



A photo showing a frame for bee hives hanging on a tree branch in a Forest Reserve. (LINDA SHIO)

BEEKEEPING FOR CONSERVATION OF NATURAL TREES AND FOREST RESERVES

(تنزانيا، جمهورية تنزانيا المتحدة)

UFUGAJI NYUKI

الوصف

Beekeeping is an activity which involves maintenance of bee colonies by using man-made hives within a selected forest area which provides the required feed and habitat resources required by bees. Through beekeeping, trees are conserved as they provide flowers hence ensuring feeds for bees. Beekeeping is used as an approach of protecting forest reserves against encroachments. Bee products, produced within the value chain, improve the livelihoods of beekeepers and communities at large while conserving the environment at the same time.

Beekeeping is an activity which involves care and management of honeybees for production of bee products, mostly honey and bee-wax. Beekeeping is an environmentally friendly activity ensuring conservation of trees and other forest resources protected through it. Therefore, beekeeping is undertaken for two major purposes which are:

- Production of bee products through which livelihoods of beekeepers and communities at large are improved and;
- Protection of trees and thereby, forest water resources.

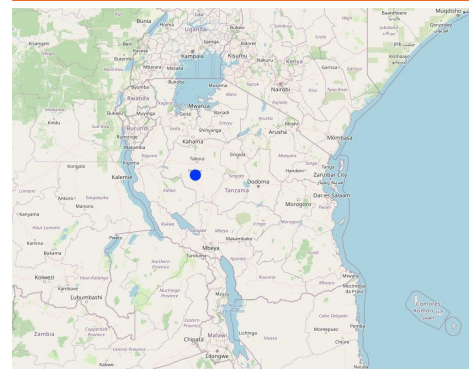
Beekeeping is largely dictated by weather/climatic conditions; hence it is very crucial for the beekeeper to understand the rhythm of various seasons for successful beekeeping. In this approach, trainings were provided to beekeepers in a community in Tabora Region, Sikonge District, on modern beekeeping techniques and skills which involve the use of modern hives and tools for increased production of bee products. Beekeepers were trained on:

- Measures which can be taken to ensure successful honey and wax production and;
- Measures required to adapt to impacts on bees from climate change.

Representatives from the Miombo Beekeeping Group (user group) are experienced beekeepers who have been in the field for a long period. Land users/beekeepers liked the approach because beekeeping does not require a lot of time due to its seasonal nature. Therefore, a beekeeper can have, besides beekeeping activities, ample time for carrying out other production activities, e.g. agricultural activities. Also, beekeeping does not require large areas of land and beekeeping can therefore, be integrated with other activities.

Insufficient capital for accessing modern hives and tools is one of the hinderances which make it hard for some of beekeepers to adopt improved beekeeping approaches.

الموقع



الموقع: SIKONGE DISTRICT, TABORA, تنزانيا، جمهورية تنزانيا المتحدة

المرجع الجغرافي للمواقع المختارة
• 32.72368, -5.6255

تاريخ البدء: غير متاح

سنة الإنهاء: غير متاح

نوع النهج

- تقليدي/أصلي
- مبادرة محلية حديثة/مبتكرة
- قائم على مشروع/برنامج



Training to beekeepers on value addition of bee products by a beekeeping officer. (OCTAVIAN MLENGA)

غايات النهج والبيئة المواتية

الغايات/الأهداف الرئيسية للنهج

1. Beekeeping is practiced as a method of conservation of trees and other potential resources against encroachment from illegal timber harvesting, specifically in forest reserves.
2. Beekeeping is further developed for diversification of income sources so as to have access to other bee products besides honey which is commonly used as food and medicine.
3. On-farm beekeeping ensures pollination of crops thereby increasing crop yields.

