

LOCAL KNOWLEDGE IN THE MANAGEMENT OF TIKUNG HONEY IN ENSABANG VILLAGE, SEPAUK SUB-DISTRICT, SINTANG DISTRICT

Kearifan Lokal Masyarakat dalam Pengelolaan Madu Tikung di Desa Ensabang Kecamatan Sepauk Kabupaten Sintang

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ABSTRACT

Knowledge is essential for people to adapt to nature and becomes a cultural heritage in managing existing natural resources with knowledge, customary, and cultural norms in the community's concept of thinking. Forest honey from Ensabang Village, Sepauk District, Sintang Regency, is honey produced by *Apis dorsata* bees, which is managed by the community using the Tikung technique, the management of which is based on the community's local knowledge and customary rules. This research aims to examine forms of local knowledge in the management of Tikung honey. This research used interview techniques with all Tikung honey farmers, and the data was analyzed using qualitative descriptive analysis. The study results show that the management of Tikung honey is carried out individually. The Tikung is placed on the river bank and the ground, and the types of wood used to make Tikung are Tembesuk (*Fagraea fragrans*) and Kawi (*Shorea balangeran*). Harvesting forest honey is carried out at night, and packaging and marketing are carried out directly by honey farmers. The traditional rule is that people are prohibited from burning near nest trees, destroying and cutting down nest trees and food trees, and putting Tikung in other people's trees and gardens. There are written sanctions and fines for those who steal and claim other people's Tikung.

Keywords: tikung honey; tikung land and water; tembesuk; local knowledge; ensabang village

ABSTRAK

Kearifan merupakan suatu hal yang penting untuk masyarakat beradaptasi dengan alam dan menjadi suatu warisan budaya dalam mengelola sumber daya alam yang ada dengan pengetahuan, norma adat dan budaya yang terkandung dalam konsep berfikir masyarakat itu sendiri. Madu hutan Desa Ensabang Kecamatan Sepauk Kabupaten Sintang merupakan madu yang dihasilkan oleh Lebah *Apis dorsata* yang dikelola oleh masyarakat dengan menggunakan teknik Tikung, yang dalam pengelolaannya berdasarkan pada pengetahuan lokal masyarakat dan aturan adat. Tujuan penelitian ini untuk mengkaji bentuk-bentuk kearifan lokal masyarakat dalam pengelolaan madu Tikung. Penelitian ini menggunakan teknik wawancara kepada seluruh petani madu Tikung, dan dianalisis menggunakan analisis Deskriptif Kualitatif. Hasil penelitian menunjukkan bahwa pengelolaan madu Tikung dilakukan secara individu, penempatan Tikung diletakkan di pinggir sungai dan di tanah, jenis kayu yang digunakan untuk membuat Tikung adalah Tembesuk (*Fagraea fragrans*), dan Kawi (*Shorea balangeran*). Proses pemanenan madu hutan dilakukan pada malam hari, serta pengemasan dan pemasaran yang dilakukan langsung oleh petani madu. Bentuk aturan adatnya adalah masyarakat dilarang untuk melakukan pembakaran didekat pohon sarang; merusak dan menebang pohon sarang maupun pohon pakan; dan meletakkan Tikung dipohon dan dikebun milik orang lain. Terdapat sanksi tertulis dan denda bagi yang mencuri dan mengakui Tikung milik orang lain.

Kata kunci: madu tikung; tikung darat dan air; tembesuk; kearifan lokal; desa ensabang.

A. INTRODUCTION

Honey is a natural resource produced by bees. The community utilizes it because it contains beneficial nutrients (Savitri *et al.* 2017), such as carbohydrates, amino acids, minerals, enzymes, vitamins, and water (Apriani *et al.* 2013). Forest honey is produced by *Apis dorsata* bees, which are honey-producing bees with giant hives compared to other bee hives. In Indonesia, there are two ways, namely the traditional way using tikung (artificial nests), lalau (bees nesting in large wood), and repak (bees nesting in any place), and the modern way using wooden stups containing comb frames or wooden boxes. Forest honey management is an activity carried out by a group of people to sustain honey production sustainably, and it is based on local knowledge. Local knowledge in the form of culture consists of values, norms, ethics, beliefs, customs, customary laws, and special rules.

