

Case 4: B O T S W A B A

Sustainable Management of Forest and Range Resources through using GIS-Remote Sensing Tools and Participatory GIS

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Sustainable Management of Forest and Range Resources through using GIS-Remote Sensing Tools and Participatory GIS for KyT is a two phased project carried out by the Department of Forestry and Range Resources (DFRR) in partnership with JICA and the other phase carried in partnership with the University of Botswana. The main aim of the DFRR/JICA phase is to assist and train the community in using resource mapping in the management and monitoring of the forest resources they use. The project involved use of high resolution satellite images in developing resources maps in selected areas in the Tswapong area where communities harvest and use such resources. The other phase of the project is to train community members especially the youth in participatory GIS and data management. This involves training in the use of GPSes and basic IT skills to enable effective resource and data management. This project serves to provide important resources maps for the Tswapong community so that they can be able to locate, manage and help in future planning with regard to sustainable utilization of their resources.

Implementing Organization	Kgetsi ya Tsie Women Resources Enterprise Community Trust (KyT) Add : Covering 27 villages in the Tswapong Area, Botswana
Funding Source	JICA, National Environment Fund
Implementing Period	07/2016 – 03/2018
Project site	Botswana, Tswapong villages (see map below; Lerala, Sefhare, Chadibe, Borotsi, Malaka, Matlhakola, Goo Sekgweng, Maunatlala, Mokokwana, Mosweu, Seolwane)

Key Words: Sustainable Forest Management and Utilization; Processing of forest products; Community Based Natural Resources Management, Gender empowerment, Poverty alleviation, Income generation



Community and stakeholder involvement meeting

Background of the Project

Kgetsi ya Tsie Women Resources Enterprise Community Trust (KyT) is a community based organization established in 1997 to empower and improve people's livelihoods especially women in the Tswapong area through sustainable utilization of natural resources. KyT is governed by 10 board members selected from the 27 villages within the Tswapong area. The centre or headquarters of the trust is in Lerala village where a production factory is established to process marula oil, their products and other natural resources products. The project on Sustainable Management of Forest and Range Resources through using GIS-Remote Sensing Tools and Participatory GIS has now been started with the community to address the need to conserve, manage and monitor their resources so that they can remain sustainable even to the future generations.

Overall Goal and Objectives of the Project

Goal: The main objective of the project is to sustainably manage the natural resources in the Tswapong area through monitoring and sustainable use.

Objective 1: To promote an active role of community members in their resources management.

Objective 2: To enhance use of the local natural resources in a sustainable manner.

Objective 3: To develop the capacity and skills of KyT's members in the management of natural resources.

Objective 4: To assess the distribution of major resources of economic use.

Major Activities

- ✓ Assessment and monitoring of natural resources of importance to communities.
- ✓ Sustainable harvesting of natural plants resources for livelihood improvement.
- ✓ Processing of natural resources products in to various value added products.
- ✓ Conducting community educational campaigns and awareness in the wise use of natural resources.
- ✓ Conducting of forest inventories and development of sustainable management plans.

Direct Outputs from the Project

The main outputs of this project are tree cover and distribution maps at different scales. This is expected to enable sound management of resources by depicting distribution of resources. It will help show areas where particular plant species of importance are through maps developed. It will also equip community members on map reading skills and basic GIS skills to be used in management of natural resources.

Indirect Impact of the Project

- ✓ Improved management of resources will be attained.
- ✓ Community participation and ownership in good practice will be enhanced.
- ✓ Improved stakeholder involvement is promoted.

Challenges of the Project

Most challenges in good practice implementation are in stakeholder involvement and community involvement. Lack of ownership by communities who are important to most implementation processes. Other challenges and limitations are due to;

- ✓ Lack of proper consultations during inception to involve all stakeholders and have buy in.
- ✓ Lack of benefits flow to all members of the community.

