

Safeguarding Livelihoods in the GaMampa Wetlands in the Limpopo River Basin



HIGHLIGHTS

- ✓ Government officials have committed to supporting the GaMampa and were still involved with the community more than a year after field project activities ended
- ✓ With support of the Landcare Unit, Limpopo Department of Agriculture, the community obtained funding from UNDP to assist them in continuing to manage their wetland resources

March
2013

Outcome Stories

Wetlands play a key role in supporting local livelihoods. They provide multiple services, supplying water on one hand and controlling floods on the other hand. Wetlands mitigate water pollution, and they are a source of biodiversity. Wetlands often have enough water to sustain crop production even during drought periods, helping to ensure food security for households that are largely dependent on them.

The main source of degradation has been identified as the encroachment of agriculture into many of the wetland areas in the Limpopo River Basin. Long-lasting efforts towards sustainable management and conservation of wetlands cannot focus on conservation alone; it requires that farmers are taken on board as co-managers of the resource.

To tackle this problem a better understanding of the linkages and feedback between different components of wetland systems is needed. The wetlands-based livelihoods in the Limpopo River Basin Project¹ assessed wetland capacity to continue delivering ecosystem services under different wetland resource use scenarios. This was done through three major outputs: the framework for the inventory, the WETSYS trade-off model, and the development of guidelines for sustainable management.



GaMampa wetlands

Supported by field surveys, discussions with the community and capacity development activities, the project designed generic guidelines for wetland ecosystem management that can be used to guide government decisions regarding sustainable use and management of wetlands. The guidelines provide practical and field-tested management solutions that help ensure that livelihood benefits are not derived at the cost of ecosystem services.

Assessing trade-offs in GaMampa

The project developed and applied a trade-offs based framework for making decisions about allocations of wetland resources to specific uses, including agriculture. Integrated trade-offs models such as WETSYS can provide an innovative approach for assessing the costs and benefits of the different uses of wetlands. A modeling exercise in the GaMampa wetland, South Africa, helped the local community and other

stakeholders who rely on natural wetland products for their income better understand the trade-offs involved in clearing reeds for preparing new areas for cropping.

Most of the natural resources harvested from the wetland contribute in-kind to household subsistence and food security. Economic evaluation estimated that the contribution of the GaMampa wetland to the livelihoods of the local communities can potentially amount to USD 211 per household per year. This far exceeds the cash income currently derived from the wetland, which is only USD 35 per household per year. The trade-offs analysis in the GaMampa wetland was undertaken at the local level.

The choice of management options was informed by field surveys and discussions with the community. Recommended wetland management options for GaMampa include:

GaMampa wetlands

Photo: IWMI / Matthew McCartney



- (1) rehabilitation of the irrigation scheme;
- (2) introduction of crops more adapted to the wetland environment and reduction of artificial drainage;
- (3) development of ecotourism and;
- (4) imposing controls on wetland resource use.

Other modelling tools will be needed to assess the cumulative impacts of small wetlands use in order to be able to scale the research findings up to the catchment level.

Forging partnerships for continued focus

Although there is no guarantee that public officials will remain committed to supporting changes and needs in GaMampa, they were still involved with the community more than a year after field project activities ended. Engaging government officials responsible for natural resource management (NRM) helps ensure that local

concerns are incorporated into program management decisions. With support of the Landcare Unit, Limpopo Department of Agriculture, the community has obtained financial support from UNDP to assist them in continuing to manage their wetland resources.

After the completion of the project, other projects built on the concept of trade-offs analysis. For instance, the EU supported WETwin project, which aims to enhance the role of wetlands in basin-scale integrated water resources management (IWRM).

“Making optimal use of wetland resources and managing them sustainably need not be mutually exclusive.

A project supported by the CGIAR Challenge Program on Water and Food (CPWF) sought to find out how.”

References

Chuma, E., Masiyandima, M., Finlayson, M., McCartnery, M., and W. Jogo. 2008. *Guideline for sustainable wetland management and utilization: Key cornerstones*. CPWF Project Report PN30. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food.

CPWF. 2010. *Wetlands-based livelihoods in the Limpopo Basin: Balancing social welfare and environmental security*. CPWF Project Report PN30. Colombo, Sri Lanka: CGIAR Challenge Program on Water and Food.
http://results.waterandfood.org/bitstream/handle/10568/3903/PN30_IWMI_Project%20Report_Mar10_final.pdf?sequence=1

Jogo, W. and R. Hassan. 2010. Balancing the use of wetlands for economic well-being and ecological security: The case of the Limpopo wetland in southern Africa. *Ecological Economics*, 69(7), 1569-1579.

[http://repository.up.ac.za/bitstream/handle/2263/14112/Jogo_Balancing\(2010\).pdf?sequence=1](http://repository.up.ac.za/bitstream/handle/2263/14112/Jogo_Balancing(2010).pdf?sequence=1)

Morardet, S., Masiyandima, M., Jogo, W., and D. Juizo. 2010. Trade-offs between livelihoods and wetland ecosystem services: An integrated dynamic model of Ga-Mampa Wetland, South Africa. *Proceedings of LANDMOD*, 2010, Montpellier, France.

<http://cgspace.cgiar.org/bitstream/handle/10568/21596/21596.pdf?sequence=1>

Project Partners

International Water Management Institute (IWMI)
University Eduardo Mondlane, Mozambique
University of Zimbabwe

About CPWF Outcome Stories

The CPWF Outcome Stories document changes in knowledge, attitudes and practices that have emerged through CPWF-funded research. Outcomes occur when research outputs foster engagement processes that result in changes in practice or changes in behavior. These stories capture outcomes at a specific point in time; outcomes may have evolved since the completion of these projects.



Photo: CPWF / Tuppy McIntosh

Andes • Ganges • **Limpopo** • Mekong • Nile • Volta

About CPWF

The CGIAR Challenge Program on Water and Food was launched in 2002, with the aim to increase the resilience of social and ecological systems through better water management for food production (crops, fisheries and livestock). We do this through an innovative research and development approach that brings together a broad range of scientists, development specialists, policy makers and communities, in six river basins, to address the challenges of food security, poverty and water scarcity.

The CPWF is part of the CGIAR Research Program on Water, Land and Ecosystems. WLE combines the resources of 11 CGIAR centers and numerous international, regional and national partners to provide an integrated approach to natural resource management research. The program goal is to reduce poverty and improve food security through the development of agriculture within nature. This program is led by the International Water Management Institute (IWMI).

www.cgiar.org www.waterandfood.org

Mailing address

CGIAR Challenge Program
on Water and Food
P.O. Box 2075, 127 Sunil Mawatha
Pelawatta, Battaramulla, Sri Lanka
T: +94 11 288 0143
F: +94 11 278 4083
E: cpwfsecretariat@cgiar.org