

Institutional Options for Managing Rangelands

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Garret Hardin's "tragedy of the commons" theory uses the example of rangelands to argue that when many people have access rights to the same resource, there is a potential for each individual to overuse and underinvest in the resource. This theory has prompted a debate over the effectiveness of common property resource management, especially for rangelands.

In reality, rangelands have been subject not just to the open access situation described by Hardin, but to a wide range of tenure arrangements, with different structures for regulating access to, use of, and management of rangelands. These include many customary and tribal institutional arrangements that have functioned for long periods. Each of these property rights regimes and institutional options is associated with different costs for achieving various goals, such as poverty reduction, equitable access to resources, and sustainable use and management of those resources. This brief considers the benefits and costs of alternative tenure and institutional arrangements and the impact of existing legal and policy frameworks on the sustainability and equity of pastoral production systems under three categories of landownership: (1) state ownership; (2) individual ownership; and (3) common property.

STATE OWNERSHIP

Proponents of state involvement maintain that only an external authority can enforce the best use of, and investment in, common pool natural resources. They argue that the state has greater financial resources with which to make large-scale investments and can bear the risk associated with such investments better than community members can. Defining the "best" use rates and investments, however, requires a good deal of information on local conditions. In most cases government agencies responsible for state rangelands have only limited knowledge of agroecological conditions, and even less understanding of local rules of use and management. These information problems increase the costs of enforcing management decisions by government agents. Furthermore, in the arid and semi-arid regions, flexibility and mobility are valuable strategies for managing spatial and temporal variation in climate.

Centralized government decisionmaking and enforcement structures are likely to severely reduce this flexibility. Finally, collective action is likely to be lower under state tenure because pastoralists may fear that claims on returns to investments they make now on state land will not be recognized in the future. Nonetheless, a number of different institutional arrangements have been introduced to manage some of these costs, including the granting of common use rights to communities or cooperatives, grazing licenses, and leaseholds.

COMMON USE RIGHTS FOR PASTORAL COMMUNITIES

Some governments provide tacit recognition of pastoral communities' use rights and their potential for informally operating grazing networks. This tacit recognition, however, gives pastoralists only a limited role in management and investment decisions and an even smaller role in deciding on the evolution of property rights. Often users do not have the right to reallocate common land to alternative activities like cropping or reserves, a situation that limits the capacity of pastoralists to respond to local conditions. By appropriating pastoral resources and limiting the role of local-level pastoral institutions, state ownership has often fostered land use conflicts and the breakdown of collective action within and across pastoral groups. In particular, where the state claimed ownership but expended limited resources to manage rangelands or relied on bureaucrats to implement management schemes without knowledge of local resources and institutions, many land use conflicts have arisen and resources have become degraded.

COMMON USE RIGHTS FOR PASTORAL ORGANIZATIONS

Numerous projects have attempted to reorganize pastoralists into cooperatives with the aim of improving rangeland resources and promoting collective action, but the cooperatives have rarely been effective managers of rangelands. In theory, the state and the local organizations could work together to create and enforce use rules and investment activities, but in practice the costs of negotiating such rules have often been prohibitive. In most West Asian countries pastoral cooperatives have mainly been involved in distributing subsidized feeds. In Jordan, however, the new herder-driven cooperatives, which have management rights granted by the state on their traditional pastures, are getting better range productivity results than state-managed reserves, without requiring expensive fencing and guarding. This type of cooperative fosters collective action between members because members are certain to reap the benefits of their investments and control access to improved pastures. There remain, however, concerns about potential conflicts between cooperative members and nonmembers. In the Sahel, most of the pastures exclusively used by members of pastoral organizations reverted to common pastures open to all community members at the end of the projects.

Each of these property rights regimes and institutional options is associated with different costs for achieving the goals of equity, sustainability and poverty reduction.



GRAZING LICENSES

As part of a strategy designed primarily to reverse rangeland degradation, government-managed grazing reserves grant grazing licenses. In the best-case scenario, the government has a well-defined and well-funded investment strategy. Grazing reserves are then opened for grazing during specific periods of the year, and any herder can buy a license, whether or not he or she is a member of the tribe or community that held traditional claim to the reserve area. Pastoral communities contribute little to the management of these reserves, and the main collective action of community members has often been to hinder state licensing policies. In Jordan and Syria, this situation has often led to conflicts between local and nonlocal herd owners. The approach has also been widely criticized because of the high costs of fencing and guarding reserves and the lack of community participation in improving and managing these reserves.

