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SUSTAINABLE FOREST AND WOODLAND MANAGEMENT FOR FOOD AND NUTRITION SECURITY IN WESTERN PROVINCE OF ZAMBIA

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SDGs:

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Implementing Partner

The Ministry of Lands, Natural Resources and Environmental Protection (Forestry Department).

Beneficiaries

Local communities in Western Province of Zambia, particularly rural communities in Sesheke and Sioma.

Country Programming Framework (CPF) Outputs

Outcome 4: Management of natural resources (land, forests and fisheries).



BACKGROUND

Western Province is characterized by difficult geographical and climatic conditions, with limited arable land that can sustain crop production. Approximately 60 percent is covered by forest, which provides a wide range of wood and Non-Wood Forest Products (NWFP) that are utilized by both local and urban communities. The sustainable use of NWFPs in Western Province remains a challenge because exploitation has not been adequately regulated and controlled by local authorities and communities. In general, NWFPs have been primarily used for subsistence purposes, especially by women. While various forest foods are available, they are selectively consumed by rural communities (e.g. mushrooms are widely consumed, whereas edible caterpillars, despite being widely available, are not). Beyond NWFPs, timber and wood fuel also contribute significantly to income security in rural areas of Western Province, with some communities being completely dependent on fuelwood for cooking and heating to ensure their health and nutrition.

Given the importance of forests to the livelihoods and food security of rural populations in Zambia, there is a growing need for the implementation of best practices in sustainable forest management (SFM). Forests are estimated to provide over 1.4 million jobs and support 60 percent of rural Zambian households. In accordance with published literature, the associated benefits of gathering, processing and trading NWFPs are extensive, ranging from economic buffering and leveraging economic value to social networking, acquiring social meaning and connecting humans with nature. Moreover, forest management is central to ensuring a sustainable supply of the most sought after and most valuable forest resources. To that end, rural communities need to be supported through improved organization and strengthened capacities in SFM.

IMPACT

The project aimed to support the food and income security of rural communities in Western Province, Zambia through the implementation of best practices in SFM. In particular, emphasis was placed on sustainable harvesting of NWFPs for consumption and income generation.

ACHIEVEMENT OF RESULTS

The project achieved its primary objective of enhancing food and nutrition security through better production, utilization and sale of forest products in target rural communities within the districts of Sesheke and Sioma. Overall, the project focused on strengthening the capacity of communities in SFM and increasing awareness on issues pertaining to food security and nutrition at five selected sites. Community forest groups were established and forest management plans and constitutions were developed to govern access and sustainable harvesting in project areas. A total of 120 beneficiaries received training in entrepreneurial skills, including 48 females and 72 males. The popularization of forest foods is set to be achieved as part of a joint effort with other ongoing FAO projects, whereby the data collected under the project is to be included in Zambia's Food Composition Table and food recipes are to be distributed after the national Food Consumption and Micronutrient Survey. Specifically, 15 wild vegetables, 22 forest fruits and three types of insects that are regularly consumed in local diets were identified. Importantly, the results and lessons learned from the project were used to generate the project concept (already approved) for a USD 7 million funding proposal for submission to the Global Environment Facility (GEF), under the Least Developed Countries Fund, in order to scale up results to other areas of the country.

Output 1: NWFP-based enterprise groups identified, mobilized, organized and strengthened, with due consideration to gender balance and women's empowerment

A total of 15 meetings were conducted across five project sites, addressing a broad range of areas, including an overview of the project and its goals, Forest Act No. 4 (implemented in 2015), the processes involved in establishing community forests, the election of group members, negotiating boundaries and demarcation. These meetings formed a basis for increasing community exposure to the laws and policies necessary for good forest management practices and, ultimately, increased community cohesion. The increased awareness of the importance of SFM enabled each community to identify a community forest that it intends to manage in a sustainable manner, develop sketch maps of the forest and sign consent letters with local chiefs.

Output 2: Management capacity of enterprise groups for product and sustainable forest management strengthened

The training delivered on Market Analysis and Development (MA&D) and SFM developed the capacities of communities to better utilize and manage forest resources for business purposes in a sustainable manner. Each of the five communities developed an Enterprise Development Plan (EDP) that was specifically tailored to the community group. The EDPs are expected to serve as a "master plan" for community reference regarding the creation of forest-based enterprise groups.

