KENWEB

Project title:

Biodiversity Values, Ecosystem Services and Water Management of the Eastern African wetlands

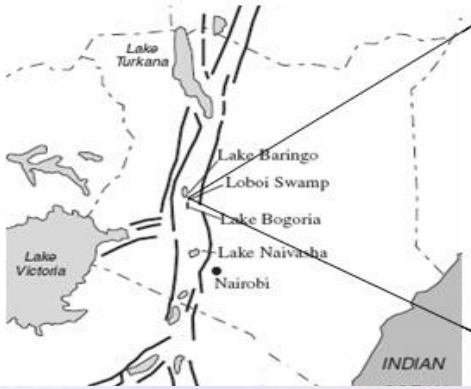
Team's goal:

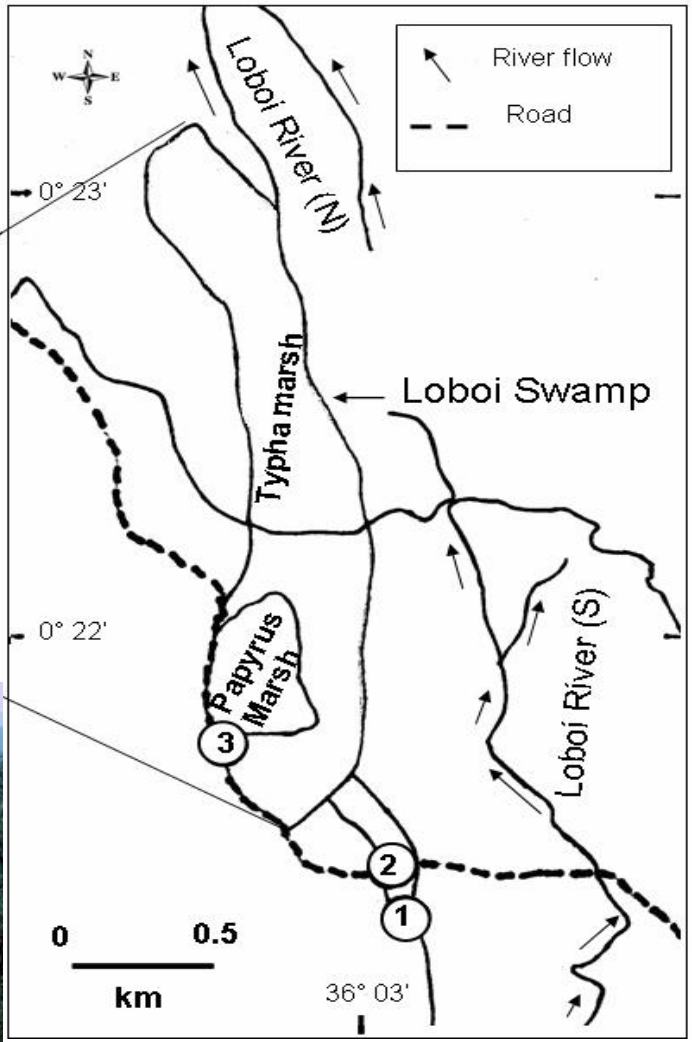
Wetlands conservation and management through Multidisciplinary Biodiversity Research and Community Participatory Assessments and Monitoring

Objectives

- establish a methodology for a better assessment and monitoring of the Biodiversity values and ecosystem services
- inventory of the biodiversity, assess distribution of species and analyse their conservation status.
- undertake simple hydrologic model to study flood patterns
- Understand the water needs of wetland ecosystems and users.

Why the Loboi swamp?





All begun discover of this fish!

New subspecies of the Nile tilapia in a warm water spring of Loboi Swamp

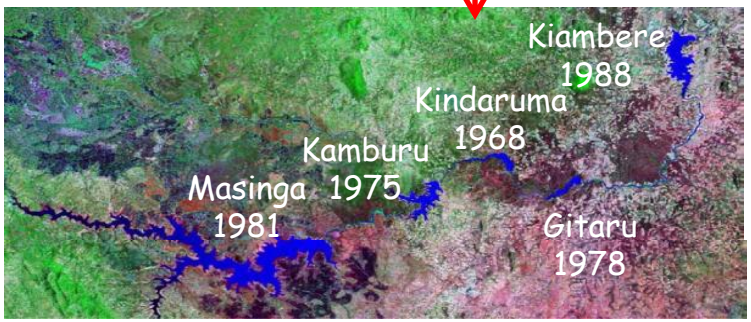
Why was this fish not earlier discovered ?

