

LOCAL WISDOM IN THE USE OF PLANTS FOR HOUSEHOLD NEEDS BY THE DAYAK BENUAQ IN LOTAQ VILLAGE, EAST KALIMANTAN

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ABSTRACT

*The Dayak Benuaq in Lotaq Village possess local wisdom in using the plants around them to meet household needs. The diversity of plant species used for household needs has been maintained until now. This research aims to examine the plant species and local wisdom in using plants for household needs among the Benuaq Dayak tribe in Lotaq Village, Muara Lawa, East Kalimantan. This research applies purposive sampling in selecting informants. The number of informants in this study is 15 people. The results of this study show that there are 20 species of plants used for household needs, namely 10 types used as firewood (fuel) and 10 types used to make household utensils. The plant family that dominates for household needs is *Arecaceae*. Plants that are often used as fuel are *kelepapak* (*Vitex pinnata* L) and *rubber* (*Hevea brasiliensis* Muell.Arg.) because they dry quickly and produce a lot of embers, while the plants commonly used to make household utensils are *uwe* or *rattan* (*Calamus* sp.) and *teluyent* or *ulin* (*Eusideroxylon zwageri*) because they are strong and durable. The Dayak Benuaq community in Lotaq Village still preserves local wisdom by utilizing plants to meet household needs.*

Keywords: *Benuaq; Arecaceae; Local wisdom; Household*

INTRODUCTION

Indigenous communities in Indonesia still preserve the local wisdom passed down and taught by their ancestors. This local wisdom is formed through the understanding and experiences of the local community, who are wise and prudent in facing various aspects of life, especially those related to nature, including plant resources, other resources, and the living environment (Taufan et al., 2023). The values of local wisdom are reflected in the utilization of natural resources, such as plants, to support and meet daily living needs. Examples of plant resources used by indigenous communities include dyes (Sepsamli et al. 2024), medicine (Sepsamli and Syamswisna, 2025), and boards (Putratama et al. 2023). Therefore, the presence of plants becomes an important component in the practice of local wisdom and needs to be preserved.

Plant resources are utilized by indigenous communities in Indonesia for various needs, one of which is wood that is processed to complement and fulfill household equipment. These needs include the use of firewood for cooking and the utilization of plants as raw materials for handicrafts in making household equipment. The wise use of plants in the surrounding environment reflects the importance of sustainable management of plant resources.

The use of plants by the Dayak Benuaq community in Lotaq Village to meet household needs, such as firewood and kitchen utensils. Plants that are used to meet household needs in the

sense of complementing tools for activities within the home, such as cooking and farming equipment. The relationship of the Dayak Benuaq community in Lotaq Village with plant resources remains well-maintained. Based on observations in Lotaq Village, the Dayak Benuaq tribe still uses rubber wood as fuel and teluyetn wood to make household utensils in the form of losukng. This shows that the Dayak Benuaq in Lotaq Village still uphold the local wisdom values inherited from their ancestors.

Research on the local wisdom of plant use among the Dayak Benuaq tribe in Lotaq village is an important subject to study. So far, the studies that have been conducted in Muara Lawa are the utilization of fruit plants by the Dayak Benuaq (Basir et al. 2015) and there has been no study on the plants used for making household tools. Based on this, there is an opportunity for research on plants used for making household tools, which is useful for further studying the potential of plants in the community in Lotaq Village. This is due to the increasing loss of traditional knowledge and the threat to plant resources. This research aims to document local wisdom and the diversity of potential plant species, thereby preserving culture and plant diversity. This research can serve as a basis for local policy measures as well as the strengthening of cultural identity among the Dayak Benuaq community in Lotaq village, Muara Lawa District.

METHOD

This study was conducted on the Dayak Benuaq tribe in Lotaq Village, Muara Lawa District, West Kutai Regency, East Kalimantan Province. This study used tools and materials, consisting of questionnaires, stationery, laptops, identification books, weaving tools, glue, cardboard, and raffia string. Field data were collected thru semi-structured interviews, observations, and documentation. Informants were selected using purposive sampling techniques, which involve deliberate consideration, examining the informants' backgrounds to determine whether they meet the criteria for being interviewed. The informants in this study number 15 people, with the criteria being the indigenous Dayak Benuaq tribe in Lotaq Village. The informants consist of the customary chief, the village head, and users of plants used to meet household equipment needs. The reason for selecting these informants is to understand the local wisdom regarding the types of plants commonly used to meet household needs. Plants used to meet household needs, if their Latin names are unknown, are made into herbarium specimens for the identification process. The types of data applied in this study include primary and secondary data. The primary data in this study encompass local wisdom and plant species used for firewood and making household utensils. The secondary data in this study include wood quality and information about the potential of plants based on previous research articles. The plants used for household needs are analyzed descriptively.

