madhu dvniya 2023

ASEAN Guidelines for Sustainable Harvest and Resource Management Protocols for Selected Non-Timber Forest Products (NTFPs)

NTFP-EP

asean

one vision
one identity
one community

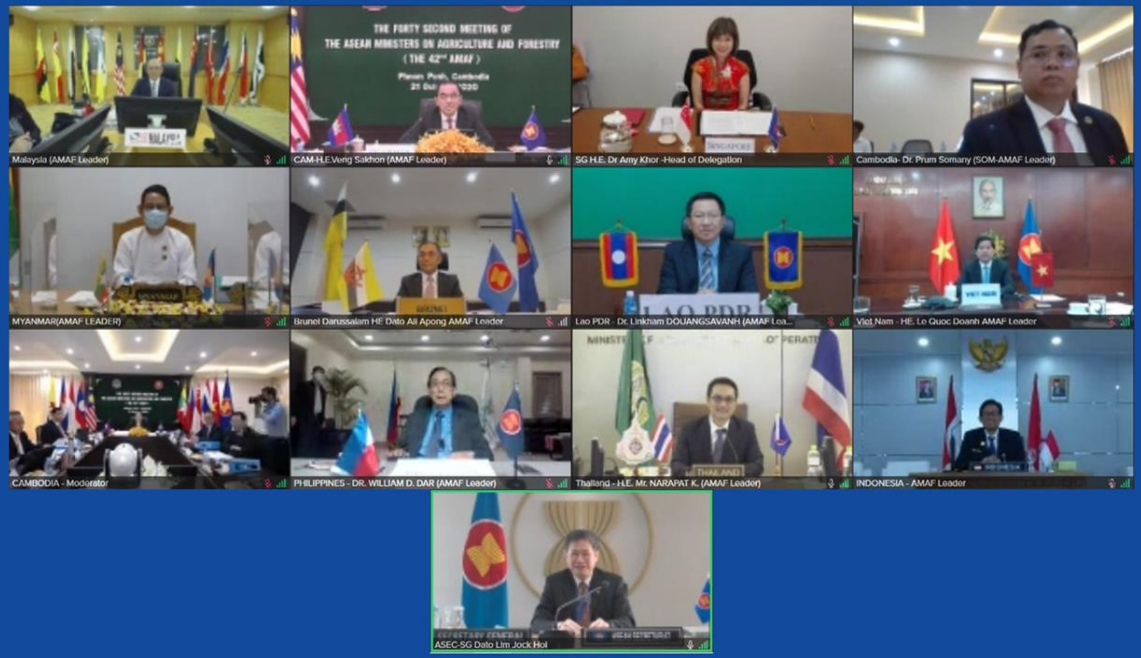
Presentation Outline

- Background
- The ASEAN Protocols on Forest Honey
  - Thumb rules
  - Social-ecological indicators
    - Ecological
    - Harvest
    - Trade and markets
    - Institutions
    - Policies and regulations
    - Monitoring methods
    - Climate adaptation


Workshop on developing ASEAN Guidelines for Sustainable Harvest and Resource Management Protocols for Important Non-Timber Forest Products:
HONEY, RESIN, FRUITS
Ho Chi Minh City, Vietnam
September 24-26, 2019
Cambodia
India
Indonesia
Laos
Myanmar
Philippines
Thailand
Vietnam

adoption (2020)

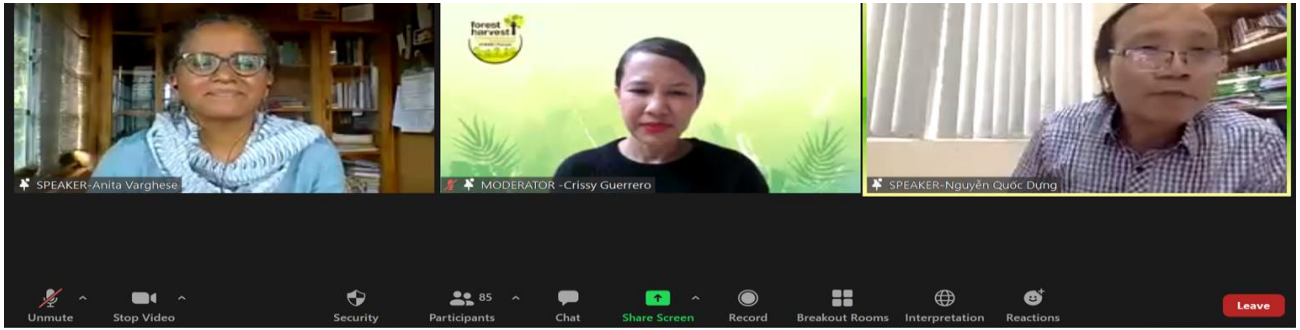
42nd AMAF
(October 2020)



sharing & dissemination (2020)

