

# **Decentralization of pastoral resources management and its effects on environmental degradation and poverty**

## **Experience from northern Kenya\***

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## **Introduction**

Growing concerns about persistent poverty and environmental sustainability have helped fuel efforts at decentralizing governance throughout the developing world. The 1992 Earth Summit in Rio de Janeiro brought widespread calls for greater community participation and equity in natural resources management and sustainable development planning, and these pressures have grown amid institutional reforms fostered by movements towards democratization and market-based economic policy, spurred by, among others, the Bretton Woods institutions (the International Monetary Fund and the World Bank) in the last two decades of the twentieth century (Goumandakoye 2003). Ironically, however, in many cases decentralization has been used by national governments not as a means to cede authority to local subjects, but rather to extend control still deeper into local community life and resource management, while still reaping the political capital associated with the rhetoric of bringing government services and development closer to the people. Often this involves the subtle but real transfer of influence, even control, from customary users of the resource to newcomers with better connections to government representatives.

This raises a subtle but important distinction between “decentralization” and “deconcentration”. The former involves the delegation or devolution of authority from a central government to lower levels in a political-administrative and territorial hierarchy so as to allow for greater participation by local peoples and their direct representatives (Agrawal and Ribot 1999). Meanwhile, “deconcentration” refers to mere relocation of power to local branches of the central government which have minimal downward

accountability as they remain primarily responsible to the central government (Ribot 2002). The two processes may be in play at once, with decentralization of some authority to certain subpopulations going hand-in-hand with deconcentration with respect to other subpopulations. Naïve enthusiasm for decentralization without an appreciation for the distinction between decentralization and deconcentration has too often facilitated the latter, often with important, unintended repercussions for poor rural communities in countries such as Kenya.

The Kenyan government's policy focus on rural development, initiated in the 1980s, as well as the advent of multiparty democracy in the early 1990s, created an impetus for devolving some decision making to the local level (Bragdon 1992). Discussions about and initiatives towards decentralization of governance at the District, Division and Location levels have progressed significantly over the past two decades. Simultaneously, government and non-governmental organizations (NGOs) have often targeted community-based groups to implement development projects and promote transparency and accountability. These aspects of decentralization have helped spawn a multitude of local groups and institutions competing with one another and with existing traditional institutions for control of local governance systems, including those related to natural resources.

In pastoral areas of Kenya's arid and semi-arid lands (ASAL), the decentralization process has not automatically fostered well-informed, equitable and representative decision-making. Indeed, from the perspective of customary residents and users of

resources in the ASAL, it often appears to have been more a process of deconcentration of central government authority, buttressing allied, local institutions and sometimes displacing well-established community institutions that derive their legitimacy from local people. Despite stated government commitment to decentralization, most central government and environmental ministries have resisted transferring appropriate and sufficient powers to established communities. Most political leaders and civil servants resist meaningful decentralization, as has been observed elsewhere (Ribot 2002). This problem can be especially acute when new governance systems give power to recent immigrants at the expense of longstanding residents or nonresidential resource users. Thus what seems decentralization for some is more like deconcentration for others.

This chapter explores these issues in the Hurri Hills area of Marsabit District, where externally imposed changes in governance have combined with a World Bank Global Environmental Facility (GEF) project to alter local patterns of natural resource management. In particular, in the process of “decentralization”, recent migrants who have settled permanently in the area have acquired significant government-sanctioned power, while traditional but transient resource users, such as transhumant pastoralists, have seen their influence over natural resource use governance wane.

