

Final Progress Report

Sustainability Science Program

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Description of SSP-related research

“Mitigating the tragedy of a spatially fragmented ‘anti-commons’: Institutions, Livelihoods and Environment under changing property regimes in semi-arid East Africa”

This research explores the character, evolution and functioning of property rights arrangements in a semi-arid setting in East Africa. Public policy continues to struggle with identifying and implementing property regimes and institutions that can meet the twin goals of poverty reduction and resource sustainability. This study responds to a dilemma in our understanding of property rights. Conventional theories have explained why rights tend towards increasing privatization, but not the reverse. In fact, the reverse is predicted not to occur due to high and monotonically increasing transactions costs. An understanding of this unusual shift is theoretically significant and important for the design of public policies.

The policy problem

Property arrangements in the Maasai rangelands of East Africa have over the past four decades undergone a major transformation, from collective arrangements to more individualized rights. More recently, new arrangements involving some form of parcel reunification is emerging, despite theoretical predictions that high transactions and strategic costs of organizing can impede such cooperation. This evolving scenario provides a suitable study case for understanding the dynamics of property rights change and the effects of such changing institutions on environment and livelihoods, including the implications of emerging adaptations.

Research questions

- i) Why do herders seek to reconsolidate and/or lease out their individually held and titled land parcels?
- ii) What is the institutional content of these emerging arrangements?
- iii) What are the perceived impacts of these arrangements on local livelihoods and ecologies?
- iv) How may public policy respond to these emerging changes?

The methods

Research was based on the case study method and will draw from the property rights literature. Sites were selected from areas that had undergone transformation from collective to individual rights. Study cases were varied depending on the length of time since individualization as a basis for comparing whether or not the emerging arrangements ‘stick,’ which in turn will point to

policy options. This research used different methods to collect data—focus groups, semi-structured individual interviews, key informant interviews, direct observation and archival records. These multiple sources of evidence will allowed for triangulation across the same set of research questions in order to improve the credibility and robustness of findings. Field data collection occurred in two phases. First, in March-April of 2008, for the focus group discussions and second, in December to March, 2009 for the individual and key informant interviews. A total of 8 sites in Kajiado District in SouthWestern Kenya, largely in areas that had undergone transformation from collective to individual rights. 4 of these sites were in areas that had individualized a decade earlier than the rest, and two of the sites are areas where the path to individualization has been blighted by extensive conflict. A total of 20 focused group discussions and 538 individual interviews were conducted. In addition to the SSP and HUCE Harvard University research support, the Kenya Agricultural Research Institute and the European Union supported the appointment of research assistants, transportation, and equipment for the entire duration of the fieldwork. Harvard University funding was used to feedback research findings in July 2009.

Findings thus far

About 77% of the people interviewed are recombining (or reunifying or reaggregating) their individual parcels. Majority of them do that in an attempt to manage environmental risk i.e. because resources are distributed heterogeneously across space and time, reunification helps people access more of the resources they need, such as pastures. This recombination is made possible by a variety of institutions such as rules and norms, which determine who can graze where and when, but also because of trust: people trust those with whom they recombine, who are largely family members and friends who neighbor.

But people are also engaging in pasture leasing. Among the Maasai, while land over the past 3 decades has become a commodity that can be bought and sold in the market, the buying and selling of pastures is extremely new. About 258 of interviewed individuals engage in pasture leasing; 66% of these sell pastures while 34% buy. Those who buy do so because they need to access more pastures, while those that sell indicate that they need to boost their incomes. Most leasing contracts are oral and demand cash upfront. Leasing arrangements are also subject to the mediation of institutions; for example the regulation of the type of animal that can be let in to pasture, or the length of time they can pasture or cultivation and cutting trees is forbidden. In addition, people tend to rely on reputation when identifying potential buyers or sellers. Most leasing occurs within sites, but people are equally likely to lease from/to neighbors as to strangers.

There are those individuals who do not recombine, do not lease and but who are in the minority i.e. about 9% of the total. These are a diverse group that defy easy characterization as they include very poor individuals with very small parcels of land as well as very wealthy individuals with lots of livestock. They do not recombine because they feel they have sufficient pastures on their land for themselves.

With regard to livelihoods, incomes are highest for those that do not recombine but also buy pastures. Those herders that recombine and buy pastures or those that just recombine have higher incomes than those that do not combine, or those that combine and sell pastures. With regard to environmental outcomes, tree cover, overall grass cover, and the cover of favored grasses is higher under the uncombined arrangement than where parcels are recombined. This is an unexpected result.

In sum, institutions such as rules and norms are at the heart of these strategies, all of which are aimed at increasing access to pastures under a circumscribed range (due to privatization) and under climatic conditions that are characterized by more frequent and intense droughts. Because this is a transitional situation that is little understood, the immediate policy advice is: do no harm. Maasai herders have by their own initiative started what can be viewed as a recreation of the commons. Policy

is best advised to strengthen this innovation. It can do this in several ways, first by strengthening people's ability to work together (i.e. by reducing the transactions costs of organizing) in order to increase the size of units that are undergoing recombination. Second, by assisting in conflict resolution or providing information that can improve herder decision making; and third by complementing the investments that herders make on their parcels.

Intended research outputs

Research outputs are incomplete but underway.

One article based on the outcomes of the focus group discussions is underway, intended as part of a special issue in the *International Journal of the Commons*.

I anticipate to submit one more journal article upon completion of the anticipated fieldwork.

Other intellectual or professional advancement activity(ies)

Position accepted

Scientist—Property rights and tenure. Center for International Forestry Research, Bogor, Indonesia.

Research proposal funded

“Biofuels development, local resource rights and governance in Africa and Asia.” May 2009.

Conference attended

“Bumbling bureaucrats, sluggish courts and protracted conflict in the transition to private property.”

Paper presented at the Workshop on the Workshop 4 (WOW4). 3rd-6th June, 2009

Bloomington, Indiana University.

Published papers

2009. Property rights and governance of Africa's rangelands: A policy overview. *Natural Resources Forum* 33: 160-170.

2009. With Helen Markelova. Collective action and property rights for poverty reduction: A review of methods and approaches. *Development Policy Review*. 27(3):301-331.

2009. With Elinor Ostrom. Top down solutions: Looking up from East Africa's Rangelands. *Environmen* 51(1):35-44.

2009. With Ruth Meinzen-Dick. The pitfalls of formalization: Cutting the web of interests. *Land Use Policy*. 26: 36-43.

Papers under review

“Bumbling bureaucrats, sluggish courts and protracted conflict in the transition to private property.”

Special issue, *European Journal of Development Research*.

Principal collaborators outside Harvard

Elinor Ostrom, Indiana University

Ruth Meinzen-Dick, International Food Policy Research Institute

Mario Younan and David Miano, Kenya Agricultural Research Institute

Carlo Jager, Potsdam Institute for Climate Change