



Bale Eco-Region Sustainable  
Management Programme (BERSMP)



Oromia State Forest  
Enterprises Supervising Agency

# BERSMP

## Policy Brief No.3



**Diminishing Grazing and Grassland Resources:  
Lessons from Livestock Management in the Bale  
Mountains**

## Summary

Important strategic and policy reforms in sustainable land management and land use planning in Ethiopia are needed for the Grazing and Grassland Resources in the Bale Mountains EcoRegion. This was the clear conclusion of the Bale EcoRegion Sustainable Management Programme (BERSMP<sup>1</sup>). The key findings of a recent study on livestock and livestock systems in Bale highlighted the historical lack of appropriate land use planning, that continues to date. A lack of land use planning which is having fundamental negative impacts on local livelihood systems and contributing to rapid environmental and natural resource degradation. Uncoordinated and non-inclusive decisions concerning land use and land use change have led to encroachment and destruction of key grazing, water and mineral resources. All key to livestock, which remain a central livelihood component for the many agro-pastoralists found in the EcoRegion. Further a lack of livestock-focused extension services is leading to increasing livestock ill-health and disease problems. Stress is being placed on livestock based livelihoods, which are at risk of collapse. This in turn leads to increasing poverty and reduced food security. Those who no longer manage livestock seek alternative sources of income, mainly from crop production. This livelihood strategy change is having further negative impacts on the remaining natural resources in the area. Resulting in the ploughing up of grasslands and afro-alpine vegetation, leading to erosion, soil degradation and environmental change. Such environmental change has both local and non-local impact (for example reducing the river flows to the surrounding lowlands).

This policy brief sets out some key lessons concerning livestock management and grazing resources in the Bale Mountains based on the Livestock and Livestock Systems Study carried out by the BERSMP in 2007-8. This work was undertaken in recognition of the importance of livestock<sup>1</sup> to local livelihoods and the escalating stress coming to bear upon their livestock management systems. We present the highlights of this study together with key issues of concern in order to share our learning, and to inform land use and development decision makers at national, regional and local levels.

It is believed that the escalating and critical situation found in Bale can be reversed. Reversed through the adoption of integrated landscape (EcoRegion) level land use planning and management systems. Land use planning systems backed up thereafter by targeted and appropriate extension services. That is land use planning and management, and extension services that account for different livestock production methods, particularly livestock mobility and progressive integration with crop agriculture and other livelihood strategies. Central to this must be suitable land categorisation and certification. Specifically, land certification, particularly grazing land certification including common/communal property, needs to be determined, and aimed at improved natural resource management of forests, grasslands and water resources. All these activities must be undertaken with the full participation and decision making of rural communities and other stakeholders.

## Introduction

Under suitable management practices, livestock<sup>1</sup> production is the most appropriate land use system for many of the highland and lowland areas of Ethiopia. Recent studies have highlighted the economic, social and environmental importance of livestock to local and the national

economy (Ethiopian Economic Association 2005). Despite this, the significance of sustainable Livestock Management, its economic, social and environmental benefits, continue to be under addressed by policy and decision makers, in favour of crop-based agricultural expansion and other land uses. Nowhere is this more apparent than in the Bale Mountains, Bale and West Arsi Zones, Oromiya Region.

Livestock is a key livelihood component for the majority of inhabitants of the Bale EcoRegion and

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<sup>1</sup> Livestock as referred to in this report, principally means, Cattle, Shoats (all side of the Bale Mountains), Cattle, Shoats and Camels (south east of the Bale Mountains).

as such, should be central to sustainable land and resource use planning and management in the area. However information about livestock and livestock systems in the area has been poorly documented and recognised, and as a result, the benefits of livestock within sustainable land use management systems has to a great degree, been neglected. FARM-Africa and SOS Sahel Ethiopia's Bale EcoRegion Sustainable Management Programme (BERSMSP) in collaboration with the Bale Forest Enterprise has recognised the great potential of improved livestock management systems and their positive impact in contributing to local, regional and national development. It is also recognised that historically sustainable livestock production has significantly contributed to the conservation of the considerable natural resources of the Bale area and beyond. However, following events in the recent land use history of Bale which have resulted in significant land use change, appropriate planning and management is now urgently required based on better understandings of livestock and livestock systems.