- ✓ Lack of proper coordination of the implementation processes/ lack of required capacity by implementers.
- ✓ Apathy and conflicts at community level.

Intervention of Central/Local Government and other stakeholders

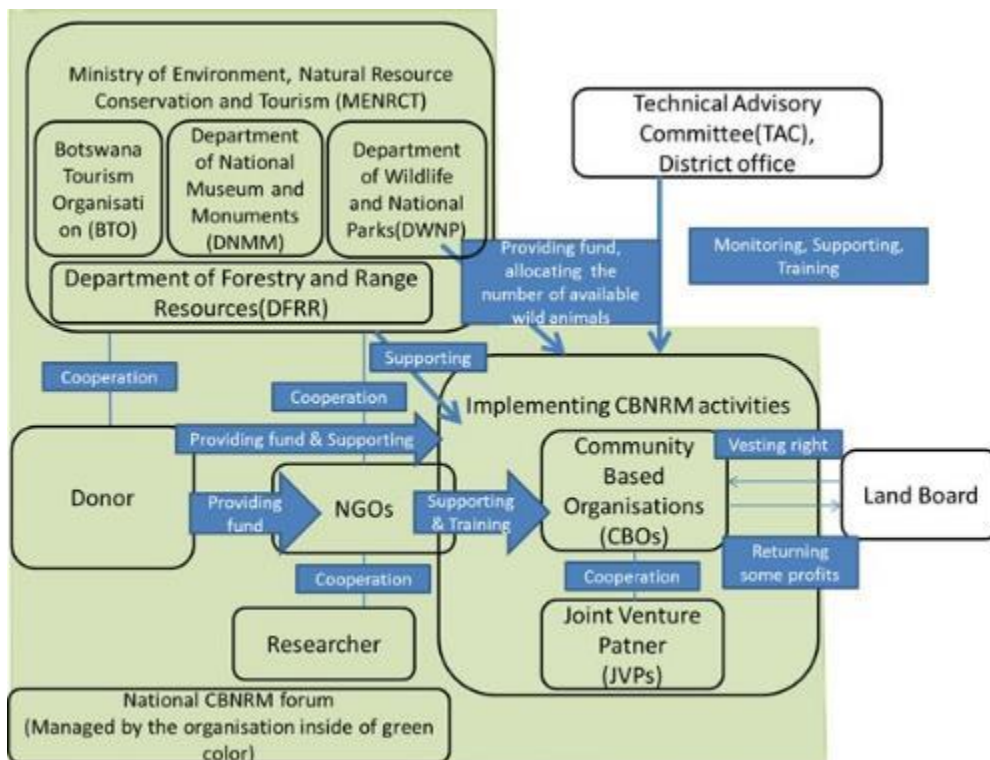
The government through the Department of Forestry and Range Resources and other relevant government stakeholders mobilize and facilitates good practice undertakings by communities. The ensure implementation of good practice is successful through providing technical advice where needed. The involvement of private, academic and non-governmental institutions also plays an important role in supporting communities in conceptualizing and implementation of good practice initiatives.