42nd AMA

forest harvest
Community-based NTFP Enterprises (CBNE) Forum



June 2, 2021 - CBNE Forum


madhu duniya
2023

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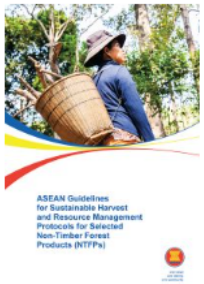

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Abstract

The ASEAN Guidelines for Sustainable Harvest and Resource Management Protocols for Selected Non-Timber Forest Products (NTFPs) presents protocols on sustainable resource management for five important NTFPs: forest honey, resin, fruits, rattan, and bamboo.

The Non-Timber Forest Products – Exchange Programme (NTFP–EP) was tasked by the ASEAN Senior Officials on Forestry (ASOF), specifically the AWG-FPD (ASEAN Working Group on Forest Products Development) to lead a consultative process to develop guidelines on sustainable harvest and resource management protocols for important NTFPs. Through a series of consultations and reviews with various experts in the region held in 2019 and 2020, these guidelines were made. It was then adopted by the 42nd ASEAN Ministers in Agriculture and Forestry (AMAF) last 21 October 2020.

Objectives

1. To promote awareness on the value of sustainable resource management practices and the importance of sustainable harvest protocols

2. To inform and guide the formulation of policies and programs by ASEAN Member States and other related institutions in ASEAN countries with regards to the sustainable management of NTFPs

3. To enhance partnerships and cooperation among stakeholders in the ASEAN community through the establishment of a common reference for the sustainable management of NTFPs

