



Bale Eco-Region Sustainable Management Programme (BERSMP)



Oromia State Forest Enterprises Supervising Agency

BERSMP

Policy Brief No. I

The Significance of the Bale Mountains, South Central Ethiopia

Summary

The Bale Mountains is among the 34 world biodiversity hotspots. It is one of the areas in Ethiopia where lack of proper natural resources management is threatening unique resources. The Bale Mountains cover areas ranging from 1500 – 4377masl. The area harbors different ecological zones including moist tropical forest, afroalpine habitats, woodlands, grasslands, wetlands and a large percentage of Ethiopia's endemic plants and animals. The importance of the ecological processes of the area is significant both locally and globally. About 12 million people are estimated to be dependent on the water resources originating from the Bale Mountains. However, the rate of agricultural expansion and land degradation is highly threatening the economic and ecological potentials of this unique area. Government willingness to jointly manage natural resources with local communities, and the communities enthusiasm and capacity to work towards sustainable development are the opportunities the Bale Eco-Region Sustainable Management Programme is using to mutually enhance the unique biodiversity and vital ecological processes of the Bale Mountains Ecosystem.

Introduction

The wide variations of geo-climatic features in Ethiopia have resulted in large biological diversity. The country hosts the fifth largest floral diversity in tropical Africa, is the richest in avifauna in mainland Africa and one of the eight Vavilov's centres of crop diversity (BERSMP, 2005). In addition to being an important regional centre for biological diversity, Ethiopia is one of the most important countries in Africa with respect to endemism of plant and animal species (EFAP, 1994).

The Bale Mountains in the Oromia region is among such areas of great diversity in

terms of fauna and flora in Ethiopia. The economic, biodiversity and ecological significance attached to this unique area is immense. The establishment of the Bale Mountains National Park more than 30 years ago and the delineation of a number of High Priority Forest Areas is a clear demonstration of its importance.

However, the area did not get the attention in terms of natural resources management. Unsustainable exploitation and degradation throughout the Bale massif increasingly threaten not only the livelihoods of the many millions of people directly dependent on the natural resources, but also the survival of a

unique fauna and flora whose economic potential as a basis for tourism remains unfulfilled. Further, the ecological processes, particularly the watershed value of the Bale Mountains, are highly threatened.

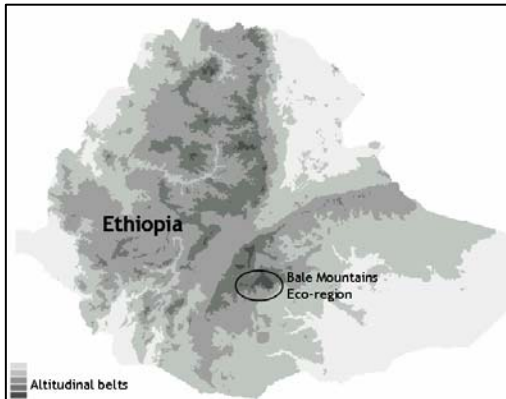


Fig. 1. the location of the Bale Mountains Eco-region(s) in Ethiopia

Characteristic Features

The main central area of the Bale Mountains is a high plateau, much of which is over 4000m with several peaks rising from it. The highest of these peaks is *Tullu Dimtu* (4377m), the second highest point in Ethiopia. South of the plateau, the land falls steeply to the moist tropical *Harennna* Forest, starting at approximately 3700m and extending down to 1500m. To the north are high ridges and broad valleys mainly lying at altitudes of 3000-3500m and comprising high forest vegetation such as Juniper

(*Juniperus procera*) and *Hagenia* (*Hagenia abyssinica*) along with woodlands, grasslands and wetlands.

The resource base

The area harbours a unique and diverse fauna and flora which include a large percentage of Ethiopia's endemics, some species of which are only found in Bale.

The key resource features include:

- ▶ The largest area of Afroalpine habitat (c. 1,000 km² and 17% of the total) on the continent;
- ▶ The *Harennna* Forest and adjacent *Mena-Angetu* forest which form the second largest stand of moist tropical forest remaining in Ethiopia;
- ▶ Over half the global population of Ethiopian Wolf (*Canis simensis*), the rarest canid in the world which is found only in suitable Afroalpine habitats of Ethiopia.



- ▶ The largest population of the endemic Mountain Nyala (*Tragelaphus buxtoni*), estimated to be approximately two-thirds of the global population;
- ▶ The entire global population of the Giant mole rat (*Trachyoryctes macrocephalus*);
- ▶ 26% of Ethiopia's endemic species (1 primate, 1 bovid, 1 hare and 8 species of rodent). Of the area's recorded birds, 6.1% are Ethiopian endemics. There are also several rare and endemic amphibian species;
- ▶ Stocks of valuable genetic material, including wild coffee (*Coffea arabica*), the value of which is estimated at USD 1.5 billion.
- ▶ Rainbow and brown trout that were introduced into rivers on the north of the massif and provide another potential tourism opportunity if sustainably managed.

All these and more have made the Bale Mountains one of the 34 world Biodiversity hotspots.

Importance

Over and above its biodiversity values, the area is of significant value to approximately twelve million people that

are dependent on its ecological processes, primarily water. The Bale massif plays a crucial role in climate control in the region, attracting large amounts of orographic rainfall. Four major rivers arise from the massif – the Wabe Shebelle, Web, Wemel and Dumal; and the water for numerous springs in the lowlands originates from the Bale Mountains.