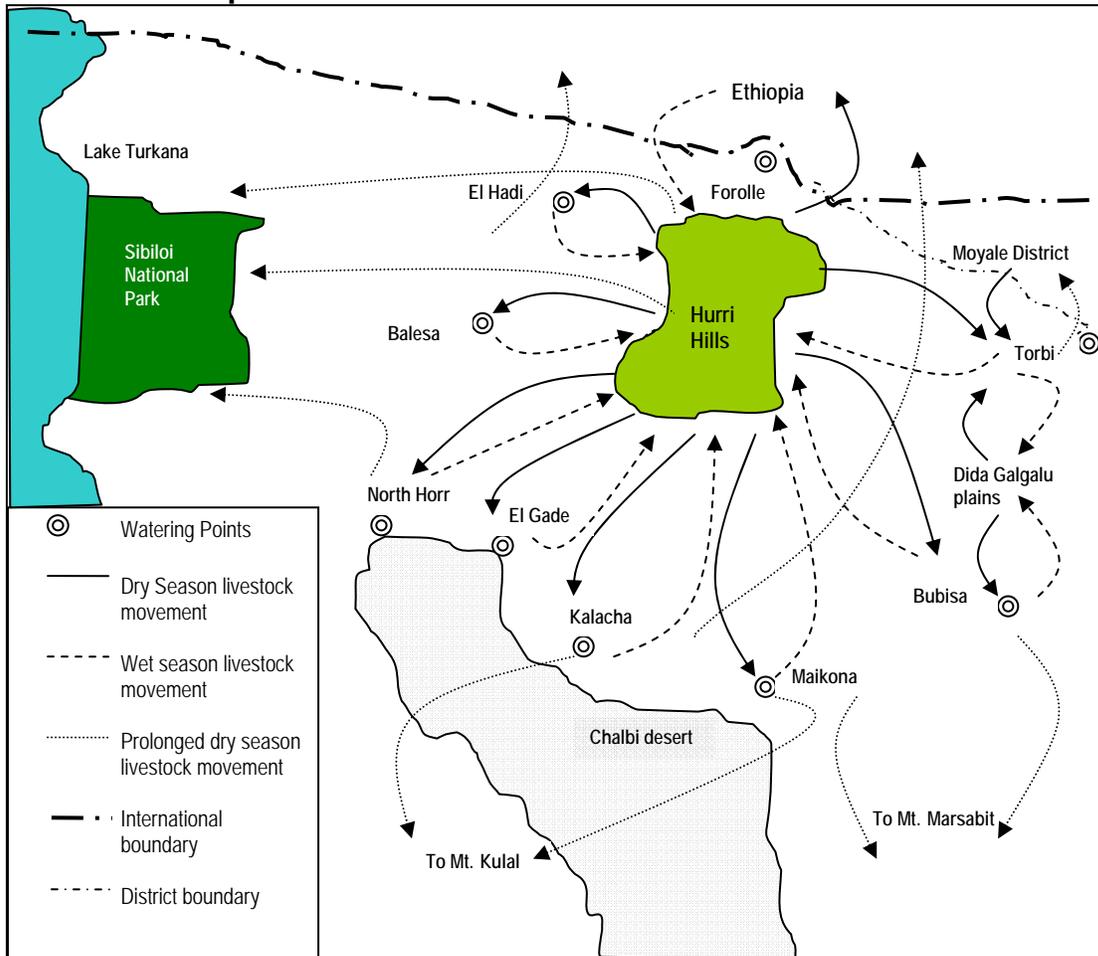
### **The Gabra and the Hurri Hills**

The Hurri Hills area of northern Kenya provides an example of how unintended effects of decentralization can unfold. Since at least the 18<sup>th</sup> century, the Hurri Hills have fallen within the grazing range of the Gabra peoples. The Gabra are a community of roughly

35,000 Oromo-speaking, nomadic camel herders found in northern Kenya and southern Ethiopia (Tablino 1999). Gabra life and livelihoods revolve around movements driven by spatiotemporal variability in water and forage availability. During the rainy season, when grazing and water are available virtually everywhere within the 25,000 km<sup>2</sup> or so area over which they range, the Gabra move their encampments far from permanent wells and other year-round water sources to certain, traditional grazing areas. In the dry season, they fall back on permanent water sources. While insecurity, proximity to centers offering administrative and commercial services, education and health care influence decisions over when and where to move, the chief determinants have traditionally been water and pasture availability for the Gabra herds.

Traditional pastoralist production systems typically cover large areas of relatively unproductive dry lands, as well as smaller, relatively well endowed areas. It is the use of these latter wetter areas to sustain the herds through critical periods that allows pastoralists to make use of the extensive dry lands the rest of the year. Efficient use of the dry lands depends on pastoralists' ability to move herds between and across these two landscapes. Mobility and relatively non-intensive use of the available, better-endowed land are necessary in order to make any use at all of poorer land. If the most productive lands are the first to be converted to farmland or set aside for conservation as is often the case, mobility is curtailed (Lane 1998). This confines pastoralists to more fragile, lower potential rangelands throughout the year, leading to deprivation and environmental degradation and thus reducing their resilience and ability to recover from subsequent droughts.

**Map: Gabra land and seasonal livestock movements**



*Source: Adapted from the Global Environmental Facility – Indigenous Vegetation*

*Project (GEF – IVP) Livestock migration routes map*

Most pastoralist communities in east Africa use lowland ranges during the rainy season, when annual grass growth is prolific and surface water is readily available, then move towards highland areas where cooler, moister microclimates extend rangeland productivity and water availability after the lowlands dry up. In the Gabra's case, however, the permanent water sources are found in the lowlands, so their movements are

the reverse of the standard practice (Robinson 1985). Higher elevation rangelands, including the Hurri Hills, are used during the wet phases of the year, while the Gabra retreat to permanent water sources in the lowlands during the dry season as shown in the map.<sup>1</sup>

In 1920-21, a major influx of Oromo-speaking herders – both Boran and Gabra – from southern Ethiopia into what is now northern Kenya prompted the British colonial government to impose grazing restrictions based on tribal divisions. These imposed grazing boundaries sharply limited the extreme traditional seasonal movement of the pastoralists, who frequently ignored the boundaries (Sobania 1979). Nonetheless, new tribe-specific grazing blocks increased the need for tribal organization to ensure self-reliance and defense of common property areas.