The people of Ensabang Village have been managing Tikung honey for generations, dating back 80 years. Based on preliminary information, it was found that the Tikung technique has been carried out by honey farming communities in Kapuas Hulu, including in the Siawan Belida area community (Jamiat *et al.* 2019), Samalah Village and Melemba Village communities (Sofia *et al.* 2017), and Nanga Lauk Village (Hariska *et al.* 2021). The community of the Siawan Belida area makes Tikung using Rengas (*Gluta renghas*) wood species. Tikung ownership is carried out in groups with individual Tikung honey management. Tikung installation must be in the middle of shady trees and cannot be installed in open tree crowns because many factors disturb and damage Tikung, such as wind and animals (Jamiat *et al.* 2019). The community of the Danau Sentarum Periau Association Group (APDS) and Kaban Madu Meliau make Tikung using Tembesuk (*Fagraea fragrans*), Kawi (*Shorea balangeran*) and Medang (*Litsea resinosa*) wood species, which in the installation of Tikung the community prioritizes avoiding damage, the community also prohibits cutting down bee hive trees and if you want to open a field, you must be away from bee hive trees (Sofia *et al.* 2017). The Nanga Leboyan community makes Tikung using Tembesuk and Kawi types of wood, and Tikung ownership is carried out in groups. In the installation of Tikung, the community prohibits installation in the crown of the tree, which must be in the middle of the tree shade so as not to be disturbed by wind and other animals (Aini *et al.* 2019).

There are differences between the Tikung technique in Kapuas Hulu and Ensabang Village, such as how Tikung is made, where the community makes Tikung from fallen trees and places Tikung near rivers, rubber plantations, and production forests. In contrast, in Kapuas Hulu, the community prohibits installing forest honey bee nests near agricultural land because it interferes with the productivity of the forest honey itself (Sofia *et al.* 2017). Although there are differences, the management carried out is still based on the local knowledge of the local community, which aims to maintain the existence of honey bees and sustainable harvesting. This study examines the form of knowledge of the Ensabang Village community in Tikung honey management.

B. METHODS

The research was conducted on October 15-30, 2023, in Ensabang Village, Sepauk District, Sintang Regency (Figure 1). The research tools used were questionnaires, cameras, location maps, and smartphones. Data collection in this study used an interview method with all 30 Tikung honey farmers. The data was taken in the form of data on the Tikung honey management process and local knowledge in Tikung honey management. This data was analyzed using descriptive qualitative methods, which describe the concept of local knowledge in Tikung honey management.

C. RESULTS AND DISCUSSION

Ensabang Village is located in Sepauk Sub-district, Sintang Regency, which consists of 3 hamlets: Sungai Tamang Hamlet, Sungai Meleban Hamlet, and Sungan Ensabang Hamlet. Hamlets that manage Tikung honey are only Ensabang River Hamlet and Meleban River Hamlet because they are close to the river and where the bee feed trees grow. The management of Tikung honey by the community started from seeing wood on top of trees inhabited by forest bees, so they took the initiative to make an artificial hive called Tikung. The name Tikung was given because the shape of the Tikung wood is like a sitting position, leaning with one leg resting on the other leg that bends. This position is called cornering in the local language. Until now, honey management in Ensabang Village has been carried out traditionally based on local knowledge and applicable customary rules.

Local Knowledge of Ensabang Village Community in the Management of Tikung Honey

1. Tikung Placement

Tikung is wood placed in a tree for bees to nest. Ensabang Village has two types of Tikung: water Tikung and land Tikung. Tikung water is placed on a tree branch around the river, and Tikung land is not adjacent to the river body (above

ground level). The choice of places around the River is due to the presence of bee nests in trees on the banks of the River and the presence of food trees, while the placement of Tikung on land is because the community has seen bee nests in Resam plants (*Dicranopteris linearis*). The distance of Tikung placement from the River to the village is around 10 km with a travel time of ± 20 minutes, while Tikung on land is 15 km within ± 30 minutes of travel. The Tikung placement location was chosen because it has good forest conditions, is far from community activities, avoids ants and bird nests, has no tall trees protecting nest trees, and has many food trees. When placing water mats in trees, attention must be paid to the branching conditions of the tree. If the branching is good and there are many, the mats can be placed in the tree (Figure 2). Tikung must be placed on land in each garden that is already privately owned.

