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# The role of governance in sustainable rangeland management

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**Abstract.** The management and rehabilitation of degraded rangelands are inherently complex in south Mediterranean where state and tribal owned pastures are grazed commonly by the agro-pastoralists. The prospect for increased degradation primarily caused by overgrazing and recurrent droughts is currently at alarming levels. Reversing the negative trends primarily requires insightful management practices, institutional and policy support, and ultimately sound governance. Historically, the emphasis on rangeland management and improvement has been placed on the agronomic and ecological techniques but the efforts to restore the health and biodiversity of rangelands have achieved little impact. Low adoption of the technical and agronomic packages indicates that the imperative role of the governance and well-established sustainable communal land management cannot be ignored. Governance practices that are in conformity with socio-organizational arrangements are essential for sustainable management in particular for common rangeland grazing regimes. These practices should be set up in a participatory manner, involving the agro-pastoralists and building social networking to achieve environmental, social and economic sustainability in agropastoral production systems. This brief paper aims to highlight the role of governance of rangelands in sustainable pastoralism in the south Mediterranean region.

**Keywords.** Agro pastoralism – Degradation – Communal land management.

## **Le rôle de la gouvernance dans la gestion durable des parcours**

**Résumé.** La gestion et la réhabilitation des parcours dégradés sont très complexes, dans le sud de la Méditerranée où les pâturages appartenant à l'État ainsi qu'à la communauté sont pâturés collectivement par les agro-pastoralistes. La dégradation causée principalement par le surpâturage et par des sécheresses récurrentes est actuellement à des niveaux alarmants. Inverser les tendances négatives exige principalement des pratiques pertinentes de gestion, l'appui institutionnel et politique, et une bonne gouvernance. Historiquement, l'accent pour la gestion et l'amélioration des parcours a été mis sur les techniques agronomiques et écologiques, mais les efforts visant à rétablir la biodiversité des terres de parcours ont montré peu d'impact. La faible adoption des solutions techniques et agronomiques indique que le rôle essentiel de la gouvernance et d'une gestion durable des terres communales ne peut pas être ignoré. Les pratiques de gouvernance qui tiennent compte des aspects socio-organisationnels sont surtout indispensables pour la gestion durable des parcours communs. Ces pratiques devraient être mises en place de manière participative en impliquant les agro-pasteurs et en ciblant la construction des réseaux sociaux pour atteindre la durabilité environnementale, sociale et économique des systèmes de production agropastoraux. Cette étude vise à mettre en évidence le rôle de la gouvernance des terres de parcours pour le pastoralisme dans les régions du sud de la Méditerranée.

**Mots-clés.** Agropastoralisme – Dégradation – Gestion des parcours communs.

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## **I – Introduction**

Despite advances in rangeland restoration, rehabilitation, and forages degradation of rangelands in the Southern Mediterranean basin persists. This is largely due to the fact that rangelands are either subject to open access or receive limited institutional support from their governments. Technical interventions to improve rangelands will continue to be unsuccessful despite technological advances without addressing this underlying problem of governance and tenure. The objective of this article is to highlight and define the problem of governance and

tenure, proven solutions, and provide policy recommendations that will eliminate this negative externality within the cultural and political context of the region.

## II – Rangeland governance

Governance in the context of natural resources can be defined as “local people’s participation in managing the natural resources that they themselves use, in a sustainable manner, partnership with other key stakeholders (government departments, NGOs, the private sector, etc.) (Acosta 2010; Rist *et al.*, 2007). The type of partnership entailed may vary, but decision-making should be equitable, transparent and accountable. Often, there is a close link between rangeland degradation, failed rangeland policies and lack of rangeland governance. While local conditions for governance may vary there have been “three comprehensive attempts to produce theoretically informed generalizations about the conditions under which groups of self-organized users are successful in managing their common dilemmas,” (Agrawal, 2001). The indicators that were identified by these authors have been shown to be robust from findings from a larger set of studies from the commons (Agrawal, 2001). Table 1 synthesis these studies and compares them. There is a little overlap and a few slight differences.

While many opponents to communal tenure look for privatization of rangelands as a solution to degradation, mobility over large tracks of areas is necessary in arid lands as rainfall can be erratic making private tenure not feasible (Miehi *et al.*, 2010). Private tenure of such areas would inevitably make a large group of people “landless”. A closed communal tenure with government institutions that provide legislation support in times of conflict with transparently elected officials has proven to reduce degradation compared to open access. Without elected leaders and transparent structures, the minority elite can inequitably benefit at the cost of other pastoralists (Bennett and Barret, 2007).