This Policy Brief contributes to this understanding by highlighting key findings from a study carried out by BERSMSP on livestock dynamics and systems in the Bale EcoRegion between 2007-08. The findings are significant and not only relevant to land use planning decisions at the local level, but also to livestock development debates in both the agricultural and pastoral areas across Ethiopia (a full report can be downloaded from our website: [www.farmsos-pfmp.org](http://www.farmsos-pfmp.org))

### Livestock in Ethiopia and in the Bale EcoRegion

Recently the Ethiopian Economic Association (2005) estimated that the country's livestock herd comprises 41 million cattle, 25 million sheep, 23 million goats and 2.3 million camels. It was said that this contributed 9% of total GDP and 21% of agricultural GDP in 2005/06. It was also estimated that 65% of the rural population rely on livestock for a significant part of their incomes, while between 12% and 15% of the country's export earnings are derived from live animals, meat, hides and skins. However, impressive as these figures

are, it is unlikely that they fully capture the true value of livestock for Ethiopia and its economy. Many livestock systems and markets remain largely informal and loosely regulated in the country and the many indirect values, such as draught power and manure production, are not included in such GDP calculations.

In the Bale Mountains, as elsewhere in Ethiopia, livestock are central to the livelihoods of many of the local people. A recent study (Watson 2007) identified that, on average, households in Bale earn USD 228 annually from marketed livestock and livestock produce, which does not take into account draught power, animal reproduction, and milk used on a consumptive basis. Today, livestock in the Bale area tends to be managed within an integrated agricultural system mixed with the growing of crops on a small, often subsistence, scale. Livestock management is maintained through the continuation of a high level of seasonal mobility (a system locally known as *godantu*). This mobile system allows access to vital grazing and water resources, to make opportune use of the climatic and resources features of the EcoRegion's physical environment (see Figure 1).

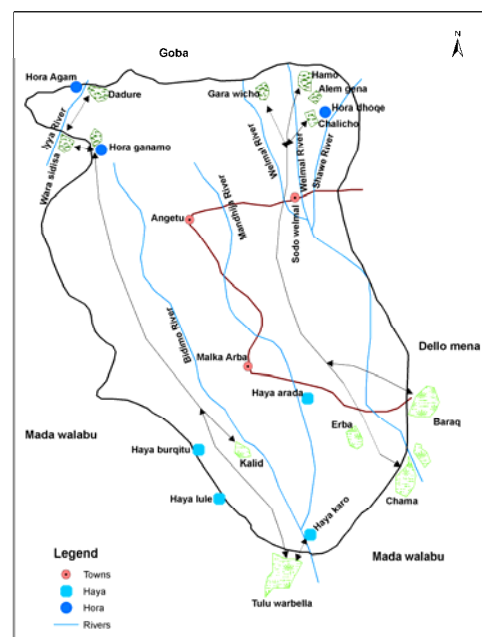


Figure 1 Dry and Wet Season Movements In and From Melka Arba PA, Harena Buluk: a part of traditional livestock movements across the landscape and altitudes, locally called *godantu*.



At present, livestock numbers are high in the Bale area, which is the result of relatively abundant natural resources spatially (yet variably) distributed across the landscape. However, managing these livestock is proving more and more difficult as the mobility of the agro-pastoralists is challenged, and access to resources becomes more competitive (competing with crop agriculture) and restricted (land categorisation – e.g. Forest Reserve / National Park).

