

Kenya (Integrated Ecosystem Project)

Western Kenya Integrated Ecosystem Project

SUMMARY

This project's main objective is to help improve the productivity and sustainability of land use systems in selected watersheds in the Nzoia, Yala and Nyando river basins through the adoption of an integrated ecosystem management approach. To achieve this the project will support farm conservation strategies, and improve the capacity of local communities and institutions to identify, formulate and implement integrated ecosystem management activities. The project is funded initially by a grant of US\$4.5 million from the Global Environment Facility (GEF) and the World Bank. It is conceived as "large scale solutions for large scale problems."

MATURITY OF THE INITIATIVE

Project approved in March 2005. Negotiations and feasibility studies are ongoing, but it is unclear whether land management activities are already being implemented. As of 2009 this project was considered in progress given that all participatory action plans in micro-catchments (15) had been completed and 80 per cent of participatory households had been involved in the assessment, planning, decision making, and implementation process.

DRIVER

Unclear. Interest in improving land use practices to mitigate soil loss in marginal agricultural land by improving land use practices and diversifying crops. Over-cropping and unsustainable practices have led to the abandonment of over half of the farmland in Western Kenya. The project aims to research the best ways of regenerating these farmlands in order to reduce environmental degradation and increase farmers' resilience to climatic variability.

STAKEHOLDERS

Supply

Smallholder farmers in Western Kenya along the rivers Nyando, Nzoia and Yala. Community representatives have not yet been selected and authorised to negotiate with outsiders.

Site selection:

Using field surveys and satellite imagery with advanced analytical techniques developed by International Centre for Research in Agroforestry (ICRAF) scientists, maps of degraded land in the river basins of Western Kenya have been created. These maps have been used to stratify the landscape into: intact, moderate, or highly degraded land in low-, mid- or upland portions of each river basin and to help select research sites. The research team has identified nine large 100 km² blocks of land, spread out across the landscape of Western Kenya. In each block 20 focus areas of 64 hectares each have been randomly selected. Activities will be carried out within each focus area. Overall, the project will work with an estimated 8,000 –12,000 households, and support sustainable land management in 5-10 million hectares.

Demand

It is unclear where demand is coming from, although Mutunga and Mwangi (2005) mention Kenya Agricultural Research Institute (KARI), ICRAF, Ministry of Agriculture, NGOs and community-based organizations (yet to identify which ones).

Potential sources of funding for ecosystem services include grants, in-kind payments for project planning, technical assistance, business planning, and operations. International NGOs and private companies with distinguishable water projects need to be targeted at further stages for contributions to the scheme.

Intermediary

Lead agency is KARI.

Facilitator

The World Bank (provides funding) and ICRAF (provides research and assists in project activities). Other institutions involved are the Ministry of Agriculture, Ministry of Environment and Natural Resources (MoERN), Ministry of Water Resources, and local government administrations.



NGOs, community-based organizations and other government agencies will use the results to influence and implement policy goals.

Organisations that will be needed to support the development of ecosystem services include: government bodies (line ministries such as environment, natural resources, water, lands and agriculture); regulation and management units (Kenya Wildlife Service (KWS), National Environment Management Authority (NEMA), Forest Department); other support groups: Nature Kenya, Kenya Wetlands Working Group, Naivasha Riparian Association, Friend of Watamu Bay, etc.

Currently Conservation Finance Alliance (United Nations Environment Programme (UNEP)/United Nations Development Programme (UNDP), Alain Lambert) provides support, advice and brokerage assistance. At the moment NGOs like ICRAF, UNEP, UNDP, and Bureau of Environmental Analysis (BEA) International are creating and disseminating training material.

MARKET DESIGN

Service

Water quality: reduction of erosion and pollutants into Lake Victoria, critical to the Basin. Also carbon credits from tree planting, and biodiversity. Current efforts seem to focus on carbon, rather than water (Food and Agriculture Organization (FAO)- Cooperative for Assistance and Relief Everywhere (CARE), 2008).

Commodity

Improved management practices on- and off-farm for soil and water protection. The project advocates for moving from short-term planting like maize to more sustainable forms of agriculture – including tree-based enterprises such as orchards and fodder plantations for livestock – are more promising in the long term. They can halt soil degradation, rehabilitate degraded areas, and thereby raise crop yields. They are also less susceptible to climate change and climatic extremes.

The project suggests the use of demonstration sites, where farmers will be invited to find out about the opportunities available.