Currently there are multiple limiting factors in the Southern Mediterranean basin that are contributing to its degradation that is a result of weak governance. In most dryland countries of the basin, the traditional mobility system has been dismantled and replaced by an unsustainable system of supplementary feeding (with state-subsidized barley) of mainly sedentary herds. This subsidized system leads to overgrazing as it reduces herders’ incentives to adapt herd sizes to biomass availability and so leads to overstocking and ongoing degradation of the rangelands (Hazell *et al.*, 2001). In North Africa, land rights and civil legislation is complex as there is pluralism of French civil law overlapping with Islamic law and tribal systems. Land rights include registered lands, *melk* lands (private lands), *habous* lands (or *waaf*) and pre-Islamic collective lands. One of the main causes of land disputes is the pluralism in legislation (UNECA, 2010). The makeup of tenure and which lands laws are followed varies often by locality and is not well defined. As a result, rangeland degradation is exacerbated by the absence of rangeland governance schemes which empower the local pastoral communities to responsibly manage their rangelands and exclude non-permitted users from other communities. Institutional overlap in ministries and agencies that manage land makes it difficult for the local administration to attain comprehensive and integrated land management activities. A tremendous amount of coordination is required as a result (UNECA, 2010). Legal pluralism, institutional overlap and the resulting lack of integrated land management activities has often created a vacuum for power grabbing by various local actors. Resulting conflicts related to rangelands are associated with a failure of governmental rangeland policies (Bedunah and Angerer, 2012). National policies in Southern Mediterranean as a result call for a decrease in rangeland in favor of sedentary crop production, further limiting the movement of pastoralists (Sivanpillai and Shroder, 2015).

Money that is lost through the degradation of rangelands and spent on policies that promote sedentary agriculture could better reduce rangeland degradation if directed elsewhere. The state not only has to cover the costs of the barley subsidies, but also has to cover the indirect costs of rangeland degradation. The annual costs of land degradation in Jordan are estimated

at about US\$ 280 million (about 3% of annual GDP) (World Bank 2008). There is an urgent need for policy and legislation refinement to achieve a more sustainable rangeland management approach. Such money would be better spent on tenure reform and institutional restructuring. Creating a defined set of rangelands users makes it possible to exclude rogue grazers that can exacerbate overgrazing. Communal land size needs to be large enough to support semi-nomadic grazing (Miehe *et al.*, 2010). Communities need to define their internal communal governing structure such that conflicts can be taken to external authorities if needed. Furthermore governmental institutions that can assist in conflict abatement are essential in supporting such institutions, with clear operating procedures and processes. Eliminating overlapping roles between institutes is essential to fulfill this process. Studies have shown that rangeland rehabilitation and improvement measures are not sustainable on the long run if they are not encompassed by a concept of rangeland governance (Niamir - Fuller, 1999). Reforms are essential if technical efforts to improve rangeland management are to be successful.

**Table 1. Summarized concepts from Baland and Platteau (1996), Wade (1988; 1994), and Ostrom (1990) from (Clifton, 2014)**

<b>Author</b>	<b>Wade Facilitating conditions</b>	<b>Ostrom Design Principles</b>	<b>Baland and Platteau Facilitating successful governance</b>
Resource system Characteristics	Small size and well defined boundaries	Well defined boundaries	None presented as important
Group Characteristics	Small size Well defined boundaries Past successful experiences Interdependence among group members	Clearly defined boundaries	Small size and shared norms Past successful experiences Appropriate leadership Interdependence among group members Heterogeneity of endowments, homogeneity of identities
Relationship between resource system Characteristics and group Characteristics	Overlap between user group residential location and resource location High level of dependence on resource location	None presented as important	Overlap between user group residential location and resource location Fairness in allocation of benefits from common resources
Institutional arrangements	Locally devised access and management rules Ease in enforcement of rules Graduated sanctions	Locally devised access and management rules Ease in enforcement of rules Graduated sanctions Availability of low cost adjudication	Rules are easy and simple to understand Locally devised access and management rules Ease in enforcement of rules Accountability of monitors and other officials to users
Relationship between resource system and Institutional arrangements	Match restrictions on harvest to generation of resources	Match restrictions on harvest to generation of resources	None presented as important
External Environments	Technology: low cost exclusion technology State: Central government should not undermine local authority	Technology: None presented as important State: Central government should not undermine local authority Nested levels of appropriation, provision, enforcement and governance	Technology: None presented as important State: Supportive external sanctioning institutions Appropriate level of aid to compensate local user of conservation activities

## Conclusions

Application of more insightful agronomic and ecological management techniques can substantially improve the conditions of rangelands and present potential for increased livestock production. However, the sustainability can only be achieved through more holistic and sound governance of rangelands. Without them the authors have often found for project interventions to be short lived or even jeopardized due to the short sighted economic incentives for overharvesting that open access tenure provides. Closed communal tenure with grazing permits and rest have shown to have substantial ecological and economic impacts in Southern Mediterranean.

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