Though livestock is greatly valued by those who keep them and rely on livestock as part of their livelihood systems, livestock values and benefits are rarely recognised by land use planners and/or by those working to protect the remaining natural resources in the area, such as those within the Bale Mountains National Park (BMNP). As a result traditional livestock herders receive little helpful support from development agents or extension services, whose priorities tend to be focused on improving crop agricultural production and agricultural inputs.

### **Increasing Difficulties in Livestock Management**

During the course of the Bale livestock study nearly all livestock owners reported increasing problems in the management of their animals. The types of problems highlighted included;

- ❖ Shortages in grazing land / resources and fodder;
- ❖ Reduced water availability (particularly in the dry season);
- ❖ The need for longer distances to be travelled to access grazing resources (in some places the time to access grazing has increased by 7-fold);
- ❖ Resource user conflicts (between livestock and crop farming / forest protection / National Park conservation);
- ❖ Animal health problems due to increased vulnerability and lack of knowledge of appropriate treatments.

Particularly during the dry season *bona*, there is now inadequate grazing and water in all the PAs (Peasant Associations) reviewed. These shortages mean movement and/or feeding of fodder is even

more necessary. However movement is more restricted and fodder is in short supply. These problems clearly indicate that the livestock management systems that have functioned effectively for decades are now under escalating stress.

The Bale Livestock and Livestock System Study clearly demonstrated that this diminishing situation has a number of root causes, the dimensions of which can be split into three themes:

1. Socio-Economics: the conversion of communal grazing areas to individual crop farm plots as;
  - a) cultivation has been encouraged by incoming settlers into the area;
  - b) cultivation has been promoted by government extension services;
  - c) challenged livestock owners themselves have sought alternative income generation activities.
2. Ownership and use rights: land registration and certification actions have been biased towards individual 'ownership' of farm plots and have failed to offer a means of registering and securing communal grazing resources. As the process of land certification has increased so too has the rush for registration of farming land, with land allocations to a growing youth population taking priority.
3. Land categorisation for conservation; the categorisation of forests and alpine grasslands as forest priority areas and/or the BMNP has reduced access to grazing, water and mineral resources, particularly those found within the boundaries.

Combined, these three themes are undermining the viability of livestock production in the Bale EcoRegion. Government and Development Services, such as the Bureau of Agriculture and Rural Development (BoARD) extension service and NGO development projects all reiterated the above mentioned livestock management problems. However, few are directly addressing these issues within their extension and

development programmes. And in a number of cases, it can actually be shown that government policies and NGO conservation and development projects are actually exasperating this diminishing livestock resource situation<sup>2</sup>.

### **Planning a way forward; addressing the lack of integrated and coordinated Land Use Planning and Management**

Underlying all these problems is the lack of coordinated and integrated land use planning, coupled with an increasing population of people seeking viable livelihoods. At lower altitudes, agriculture is expanding onto former grazing lands as small-scale farms and large-scale commercial ventures. Not only does this cause problems for those herders who need to access these areas when wet season grazing areas at altitude are being rested<sup>3</sup>, but it has also meant a pushing of cultivators further and further up into the higher altitude areas, previously only managed under extensive livestock systems. For example, the BERSMP investigation of land use change in specific woredas shows a land conversion rate, grassland to crop agriculture, of 26% between 2001-2006 in Dinsho woreda (BERSMP 2007).

Land use change processes have been on going since the Haile Selassie regime (c. 1950s), which saw the first settlers coming into the Bale area. Land competition intensified during the Derge regime (c. 1970s) with the establishment of large state farms. Most recently population pressure on land and resources has been aggravated by intra-regional resettlement programmes bringing settlers from other parts of Oromiya to set up homesteads and agricultural activities on land previously used for extensive livestock rearing. Restrictive land categorisation has also played a

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<sup>2</sup> Examples of how Conservation and Development actors are encouraging a reduction in resources for livestock include allocation of land for special and specific purposes, and restrictions on livestock entering forests and protected areas put in place by government and conservation and development actors.