RESULTS AND DISCUSSION

The Species Plants for Household Needs by The Dayak Benuaq in Lotaq Village

The Species Plants used for household needs by the Dayak Benuaq tribe in Lotaq Village consist of 20 plant species. These 20 plant species are obtained from the surrounding environment within the community. The diversity of plant types used for household needs by the Dayak Benuaq in Lotaq Village is as follows:

Table 1. Names of Plants Used for Household Needs

Local names	Latin names	Family	The part that is used	Usefulness
Draya	<i>Horsfieldia grandis</i> (Hk.f.) Warb.	Myristicaceae	Stem	For firewood
Garaaq	<i>Dilenia excelsa</i> (Jack) Gilg	Dilleniaceae	Stem	For firewood
Karet	<i>Havea brasiliensis</i> Muell.Arg.	Euphorbiaceae	Stem	For firewood
Kelejempiiq	<i>Guioa diplopetala</i> (Hassk.) Radlk.	Sapindaceae	Stem	For firewood
Keremuyikng	<i>Rodamnia inereal</i> Jack.	Myrtaceae	Stem	For firewood
Mengkurak	<i>Suraia javanica</i> (Nees) Hoogland	Actinidiaceae	Stem	For firewood
Kelepapak	<i>Vitex pinnata</i> L.	Lamiaceae	Stem	For firewood
Bela'bant	<i>Tristaniopsis whiteana</i> (Griff.) P.G. Wilson & J.T. Waterh	Myrtaceae	Stem	For firewood
Bengkuukng	<i>Macaranga gigantea</i> (Rhcb.f. & Zoll.) Muell. Arg.	Euphorbiaceae	Stem	For firewood
Bentaleekng	<i>Cratoxylum sumatranum</i> (Jack) Jepukng BI	Hypericaceae	Stem	For firewood
Biruiq	<i>Licuala spinosa</i> Becc	Arecaceae	Leaves	Household appliances
Kajekng	<i>Pandanus tectorius</i>	Pandanaceae	Leaves	Household appliances
Nyui	<i>Cocos nucifera</i>	Arecaceae	Stem	Household appliances
Uwe	<i>Calamus</i> sp.	Arecaceae	Stem	Household appliances
Teluyetn	<i>Eusideroxylon zwageri</i>	Lauraceae	Stem	Household appliances
Lempukng	<i>Shorea</i> sp.	Dipterocarpaceae	Stem	Household appliances
Bekakaakng	<i>Melastoma malabathricum</i> L.	Melastomataceae	Stem	Household appliances
Bengkirai	<i>Shorea laevis</i>	Dipterocarpaceae	Stem	Household appliances

Puutn sarap	<i>Arenga pinnata</i>	Arecaceae	Stem	Household appliances
Alaas	<i>Aquallaria malaccensis</i>	Thymelaeaceae	Stem	Household appliances

As many as 10 plant species are useful for making household tools and 10 plant species are useful for firewood (fuel). The diversity of plant species used for household needs comes from 15 families, namely Myristicaceae, Dilleniaceae, Euphorbiaceae, Sapindaceae, Myrtaceae, Actinidiaceae, Lamiaceae, Hypericaceae, Lauraceae, Dipterocarpaceae, Arecaceae, Pandanaceae, Melatomataceae, Thymelaeaceae, and Apocynaceae. The family that most dominates household needs is Arecaceae. Plants belonging to the Arecaceae family are easily found in the community environment and have many benefits from all their organs (Nuryanti et al., 2015).

Utilization of Plants Used for Household Needs

The plant species used as fuel are draya, garaaq, rubber, kelejempiiq, keremuyikng, mengkurak, kelepapak, bela'bant, bengkuukng, and bentaleekng. Each of these plants is obtained from the forest located in the Lotaq village area. Although the times have become modern, the community still prioritizes the use of wood in their lives, alongside gas stoves as an alternative for cooking needs. The advantages of using wood as fuel are that it is cheap and abundantly available in nature.