Access to Gabra grazing areas, including the Hurri Hills, has long been governed by the traditional council of elders, the *Yaa*.<sup>2</sup> The *Yaa* historically sanctions spatiotemporal use of natural resources within Gabra territory. For example, destitute Gabra, Konso and Boran households who had lost livestock during drought were often allowed to settle temporarily in the Hurri Hills until they rebuilt their herds. But this was typically on a

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<sup>1</sup> The mean annual rainfall of the Hurri hills is between 300-500mm, though highly unreliable, with mean annual temperatures averaging 21°– 30°. The area faces a risk of drought once every ten or so years with respect to livestock production, though this rises to once every three years for crop cultivation which occurs on the upper slopes of the hills (Schwarz 1991).

<sup>2</sup> The *Yaa* is a traditional council of elected clan representatives' elders that form the center of religious and political activities in Gabra society. The physical entity of the *Yaa* comprises a special mobile hamlet built by every phratry (a tribal subdivision of households claiming a common kin relation), where all important ceremonies take place. Within the *Yaa*, sacred fires burn and the most important rituals are held within a special oval thorn branch enclosure, known as the *Naabo*.

temporary basis and had to be negotiated with the traditional users of the Hills, the Gabra, through the *Yaa*.

Prior to 1974, the Hurri Hills had no permanent resident population as the nomadic Gabra pastoralists only utilized the rangelands during the wet season, descending to the lowlands during the dry season to access permanent water sources at springs and wells. With bimodal rainfall yielding two dry and two wet seasons of roughly three months each annually, this seasonal pattern of occupation preserved not only the rich pastures of the Hurri Hills' grazing lands, but also the Hills' biodiversity. The *Yaa* paid attention to indicators of biodiversity as it deliberated on resource use, with an eye toward the health of the ecosystem on which the community depended.

This system of land use and resource management continued until the 1980s, when a series of serious droughts combined with the initiation of the government's District Focus for Rural Development (DFRD) approach heralded central state involvement in local resource management issues (Bragdon 1992). The droughts caused widespread herd loss, which forced many households to sedentarize, at least temporarily, as too small a herd size compromises spatial mobility in Gabra land, as in most of the East African ASAL (McPeak 2005, Roth and Fratkin 2005). Recently sedentarized pastoralists are typically the poorest in the area, as routinely manifest in wealth, nutritional and income data (Roth and Fratkin 2005). But as civil service, NGO and small-scale commercial jobs emerge in more established settlements, the sedentarized become increasingly differentiated, into the relatively economically successful who choose remunerative non-pastoral livelihoods while typically still maintaining (even accumulating) herds, and the destitute, who are

driven by misfortune to sedentarize (McPeak and Little 2005). Thus attending to the pressing needs of newly sedentarized, destitute herder households was a priority for government and humanitarian relief and development NGOs in response to a series of droughts, especially the 1984-85 drought in the Hurri Hills region. Addressing these humanitarian needs is made considerably easier when the target population is stationary and thus easier to reach, thus NGOs have historically encouraged sedentarization in order to facilitate services provision (and, among religious NGOs, evangelism). Once such settlements are established, opportunities often emerge for non-pastoral livelihoods that subsequently complicate geographic targeting of the poor in the ASAL.

Central government's presence in the area grew markedly under the District Focus for Rural Development (DFRD) strategy, based on the District, Divisional, Location and Sub-Location administrative units. The District Commissioner (DC), sits at the apex of the District hierarchy within the Office of the President (OOP), as a political appointee and, under the strategy, has authority over sectoral field officers through his position as Chairman of the District Development Committee (DDC). Decisions concerning the prioritization and funding of development projects are made within the DDC. Thus the DC wields significant power over District resources. As Bragdon (1992) notes, it is somewhat ironic that despite commitments to autonomy for the districts and participatory development, government policy states that the position of DC should be filled with an officer from outside the District in which s/he serves. Chiefs and Assistant Chiefs are responsible for implementing policies and programmes at the Location and Sub-location levels, respectively. The Chief's Authority Act bestows significant authority upon the

Chief, who exercises control over field officers of sectoral ministries operating at the Location level. Where, in the absence of environmental policy *per se*, the local environment is subject to the policies of sectoral ministries, the Chief holds considerable power through his position of authority over local ministry field officers. In addition to administrative responsibilities, the Chief commonly also acts as a spokesperson for the local population and is supposedly a representative for the community on the DDC.

