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## Editorial

# The sustainability of southern African savannas

## ARTICLE INFO

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The sustainability of southern African savannas is critical for the well-being of populations, for natural resource use, economic activities, as well as for ecosystem functioning (Sporton and Thomas, 2002; Bassett and Crummey, 2003; Amanor and Moyo, 2008). At the same time, the ecozone is the focal point of interaction between a multitude of ongoing changes which are social and environmental in character. For example, southern Africa has been identified as one of the most vulnerable regions to climate change; the spread of HIV/AIDS has slashed life expectancies and undermined social fabric; economic liberalisation has altered the framework conditions for agriculture, industry and trade public; land reforms have led to privatisation of resources, reallocation of land and localised conflicts; there is increasing water stress in most southern African countries; while rising world food prices and increased demand for biofuels may alter land uses and change the context within which people build their livelihoods (Amigun et al., 2008; Leichenko and O'Brien, 2002; Tyson et al., 2002; Boko et al., 2007; Conway, 2008; Muller et al., 2008; Ziervogel and Drimie, 2008). The nature of these interactions – the speed with which processes occur and the linkages of local changes to global processes – makes it paramount to identify which changes may constitute threats under what particular set of conditions, and what interventions may ensure that ongoing processes of change can be turned into potential for enhanced sustainability.

The set of articles contained in this issue emerges from a collaboration between two research efforts undertaken in southern Africa. The Southern African Savannas Network (SASN, [www.savannas.net](http://www.savannas.net)) focused on threats to and oppor-

tunities for social, economic and environmental sustainability and in particular examined how existing policies and practices affect sustainability. One of the key realisations from this effort was the central role that societal processes play in the dynamism characterising southern African savannas. The Southern African Vulnerability Initiative (SAVI, [www.savi-gechs.org](http://www.savi-gechs.org)) is an ongoing project to develop a framework for assessing vulnerability in the context of multiple stressors resulting from the social and environmental changes and transformations ongoing in the region. In SAVI, the close inter-linkages between societal and ecological processes are seen as a premise for understanding the nature of vulnerability. Vulnerability, determined as it is both by these processes and by the ability to respond to them, also leads to outcomes that in turn affect social, economic and environmental sustainability in terms of poverty and inequality, viability of economic activities, and the integrity of environmental resources. Using the lessons of such different but complementary research efforts is critical to further enhance understanding of change in the region.

The first article (Eriksen and Watson, 2009) develops a common framework to interpret findings from both SASN and SAVI. A structural analysis approach is adopted in order to examine the multitude of different interactions between social, economic and environmental processes together and to identify key drivers of sustainability. The second article (O'Brien et al., 2009) presents a framework for understanding vulnerability and highlights the need for concrete tools to address multiple stressors in interventions. Two further articles elaborate specific interactions that drive sustainability

and vulnerability and draw out the implications for policy interventions. [Clover and Eriksen \(2009\)](#) investigate how the historical context of land rights and current land reforms together shape threats to social, economic and environmental sustainability. [Eriksen and Silva \(2009\)](#) use the SAVI framework to examine vulnerability to climate change in the context of economic liberalisation in a site in Mozambique.

An important insight from the structural analysis is the central role of the biophysical environment of savannas in terms of indigenous fauna and flora change, both in driving and being dependent on other processes. This is the case even at a time when a range of fundamental social and economic transformations are ongoing in the region. While the particular processes present in the region may change over time and necessarily vary between locations, the biophysical environment and natural resources are in themselves integral to societal change processes. For example, commercialisation of natural resource uses directly influences livelihood transformations and the changing viability of farming ([Eriksen and Watson, 2009](#)). [O'Brien et al. \(2009\)](#) argue that a lack of understanding of the multiple interactions inherent in the dynamism of savannas can lead to policy interventions that potentially undermine sustainability. Vulnerability interventions that focus on single stressors alone, for example, may have unintended results and even make matters worse for vulnerable groups. This is because their outcomes are influenced by multiple processes, which such a single stressor approach does not take into account ([O'Brien et al., 2009](#)). The underlying sources of vulnerability are often hidden, hence groups of people that appear homogenous, such as urban traders, can actually differ greatly in their levels of vulnerability. In addition, interventions that are limited to a particular community may be ineffective if they do not consider how vulnerability contexts are linked across space, such as between urban and rural areas through remittances.

