

Mima: a hamlet with its unique beekeeping tradition, offering financial security and environmental sustainability

Mima village is located in the Kohima district of Nagaland, North East India. The village is divided into three major khels, viz. Tsophima khel (Tm-khel), Rüsoma khel (R-khel) and Tama khel (T-khel). The population of Mima is 2149 living in 403 households¹. The village is inhabited by the Angami Naga ethnic group. The hamlet engages in a variety of farming practices, including terrace cultivation and oak-based agroforestry incorporating *Quercus* trees in the fallow jhum lands (Figure 1 a and b). Oak is the major source of firewood and timber for the villagers². Mima is popularly recognized for its unique underground beekeeping tradition practiced for generations, and referred to as ‘traditional hives’. These hives are extremely lucrative because the bees are healthy and live naturally; they can act as the cornerstone for large, healthy and genetically robust bee populations. Given their affordability, beekeepers in rural areas could build and maintain multiple traditional hives. The hives are environmentally and economically sustainable, making them a good choice in a number of situations, especially in rural areas. When the Nagaland Beekeeping and Honey Mission was started in October 2007, this was the first state in India to have a standalone apiculture initiative exploring prospects for a sustainable living through beekeeping³. Nagaland observes Honey Bee Day on 5th December every year.

Bees are an intrinsic part of our planet

as they play a pivotal role in maintaining biodiversity, viz. forest regeneration, pollination, adaptation to climate change, and improving the quality and quantity of agriculture. Around 75% of the world’s crops that produce fruits and seeds consumed by the human population depend on pollinators for sustained production, yield and quality⁴. The ethnic community of Mima village has introduced honey bees in their community farmyards, which contain a sizable number of plantations. Initially, the farmers introduced honey bees as an experiment in the agroecosystem, and once they learned about their therapeutic benefits, they began rearing bees on a larger scale. Currently, among the villages in the Kohima district, Nagaland, that produce honey, Mima is the largest producer of best-quality honey.

Due to this traditional practice of honey bee-rearing in the agroecosystem, Mima is referred to as the ‘Honey Bee Village of Nagaland’⁵. The ethnic community receives several benefits from the Government schemes every one to two months, including food grains, pulses and other commodities as subsidies. Besides, the villagers cultivate cereals and vegetable crops as a source of subsistence. The traditional bee-keeping practice of farmers helps them gain additional financial benefits. Initially, the local hives were placed by digging underground pits in the farmlands. The underground bee hives are usually made of stones and mud

(Figure 1 c–e). The modern-day hives are made up of cement and concrete slabs (Figure 1 f). Improvizations were made to obtain more hygienic honey. Local farmers consider beekeeping, honey extraction and honeycomb to be more advantageous in terms of labour and financial stability than conventional farming in the hills. According to a socio-economic survey carried out in February 2022, majority of the households practice traditional beekeeping in their backyard farms. Out of 295 litre of honey produced, 28 litre was used for their own consumption and 267 litre sold at a price of Rs 1000/litre, which helped the farmers earn about Rs 2,67,000, whereas 258 kg potato cultivated in jhum farming system was sold for Rs 58,370.

Popularization and upscaling of the traditional bee-keeping practice developed by the farmers of Mima village can be a robust solution for poverty alleviation, and socio-economic and environmental sustainability in the region.



Figure 1. a, Mima village landscape. b, Oak-based integrated agroforestry. c–e, Traditional beekeeping practice. f, Modern bee-keeping practice.

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2. Singh, A. B. and Teron, R., *Indian J. Hill Farm.*, 2019, **32**(2), 203–215.
3. Sweet success: Nagaland to observe honeybee day on December 5. *Eastern Mirror*; <https://easternmirmornagaland.com/sweet-success-nagaland-to-observe-honeybee-day-on-dec-5/> (accessed on 10 March 2023).
4. FAO, IZSLT, Apimondia and CAAS. Good beekeeping practices for sustainable apiculture. FAO Animal Production and Health Guidelines No. 25. Rome, Italy, 2021.
5. Honey bee village: overview of Mima, <http://www.onefivefive.com/india/village/kohima/jakhama/mima> (accessed on 10 March 2023).

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