

Beekeeping Modernization and Community Livelihoods

Case of ARCOS Network



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About this publication

This is one of the series of brochures aimed at experience sharing on ARCOS NBCEs Programme. Other case studies produced include:

- *Community Managed Tree Nursery Centers for Water, Energy and Food Security*
- *Building Community Ownership and Institutional Development*
- *Nature Based Village as a model for transformation towards sustainable community development*
- *Nature Based Community Enterprises as means to create jobs for youth*
- *Using water hyacinth to improve livelihoods and restore freshwater ecosystems*
- *The benefits of market-oriented agriculture to women*
- *Sustainable Energy Access in Rwanda's Rural Areas*

About ARCOS Network

Established in 1995, the Albertine Rift Conservation Society (ARCOS Network) is an non-governemntal organisation working with NGOs, Governments, Community-Based Organisations and the Private Sector, established in 1995 with the Mission "To enhance biodiversity conservation and sustainable management of natural resources through the promotion of collaborative conservation action for nature and people". ARCOS has programmes extending in the Albertine Rift region, Africa Great Lakes and African Mountains.

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ARCOS Strategic Areas 2016-2020 at a glance



1. Introduction

In nearly all countries worldwide, bees and their products are well known, have wide consumer preference and provide sustainable livelihoods to many small-scale farmers and other rural and non-rural people. Bees offer a large potential with minimal investments. As an agricultural enterprise, beekeeping does not require land ownership or rental, it can be started with the equipment and tools that can be sourced locally and in many instances skills and knowledge required for such an enterprise are found within local traditions (FAO, 2011). As a business enterprise, it offers diverse products, for example honey and wax among others, which can be sold in local markets and become an important source of regular

income for rural households and can also provide complementary services, such as crop pollination. Moreover, bee products improve family nutrition and can provide for traditional health care remedies. Despite its crucial importance for the improvement of livelihoods, beekeeping in many developing countries provides minimal outputs due to the use of traditional practices (Ahikiriza, 2016). It is therefore very important for communities and government to modernize this activity and make it more profitable so that it can provide them enough income and contribute to regional development.



Traditional beehives. The equipment and tools for beekeeping can be sourced locally and in many instances skills and knowledge required for such an enterprise are found within local traditions. Photo: Gilbert/ARCOS, 2017

2. The Challenges

Beekeeping is still operated in the old traditional ways implying the need for modernization. Low productivity and poor quality of bee products are the major economic impediments for rural beekeepers. However, they face other economic problems mostly related to poor social infrastructures to organize beekeepers, lack of packaging materials and market instability, poor use and access to improved production technologies, increased loss of beekeeping areas, inadequate and ineffective extension services and inadequate statistical information to guide plans and operations; inaccessibility to markets, unreliable transport, lack of market information and inadequate entrepreneurship skills among beekeepers (Munuo, 2015).

These push beekeepers to produce low quality products that they are forced to sell locally to wholesale buyers at prices much lower than in domestic commercial markets.

In addition, beekeeping in Rwanda and many other developing countries is practiced by cooperatives that face a lot of problems related to poor governance and leadership thus affecting the overall development; unsustainable practices that do not give attention to environment; lack of clear business development models to maximize the profits; and finally, lack of clear involvement of other members of the community to support the sustainability of their business.



Members of KOTEREM (Beekeepers from Mukura Sector of Rutshiro Sector) posing with ARCOS' Executive Director and Partnership Manager

3. ARCOS' Response

a. ARCOS Network Approach and Goals:

ARCOS' community development programme adopts a holistic understanding of the socio-ecological system and helps the community to build vision of success based on sustainability principles and rooted in the cultural heritage. ARCOS works with Nature Based Community Enterprises (NBCEs) through a model structured around four but interrelated components that make the situation more approachable.

The BEST Approach (ARCOS 2015) focuses on four key areas:

B: Building leadership and sustainable institutions: Cooperative management, governance, setting targets and work plans, gender and youth inclusiveness.

E: Enhancing environmental resilience. Promoting Community Based Adaptation through sustainable agriculture, enhancement and protection of soil and water ecosystems and biodiversity, forest landscape restoration, ecosystem-based adaptation, promotion of green energy technologies.

S: Sustainable business solutions. Assisting NBCEs in business planning, value addition, private sector engagement, market linkages and quality certification.