الشروط التي تمكن من تنفيذ التقنية/التقنيات المطبقة في إطار النهج

- **الدبنة /التقافية/ الاجتماعية/ القيم:** Beekeeping being one of the traditional practices in this area, minimum energy and resources are required on promoting and sensitizing individuals to undertake beekeeping as they are experienced with it. Knowledge transfer is shared from one generation to another within families as members are engaged in management of beehives and other beekeeping activities throughout.
- **الإطار المؤسسي:** For effective management of beekeeping activities, institutions have placed beekeeping officers for administration and supervision of beekeeping activities by linking beekeepers to the Government.
- **التعاون/التنسيق بين الجهات الفاعلة:** Beekeepers tend to form groups within their communities, through which they undertake their beekeeping activities. Through such beekeeping groups, they are easily reached by the government for trainings, technical support and financial grants that are given to groups who apply for projects specifically on beekeeping activities. Various stakeholders collaborate with the government by providing technical support to beekeepers in terms of skills and tools required.
- **الإطار القانوني (حيازة الأراضي، وحقوق استخدام الأراضي والبيئة):** In Tanzania, beekeeping is allowed to be undertaken in forest reserves and bee reserves. Beekeepers are granted with an entry permit into reserves for undertaking their beekeeping activities. Because of the presence of diverse plant species that flower at different seasons and also the security of their beehives, beekeepers prefer beekeeping in protected areas.
- **السياسات:** Beekeeping is one among the Departments within the Ministry of Natural Resources and Tourism which has policies and regulations in place.
- **حوكمة الأراضي (صنع القرار والتنفيذ والإنفاذ):** The presence of laws that govern management of forest and bee reserves as well as by-laws, against encroachment by illegal human activities, ensures the security of natural resources required by bees.
- **المعرفة حول الإدارة المستدامة للأراضي، والوصول إلى الدعم الفني:** Hands-on trainings to beekeepers are provided through extension services by beekeeping officers. Also, the presence of institutions in the country which provide technical knowledge on modern beekeeping techniques ensures professionalism and sustainable beekeeping practices.
- **عبء العمل، توفر القوى العاملة:** Beekeeping activity requires manpower for hives making and for hanging hives on trees. Here, beekeepers tend to assist among themselves. Women who undertake on-tree beekeeping activities depend on men during the time of taking up/down of bee hives.

الظروف التي تعيق تنفيذ التقنية/التقنيات المطبقة في إطار النهج

- **توفر/الوصول إلى الموارد والخدمات المالية:** Beekeepers do not have reliable access to financial resources (capital) which could enable them to acquire modern beekeeping tools and production facilities. They cannot access loans from financial institutions for undertaking beekeeping activities as beekeeping relies on weather/climatic conditions for productions, whereas beekeepers cannot be assured of their productions in terms of quantities.
- **الأسواق (لشراء المدخلات وبيع المنتجات) والأسعار:** Beekeepers do not have a readily available market of their products. Because of this, they are forced to sell their products through middlemen (traders). This results in lower returns to producers. Also, because of financial constraints, farmers do not have access to modern beekeeping tools and facilities for increased production and product quality assurance.
- **غير ذلك:** Climatic changes can have impacts on beekeeping activities, hence affecting production. For instance, during heavy rains flowers tend to fall down from trees thus affecting bee feed availability resulting in lowered honey production. Also, when the rain is too small, the flower production on trees is minimum resulting in low feed availability for bees.

مشاركة وأدوار الأطراف المعنية

الأطراف المعنية بالنهج وأدوارها

ما هي الجهات المعنية / الكيانات المنفذة التي شاركت في النهج؟	حدد الأطراف المعنيين	وصف أدوار الأطراف المعنية
مستخدمو الأراضي المحليون/المجتمعات المحلية	Beekeepers from a beekeeping group Known as MIYOMBO GROUP were involved in application of this approach.	The role of the involved user group in this approach includes undertaking beekeeping activities for conservation of trees and natural resources. They are experienced with the practice and therefore they can undertake beekeeping.
الحكومة الوطنية (المخططون، صانعو القرار)	The National Government under its agency known as Tanzania Forest Services Agency	Providing technical support by providing skills and modern tools for beekeeping activities.

انخراط مستخدمي الأراضي المحليين/المجتمعات المحلية في المراحل المختلفة للنهج

	غير موجود	سلب	الدعم الخارجي	تفاعلي	التعمية الذاتية	
المبادرة/التحفيز	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beekeepers at individual levels are mobilized to form formal beekeeping groups through which participatory analysis of the beekeeping activities is done by collaborating with the beekeeping officers and local administrative units. Thereafter, they develop plans which provide guidance and assistance to beekeepers especially to the new actors in the sector.
التخطيط	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beekeeping activities are planned by the beekeeper who is provided with technical support from beekeeping officers specifically on techniques and skills that can be employed for increased production of bee products.
التنفيذ	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beekeeping involves the use of modern skills and techniques which are provided to beekeepers through government institutions and agencies. For instance, Tanzania Forest Services Agency under the Ministry of Natural Resources and Tourism, are mandated by the Government on supervision of all forest and bee resources towards ensuring sustainable production. The agency collaborates with beekeeping groups during implementation of beekeeping activities.
الرصد/التقييم	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Government agencies facilitate monitoring/evaluation of beekeeping activities, production and marketing of products. The government possess a database of beekeepers in all the districts, which enables tracing of the specific source of bee products from producers and their locations.