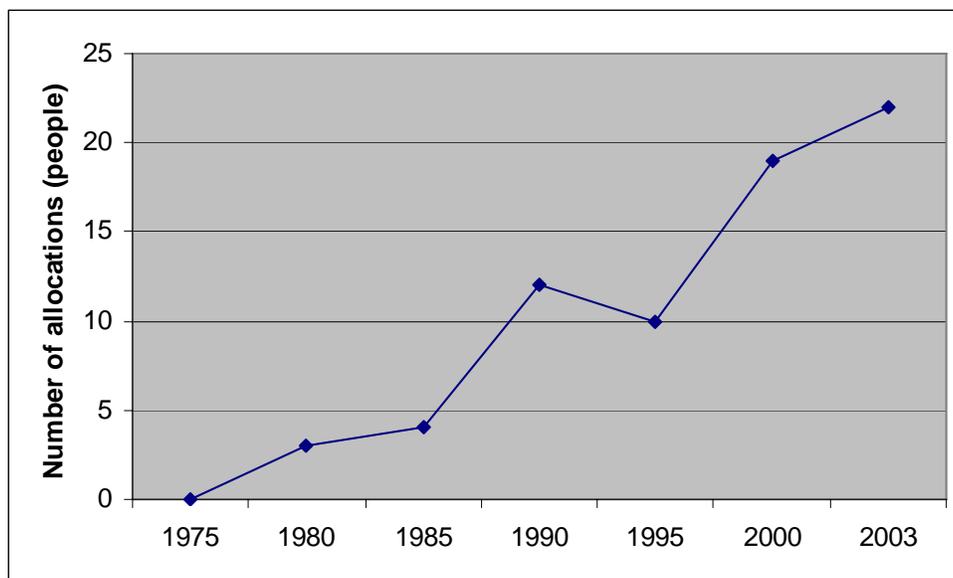
Initially, the Hurri Hills fell under Kalacha Location. All land use decisions related to the Hills were deliberated on by the wider community comprised of both temporary resident agro-pastoralists and non-resident pastoralists. Then in 1987 the Kenya government designated Hurri Hills as an administrative Location for relief food distribution purposes. This was further restructured into a Sub-location in 1997.

These administrative units were intended to bring governmental decision making closer to the people (District Development Officer 1997). Toward that end, a number of Location-level institutions were constituted to address various issues as part of the broader local development forum, the Location Development Committee (LDC). One major one was a Location level land allocation committee. To date, this committee has been made up mostly of government officials with little or only token community representation. The land allocation committee provided a new mechanism to allocate plots of land to individual applicants, supplementing and competing with traditional mechanisms such as the *Yaa*. Most importantly, the land allocation committee legitimized permanent settlement on the Hills.

The establishment of the Hurri Hills Location conferred official government recognition and authority on the settled population and, by extension, entitled them to take more control over resource use management in the Hurri Hills. For example, in 2004, the Location Development Committee had no representatives from the non-resident, nomadic Gabra community, the traditional users of these lands. Location representation was primarily of those who resided there permanently, along with government representatives not originally from the area and thus unfamiliar with (or unappreciative of) traditional institutions in the region. This pattern of deconcentration effectively excluded, or at least diminished the influence of, the traditional, non-resident users of the Hurri Hills even as it brought some decentralization of influence, if not authority, to newly settled, permanent residents in the area.

This had significant implications for resources management and the path of local development. For example, Gabra pastoralists have long regarded any permanent water resource development in the Hills as a threat to the availability of wet season grazing pastures there due to the likelihood that year-round water availability would attract permanent residents. Development of water sources has historically been confined to temporary water storage structures such as pans, underground tanks, and roof catchments. In contrast, settlers have, quite understandably, continually prioritized permanent water sources as their most pressing development need. Government has supported this view.

The result of the changes in governance was that the rate of land disbursement increased rapidly (Figure 1). Primary research in 2004 (detailed in Munyao 2005) found that over 60% of survey respondents who controlled land parcels had been allocated land via the land allocation committee, compared to less than 30% who had been allocated land through the traditional system. Clearly, the new land allocation committee, spawned by the creation of new, local-level units of government, was stimulating new land occupation and use patterns.