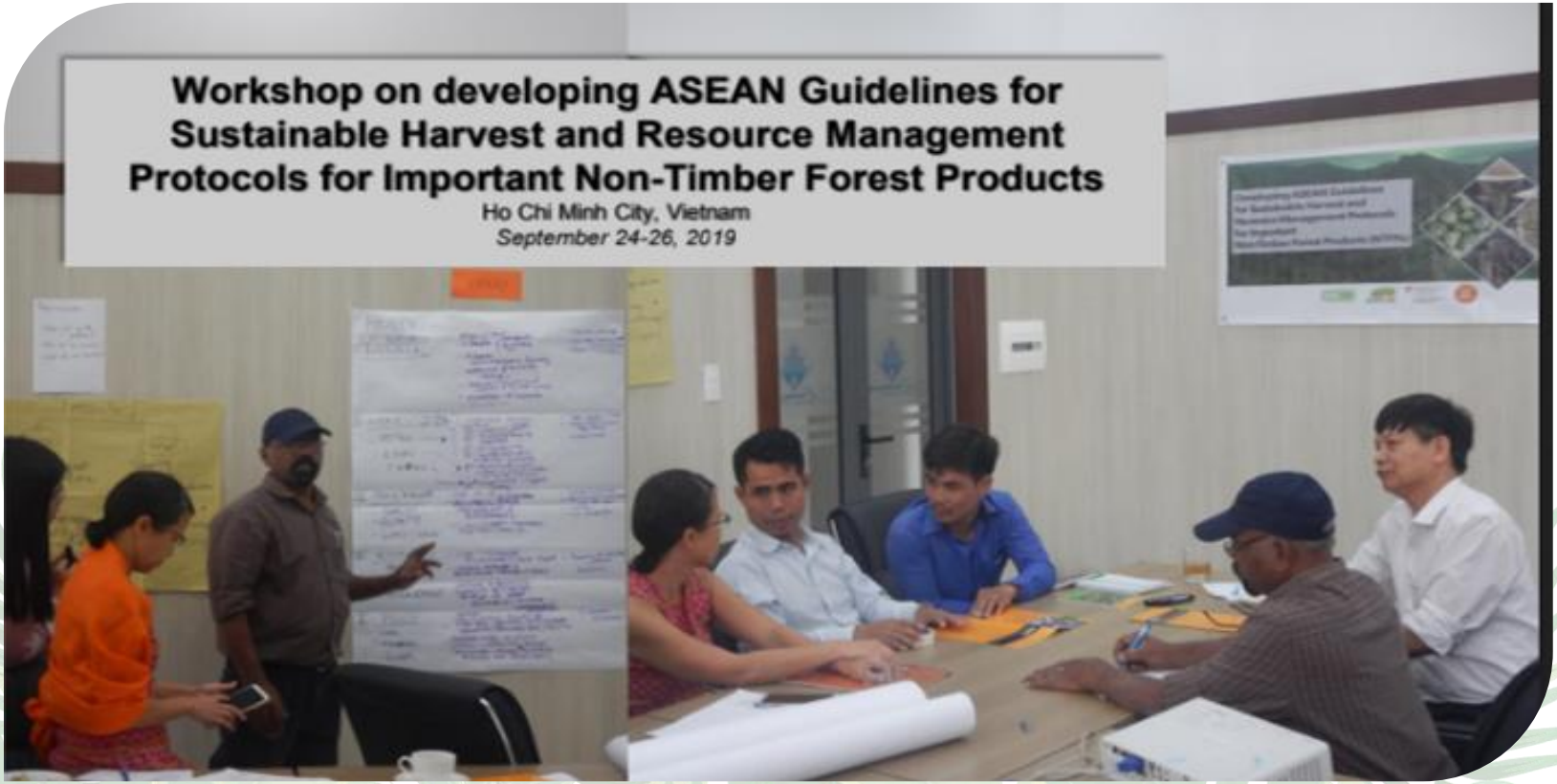
Methods

- Literature review, consisting of publications and related documents on existing protocols and guidelines on NTFPs

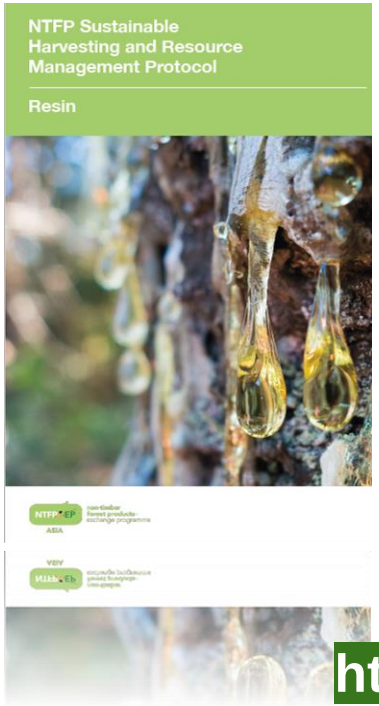
- Meetings and workshops with participants from the academe, government, NGO’s and forest communities

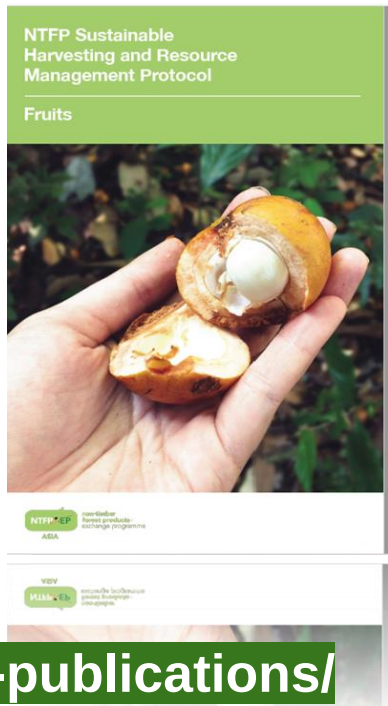
- Series of consultations with experts on 5 economically important NTFPs in the ASEAN region namely : **honey, resin, fruits, rattan, and bamboo.**

consultations (2019-2020)



NTFP Sustainable Harvesting and Resource Management Protocols





https://ntfp.org/ir-publications/


NTFP Sustainable
Harvesting and Resource
Management Protocol
Honey

NTFP-EP non-timber forest products - exchange programme

ASEAN CENTRE FOR BIODIVERSITY

Apis cerana (Asian Honey Bee) Expert Consultation and Workshop

August 20, 2021

ntfp.org /ntfpep @ntfpep

NTFP-EP non-timber forest products - exchange programme

ASEAN CENTRE FOR BIODIVERSITY

ASEAN Forest Honey Producers Consultation & Collective Labelling Discussion

September 22, 2021

ntfp.org /ntfpep @ntfpep

Main threats to NTFPs – including honey

- Habitat loss – conversion of forests
- Habitat degradation- invasive species
- Illegal clandestine trade
- Climate Change
- Tenure not being clear
- Long term ecological studies are not prioritise
- Sustainable Harvest is not prioritised or incentivised