Output 3: Community capacity to implement and monitor forest policy and enabling regulations enhanced

Communities were sensitized to the provisions of Forest Act No. 4, particularly the Community Forest Management (CFM) guidelines, which highlight the fundamental steps to be followed in order to obtain legal rights to the use of forest resources. Across communities, a total of 38 850 hectares were assigned to community forests. Community-based forest management plans and constitutions were developed using a participatory approach with supervision by district facilitators. These documents represent local regulations that govern the access to forest products. Additionally, district facilitation teams (with a total of 14 members) were trained on the basic principles of the sustainable harvesting, processing and packaging of forest products.

Using the FAO Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) as an analytical framework, an assessment of community forestry regimes was carried out. A report was developed on how Zambia could adapt its legal frameworks to better align with the VGGT in order to support national food security and nutrition through the sustainable management of forest and woodland resources.

Output 4: Contribution of forests foods to food security and dietary diversity promoted and popularized

A study was conducted on the role of forests in improving food security and nutrition in targeted communities. Based on survey results, forest food products that contribute to local diets were identified, including 15 wild vegetables, 22 forest fruits and 3 types of insects. Subcommittees were organized within beneficiary groups to run awareness-raising campaigns on the benefits of forest foods. Demonstrations on the cooking of forest foods were carried out and outreach products were distributed to community members and other stakeholders.

IMPLEMENTATION OF WORK PLAN

Project activities were carried out within the allocated budget, with a no-cost extension being granted. Although EDPs were developed under the project, they were not operational at project closure. This ultimately meant that the innovative technologies for enterprise-specific development could not be addressed and start-up funding could not be delivered. Delays were also experienced in the procurement of processing equipment, which resulted in products being out of season.

FOLLOW-UP FOR GOVERNMENT ATTENTION

A number of areas for follow-up action are recommended beyond the project. Based on the lessons learned on the processes involved in CFM, emphasis should be placed on increasing the efficiency of the procedure for granting legal access to forest resources. Additionally, since a strong relationship was developed with the Barotse Royal Establishment, an official administrative entity that embraced CFM processes, communities within their jurisdiction should be used as exemplary models of how SFM can lead to desirable results.

Another key area for government attention is the provision of continued support to establishing linkages between communities and markets. This should be addressed both by supporting capacity development in MA&D for enterprise groups and the strengthening of local government structures in Sesheke and Sioma. Additionally, attention should be given to operationalizing the EDPs developed in target communities.

On a larger scale, the manuals and modules developed under the project need to be approved by the Ministry of Lands, Natural Resources and Environmental Protection and implemented routinely. This will ensure that CFM processes can be better supported in other districts.

SUSTAINABILITY

1. Capacity development

The active engagement of national stakeholders throughout project implementation supports the sustainability of the results achieved. In particular, the training provided on SFM and MA&D will form a basis for the ongoing formation of enterprises that can sustainably use forest resources. The increased awareness among community members on how to obtain legal rights to the use of forest resources and the Forest Management Guidelines will also support these ventures.

2. Gender equality

A concerted effort was made to incorporate gender equality in project activities. As such, approximately 40 percent of members in the groups formed under the project were female.

3. Environmental sustainability

The sustainable utilization and management of forest resources was a key outcome of the project. The formulation of locally-tailored forest management plans by each of the five community forest groups supports the environmental sustainability of the project.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

The expected long-term impact of the project is an improvement in food security and nutrition of rural communities through the commercialization of forest products. This was addressed by supporting and promoting income-generating activities through training on MA&D and facilitating the formation of forest-based enterprises that create employment opportunities in targeted rural communities. The project enforced the belief that access to nutritious food is a human right through awareness-raising activities on the availability and benefits of forest foods.

5. Technological sustainability

The project did introduce simple technologies for the processing of forest (such as honey) and agriculture products (for example cereal crops such as maize and sorghum). The technologies introduced are locally appropriate, easy to maintain and will continue to function after the end of the project. The Forestry Department conducted a training on how to operate the equipment.

6. Economic sustainability

The increased awareness on how to legally obtain access to forest products and the capacity for ongoing formation of forest-based enterprises developed under the project support economic sustainability at a local level. On a larger scale, however, funding needs to be secured to extend the results of the project to other areas of Zambia. This is to be addressed through the submission of a funding proposal to GEF, under the UNDF, based on successful elements of the project.