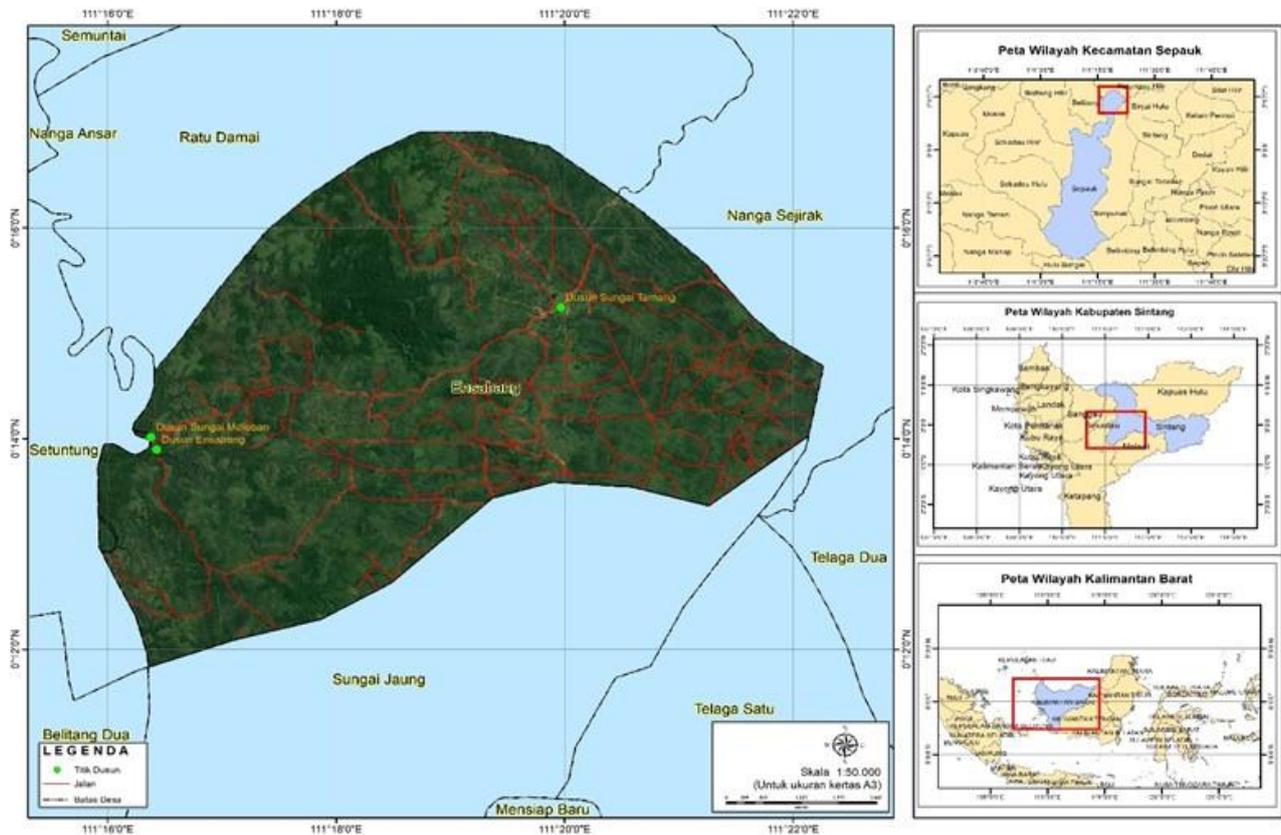


Figure 1. Location of the research

Nesting trees for Tikung water were chosen based on the type of tree that produces flowers and trees that have a lot of branching to make it easier to support Tikung, while the placement of Tikung land does not use trees as a support, but only wood that is stuck to the ground (Figure 2). There are 5 types of Tikung trees used by the community, namely Kesiak (*Ficus maclellandii*), Engkriah (*Calophyllum elegans*), Putat (*Barringtonia actutangula*), Miasung (*Syzygium cauliflora*), Empanak (*Garcinia borneensis*). These five species are widely used because they grow along the Ensabang River and have many branches. However, the most commonly used tree species is the Kesiak tree (*Ficus maclellandii*). This is because the tree has more branches than others and does not break quickly. Engkriah tree is a tree with a round leaf shape with tapered ends, and this plant is small to medium in size (Widodo 2015). A Putat tree is a tree whose flowers are ball-shaped and bunched and have a fragrant aroma that attracts bees. Putat trees grow in stagnant water and are commonly found in the Lake Sentarum. Putat trees are trees deliberately planted to become bee nests and types of bee feed (Jamiat *et al.* 2019). Ratnasari *et al.* (2022) Miasung tree is a tree whose leaves are dark green, the shape of the leaves is elongated at the tip of the pointed leaves, and the layout on the stem is opposite. According to Saito *et al.* (2015), Empanak trees are small to medium in size and can be shrubs. Branching is arranged alternately, flowering is in the leaf axils, and large seeds hang on the juice. There are similarities and differences in the selection of Tikung placement trees, for the similarities are seen in both branching and bee food trees. The difference is seen in the shape of the branching because the shape will also affect the shape of the Tikung notch. Therefore, Tikung honey farmers must survey the location first and tree placement of Tikung before making Tikung media.

