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Role of Participatory Action Research in Reviving Endogenous Rangeland Management: A Case from Southern Ethiopia

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Abstract

African rangelands are extensive and support large populations of pastoral people and livestock. The semi-arid Borana Plateau is an especially important rangeland for Ethiopia. It is over 95,000-km² in size and home to about 350,000 people and one million head of cattle, small ruminants, and camels. The grazing systems of the Borana Plateau have become increasingly unsustainable in recent decades, however, because of human population growth, expansion of maize production in dry-season grazing areas, and range degradation in the form of woody encroachment. Heavy grazing by livestock, reduced mobility of pastoralists, and lack of fire have contributed to conversion of open, mixed savannah communities to dense woodlands and bushlands. Herbaceous forage production for cattle and sheep can then be reduced via competition with woody plants for water and light. Residual grass can be subjected to intense grazing pressure, further exacerbating the downward spiral. Prescribed fire is the most cost-effective means of manipulating vegetation in savannah ecosystems of eastern Africa. A blanket national ban on the use of fire was initiated in Ethiopia during the 1970s. This was intended to protect croplands and other natural resources from indiscriminant burning, but one unintended consequence of this policy has been a weakening of traditional forms of range management that depended, in part, on the regulated use of fire to control undesirable woody plants, promote herbaceous forage production, and reduce populations of disease-carrying ticks. Efforts by pastoral communities to revive endogenous range management practices like the use of fire are now gaining the positive attention of policy makers. An alliance among pastoral communities, researchers, policy makers, and development actors is being forged to re-introduce prescribed fire to the Borana Plateau. Describing this process is the objective of this paper. The process requires a combination of indigenous knowledge, modern technology, training, and research, as well as creation of a truly collaborative management approach. Rather than top-down research, the key elements for change have been participatory action research, outreach, and engagement with a wide variety of stakeholders.

Keywords: Borana Plateau, collaborative problem solving, indigenous knowledge, pastoral development, prescribed fire, savannah ecosystems