DOCUMENTS AND OUTREACH PRODUCTS

- ❑ An Assessment of Zambia's Forest Tenure System's Alignment with the Voluntary Guidelines for the Governance of Tenure. F Kalaba. 63 pp.
- ❑ Community Based Forestry Assessment framework for Zambia. F Kalaba. 43 pp.
- ❑ Manual for Forests and Food Security and Nutrition Community Training in Sesheke and Sioma Districts in Western Zambia. M Kaonga. 32 pp.
- ❑ Market Analysis and Development Modules Phases I and II. M Sishekanu. 29 pp.
- ❑ Market Analysis and Development Modules Phases III and IV. M Sishekanu. 28 pp.
- ❑ Recommendations on how Zambia's legal framework can inform its reporting and consistency to VGGT and ensure sustainable forest and woodland management for food and nutritional security. F Kalaba. 21 pp.
- ❑ Report on Forest Foods and Local Edible Non-Woody Forest Products Collected and Consumed in Local Diets in Western Province, Zambia. M Kaonga and J Kwenye. 50pp.
- ❑ Overall contribution of the Technical Cooperation Programme to Food and Nutrition Security in Western Province of Zambia. M Kaonga. 25 pp.
- ❑ Community forest awareness-raising and simplified community forestry management planning process. R Vinya. 88 pp.
- ❑ Technical guidelines on community-led workshop, awareness-raising events and training program to be conducted in the targeted communities in Sesheke and Sioma districts. J Kwenye. 8 pp.
- ❑ Forests for Food Security and Nutrition – Community information brochure. M Kaonga. 4 pp.

ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	The food and nutrition security of rural communities in the Sesheke district of Western Province, Zambia is addressed through sustainable harvesting of NWFPs for consumption and income generation	
Outcome	Sustainable utilization of NWFPs for food and nutrition security leads to increases in household incomes and better forest management	
	Indicator	<ol style="list-style-type: none"> 1. Increased household incomes from the sales of forest products. 2. Greater number of rural households than before using information from forest foods recipe books. 3. Increased number of people exposed to knowledge of SFM practices. 4. Increased number of people applying SFM practices, as well as with skills in processing, packaging and storage techniques.
	Baseline	<ol style="list-style-type: none"> 1. Low income generation from forest products among rural community members. 2. Low levels of utilization of forest foods due to lack of information. 3. Only the Forestry Department has knowledge of SFM practices. 4. Only the Forestry Department applies SFM practices, and there is a low level of processing, packaging and storage of forest products at the community level.
	End Target	<ol style="list-style-type: none"> 1. 50% increase in additional household income per annum attributed to the sale of high quality handicrafts linked to the markets; 60% increase in additional household income per annum attributed to the sale of forest products linked to the markets. 2. 10 forest foods recipe booklets produced. 3. 50% of the community members and enterprise groups are exposed to knowledge on best practices for forest management. 4. 50% of the community members and enterprise groups are applying the knowledge of best practices for forest management, as well as processing, packaging and storage techniques.
	Comments and follow-up action to be taken	<ol style="list-style-type: none"> 1. The EDPs were not fully operationalized. Hence, the operationalization on EDPs is an area for follow-up action. 2. Recipe books were not produced under the project. However, through a study/report, the nutritional value of forest foods and edible NWFPs that are collected and regularly consumed in local diets was produced. A list of foods that are regularly consumed in local diets was also submitted to the National Food and Nutrition Commission (NFNC) for inclusion in the recipe book and food composition table. In the future, support needs to be provided to the NFNC for the production of a food composition table and food recipes following completion of the planned nationwide Food Consumption and Micronutrient Survey. 3. Capacities were developed in five areas of best practices for management: <ul style="list-style-type: none"> – Attributes of the forest resource system. – Attributes of enterprise groups. – Forest governance. – Interactions between enterprise groups and the resource. – Interactions between governance system and the resource. 4. Follow-up actions should facilitate the signing of an agreement to establish community forests and ensure the operationalization of a forest management plan. 5. Capacity was developed for 12 interest groups in best practices for forest management, including: early burning; assisted natural regeneration and tree planting, use of proper harvesting techniques, selective cutting of trees, participatory management and empowerment with simple tools to process, pack, store and market forest products.