The selection of the nest is not only because it has a lot of branching but also because it produces flowers as bee food. The bee food trees around the Tikung air nest are Putat (*Barringtonia actutangula*), Engkriah (*Calophyllum elegans*), Bemban (*Machaerium biovulatum* Micheli), Lembasung (*Syzygium cauliflora*). In contrast, the food from Tikung land is

Nyelik (*Zea mays*) and Rice (*Oryza sativa*). Putat (*Barringtonia actutangula*) and Engkriah (*Calophyllum elegans*) are food trees that flower very often, and the honey from these flowers is thicker and slightly bitter-sweet. Honey produced from the flowers of libang root, miasung, taun, kayu samak, and marbemban is the best-tasting and sweetest honey. The weather also influences the type of honey produced. In the rainy season, the honey will be more liquid because it mixes with water. If the weather is good, it will be thicker. Therefore, harvesting cannot be done in the rainy season.

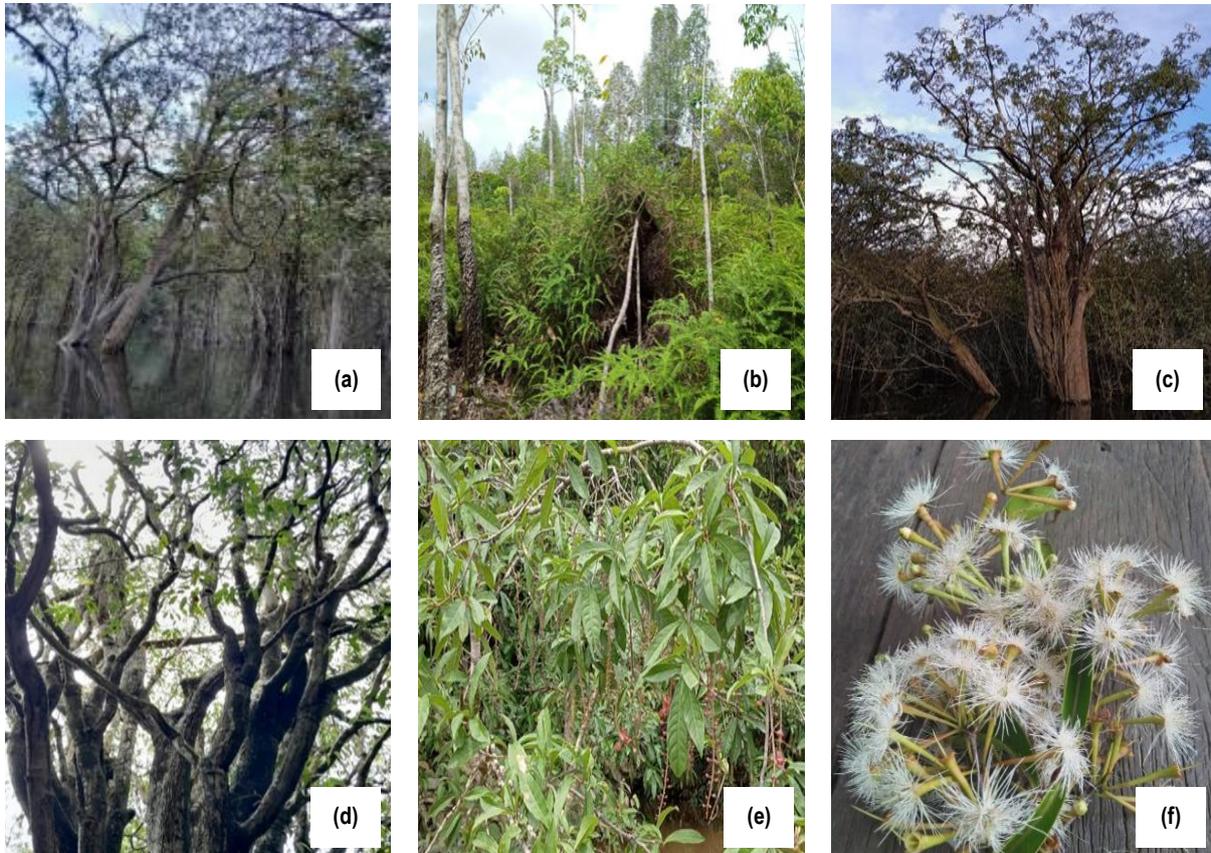


Figure 2. Water Tikung (a), Land Tikung (b), putat nest tree (c), kesiak nest tree (d), putat food tree (e), and miasung food tree (f)

2. Tikung Wood Species

The people of Ensabang Village have a type of wood used to make Tikung. The types of wood used to make Tikung are Tembesuk (*Fagraea fragrans*) and Kawi wood (*Shorea balangeran*). Among the two types of wood that are often used is Tembesuk wood because the wood still grows a lot around the River, and the community believes that there is a distinctive aroma from Tembesuk wood. Besides that, the wood is solid and durable. Wood stored in the forest must be around 1 week, after which it can only be made into tikung. Semalah Village and Melemba Village are made from certain types of wood, namely Tembesuk (*Fagraea fragrans*), Kawi (*Shorea balangeran*), and Medang (*Litsea resinosa*) (Sofia *et al.