Local institutions in Ladakh, India: community-based resource management in mountain agropastoralism

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This study analyses the status and challenges faced by traditional institutions in natural resource management in the Trans-Himalayan region of Leh-Ladakh, India. Employing mixed methods, including informal interviews, field observations and focus group discussions, it examines the roles of local institutions like goba, lorapa and lurhupa in preserving the traditional agricultural system. Rapid urbanization due to market forces, acculturation, livelihood changes and policies is minimizing reliance on traditional practices. Increasing population further undermines the relevance of these institutions. Participation decline and shifts from consensus-based to rotational selection methods are observed. Altered dietary habits, crop–livestock changes and improved socio-economics impact the structure, role and future of these systems in resource management. Ensuring their continuation is crucial for sustainable resource governance, particularly in fragile ecosystems like Ladakh.

Keywords: Agropastoralism, indigenous communities, local institutions, mountainous region, natural resource management, traditional knowledge.

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like poplar, willow and fruit trees, are influenced by conditions, land tenure and socio-economic statu households. Animal husbandry also complements agr ture, contributing to food and fodder security[15–19]. L institutions, such as goba (village head), chhurpon (w management), primogeniture system for land managem and other institutions such as droksa (summer pasture tlement), tsogs (forest groves), pha-spun (social affiliati and amchi (for healthcare), demonstrate effective susta able resource management[19–24] (Supplementary Figure These institutions, being directly or indirectly involved resource management, are integral to socio-cultural, e nomic, religious and educational aspects of society[17] Their interconnections form a self-regulatory system, exter ing to landscape-level management, such as irrigation wa management[21,25].

Ladakh's mountainous ecosystem is impacted by soci political changes, developmental pressures and cultur assimilation, threatening traditional knowledge and pra tices. Socio-economic shifts, notably in the tourism a service sectors, have reduced on-farm production and alter food systems, leadi