**Figure 1: Land Allocation trend on the Hurri Hills 1975-2003**

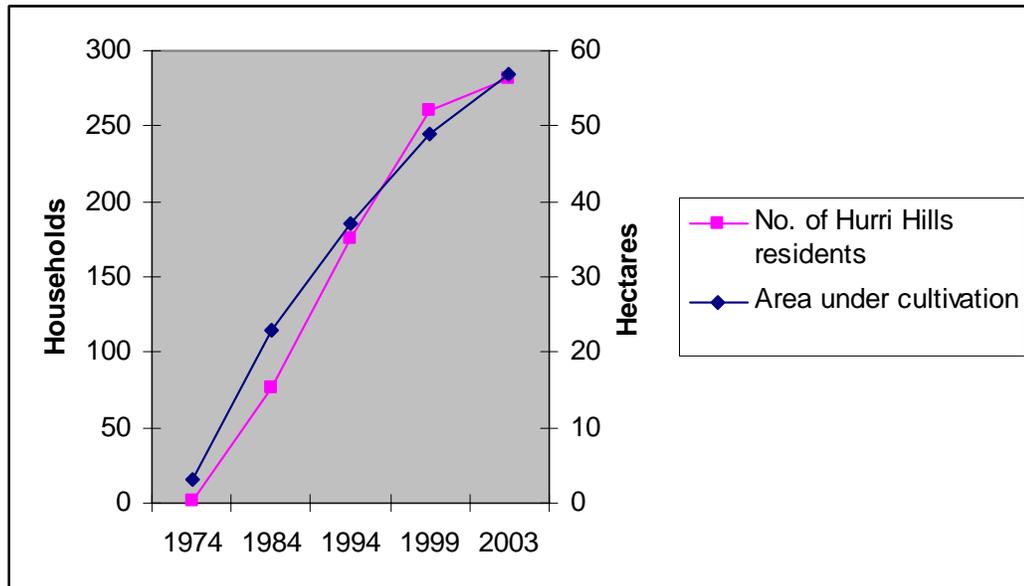
People who received plots from the Land Allocation Committee were given permanent and legally defensible rights to the land. In contrast, allocation under the traditional system always remains subject to periodic review. Thus the new system conferred more secure rights to land than did the traditional system. This predictably diminished the power of traditional leaders, such as the *Yaa*. Moreover, the legal authority of government administrators in pastoral areas gives them extensive powers over access to,

use and allocation of communally held resources. In addition, their ability to enforce their mandate with the full backing of national law and the police under their jurisdiction means that they wield considerable power in resource allocation decisions.

The recently introduced process of government-led land allocation has therefore sparked increased permanent residence in the Hurri Hills and given greater legitimacy to those who settle there. This process has also been associated with dramatic increases in the area under cultivation in the Hills, which closely tracks growth in the year-round resident population in the area (Figure 2). While there may well be dual causality in this relationship – with pressures to increase cultivation helping to fuel demand for legal empowerment of a local land allocation committee and more formal and secure land rights – the impact of this formalization has been undeniably felt by those practicing more traditional pastoralism (Munyao 2005). Permanent settlement has compromised the access of Gabra herds to seasonally important forage resources eroding their capacity for sustainable management of their grazing resources to cope with drought when it occurs.

The establishment of the new administrative areas has not taken into account the spatio-temporal nature of rangeland resources on which the local pastoralist communities depend. It has fostered increased cultivation and permanent residence by agro-pastoralists. Furthermore, the new boundaries also enhanced the tribal territorial identity that had been created during the colonial era through the establishment of tribal grazing blocks. These administrative areas have thus created contentious resource use boundaries

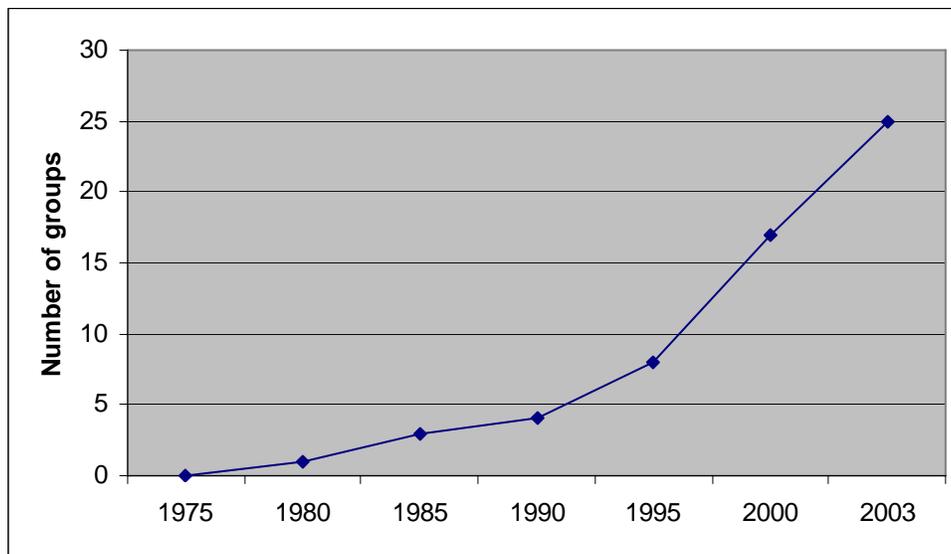
that have complicated administrative tasks and fueled tension and insecurity over pastoral resource use and land tenure between communities (Haro et al. 2005).



