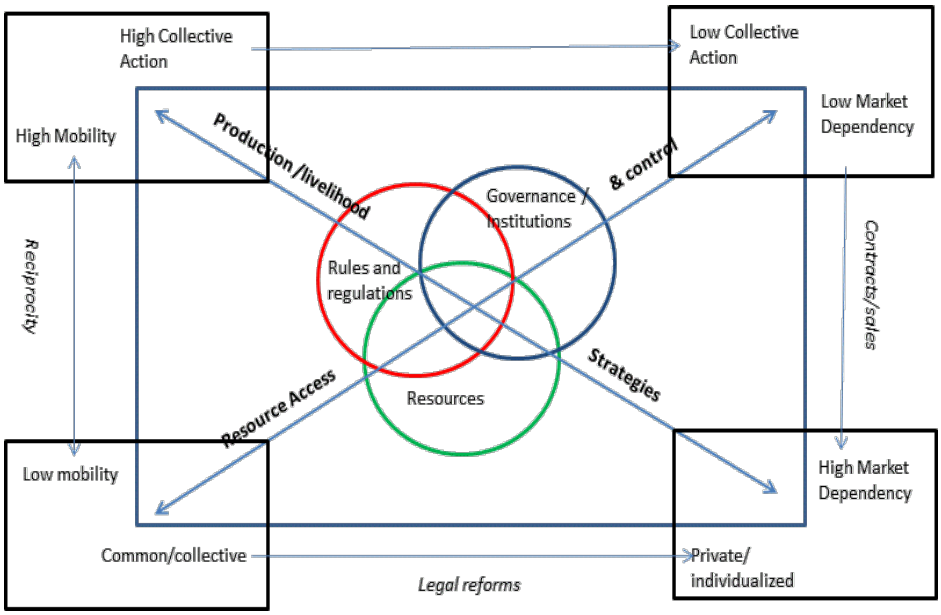
There are estimated to be 180 million pastoralists in developing countries. These are agriculturalists who rely primarily upon their livestock for income. They consume the products of their livestock and exchange those products for grain and other needs. They typically live and graze their animals in marginal areas that are too cold, high, or dry for traditional crop agriculture. They move their herds as needed to access additional pastures of high but seasonal or other temporary value. If a pastoralist group lives near cropping areas (as in the Sahel and in a number of Middle Eastern countries), it may also move livestock during the rainy season to avoid conflicts with farmer communities. This practice of migration is also referred to as "transhumance."

A pastoralist community most often will have a base area where its members spend part of the year, and from which its herds move seasonally to access pasturage elsewhere. Pastoralists must cope with fluctuating rainfall; if there is a succession of low-rainfall years, drought can stress their livelihood systems and decimate their herds. Migratory herd movement is a strategy that allows pastoralists to use their intimate knowledge of their natural resource base to respond to such challenges in a changing and uncertain environment (Ngaido, 2000; Ngaido and Kirk, 2001). The extent to which groups move varies a good deal, as does the number of community members that travel with the herds. In some cases, only young men of a certain age travel with the herds. Pastoralist communities can be categorized as nomadic, semi-nomadic, and settled. A pastoralist ethnic group may have some communities that fit each of those categories (Taylor, 2007; Behnke, 2011).

Understanding pastoralist land use systems is challenging because there are many diverse systems that reflect different resource endowments, rainfall patterns, and community strategies. In addition, these elements and related strategies are not static, but change in response to other factors. Figure 1 below illustrates the interaction of many of these factors.[1]

[1] This figure was designed by Tidiane Ngaido for this paper.

Figure 1: Framework for Understanding Pastoral Systems



At the center of the figure, three key components of pastoral land use systems are recognized: resource access, rules and regulations, and governance/institutions:

- The **resource** component relates to the areas used by pastoralists for grazing. Four resource types are considered here: 1) grazing resources that are considered as the home base of the pastoral community; 2) grazing resources that are used during the transhumance period for the same community or other communities, or that are collectively accessed by various communities (what is generally considered as open access); 3) grazing resources that are under the control of other communities but are accessed mainly during drought periods to complement community feed needs; and 4) options for renting or contracting grazing resources through various market mechanisms.

- The **rules and regulations** component includes customary and statutory legal and social norms and rules governing access, use, and management of the resources, as well as the implementation of production systems and livelihood strategies. Our concern here is with recognition of rights to natural resources essential to patterns of pastoralist land use. Some pastoralist communities may have their customary rights recognized by the state, others will not. Those rights are communal in nature, and in cases where they are recognized, a body of theory and practice concerning "common property" is relevant. Communities that do not have state legal recognition are in a more precarious situation and open to many abuses by influential and rich community members. They are also vulnerable to government, which may be able to allocate their mainstay resources to others for other uses, without consultation and appropriate compensation. Tenure is thus a key analytical category for analysis of pastoralist systems, at both the community and individual levels.

- The **governance/institutions** component includes customary and government institutions responsible for the management of pastoral resources. Some institutions with authority in this area are traditional in nature, and again may or may not be recognized in national law. Others will have been introduced more recently (cooperatives, pastoral groups, producer organizations, and nongovernmental organizations [NGOs]). These play complementary but competitive roles in the management of the resources. The capacity of a single institution or several working together for effective "collective action" is critical to sound management of pastoralist lands.

This schematic reminds us of the variety of factors at play and the potential for change in one factor to affect others.

2.0 PASTORALIST LAND TENURE AND REFORM MODELS

Most pastoralist groups hold the land they use by virtue of long practice and custom. While they have strong proprietary feelings toward their territories, their customary rights in those areas are often not recognized in national law. In other cases, customary rights had been recognized during the colonial period, but recognition was withdrawn by post-independence socialist governments. There are exceptions to this, such as Morocco, where those rights were recognized as early as 1948 and continue to receive recognition. Tribal communities are titling the land in the name of their tribe.

In the absence of such recognition, the lands used by pastoralists are usually considered to be owned by the state. This is by virtue of legal provisions, sometimes in the constitution and in other land legislation, that land to which no private title has been established is the property of the state. The failure of national law to recognize the customary rights of pastoralist groups has left those communities highly vulnerable to the current wave of appropriations of land for large-scale commercial exploitation (World Bank, 2010).

How can those customary rights best be characterized? Early blanket characterizations of such land tenure as "communal" are now recognized as serious oversimplifications and misleading. Pastoralists make different uses of the various areas of land they access that are subject to different tenure rules. These are, in effect, tenure micro-regimes. The areas of land with particular uses and related tenure rules are characterized as "tenure niches" in the larger landscape (See Box 1.)

BOX 1: PASTORALIST LAND USES AND TENURE NICHES

"Multiple resource use in pastoral Africa is traditionally regulated by informal or formal rules based on the priority claimed by different user groups: 'primary users' have highest priority within their home territory, 'secondary users' have seasonal access, and 'tertiary users' have infrequent access in times of need, such as drought years. Five territorial units within a hierarchy of tenure regimes can be distinguished: the customary *territory* belonging to the 'tribe'; flexibly defined *annual grazing areas* within the territory, with priority use by several clans, sections, or sub-clans; *dry season bases* where a specific group, such as a sub-clan, is the primary user and other groups are secondary or tertiary users; *key sites* within the dry season base; and *group or individual resources/areas*, such as trees in Turkana, where a household or group of households are primary users.

Overlapping territories, managed jointly by neighboring groups, allow some room for expansion and function as fall-back areas in difficult years. *Buffer zones* between groups, maintained for similar reasons, are more extensive and often used by more than two groups. The latter require ad hoc negotiations over use between the different groups when the need to use these areas arises."

Source: Niamir-Fuller (1994).

These niches are not identical from one pastoralist group to another, nor are they of the same importance in different pastoralist land use systems. The differences between pastoral land use patterns and tenure niches depend very much on the size, quality, and biodiversity of the resources they utilize.

It is also possible to identify and categorize tenure niches depending on whether they are entirely under the control of the community in question or shared with other communities:

- *Transhumance areas are under the control of the same community*. This is an extension of the home base and all community members have access to these resources, though some may have priority access. These areas are also used for leverage by the controlling communities to grant access to others.

- *Transhumance areas are under the control of farming communities.* These resources are usually located in a different ecosystem, generally forests, water, and deep ranges. There may be strong traditions of allowing pastoralist communities to use this land temporarily as part of their migration pattern.

- *Transhumance areas are controlled by other pastoral communities*. Many mechanisms exist for accessing these resources. The most prevalent is a reciprocal arrangement between communities whereby communities share their respective risks or grazing contracts.

- *Transhumance areas are under the control of government institutions (range and forestry services).* These services can be rented or otherwise accessed by pastoral groups during specific periods of the year. Depending upon the customary rights over these resources, some pastoral communities may have priority access rights.

- *Transhumance areas are collectively accessed by various communities (shared access).* These are generally deep areas of the rangelands in Central Asia, the Sahel, and the Middle East. These often lack any effective control of use. They are in the nature of open access resources, and vulnerable to overgrazing. These areas play an important role in providing an option that reduces tensions between pastoralist and farming communities, notably in the Sahel.

Security of tenure is one means we have of affecting land users' incentives for investment and good husbandry, and for getting tenure "right" has been seen as key element in programs to protect pastoralist land and improve its use. Pastoralist land access and use will only receive the necessary protection if it is seen by policy-makers to be relatively productive and efficient.

The early development literature on pastoralism assumed that traditional pastoralists' wide and often unpredictable movement in search of water and grazing were inherently unproductive and destructive to range resources. There is a critique of "the commons" that originates in a failure at both a popular and theoretical level to understand the operation of customary commons. Policy prescriptions focused on creation of more limited, legally bounded ranches near permanent water sources, where equilibrium between stocking levels and forage could be achieved by managers, largely through control of livestock numbers.

During the 1960s, a consensus emerged in development circles that this could best be accomplished by breaking up the commons into household landholdings. A theoretical basis existed for individualization: the "tragedy of the commons" model associated with Hardin (1968). Communal grazing, Hardin argued, must inevitably lead to overgrazing. Individual livestock owners from the community, he suggested, have no incentive to "stint" and will put as many of their livestock on the commons as possible; overgrazing and range degradation must necessarily result. This perspective informed some important reforms of pastoralist land tenure, notably the creation of individual ranches under the Tribal Grazing Land Policy in Botswana (see Box 2 in Section 3.0). It is still reflected in some important ongoing reforms, such as the

development of “household ranches” underway in high plateau pastoralist areas of western China (see Box 3 in Section 3.0).

But the tragedy of the commons models assumed a free-for-all, with little or no community control of use of the grazing commons. This often was not the case. In fact, there were many community institutions that managed the use of the commons by its members and others, ensuring that the resource was not overused and degraded. These actively managed commons are referred to by institutional economists as “common property” situations (Ostrum, 2010). Where communities do not actively manage their commons, the degradation predicted by Hardin can of course occur, but this is not nearly so common as proponents of individualization of pasture tended to assume. This situation of an unmanaged shared resource is today characterized as an “open access” situation—to distinguish it from “common property” situations.

This “common property” model underlies reforms that seek to preserve and improve pastoralist management of pasture commons (Lawry, 1990). These reforms seek to help communities do a better job of managing their commons. They emphasize clearer delimitation of the commons, clear tenure rules to govern their access and use, and more effective management institutions. They often involve breaking up large areas of pasture into smaller and more manageable areas for smaller user groups. Reform under this model seeks to ensure that these features are in place. If they are, the model predicts, communities will respond to incentives as do individual owners—self-regulating use of the resource to ensure sustainability. Many more recent project initiatives have focused, explicitly or implicitly, on building and perfecting “common property” in pasture resources. Some pastoralist systems include small highly regulated commons that fit the common property model, for instance, mountain grazing commons of farming communities in highland Ethiopia. But in arid contexts with pronounced migratory patterns, common property reforms often carve out limited areas of better pasture to regulate and focus new investments on those areas. These radically alter traditional patterns of pasture use and management.

Both sets of tenure reform programs—individualization and common property approaches—have had a common objective: seeking to create stable production systems for pasture that obviated or reduced the need for seasonal migrations. As will be seen, other more complex reform programs have addressed a wider range of land uses, or have sought to apply regulatory and technical solutions without tenure reform. These earlier project experiences shed light on the pros and cons of different approaches. They are reviewed in the following section of this paper. If they have not been entirely successful, they still can suggest valuable lessons for future project design.

3.0 PASTORALIST LAND MANAGEMENT AND TENURE REFORM PROJECTS

Here we consider two examples of individualization experiences, followed by examples of several common property reforms, two examples of more comprehensive tenure approaches, and finally two cases where the focus has been on regulatory innovations working with the customary tenure system. These reforms, it should be noted, have focused almost entirely on one tenure niche: the pasture commons, typically the near commons areas.

3.1 PASTURE INDIVIDUALIZATION: BOTSWANA AND CHINA

Individualization of pasture resources has been pursued in a number of developing countries. This was an early prescription, and has been relatively well-studied (and -critiqued), notably in the case of Botswana (see Box 2).

BOX 2: BOTSWANA'S TRIBAL GRAZING LAND POLICY

Botswana's extensive rangeland historically supported diverse livelihoods—hunting, foraging, and keeping livestock. Cattle have been a longstanding source of subsistence and income for rural residents, with the highly dynamic arid and semi-arid ecosystem dictating how communities managed the land and herds. In early twentieth century, the colonial government responded to expanding markets for livestock by rewarding investment by syndicates in drilling boreholes with private property rights to the borehole and de facto control of the surrounding land. Borehole development allowed for year-round pastoral production and reduced the need for seasonal migration for water. Both herding communities and livestock became more sedentary.

Government became increasingly concerned about range deterioration around the water points. In 1975, invoking the "tragedy of the commons," government promulgated the Tribal Grazing Land Policy (TGLP). The TGLP sought to increase productivity and conserve rangeland by leasing large tracts of formerly communal rangeland for commercial ranching by large producers who, it hoped, would invest in the land. The leases were for 50 years. In 1991, the National Policy on Agricultural Development expanded areas for commercial ranches to include the land surrounding private boreholes, turning de facto control of pastures through borehole ownership into exclusive tenure to that land. Taylor (2007) estimates that 40,000 km^2 have been taken out of the commons for these ranches.

