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MAINTAINING ECOLOGICAL AND ECONOMIC VALUE OF ALPINE WETLANDS

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SUMMARY

The high altitude catchments of Lesotho are extremely important as they are the largest watersheds in Southern Africa and are responsible for regulating 43% of the region's mean annual rainfall. They are also important both locally and regionally, as they have an economic value to Lesotho as pasture lands for livestock.

The Lesotho alpine wetlands have two important conservation values. One is their ability to stabilize the hydrological regime of the region and the other is their biotic uniqueness, as they are found nowhere else in the world.

Alpine wetlands in Lesotho are in a poor condition. Their degradation status can be attributed to two main factors; the climate which has become drier over the years and poor land use practices, overgrazing and trampling by livestock.

The ultimate option for the restoration and rehabilitation of these wetlands would be to reduce grazing pressure of livestock from these areas.

KEYWORDS: alpine, economic, management, restoration, wetland

INTRODUCTION

The high altitude catchments of Lesotho are the largest watersheds in southern Africa (Lahmeyer Macdonald Consortium & Oliver Shand Consortium 1986). The Orange-Senqu River system has its sub-basins in Botswana, Namibia, South Africa and the entire river system in Lesotho as its main tributary source. While constituting only 4% of the basin area, the river systems in Lesotho contribute approx. 45% of the Orange-Senqu runoff. Most of the water sources originate in the rugged mountainous terrain in the Highlands of Lesotho above 2,000 metres above sea level (m.a.s.l) where the terrain, rainwater and run-off form a myriad of wetlands which are valued for their hydrological functions such as their support to river flow.

Lesotho's alpine wetlands are rare ecological features in Southern Africa. They are distinct floristically and structurally from other wetland systems in Southern Africa. Just like many wetlands found throughout the world, the wetlands of Lesotho perform important ecological and socio-economic functions. The most important functions performed by these wetlands are the hydrological functions.

Wetlands provide supporting services which are necessary for the production of other ecosystem services such as primary production, nutrient cycling and soil formation. Wetlands also provide regulating services. These include water purification (through the assimilation of nutrients and removal of toxins), sustained stream flow, flood reduction, groundwater recharge / discharge, erosion control and the regulation of climate. (Sullivan *et al*, 2008). The wetlands of Lesotho are primarily important for their hydrological functions and they have directly and indirectly become the source of livelihoods and income for the country.

THREATS TO THE ALPINE WETLANDS IN LESOTHO

The status of wetlands in Lesotho varies. Some wetlands are still in their pristine state while others are experiencing degradation of varying scales. And as such many alpine wetlands are losing their ecological, as well as socio-economic functions. These threats experienced can lead to a number of ecological problems such as habitat change and species loss.



Fig 1: A Pristine wetland



Fig. 2: Wetland Overgrazing



Fig. 3: A degraded Wetland

The significance of these wetlands for continued economic growth and related contribution to poverty alleviation is attested to by the level of utilization. However, sustenance of these benefits in the long is under grave threat. There is need for institution of sustainable use of these crucial resources. While there are a lot of actors and activities among the stakeholders there are gaps that need to be filled. There are policies and legal instruments in support of wetland conservation and this need to be translated into by-laws that can be implemented at the local levels. Generally,

there is lack of awareness on the condition and trends of wetlands. Main actors within the watershed and wetland management systems are the government, chiefs, grazing associations, and herders. Currently the private sector and non-governmental organizations are not on board. There is need to advocate their contribution, particularly for livelihoods enhancement projects that can relieve current pressure on the wetlands.

SOCIAL AND ECONOMIC VALUE

Currently the river systems, which emanate from the wetlands, maintain the necessary quality and quantity of water which has been harnessed through the Lesotho Highlands Water project (LHWP) to support one of the major sources of foreign income for Lesotho. The sale of surplus water to South Africa through the Lesotho Highlands Water Project (LHWP) and generation of hydropower are initiatives that are expected to improve livelihoods of the Basotho people.

The alpine wetlands provide positive economic benefits for livestock owners through grazing and herder employment. However, the general view is that there is decreased livestock and range quality, diminishing gathering of other wetland resources, increased conflicts between members and non-members of grazing associations as well as between the local leadership (chiefs and councillors). Also other potential multi-functions that can accrue from the wetlands and watersheds such as ecotourism are currently not tapped. Women and other poor members of the society are marginalized in the utilization of these wetlands. Consequently, there is need to advocate for alternative land uses and tap on the multi-functional ability of these wetlands for enhanced economic diversification (WRCP, 2010).

Despite the importance of these wetlands to the people and the economy, the systems continue to be degraded, mainly because of, uncontrolled livestock grazing and trampling, and overexploitation of resources.

CONCLUSION

There is no doubt that the wetlands of Lesotho are under threat and that urgent action is required to address these threats. The current increasing attention to wetlands, both at the local level is a clear indication that the government of Lesotho is keen to address the current threats and challenges faced by the nation's wetlands (DWA, 2005). This include: Improving knowledge and Information on Lesotho's Wetlands through research and international collaboration, Effective Wetland Management and Governance, Capacity Building and Wetland Restoration and Rehabilitation.

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