This road did not exist

Swamp reduced by 60% in last 30 years: Papyrus harvest & Irrigation

Water is now more and more visible

Why the Tana Delta?

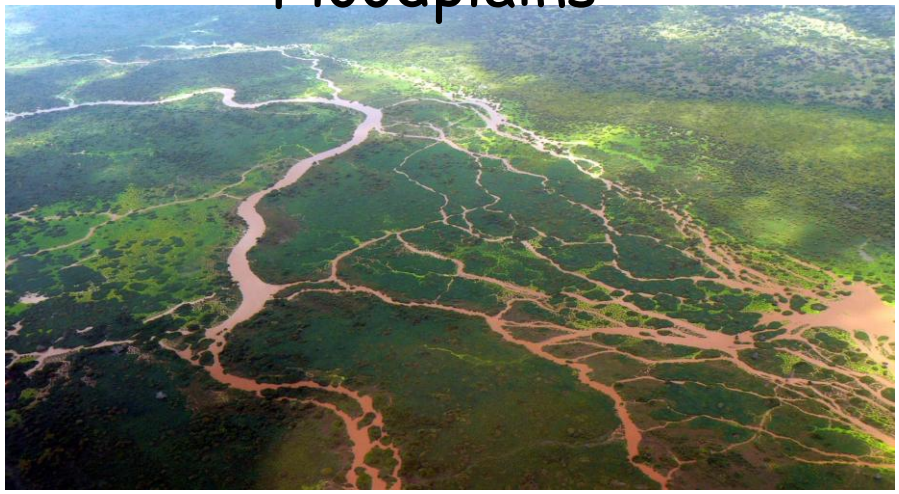


5 dams in the upstream part; 6th the Grand Fall below Kiambere

High in Biodiversity

Different from inland wetlands
Delta ecosystems are extremely diverse:

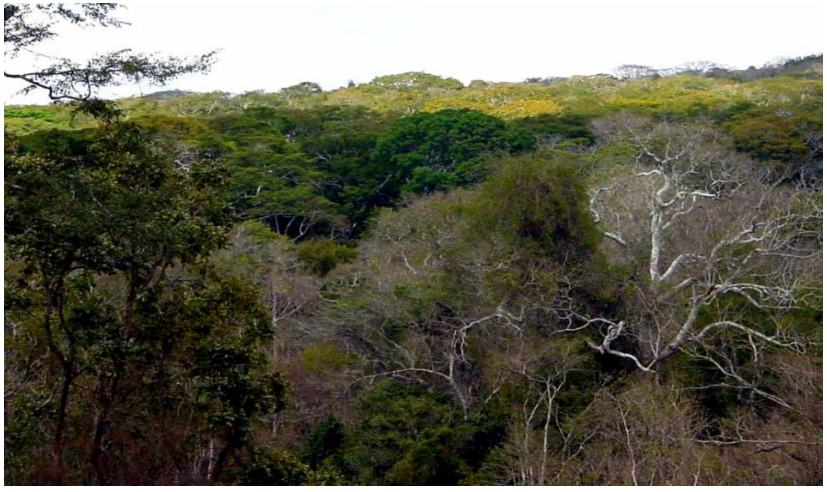
Floodplains



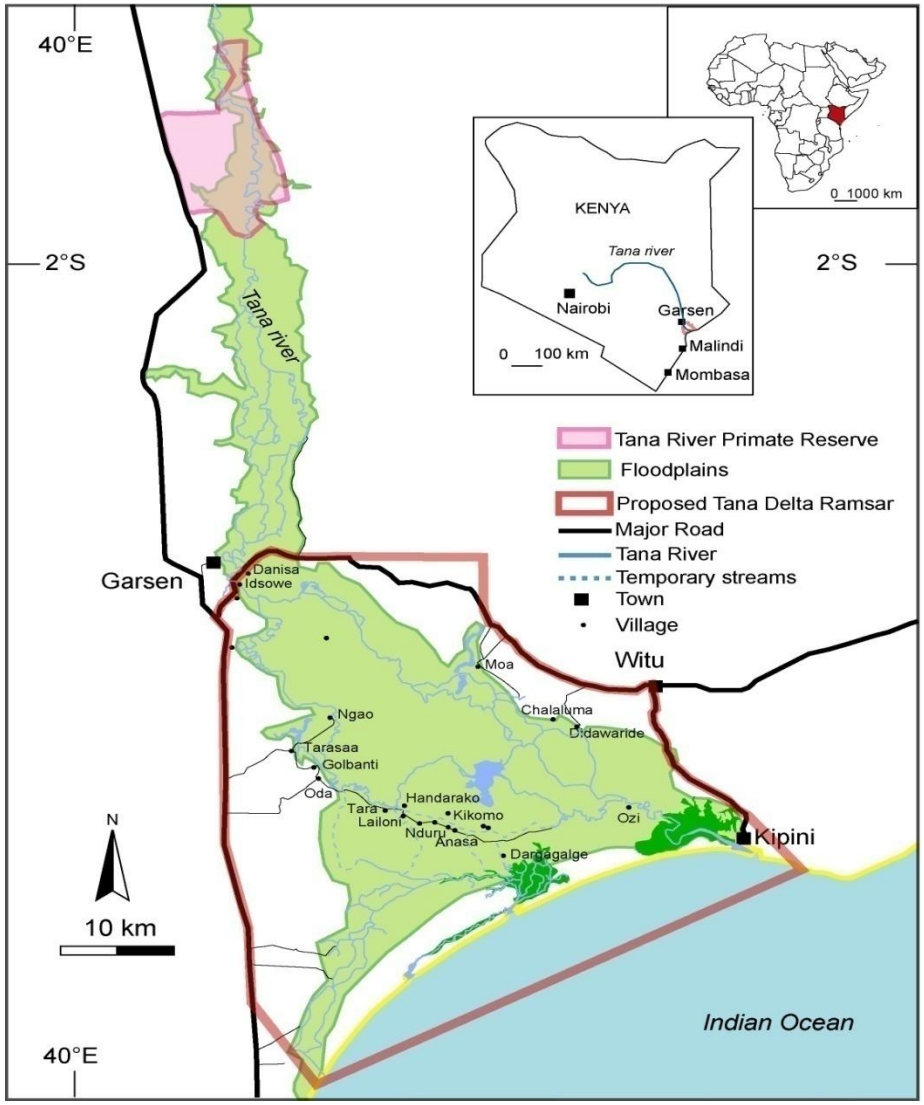
Mangroves

Lakes

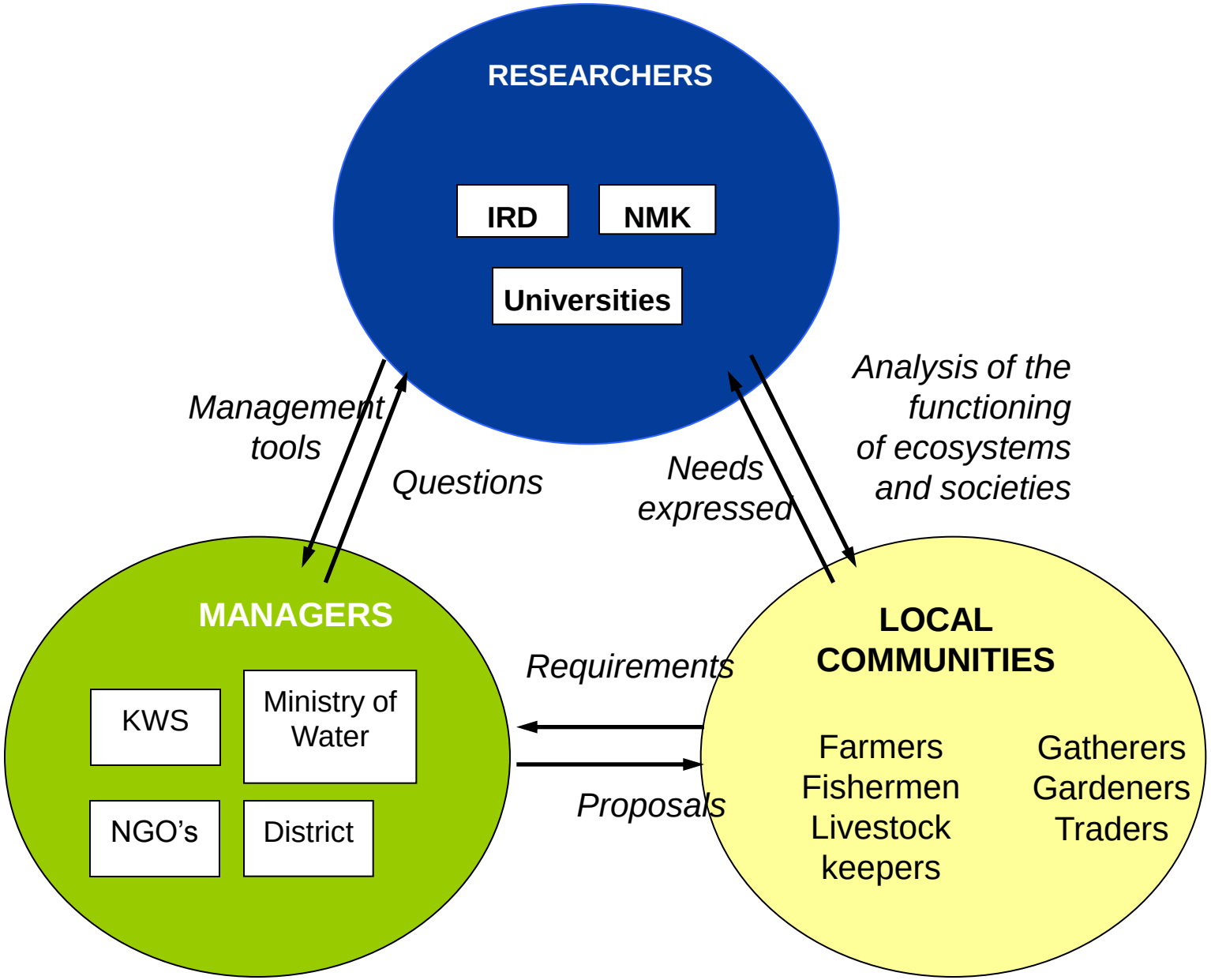
Coastal forests



Candidate for designation as a wetland of international importance under the Ramsar Convention



Interdisciplinary and multi-institutional work



Methodology

Data acquisition: Multidisciplinary biodiversity surveys, hydrological modelling, user strategies

1 Comprehensive literature review

2 Multidisciplinary field trips

3 Observers' networks composed of members of the local community

Synthesis and normalisation of the existing data

- Description of the ecosystem functioning, fisheries database, biodiversity inventory
- Stakeholder identification and their resource management practice
- Description of the political, economical and legal context
- Identification of gaps in data for purposes of planning objectives of field excursions

Hydrological studies and Hydraulic modelling

- Develop a water balance model for Loboi swamp
- Exists for tana.
- Data acquisition through stageboard installation in collaboration with WRMA

Productive ecosystems sustain wide range of socio-economic activities and its associated specific socio-cultural practices

Recession Agriculture	Forest exploitation	Fisheries	Livestock keeping
			
Warufiji	Warufiji	Warufiji	Barbaigs Sukuma
Pokomos	Pokomos	Pokomos Ormas	Ormas

Specific practices shaping specific landscapes
Livestock keeping of the ormas

Economic estimation:
20,000 local cows,
+ 1 M cows depending on the Tana floodplain grassland

Close link between wetland and identity

- A lot of symbolism in link with the forest and the river