Key Parameters to Assess Sustainable Harvests

- Ecological parameters
- Harvest methods
- Raw produce quality
- Production and Processing Standards

Framework for the protocol

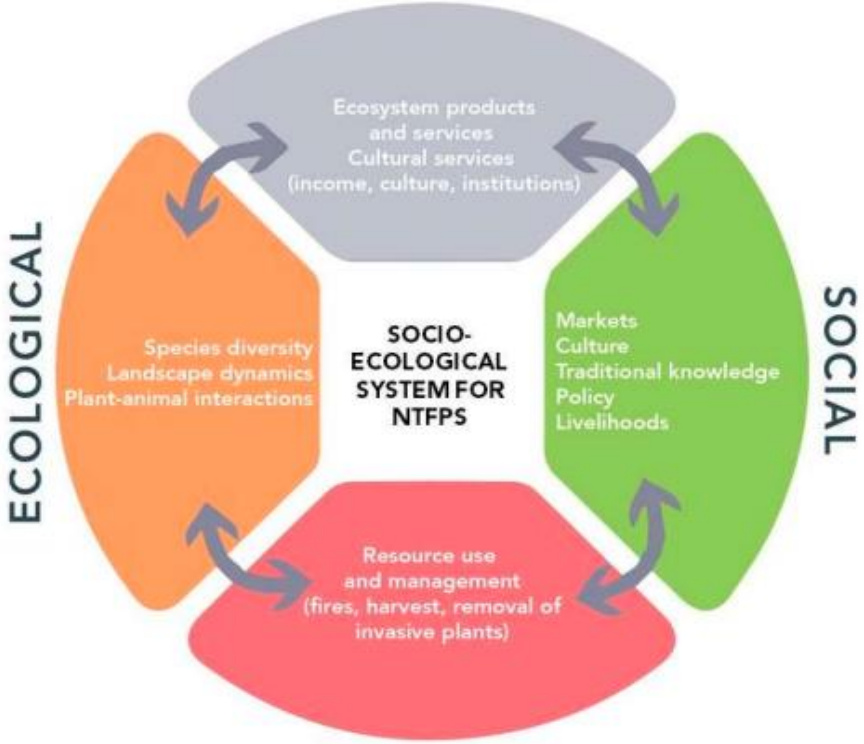


Figure 2. Socio-ecological components of an NTFP harvest system which are constantly interacting with each other. This representation is based on NTFP-EP field experiences and was developed in consultation with Prof. Tamara Ticktin, University of Hawaii.

Principles of the Socio Ecological monitoring framework

- Incorporating traditional ecological knowledge/TEK
- Community engagement and information sharing
- Participatory data collection
- Establishing multi stakeholder partnerships
- Adaptive Monitoring

Honey

Introduction

- It is important to understand the social structure of bees and the architecture of their hives in establishing protocols for sustainable wild honey harvest.
- Honeybees produce honey by collecting nectar, pollen and dew from plants
- These are brought back to the hive and stored as food. It also feeds their brood in the hive
    - If not managed properly, honey harvesting can be potentially disastrous
- Threats: pesticides, changes in weather, unsustainable harvesting
- Common honey sources in Southeast Asia: *Apis dorsata*, *A. cerana*, *A. florea*, and *A. adreniformis*.

- Thumb rules
- socio-ecological indicators
- case boxes
- references

- Check shoot harvest: number of shoots per month per year, which month has the highest number of shoots. This is especially important for villages focused primarily on shoot production.
- Condition of clump: density of culm/clump and number of old bamboos, number of healthy shoots and dead shoots. This is important to determine suitable use, proper time of harvesting and bamboo productivity.
- A good chronology of records about the bamboo harvesting from selection, coding, harvesting, carrying, stripping, and manufacturing is important.