مخطط التدفق

اتخاذ القرار بشأن اختيار تقنية الإدارة المستدامة للأراضي

- وقد تم اتخاذ القرارات من قبل
- مستخدمو الأراضي وحدهم (المبادرة الذاتية)
 - مستخدمو الأراضي بشكل أساسي، بدعم من متخصصي الإدارة المستدامة للأراضي
 - جميع الجهات الفاعلة ذات الصلة، كجزء من نهج تشاركي
 - متخصصون في الإدارة المستدامة للأراضي بشكل أساسي، بعد التشاور مع مستخدمي الأراضي
 - متخصصون في الإدارة المستدامة للأراضي بمفردهم
 - السياسيون / القادة

- تم اتخاذ القرارات بناء على
- تقييم المعرفة الموثقة جيدًا بشأن الإدارة المستدامة للأراضي (اتخاذ القرارات القائمة على الأدلة)
 - نتائج البحوث
 - خبرة وآراء شخصية (غير موثقة)

الدعم الفني وبناء القدرات وإدارة المعرفة

شكلت الأنشطة أو الخدمات التالية جزءًا من النهج

- بناء القدرات/التدريب
- خدمة استشارية
- تعزيز المؤسسات (التطوير التنظيمي)
- الرصد والتقييم
- البحوث

بناء القدرات/التدريب

تم تقديم التدريب للأطراف المعنية التالية

- مستخدمو الأراضي
- موظفون ميدانيون/ مستشارون

شكل التدريب

- في العمل
- من مزارع إلى مزارع
- مناطق العرض
- اجتماعات عامة
- دورات

المواضيع المعطاة

1. MODERN BEEKEEPING PRACTICES AND TOOLS FOR SUSTAINABLE PRODUCTION OF BEE PRODUCTS.
2. VALUE ADDITION OF THE PRODUCED BEE PRODUCTS FOR IMPROVED LIVELIHOOD AND INCOME GENERATION.

خدمة استشارية

تم تقديم الخدمة الاستشارية

- في حقول مستخدمي الأراضي
- في مراكز دائمة

Trainings are provided to beekeepers at their local communities, within their groups (producer organizations), which consist of members who have the common interest on beekeeping activities.

تعزير المؤسسات

تم تعزير/إنشاء المؤسسات

- لا
- نعم، قليلا
- نعم، باعتدال
- نعم، إلى حد كبير

على المستوى التالي

- محلي
- إقليمي
- وطني

صف المؤسسة والأدوار والمسؤوليات والأعضاء وما إلى ذلك

Tanzania Forest Services Agency, a government agency mandated by the government to supervise sustainable productions of forest and bee products. In this approach, the agency has been strengthened by collaborating with beekeepers who ensure sustainable protection of forest resources as well as production of bee products. Also, the local government around the area where beekeeping approach is undertaken has been strengthened through livelihood improvement of the community.

مزيد من التفاصيل

The Tanzania Forest Fund provides technical and financial support to beekeeping groups which have written up projects upon their call on project write ups, specifically on beekeeping and forest conservation. Modern beekeeping skills and techniques are offered to beekeepers by government agencies/institutions that are related to beekeeping and marketing.

نوع الدعم

- مالي
- بناء القدرات/التدريب
- معدات

الرصد والتقييم

Beekeeping activities can be monitored and evaluated through the data base containing a register of beekeepers and their productions.

