

Sustainable Management of Beekeeping in Jumla District of Nepal: The Role of Farmer-led Institutions

M.B. Gurung, S.R. Joshi, and F. Ahmad

International Centre for Integrated Mountain Development, Kathmandu, Nepal

Introduction

Past development efforts have often ignored the vital elements of sustainable development: involvement of the beneficiaries and strengthening their institutions. It is now realised that sustainable management of any development activity is possible only if the people in need are involved in all the phases of development from planning, through implementation, and monitoring to benefit sharing. This paper highlights the role of farmer-led institutions in ICIMOD's bee-keeping project which is being implemented using a community-based approach in Jumla district of Nepal.

Beekeeping in Jumla

The rich tradition of beekeeping in Jumla is associated with the genetic diversity of Jumla *Apis cerana*, the availability of bee forage plants, and a wealth of indigenous knowledge on beekeeping. Nowadays only the poorest of the poor in remote villages keep native *Apis cerana* bees. At present, there are around 5000 log hives with bee colonies in Jumla district. The Jumla strain of *Apis cerana* is a good genetic race in the sense that it is larger, and produces more honey, and has a lower level of absconding, than other strains like *Apis cerana himalaya* and *Apis cerana indica*.

Why beekeeping in Jumla?

In Jumla, most of the farmers living in remote villages above 2600m keep bees primarily for selling honey and other value-added products. Most beekeepers do not have 'khet' (irrigated land) for rice growing and a system of bartering honey for rice from lower altitude areas has existed for many years. Beekeeping is one of the major sources of income for beekeepers, as there are limited options for cash income. Sustainable beekeeping management is, therefore, crucial for poor farmers to generate cash income. This enterprise provides benefits to individual beekeepers at a local level (food, nutrition, better crop yield through pollination, cash income, medicine, and so on) as well as to society, at national, regional, and global levels (biodiversity, clean air, water, and so on).

Project Initiatives

The Austrian government funded a project entitled 'Promotion and Development of Beekeeping Through Preservation of Indigenous Honeybees, *Apis cerana*', from July 1993 to December 1998. This project focused on research and development, particularly in Nepal. During the phase, the project carried out research on the genetic diversity of *Apis cerana*, crop pollination, honey plant resources, and comparison of straw and wooden hives. From 1995 to 1998, the focus of the project shifted to training and extension, particularly in Jumla. The training and extension activities initiated in Jumla communities became the basis for further beekeeping development in the region. Some of the activities

undertaken in Jumla to make the project's initiatives more effective and sustainable included: (a) farmer-trainers training, (b) village-based training and workshops, (c) farmer field trips, (d) distribution of written materials, (e) exhibitions, (f) participatory planning and extension, (g) group formation and mobilisation, and (h) marketing activities.

Project Accomplishments

Awareness about the conservation of indigenous honeybees

Through applied research, training, and extension activities, the project raised awareness among beekeepers, honey hunters, local farmer-led organisations, government, and non-government organisations about the importance of conserving *Apis cerana* and other wild bees (*Apis laboriosa* and *Apis dorsata*).

Building farmer organisations

The establishment of farmers' groups and networks facilitated a wide exchange of experiences and resources. The development of farmer-trainers within the communities further facilitated the process of linking farmers' groups to district-based government and non-government organisations. The strengthening of some farmer-led organisations and community-based farmers' groups for the development of farmer-to-farmer extension and marketing services for bee-based products and other local products has led to sustainable beekeeping management in Jumla.

Establishment of a beeswax collection and processing centre

A beeswax collection and processing centre was established in Jumla bazar. A farmer-led organisation was made responsible for beeswax processing and marketing of honey. With the help of the ICIMOD beekeeping project and the farmer-led local organisation, the farmers have been able to make candles and herbal creams for their own use and for marketing to generate income.

Women farmers' participation in beekeeping enterprises

The project initiated the formation of women's groups and trained women who later worked together with other groups. Participatory approaches such as PRA tools and techniques were used to analyse gender roles and examine ways to make project activities relevant to women farmers. Previously, women farmers were being excluded from participating in community development activities. With the advent of the project, quite a few women farmers have been trained in both technical and organisational aspects of beekeeping.

Human resource development in beekeeping

Various types of training were imparted to both men and women beekeepers. The farmer-led organisations also trained their staff in various aspects of beekeeping management and enterprise development. The farmer-trainers form a valuable resource for the community as they are the source of information regarding beekeeping management. A total of 143 beekeepers have been trained as local farmer-trainers on such aspects as beekeeping management, hive making, queen rearing, and honeybee diseases. The staff of the farmer-

led organisation has also been supporting other government and non-government organisations in organising training events on beekeeping management in general and candle and cream making in particular.

Improvement of Appropriate Technologies for Beekeeping

The project facilitated improvement of traditional beekeeping through the use of appropriate technologies. The Jumla top bar hive proved to be the most appropriate technology for the area. A number of farmers constructed these hives with their own investment. The farmer-led organisation in Jumla is promoting the hive by collaborating with other organisations. Out of 24 VDCs where ICIMOD implemented its beekeeping programme, 19 VDCs adopted Jumla top bar hives; the remaining five have not yet adopted this hive due to a lack of farmer-trainers and wood for making the hives.

Factors Contributing to the Development of Farmer-led Institutions

Several factors contributed to the development of farmer-led institutions. They included: (a) strong beekeeping traditions and indigenous knowledge, (b) abundant natural wildflowers and plants available in forests and on uncultivated lands, (c) participation of both men and women beekeepers in the process of beekeeping development, (d) facilitation by the project team for mutual learning through sharing ideas and experiences, and (e) supporting of local partner institutions and farmers' groups to build institutional and human resource capacity through training and experience sharing.

Future Implications

Strengthening farmer-led organisations for the development of farmer-to-farmer training and extension is imperative for sustainable beekeeping management. Equally important is farmer's participatory research on *Apis cerana* for a new professionalism with new concepts, values, and behaviour.

Beekeeping should be taken as an integrated approach to development, rather than a sectoral approach. A beekeeping project focusing on poverty alleviation and biodiversity conservation cannot work in isolation. Therefore, partnership with local communities is crucial to integrate other forms of income generation programmes such as vegetable seed production, apple farming, promotion of local products like blankets, herbal tea, bamboo, and woollen products.