* 2017). Tembesuk is an example of a local commercial timber species. The Tembesuk tree species has a specific gravity of 0.81 g/cm³, wood strength class I, and durability class II. In addition, its wood is also used for panel wood (MDF, *medium density fiberboard*), particleboard, veneer, and furniture, while Kawi can grow up to 20-25 meters with a branch-free trunk height of up to 15 meters. The distance between one tikung and another should be around 2 meters. There is no need to use a hook in the installation of the tikung because the making of the tikung has adjusted the branch model. The wood of this tree is classified as strength class II with a specific gravity of 0.86, making it very suitable for building materials (Martawijaya *et al.* 2005). Tikung there is modeling on the *notch* (end of Tikung), making this Tikung notch based on the type of branching on the tree.

3. Harvesting and Marketing of Tikung Honey

Tikung honey harvesting is usually carried out in October - December and February - April because in that month, there is a rainy season, which causes the feed tree to produce flowers as bee food. Harvesting is done if the hive is ready to be harvested with the following characteristics: the hive looks darker and bulging because it contains honey, the bees have also settled around it, and the hive has started to release honey. Therefore, honey farmers must check the hive to ensure it is ready to be harvested. The hive can be harvested around 15 - 20 days after the bees have settled. Harvesting honey is done at night with a harvesting system (Traditional harvesting). Before harvesting, no rituals were carried out

because the level of risk was not too high. When harvesting, it is forbidden to bring fragrances such as perfume, and it is prohibited to use a flashlight. At the time of harvesting, the community does not use safety measures because the risk of harvesting is not high. Honey farmers use nests that become larvae to make candles.