The policy included protections for communal land users through demarcation of reserved land and protective provisions, such as requirements of community consultation regarding location of commercial ranches. But in implementation, the TGLP prioritized establishment of commercial farms and the interests of elites. Reports by government agencies and independent observers alike suggest that privatization adversely impacted those dependent on communal land and the fragile rangeland itself:

- Establishment of private ranches dispossessed those most reliant on the communal lands, including pastoralists and hunter-gatherers. The government failed to provide adequate alternate land for the

dispossessed, to demarcate reserve land, or to enforce protections intended to equalize the rights of pastoralists and commercial ranchers.

- The TGLP dictated uniform private ranch boundaries, without regard for differences in soil, vegetation, and topography, resulting in damage to vulnerable ecosystems.
- Many commercial ranchers increased their herds and did not erect fencing, asserting their rights to use both the leased ranchland and communal land, and thereby limiting their need to invest in ranch infrastructure and purchase inputs. Pressure on the village grazing areas relied on by smallholders and communal land users increased.
- The limited information available suggests that less than 30% of commercial ranches have been profitable. Their real value may be in land speculation; land for which lessees pay annual fees of $0.15/hectare are now advertised for $100,000–$400,000.
- A decreasing number of rural households own cattle (37% in 2003).

Adams (2013) concludes that the excising of land from the commonage has exacerbated grazing pressure in communal areas, contributed to rural poverty, increased the gap between rich and poor, and fuelled rural-urban migration. The TGLP is scheduled for review at the close of the National Development Plan's 10-year term in 2016.

Sources: Adams (2013), Arntzen (1998), Centre for Applied Research (2007a, 2007b), Cullis and Watson (2005), Frimpong (n.d.), Hitchcock (1990), Malope and Batisani (2008), Peters (1994), Republic of Botswana (2013), Taylor (2007).

Botswana's Tribal Grazing Land Policy and its implementation were explicitly informed by Hardin's "tragedy of the commons" model. The TLGP has drawn considerable criticism because it transformed large parts of the communal range into large leasehold ranches and focused government support and subsidies on those leaseholders, most notably large loans for fencing. The leaseholders were clearly enriched by the reform. But the reform had a major downside: it excluded small herders from much of the communal range to which they previously had access. This exclusion was expected by policy-makers to be counterbalanced by TGLP ranchers moving their livestock off the communal range and onto their ranches. In fact, the ranch-holders often turned their livestock out onto the remaining communal pastures when those were at their best. The TGLP seriously undermined the livelihoods smaller stockholders relying on the communal pastures; problems of degradation of communal pastures through overgrazing continued.

China is currently implementing a program that creates household ranches out of pasture commons. The decision to move in this direction was inspired not so much by a theoretical model but by the positive results achieved in the late 1980s by dividing commune agricultural lands among households (Bruce and Li, 2009). The central government is convinced that household management of pastures will, as in the farmland case, produce the incentives needed for better husbandry (see Box 3).

BOX 3: BUILDING THE HOUSEHOLD RANCH IN CHINA

Around 300 million hectares of China's grasslands are classified as useable pastoral areas. They include large areas of the high plateau of Tibet, Qinghai and Gansu, river basins in Xinjiang, the steppe areas of Inner Mongolia, the Loess and Yunnan plateaus, and the Gobi Desert, and are inhabited by China's major minority populations: Tibetans, Kazakhs, Uigurs, and Mongolians. These are arid highland areas subject to extensive droughts and dry spells, occasional concentrations of heavy rain, and unreliable seasonal rainfalls. The quality of vegetation can vary extensively across time and place. Traditionally herders moved their flocks between pastures in different ecological niches on a seasonal basis to maximize access to grazing.

After the success of the 1949 revolution, pastoralists were brought within the standard rural administrative structure of mutual aid teams, cooperatives, and collectives. The pastures were taken into either state (Xinjiang) or collective (Inner Mongolia) ownership, and the flocks also became state- or collective-owned.

There was a rapid growth in animal numbers as herders sought to maximize incomes and this raised fears of land degradation due to over-grazing on collective pastures. In 1978, China initiated its Household Responsibility System, which returned farmland to household agriculture on family holdings. This successful model was soon extended to pastoral areas, contracting stock and pasture to households. While the herders do not own their lands, in theory they have secure, long-term use rights, and they are able to subcontract their pastures or charge a rent for others to use it. In 2009, the transition to household ranches was said by government to have been accomplished in two-thirds of China's pastureland; other commentators suggest the portion may be lower and varies considerably locally.

Environmental protection in the grasslands and western upland areas to reverse range deterioration has been a key driver of national land right policies in this area. Most Chinese rivers rise in these upland areas and flow eastward. After a string of environmentally connected natural disasters, government from 2011 redoubled efforts to promote a more sedentary pastoralism through promotion of grazing bans, resting pastures, and rotational grazing. The central government has heavily subsidized these through compensation payments to participating herders for loss of production. The incomes of participating households have risen, both due to subsidies and the better quality of animals and animal products entering the market.

The government is pressing forward with implementation of its sedentarization and household ranches policies, and has been willing to back this with substantial subsidies for compliant households. In 2011, the State Council urged its departments and local governments to "basically complete the relocation and settlement of nomads by the end of 2015." The budget for this program was set to reach 13.6 billion yuan (about 2.1 billion U.S. dollars) that year. Affected herdsmen are compensated with an annual subsidy ranging from 5.5 yuan (about $0.85) to 50 yuan per *mu* of different kinds of grasslands where grazing is prohibited, and an annual subsidy of 1.5 yuan for per *mu* of grassland where grazing is limited. In addition, herdsmen who sow grass will be given an annual subsidy of 10 yuan per *mu*. The program also provides an annual subsidy of 500 yuan to every household in rural areas to help them purchase diesel oil and cattle feed. The central government is expected to annually spend 13.4 billion yuan in five consecutive years (2011–2015) on the program.

Empirical studies suggest that the orderly process depicted in government documents cloaks preferential treatment of powerful families, diverse local responses to the reform, and significant conflict over pastures. In addition, in spite of the substantial subsidies for more sustainable land use, there is evidence that the quality of grasslands continues to deteriorate. Some analysts attribute it primarily to poor household compliance, or to climate change. Others stress the impact of extension of agricultural and other activities into pastoralist areas. Despite the regulations seeking to protect the pastures and herder pasture rights, the demand for land for agriculture and other uses is growing rapidly and infringement of herders' rights is common; water resources are diverted and uncontrolled development continues to take place.

Some commentators, however, put forward a more fundamental critique: that the government's approach is itself at fault, because it encourages concentration of livestock within limited areas, discouraging the pastoralists' earlier wide-ranging movements to find grazing and water and so creating unsustainable pressures on the pasture in those limited areas. They ask whether the new household ranches will be sustainable when the subsidies stop, and express concerns over the longer-term impact of processes such as subdivision of ranches among heirs and transfers and subleasing of ranches.

Sources: Banks (2005), Li and Huntsinger (2011), Zhang and Li (2009), and Zukosky (2008).

The new household ranches in China are held, as in the case of Botswana, in long-term leasehold title. In this case, however, every pastoralist household could apply for and receive an allocation of rangeland. In some provinces, each herder household got the same amount, but in others, household size was taken into consideration. As in Botswana, it was clear from the outset that the new individual ranches would need considerable support from government to transition to the more intensive animal husbandry envisaged. The subsidies being paid to help the new ranches reach equilibrium are substantial. Questions have been raised about the viability of the ranches when the subsidies end. More important, range conditions on the ranches do not appear to have improved much. Commentators suggest that the loss of mobility and access

to far pastures has led to a concentration of livestock on the ranches, resulting in continuing range deterioration.

The primary difference between the programs in Botswana and China is distributional. In Botswana, the TGLP assumed that livestock production required a large scale, with operations run by big, established ranchers. In contrast, the Chinese program has a strongly egalitarian orientation resulting in much smaller units managed by rural households. In neither Botswana nor China did ranchers receive full ownership of the land, but they did receive relatively strong leasehold or use rights, and those rights are transferable. In China, commentators suggest that transactions to date are tending to a larger operating unit than the initial household ranches.

What can we learn from these cases?

- The individualization programs have a potential for elite capture of pasture resources, though this may be moderated by clear distributional policy objectives;
- Very substantial private or public investment was required for establishment of individual ranches, principally for water source development and fencing;
- The individualization programs have had less impressive impacts on range condition than was anticipated. In the Chinese case, continuing and very substantial subsidies are being deployed in an attempt to improve pasture condition on the ranches; and
- It will be important to monitor the impact of marketability of the leased land over time, to assess the long-term impacts of markets on ranch size, distribution of access to pasture, and movement of land out of animal husbandry.

3.2 COMMON PROPERTY REFORMS: KENYA, MEXICO, MONGOLIA, AND NIGERIA

As noted earlier, institutional economists have argued convincingly for the viability of management of range as common property by pastoralist communities, so long as some basic conditions are met. However well-grounded in theory this position may be, realizing effective communal management has been problematic. Five cases are reviewed here: Kenya's experience with group ranches, ejidos focused on cattle production in Mexico, Mongolia's experience with management by herder groups of pasture commons leased from the state, Namibia's registration of communal lands, and Nigeria's attempt to encourage pastoralists to use state-designated grazing reserves.

In Kenya, group ranches were introduced in the context of a major tenure reform program converting customary rights to individual private ownership. The group ranches were an option for pastoralists, who resisted the idea of individualization of their pastures. A strong legal basis was provided for the groups by the Land Groups Act of 1968. The group ranch was privately owned by the group, and members owned tradable shares in the ranch. The program was implemented primarily on Maasai tribal lands. Livestock remained owned and managed by the members individually, subject to grazing quotas. While government initially provided assistance with developing water and other infrastructure for the new group ranches, it then stepped out of the picture (see Box 4).

BOX 4: KENYA'S GROUP RANCHES

Group ranches in Kenya are a government-driven land intervention created to reduce environmental degradation due to overstocking of livestock, provide incentives for investment in and management of land and natural resources, increase productivity and improve earning capacity of pastoralists, and strengthen tenure security for local land users. Group ranches are a form of private ownership of land. Land within group ranches belongs to a designated members; it is neither owned by individuals nor is it open access. Group ranches represent a significant transition from what was previously a form of

common ownership of rangelands (Mwangi, 2006; FOLA, 2011; Mwangi, 2005).

Kenyan rangelands make up 82% of the country's land area and support a population of approximately six million people. Prior to colonization, these natural pastures were used by local pastoralists for grazing livestock, and livelihood systems included season movement of people and animals. Pastures were managed communally, and individuals owned animals. Pastoralists' livelihoods and natural resource management practices were adapted to the ecological context. (Kibugi, 2009; FOLA, 2011).

The Land Groups Act of 1968 provided a legal framework for group ranch operations and management, and was built on decades of colonial and state intervention into pastoral livelihoods and land management. Group ranch boundaries were initially formed along traditional grazing unit lines, and were determined by pastoralists with government support. After their formation, the Registrar of Group Lands formally approved the boundaries (FOLA, 2011). Under the group ranch system, each ranch has a set of registered members and a delimited territory. Ranch members have grazing quotas (i.e., limitations on the number of livestock) and manage their own livestock. The group holds title to the ranch, and individual members within the ranch hold residency rights (and "unilaterally tradable shares"). An elected body of members governs the management of the group ranch, and guides the development of shared ranch infrastructure. Once a group ranch has been created, the state has little involvement in its management. The governing body determines how resources will be managed and accessed (for example, dividing the ranch into zones for settlement, conservation, and grazing) (Mwangi, 2006; Kibugi, 2009).

According to Mwangi (2006), "there is common consensus among scholars and planners that this policy innovation is a dismal failure," and that "it has jeopardized the socio-economic welfare of the Maasai." The group ranches failed on at least four counts:

1. Initial seeming acceptance of group ranches appears to have been due to fear of other potential government actions. In fact, many Maasai had opposed the intervention, and believed that it would lead to non-Maasai being able to acquire individual land holdings more easily. From its inception, the group ranch system had weak buy-in (FOLA, 2011).
2. Group ranches were not planned with seasonal variation in mind. Their boundaries held members on fragile lands, members who had before moved with their animals according to the seasons. The boundaries also broke down cooperative relationships between agriculturalist and pastoralists that had once lived side-by-side. When those boundaries were ignored, concentrations of people and animals led to environmental degradation, and increased conflict and competition over grazing land. Some pastoralists moved out from the confinement of their group ranches to find water and grazing land, especially during droughts (Mwangi, 2005; FOLA, 2011).
3. Subdivision reduced parcels sizes, increased land sales, and increased agricultural cultivation. It also led to higher intensity growing on smaller, more fragile lands. On such parcels, families could not cultivate enough food to feed their families, and their agricultural practices were not sustainable (FOLA, 2011).
4. Group ranches failed to improve beef commercialization as promised (FOLA, 2011).
5. Group ranches also failed to protect women's rights to land and natural resources despite the fact that women are critical resource users; registration of group members only registered male "heads of households" and in some cases their sons. Widows could be registered, but this was not done as a matter of case. Youths were also generally excluded from registration, though they used forums available to them to contest that exclusion over the course of the group ranch program (Mwangi, 2005; Kibugi, 2009).

Because of these failures, many ranches were (and continue to be) subdivided by their membership, an allowable action under the 1968 Law. This process is very controversial, as the process includes the granting of individual title to members. Of course, members have many incentives and pressures to subdivide their land, including (Kibugi, 2009):

- Desire to use individual titles as collateral for loans (FOLA, 2011);
- Frustrations with inefficiencies and corruption in ranch management (FOLA, 2011; Kibugi, 2009);

- Preference for individual means of production over group means of production (especially among young men) (Mwangi, 2006);
- Desire for protection of individual claims against government appropriation and market pressures (FOLA, 2011);
- Perceptions of tenure insecurity due to development of commercial agriculture surrounding ranches (Mwangi, 2005);
- Demographic pressures (Mwangi, 2005); and
- "Perceptions of scarcity and common-pool resource losses" (Mwangi, 2005).

