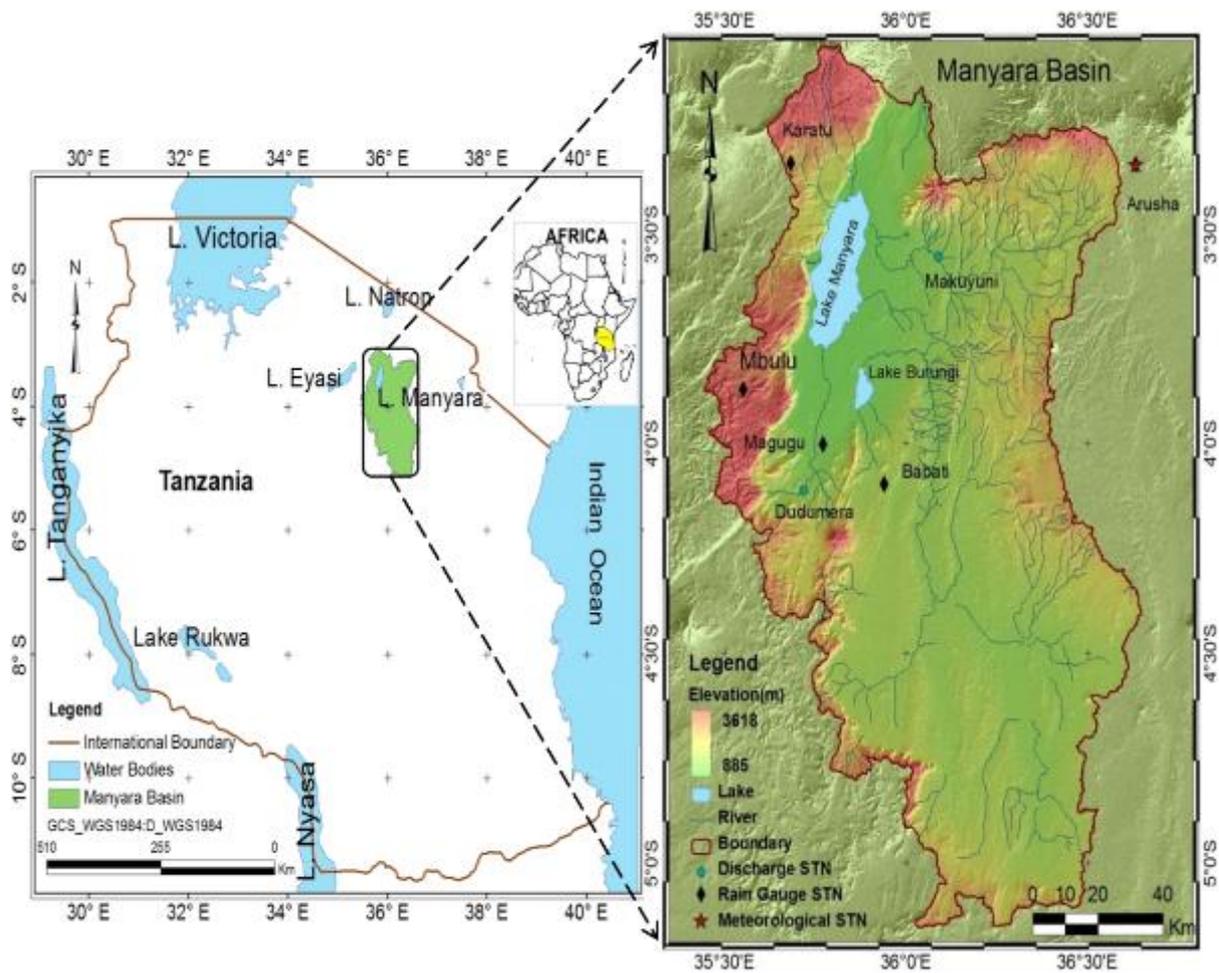


North South South Project (VLIR-UOS)
Integrated water management Lake Manyara
Mission 7-12 December 2015
Summary (CEBioS)



Map of Lake Manyara (from Deus et al., 2013)



Lake Manyara inlet, North-east short grass steppe with running wildebeest and in background the rift escarpment (photo@Luc Janssens de Bisthoven)

Summary

This mission is in the framework of the North South South Project (VLIR-UOS) **“Balancing water for biodiversity and socio-economic use in a changing climate: towards a Decision Support System for sustainable land and water use” in the lake Manyara region, Tanzania**. RBINS- CEBioS is involved as a partner in this project, together with KU Leuven (Prof. L. Brendonck), NM-AIST (Tanzania, Dr. Hans Komakech), UWC (S. Africa, Dr. Maryke Malan), UNZI (Zimbabwe, Dr. Tamuka Nhiwatiwa) and UGent (Prof. P. Boeckx). The project ends in December 2016.