**Figure 2: Population and acreage under cultivation on Hurri Hills, 1974-2003**

The creation of formal, local government structures has created an overlap of the formal administrative and resource management institutions of government with the traditional authority of elders, such as exercised through the *Yaa*. Although government tolerance of the continued presence of traditional elders is a compromise aimed at gaining community support and building consensus on pastoral resource management, in reality the *Yaa*'s present influence over natural resource management has become minimal. Permanent residents' self-interest proves a major motivating factor in the deliberations of the formal institutions of local government since the sanctioning authority is concentrated in the hands of the administrative chief, a central government appointee.

The creation of entities such as land allocation committees has occurred within a wider framework in which more and more community-based groups are emerging. For example, the number of community groups officially registered in the Hurri Hills has increased from virtually none in 1975 to 25 by 2004 (Figure 3). On the positive side, some of these groups provide a voice for otherwise-voiceless groups, especially women and young people, in highly paternalistic pastoral communities. But they also created alternative centers of power within the community, liable to manipulation by local settled elites, thereby undermining the effectiveness of existing community institutions such as the Yaa.



**Figure 3: Registered Community groups in Hurri Hills (1975 – 2003)**

The emergence of a better educated, more politically aware class of elites among settled local communities, on one hand, and the weakening of traditional institutions prevalent

among non-resident, nomadic populations, on the other, has been a major source of conflict and ambiguity in community-based resource management efforts in the Hurri Hills, as in other parts of northern Kenya and the broader East African ASAL. For example, Yirbecho et al. (2004, p.1) found that “resource conflict in this region appears to be associated more with the rise of nontraditional land uses, especially crop cultivation in [areas] traditionally used for grazing and watering herds, than with any growth in herd sizes associated with livestock cycles or growing pastoralist populations. Traditional pastoral communities tend to have fewer resource-related conflicts than communities experiencing a rise in crop cultivation. ... The traditional pastoral system appears more capable of mitigating resource related conflicts and of resolving them when they do occur, while such conflicts appear to be more frequent and less easily resolved where land use patterns are shifting away from traditional extensive grazing systems towards more diverse land use systems incorporating cultivation as well as grazing.”

The problem arises because most initiatives in decentralization and community empowerment driven by central government and external donors (i.e., from the top down) treat cultivators and herders as if they were a single entity, disregarding their varied sources of legitimacy and livelihoods and the inherent conflict in their ambitions for the natural resource base on which they each depend. In such cases, enforcement of community sanctions fails to achieve very much because the two groups differ in terms of cultural norms and legal status, despite overlaps in resource management mandates. Most of the emerging community groups arise from empowerment and development initiatives spearheaded by development agencies working with government and thus are prone to

(often inadvertent) capture by the settled population, and at times are at variance with the existing traditional institutions.

Consider the example of the Environmental Management Committee (EMC) intended to spearhead environmental management and biodiversity conservation efforts. The EMC concept, introduced in the area by the GEF project in 2003, drew inspiration from GTZ's experiences working with the pastoral Rendille community in southwest Marsabit District. Through the Marsabit Development Program (MDP), GTZ spearheaded the establishment of EMCs to deal with problems of natural resource management and localized environmental degradation caused by overstocking and settlement at water points and trading centers (Haro et al. 2005). Ideally, the EMC membership is comprised of traditional leaders, women, and youths within an identifiable neighborhood based on shared resources. The EMC is charged with mobilizing and raising environmental awareness for user groups by helping organize meetings to elaborate and disseminate environmental management protocols aimed at minimizing natural-resource related conflicts and facilitating participatory assessment of implemented actions and measures (Haro et al. 2005). In most other parts of Marsabit District where this model is used, the EMC mainly deals with pastoralists and settled communities near water points and trading centers that comprise only one ethnic group.

In the case of the Hurri Hills, however, the presence of ethnically diverse resident cultivators (Boran and Konso) and non-resident pastoralists (Gabra) greatly complicates the EMC's work and undermines its legitimacy. Since the EMC is exclusively made up of year-round Hurri Hills residents, its composition is mainly Boran, while the

traditionally recognized natural resource decision makers on the Hills had been the nomadic Gabra elders. This has posed a major challenge to the effectiveness of the EMC due to its perceived lack of legitimacy among the nomadic Gabra pastoralists. The limited cultural precedence for a body such as the EMC to define new rules for resource use has led some community members to refuse to accept the final authority of the EMC (Haro et al. 2005).