While there is very little current information available about the number and size of group ranches in Kenya, a 1984 paper (Ng'ethe, 1984) lists 159 total group ranches in Kenya, comprising 30,261 square kilometers of land. Recently published case studies offer insight into the scale of subdivision. For example, in Kajiado District (one of 46 districts in Kenya), 52 group ranches were registered in 2006, 32 of which were subdivided, and 15 of which were in the process of being subdivided. According to a brief published by Focus on Land in Africa (2011), "today few, if any, group ranches remain." Not only have ranches been subdivided, but since subdivision, individual landholders have also sold their parcels to non-Maasai (FOLA, 2011).

Some group ranches still exist and are using creative means for strengthening and diversifying members' livelihoods without subdivision of the ranch. For example, an 8,900-hectare ranch south of Nairobi allocates 3–4 hectares of land to each member for agriculture where there is good access to water. Another section of the ranch is dedicated to conservation, where members have built tourist lodges and other projects for more diversified incomes (*The New Agriculturalist*, 2012). Another ranch, Il Ngwesi Group Ranch, owns 8,645 hectares of land. Its 7,000 members have developed cultural villages, artisanal handicraft production, campsites, and eco-tourism for visitors. The ranch uses proceeds from these enterprises for development projects that benefit members, including for education, health, and water projects. The ranch has also purchased land outside the ranch for large-scale agriculture (UNDP, 2012).

Sources: Burnsilver and Mwangi (2007), FOLA (2011), Kibugi (2009), Mwangi (2005, 2006), The New Agriculturalist (2012), Ng'ethe (1984), and UNDP (2012).

It seems that the top-down character of the reform undermined its effectiveness. There was no Maasai demand for tenure reform. Internal conflicts within groups were common, and management and observance of rules were weak. Increasingly, members (particularly younger men) insisted on subdivision of the ranches, which was allowed by the Act. Many members moved into crop production, and few group ranches remain today. Those which have survived seem to have done so by developing sideline economic activities that generated additional income streams for their members, such as eco-tourism.

Mexico provides another example of a common property approach. After the Mexican Revolution of 1910–1920, government instituted the ejido as the fundamental unit of community land governance. Ownership of land remained vested in the state, but ejidos received perpetual management rights over the lands. Most ejidos were essentially farming operations that had some limited pasture for grazing of draft animals and production for the households. But some ejidos were created out of private ranches that had been nationalized and continued operations as livestock collectives, with both herds and lands held by the ejido. In the early years, substantial government assistance was available, but support was often subject to detailed operational requirements imposed by the government and central bank. The collective ranches, some of which were directed into operations that required expensive inputs and links to foreign markets, had difficulty remaining profitable after that assistance ended. After 1992, in Mexico's "Second Land Reform," legal reforms empowered members to subdivide and sell ejido resources. In one well-documented case, the ejido members voted to break the ejido pasture into smaller management units. Subdivision increased. Membership in the new units has since declined, and transactions have shifted control of much of the ejido land to outsiders (see Box 5).

BOX 5: MEXICO'S CATTLE EJIDOS

The agrarian reforms implemented after Mexico's revolution created the ejido as the foundation for the redistribution of the country's land and efforts to combat rural inequality. The ejidos initially benefited from government-subsidized inputs and established markets, but beginning in the 1980s, the supportive framework collapsed under Mexico's financial crisis and NAFTA's relaxation of trade restrictions. In 1992, new legislation permitted ejidos to privatize demarcated land holdings and develop production groups to manage communal land. The experience of one cattle ejido in northwestern Mexico offers insight into the ways in which Mexico's history of reforms—and institutional control over land use and management—impacted and ultimately may have constrained the ability of the ejidatarios to respond to changing local conditions and maintain their agrarian livelihoods.

In the 1950s, the Mexican government expropriated land owned by the Canana Cattle Company in the northern border region of Sonora and divided it into seven ejidos. A group of 142 peasant households formed Ejido Miguel Hidalgo and received usufruct rights to 42,300 hectares of communal land. Most of the land was arid grassland, with highly variable rainfall and subject to cyclical drought. The ejido included about 200 hectares of fertile floodplain, which the ejido cultivated for forage to supplement grazing and provide consumption crops.

Ejido Miguel Hidalgo operated as a collective. The centralized ejido governance system managed the cattle in relation to local grass and herd conditions, controlled water use, required all households to participate in maintenance of infrastructure, and ensured all households received sufficient meat from the herds. Local government agencies and the state bank, which was the ejido's sole source of formal credit, encouraged the ejido to raise feeder calves for export. The operation required expensive inputs and intensive use of low elevation pasture. The bank encouraged the ejido to increase to size of the herds to improve profitability. The operation was not sufficiently profitable, and most households used their credit for consumption spending. A series of floods damaged the ejido's water system that supported the pastures, and a decade of drought followed. The financial crisis in Mexico, combined with controls over credit, prevented the ejido from repairing of the system. Ejidatarios were saddled with debt and were unable to pay for inputs or infrastructure. The land was increasingly degraded, and cattle were sold at a loss or starved.

Frustrated, the ejido voted to divide herds and rangeland into six sections and decentralize its management. Around the same time, the government passed the 1992 reform permitting privatization of ejidal land. A water law of the same year made water extraction rights alienable. On Ejido Miguel Hidalgo, each ejidatario received title to a four-hectare parcel of floodplain, and they formalized their membership in the separate cattle groups. Twelve years after privatization, just over half of the 142 households still owned their shares of the floodplain, and 88% leased out their land. The average plot size had tripled. The transfer of control of the floodplain to outsiders severed the centuries-old link between the floodplain and rangeland resources; rancher-farmers had less rangeland under the new system and lost control of the floodplain for forage. By 2006, most ejidatarios had largely non-agrarian livelihood strategies and outsiders controlled much of the range and floodplain. An increasing number of cattle ranchers were absentee and many were linked to narcotics trafficking and rumored to be using cattle operations as a repository for cash. A group of five ejidatarios were negotiating with a mining company for the sale of ejidal water; ironically, they reportedly hoped to use the proceeds to rehabilitate the communal water system.

Sources: Cornelius and Myhre (1998), Coronado-Quintana and McClaran (2001), de Janvry et al. (1997), Emmanuel (2006), and Yetman and Burquez (1998).

In Kenya and Mexico, in the absence of continuing state support for animal husbandry on the group ranches, a tendency toward subdivision emerged. In some cases, landholders subdivided land in order to manage pasture for more profitable operations. However, some households obtained land over which they could exert more autonomous control, including moving into farming or other land uses.

In Mongolia, a recent pilot funded by the Millennium Challenge Corporation (MCC) has created user groups and leased state-owned pasture to those groups for management (see Box 6). Group members were

selected from among qualified applicants in a random selection process. They retained individual ownership of their herds.

BOX 6: RENTING STATE-OWNED PASTURE TO HERDER GROUPS IN MONGOLIA

The MCC's 5-year compact with the Government of Mongolia began in September 2008 (and ended in September 2013). This compact included a $27 million property rights project with an urban titling component, and complementary peri-urban rangeland component (PURP). Two ultimate objectives of this property rights project were to: (1) improve livestock productivity and herder incomes; and (2) increase the security and capitalization of land assets held by lower-income Mongolians (USAID, 2010).

To accomplish those goals, MCC supported local government in leasing pastureland to herders (the only rights not permissible under Mongolia's legal framework) (Bzarragchaa et al., 2013), and also—in partnership with the Millennium Challenge Account in Mongolia—provided fencing, wells, and other training and services to them. The project also worked to improve Mongolia's property registration systems, and supported poor households in acquiring land titles. In March 2013, the MCC estimated that between 51,000 and 61,200 beneficiaries would be served by the project, and that participating households would realize an estimated $13,891,974 increase in household income (USAID, 2010; MCC, 2013a).

Traditionally, Mongolia is a nomadic society, and herders change location several times over the course of a year as they seek better pastures and water sources for their stock (Bazarragchaa et al., 2013). However, this is changing. The PURP was designed as a pilot in response to the "steady stream of poor rural Mongolians" who are "abandoning traditional nomadic herding practices and migrating to the cities in search of better lives." This migration and concentration of people and animals, has led to over-grazing (MCA, 2011).

The PURP component was implemented in five areas of urban and peri-urban Mongolia (in the capital of Ulaanbaatar and in other cities), and included remote lands near the country's smaller cities (L. Rolfes, personal communication, 2013). As of March 2013, nearly 390 herder groups had signed pasture leases, 273 wells had been planned for those leased lands, and more than 5,000 participants (herders and government officials) had been trained on sustainable pasture use and management (MCC, 2013a). Approximately 465 serviced tracts of pastureland were leased to herder groups over the course of the project. Herders were given leases to land to be used in the winter and spring, and typically continued to use summer pastures allocated to them by the local government. The leases granted under the project were 15-year leases renewable for up to 15 years, and transferable through inheritance (L. Rolfes, personal communication, 2013; Bazarragchaa et al., 2013).

Specifically, the PURP component located potential leasing sites, selected participants to receive leases (based on innovating randomized selection process), developed wells and animal enclosures and shelters, and trained herders and government representatives on sustainable natural resource management and business skills (Bazarragchaa et al., 2013). The project also targeted women through awareness-raising about the benefits and importance of land ownership through public outreach. By 2011, women's participation in land ownership had increased by five percent in project areas (MCC, 2013b).

Given that the project just ended in September 2013, the long-term impacts of the project are as yet unknown. However, some of the challenges faced during implementation may be instructive:

- There was a lack of clarity regarding the relationship between the project and the World Bank's Resettlement Policy, leading to the project rejecting potential beneficiaries out of caution;
- Government partners withdrew from leasing land in the districts of the capital immediately prior to their signing. This caused conflict not only between the governors responsible and the project, but also between proposed beneficiaries and the project; and
- There was confusion among herder group members and local government partners regarding eligibility, roles, and responsibilities within the project (Bazarragchaa et al., 2013).

Early PURP component successes documented by Bazarragchaa et al. in a 2013 presentation at the

World Bank Conference on Land and Poverty may also be instructive:

- 89% of herder groups "encourage equal participation and votes from members when making decisions";
- Herder groups have constructed weather-resistant livestock shelters for the winter season;
- Herder households have learned how to keep financial records and livestock health records;
- The vast majority (nearly 86%) of participating groups have reduced their livestock numbers to a sustainable level, and begun pasture rotation;
- 44.5% of participating herders have become contracted suppliers of milk and dairy products (and have increased their seasonal milk yields); and
- Participating groups have developed Environmental Management Plans (and many have built toilets and other waste disposal facilities).

Sources: Bazarragchaa et al. (2013); MCA (2011); MCC (2013a and 2013b); L. Rolfes, personal communication (2013); and USAID (2010).

The range management portion of this Mongolia initiative exhibits a number of unusual characteristics. Its rationale is not to reform pastoralist tenure but to deal with the breakdown of that system, a growing abandonment of traditional pasture management by pastoralists, and their increasing crowding into areas around towns and cities. Another distinctive feature is the random selection of participants in herder groups; this could be advantageous in terms of perceived fairness but it may be wondered how this will affect long-term cooperation within the groups. It is also notable that the project supported continued seasonal use of pastures in other areas, as assigned by local governments. It is not clear whether this concession to mobility preserves sufficient flexibility to cope with uncertainty. The project has benefited from major investments in infrastructure from Mongolia's Compact with MCC. It remains to be seen how the user groups will manage once that external support is gone. The pilot was just completed and so longer-term impacts are not yet clear.

Nigeria offers yet another example of somewhat different common property management approach. The federal government has established grazing reserves and encourage pastoralist to settle in them in agro-pastoral communities—not abandoning, but at least reducing, migration. The pastoralists themselves have approached the reserves cautiously, and the extent to which pastoralists have settled in them differs widely. Many reserves are in relatively remote areas, isolated from other economic opportunities and established services such as schools and clinics. Pastoralist communities have been reluctant to abandon their migrations and the related traditional networks and linkages. In addition, there have been difficulties removing agriculturalists already living within the some reserves, causing pastoralists to question whether they will have access to some of the best land in the reserve if they settle there (see Box 7.)

BOX 7: NIGERIA'S GRAZING RESERVES

Nigeria's estimated 15.2 million cattle contribute about a quarter of the country's agricultural gross domestic product and supply the population with one of its primary sources of protein. The cattle—the majority of which have been managed under nomadic and transhumant systems—have also been the focus of more than 50 years of legislative effort to encourage settlement by granting the pastoralists access to grazing reserves. Implementation has been slow. Countywide, an estimated 415 grazing reserves covering 4.3 million hectares have been established, which is less than half the national goal. Only about one-third of those have been gazetted (legally reserved). For those reserves that have been established, results have been mixed.

Some of Nigeria's grazing reserves have succeeded in supporting pastoral settlement. On the 230,000-hectare Zamfara Reserve in northwestern Nigeria, a third of the pastoralists are sedentary, and many have informal rights to cropland in addition to access to rangeland for their herds. Elsewhere, pastoralists

have been reluctant to settle on reserves. In areas such as the isolated 31,000-hectare Kachia Grazing Reserve in Kaduna, even local pastoralists living on borrowed land have refused to move to the reserve. They view the livelihood opportunities on the reserve as potentially less flexible and resilient than the web of relationships through which they historically obtained access to land and water. The Zamfara and Kachia reserves share many qualities, yet Zamfara appears to have been more successful in encouraging settlement. A brief comparison of the two reserves highlights some possible reasons for their disparate fortunes.

The Zamfara Grazing Reserve was one of five pilot grazing reserves established at independence. The Kachia Grazing Reserve was created about ten years later. At the time that they were established, enclave villages of indigenous farmers cultivated land within the reserve boundaries. In the Zamfara Reserve, pastoralists and farmers began using what was then national forest land beginning in the late nineteenth century, and the two agricultural systems and communities evolved together. In 2002, about 28,000 people lived in the Zamfara Reserve, including an estimated 1,000 sedentary pastoralists. About 7,000 transhumant and nomadic pastoralists used the reserve during part of the year. Local government representatives were responsible for enforcing general rules regarding access to crop residue, stock routes, and water points. While many operations included both farming and livestock (agro-pastoralists), a practice of cooperative exchange continued through tools like manure contracts, under which pastoralists grazed their cattle on crop residue and received grain in exchange for providing farmers with manure essential for soil health and productivity.