التمويل والدعم المادي الخارجي

الميزانية السنوية بالدولار الأمريكي لمكون الإدارة المستخدمة للأراضي

- < 2000
 - 10,000-2,000
 - 100,000-10,000
 - 1,000,000-100,000
 - > 1,000,000
- Precise annual budget: غير متاح
- Own source/savings of beekeepers - Financial institutions
 - Government grants

تم تقديم الخدمات أو الحوافز التالية لمستخدمي الأراضي

- الدعم المالي/المادي المقدم لمستخدمي الأراضي
- إعانات لمدخلات محددة
- الائتمان
- حوافز أو وسائل أخرى

الدعم المالي/المادي المقدم لمستخدمي الأراضي

Technical support from one financial institution within the community, (National Microfinance Bank); which supported 2 beekeeping groups with 50 modern beehives for each group and protective cloths for increased production of bee products.

ممول بالكامل
ممول جزئيا



معدات: الآلات

The Government provides subsidies to beekeepers by providing them with modern machines which can be used to ease operations and processing of bee products. The only condition to receive the subsidy is that beekeepers should be within a formal group, and they receive the subsidy in terms of materials and not finance. There is no any returns required from beekeepers to the government on this subsidy provided by the Government.

معدات: الأدوات

Modern tools are provided to beekeepers by the Government for easy undertaking of their beekeeping activities. These includes tools like smokers, beehives, protective clothing as well as packaging materials. There is no any returns that is required from the beekeepers to the Government after being given the tools.



العمل من قبل مستخدمي الأراضي كان

- تطوعي
- الغذاء مقابل العمل
- مدفوع نقدا
- مقابل دعم مادي آخر

حوافز أو وسائل أخرى

Existence of a project that works on this community, dealing with the beekeeping value chain activities, from production to harvesting of bee products promotes and ensures sustainable productions of bee products with quality adherence.

تحليل الأثر والتصريحات الختامية

آثار النهج

نعم، إلى حد كبير
نعم، باعتدال
نعم، قليلا
لا

هل ساهم النهج في تمكين مستخدمي الأراضي المحليين وتحسين مشاركة الأطراف المعنية؟
The approach has united users (beekeepers) with Government agencies, institutions and NGO's who empower them through technical and financial support.



هل مكن النهج من اتخاذ القرارات المبنية على الأدلة؟
Beekeeping ensures protection of natural forest/tree resources. This facilitates decision making of the Government towards promoting and enhancing beekeeping activities.



هل ساعد النهج مستخدمي الأراضي على تنفيذ وصيانة تقنيات الإدارة المستدامة للأراضي؟
Beekeeping, one of the environmental conservation practices ensures SLM & SFM practices, because trees i.e flora species are conserved as they provide bee feed and bee habitats.



هل نجح النهج في تحسين التنسيق والتنفيذ الفعال من حيث التكلفة لأنشطة الإدارة المستدامة للأراضي؟
Beekeeping is an environmentally friend activity with low running cost.



هل نجح النهج في تعبئة/تحسين الوصول إلى الموارد المالية لتنفيذ الإدارة المستدامة للأراضي؟
Through beekeeping groups, support can easily be attained from the Government (Tanzania Forest Fund) and institutions such as banks and other NGO's.



هل أدى النهج إلى تحسين معرفة وقدرات مستخدمي الأراضي على تنفيذ الإدارة المستدامة للأراضي؟
Improved knowledge of beekeepers leads to more products and enables SFM (sustainable forest management) practices.



هل ساهم النهج في بناء/تعزيز المؤسسات والتعاون بين الأطراف المعنية؟
Through beekeeping, agencies and institutions that are involved in production and marketing of bee products collaborate. For instance, honey produced is used as food, this will bring on board the agency dealing with food health security.



هل ساهم النهج في تمكين الفئات المحرومة اجتماعيا واقتصاديا؟
Tanzania Forest Fund provide grants to beekeeping groups, when members unite and create a group, write up their project they can be facilitated as well with regard to beekeeping and conservation activities.



هل أدى النهج إلى تحسين المساواة بين الجنسين وتمكين النساء والفتيات؟
Women also participate in beekeeping activities and honey production but not to a large scale as compared to men. This is because, this activity is preferred to be undertaken in forest reserves which are far from homes/villages and therefore making it unease for women participation.



هل شجع النهج الشباب/الجيل القادم من مستخدمي الأراضي على الانخراط في الإدارة المستدامة للأراضي؟
Youth are fully engaged in beekeeping activities by assisting throughout the whole process thus learning beekeeping as well.



