Chapter 6

An Approach toward an Integrated Management of the Mara River Basin in Tanzania

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ABSTRACT

Lack of Integrated River Management practices is the major problems that affect effective management of natural resources. This chapter presents findings on different factors affecting the sustainability of the Mara River Basin (MRB). The study was limited to the MRB part of Tanzania and multiple approaches were used in data collection. MRB is experiencing a number of management problems including deforestation, land degradation and pollution of the river water associated with human activities. Institutional framework for natural resource management (NRM) is rather sectoral thus lacking integration and sometimes results into conflicting efforts to conserve natural resources. It is evident that some cultural attitudes have positive impact on natural resources management such as the customary land tenure system. For sustainability of the MRB resources, integration of projects, programs and stakeholders’ participation are key factors without neglecting cultural aspects. Furthermore, different policies need to be considered by linking them together to achieve sustainability.

INTRODUCTION

The Mara River (MR) is an international river, shared between Kenya and Tanzania. Natural resources (including water) in the river basins are being managed in unsustainable manner, thus leading to natural resources depletion and consequently environmental degradation. Likewise in other basins, climate change and variability coupled with land use change in the basin affects agricultural production in a number of ways including crop production failure (Salinger, 1992; Frederic, 1997; Majule, 2008). Stakeholders in the basin are increasingly facing problems with poor water quality and environmental degradation and thus limiting efforts to achieving poverty alleviation, improving health, food security, economic development and protection of the natural resources including forest...
An Approach toward an Integrated Management of the Mara River Basin in Tanzania (Salinger, 1992; URT, 2005). Main issues include the loss of forest cover in the upper catchments and along rivers, unsustainable agricultural expansion and intensification (including small scale irrigation), population growth, poorly planned water abstraction, pollutions from mining, agriculture and inappropriate fishing methods.

A number of projects have been initiated in the MRB to address a number of socio-economic, cultural and environmental concerns (Yanda & Majule, 2004). For example, the MRB Project was developed to serve as a catalytic agent for bringing various stakeholders within and outside the basin to the discussion table to exchange ideas and information for planning and implementing shared sustainable management and conservation initiatives. The project adapts Integrated River Basin Management (IRBM), which is the most promising approach to sustainable management of fresh water, through balancing water management across the whole river basin in order to achieve economic, social and environmental goals in a sustainable manner (GWP, 2000; www.gwpforum.org). There is a growing need for generating baseline data prior implementing different development programs in order to make sure that development activities do not really compromise with natural ecosystems (Yanda et al., 2007; Majule & Kalonga, 2008; Majule et al., 2009).

For sustainable management and development of resources of the MRB, there must be political commitments from the governments of Tanzania and Kenya and support stakeholders’ dialogue to develop a shared vision, mission and objectives. Baseline studies on socio economic and cultural aspects on the MRB is intended to provide different stakeholders and scientific community information that can be used in the planning of different development activities as well as undertaking different research activities in the area. The paper presents facts about socio-economic, cultural and environmental concerns on the sustainability of the MRB, Tanzania based on the study which was conducted in the MRB. It uses such information to emphasize a need to developing and Integrated Water Resource Management Strategy for MRB in order to sustain potential available natural resources in the basin (McDonald & Kay, 1988). This allows for documentation of best and poor practices that will enhance sustainable planning of the management of the MRB natural resources in particular water. This chapter therefore have discussed the institutional framework for managing natural resources in MRB and ascertained how socio-economic activities, cultural aspects contributes to resource management. The environmental implications associated with resource management and policy interventions that could be adopted in other basins have also been highlighted.

DESCRIPTION OF THE STUDY AREA

Geographical Locations

The Mara River is an international river, shared between Kenya and Tanzania. The size of the MRB is about 13,750 km², of which about 65% is located in Kenya and 35% in Tanzania. The basin is located in the northern part of the country and is shared with Kenya on the upper stream part (Figure 1). The Mara River drains its water into Lake Victoria and the basin covers Musoma, Tarime and Serengeti districts in Tanzania.

Climate and Soils

The Mara region is divided into three major climatic zones. The northern zone falls within the MRB is a (highland area) which mainly covers Tarime and part of Serengeti districts. This zone receives an average rainfall of between 1250 and 2000mm per year. It has two rainy seasons; a short one from September to January, and a long rainy season from February to June. The central zone covers much of Musoma district and eastern parts of Serengeti. The area receives between 900
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