Payment mechanism

There is no indication as to which mechanisms are going to be used. Information only indicates “once the project is in place, appropriate institutional mechanisms shall be put in place based on research evidence to institute measures of soil erosion and water management measures both on and off the farm” (Mutunga and Mwangi, 2005).

It is not clear whether local people will be able to decide how incoming funds will be spent. Mutunga and Mwangi (2005) suggest that this will be known during the operational phase of the project.

Terms of payment

Unclear.

Funds involved

Initial grant of US\$4.5 million from the GEF and the World Bank (which provided a loan of US\$4.1 million).

ANALYSIS OF COSTS AND BENEFITS

Economic

Financial analysis has not been done for the project. It is perceived that deforestation and land use change in the catchment has affected water quality and quantity. Pollution is also significant, affecting international waters.

Expected impacts on farmer income through the diversification of regional agricultural production into fruits, fodder, timber and the selling of carbon credits.

Environmental

Current situation: facts about erosion on degraded land in Western Kenya
(http://www.worldagroforestry.org/ar2004/te_story02.asp):

- 3.2 million tonnes of soil have washed into Lake Victoria since 1963 (equivalent to one million truckloads)
- In the Nyando river basin US\$42.7 million worth of soil is lost every year (based on US\$12 per ton)



- Over 50 per cent of the land has been abandoned due to depletion of soil nutrients
- In Kenya each year the value of soil lost due to erosion is three to four times as high as the annual income from tourism

Social

Existing capacity. Projects undertaken by ICRAF (like Transvic, Safeguards and Scales) have led to local institutions for collective action, and these will be used as entry points for the project.

Traditional institutions for organisational purposes also exist. Participatory methodologies are being used throughout the project to ensure participation of local groups, and mainstreaming of gender is taken into consideration.

Current level of awareness among national business community, government agencies and community organisations about ecosystem services opportunities is poor, although there is more involvement and understanding from national and international NGOs.

LEGISLATION ISSUES

There is lack of understanding on how benefits can be generated and how they should be treated in legislation. Current policy tools such as forest and water legislation do not cover ecosystem services comprehensively. Currently BEA International is conducting research and dialogue in partnerships with relevant departments of water.

MONITORING

The project has built a unique impact assessment model measuring seven dimensions as diverse as biodiversity, policy and socioeconomic impact.

MAIN CONSTRAINTS

Main constraints identified by Mutunga and Mwangi (2005) are:

- Absence of government organisations or agencies to regulate and manage ecosystem services and of institutional structures and services to deal with the management of PES schemes;
- Lack of understanding on how benefits can be generated and how this is legislated;
- No clear legal rights in the community-owned lands where the project is based.
- Deficiency of support to community-based organisations to sell, approve, or reject projects.

A comment from a water user on the main obstacles to implement PES include (Msafiri, Nairobi City Water and Sewerage Company-NCWSC; in FAO-CARE 2009):

- the company is making regular contributions to environmental bodies, but it is unclear whether these funds are being invested in watershed management;
- there is no established policy framework for setting up institutions to oversee implementation of PES (environmental legislation only mentions voluntary schemes but insists on negotiated and mandatory compliance);
- there is little legal or legislative provision to enter into payment arrangements (insecurity of investment);
- there is poor understanding of PES at the governance level;
- within the water utility itself, the governing body does not include any representative from the watershed governing bodies.

MAIN POLICY LESSONS

No information available.

OTHER INFORMATION

No information available.

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REFERENCES

[FAO-CARE, 2008. Workshop report, The role of payments for environmental services as reward mechanisms for sustainable land management in East Africa. FAO-CARE, Dar es Salaam, p. 20 pp.](#)

[ICRAF – Annual Report 2004. Restoring Kenya's degraded land.
http://www.worldagroforestry.org/ar2004/te_story02.asp](#)

[Mutunga and Mwangi \(2005\) An Inventory of current ecosystem service payments, markets and capacity building in Kenya. Document presented at the Eighth Public Meeting of the Katoomba Group- Building Foundations for Pro-Poor Ecosystem Services in Africa 19-22 September, 2005, Uganda.](#)

[Several documents available in the World Bank website:](#)

<http://web.worldbank.org/external/projects/main?pagePK=104231&piPK=73230&theSitePK=40941&menuPK=228424&Projectid=P072981>

LINKS

[FAO-CARE, 2008. Workshop report, The role of payments for environmental services as reward mechanisms for sustainable land management in East Africa. FAO-CARE, Dar es Salaam, p. 20 pp.](#)