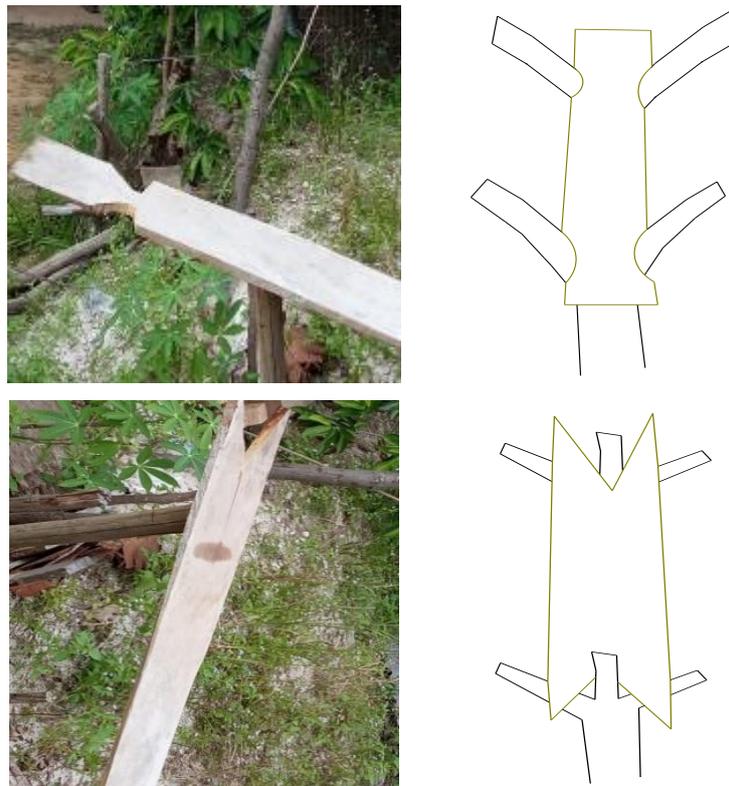


Figure 3. Tikung wood with 2 branches (up) and Tikung wood with 1 branch in the middle (down)

In contrast to the people of the Siawan Belida area, they do sustainable harvesting (leaving a little nest) during the day and traditional harvesting (harvesting without residue) at night. Harvesting is also made a special ritual so that the harvest thrives safely and with a large amount (Jamiat *et al.* 2019). The equipment used for Tikung honey harvesting is a *pantung*, bucket, knife, flashlight, funnel filter, cupai (container for honey harvest), and bottle as a place to store honey. One Tikung can produce 5 - 10 kg of honey, depending on the size of the hive and the number of Tikungs. The honey obtained is packaged using bottles of the same size. The bottle's contents, as much as 620 ml, have not been labeled because the Ensabang Village community has no special assistance related to honey packaging. Marketing of Tikung honey is done freely and packaged in bottles. The farmers sell directly to the market, some are entrusted to known people, and some customers come directly to the farmers. Based on interviews with honey farmers, some people in the village buy it for resale. The price of honey per bottle is IDR 150,000 - IDR 200,000 per 620 ml bottle. Packaging of honey products for the Kaban Madu Meliau group only uses jerry cans of various sizes without any special labeling. Marketing involves a bulk system, unique customers, and sales at Rumah Panjang (Sofia *et al.* 2017).



Figure 4. Tikung has a nest (left) and left over from harvesting (right)

Customary Rules and Prohibitions in Tikung Honey Management

Customary rules and prohibitions are made based on mutual agreement by all honey farmers in Ensabang Village, which aims to maintain the sustainability and existence of bees and forest honey and to avoid conflicts between honey farmers. Customary rules in Tikung honey management include the community is prohibited from burning around or near hive trees, cutting down hive trees and food trees, putting Tikung in the garden and on trees that do not belong to them, taking Tikung wood belonging to others, and harvesting Tikung honey belonging to others. The rules stipulate that violators will be subject to reprimands and fines ranging from Rp.150,000 to Rp.1,000,000. The people of Semalah Village and Melemba Village also apply customary rules through prohibitions. The community prohibits cutting down bee hive trees, opening fields near hive trees, harvesting bees that are not their hives, and not throwing garbage in the River (Sofia *et al.* 2017), the Belida thrush area burns, and illegal logging of bee food trees, and prohibits opening gold mining near the hive (Jamiat *et al.* 2019). Similarly, the Tunggul Boyok Village community in honey management and conservation efforts in the form of a ban on logging trees where honey bees nest and a ban on farming around trees where bees nest, both of these are related to the preservation of tapang trees as a place for honey bees to nest. Forest sustainability is a requirement for forest honey to be sustainable.

D. CONCLUSION

The process of managing Tikung honey in the Ensabang Village community, both Tikung on trees and the ground, is still carried out traditionally based on the local knowledge of the local community. Each head of the family owns Tikung, which will later be passed on to their descendants. The community also still maintains the condition of the forest area for forest bee nests by applying rules and prohibiting burning near nest trees, prohibiting damaging and cutting down nest trees and feed trees, and prohibiting placing Tikung in trees and gardens owned by others, harvesting is done traditionally and carried out at night, filtering is done using a squeeze system, packaging and marketing is done directly by farmers.

AUTHOR'S DECLARATION

- Conflicts of Interest: None.
- We here by confirm that all the Figures and Tables in the manuscript are ours. Furthermore, any Figures and images, that are not ours, have been included with the necessary permission for republication, which is attached to the manuscript.
- No animal studies are present in the manuscript.
- No human studies are present in the manuscript.
- No potentially identified images or data are present in the manuscript.

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