هل أدى هذا النهج إلى تحسين الأمن الغذائي / تحسين التغذية؟
Bee products that are produced are sold and therefore providing income to the family which ensures food accessibility.



هل أدى النهج إلى تحسين الوصول إلى المياه والصرف الصحي؟



هل أدى النهج إلى توفير فرص عمل ودخل؟
Beekeeping provides employment opportunities to the beekeeper and other individuals.



المحفز الرئيسي لقيام مستخدمي الأراضي بتنفيذ الإدارة المستدامة للأراضي

- زيادة الإنتاج
- زيادة الربح (القدرة)، وتحسين نسبة التكلفة إلى العائد
- الحد من تدهور الأراضي
- الحد من مخاطر الكوارث
- انخفاض عبء العمل
- المدفوعات/ الإعانات
- القواعد واللوائح (القرارات) / الإنفاذ
- الواجهة والضغط الاجتماعي/ التماسك الاجتماعي
- الانتماء إلى حركة/ مشروع/ مجموعة/ شبكات
- الوعي البيئي
- العادات والمعتقدات والأخلاق
- تعزيز المعرفة والمهارات في مجال الإدارة المستدامة للأراضي
- تحسينات جمالية
- التخفيف من حدة الصراع

استدامة أنشطة النهج

هل يمكن لمستخدمي الأراضي الحفاظ على استدامة ما تم تنفيذه من خلال النهج (بدون دعم خارجي)؟

- لا
- نعم
- غير مؤكد

Beekeepers use locally available materials for undertaking their beekeeping activities from hives construction to honey processing.

الاستنتاجات والدروس المستفادة

نقاط القوة: وجهة نظر مستخدم الأرض

- Provides sources of income to the family through the produced bee products.
- Access to bee products which are used as food, medicines and sale as industrial ingredients of various products.
- Pollination of crops when practicing on-farm beekeeping.

نقاط القوة: وجهة نظر جامع المعلومات أو غيره من الأشخاص

- Effective means of conservation of trees and natural resources.
- Ensures livelihoods improvements through diversified sources of household income.

نقاط الضعف / المساوئ / المخاطر: وجهة نظر مستخدم الأرض/كيفية التغلب عليها

- Climatic changes which affects beekeeping production. Beekeepers should be capacitated with skills on how to adapt to climate changes for assured production.
- Encroachments by illegal human activities in potential areas for beekeeping affecting productions. Protections of forest and bee reserves should be strengthened so as to ensure bee feed availability.

نقاط الضعف / المساوئ / المخاطر: وجهة نظر جامع المعلومات أو غيره من الأشخاص الرئيسيين لمصدر المعلومات/كيفية التغلب

- A way of maintaining the traditional/cultural practices that have been practiced from previous generations.

عليها

- Women participation in beekeeping productions within the value chain is still very low as compared to men. Promote on-farm beekeeping to women so that they can also participate in the production of bee products. Women should be influenced to participate on beekeeping activities.
- Lack of enough capital by beekeepers for upscaling beekeeping practices in a modern way. Linking beekeepers to markets that will assure them good income and profit generation so to expand their activities and apply modern tools such as hives for increased productions.

المراجع

جامع المعلومات
LINDA SHIO

المحررون

المُراجع
Udo Höggel

تاريخ التوثيق: 19 نوفمبر، 2024

آخر تحديث: 22 يناير، 2025

الأشخاص الرئيسيين لمصدر المعلومات

LINDA SHIO (shiolinda11@gmail.com) - جامع المعلومات المشارك

WOCAT الوصف الكامل في قاعدة بيانات

https://qcat.wocat.net/ar/wocat/approaches/view/approaches_7416/

بيانات الإدارة المستدامة للأراضي المرتبطة

Technologies: Forest Beekeeping https://qcat.wocat.net/ar/wocat/technologies/view/technologies_1360/

تم تسهيل التوثيق من قِبَل

المؤسسة

- TANZANIA FOREST SERVICES AGENCY (TFS)

المشروع

- Global coordination project for the SFM Dryland Sustainable Landscapes Impact Program (GEF-FAO / DSL-IP)

روابط للمعلومات ذات الصلة المتوفرة على الإنترنت

- HONEYBEE MANAGEMENT THROUGHOUT THE SEASONS: <https://extension.psu.edu/honey-bee-management-throughout-the-seasons>

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