<sup>3</sup> As part of the traditional *godantu* movements

significant role in relation to Grazing resource availability. The Bale Mountains National Park (BMNP) since its establishment in the early 1970s has attempted to restrict access of herders and livestock to the Park area whilst Forest Reserves<sup>4</sup> established at the same time, have restricted access to these resources<sup>5</sup>.

These land use changes have occurred with little regard to the wider natural resource and livelihood base of Bale's local communities. Integrated land use planning and implementation has not occurred with government departments failing to work together. Planning that has taken place has not done so at a scale that would promote a full recognition of the EcoRegion's benefits and how best to harness them. This would include an understanding and incorporation of the benefits of livestock systems in the area, and their environmental and socio-economic advantages over crop production. Indeed, ploughing up the grazing areas of the EcoRegion's grasslands is likely to have far more negative and far-reaching environmental and socio-economic impacts than properly managed extensive livestock production.

This lack of an integrated land use planning system, that includes the entire agricultural-ecological zone and the livelihood systems of Bale communities, means that competing land uses are diminishing the diversity and viability of livelihoods and forcing people to degrade and over use natural resources. A land use planning system that addresses these issues, and all stakeholder interests, including livestock herders, is urgently needed.

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<sup>4</sup> There are five Forest Reserves in Bale, c. 500,000ha

<sup>5</sup> Forests are an integral part of livestock production by providing browse, graze and shade, particularly in the dry season. But they have been increasingly designated for protection and conservation purposes rather than as an element of sustainable livelihoods. In the Bale Mountains herders also rely on high altitude mineral springs (locally know as *horo*), but again many of these are found within the boundary of the BMNP, though access has been relatively unrestricted to date.

### Who can use local resources; Resource Tenure and User Rights

The Bale Livestock study also shows that a key cause behind grazing land loss is that tenure and/or use rights to these grazing lands are extremely insecure, and from a formal/legislative perspective – almost non-existent. Further, though land users (herders) may be able to prove their use of the land at certain times of the year, at other times, these lands are rested as part of the traditional *godantu* wet season / dry season migratory livestock system. At these times it is easy for local government to argue that such land is ‘unused’ or in ‘excess’, and therefore distribute it to those who can, they believe, use it more ‘productively’ i.e. for agriculture. Security of tenure for agricultural land can then be provided to these new settlers as part of land certification schemes. Certification systems for grazing lands and or group use rights have not been established.

There is no mechanism or means of providing security of tenure for communal or common property land. As a result, in some areas all the common grazing land and livestock corridors have been distributed to new settlers and/or landless groups, including previously landless youth. In response to this land use rights loss and to try to avoid redistribution, livestock owners have either fenced their land to conserve grass for more intensive livestock management (e.g. in Nensebo), whilst others have ploughed their land and converted it to crop production (e.g. Dinsho). The remaining livestock herders who are still committed to and dependent on the more extensive, traditional livestock production systems can only try to find alternative routes to necessary grazing, water and mineral sources, avoiding the new fences and fields, and/or travel further distances (causing extra burden and stress for themselves and their livestock).

As such, current land tenure policies ignore and often undermine common property resource ‘ownership’ and access. This is despite the fact that traditionally these common property regimes have proved to be extremely effective and efficient ways of managing resources. This is

proven by the relative abundance of natural resources still found in the Bale EcoRegion. Individual land tenure can have its advantages. However in Bale, further increasing of individual land holdings, particularly those used for agricultural purposes, can only have a further detrimental impact on the livelihoods of livestock herders, and knock-on negative environmental and socio-economic impacts. A common property resource tenure policy and certification schemes, that include the needs of mobile livestock herders, are required without delay.