Bamboo garden
Photo: Arief Rizqi and Dr. Elisabeth Widiati

Bamboo Age Markings Towards Sustainable Harvest, Ngada, Flores, Indonesia

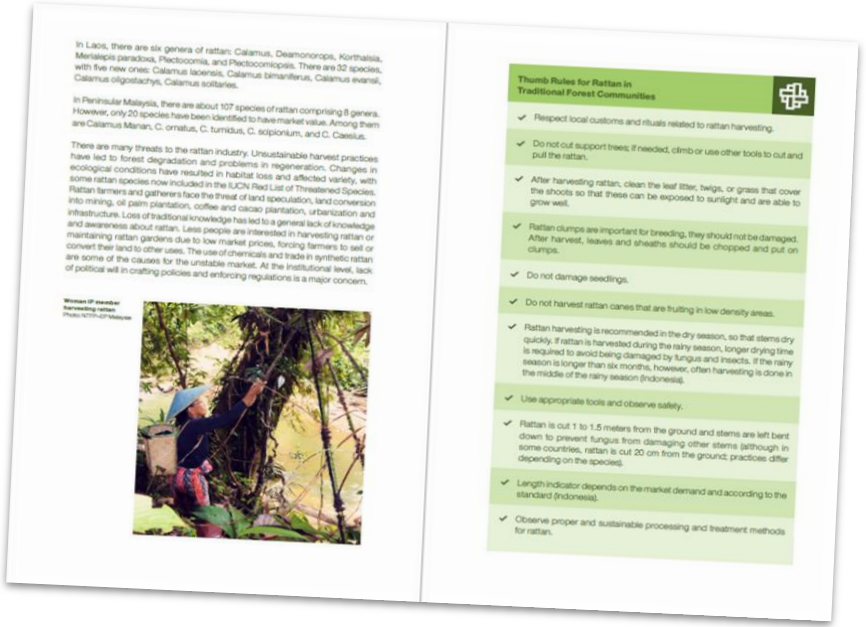
In 2012, Yayasan Bambu Lestari (YBL) or Sustainable Bamboo Foundation based in Bali Indonesia released a book called "Towards Resilient Bamboo Forestry" or "Menuju Perhutanan Bambu Resilien" (Rabik and Brown, 2012). The book highlights six steps in the sustainable management of bamboo clumps namely: 1. Improving the Bamboo Structure, 2. Management of Understory Plants, 3. Soil Management 4. Soil Nutrient Management, 5. Sustainable Harvesting, 6. Ecological Pest and Disease Management.

The step on sustainable harvest elaborates the age structure of the bamboo clumps. Once the age of the clumps has been determined, then the stems or culms are marked by age. Usually ages are classified as 1. Young Bamboo – (bamboo aged 1–2 years), 2. Adults – When bamboo is 3–4 years old, 3. Over aged bamboo – around 5–7 years old. There are several ways to know the age of the bamboo like the resonance test using a bamboo culm of 50–75 cm in length with a diameter of 6-8 cm. By placing one end of the bamboo on the culm being tested and then placing the other end on one's ear, one can hear the sound made after tapping on the bamboo. Older bamboo produces a sound that lasts longer in the ear.

An optimal cluster is one that has 4 culms that are 1 years old, 3 culms that are 2 years of age and 2 culms that are 3 years old. It is important to harvest the 3-year old mature bamboos first and the 1 year olds last.

In 2015 YBL, in collaboration with the company Indobamboo, led by the Ministry of Forestry and Environment and supported by ITTO, joined the government program on establishing 1,000 bamboo villages both to restore especially degraded ecosystems and to lead to improved local incomes.

One of the villages in the program is Ubedolumolo Village, Bajawa Subdistrict, Ngada District, Flores Island, East Nusa Tenggara Province. They were managing the *Dendrocalamus asper* species. The Ngada district is known for its close links with bamboo spanning generations. Their local wisdom also supports bamboo cultivation. They identified and marked the ages of the culms in each clump with the planned year of harvest to make sure that only mature culms were harvested, leaving shoots and young stems intact. Alongside this sustainable bamboo management practice (YBL), the local community organization was also strengthened for more efficient management of the initiative, post harvest treatment was implemented and local industries promoted. Since then Ngada district has been declared by the Ministry of Environment and Forestry as the center of excellence for the 1,000 bamboo villages program as a platform to develop and strengthen the use of bamboo in Indonesia through the community-based bamboo industry. Since then there are already 10 bamboo villages that have been used as centers of excellence and pilots for other regions, all in Ngada District. The sustainable bamboo program is also supported with a Community Learning Center, Bamboo Field School and Bamboo Music School in Wogo village, Golewa sub-district.