The plants that are often used as fuel by the people of Lotaq Village are kelepapak (*Vitex pinnata* L) and rubber (*Hevea brasiliensis* Muell.Arg.). These plants are easily found in nature, and the drying process does not take long, so they can be quickly used as fuel. There are plants whose drying process takes quite a long time, and they also produce little charcoal, such as garaaq (*Dilenia excelsa* (Jack) Gilg). The long drying process of the wood from this plant is due to the high water content in the wood. The shortcomings of these plants make them rarely used by the community. The small amount of embers produced by the draya plant (*Horsfieldia grandis* (Hk.f.) Warb.) also makes it not very effective and efficient as a fuel source.

The people of Lotaq village still use household utensils made from plants to meet their kitchen needs. Teluyetn (*Eusideroxylon zwageri*) is one type of plant used to make rice spoons (sutil) (Figure 1), losukng (Figure 2), aluq (Figure 3), pengrujek (Figure 4), and soeek (Figure 5). Losukng is used to separate rice from the husk and to pound cassava leaves. The pounder made from losukng (aluq) also uses this plant. Pengrujek is used to grind chili and spices, but it is also commonly used to grind cold rice flour. So far, the making of the pengrujek can use the puutn sarap plant (*Arenga pinnata*), and there are also those made from the puutn nyui (*Cocos nucifera*). The container for grinding spices uses a soeek. Soeek is made not only from teluyetn wood (*Eusideroxylon zwageri*) but also from various other types of wood. The advantage of using teluyetn wood is that it is hard and durable for many years. Teluyetn wood, commonly known as ulin wood, is classified as strong and very durable (Dzulfaqor & Aji, 2024).



Figure 1. Sutil



Figure 2. Losukng



Figure 3. Aluq



Figure 4. Pengrujek



Figure 5. Soeek

The uwe plant or rattan is utilized in making household utensils. There are several tools made from uwe, including sopit (tongs) (Figure 6), lids (Figure 7), floor mats (Apaai) (Figure 8), gawakng (Figure 9), pemupuk laler (Figure 10), and pemupuk tilem (Figure 11). Sopit or tongs are used to carry hot pans or pots. Sopit is made from uwe that is split in two and then bent to resemble food tongs. A cover is used to protect food from dust or other animals. The rattan commonly used to make a tudung is old rattan. The floor mat, commonly referred to by the local community as apaai. The uwe plant is woven to resemble a carpet and adorned with Dayak motifs. For coloring, they use liquid from certain plants to make it attractive. Gawakng is also a bag made from uwe. Gawakng is made from the uwe plant, which is split and then woven into a mat. The motif of the weaving has certain symbols. One of the motifs with images of trees and leaves symbolizes humans who are still interconnected with nature and represents the fertility of the land and the preservation of the land itself. Pemupuk tilem, also known as pemupuk tilem, is made from rattan. The fly swatter is also made from uwe or rattan. The manufacturing process involves splitting the end into four parts and then weaving it into a small racket shape. In Indonesian, "pemupuk laler" refers to a fly swatter, which is commonly used to swat flies. The advantages of making household tools using uwe or rattan are that they have very strong properties, thickness, durability, and can be easily crafted into various shapes (Sakinah et al., 2019).



Figure 6. Sopit



Figure 7. Lids



Figure 8. Apaai



Figure 9. Gawakng



Figure 10. Pemupuk laler



Figure 11. Pemupuk tilam

There are other plant species used to make household utensils. Lempunkng (*Shorea* sp.) and alaas (*Aquallaria malaccensis*) are plants used to make pot or pan holders after cooking with firewood, commonly referred to as sikau. The advantage of using these plants is their durability (Husna et al., 2021). Bamboo is also used to make lewakng (Figure 12). Lewakng is a household utensil used to separate rice and husks from freshly milled rice. Lewakng in Indonesian is also called nyiru or tanpah, while outside of Kalimantan, it is commonly used to place snacks. The advantage of using bamboo for lewakng is its durability, allowing it to be used for years.