T: Transforming and inspiring others. ARCOS and empowered NBCEs focus on Nature Based Villages (NBVs), demonstration sites in integrating sustainable environment and livelihoods practices. This is supported through a Nature Based Community Fund (NBCF) established to foster sustainability actions in each NBV through community loans, incentives and activities of common benefits. ARCOS also promotes community to community exchange through training workshops, exhibitions and exchange visits where communities share knowledge and experience and learn by doing.

b. Implementation and Process

Using its BEST approach, ARCOS started with a series of trainings in institution management and leadership of KOTEREM and MUTUBEHAFI cooperatives so that they could have sustainable governance and management of their cooperatives. Other training offered regards sustainable protection of the environment and natural resources as a vital ingredient to their business (beekeeping). Furthermore, the trainings involved sustainable development of the cooperatives' business, finance management and sustainable improvement of their business in general. Finally, these beekeeping cooperatives were assisted with knowledge exchange and sharing among themselves and with other cooperatives who have excelled in modern beekeeping practices across the country.

The identified cooperatives have been supported and the following are some of the activities that ARCOS backed/sponsored:

Training in modern beekeeping for the members of MUTUBEHAFI and KOTEREM of Rutsiro district. Unlike more formal training settings, a hands-on training approach was used to provide cooperative with skills on how the members of these cooperative could shift from traditional practices to modern beekeeping in order to increase their production and boost the cooperative's income. This approach allowed 20 participants of MUTUBEHAFI and KOTEREM to gain practical knowledge on methods used in modern beekeeping including location and apiary setting, feeding bees, honey extraction, beehive inspection and transfer, quality honey harvesting and processing, packaging and the management and control of bee diseases. The trainees got an opportunity to practice and discuss the challenges in the farms. The participants were also able to see innovations at first hand and exchange practical knowledge.

In order to boost their business, ARCOS supported the two cooperatives (KOTEREMU and MUTUBEHAFI) in constructing standardized apiaries that can accommodate 25 hives each and contributed 37 modern bee hives that are capable of increasing the honey production. These beehives **were accompanied by other materials used for honey harvesting** and processing like honey combs, smokers, honey pressing machines and all attires used in honey harvesting and processing.

4. Achievements and Impact



Two cooperative (KOTEREM and Mutubehefi) received training in modern beekeeping



Two cooperatives also received modern beekeeping materials

After ARCOS' support to cooperatives in shifting from traditional beekeeping to modern ways, tremendous results have so far been made and livelihoods of members have been improved as a result of increased cooperatives' profits.

- Governance and leadership of both cooperatives are in place and the transfer of power is done in a transparent way;
- Community awareness in climate and environmental resilience practices considerably enhanced in all cooperatives' activities;
- The production of both cooperatives increased from 2kg per hive (traditional) to 10kg per hive (modern) and is likely to increase more in the upcoming years since these cooperatives adopted modern beekeeping practices;
- Annual turnover of both cooperatives increased from RWF 200,000 to RWF 2,421,000 for KOTEREM and from RWF 1,000,000M to RWF 11,406,955 for MUTUBEHAFI through modernized beekeeping and livestock farming;
- Community attitude more open towards exploring sustainable and productive practices through modernization of their business and sustainable environmental conservation.

5. Lessons Learned

A lot has been learned with transforming communities from traditional practices to modern beekeeping since ARCOS started working with MUTUBEHAFI and KOTEREM cooperatives. Below is a summary of lessons learned:

- Capacity building and experience sharing in modern beekeeping is a key factor for the success of communities and improvement on their practices;
- Communities in beekeeping need continuous or regular technical advice and training in modern beekeeping and monitoring and evaluation to assess the change that is needed;
- Cooperative leadership is crucial for the successful implementation of planned activities;
- Local government involvement in all stages is important for the success of the cooperatives as they support in technical or any other needed assistance;
- Mindset change is needed for communities to switch from traditional practices that have been their daily routine to modern and sustainable beekeeping practices.

7. The Challenges Ahead

Despite the assistance provided, KOTEREM and MUTUBEHAFI still need constant follow up and training to make their products more professional and competent on market starting with packaging, marketing, etc. There is still a challenge in increasing their production to be able to satisfy the growing honey market due to limited finances for expanding modern apiaries and increasing the number of modern beehives.



6. Conclusion

Cooperatives should be considered as an important plank of development. The cooperatives have inherent advantages in tackling the problems of poverty alleviation, food security and employment generation.

ARCOS' Nature Based Community Enterprise (NBCE) Programme includes an innovative community development approach focused on empowerment and capacity building toward sustainability through a new holistic approach (BEST Approach). The innovative approach also realizes the importance of functional governance structures in

leading communities toward a prosperous future and proposes social governance mechanisms aimed at creating transparent and participatory decision-making processes.

Through partnership with community, we establish a holistic understanding of the socio-ecological system in which a community exists and looks to integrate a deeper awareness and consciousness into communities and partner government institutions. Socio-ecological success is also defined in the approach by providing a principle-based definition of sustainability.

8. References

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