In Laos, there are six genera of rattan: Calamus, Daemonorops, Korthalsia, Merlalepis paradoxa, Plectocomia, and Plectocomiopsis. There are 32 species, with five new ones: Calamus laoensis, Calamus bimanifarius, Calamus evansii, Calamus oligostachys, Calamus solitaries.

In Peninsular Malaysia, there are about 107 species of rattan comprising 8 genera. However, only 20 species have been identified to have market value. Among them are Calamus Manan, C. ornatus, C. tumidus, C. scipionum, and C. Caesius.

There are many threats to the rattan industry. Unsustainable harvest practices have led to forest degradation and problems in regeneration. Changes in ecological conditions have resulted in habitat loss and affected variety, with some rattan species now included in the IUCN Red List of Threatened Species. Rattan farmers and gatherers face the threat of land speculation, land conversion into mining, oil palm plantation, coffee and cacao plantation, urbanization and infrastructure. Loss of traditional knowledge has led to a general lack of knowledge and awareness about rattan. Less people are interested in harvesting rattan or maintaining rattan gardens due to low market prices, forcing farmers to sell or convert their land to other uses. The use of chemicals and trade in synthetic rattan are some of the causes for the unstable market. At the institutional level, lack of political will in crafting policies and enforcing regulations is a major concern.

Woman IP member harvesting rattan
Photo: KITRI-ICP Malaysia

Thumb Rules for Rattan in Traditional Forest Communities

- ✔ Respect local customs and rituals related to rattan harvesting.
- ✔ Do not cut support trees; if needed, climb or use other tools to cut and pull the rattan.
- ✔ After harvesting rattan, clean the leaf litter, twigs, or grass that cover the shoots so that these can be exposed to sunlight and are able to grow well.
- ✔ Rattan clumps are important for breeding, they should not be damaged. After harvest, leaves and sheaths should be chopped and put on clumps.
- ✔ Do not damage seedlings.
- ✔ Do not harvest rattan canes that are fruiting in low density areas.
- ✔ Rattan harvesting is recommended in the dry season, so that stems dry quickly. If rattan is harvested during the rainy season, longer drying time is required to avoid being damaged by fungus and insects. If the rainy season is longer than six months, however, often harvesting is done in the middle of the rainy season (Indonesia).
- ✔ Use appropriate tools and observe safety.
- ✔ Rattan is cut 1 to 1.5 meters from the ground and stems are left bent down to prevent fungus from damaging other stems (although in some countries, rattan is cut 20 cm from the ground; practices differ depending on the species).
- ✔ Length indicator depends on the market demand and according to the standard (Indonesia).
- ✔ Observe proper and sustainable processing and treatment methods for rattan.

Thumb Rules for Honey in Traditional Forest Communities

- Define colony or area ownership
- Do not destroy the habitat of bees, including nesting sites and foraging areas
- Ensure that colonies are a certain distance away from chemical intensive farming activity or sources of pollutants such as haze
- Use appropriate sustainable harvesting tools and methods
- Harvest only mature colonies for honey
- Harvest only the honey part of the comb, leaving the brood intact
- Brood collection is only for community consumption and not for sale. To ensure sustainability, a percentage of broods should always be left behind.

Thumb Rules for Honey in Traditional Forest Communities

- Harvest honey only on dry days so as to reduce water content
- Do not harm the bees while collecting honey from the hive.
- Cut honey combs and drain the harvested honey; never squeeze the combs.
  - Honey should be pre-filtered in the forest if it cannot reach the processing center in a few hours
- Honey should be clean and meet the standards for food and health
- Respect local customs and rituals related to honey harvesting
- Advocate for supportive policies and programs for sustainable forest honey management and trade

Socio-ecological indicators

to ensure the sustainability and quality of forest honey

1. Ecological

- The forest has an abundance of nesting trees and nectar sources
- There is a stable or increasing number of colonies in a particular area
- Sacred sites are secured
- There is regular flowering of pollen and nectar sources
- Occurrence of pollination
- Climate patterns such as rainfall and humidity are stable

2. Harvest

- Only mature colonies are harvested - *wide, thick and visible comb, capped or sealed honey*
- Only honey part is removed from the comb
- Harvesting is done on dry days
- Appropriate harvesting methods, tools and equipment are used

Socio-ecological indicators

to ensure the sustainability and quality of forest honey

3. Trade and Markets

- Honey is clean and meets health and food standards
- There is no brood for sale
- Honey can be traced to its source
- Honey properties indicate that it has been harvested properly

03 Trade and Markets

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- There is no brood for sale.
- Honey can be traced to its source.
- Honey properties indicate it has been harvested properly.