### New Land use Planning : Who decides - Participatory Decision Making

As part of new integrated planning processes and the development of common property land tenure policies and schemes, herders need to be consulted as important stakeholders who have much to gain and lose from changing resource management regimes. In order to do this, the view that livestock is a negative component of agricultural systems needs to be challenged, and its positive contribution to local-national economies and the environment advocated. Further some agro-pastoralists in the Bale Mountains have developed livestock-crop systems that are more intensive and integrated and less reliant on mobility (see Photo 1). How this has been achieved and its impact on socio-economics and the environment needs to be understood through collaboration between those leading the changes and government actors.



To encourage better participation and inclusiveness of local communities, BFE and BERSMP have begun expanding the Participatory Natural Resource Management (PNRM) approaches previously targeting forests. BFE and BERSMP's work in the EcoRegion includes forests, grassland and water resources, as key natural resources. Local communities and institutions are central to this PNRM approach. However for this to be fully achieved, policy and decision makers at national, regional and local levels need to recognise the great potential (and indeed past experience) of local communities to manage their own resources and provide enabling and supporting policy and legislative measures to allow them to continue to do so.

### Introducing EcoRegion Planning

BFE and BERSMP believe that EcoRegion planning is vital to the health and wellbeing of the Bale Mountains: its agro-pastoralists and its environmental attributes. EcoRegion planning takes decision making to the appropriate landscape scale, whilst supporting the inclusion of all stakeholders. BFE and BERSMP are introducing this type of planning system to the Bale Mountains. By working in partnership with government offices, development and conservation NGOs and local communities BFE and BERSMP hope to facilitate the identification of informed and fairly negotiated solutions to the challenges faced (and as discussed in this policy brief). A primary output of this will be the production of sustainable development and management plans for the entire area, produced in a planning process led by local government offices but inclusive of communities and other stakeholders.

A key part of the proposed new planning systems is the availability of planning information. BFE and BERSMP have been compiling a Geographical Information System (GIS) database for Bale. This database contains core information concerning economic development; social development; and environmental factors. This information will be made available to local government offices and communities in the Bale Mountains to inform and influence land use planning decisions and management actions.

Landscapes, particularly those encompassing human elements, are inherently complex therefore, given the limited resources available, it is impossible to manage and monitor all individual components and inter-linkages. The EcoRegion planning process identifies focal targets which are the **Priority Components** of the EcoRegion, and that together characterise the biodiversity and ecosystem services that are in need of management. In Phase I of the EcoRegion planning process, Priority Components for the Bale Eco-Region have been identified under the three pillars of sustainable development: *ecological*, *economic* and *social*. The overall objective of the Eco-Region Plan is to improve the condition of these Priority Components and to balance the interactions between them – reducing negative conflicts and contradictions while increasing positive complementarity. Thus, the Priority Components will be the basis for setting goals, carrying out management actions, and measuring management effectiveness.

Three themes of sustainable development and their priority components

<b>Ecological : Environmental Management</b>	<b>Economic Development</b>	<b>Social Development</b>
Hydrological system	Agriculture (crops and livestock)	Population and settlement
Forests	Tourism	Culture
Afroalpine and Sub-Afroalpine (Ericaceous belt)	Clean energy	Health
Grassland	Industry	Governance
Wildlife	Business development	Education and training
Natural Products (including NTFPs) Medicinal plants / Bamboo / Fuel wood and timber / Coffee / Honey / Mineral water / Incense, gum and essential oils / Hunted species	Financial services	Social security
	Infrastructure and Services	Community Empowerment

The Bale EcoRegion planning process is now underway. It is a new and experimental process within which BFE, BERSMP and Government and Community partners are all involved, and are all learning. The resultant Bale EcoRegion Plan will provide tools by which Government and Community can negotiate over natural resource use and make informed and improved land use decisions.

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The Bale Eco-Region Sustainable Management Programme (BERSMP) is a jointly implemented Government (Bale Forest Enterprise) / NGO (FARM-Africa / SOS Sahel Ethiopia) partnership.

The programme has been operating in the Bale Massif since the end of 2006 and aims to bring local communities into a central role in sustainable natural resources management supported by government services, across the whole Bale Massif.

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