Output 1	NWFP-based enterprise groups identified, mobilized, organized and strengthened, with due consideration to gender balance and women's empowerment		
	Indicators	Target	Achieved
	Number of enterprise groups and training meetings on MA&D conducted.	All members of all groups and at least 30% of community members attend the meeting.	Yes
Baseline	No organized groups and low skill level of enterprise groups on forest products.		
Comments	Based on situational analysis and consultations with stakeholders and community members, twelve groups were identified and fully mobilized, and their capacities were developed in MA&D. Additionally, the EDPs were further developed.		
Activity 1.1	Raising community awareness about the project		
	Achieved	Yes	
	Comments	For each site (Ngambwe, Njoko Malomo, Kabula II, Luyobe and Lukama), meetings were held for all groups at the same time. A total of 15 meetings were conducted. The meetings addressed the following topics: the project overview and its objectives, Forest Act No. 4 (2015), the processes involved in establishing community forests, conducting elections and boundary negotiation and demarcation. Awareness-raising activities became part of the project because external groups/individuals, at different stages, showed interest in the project and a desire to find out more information. These activities formed part of the introduction at every meeting to help members establish connections between project activities that had been covered and those that were yet to be carried out. Future activities should focus on upscaling the project to reach other communities.	
Activity 1.2	Run community feedback meetings		
	Achieved	Yes	
	Comments	Intermediate feedback meetings were conducted for each site that received awareness-raising activities. The results of the activities were measured through the signing of interest letters, drawing of sketch maps, list of elected members and formation of forest-based enterprises.	

Output 2	Management capacity of enterprise groups for product and sustainable forest management strengthened		
	Indicators	Target	Achieved
	List of individuals and forest product groups willing to receive training.	75% receive training and, of these, 50% are women.	Yes
Baseline	150 members of forest products groups with no or poor training.		
Comments	130 individuals were trained in sustainable forest management and MA&D, and 40% of participants were female. The attendance of and participation by women in project activities was initially low and could largely be attributed to sociocultural beliefs in target areas. Throughout the project, emphasis was placed on the need for increased engagement of women in SFM and MA&D, which yielded positive results and higher participation rates by women.		
Activity 2.1	Organization and registration		
	Achieved	Partially	
	Comments	The project focused on registering community forest groups, with the aim of allowing groups to form cooperatives. Leaders were elected and community forests were identified at each site. The process of registration had started, and only the compilation of necessary documentation remained to be completed. Follow-up activities need to finalize the registration process and support the opening of bank accounts.	
Activity 2.2	Forest-based enterprise development		
	Achieved	Yes	
	Comments	The identification, training and organization of forest-based enterprise groups were performed. The capacities of groups to develop EDPs were a key focus area and a fully developed document was being finalized with the support of a project consultant. In the future, the opening of bank accounts and delivery of start-up capital need to be addressed.	
Activity 2.3	Innovative technology development		
	Achieved	No	
	Comments	The technologies were not developed as the EDPs were not in operation.	
Activity 2.4	Processing and value addition		
	Achieved	Partially	
	Comments	The products with the most potential for enterprise development were identified, but the processing equipment was purchased and distributed to communities later than planned, meaning that some products were out of season. Nevertheless, communities were trained on the theory of processing, as well as methods to improve traditional processing methods. Further training on beekeeping and the management of modern hives is an area for follow-up action.	
Activity 2.5	Access to markets and funding		
	Achieved	No	
	Comments	Owing to delays in procurement and its effect on products being out of season, the processing of products was not carried out under the project. Consequently, the provision of start-up funding was also not carried out.	
Activity 2.6	Entrepreneur skills		
	Achieved	Partially	
	Comments	The entrepreneurial skills of beneficiaries were developed under the project. However, the beneficiaries were not brought to a level where they could, in practice, process forest products in an improved way and then market the products. This was because M&D skills were largely theoretical, and because there was delay in the procurement of simple processing equipment. Action is required for the operationalization of EDPs.	

