

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

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.

Supported by field surveys, discussions with the community and capacity development activities, the project designed generic guidelines for wetland ecosystem management that can be



GaMampa wetlands

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: (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;

GaMampa wetlands

Photo: IWMI / Matthew McCartney



(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

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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.



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

About CPWF

The Challenge Program on Water and Food was launched in 2002. CPWF aims to increase the resilience of social and ecological systems through better water management for food production (crops, fisheries and livestock). CPWF currently works in six river basins globally: Andes, Ganges, Limpopo, Mekong, Nile and Volta.

CPWF is a member of the CGIAR Water, Land and Ecosystems Research Program. The program focuses on the three critical issues of water scarcity, land degradation and ecosystem services, as well as sustainable natural resource management. CGIAR is a global agriculture research partnership for a food secure future. Its science is carried out by the 15 research centers who are members of the CGIAR Consortium in collaboration with hundreds of partner organizations.

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