The EMC's dependency on elders or the authority of a local chief to enforce sanctions for non-compliance with conservation by-laws has also been a problem. In addition, its inability to offer incentives for compliance has seriously compromised its effectiveness. Enforcement of resource use restrictions traditionally relied on community elders who induced compliance out of fear of being ostracized or cursed. Where traditional institutions have been undermined and support of the elders is not assured, the effectiveness of community-based efforts has become doubtful because such social sanction mechanisms become less effective.

### **Conclusions and Recommendations**

Decentralization of land use authority in the Hurri Hills seems to have had several unintended and undesired consequences. Rather than devolving authority to established, traditional institutions with credibility among extant resource users, the central government followed a pattern of deconcentration, extending authority to spatially dispersed agents of the central government through creation of new, more disaggregated jurisdictions, Locations and Sub-Locations. These were staffed typically by outsiders but brought the full powers of the state to the local level.

This new, local-level central government authority both reflected and fostered increased settlement and cultivation in the Hurri Hills, investing newly settled households and nontraditional livelihoods with unprecedented influence. This has, however, impeded traditional, non-resident pastoralists' access to customary livestock migration routes and displaced them from critical wet season grazing areas, thereby increasing their vulnerability to drought. This transition has helped fuel increased conflict over water resources and crop damage by livestock. Increased settlement and sedentarization has accelerated localized environmental degradation due to greater demand for fuel wood and timber for building, as well as increased soil erosion due to cultivation (Munyao 2005). Although no firm data exist by which one can conclusively establish the effects of sedentarization and deconcentration/decentralization of government authority on either the quality of the natural resource base nor on poverty and well-being in the area, widespread local perception, including that of many NGOs working in the region, and the launch of the World Bank GEF project on the Hurri Hills all suggest deconcentration of government authority has been associated with deterioration in both socioeconomic and environmental indicators over the past thirty years.

The key to effective decentralization to empower the poor is increased, broad-based participation in local decision making concerning common pool resources and public goods and services provision. Downwardly accountable or representative authorities with meaningful discretionary powers are the basic institutional elements of decentralization that leads to efficient, equitable, sustainable and credible resource management (Agrawal 1999). Effective decentralization in the area of natural resource management requires these same elements. However, case studies from around the world indicate that the

institutional arrangements necessary to bring about decentralization that proves effective (in terms of both improvement of poor peoples' livelihoods and conservation of critical natural resources on which they depend) are often not present in so-called decentralization reforms, too many of which turn into exercises in deconcentration alone (Agrawal and Ribot 1999, Barrett et al. 2001, Ribot 2002, Goumandakoye and Mathu 2003, Ribot 2004). In addition, communities' capacity to self-govern natural resources in a way that promotes conservation and equity cannot always be assumed (Barrett et al. 2001). Community-based methods work best when there are strong local systems of social control to enforce access restrictions, as rules enforcement appears to be the core element of effective management of common pool resources (Gibson et al. 2005). Unfortunately, some government-led decentralization processes have undermined, rather than reinforced, pre-existing local systems of social control by imposing alternative governance systems and effectively transferring authority to new stakeholders whose livelihood systems are often less well adapted to local natural resource conditions.

In the case of the Hurri Hills of northern Kenya, deconcentration appears to have created new pressures for sedentarization and resource overuse, manifest in higher human and livestock populations, and more cultivation and localized resource degradation in the Hills, and to have displaced traditional Gabra authorities and disfavored non-resident Gabra pastoralists in favor of permanent Boran settlers.

Cases such as this one raise the question of whether the national constitutional review process might be used to advocate for proper devolution of state authority to local peoples.

It also underscores how, at least in pastoralist regions, decentralization of governance systems needs to be considered within the overall framework of a mobile community dependent on the spatio-temporal allocation of natural resources with loosely defined boundaries. Without taking this into consideration, groups of pastoralists will likely continue to be sidelined in the decentralization process, leading to inadvertent deconcentration and the eventual dispossession of their natural resources.

During decentralization, the government and development agencies also need to pay closer attention to the array of local interests and the prospect for competing centers of power within local jurisdictions and what this might mean for land use patterns, equity, and security. Indeed, support for decentralized resource management may require a re-conceptualization of the role of the state and other local level institutions in natural resources management.