Figure 12. Lewakng

There are several household tools made using plants as agricultural and hunting tools. One of the plants used to make farming and hunting tools is rattan, includes gawakng lengkakng (Figure 13), awiiq or berangka (Figure 14), and amoq (Figure 15). Gawakng lengkakng is a type of basket that is round in shape but has a looser weave. Gawakng lengkakng is used for picking fruit, as a fish container, and for other purposes. Gawakng lengkakng is made from uwe that is split into small pieces and woven. Awiiq or berangka is a type of basket that is carried and woven using rattan, but its weaving is not tight. The tool is also commonly used to carry the harvest of fruits, vegetables, and others. The advantage of this item is its durability, allowing it to be used for years. Amoq is one of the baby carriers made from the uwe plant. The process of making this item involves splitting the uwe into small pieces, and then to thin the texture, the split rattan is shaved with a sharp small knife until it becomes thin and tightly woven. Amoq is used as a lifter for rice, dawak, sorghum, and other types of small grains. The wooden handle of the amoq is made from carved teluyetn.



Figure 13. Gawakng Lengkakng



Figure 14. Awiiq or berangka



Figure 15. Amog

Bakur is a supplementary tool in agriculture. This tool is used to carry rice from the fields to the house. The object is made from uwe, which is woven in the process of its creation. Sahukng is one of the household items commonly found among the Dayak community, known as a hat. Sahukng is made from kajekng leaves (*Pandanus tectorius*) and biruq (*Licuala spinosa* Becc) which are shaped into a round conical form (Figure 16). This tool is used as a head protector when outside the house. The advantage of kajekng leaves is that they have elastic or flexible properties and strong characteristics (Eksak and Zuriyah, 2024).



Figure 16. Sahukng

Gamaak is an object used as a temporary storage container during rice harvesting, which is attached to the waist of the harvester (Figure 17). Gamaak is made from the teluyetn plant (*Eusideroxylon zwageri*) as the hanging strap and the uwe plant as the container for the harvested rice. Usar or siruq is a tool that functions to separate the rice grains from the rice husks (Figure 18). This tool is useful for separating the rice from the rice husks and is made from bamboo or tolakng. The process of making this item involves drying the bamboo until it is completely dry, then splitting it and cutting it into small pieces, smoothing it until it is very thin, and finally weaving it using a tool made of wood that is commonly used to tighten the weave.



Figure 17. Gamaak



Figure 18. Siruq

Kelungkukng is one of the farming tools used by the Lotaq village to bind the mouth of a pig when it is caught (Figure 19). The tool is used during traditional ceremonies. The materials used to make kelungkukng are tolangk and uwe (rattan) woven into a round triangular shape. Denaq tangor is a tool used by the Lotaq community to catch fish (Figure 20), resembling a fishing rod. The tool is made from tolangk, sometimes from bekakaakng (*Melastoma malabathricum* L.).



Figure 19. Kelungkukng



Figure 20. Denaq tangor

Didiq is one of the tools used by the community to catch birds, where the Lotaq community relies on sap as glue and sticks from the leaves of the nyui (coconut) tree, which are collected in large quantities (Figure 21). The method of installing didiq involves the community climbing a tree, then placing bait in the form of fruits that birds eat, after which didiq is placed on a branch of the tree and left for several hours. Pegookng is a cage or enclosure for birds (Figure 22). The tool is made from rattan or uwe wood, which is shaped into circles and tied with string to form a perfect circle. The advantage of the uwe or rattan plant is that it can be easily crafted into various shapes (Sakinah et al., 2019).



Figure 21. Didiq



Figure 22. Pegookng

Putaatn is a tool that functions as a chicken coop. The tool is made from the uwe plant, which is split into large pieces and then resembles a round cage. Pangukng is a pig pen made of wood. The wood used to make it is teluyetn wood, which is used for the floor, and bengkirai (*Shorea laevis*), which is used for the walls of the pig pen. Teluyetn wood is very effective for making pig pens compared to other types of wood that easily rot when exposed to water. This is related to the properties of teluyetn wood, which is classified as strong and durable class 1, making it not easily damaged when exposed to water (Dzulfaqor and Aji, 2024).

CONCLUSION AND RECOMMENDATION

The Dayak Benuaq community in Lotaq Village, Muara Lawa uses 20 plant species for household needs, namely 10 plant species for making household utensils and 10 plant species for firewood (fuel). The family of plants that dominates household needs is Arecaceae. The plants that are widely used for household needs are uwe (rattan) and teluyent (ulin). The Dayak Benuaq community still preserves the local wisdom values inherited from their ancestors in utilizing the surrounding plants, where harvesting can only be done when the plants are mature or when the trees are pole-sized. In the next research, it is recommended to test the wood fibers and wood quality used by the Dayak Benuaq community in Lotaq Village, as this will provide further information for plant management and conservation efforts.

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