In the smaller Kachia Grazing Reserve, much of the land was rocky, and there was little or no prior use of the range by pastoralists. Three villages of farmers lived on the most fertile land for at least a generation. Because of the poor quality of land and distance from services, the state struggled to attract nomadic or transhumant pastoralists to settle in the reserve. However, a handful of Fulani households whose families had been based in a nearby region for several generations moved into the reserve because they were told it would be Fulani land.

Nigeria's Land Use Act, which was passed in 1978, and the National Agricultural Policy of 1988, supported the authority of local governments to grant pastoralists occupancy rights to grazing reserves. The Land Use Act also created a basis for valuing land and compensating displaced communities. Despite the availability of occupancy rights, neither the Zamfara nor the Kachia reserve was gazetted. It is unknown whether any serious consideration was given to gazetting the Zamfara Reserve given the history of cropping communities within its borders. By one report, however, the pastoralists themselves resisted gazetting, which they believed would require the imposition of stricter rules that would limit the cooperative and flexible relationships among residents.

On the Kachia Grazing Reserve, the pastoralists believed that the government would relocate the villagers, providing the Fulani with secure rights to the reserve and unfettered use of the most fertile land, as well as supporting the development of essential infrastructure, including a school and clinic. The villagers continued to cultivate the land while waiting for payment for relocation. As in many states, however, Kaduna officials resisted gazetting the Kachia Grazing Reserve, moving established villages, and compensating the villagers for the lost land and crops. As of the last report in the late 1990s, only 34 pastoralist families had settled in the reserve. The pastoralists cultivated their own land, and the farmers used fertilizer for their crops so there was no need to develop the traditional cooperative relationships of exchange. Instead, the separate communities competed for the limited cropping land, and rangeland use by transhumant pastoralist was unregulated. Other pastoral families refused to move because they believed their livelihood options would be more restricted in the reserve.

Meanwhile, the expanding population on the Zamfara Reserve has resulted in increasing encroachment on grazing land for crops and land degradation from overuse. Researchers who have been working on the reserve for more than a decade note a trend of independent agro-pastoralists replacing the integrated farmer and pastoralist operations that thrived on principles of cooperative exchange. In 2009, violent clashes occurred between pastoralists and farmers on the reserve. In 2013, a new bill was proposed that would create federal grazing lands and corridors in all states, managed by a federal grazing commission. The bill was defeated by those representing the interests of farmers and believing that protecting pastoralism at this stage in Nigeria's history was anachronistic.

Sources: Ayanda et al. (2013), Hof et al. (2003), Hoffmann (2003), Ibrahim (2012), Ingawa et al. (1998), Omolehia (2005), and Waters-Bayer and Taylor-Powell (1986a and 1986b).

Neither of the Nigerian reserves was the customary base area of the pastoralist groups concerned. The state offered the pastoralists no clear new rights in the reserves. However, even without new rights to land in the Zamfara Reserve, pastoralists settled and thrived, in part due to the integration of their patterns of use of natural resources with the uses of the more settled communities. In other reserves, poor land quality in some cases and isolation of pastoralist communities both within the reserves and from other economic opportunities and services seem to have been key factors in the disappointing uptake by pastoralists. In Kachia, the pastoralist and sedentary communities never integrated, no services were provided, and other economic opportunities were limited. The pastoralists were left to rely solely on the relatively isolated expanse of rocky land to support their herds and families.

These four projects (Kenya, Mexico, Mongolia, and Nigeria) have focused on shared pasture resources and pursued reforms along common property lines. As in the case of individualization reforms, they have not performed as well as anticipated. This can be attributed to specific design flaws and implementation failures; some that stand out are:

1. Lack of community demand for the reforms implemented. Limited community buy-in resulted in weak pasture management.
2. Too narrow a focus of efforts on a pasture commons tenure niche, and failure to assess carefully the impact of reforms on the larger system of livestock management, resulting in loss of access to important resources in the network used by the group and its members.
3. An inadequate effort in most cases to adequately address institutional issues, in particular, the question of management of the commons. Projects failed to identify clearly the "community" that had interest and rights in the resource, and to build on the existing capacity and legitimacy of traditional communities. Instead, they usually attempted to create new institutions such as ranch or herder groups, which were often not inclusive and whose social legitimacy as managers of pasture commons may not be accepted.

3.3 MORE COMPREHENSIVE PROGRAMS: MOROCCO AND TUNISIA

The programs reviewed above focus on one "tenure niche"—the pasture commons. They failed to consider how changes in this area would affect land use in other niches, which often generated unintended negative impacts. Programs undertaken to develop the pastoralist sector in Morocco and Tunisia seem to have done a better job of recognizing the full range of land use niches and interactions among them, the full network drawn upon by pastoralists that includes social assets and relationships in addition to resources. They have sought to address the system-wide issues by implementing a variety of strategies across different land use categories and situations.

In Morocco, customary rights of pastoral communities had long been recognized, and in the 1990s, the government moved to formalize those rights by demarcating and registering them to the communities (see Box 8). Communities continued to manage their land according to custom, but the Ministry of Interior was given a broad oversight role. Restoration activities were pursued under a co-management model involving the community under a plan prepared in collaboration with the Forestry Department. In other areas, government has supported the organization of grazing cooperatives on tribal land, building on existing social units (rather than common ecology, as in the case of the perimeters). Those units have been given the management of designated pasture areas. Herds remained individually owned. Government has provided assistance and advice to the cooperatives. Title to the land is retained by the tribal group. These cooperatives are considered to have operated successfully. Tribal lands not managed as perimeters or by cooperatives (most tribal lands) have remained under customary title and management. Government has worked with those communities to diversify income streams and decrease reliance upon on pasture resources.

BOX 8: REFORM OF PASTORALIST LAND USE AND TENURE IN MOROCCO

The customary rights of Moroccan pastoral communities were recognized in 1912 as tribal collective rights. In the 1990s, the government introduced various legal reforms to enhance tenure security of members through delimitation and registration and introduced new forms of management to promote better resource management: pastoral perimeters and tribal cooperatives.

The legal approach consisted of recognizing the ownership rights of each tribal group and delimiting the boundaries of the resources under their control. The tribes and communities retained full control over the management of their collective common property resources. Nonetheless, to make sure that the state has some control on the evolution and uses of these resources, the management of these resources and collectivities were put under the trusteeship of the Ministry of Interior. Each tribe/group has an elected or appointed representative who liaises with the Ministry of Interior and manages tribal/group affairs. Customary pastoral management is the prevailing system, and tribal institutions determine access and use of these collective resources.

In 1996, the Ministry of Interior Census found that tribal pastoral lands were about 12,033.4 thousand hectares, of which 23.581% were managed pastoral perimeters, 5.171% were under pilot tribal cooperatives, and 71.248% remained under customary management.

- The pastoral perimeters reflected the ecosystem approach and were experimented in the Middle Atlas region of Morocco. The process included the determination of range perimeters according to the plant population rather than tribal boundaries. The selected ranges were put under the forest regime, which made the forest services responsible for managing access and organizing grazing schedules. Perimeters included territories of many pastoral groups and all right holders and herds were identified and registered (MAMVA, 1994; Amane et al., 1993; Msika et al., 1997). Most of the interventions focused on improving range productivity through deferred grazing, reseeding, and other range improvement practices.
- Tribal cooperatives were implemented in the Oriental region. Tribal systems were organized into cooperatives to enhance tribal range management. This management option avoided the pure ecosystem approach by determining the cooperatives according to tribal territories. The introduction of cooperatives and other production and management packages were incentives to members for more collective action and sustainable management of pastoral production systems and livelihood strategies. The cooperatives were responsible for the management of their grazing resources. The project introduced various innovations amongst rights holders such as cooperative marketable membership shares, grazing reserves, and subsidized feeds. Encouraging results have been obtained from tribal cooperatives, and government is fostering the promotion of this option to improve the management of pastoral collective lands.
- Customary pastoral management has persisted in all other areas. Tribal resources were either delimited or registered. Each tribe has an account that is managed by the Ministry of Interior where all the revenues generated from these resources (mining, urbanization, etc.) are saved to finance tribal collective projects and grants to members during droughts and other calamities.

Sources: Amane et al. (1993), Bouderbala and Filali-Meknassi (1991), Chiche (1997), El Alaoui (1997), IFAD (1998 and 2001), Mahdi (1997a and 1997b), MAMVA (1994), Msika et al. (1997), Ngaido (1999), Ngaido et al. (1998) and Qarro (1997).

The Moroccan case has attracted interest because it has deployed a range of strategies, reflecting to some extent the different land use and tenure niches concerned. Morocco has experimented with enhanced customary tribal management, a forest pasture co-management regime, and creation of herder cooperatives with assistance from the International Fund for Agricultural Development. The cooperative management model has become the most widely replicated approach.

The program in Tunisia (see Box 9) reflects some of the same elements as in Morocco. Tribal ownership of land has long been recognized. In the 1960s, the Tunisian government initiated individualization and

privatization of this tribal land. Households could choose whether they would cultivate the land or use it for animal husbandry; government provided a package of services and subsidies to each group.

Owners of pasture in some areas of the country were given the option of turning over their land to the forestry services to manage its rehabilitation. After rehabilitation, these lands are to be returned to the communities. For pasture remaining under tribal collective management, government has created new watering points and access roads, and has introduced local reserve areas and rotational grazing. Community members have access to local resources according to the norms and practices of their tribal groups, and all tribal groups and fractions continue to exercise their rights over the grazing resources.

BOX 9. PRIVATE AND TRIBAL MANAGEMENT OF PASTORAL LANDS IN CENTRAL TUNISIA

In the context of a program to individualize and register collective lands in full private ownership, Tunisia in the 1960s faced the issue of how to deal with pastoralist lands. Customary rights in this land had long been recognized. Central Tunisia was the experimental ground for new policies. Arable tribal lands were individualized and distributed to households. The new land owners had the choice to either become a farmer, cultivating barley, wheat, and tree crops (nut trees and olives), or maintain these allocated lands as pastures and improve them with forage crops such as barley, cactus, olives, and other shrubs. Landowners who decided maintain their lands for grazing received technical support and subsidies from the Livestock and Pasture Office. These subsidies consisted of livestock feeds and other services to compensate for their losses during the periods where their pastures are under improvement. Following the improvement of their private ranges, owners can rent their range to other pastoralists or to use it for their own herds. Range owners relied heavily on their private ranges and crop residues for grazing. Some of the landowners who had small herds intensified their production systems by introducing dairy cows.

An alternative strategy was adopted by the government for the remaining tribal pastures. Pastoral communities can put their lands in the control of the Forest Services. A community can collectively request that the Forest Services improve their pastures, committing themselves to managing the improved pastures according to their guidelines. In addition, users pay fees, partly retained by the Forest Services, to recover improvement costs. Once these costs have been recovered, community members in principle can reclaim and manage the improved pastures themselves. This strategy has been plagued by internal conflicts between community members and with the Forest Services. Not all the members of the community may have agreed with the use of the land as a grazing reserve. Members who do not own large flocks often would have preferred that the lands be distributed amongst members for cropping. Community pastures under the forest services, after the cost recovery period, are to be devolved to local user associations, who will manage the improved pastures and control the revenues generated from the grazing licenses. Many communities have successfully developed their water resources with the help of the Association of Common Interests and have been managing the revenues generated from water sales to cover the full maintenance costs of their wells. A similar framework might be used to develop and manage rangelands.

The reforms took yet another approach for tribal collective lands that had not been distributed amongst members and were not turned over to Forestry Services for improvement. These pastures remain under tribal collective management, and have been improved by the Tunisian government with watering points and access roads. The government also introduced shrub plantations and rotational grazing. Community members had access to their local resources according to the norms and practices of their tribal groups. Moreover, all tribal groups and fractions continue to exercise their rights over the grazing resources.

These changes have dramatically increased the need for water for irrigation. Policies to expand irrigation by using all mobilizable water resources, under drought-prone conditions, are not sustainable and may in the long run increase the vulnerability of agricultural sector.

Sources: Bachta et al. (1998), Elloumi and Chemak (2003), Mares (1996), Nefzaoui et al. (2000)., Ngaido (1999), and Ngaido and Kirk (2001).

The particulars of the Moroccan and Tunisian program are perhaps of less relevance here than the fact that the programs deployed diverse strategies for different land categories, including individualization and

a transition to agriculture in some cases, co-management of degraded resources under co-management arrangements, management of tribal lands under pasture cooperatives, and management of other tribal pasture by traditional authorities under custom, with activities focused on improved land use rather than tenure change. In both countries, far greater attention was paid to traditional institutions and their role in range management than in the common property management cases reviewed earlier.

3.4 NON-TENURE APPROACHES TO PASTURE MANAGEMENT: MALI AND NAMIBIA

Some countries have pursued programs for improving pastoralist land use and management largely through measures that do not seek to alter land tenure but instead rely on technical and administrative/regulatory innovation to change behavior. These may appear to be of limited relevance to a discussion of certification efforts, but these projects remind us that tenure solutions are only one tool for seeking to improve pasture management. The project from Mali discussed in Box 10 is worth considering. It decentralizes authority to deal with environmental issues to local government at the commune level, and then creates new linkages and competences at the village level. It creates a number of new institutions with responsibilities to foster sustainable use of natural resources at both the commune and village levels. This is an approach that seeks strong grassroots participation as a means of getting community buy-in on initiatives to improve pastoralist land use. These locally implemented initiatives have been successful in both improving range condition and averting conflicts over pasture and water resources.

BOX 10: COMMUNITY-BASED RANGELAND ENHANCEMENT IN MALI

In 1991, faced with problems of environmental degradation and growing farmer-herder conflict, Mali's multi-village communes (the base local government unit) were empowered to manage commune natural resources. The commune mayor and council work with local villages through a commune Natural Resource Management Advisory Committee (NRMAC). The committee consists of stakeholders, including women--agriculturalists, agro-pastoralists, transhumant herders, and key actors in local government Four to five members from each village in the commune are elected by the Commune General Assembly. The committee uses radio and other means to extend technical advice and services to villages and also resolves land use disputes.