Output 3	Community capacity to implement and monitor forest policy and enabling regulations enhanced		
	Indicators	Target	Achieved
	Communities have capacity to engage local and national governments.	At least 40% of people (including women) living in the areas where the 12 enterprises operate from.	Yes
Baseline	Communities are marginalised in decision making processes and the management of forests		
Comments	Communities were made aware of and oriented on the new forest policy regarding the development of community/local level forest regulations, and constitutions were prepared for five community groups (Kabuyu, Katuli, Lukama, Ngasinamwi and Nkuma). Future work should focus on adapting local regulations into laws.		
Activity 3.1	Turn local rules into by-laws		
	Achieved	Partially	
	Comments	Local level regulations were developed for all five community forest groups. The process of developing by-laws was ongoing at project closure, and thus is an area for follow-up.	
Activity 3.2	Capacity of community to use policy		
	Achieved	Partially	
	Comments	Local level regulations had not been operationalized at project closure.	
Activity 3.3	Capacity for advocacy		
	Achieved	Partially	
	Comments	No training was conducted specifically for capacity development in advocacy, but the project incorporated simple advocacy issues/skills in certain training sessions. For example, community forest groups were able to engage with local leaders to support the process of advocating for recognition by the Government.	
Activity 3.4	Sustainable management practices		
	Achieved	Yes	
	Comments	Training in sustainable harvesting, processing and storage were delivered to all community forest groups. Follow-up action needs to be taken to operationalize forest management plans.	
Activity 3.5	Forest management		
	Achieved	Partially	
	Comments	Forest management plans were developed for all five community forest groups, but training was not conducted on how to operationalize them. This will be an important area for follow-up actions.	

Output 4	Contribution of forest foods to food security and dietary diversity promoted and popularized		
	Indicators	Target	Achieved
	Forest foods are contributing to food and nutrition security.	General training and awareness-raising for all communities, especially women.	Yes
Baseline	Communities in the areas lack knowledge on food and nutrition security.		
Comments	Data collection on indigenous foods was undertaken through a consultancy on NWFPs for food and nutrition security. The consultancy, however, which was expected to spearhead this output, was delayed because of illness to the international consultant. Nevertheless, project activities were completed later in the year when an awareness-raising campaign was also being conducted at the sites. Ultimately, through training, communities were made aware of the nutritional values of forest products, such as mushrooms, honey and fruits. In the future, food recipes that use forest foods need to be published and further popularized within communities.		
Activity 4.1	General community awareness about forest foods		
	Achieved	Yes	
	Comments	The following forest food products were identified from the data collected by the national consultant: linosi (loney), seto (devil's claw), mungongo (<i>Schinziophytonrautanenii</i>), timber, muhuluhulu (<i>Strychnoscocculoides</i>), muhwahwa (<i>Strychnospungens</i>), mumbole (<i>Vangueriopsislanciflora</i>), wildlife, mubula (<i>Parinaricuratelifolia</i>), muzauli (<i>Guibourtiacoleosperma</i>), munakalali, mubilo (<i>Canthiumburtii</i>), mucinga, masinge, sikuswani (<i>Pteranthusesculentus</i>), siboyani (<i>Dioscoreahirtiflora</i>), mumaka, sihopani, mahungu (Caterpillars or <i>Gonimbrasiabelina</i>), and mbowa (mushroom).	
Activity 4.2	Facilitate village level nutrition groups		
	Achieved	Partially	
	Comments	No specific nutrition groups were formed, primarily because of the time required to perform the nutrition consultancy. Thus, there was not enough time to create groups and deliver nutrition training. Alternatively, sub-committees were created among target beneficiaries (who had already received other forms of trainings) to lead the nutrition-based component of the project. These committees of women prepared awareness-raising material on the benefits of forest food. In the future, attention should be given to strengthening these sub-committees through collaboration with other existing structures in the Ministry of Health and the Ministry of Community Development and Social Welfare.	
Activity 4.3	Document forest foods recipes		
	Achieved	Partially	
	Comments	Forest foods were documented in the study reports on nutrition and food security. However, the forest food recipe books were not produced.	
Activity 4.4	Train producers (collectors) of forest foods and link to the local markets		
	Achieved	Partially	
	Comments	This part of the project was covered by training on MA&D and SFM. Follow-up action should focus on linking communities to markets.	
Activity 4.5	Training in entrepreneurship and business		
	Achieved	Yes	
	Comments	Training was conducted and capacities were developed on the identification of potential forest products for enterprise development (using the five areas of sustainable enterprise development as the foundation for selecting forest products).	
Activity 4.6	Dissemination meetings with nutrition groups		
	Achieved	Yes	
	Comments	A major awareness-raising/dissemination campaign was performed, during which demonstrations on the cooking of forest foods were undertaken. Outreach products on forest foods were distributed to community members and other stakeholders.	

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