A particular feature of transformations in savannas is the way that several different economic activities, including game farming, harvesting of indigenous plants, commercial farming and expansion of biofuel production, are complementing and potentially competing in the savanna system. Importantly, the uses and interests of small-scale resource users appear to be losing out in competition with commercial and powerful actors. [Clover and Eriksen \(2009\)](#) observe that the colonial land tenure systems and post-independence land reforms have in combination skewed policy attention and investments towards commercial farmers and large land owners while the majority of the population has experienced a loss of political, economic and social rights. Historical inequity in the pattern of land access, in economic and social support and access to markets, capital and labour, have been compounded by a shift in the focus of land reform from reducing poverty to privatisation of land and economic efficiency. In addition, economic liberalisation has in the case of Mozambique led to smallholders facing increased competition from commercial interests in accessing land and natural resources ([Eriksen and Silva, 2009](#)). With a reduction in formal employment opportunities following privatisation of industries and farms, many smallholders have been pushed into marginal and labour intensive activities.

During droughts in particular, many savanna households resort to activities such as casual employment on commercial farms or sale of charcoal to traders. Because most people have a poor negotiating position in labour and trade markets, they are locked into unreliable and short term survival type strategies at the expense of their long-term livelihood security and capacity to respond to future change, such as in climatic conditions ([Eriksen and Silva, 2009](#)). Rather than enabling long-term security in the face of shocks and changes, local faunal and floral resources as well as social networks become important safety nets for short-term survival for most villagers. These patterns diminishing the economic sustainability of agricultural livelihoods economically unsustainable for the majority of savannas populations, while threatening equity, social justice and contributing to poverty. Any environmental degradation associated with inequitable land distribution further undermines livelihoods and reinforces local tensions over the loss of political and economic rights ([Clover and Eriksen, 2009](#)).

The insights from the SASN and SAVI research efforts have several ramifications for the development of policies and interventions in savannas. First, in order to take advantage of opportunities and address challenges within the complex and dynamic system that savannas represent, future interventions must address the different elements of savannas and the interactions across sectors and geographic scales in a coherent manner. Changes in the biophysical environment, such as indigenous fauna and flora, and the social and economic processes with which they interact must form a key focus of any savanna policy. Savanna sustainability is dependent on change and disturbances that may temporally diminish valued qualities. Their herbaceous and woody layers must be managed as an interacting entity and as part of a catena of various grass-tree communities. Importantly, policies that are targeted at individual sectors and aspects of the environment that are contained in savannas are, in the absence of a coherent policy for savannas as a whole, likely to lead to conflicting measures that may undermine savanna system functioning and fail to address the critical threats to (or realise the potential opportunities of) the economic, social and environmental sustainability of savannas.

Second, there needs to be a prioritisation of savannas populations, natural resources and economic niches within policies. It follows that such interventions are not apolitical since they inherently will favour one interest over another, and a form of economic and political empowerment needs to be an ingredient in any effort aiming to address social sustainability and vulnerability. Empowering poor savanna households in terms of control over and access to land and natural resources rather than focusing on facilitating large commercial actors would represent one such intervention. This could include actions such as strengthening rights to non-monetised forest resources and to agricultural land in the face of expanding commercial agriculture and timber extraction. Addressing the poor negotiating position of most savanna households in employment and trade relations, for example through regulating employment conditions, boosting agricultural services and organising market outlets for savanna niche produce would constitute other measures that could prevent the problem of most household capital and

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