Each village has a Natural Resource Management User Group (NRMUG) consisting of village and herder representatives. There are also two trained environmental monitors in each village who are appointed by the chief. A General Assembly of the NRMUG members drafts and passes by-laws on internal structure, governance, and natural resource use. The user groups and environmental monitors enforce use rules. The emphasis is on managing interactions between groups of users with conflicting interests.

From 1999, USAID's SANREM CRISP supported the establishment of a NRMUG for Madiama in northern Mali to explore potentials for enhanced carbon sequestration in Mali's rangelands. The project promoted rangeland regeneration by alternating periods of trampling—where animal hoofs break up the soil surface, allowing aeration, water absorption, and seed penetration—and undisturbed rest. This rest was accomplished through rotational grazing. In the rotational grazing system, the pasturage of a village is segmented into demarcated sections that are used on a rotational basis. The rotation is triggered when the current section has been grazed sufficiently to regenerate. This decision is made by trained village environmental monitors using empirical observation. Integrating this new system into the existing one required the coordination of pasturage areas used, watering points, and transhumance corridors that were accessed by both local agro-pastoralists and transhumant herders.

The project improved the quality of range resources at the project sites. The vegetative cover and soil structure were improved, useful plant species reemerged, and unwanted species were crowded out due to renewed competition. The Madiama NRMAC has also been successful in reducing tensions and conflict. For example, when a pastoralist trespassed to access water before the prescribed date, tensions quickly ignited between the trespassing herder and those who had been waiting for their access date. NRMAC members were able to use their conflict mediation techniques to diffuse the situation.

Sources: Hilhorst (2008 and 2010), Moore et al. (2005), and Roncoli et al. (2007).

The approaches taken in the Mali case may potentially play important roles in supplementing tenure approaches to pasture management improvement

Another case worth examination is the MCC-funded effort currently in implementation in Namibia, focused on communal land registration in pastoralist northern Namibia (see Box 11). However, it has chosen not to prioritize registration of pasture land.

BOX 11. COMMUNAL LAND REGISTRATION IN NAMIBIA

Namibia is the most arid country in sub-Saharan Africa; because of this, its land and ecosystems are very fragile (USAID, 2010, p. 3). More than two-thirds of Namibians live in communal areas, which compose 36% of Namibia's land mass (Kasita 2011, pp. 1-2). A colonial legacy of enforced racial segregation, later resettlement, and subsequent natural resource management practices (such as the fencing of communal land and misallocation of grazing land) have resulted in overgrazing and severe land degradation, putting rural peoples' livelihoods at risk (Devereux, 1996; MCC, 2012, p. 1).

In 2002, the Government of Namibia enacted the Communal Land Reform Act, in an effort to distribute land rights more equally and redress extensive enclosure of communal land. Enclosure of communal land by local elites and other actors had led to diminished access to grazing, disruption of traditional patterns of transhumance, confinement of seasonal grazing, and overuse of sensitive ecosystems (Odendaal, 2011). The Act grants most Namibians rights to communal land. Communal land is held in trust by the state for local communities and cannot be sold. Local traditional authorities and Land Boards administer the land (USAID, 2010, pp. 5-6). The Act also established communal land registration to "bring about tenure security and promote investment in land" (Kasita, 2011, p. 1). Two types of rights to communal land were established under the Act: customary rights (for the lifetime of the holder and inheritable) and leasehold rights (for 99 years and transferable) (Kasita, 2011). The Act prohibits any new enclosures of communal land (Werner, 2011).

The Millennium Challenge Corporation – Namibia (MCA-N) partnered with the Ministry of Lands and Resettlement in 2008 to implement the Act through the Agriculture Project under its 5-year compact. Two sub-activities are being implemented under the project's Land Access and Management activity: 1) the Communal Land Support (CLS) sub-activity with the goal to "strengthen the land ownership verification and registration process towards improved land tenure" and 2) the Community-Based Rangeland and Livestock Management (CBRLM) sub-activity with the goal to "enhance the productivity and sustainability of land-based resources through the introduction and support of CBRLM activities" (MCA, 2011).

Through the $8.1 million CLS sub-activity, MCA-N has assisted in identifying relevant land holdings for registration, implemented an extensive civic education campaign, and supported the verification, registration, and investigation of communal land holdings. This included community mapping, awareness-raising, and the piloting of village land registers in 10 villages. The CBRLM has trained farmers in rangeland management, livestock management, and business and marketing skills. It also included improved community-based land use planning for rangelands, and the introduction of technologies and skills to improve grasses (NORC, 2013). These activities are only now being implemented and so their full impact is not yet known. However, as of April 12, 2012, 2,072 customary land parcels had been mapped and verified, 303 applicants received customary land rights certificates, and 25 village maps have been completed (MCC, 2012).

Researchers and practitioners have identified several challenges and pitfalls related to the implementation of the Communal Land Act, including:

- Limited human and financial capacity to meet all registration goals within the allotted time period (2011–2014);
- Distrust among rural people of the government (and suspicion that the government is attempting to commercialize agricultural land);

- Reluctance on the part of rural people to register land because of their practice of shifting cultivation;
- Difficulties communicating the nuances of the Act to illiterate rural people (Kasita, 2011, p. 14);
- Potential weakening of traditional authorities in the face of Land Boards having been named as final arbiters of land matters, and local elites discounting their position;
- Continued elite capture of communal land;
- Lack of incentive on the part of individuals to register land they "own" when that land consists of house plots or land that is far from valuable water sources (especially when they use "commonage" land for grazing or watering their animals) (Mendelsohn, 2008; Meijs and Kapitango, 2009); and
- Exacerbation of insider/outsider dichotomies within land reforms and exclusion of marginalized groups from community decision-making (especially when it involves land allocation) (Devereux, 1996).

Sources: Devereux (1996), Kasita (2011), MCA (2011), MCC (2012), Meijs and Kapitango (2009), Mendelsohn (2008), NORC (2013), Odendaal (2011), USAID (2010), and Werner (2011).

In this case, the project has sought to address pasture use through community-based land use planning and mapping and through training in pasture-management techniques. It has not engaged in formalization of pasture rights, but has confined its land registration activities to other tenure niches, such as residential land.

4.0 LESSONS FROM THE PROJECT EXPERIENCE

This review has touched on a variety of tenure reform policies and models: private individual leasehold from the state (Botswana), household long-term use rights (China), private ownership by groups (Kenya), leaseholds to herder groups (Mongolia), long-term proprietorship by ejidos (Mexico), simple access to reserves (Nigeria), more complex and robust strategies (Tunisia and Morocco), and strategies that rely on administrative and regulatory approaches, leaving customary tenure in pasture largely unaffected (Mali and Namibia). That discussion has raised some points of project design and implementation that deserve further attention. This paper will return to them shortly, but it must first address a broad and influential critique of tenure reform-based attempts to stabilize and improve pasture use.

4.1 A BROAD CRITIQUE: TENURE IN DISEQUILIBRIUM CONTEXTS

Before moving on to details of project design and what we can learn from the experience with the projects reviewed above, it is important to examine a fundamental critique of the basic approach of most of these projects. That approach is to seek through tenure reform to create new incentives for investment in, and better husbandry of, pasture resources and reduce the need for herd migrations.

The projects have had their successes and shortcomings, but the consensus of the development community is that their results have been disappointing, sufficiently disappointing that USAID in the early 1990s disengaged from work with pastoralists for nearly two decades. The projects often: a) failed to produce the better range quality they promised for the niches addressed; b) adversely affected smallholders' pasture access; and c) led to elite capture of rangelands.

Why was this performance as poor as it was, especially the failure to produce better range quality in those areas on which the projects focused? It was not simply a matter of the particulars of the project design or implementation, studies suggest, but because of a more fundamental misjudgment underpinning those projects. Studies of pastoralist land use project impacts in the later 1980s and early 1990s explained the poor results of these projects as their having focused too exclusively on the grazing commons, to the neglect of other resources that migration had allowed pastoralists to access on a more temporary basis, and their failure to take into account the still larger network of resources and relationships around those resources that facilitated resource access. Key studies include Ellis and Swift (1988), Scoones (1994), Lane and Moorehead (1995), Niamir-Fuller (1999), and Ngaido and McCarthy (2004). There were, these researchers argued, serious trade-offs when pastoralists abandoned their migratory strategies. Those studies call for a positive reassessment of migratory pastoralism as both a production strategy and a risk management strategy.

Too narrow a focus on improving performance in one tenure niche without a full understanding of how it fits into the larger land use strategy of the pastoralists has been identified as a key weakness in many projects, and the source of some unanticipated negative effects of those projects. "Reforms" meant to strengthen tenure and land management in one niche often involved destroying those networks and the institutions that facilitated mobility and led to land degradation in other niches.

An influential 1993 publication (Behnke, Scoones, and Kervin, see Annex 2) stresses that pastoralists operate in radically uncertain environments, due to both annual and longer-term variability in rainfall and other conditions: "disequlibrium" situations. The genius of migratory pastoralism, they suggest, is the flexibility it confers on pastoralists as they manage their herds in disequilibrium situations. The larger network of resources and relationships around those resources along migratory routes create a potential to constantly adjust resource use in larger or smaller ways to deal with the unexpected. Climate change is a process with which pastoralists have been contending for generations in some contexts (see Annex 3 on Western Sudan). The escalating rate of climate change in pastoralist contexts is a source of yet greater unpredictability, and further reason to preserve migration and flexibility. Recent think-pieces conclude that migration offers pastoralists their best hope of dealing with the uncertainties posed by climate change (see Annex 4).

This critique both stresses the advantages of mobility and suggests that individualization or common property rights solutions—the tenure strategies typically used in the projects—have often failed to produce the desired results. There is ample support for this assertion in the case studies done for this paper. Tenure reform, they propose, should only be approached with great caution. They call for new legal formats to provide security of tenure but still permit flexibility of use patterns. They note that this will be no easy task because models for this kind of tenure system are not readily available. Viable solutions must, they emphasize, be based on empowering pastoralist communities.

USAID's guidance on pastoralist land policies reflects this understanding (Behnke, 2011). The guidance is highly cautionary, but does provide some positive suggestions (see Annex 5). "*The challenge for USAID and the Government of Ethiopia is to develop a certification approach that proceeds carefully and is responsive to the points made in the disequilibrium critique and at the same time integrates elements of value from the project experience to protect pastoralist lands.*"

Bearing in mind the important points made by the disequilibrium critique, the paper now returns to the project experience—the experience with the tenure reform approaches, the communities and institutions responsible for management, and the physical scope of the resources to be managed and certified.

4.2 TENURE: RIGHTS RECOGNITION AND REFORM

The project experience has largely involved efforts to stabilize and improve pasture use working with either an individual ranch or a common property model. First, what has been the experience with the individual ranch model?

- The individualization programs clearly have a potential for elite capture of pasture resources by controlling the lands allocated to them while also exercising their customary access rights to use common pastures. Such elite capture can be moderated by egalitarian policies but remains a real source of conflict.
- Very substantial private or public investment was required for establishment of individual ranches, principally for water source development and fencing.
- The individualization programs have had less impressive impacts on range condition than was anticipated.
- Where land rights in ranches are marketable, it is important to monitor long-term impacts of markets on ranch size, distribution of access to pasture, and movement of land out of animal husbandry. What types of transfer mechanisms were used to sustain the ranch production system? What have been the impacts of inheritance on the efficiency of the ranch?

The commercial ranching approach in Botswana involved creation of large-scale commercial ranches that radically redistributed pasture access, barring small stockholders from the ranches while allowing

commercial ranching operations to turn their herds onto the commons during the wet season, thus contributing to rural poverty. The Chinese household ranching program, while more egalitarian in its objectives, seems to be having difficulty delivering improved range conditions even on the ranches, and appears to be leading to more rapid range deterioration outside the ranches (Banks, 2011). Its provision for transfers of pastureland creates a potential for longer-term distributional impacts on pasture access, but these seem to be having difficulty delivering on improved range condition on the ranches and has been described as flawed in terms of the disequilibrium critique (Banks, 2011). Its provision for transfers of pastureland creates a potential for longer-term distributional impacts on pasture access, but these will only become clear after some decades. The impact of such transfers on poverty will depend to a large extent on local potentials for alternative job creation. Under China's individualization of farmland the labor released from farming fueled a successful rural industrialization, but it is questionable whether such a potential exists in most pastoralist contexts.

Both these individualization approaches have involved large infusions of public funds in the attempt to upgrade land quality and productivity on the household ranch. Such resources may not be available in many contexts, or there may be a reluctance to focus them on pastoralist land use. This also raises a problem not well-addressed in the project literature: these resources do nothing to address the exclusion of women, who are often significant livestock owners, from property rights to the pasture. Instead, property rights are conferred on the household, typically represented by the husband, leaving the wife vulnerable to loss of access to productive resources in the case of divorce or widowing. The exclusion is further exacerbated by policies such as Botswana's TGLP, which restrict leaseholds to those with economic resources and established operations. Divorced and widowed women are among the least likely to have the resources and track record of production necessary to meet the requirements.

In future range management and pastoralist protection initiatives, general individualization of grazing is unlikely to be the preferred approach. It too runs directly contrary to the disequilibrium critique and creates unacceptable risks due to loss of flexibility. Egalitarian approaches, such as those in China, may not be sustainable at appropriate scales, and less egalitarian approaches, such as those in Botswana, radically reduce small stockholder access to pasture land. Individualization, however, might be an approach that is appropriate to some tenure niches—where pastoralists already hold individual or household rights under custom (e.g., residences, home gardens or fodder production areas, or even small household areas of pasture for special categories of family livestock, such plow oxen or pregnant animals).

The common property approach has dominated more recent project efforts to improve pasture management. These projects also have not performed up to expectation. To some extent, this reflects design flaws and implementation failures. Some of these that stand out from the review of the projects include:

1. Lack of community demand for the reforms implemented. Limited community buy-in resulted in weak pasture management and in conflict within the groups.

2. Where pastoralist communities have had the option to utilize or not commit to such demarcated pastures, they have been reluctant to do so if it implied abandonment of migratory practices. This is especially true in cases where the demarcated pastures do not provide reasonable access to other economic opportunities, services, and options for accessing alternate water sources and pasture in the event that the natural resources within the demarcated pasture are compromised by drought, natural disasters, or conflict.