In many cases self-organized institutions may do better than those imposed by the state (Finke 2000). The persistence of traditional institutions, such as the *Gabra Yaa*, despite years of government-sanctioned competition attests to their resilience. Their overarching influence in the socio-political and economic life of the *Gabra* community locally and nationally reinforces their credibility. It may thus prove more effective to link political and development decentralization strategies to existing community institutions, not only to strengthen them, but also to enhance the legitimacy and viability of such strategies. In some cases, state intervention may be necessary to address the needs of otherwise marginalized groups in the community. But decentralization needs to be backed by

enforceable sanction and reward mechanisms for non-compliance and compliance, respectively, and by a similar decentralization of the financial resources necessary to implement those mechanisms.

Perhaps the clearest lesson from the Hurri Hills example is the need for greater institutional support and capacity development within existing pastoralist institutions in order for them to be able to undertake policy advocacy. The highly disenfranchised nature of many pastoral communities and the state's deeply ingrained bias against pastoral communities and regions militates against their ability to positively advocate for policy change, since influencing the policy environment is a complex task and is highly dependent on the willingness of governments to listen to its citizens (IIED 2003). Ultimately, the success of decentralization and effective management of pastoral resources will depend to a great extent on appropriate policies, the capacity of local institutions as well as the political will to undertake decentralization in a manner that truly empowers the traditionally voiceless and relatively poor communities of pastoralists.

## References

Agrawal, A., Ribot, J.C. (1999). "Accountability in Decentralization: A Framework with South Asian and African Cases." *Journal of Developing Areas* **33**: 473-502.

Barrett, C., B., Brandon, K., Gibson, C., and Gjertsen, H., (2001). "Conserving Biodiversity amid Weak Institutions." *Bioscience* **51**(6): 497-501.

Bragdon, S. H. (1992). Kenya's Legal and Institutional Structure for Environmental Protection and Natural Resource Management: An Analysis and Agenda for the Future. McNamara Fellowships Program Paper. Washington, DC, Economic Development Institute - World Bank.

Bragdon, S. H. (1992). Kenya's Legal and Institutional Structure for Environmental Protection and Natural Resource Management: An Analysis and Agenda for the Future. McNamara Fellowships Program Paper. Washington, DC, Economic Development Institute - World Bank.

District Development Officer, D. (1997). District Development Plan 1997- 2002.

Finke, P. (2000). From 'Common Property' to Open Access: Changing Pastoral Land Tenure in Post-Socialist Mongolia. Eighth Conference of the International Association for the Study of Common Property, Bloomington, Indiana, USA.

Goumandakoye, M., and Mathu, W. (2003). Decentralized Governance of Natural Resources, UNDP Dryland Development Centre: 33.

Haro, G. O., McPeak, J.G., and Doyo J.G. (2005). "Linkages between Community, Environment, and Conflict Management; Experiences from Northern Kenya." *World Development* **33**(2): 285-299.

IIED (2003). Shared Management of Common Property Resources in the Sahel; A Regional Action-Research Programme, International Institute of Environment and Development: 24.

Lane, C. R. (1998). Pastoral land tenure in east and west Africa, IIED.

McPeak, J G. (2005). Individual Rationality and Collective Rationality in Pastoral Production: Evidence from Northern Kenya. *Human Ecology*, **33**(2), 171-197.

Munyao, K. (2005). Pastoral Land Use Changes in Northern Kenya: Challenges and Opportunities: Land Use Change in the Hurri hills and the implications for Pastoralism and Biodiversity Conservation in Marsabit district, Kenya. Cornell University. Masters Thesis.

Ribot, J. C. (2002). Democratic Decentralization of Natural Resources; Institutionalizing Popular Participation. Decentralization and Environment. M. Schultz. Washington, World Resources Institute.

Robinson, P. W. (1985). Gabra Nomadic Pastoralism in the Nineteenth and twentieth century northern Kenya; strategies for survival in a marginal environment, Northwestern University: 21-36.

Roth, E. and E. Fratkin, eds. (2005). *As Pastoralists Settle: Social, Economic, and Health Consequences of Pastoral Sedentarization in Northern Kenya*, Amsterdam: Kluwer Academic Publishers.

Schwarz, H. J. (1991). Marsabit District, Kenya Range Units. Nairobi, Ministry of Livestock Development: Map set for the Range Management Handbook of Kenya; Marsabit District.

Sobania, N. W. (1979). Background History of the Mt. Kulal region of Kenya. IPAL Technical Report. Nairobi, United Nations Education and Scientific Organisation (UNESCO): 43-46.

Yirbecho, A.T., Barrett, C.B. and G. Gebru (2004), Resource Conflict in the Rangelands: Evidence from Northern Kenya and Southern Ethiopia. USAID Global Livestock CRSP