INDIVIDUAL LEASEHOLDS

The practice of granting long-term individual leaseholds on range resources remains limited. In Botswana, leaseholds have in some cases led to increased livestock production and improved rangeland conditions, but the policy has been strongly criticized on equity grounds. In many cases, people with previous claims to resources have been dispossessed or denied further access without compensation. This situation has led to additional pressures on the now smaller common pool resource base, increasing range degradation and leading to conflicts between large and small herd owners. Widespread individual leaseholds increase the vulnerability of pastoral communities during droughts by limiting their capacity to move and negotiate access to neighboring pastures. There is very little collective action under this system.

In summary, state ownership often does not promote community stewardship and thus limits collective action and incentives for members to manage their resources effectively and make long-term investments. Competing claims between pastoral communities and states has created situations of confusion and open access, leading many pastoralists to challenge both state and traditional range management rules and activities and in some cases to illegally appropriate common rangelands.

INDIVIDUAL OWNERSHIP

In pastoral areas of central Tunisia, individual private property rights fostered the transformation of pastoral and nomadic systems into agropastoralist systems. Privatization led to the wide-scale adoption of fodder crop production, including cacti and shrubs. The efficiency of this option, however, depends on the performance of land, purchased input, credit and output markets, and legal and institutional provisions to reduce land fragmentation. Obviously, there is potential for misappropriation of land by the politically

powerful, and equity issues are thus of utmost concern. Also, such a system is likely to reduce herd size, mobility, and collective action within and between pastoral groups, and consequently pastoralist households may become more vulnerable to drought.

COMMON PROPERTY

Common property rights for communities make tenure more secure, but the communities must bear all costs of making, monitoring, and enforcing rules regarding rangeland management. Managing access to and use of resources can be difficult, particularly when benefits and costs are not equally distributed among community members. Common property rights are generally granted to a fixed and well-defined group for rangelands with well-defined boundaries, thereby limiting flexibility and herd mobility. Nonetheless, under community ownership, local institutions may keep their traditional roles of managing the resources, deciding how to allocate resources between pastures and croplands, and deciding on the nature of the rights to be allocated to members and nonmembers. These opportunities may empower local institutions and provide them with the capacity to mobilize collective action and sustain the livelihoods of their communities.

Because landowning communities may have difficulties mobilizing financial resources and technical expertise, they may enter contractual arrangements for improving their resources. Under such contracts, as in central Tunisia and Morocco, state institutions, generally forest services, are entrusted with the responsibility for improving and managing the resource. After the improvement of the resource, rights holders purchase grazing or cutting licenses, and the revenues generated from the licenses are used to pay off improvement costs. Theoretically, these ranges will revert to communities once improvement costs are recuperated; in practice, however, such transfers have often not taken place.

CONCLUSIONS

Achieving efficient, equitable, and sustainable rangeland management depends on the costs and benefits of alternative systems. These costs and benefits, in turn, depend on agroecological, sociocultural, and economic characteristics. The conservation and management of rangelands require not only tenure security, but also an understanding of local livestock production and risk management strategies and factors that promote collective action, which can then be integrated into national policy formulation strategies and project designs.

Further reading:

- T. Ngaido, "Pastoral Land Rights," paper prepared for the World Bank's Regional Workshop on Land Issues in Africa, Kampala, Uganda, April 2002, [http://Inweb18.worldbank.org/ESSD/ardext.nsf/24ByDocName/PapersPastoral/\\$FILE/Pastoral+Land+Rights_Ngaido.pdf](http://Inweb18.worldbank.org/ESSD/ardext.nsf/24ByDocName/PapersPastoral/$FILE/Pastoral+Land+Rights_Ngaido.pdf);
- T. Ngaido, N. McCarthy, and M. Di Gregorio, "International Conference on Policy and Institutional Options for the Management of Rangelands in Dry Areas: Workshop Summary Paper," CAPRI Working Paper 23 (Washington, DC: IFPRI, 2002), <http://www.capri.cgiar.org/wp/capriwp23.asp>;
- N. McCarthy, B. Swallow, M. Kirk, and P. Hazell, Property Rights, Risk, and Livestock Development in Africa (Washington, DC: IFPRI, 2000), <http://www.capri.cgiar.org/proprights.asp>.

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