3. Too narrow a focus on the pasture commons tenure niche and use of the common property model as a tool to enable abandonment of migration both reflect a failure to adequately assess the impact of such reforms on the larger system of livestock and range management, resulting in:

a. Loss of access to important resources in the network used by the group's members; and

b. Uneven results in improving pasture condition in the commons, due to failure to reduce herd sizes, tending to result in continuing stress on the commons.

4. An inadequate effort in most cases to address the institutional dimension that is critical to common property management. This has been reflected in:

   a. Failure to clearly identify the "community" with the interest and rights in the resource and to build on the existing capacity and legitimacy of traditional communities.

   b. Instead attempting to create and rely upon new institutions such as ranch or herder groups that may be vulnerable to elite control, whose ultimate interests in the pasture commons may be quite disparate, and whose social legitimacy as managers of pasture commons may not be accepted by the community.

   c. Failure to take into account impacts on poor households and women—groups most often the biggest losers.

5. A tendency toward subdivision and movement of some land into non-pasture uses, especially over time. This may have been in part linked to failure of governments to provide continuing support for animal husbandry and the associations, but it also reflects a failure of member faith in the model. Group ranches that have been successful have done so by developing sideline economic activities that generated additional income streams for their members, such as eco-tourism.

The Mongolia case, while too recent to assess in terms of sustainability, makes a number of points worth consideration. Its rationale for commons management is stated not as a policy initiative to improve tenure and pasture condition but rather as an attempt to respond to the breakdown of the customary system: a growing abandonment of traditional pasture management by pastoralists and their increasing crowding into areas around towns and cities. This provides a cautionary note in relation to the disequilibrium critique. That critique tends to assume the continued environmental viability and societal commitment by pastoralists to migratory pastoralism. The Mongolia case suggests that the health of the traditional system should not be assumed, but is a key question for inquiry. It is also noteworthy that the project supported continued seasonal use by members of the herder groups of range in other areas, as assigned by local government. The combination of common property approach for some pasture combined with continued mobility is worth consideration.

More comprehensive models (Morocco and Tunisia) also make a number of important points. First, they deploy a number of tenure strategies (individual registration, commons management, co-management of degraded areas, cooperative and tribal land management) across different tenure niches. These have generally been assessed as relatively successful programs. The potential lesson is that while the tenure niche approach is valuable, it is a misuse of it to focus on a single niche. Instead, there is a good deal to be said for looking at the larger system of migratory grazing in a given society, identifying the tenure niches, but then seeking to develop approaches that provide options for community members, are compatible with one another, and complementary in nature. Both countries offer a variety of experiences in managing the commons and provide lessons regarding shortcomings, as well as opportunities for the options.

Finally the non-tenure approaches in two case studies (Mali and Namibia) provide reminders that technical and administrative/regulatory measures, particularly if conducted in a participatory manner, can make important contributions to better range management. They can be integrated with tenure approaches in a robust range improvement policy.

If the tenure prescriptions pursued by these projects have been less than successful, where do we look for future directions? The critique itself clearly suggests caution in the use of tenure reforms to create security

of tenure, and the need to work with existing customary tenure frameworks. It also asks us to identify additional tools that can provide security of wide-ranging access and mobility for pastoralists.

In addition, several trends are evident in the land tenure literature and USAID policy guidance on land tenure, trends that seem to have direct relevance for the case at hand:

1. There is growing consciousness of the durability and need to work in policy and project contexts with customary tenure systems and their institutions (Bruce and Migot-Adholla, 1994; Lavigne-Delville, 2000 and 2010; Fitzpatrick, 2005; and Knight, 2011). This is reflected, albeit cautiously, in current USAID policy guidance (Freudenberger, 2011, summarized in Annex 6).

2. There is an increasingly strong body of opinion that protection of the rights of existing land users from "land grabs" can in many African circumstances be most readily achieved through broad recognition of a community title over entire community territories (Morocco and Tunisia). This reflects positive assessments of tenure reforms along these lines in Mozambique (see Annex 7) and Tanzania (see Annex 8). In the first case, custom continues to govern individual and other rights for at least the time being, while in the second, household and other rights are demarcated and certified. Local piloting of recognition of group title by the international NGO Namati and its local partners in several countries has produced valuable insights into the process (see Annex 9). None of these cases, it should be said, directly addresses protection of migratory pastoralists.

3. There is at the same time a growing sense that if customary tenure is to continue to play a major role, measures must be taken to strengthen women's rights under custom. The projects reviewed in the paper accepted the male head of household as the holder of land rights and decision-maker, as exemplified by the group ranches in Kenya (Mwangi, 2005; Kibugi, 2009). USAID land policy guidance on gender and land is emphatic on the need for change, while recognizing that change in this area does not come easily (see Annex 10). For a work specifically addressing women's land rights in rangeland project contexts, see Kleinooi (2013).

In thinking through these tenure options, a further set of critical question arises. In whom exactly do rights vest under custom? In households? In communities? In which communities—in clans, in tribes, in villages, or other social units? Do these communities have institutions capable of effectively managing the resources concerned? Do they need help? These issues are taken up in the following section.

4.3 MANAGEMENT: COMMUNITIES AND THEIR INSTITUTIONS

In reviewing the project experience, a number of problems relating to land communities and their institutions stood out:

1. There was a failure by those designing these projects to consult with communities in the development of project design. Limited community buy-in resulted in weak pasture management and in conflict within the groups and communities.

2. Design efforts often failed to adequately address the institutional need for resource management, notably in the common property model cases. Project documents are surprisingly uninformative on traditional land management institutions and the role they are playing in the projects, and they reflect little consciousness of the potential to build on existing capacity and legitimacy of those institutions.

3. Instead, a number of the projects created new institutions such as ranch or herder groups, whose members' sense of common purpose has been limited and whose institutional legitimacy as managers of pasture may not be respected.

In practice, the timeframe of most project activities means that they will be wise to rely, initially at least, on existing institutions. First, rights of access and use will belong to households or communities and the

institutions through which those right-holders act. Those institutions are natural candidates for management roles. Recent USAID guidance on local land governance (Bruce, 2012, see Annex 11) recommends seeking opportunities to engage with and work through community-based local institutions, in particular, customary institutions. They often have considerable legitimacy, and in most African countries, a knowledge of land resources and on-the-ground presence that cannot be matched by state institutions or new constructs.

The limitations of those community-based institutions, however, should be recognized. Opportunities should be sought to increase transparency, accountability, participation by women and other marginalized groups, and participatory decision-making. If there are capacity limitations in relation to important management tasks, they can be enabled through support and complementary efforts by government, NGOs, and other development actors. In some cases, issues of scale may arise. Coordination in use of resources may be needed on a larger scale than the reach of community-based institutions. An overarching coordination institution may be needed, even if it leaves most of the roles of community-based institutions intact. The opposite might be the case.

It may be possible to pilot institutional reform or alternative institutions in the course of a project. New legislation is risky in what will be a learning process and ambitious within the timeframes of projects. But a project can work with local partners to raise awareness of the need for legal change, sponsor public consultations on legal reform ideas, and pilot other options with the consent of local actors. Among the projects reviewed, relatively few relied upon new legislation; exceptions are the Group Areas Act in Kenya, the Tribal Land Act in Botswana, and the ejido legislation in Mexico.

4.4 THE SCOPE OF PROTECTION: WHICH RESOURCES?

One of the key failings of the projects reviewed here was the focus on the pasture commons, typically commons nearer the base areas of the group. As has been discussed, the results were disappointing. The Tunisia and Morocco projects did better, in that they worked across the numerous tenure niches. This reflects an awareness of their differences in the strategies pursued, but also of the fact that pastoralists access resources in all these niches.

The disequilibrium critique urges the importance of preserving mobility, and that appears to imply scaling up our thinking about resource protection to the full landscape over which the pastoralists move as they access resources. For this purpose, it is useful to review the niches identified by Ngaido and detailed at the beginning of this paper: transhumance areas under the control of the same community, farming communities, other pastoral communities, and government institutions, as well as areas that are collectively accessed by a number of communities. These areas include not only pasture but water and other “spot” resources, as well as corridors and rest areas. The relationships with other groups that allow flexibility are also assets (i.e., social capital) and are vital to long-distance migrations.

What does protection mean for this larger range of resources? We are used to thinking in terms of protecting “possession” of a resource, but now the right to access and use that resource on occasion, and for the right to move, are needed. This is a much broader concept of security, and protection will require other measures. In some of the niches noted above (notably the “own group” niche), it may still be appropriate to consider—with considerable caution—resources where tenure solutions such as individualization and common property management are useful tools for protecting land rights. Such tenure reforms should have some purpose other than reducing migration, and (especially in a common property situation) the institutional side should receive more careful consideration than often has been the case.

Beyond that niche, protection becomes more complex. It is still a matter of ensuring access and the right to use the resource, but because access is not exclusive, other tools in addition to tenure may be needed. These have not been explored in the projects or other literature as systematically as they might usefully

be, but some can be noted. In the case of use of resources belonging to other communities, tools likely to be deployed include buffer zones, rights of way, draft fences, migratory corridors, and agreements between communities (and even between households). They may be grounded in custom or contractual in nature, and may be long- or short-term in nature.

The variety of contractual arrangements—consideration and remedies—would be considerable. Protection in these cases means creating an environment of good faith where communities and households feel they can confidently enter into and rely upon these mechanisms. As Ngaido (2010) emphasizes, pastoralist land use is not simply about a network of resources but a network of relationships with other communities and individuals concerning particular resources. Protecting access means protecting those relationships as well.

In the case of land controlled by government, as in the case of forest areas held by a Forestry Department but grazed seasonally, agreements with local communities may govern use. The Tunisian and Moroccan cases illustrated this. There will also be cases where, due to land degradation, the community (or communities) and a government agency agree on a co-management arrangement. Here, a community manages or uses a resource subject to a management plan agreed upon with the government agency, who typically provides support or other assistance.

Finally, there is the case of a shared resource over which no one community has primary right—a case in which the resource is often not really managed but functions as an open access resource. There will be understandings among communities about access to such resources, and in some cases, there may be a substantial body of custom coordinating use by different groups. A well-documented example of coordinated land use by different ethnic groups over a large region is the longstanding customary *Dina* system in Mali's inland Niger Delta (Cotula, 2006).

In all these cases, protection should also include mechanisms to settle differences, which are certain to arise in such fluid circumstances. To the extent that fora can be created for ongoing discussion of resource sharing arrangements, allowing adjustments as needed and mutually agreeable, this will be advantageous. Pastoralist groups adversely affected by drought or other events have long negotiated for access to pastures controlled by communities more favored by rainfall that year. Comity is the principle that motivates such sharing of resources with neighboring communities in distress. Governments in some countries have held seasonal consultation events to bring pastoralist groups together and discuss problems with rainfall. Such fora provide an opportunity to anticipate problems and negotiate solutions that avoid clashes over pasture or water. This was the practice in the western Sudan during the late colonial period (Bruce, 1993).

It will be important to rely on traditional dispute settlement mechanisms to the extent possible, but this may be more difficult when disputes arise between different communities or with outsiders. Adjudication is difficult when parties have different expectations and even different ideas about applicable rules. Careful and participatory drafting of contractual agreements that establish agreed rules accepted by the affected communities will assist in creating a foundation for managing disputes. The honoring of contracts is a legal principle that is accepted across communities with very different notions about tenure rights. Often, mediation, which actively engages the parties and often results in compromise between affected parties, will be preferable to adjudication. Unlike courts or other adjudicatory mechanisms like arbitration (which tendd to produce winner-take-all solutions), mediation has the potential to facilitate compromise resolutions. Solutions can be crafted to address the circumstances facing the parties and renegotiated in light of changing range conditions in the future.

5.0 MOVING FORWARD: SOME TENTATIVE DIRECTIONS

Policy on the future of pastoralist land use systems is at a crossroads. The disequilibrium critique of tenure solutions is well-founded. Its core message is that *mobility and flexibility should be preserved for their risk management value and their efficient use of scattered and dynamic resources.*

The question then becomes, how can pastoralist lands be protected while at the same time preserving mobility and flexibility? And what is the role for rights certification in providing that protection?

These questions do not arise in a static situation. Pastoralist systems are increasingly in a process of change, adjusting to loss of land to competing uses, seeking to provide members with better access to public and private services, and attempting to accommodate governments' security concerns along borders (Galaty, 2011). At the same time, calls for protection of pastoralist lands by advocacy organizations are finding African governments more responsive. The cultural survival of pastoralist peoples is directly connected with their mobility and resource access. The African Union's 2010 approval of the decision of the African Commission on Human and People's Rights recognizing Endorois pastoralists in Kenya as an indigenous people and calling for restoration to them of their lands has potentially wide-reaching implications (see Annex 12).

The African Union's 2010 Policy Framework for Pastoralism in Africa reflects the key ideas set out in this brief: the need to protect pastoralist rights, the importance of mobility, and acknowledgment of pastoralist institutions' legitimacy (AU, 2010). But moving from these principles to effective implementation is challenging. These pastoralist systems share space with other land users and exist in broader economic and social contexts that are often rapidly changing. Countries with pastoralist peoples must struggle to find effective strategies to protect pastoralist lands and livelihoods in the context of these changes. Any successful approach will require a number of constituent elements—only some of which relate to tenure. Pastoralist systems are diverse, and so recommendations need to be kept at a fairly general level, and detailed in relation a particular pastoralist land use system.

Below the authors list some general directions that should be observed in moving forward with a project aimed to protect pastoralists land rights.

First, governments must examine far more critically than in the past proposals for appropriating pastoralist land and other resources for commercial agriculture, conservation uses, or mining. The benefits of these projects are sometimes badly overstated, and the costs to pastoralist production almost always understated. It will be important to:

1. Mount public education efforts to increase understanding of the efficiency of pastoralist land use systems;
2. Improve economic assessments of existing and alternative land uses to reflect: a) the real economic value of pastoralist production; and b) the considerable damage to such production that can be done by ill-considered investment projects;

3. Limit to reasonable levels the extent of such reallocations generally and the extent of any single reallocation; and

4. Locate any such reallocations where they do not undermine pastoralist land use networks.

Restraint is simple, is not costly, and is sustainable. Such restraint, however, will be greatly facilitated by the provision of solid legal and other protections for pastoralist land rights.

