Linking the social and the ecological for resilience and adaptability: The case of a controlled grazing system in the Ethiopian highlands

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Abstract

Ensuring a sustainable flow of ecosystem services is a challenge: long-term trends such as demographic growth increase the pressure on natural resources, and communities need to cope with ‘surprises’ such as political shifts. Understanding how communities perceive change and seize windows of opportunity, how they learn and adapt management practices may be crucial to achieve sustainability and face an uncertain and turbulent future.

In Ethiopia, governments guided by different political ideologies have led to radical changes in the land tenure system and the rules governing access to communal grazing land. The latter is an essential element in the highland farming system, esp. to ensure adequate nutrition for oxen used for ploughing and dairy cows. As the communist Derg regime ruled between 1975 and 1991, all land was declared government property and producer cooperatives were established. During that period, communal grazing land was in effect ‘open access’ and overgrazing resulted in severely degraded land. With the regime change in 1991, communities regained some say in how the grazing land was managed. Despite this, land degradation and erosion is severe in most of the Ethiopian highlands. Yet, a few communities are able to manage their communal grazing land in a sustainable manner. This study aims at understanding how one such community was able to recognize windows of opportunity, to learn from past mistakes, and to adapt their management. Data was collected through focus group discussions, key informant interviews and participant observation and analysed through content analysis.

The results show that three factors played a key role in enabling the community to cope with the impact of policy changes over the last 25 years. Firstly, traditional leaders stepped forward at the collapse of the producer cooperative in 1990, recognizing and seizing the window of opportunity and mobilizing the community. They built on their previous experience and authority as ‘father of herders’ and on the wide-felt need to change the management of the grazing land, as it was severely degraded and no longer secured adequate nutrition for the oxen, needed for ploughing. Secondly, an informal institution was established which governs the access to and use of the communal grazing land. Through the community-level, participatory approach, the management rules are adapted based on experimentation (e.g. with enclosures allowing regeneration), sharing of knowledge (e.g. rotational grazing, keeping animals on the land at night to fertilize through dung) and negotiating practices (e.g.

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allowing some access to dairy cows so that poorer households (i.e. those who do not own oxen) also benefit from the grazing land). Thirdly, the community was able to effectively interact with various official government agencies to safeguard their autonomy, and to enrol them to help enforce rules (e.g. excluding cattle from neighbouring villages). The study thus shows that while ecological knowledge is essential for social-ecological resilience, so is social knowledge, i.e. recognizing and seizing opportunities despite uncertainties, mobilizing for collective action, and ensuring a continuous process of social learning.

**Keywords:** Leadership, informal institution, collective action, communal grazing land, management of natural resources