Harvested honey
Photo: NTFP–EP Cambodia

Socio-ecological indicators

to ensure the sustainability and quality of forest honey

4. Institutions

- Local or traditional organizations are engaged in collective trade
- There is an effective community institution that manages honey resources
- Community discussions are done during honey collecting season
- Social networks or partnerships exist between harvested and other actors in the value chain

Socio-ecological indicators

to ensure the sustainability and quality of forest honey

5. Policies and regulations

- Policies for harvest and harvest areas exist
- The ownership of colonies is defined
- Harvesters have permits or licenses to harvest and transport honey
- Policies for protecting the forest exist
- There are enabling local, national and international policies for Asian honeybees in such areas as taxes, partnerships, honey standards
- Local, national and international platforms such as trade certification bodies advocate for favorable policies

***Apis dorsata* colony**
Photo: NTFP–EP
Philippines

Socio-ecological (*cont.*)

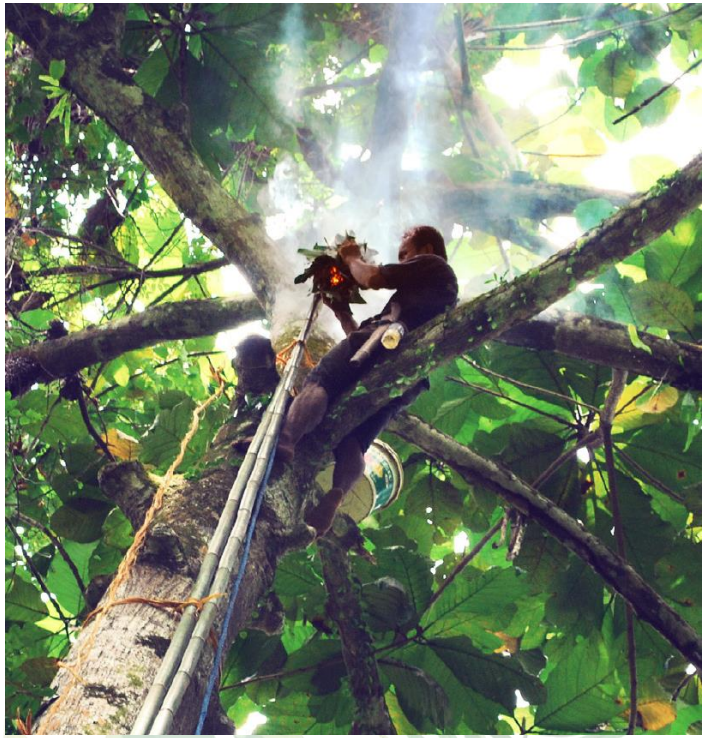
06 Monitoring Methods

- Resource mapping, including identification of nesting trees
- Number of colonies observed versus number of colonies harvested
- Community permanent plots recording number of colonies, number of trees with colonies, flowering trees before, during, and after each harvest season.
- Pre- and post-harvest monitoring through inspection of peer groups of non-collecting hunter group within three days after each harvest
- Community-level associations assess the quality of the honey.
- Records of where the honey is from, what are the nectar sources, who collected, and other relevant information
- Observance of adherence to harvest protocols
- Community discussions during honey collecting season
- Internal control systems and participatory certification processes checking traceability and sustainability
- Reports on progress on enabling policies for harvest and trade of honey
- Maintain observation records about animals and birds that are dependent on the bees, honey and combs.

Socio-ecological (*cont.*)

07 Climate Adaptation

- Monitor if climate-related factors such as warmer temperature and stronger typhoons affect the flowering patterns of nectar sources and the migration and foraging patterns of bees.
- Ensure that traditional practices are still sustainable in light of changes in climate.
- Monitor if bee populations are declining.
- Monitor the use of chemicals in the vicinity, particularly pesticides.
- Record if honey has higher water content than previous years despite use of proper harvesting methods.



Recommendations for Honey

- Honey Bee Colonies in the wild need more protection and research
- Local language guide books on sustainable honey harvesting.
- Harvesters link up with green markets that value the ecosystem
- Support the traditional ecological knowledge of communities

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