Way Forward

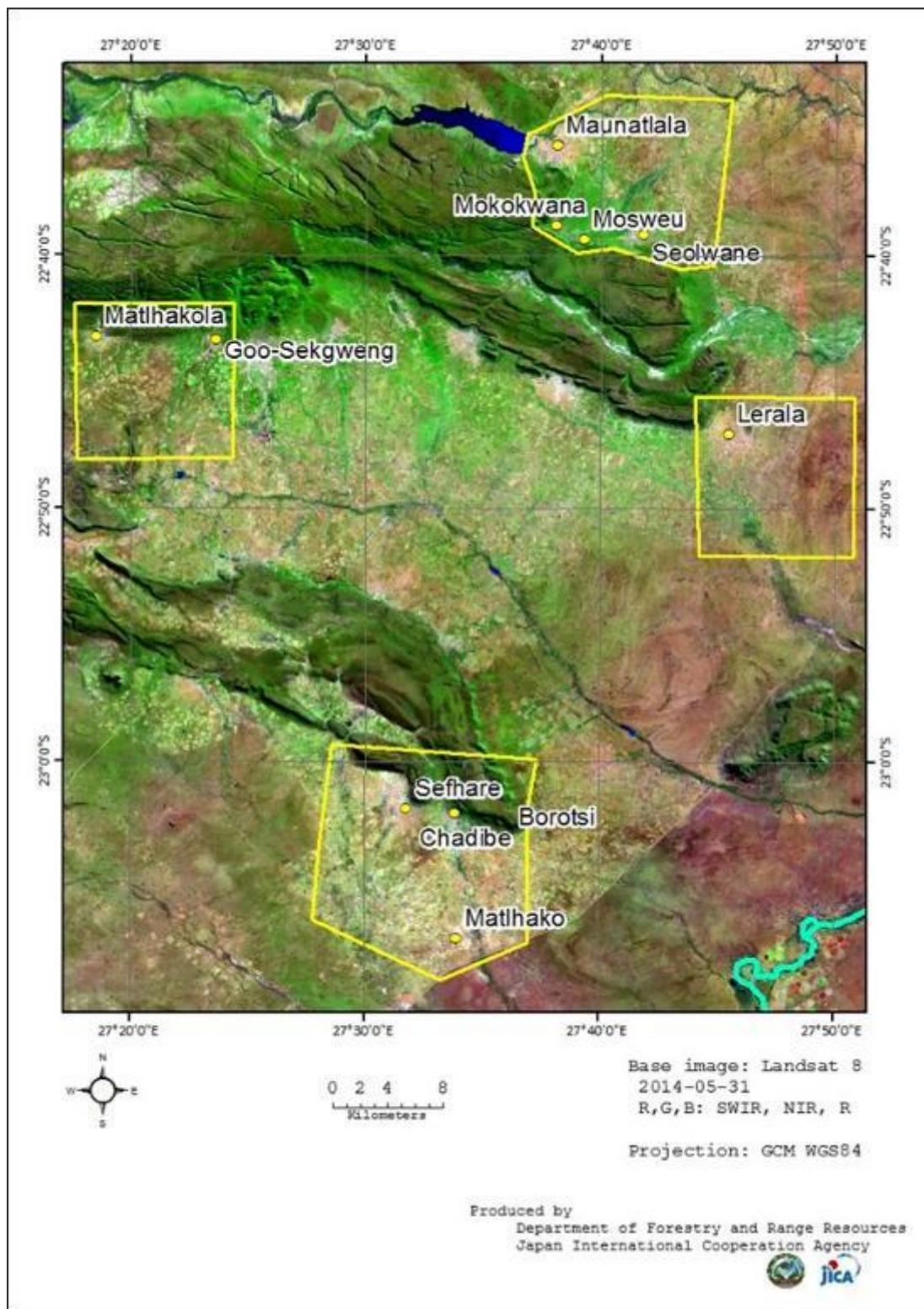
As this is a new and a bit complex phenomena of applying good practice to communities more education, awareness trainings is required regularly to ensure sustainability and full utilisation of the use of the tools applied. Community buy in and appreciation needs to be enhanced through support and technical advice on a regular basis. Involvement of various stakeholders needs to be done for continued support. DFRR continues to assist in sourcing of funds to supports activities on good practice.

Reference Documents/Materials

- i. Forest Policy, 2011
- ii. CBNRM Policy, 2007
- iii. The good practice manual to apply the output of NFMS to CBNRM activities (draft, July 2017)
- iv. Action Plan of KyT to manage natural resource by using tree cover map and satellite imagery map, July 2017



Schematic diagram for support to CBNRM implementation



Selected areas for resources management (Source: DFRR-JICA NFMS Botswana Project)

Resource Persons

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