Second, the necessary time and resources must be committed up front to understand the particular pastoralist land use systems or systems. Any attempt to tackle certification uninformed by a solid understanding of the land use system, based on the earlier project experience, will end badly. Certification is not a simple technical fix, but involves fundamental policy choices about the nature of rights to be held by the project's communities, their households, and their members. The choices made as to which rights will be certified and which will not be certified will affect the roles and responsibilities of the local institutions, customary and statutory, and impact the various tenure niches and how the resources in those niches are managed. Those choices have important development and distributional consequences. It will be important to:

1. Assess carefully the customs and practice of land use by pastoralists and their communities. Popular understandings of these may be outdated or reflect prejudices. That assessment should examine how different stakeholder groups (large and small stockowners, men and women, etc.) use the systems' resources differently, and how they are likely to be affected differently by changes. The assessment should include identification of users that may not have rights to resources under customary or state law, such as encroachers;

2. Conduct natural resource rapid rural appraisal and participatory mapping of territories and land use, possibly using GPS, to help understand these systems. Mapping should show flexibility in resource use from year to year and trends in natural resource use over time;

3. Consider whether the traditional land use system is in fact performing well and delivering the risk management and productive use of scattered resources it has in the past;

4. Identify pastoralist communities and units with rights in resources, under custom and/or state law, and the rights will need to be taken into account in protection strategies and project design;

5. Consult pastoralists in various stakeholder groups to understand their expectations and aspirations, in particular what they want and need out of the existing land use system; and

6. Use findings to stimulate both discussions with government and public consultation on policy alternatives.

Third, if such does not already exist, engage in consultation with stakeholders and the affected communities to develop an overall strategy for sustainable use of natural resources by pastoralists and for protecting their rights to those resources. The protection element of this policy needs to be clear; a certification program, if mishandled, can become a process to identify resources that will not be needed by pastoralists and are available for other uses, rather than a protection program. This strategy may well include tenure elements and rights certification, but should not be limited to them. The elements of a tenure and certification dimension to that strategy might include:

1. A public policy/strategy document for protection of the natural resources used by pastoralists that at the same time seeks to protect mobility and flexibility should be developed. Protecting flexibility means that the net of protection must be cast very broadly—not just with respect to the most important tenure niches but over the full range of resources pastoralist communities access in their migrations.

2. Existing law, custom, and practice should initially continue to govern land use within that protection zone. The project can then develop approaches for implementation of protection measures for particular land uses with their particular tenure arrangements. For instance, household holdings such as residences or gardens could receive individual titles. Similarly, if there is a small, discrete pasture or other commons in need of better regulation, a common property approach could be adopted. Where settled land use has already been established, this should usually be respected, but new tenure reforms should be planned not to replace or impede mobility and flexibility but to reinforce them.

3. Other mechanisms can be used for other niches to protect rights in those lands and other resources. Regulatory or contractual instruments can be used to support rights of way, new water points along routes, agreements between neighboring pastoralist communities regarding mutual commitments to assist in drought conditions, or agreements with farming communities. Care should be taken to ensure that these kinds of mechanisms are negotiated, drafted, and enforced in a manner that both reflects local conditions and is consistent with the overall strategy and any plans for a policy or other framing legislation.

4. The decisions with regard to any one niche should be informed by:

    a. A full understanding of the role it plays in the larger land use system; and

    b. An understanding of protection to include protection of mobility, flexibility, and social (as well as natural) assets.

5. Documentation and certification of such arrangements by government can provide valuable protection. However, it may require some creativity and ingenuity to incorporate this broader range of rights and resources into the existing certification system.

6. A final element in rights protection will be rights education and enforcement. Programs should be created to increase rights awareness, allow continuing consultation on how best to provide needed flexibility, avoid disputes arising, and mediate those disputes that do arise.

Fourth, the institutions that are playing important land use management roles now should be considered, including national and local government units, but especially local institutions—both civil and traditional. Some among them will play important roles in the policy development and design activities described above, while others may play important implementation roles.

1. At the outset, the institutional challenge will be to identify an institution or group of institutions that will generate a robust and sympathetic discussion of pastoralist land rights and how to protect them. While government will need to be involved, provincial and local government involvement will be particularly important to such a dialogue. It should involve strong participation by NGO and community leaders. Here creativity will be called for. One possibility would be a nongovernmental institution supported by the project that is less an organization and more a forum where policy issues can be addressed and that could take a role in studies and policy development.

2. There will be a need to identify an institution to take responsibility for the largest unit of protection. In some cases, the answer may be evident, for instance, a tribe or a provincial land trusteeship board. Is the institution to hold rights to that area, or have a trusteeship mandate of some sort? National and provincial laws may influence these decisions.

3. There will be need to assess the role and potentials of government institutions and their land allocation and management roles. Often a number of government institutions are involved in allocating land and other natural resources for investment and other competing uses, but without effective coordination. Protection of pastoralist land rights will require a system of land governance that coordinates and manages conflicting demands for those resources.

4. Locally, a protection project should seek to work with existing land use management institutions, in particular, with traditional institutions, taking advantage of their legitimacy and local knowledge. It may be appropriate to work with both smaller and larger communities—the first often nested within the second. Normally, one would choose to work with a community that has customary rights to use or manage the resource.

5. If protection activity at a different scale is required, it may be necessary to organize existing local institutions into a larger network to carry out that task, or train village-level facilitators to carry out activities at an even more local level. The communities and their management institutions may need capacity building and outside support, for instance, by NGOs or local government.

6. The importance of working with traditional institutions also applies to certification efforts; those institutions and their leaders will have intimate knowledge of existing land rights and their holders. Some community institutions may be able to play important roles in adjudication of household and community rights, and may also be entitled for certification as the proprietor of some commons areas.

7. It is difficult to frame recommendations on such institutional arrangements without a clearer sense of the institutional frameworks in the country and local society concerned. But based on the earlier project experience, this is a challenging area and should receive careful attention early on.

The authors would finally like to repeat a point made in the introduction: these recommendations, while they do reflect considerable experience in a variety of arid lands pastoralist contexts and have been prepared for consideration under USAID's Ethiopia LAND Project, are not framed in relation to the needs on the ground in pastoralist areas of Ethiopia. The recommendations are generic and will almost certainly need significant adjustments to make them really useful in the Ethiopian context. To the extent that different pastoralist land use systems prevail in different parts of Ethiopia, somewhat different strategies may be called for in those cases. This review of the past experience and identification of some general directions will however hopefully be useful in avoiding past mistakes, and in stimulating discussion of ideas about ways forward in Ethiopian contexts.

ANNEX 1: LAND GRABBING AND PASTORALISM IN TANZANIA

In Tanzania, approximately 10 percent of the population (2.2 million people) practices pastoralism or agro-pastoralism, and depends on land in semi-arid regions (grasslands, thickets, woodlands, and forests that make up nearly 80% of Tanzania's landmass) for their livelihoods. Many of these pastoralists and agro-pastoralists are also transhumant, moving seasonally with their livestock to access forage and water.

From the colonial era until the present, pastoralism has faced serious discrimination and dismissal as an illegitimate and unsustainable lifestyle, both by the government and, in some cases, by donors. In addition to national land reforms that have marginalized their needs and rights, pastoralists also have had to cope with a changing climate, the breakdown of customary institutions, and reduced grazing areas.

A growing population and land degradation in Tanzania have led to increased cultivation on marginal lands, and reduced the amount of land available for grazing. The government also has set aside land for conservation (e.g., national parks and wildlife reserves) and large-scale agriculture projects, removing it from pastoral use. As a result, some pastoralists have settled permanently as farmers, and others have been forced to migrate to other regions. Many pastoralists have migrated to southern, eastern, and central parts of Tanzania to continue livestock rearing, while an increasing number of Maasai have moved to urban areas in search of paid work. In their new homes, pastoralists often experience conflict—sometimes violent—with agriculturalists, conservation administrators, and others with competing land interests.

The Government of Tanzania (GOT) has "put agriculture at the forefront of its development agenda through its *kilimo kwanz*a (agriculture first) initiative, which emphasizes modernization of agriculture through technological reforms and other avenues" (Oakland Institute, 2011). It has also decided to invest in the biofuel sector to reduce the country's dependence on fossil fuels and to stimulate socio-economic development. Civil society and the international community have highlighted specific biofuel projects in Tanzania as examples of *bad* practice in large-scale land acquisitions and agricultural investment.

The Land Matrix (www.landmatrix.org) has catalogued 27 different land deals contracts in Tanzania, totaling more than 273,928 hectares. All of the deals were undertaken for agriculture or forestry projects (including biofuel development), and they are in different stages of implementation. At least some of these projects have resulted in the elimination of pastoralists' "secondary rights" to grazing land and forest resources without compensation (e.g., rights to collect firewood, honey, or fruits) and/or have not taken into account their seasonal use of the land for water or grazing. Because of this, some Maasai have changed their transhumance practices, moving less frequently and far, afraid that outsiders will take their land if they leave it. Pastoralists have also "expressed fear that pastures may be looked at as 'idle' or 'bare' land, and then be identified [by the government] for investment purposes" (Sendalo, 2009, p. 5).

These fears are founded in a long history of pastoralist resettlement and the lack of recognition by the government of pastoralism's significant contribution to the economy. In addition to their concern about the human impacts of these large land deals, researchers and practitioners also worry about the potential impacts of these projects on biodiversity, the suitability of the particular pieces of land for the projects, and the capacity of institutions to manage them.

In January 2013, the GOT announced that it would begin restricting the size of land that large-scale foreign and local investors can acquire for agricultural lease; prior to that time, there had been no restrictions (*The Guardian*, 2013). While the restrictions still allow for large projects (up to 10,000 hectares for sugar cane, for example), they are one step closer to protecting local communities' and pastoralists' rights to land.

Sources: *The Guardian* (2013), Land Matrix (2013), Larsen (2012), Oakland Institute (2011), Sendalo (2009), and Sosovele (2010).

ANNEX 2: TENURE SECURITY AND DISEQUILIBRIUM

The early development literature on pastoralism assumed that traditional pastoralists' wide and often unpredictable movements in search of water and grazing were inherently unproductive and destructive of range resources. Policy prescriptions focused on creation of more limited, legally bounded ranches near permanent water sources, where equilibrium between stocking levels and forage could be achieved by managers, largely through control of livestock numbers.

Comparative studies during the 1980s tended to show that pastoralist strategies either equal or exceed the productivity per unit of land area of commercial ranches in comparable ecological environments. In 1993, Behnke, Scoones, and Kervin concluded in their watershed *Range Ecology at Disequilibrium* that the highly flexible and opportunistic strategies practiced by arid-area pastoralists in response to unpredictability of rainfall and pasture availability were in fact efficient and economically viable. Moreover, they found that the neglect or undermining of traditional management practices for widely scattered but valuable range resources used intermittently had led to deterioration of those resources. In such unpredictable environments, they concluded, livestock movement is an effective means of dealing with local imbalances in stock numbers and forage availability.

What does this imply for tenure in pastoralist lands? Behnke and his co-authors note, "Any official attempt to foster opportunism by maintaining livestock mobility will require the development of legal formats capable of providing security of tenure while permitting flexibility of use patterns. This will be no easy task. Models for this kind of tenure system are not readily available from pastoral areas of industrialized countries, which have themselves had a very mixed record with respect to the promulgation of appropriate pastoral tenure legislation." Effective implementation of such an approach, they add, will require not so much building new bureaucracies but "empowering pastoralist communities, who are uniquely qualified by their intimate knowledge of local resources and their management experience to effectively implement such an approach." (1993: 30).

Source: Behnke, Scoones, and Kervin (1993).

ANNEX 3: WESTERN SUDAN: FAILURE TO ADDRESS CLIMATE CHANGE

Many pastoralist communities have been contending for decades with long-term climate change, though that change has occurred at a more gradual pace than that anticipated in coming years. In western Sudan, for example, climate change has played a major role in undermining longstanding patterns of pastoralist land use, creating communal conflict and violence. Declining rainfall and desertification drove camel nomads south out of their own traditional territories (*dars*) and tenure niches into the *dars* of cattle nomads, and cattle nomads into the more mixed farming areas further to the south. During the immediate post-independence period, there had been well-developed mechanisms for coordinating pasture use among different tribes. These included an annual gathering in El Obeid, in which traditional authorities came together to review needs in light of that year's rainfall and to negotiate agreements for use of pasture access of more fortunate communities by communities that had received less rainfall. By the late 1970s, however, the Government of Sudan had abolished traditional "native authorities," replacing them with party functionaries who had little legitimacy in the eyes of herder communities. The lack of traditional mechanisms was one factor contributing to climate change-driven competition for land that later spiraled into violence in Darfur.

Sources: Babiker (2011), De Wit (2001), Egemi (2008), El-Hadary (2010), and Sulieman (2013).

ANNEX 4: FACTORING IN CLIMATE CHANGE

It is increasingly likely that climate change will impact pastoralists' livelihoods through its effect on pasture resources and water points. Planners need to take those impacts into account when thinking through options for pastoralist land use and measures to provide security of tenure to pastoralists. Assuming stable patterns of rainfall and temperature based on historical data could lead to land use strategies and related formalization policies that will cease to be viable after a few decades.

Anticipating those impacts is challenging because current climate change forecasts are quite tentative. Two recent discussions of potential impacts of climate change on pastoralist resources differ in some important respects.

Hesse and Cotula (2006) suggest that "Climate change is affecting drylands and pastoral livelihoods in Africa. Although long-term impacts are difficult to predict and are bound to vary from one location to another, most climate change models predict decreasing rainfall and rising temperature in many dryland areas." The authors suggest that this will disrupt existing migration patterns as former pasture areas produce less vegetation and water points dry up. Droughts are likely to become more frequent and successive years of drought longer. The Humanitarian Policy Group (2009) reaches conclusions that are similar on some points, but notably different regarding rainfall: "Regional climate projections for East Africa over the next 50 years indicate that rainfall and rainfall intensity will increase, temperatures will rise, successive poor rains will become more common, and incidence of drought will increase." It paints a similar scenario of declining reliability of existing patterns of land use and the need for flexibility in addressing change.