CEBioS was present with Luc Janssens de Bisthoven and Maarten Vanhove. This external project fits into the strategy of CEBioS, SO1 (knowledge), SO3 (awareness), SO4 (Mainstreaming, policies) and SO5 (MRV) (see <http://www.biodiv.be/cebios2/programme/strategic-objectives>)

Project Summary

By integrated research with complementary expertise from the different partners, scientific data will be generated and implemented in a Decision Support System for sustainable multisector water allocation in the Lake Manyara basin as a case study. As such we aim to contribute to the sustainable development of ecotourism and irrigation based agriculture in the basin, a model that is relevant in all partner countries. Researchers will be trained in aquatic ecology, hydrology, characterisation of land use change, soil erosion and decision support systems.

Role of CEBioS in cooperation with partners for the present mission

1) ECOLOGICAL RESPONSE:

a) Survey of traditional knowledge and local perception about the benefits generated by the lake in terms of biodiversity, water quality and -quantity. With a workshop we will start assembling local traditional knowledge about the changes of the lake and its catchment area during the last decades, and the associated impact on water quality, cattle and wildlife. With the help of the Belgian NGO TRIAS, and the RBINS promoter, who both have experience in extension work with local farmers and pastoralists, we will organise a meeting and conduct a number of structured surveys with questionnaires addressing local stakeholders and experts.

Objectives

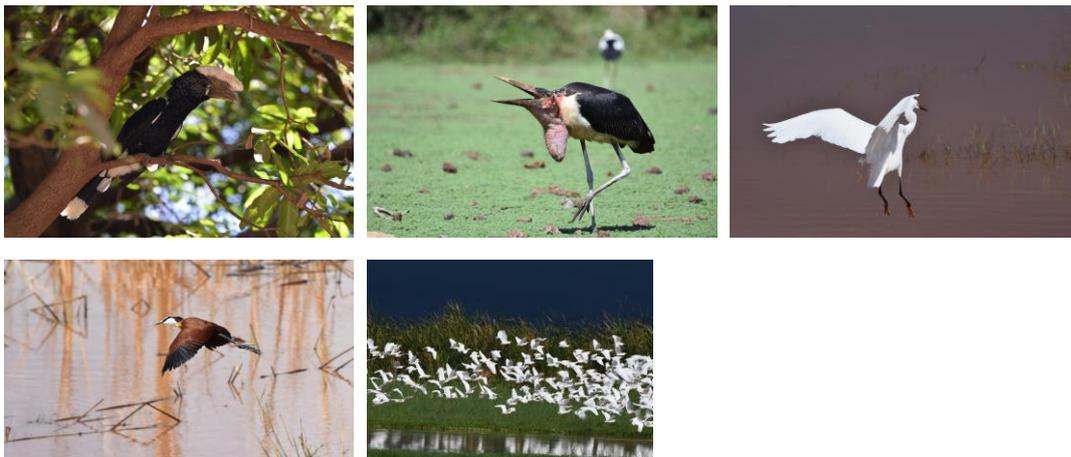
- To know the different partners
- To know the different stakeholders
- To understand the roles and mandates
- Field reconnaissance, ground truthing
- To launch a stakeholders' analysis of the LM region and its bottlenecks during a multistakeholders workshop (= 1) of ecological response, see project proposal)
- To plan for the further implementation of the project
- Scoping of information
- Bringing scientists and stakeholders together
- Analysis of current situation: benefits and users
- Basis for a better management of Lake Basin area
- Integrate biodiversity, climate and socio-economics
- Long term: better compliance and implementation, less conflicts, more stable livelihoods, less poverty, better health

The first day, the project partners came together at NM-AIST to make the last preparations for the multistakeholder workshop. The second day the partners drove to the Manyara sub-basin and visited the area. The next two days the multistakeholders workshop took place at premises kindly organised by the Belgian NGO TRIAS. The list of participants and the structure of the workshop are given below. Participants were given the opportunity to do a stakeholder's analysis, a community mapping exercise, a problem tree, and a SWOT analysis. Each stakeholder also presented the own perspective on the lake Manyara socio-economic and environmental issues. In the afternoon of the second day TRIAS showed some interesting rural development projects North of Mto Wa Mbu (irrigation, bee hives, bananas). The workshop provided a very informative, multi-faceted and nuanced view on the Lake Manyara environmental problematics. It also created a space for lively interactions between the stakeholders for a better mutual understanding of conflicting issues.