These rivers are the only sources of perennial water for the arid lowlands of the east and southeast of Ethiopia, including the Ogaden and Somali agricultural belt. The livelihoods and food security of the people in these lowland areas, particularly during the dry season, are therefore highly dependent on good environmental management in the highland areas.

Hydroelectric Power

Currently, two of the rivers have hydroelectric schemes: the Melka Wakana scheme on the Wabe Shebelle and the Yato mini-scheme on the Yadot River. The produced hydro-electricity supplies the towns of Dodola, Adaba, Dinsho, Robe, Agarfa, Ali, and Goba, and Dola Mena respectively via a central grid.

All the people living in the area are inextricably dependent on the local natural resources for their livelihoods, which are primarily agro-pastoral in nature.

According to a recent study, under current open-access resource management and policy structures, the annual direct consumptive use value in the Bale Eco-Region is US\$ 377,777,500 (Watson, 2007). This considerable value illustrates the economic losses that will be suffered as a result of declining environmental quality.

In addition, the contribution of this eco-region to the overall global environmental stability is of immense importance. Especially, at a time when the world climate is under high threat,

places like the Bale Mountains need to be given due attention.

Challenges and Threats

According to WBISPP 2001, in 1995 alone 32,000 ha of forestland was converted to agricultural land in the Oromia region. The current loss (between 2000 and 2010) is estimated to be more than 8.7%. It is further estimated that between 1990 and 2020, the region could lose 27% of its high forest resources from agricultural expansion (WBISSP, 2001).

The situation described for the Oromia region holds true also for the Bale Mountains. Threats to the wider Bale eco-region are undermining the long-term conservation of the area. The problems facing the Bale Mountains could be summarised as follows:

- ▶ Local community livelihoods are poorly developed and dependent on the unsustainable use of natural resources;
- ▶ Communities and Government are not working together to conserve and ensure sustainable use of resources. This has resulted in

natural resources being treated as open access resources;

- ▶ Human impacts (uncontrolled settlement, migration, land degradation and overgrazing) are eroding the eco-region's values and exceptional resources. For example, forest destruction is rising as growing number of people use increasing amounts of indigenous wood from natural forest and woodlands to supply the ever-increasing demand for fuel and building materials;
- ▶ The area's tourism activities and the revenues generated in that line are not contributing to the eco-region's management and community benefits;
- ▶ The current management system by the government is too weak to deal with pressures threatening the resources;
- ▶ The policy framework for natural resource management, landscape level planning and protected areas is inadequate;
- ▶ If the highland environment continues to be mismanaged, the flow of water will be altered, typically becoming seasonal - with rapid flow during the rainy season and drying up during the dry season. In the lowlands this will

result in the reduction of livestock and wildlife, leading to degradation of rangelands surrounding the few areas with permanent water - which in turn leads to food-insecure lowland communities.

- ▶ Negative impacts on the natural resources. The fauna and flora of the area are becoming vulnerable. For example, the Ethiopian Wolf is listed as Endangered by The World Conservation Union (IUCN);

Opportunities and Next Steps

The Bale Mountains, endowed by unique natural resources, have high potential for conservation as well as economic benefits if properly managed.

Activities carried out by different development organisations in the area have witnessed the capacity of local communities to work with government and development practitioners to ensure proper natural resources management. Further, Government programmes are becoming open for bottom-up approaches making joint implementations feasible.

Therefore, acting on available opportunities, programmes should gear

towards full community involvement in natural resources management while ensuring proper legal supports are in place.

The Bale Eco-Region Sustainable Management Programme

The programme brings local communities into a central role in sustainable natural resources management supported by government services, across the whole Bale Massif.

The goal is to mutually enhance the unique biodiversity and vital ecological processes of the Bale Mountains eco-regions, and the social and economic well being of the communities dependent on the eco-region's natural resources.

The programme will run in two phases from 2006-2011 and work in 14 woredas.

The first phase has started in four priority woredas: *Goba, Harena Buluk, Delo Mena* and *Nensebo*. The programme aims to accomplish the following major output:

1. Eco-region Plan Completed and Used
2. Government and Community Institutional Capacity Strengthened for Sustainable NRM
3. Functional and Sustainable NRM and Conservation Systems Developed
4. Community Natural Resource Based Livelihoods Diversified
5. Sustainable Financing Mechanisms, which benefit the government and communities developed
6. Legal, policy and regulatory frameworks for Eco-region planning, CBNRM and protected areas in place.

References

- Bale Eco-Region Sustainable Management Programme (BERSMP)**, 2005. Project Proposal, Addis Ababa
- Ethiopian Forestry Action Program**, 1994. Synopsis Report, Ministry of Natural Resources Conservation and Development, Addis Ababa
- Watson, C.** 2007. Direct Consumptive Use Valuation of the Ecosystem Goods and Services in the Bale Mountains Eco-Region, Ethiopia, Research undertaken in fulfillment of MSc requirements, Centre for Environmental Policy, Imperial College, London
- Woody Biomass Inventory and Strategic Planning Project (WBISPP)**, 2002. A Strategic Plan for the Sustainable Development, Conservation, and Management of the Woody Biomass Resources, Ministry of Agriculture and Rural Development, Addis Ababa



The Bale Eco-Region Sustainable Management Programme (BERSMP) is a joint programme of FARM-Africa and SOS Sahel Ethiopia. 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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