One of the greatest assets pastoralists possess in meeting these challenges, both papers suggest, is the ingenuity that they have shown in addressing drought in the past, adjusting the movements of their herds to take advantage of opportunities. It is essential, these authors conclude, that such flexibility not be lost through land use reform and sedentarization interventions. Instead, they urge, emphasis should be placed upon: a) enabling herd mobility; b) securing rights to critical natural resources such as dry season pastures and water points; and c) building coordination and conflict management institutions to deal with what is likely to be intensified competition over those resources. The Humanitarian Policy Group paper concludes that "recognizing the need for pastoral mobility and communal land tenure, and valuing the contributions of customary institutions, will allow pastoral communities' inherent adaptive capacities to be expressed in order to cope effectively with increasing and more extreme climatic variability."

Sources: Hesse and Cotula (2006) and Humanitarian Policy Group (2009).

ANNEX 5: USAID GUIDANCE ON PASTORALIST LAND

USAID's 2011 Property Rights and Resource Governance Briefing Paper No. 10, "Pastoral Land Rights and Resource Governance: Overview and Recommendations for Managing Conflicts and Strengthening Pastoralists' Rights," reflects the disequilibrium critique and urges considerable caution in tenure reform for pastoralist systems. Its "black-letter" recommendations are reproduced below:

- Donor or government efforts to promulgate new, improved tenure regimes for pastoral areas should be viewed with caution.
- In the place of large-scale tenure reform, policy can usefully concentrate on developing procedures for resolving land disputes, specifying who is entitled to make legal judgments regarding land ownership, how they may legitimately go about doing so, and how these decisions can be enforced.
- Used with caution, participatory land use planning is relevant to pastoral as well as settled areas.
- Innovative policies are needed to support property arrangements that defuse the unnecessary conflict between pastoral land rights, parks, and wildlife.
- Policy should support the enactment of land tenure laws that recognize pastoral mobility and protect pastoral access to the natural resources that sustain mobility.
- Efforts need to be made to address many pastoral needs in the context of regional cooperation because pastoral production zones often cross national borders.
- Policy makers can support skills training, enterprise development, and educational opportunities for those "exiting" pastoralism or those who already are pastoral "drop outs."
- The international community should continue to document and publicize large-scale land acquisitions affecting pastoralism.
- Planners should recognize that large-scale irrigation schemes in pastoral wetlands and riverine areas do not necessarily provide economic benefits that equal or exceed those from pastoral production.

Source: Behnke (2011).

ANNEX 6: USAID POLICY GUIDANCE ON THE FUTURE OF CUSTOMARY TENURE

USAID policy guidance in this area is provided by "The Future of Customary Tenure: Options for Policymakers," Property Rights, and Resource Governance Briefing Paper # 8.

It recommends:

- Continue to illuminate the existence of customary tenure systems;
- Prioritize interventions according to the intensity of pressures on customary tenure systems and the risks to customary resource rights;
- Allow communities to define the most appropriate strategies for formalizing customary tenure arrangements;
- Make values and principles explicit when redefining and clarifying tenure regimes;
- Involve the public;
- Retain maximum flexibility: Avoid undoable actions when dealing with customary systems unless necessary and justified;
- This is a learning process: Build in opportunities for self-reflection, assessment, and correction; and
- Develop a plan to deal with conflicts.

The brief also identifies several promising interventions:

- Encourage and facilitate national tenure assessments;
- Carry out participatory research on customary tenure systems in a representative or purposefully selected (because of particularly interesting attributes or problems) set of communities;
- Work with governments and communities to engage a multi-level consultative process;
- Work with national institutions to develop a policy framework that responds to identified concerns and issues;
- Establish (or reinforce), train, and finance the community-level resource management institutions (e.g., Community Land Boards) that implement customary tenure systems;

- Provide training in practical skills as needed by people and institutions dealing with the nuts and bolts of local tenure security; and
- Ensure that mechanisms are established to monitor the impact of any new land or other tenure legislation.

Source: Freudenberger (2011).

ANNEX 7: MOZAMBIQUE: DEMARCATION AND CERTIFICATION OF COMMUNITY LANDS

Mozambique's 1997 Land Law recognizes customary land tenure rights. That recognition is not conditional on their being recorded officially, but the law provides for their demarcation and certification. This is not done in a systematic fashion, but takes place on the application by rural communities. A unique aspect of the law is that communities are not defined or otherwise identified. Instead, they are asked to self-identify. This was done to accommodate the wide range of land-holding communities in different parts of Mozambique, and it has resulted in certification of a wide range of community territories. The results of the demarcation and consultation processes are then presented to the Provincial Service of Geography and Cadastre, which processes the certificate.

Implementation of community land demarcation and certification has been gradual and highly dependent on funds provided by international donor agencies. In 2007, the government established a Community Lands Initiative (*Iniciativas de Terras Comunitárias*, or ITC) with a dedicated land fund. The purpose of the initiative is to strengthen the land rights of rural communities and support the development of the technical capacity of communities to manage land sustainably. The fund supports community land delimitation and development of projects. The funded activities are implemented by NGOs, the private sector, and government bodies. The ITC initially focused on Cabo Delgado, Manica, and Gaza provinces but was later expanded to include Niassa, Nampula, and Zambezia provinces. It is estimated that between 10% and 15% of total land in Mozambique now has been certified to communities.

At the same time, the Government of Mozambique has focused its funding and staff on processing requests for issuance of use permits to outside and national investors. The commitment of government to the community demarcation and certification program has been questioned.

Sources: De Wit and Norfolk (2010), Knight (2010), Norfolk and Tanner (2007), and Tanner (2005).

ANNEX 8: TANZANIA: DOCUMENTATION AND CERTIFICATION OF COMMUNITY RIGHTS UNDER THE VILLAGE LAND ACT

Under the Tanzania Village Land Act of 1991, customary rights in more than 9,000 villages are given legal recognition. This does not depend on certification, but the act prescribes in detail for the certification of rights. Village land administration is also provided for in elaborate detail, and control over the land devolved to elected Village Land Councils. These make allocations and other decisions regarding village lands and must report their dispositions to the Village Assembly. Village Land Councils have the power to regulate by by-laws the management of community natural resources, and responsibility for the survey, adjudication, and registration of customary rights, implemented by village adjudication committees. Councils can only exercise this authority after village land has been surveyed and a Certificate of Village Land issued, signed by the Commissioner of Lands.

Implementation of the Village Land Act has proceeded slowly. Government has focused national and donor funding on demarcation and certification of village lands. By 2011, 6,616 villages (roughly 66% of villages) had had their land registered. Relatively little progress has been made in certification of household rights, which has been seriously underfunded and taken place only on a pilot basis. Major donor funding would be necessary for broader implementation.

While Tanzania has been often cited as a good practice case, its legal basis has been criticized. Knight remarks that while the act is laudably thorough in providing procedural protections, it "so extensively prescribes these myriad protections, in impenetrable legal language, that they are often lost in the sea of caveats, clauses, and exceptions." (2010: 205-211).

Sources: Knight (2010) and Pedersen (2010).

ANNEX 9: IDLO/NAMATI: LESSONS FROM AN NGO-LED DOCUMENTATION OF COMMUNITY LAND RIGHTS

A three-country research program on protection of community land rights was recently completed. Initiated by the International Development Law Organization (IDLO) and more recently managed by the NGO Namati, the program piloted community land documentation with communities in Mozambique, Liberia, and Uganda. While none of the study sites was in arid contexts involving pastoralists, the program has produced a wealth of insights into effective processes for community land documentation, paving the way for certification. The approach was activist, encouraging communities to essentially revise their own land customs.

An executive summary notes key findings:

"One central finding is that the community land documentation process is a valuable opportunity to resolve local land conflicts. Governments and civil society actors should leverage the process to support communities to address inter- and intra-community land disputes, which may undermine perceived tenure security and foster local or regional unrest.

A second central finding is that while the data and observations from Liberia and Uganda indicate significant changes in the study communities resulting from community land documentation efforts, in Mozambique very little change was noted. The primary difference between the processes followed was the inclusion in Liberia and Uganda of extended, iterative, and participatory processes of cataloguing, debating and adopting community by-laws/constitutions and plans for natural resources management.

The research indicates that the community by-laws/constitution-drafting process was likely the primary driver of many of these impacts. Under this analysis, it becomes clear that governments and civil society actors should structure community land documentation processes to proactively address intra-community governance, with special emphasis on leveraging the process to:

- Improve community land administration and management;
- Create mechanisms to hold leaders downwardly accountable to their constituents;
- Strengthen and protect the rights of women and other vulnerable groups;
- Foster conservation and sustainable natural resources use;
- Align community norms and practices with national law; and

- Promote local-level democracy."

The report also concludes that "community land documentation may be a more efficient method of land protection than individual and family titling, and should be prioritized in the short term."

Source: Knight et al. (2012).

ANNEX 10: USAID GUIDANCE ON GENDER AND LAND

USAID 2001 Property Rights and Resource Governance Briefing Paper No. 7 on "Land Tenure, Property Rights, and Gender: Challenges and Approaches for Strengthening Women's Land Tenure and Property Rights" makes important recommendations that may be relevant to gender dimensions of pastoralist land protection:

- Support legislative and institutional reforms that build on local tenure systems and practices that secure women's rights to land and property. Strengthen common property law to enable legal claims. Understand how land laws and family laws have an impact on women's secure rights to land and property.
- Attempt to identify all property rights holders and/or resource users within households and within communities prior to the implementation of land reforms to ensure these rights are respected, secured, and enhanced. Consider registration systems that record multiple use rights as well as ownership. Ensure that both husbands and wives names are listed on land documents and registered. Document and register the rights of those living in consensual union or married under customary or religious law.
- Include women's voices, knowledge, and interests in land programs. Policy formulation should be informed by systematic field-level research to ascertain opportunities for, and barriers to, strengthening women's rights.
- Support rights awareness and positive behavior change among women, local customary institutions, and formal legal systems regarding women's land and property rights. Include men in these programs.
- Support programs that empower women through cooperative action via women's groups or associations.
- Invest in governance structures, both formal and customary, that promote inclusivity, transparency, and accountability.
- Support alternative dispute resolution, land claims courts, or legal aid to help provide legal recourse when women's land rights are violated.
- Monitor gender impacts of land and property reforms and legislation.
- Support legislative changes that improve transferability of land and productive assets via secure and enforceable contracts, specifically rental agreements.
- In urban areas, and where municipal budgets and/or donor funding allow, provide low interest loans for the poor to purchase or rent land, or to acquire or improve housing. Such loans will benefit women if adequate attention is given to strengthening their empowerment, interest, knowledge, and engagement in the services offered.

- In rural areas, strengthen land rental markets and increase access to market opportunities to increase the value of the land and asset holdings. Support value chain projects that deliver inputs when and where women need them. Target extension services to crops that women are involved in producing or to livelihood strategies specific to women.
- Strengthen the ability of women to access formal and informal dispute resolution mechanisms, enabling them to defend their rights.
- Strengthen women's participation in contractual and other market-mechanism activities that can provide them with land access (e.g., land rental markets).
- Increase women's access to market opportunities, for instance through value chain projects that deliver inputs when and where women need them.
- Monitor carefully the gendered impacts of project initiatives.

Source: Giovarelli and Wamalwa (2011).

ANNEX 11: USAID POLICY GUIDANCE ON LOCAL LAND MANAGEMENT INSTITUTIONS

USAID's policy guidance in this area is summarized in "Land and Conflict: Land Disputes and Land Conflicts," Property Rights and Resource Governance Briefing Paper No. 16. Its concluding recommendations are:

- Governments and the international development community should increase their investments in the creation of national systems of strong local land governance institutions–institutions that can undertake a wide variety of land governance tasks and have the capacity to take on new tasks as needed.
- Those designing projects and programs should seize opportunities to engage and support existing local land governance institutions, including customary institutions, and enable them to take on new land governance tasks.
- Efforts to support local land governance institutions should seek to ensure that the institutions are empowered through provision of property rights and/or other legal protections; without these, incentives for good land management will usually be insufficient.
- User groups, as discussed here, often lack such property rights; it is preferable when working with user groups to support community-based groups whose incentives can be reinforced through provision of secure rights of tenure.
- Efforts to support local land governance institutions should recognize the limitations of existing institutions, which may necessitate reforms in their structure or processes in order for them to address program or broader policy concerns and to meet constitutional standards. Opportunities should be sought to increase transparency, accountability, women's participation, and participatory decision-making in those institutions.
- It should be recognized that the process of enabling community-based land governance institutions will often require support and/or complementary activities from national or local government, NGOs, and other development actors. That assistance may focus on building organizational capacity or inter-institutional linkages, it may be technical in nature or it may extend to promoting reforms of the policy environment.
- Initiatives to work with local land governance institutions should be sensitive to, and seek to address, the need for durable incentives for local communities and their members to support the land governance task undertaken, rather than depending too heavily on ephemeral, project-generated incentives.

Source: Bruce (2013).

ANNEX 12: PASTORALISTS AS INDIGENOUS PEOPLES

On February 2, 2010, the African Union approved the decision by the African Commission on Human and People's Rights (ACHPR) to restore the ancestral lands of the pastoralist Endorois community. The Endorois had been slowly evicted from their lands by the Kenyan government between 1973 and 1986. The ruling established a major precedent on indigenous right to ancestral land under the African Charter, a ruling whose ramifications are still coming to bear. The ACHPR decision appears to have opened the door for potentially hundreds of indigenous land claim cases from across all African Union member states. It also has the potential to reverse centuries of negative impacts caused by the stubborn vestiges of colonial land regimes across Africa. The African Commission recommends that Kenya, as the respondent state: a) recognize rights of ownership to the Endorois and restitute Endorois ancestral land; b) ensure that the Endorois community has unrestricted access to Lake Bogoria and surrounding sites for religious and cultural rites and for grazing their cattle; c) pay adequate compensation to the community for all the loss suffered; d) pay royalties to the Endorois from existing economic activities and ensure that they benefit from employment possibilities within the reserve; e) grant registration to the Endorois Welfare Committee; f) engage in dialogue with the complainants for the effective implementation of these recommendations; and g) report on the implementation of these recommendations within three months from the date of notification.

Source: Mennen and Morel (2012).

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