Selection of photos



A selection of land/water use, ecosystem services and environmental problems: tourism, the possibility of elephant poaching, siltation of the river inflows into the lake, pastoralism by Masaai, bee keeping, small holders farming, immigration and human settlement, erosion, wood exploitation, irrigation. (photo@Janssens de Bisthoven)



A small selection of birds: silvery-cheeked hornbill, marabout stork picking up termites, white egret, jacana



Some mammals of Lake Manyara N.P.: olive baboon, impala, bushbuck, Kirk's dikdik, lion, and elephant

Structure of the multistakeholder's meeting

1. The approach was **participative, iterative and interactive**, interspaced by **presentations and interventions by the stakeholders**. 17 persons were present. The workshop lasted two days in the town of Mto Wa Mbu, next to the L. Manyara N.P. The present stakeholders can be divided into 1/administration (national parks, district, water authority), 2/farmers, 3/pastoralists, 4/academics and 5/ NGO (TRIAS), which serves as in-between towards farmers and pastoralists. See list of stakeholders at end of document.
2. The workshop started with a short **welcome**, a **round of presentations** and a **stakeholder's analysis** of the Lake Manyara region or sub-basin.
3. Participants were asked about all possible stakeholders involved in the current use of the sub-basin, and their **possible interest and role** in the present project or more generally in the development of a DSS. This exercise was a good ice breaker and made us realise we were only a fraction of possible interested parties, but that fraction was quite important in terms of interests and benefits from the lake and sub-basin.
4. This first list of stakeholders was then **classified into 4 categories of parties**: 1/ high interest, high influence, 2/high interest, low influence, 3/ low interest, high influence, 4/ low interest, low influence. Although this is certainly not an exact science, this kind of output creates a process of reflection amongst the stakeholders, self-reflection, self-assessment and also a sense of knowledge about the political economy at stake, and political correctness, present in such environmental conflict setting. It allows letting appear issues which are difficult to address frontally.
5. After the stakeholders' analysis, the 4 categories of stakeholders were asked to draw a map without external help about the lake Manyara region, and the resources, settlements and conflicts. This **'community-mapping tool'** is one of the tools proposed by 'Community Environmental Action Planning', ProAct Network, 2013. It proved very powerful at showing the perspectives of the different stakeholders groups: 1/ the priorities in the narratives of the oral presentations of the maps, 2/ the reference points in the map, 3/ the orientation of the Lake in the map and 4/ the amount of details/priorities provided in the maps. This exercise allowed all participants to grasp the different perspectives of the other beneficiaries of the sub-basin in a very visual way.



'Community mapping' at work.

6. The next step in the workshop was to construct by means of individual cards a **problem tree** about the Lake Manyara sub-basin. It allowed all stakeholders to reflect on all bottlenecks, challenges, and problems around the lake and to think about cause-effect relationships in a collective brainstorming. It made also clear that the present project can only tackle a fraction of the existing challenges.
7. And to conclude, on the basis of previous exercises, the group made plenary a **SWOT analysis** of the project and the possible development of a DSS.

List of stakeholders involved during this mission

NAME	ORGANIZATION
Yustina A. Kiwanga	Tanzania National Parks (TANAPA)
Isaac M. Urassa	Monduli District
Lazaro K. Mathayo	Trias Tanzania
Fred L. Parmelo	Ujamaa-CRT
Tamuka Nhiwatiwa	University of Zimbabwe
Herry H. Mahimbo	Mviwata-Arusha
Amani G. Maressi	Lake Manyara National Park
Luc Janssens de Bisthoven	Royal Belgian Institute of Natural Sciences (RBIN)
Maryke Malan	University of Western Cape South Africa
Revocatus Machumba	Nelson Mandela - African Institution of Science and Technology
Hans Komakech	Nelson Mandela - African Institution of Science and Technology
Maarten Vanhove	Royal Belgian Institute of Natural Sciences (RBIN)
Maarten Wynants	KULeuven Belgium & Plymouth University UK
An Steensels	KULeuven Belgium
Robert K.M. Sunday	Internal Drainage Basin Water Board
Luc Brendonck	KULeuven Belgium
Bart Casier	Trias Tanzania