For example in Rufiji a Taboo existed of not cutting the big trees without
the authorization of the forest spirit. This is also a feature of the “Kaya”
Forests among the Mijikenda people in Kenya

-Complex rules for access and sharing of pastures, land and water
between the differents users group

Empowering the local communities

Within the Ramsar site the objective is to design **co-management** of natural resources with the local communities

Definition we are using « partnership by which 2 or more relevant social actors collectively negotiate, agree upon, guarantee and implement a fair share of management functions, benefits and responsibilities for a particular territory, area or set of natural resources » (Borrini et al. 2004, sharing power)

Following a few key principles of co-management :

- Develop trust
- Take into account the diversity of interests within the communities
- Initiate a flexible iterative negotiation process (with adjustements, re-elaboration)
- Build on customary and local organisations

In Tanzania, experience of community-based management plan

- Each community develope a Village Environmental Management Plan with some zoning and mapping of their territories

- National Law is recognising the VEMP

-Researchers provided technical support in participatory mapping

Exogenous Exploitation

Tana delta : different and conflicting visions for the same territory

Local views	Agri-business
Local economy for self-consumption	Agro-industry for exportation
Natural flood	Irrigation
Culture embedded and productive systems	Bureaucratic systems
Communal Natural resources	Private property
Negotiated	Top-Down approach
Wetland adapted Natural ressource management system	Drainage of wetlands