

Development of Integrated Water Resource Strategy and monitoring of wetlands and river catchments of Laikipia County, Kenya

Implementing partners

Kenya Wetlands Biodiversity Research Group (KENWEB)
Laikipia Wildlife Forum (LWF)

Background

Laikipia County is lowland with numerous volcanic ridges cut into by two major rivers Ewaso Narok and Ewaso Nyiro with various tributaries flowing down from the Aberdares and Mt. Kenya. The Ewaso Narok River sustains Ewaso Narok and Rumuruti forests, Ngare Narok swamp and flows through several ranches and finally joining Ewaso Nyiro river. These riverine, wetland and forest ecosystems support a myriad of socio-economic activities of forest users, pastoralists and farmers and maintain a great number of wildlife. The Laikipia County possesses the highest population of wildlife in the country outside protected areas. The county is largely water scarce and thus human-wildlife and social water users conflicts are of major concern.

At present, the water resources of the rivers and wetlands are managed by the Water Resource Management Authority (under the Ministry of Environment, Water and Natural Resources) who in turn engage local communities to form Water Resource Users Associations (WRUAs). 25 WRUAs operate in the Laikipia County with the responsibility to manage water allocation and use. The allocation of water has generated much conflict between farming communities located in the upper zones of the river and the pastoral groups in the lower sections. Various partners have worked with the communities to enable equity in water sharing and to maintain its quality and the integrity of riparian and catchment areas.

The Kenya Wetlands Biodiversity Research Group (KENWEB) has worked in Laikipia wetlands and associated riverine ecosystems providing information for improved conservation of biodiversity and for the development of the Kenya Wetlands Atlas, a project of the Ministry of Environment, Water and Natural Resources.

The Laikipia Wildlife Forum (LWF) is involved in the monitoring and management of forest, rangeland and wetlands in the upper Ewaso Ng'iro basin, much of which lies in Laikipia County. Due to the high demand for improved support in the water management, water program was set up and has supported WRUAs in a variety of activities including governance issues for registration of the associations, rainwater harvesting among others. Many WRUAs have existed for close to 10 years and have a variety of specific needs depending on the size and volume of the river catchment that they are located. In order to adequately support integrated water resource management of this region, LWF and KENWEB have proposed to work together on an IWRM strategy for the Laikipia county to enable development partners invest on

building up community ability to manage scarce resources based on particular water needs of each WRUA and the environment to maintain biodiversity.

Objectives and Methology:

This project supports the following **Satoyama Initiative activity clusters** 1/ knowledge Facilitation, 2/ Policy Research, 3/ Research for Indicators and 4/ Capacity Building.

The **main objectives of the project** are to: 1/ provide guidance to development agencies such as LWF towards support of water conservation and management in Laikipia county 2/ provide a simple manual or guide for communities to monitor and report the status of wetlands and river ecosystems

The **methodology** to be applied by the partners include stakeholder workshops with WRUAs; field visits for analyses status of river catchment protection, water quality and quality and to determine capacity of WRUAs for IWRM; capacity building workshops on areas identified that require specific training including on monitoring of wetlands and riverine environments. KENWEB researchers and affiliates will produce a simple guidebook in order to enable monitoring and long-term data acquisition on biodiversity and hydrology by resident researchers and ranch managers as well as field officers responsible for environmental protection and biodiversity conservation. The use of this guidebook will ensure sustainability of adequate water for human and livestock use, and for development of agriculture, fisheries and wildlife resources.

The guidebook will be handed to communities for monitoring purposes in a five-step process working with KENWEB scientists and the LWF Water Program: Step 1/ demonstrative use whereby the researchers will demonstrate the methodology 2/ participatory use whereby the communities will work with the researchers in using the manual 3/ instructive use whereby the communities work on their own with researchers instructing 4/ non-instructive use whereby the community work with the researchers watching but thereafter receive feed back 5/ independent use whereby the community work on their own and send data to researchers for validation.

This data will continuously be collected and analyzed in the long-term by the water program of LWF with collaboration of KENWEB and used for decision making for conservation and management of wetland and river ecosystem and for support of communities livelihood programs.

Outline for wetland and river basin monitoring guidebook

Section one - Introduction

- 1.1 introduction of wetlands
- 1.2 why we should monitor wetlands
- 1.3 purpose of this guide; how to use this guide
- 1.4 selecting monitoring sites, tools and indicators

Section two Drainage system and wetlands of Laikipia County

- 2.1 geographical location
- 2.2 drainage and hydrology

Section three Indicators and procedures for wetland monitoring

- 3.1 biological monitoring tools and procedures
 - 3.2.1 birds
 - 3.2.2 fish
 - 3.2.3 mammals
 - 3.2.4 herpetofauna
 - 3.2.5 macroinvertebrates

Section four - Water quality monitoring tools, procedures and indicators

- 4.1 water quality
- 4.2 water quantity

Section five - Baseline data on Laikipia wetlands

- 5.1 Laikipia wetland related fauna and flora baseline data and identification guides
- 5.2 Standard data collection format for wetland monitoring
- 5.3 Feedback and contacts

The **outputs of the project** are: 1/ IWRM Strategy report for the upper Ewaso Nyiro ecosystem; 2/ Wetlands and river basin monitoring guidebook for Laikipia County with baseline information on existing biodiversity and hydrological status of selected sites 3/ a video documentary highlighting compliance, enforcement and governance issues facing WRUAs including examples of best practice.

Project execution dates:

- The guidebook and strategy documents will be printed by December 2013
- The handing over of the guidebook to the community and capacity building for use is suggested for January to June 2014.

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