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Potential Utilization of Palms as Weaving Tools and Crafts in the Acehnese Community in Gandapura District, Bireuen Regency

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ABSTRACT
Gandapura sub-district is an area that has the potential of unique natural resources rich in flora and fauna. However, the potential possessed by the community in processing palms has not been developed, and has not been able to increase market sales in order to improve the needs of their daily lives, In the end, this research activity was carried out can have an impact on community empowerment in increasing the production of plaits and community skills. already known information about the use of plants as tools, plaits and crafts by the community in this area, conducted an exploration of the existing knowledge in the community. The method used was participatory observation, questionnaires and semi-structured and free in-depth interviews (open ended) on various age groups, The results showed 7 types of plants for the production of tools, plaits and crafts, these types are Bak Jok ('), bak Pineng (Areca catechu), bak Teue (Borassus flabellifer), Ibus (carypha Utan) bak U (Cocos nucifera), bak Meria (Metroxylon sago), and bak Lipah (Nypa fruticans).

Keywords: *Acehnese, Bireuen Regency, Potential Utilization*

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INTRODUCTION

Indonesia is a nation that has a variety of ancestral heritage cultural arts skills, which until now have been preserved, one of which is woven crafts (Chen, 2019), Wicker is a form of handicraft that is processed through the process of organizing basic materials in the form of overlapping, cross-crossing, folding, and so on (Adamy & Rani, 2022). Wicker crafts are a form of traditional skills that have long grown in Indonesia. The development of this woven craft initially had a simple form as a work of art to meet daily needs. In the past, wicker crafts were still a side activity of rural communities in filling the

time when waiting for planting time as the main livelihood (Barrett dkk., 2019). In certain communities (Kooli, 2023), woven crafts are made for the purposes of traditional ceremonies in addition to household needs so that woven motifs have their own artistic value and meaning (Baihaqi dkk., 2023). Menurut Rohandi *et al*, (2021) (Khan dkk., 2023). Plaiting is a technique of making works of art by overlapping (crossing) plaited materials (Sugita dkk., 2021). In the beginning, all people used all types of plants for weaving, but with increasing experience, they eventually chose the types that were easy and of good quality to use when weaving (Dewi dkk., 2022). Another reason is that the ease of obtaining these types of plants also determines the type of plants used (Kasneci dkk., 2023). Based on these reasons, the most suitable plants were chosen. Among craft plants, rattan is the main raw material for Indonesian woven crafts (Patel & Lam, 2023). According to Prabawati, (2016), wicker is another form of pottery made from the arrangement of blades, apart from also pottery made of clay (Ebimgbo dkk., 2019). Including the type of traditional weaving that exists in the Sundanese tribe (Van Huis, 2021). Where different materials have different names and weaving techniques. The Dualaus Village community of Belu Regency, the plants used as woven craft materials are spiny forest pandanus (Pandanus tectorius Sol.), lontar (Borassus flabelliferLinn, and gewang (Corypha utan Lamk) (Qiao dkk., 2019). The plants found in the area are wild plants and a small part is cultivated by the local community. (Meken et al, 2022). Basically (Chun dkk., 2020), weaving or making plaits is composing warp and weft (Ramadhan dkk., 2024). The warp is the part of the slice that is arranged longitudinally, while the weft is the part of the slice that is arranged crosswise (Cai dkk., 2021). Palmyra leaves in the community in Kupang City, can be utilized and made into baskets, making hats, in addition to baskets there are also plaits made as a substitute for plates, water containers made from palm leaves are usually used as a place to put palm sap water and also as a dipper to measure the sap water from tapping where the leaves used are young leaves which are then dried.

Many people in the Gandapura sub-district area utilize palm parts for tools, weaving and handicrafts, both for their own needs as well as additional community income (Boughton, 2021). Tools, plaits and crafts produced from several types of palms they sell such as mats, broom sticks, ropes, hoods, burlap, ragas, rengkans, ketupat sarongs, rolling cigarettes and others. This potential is very high in supporting the community to utilize palm species, as evidenced by the many sellers in the market who still trade all the products of palm plants (Nikat dkk., 2019). From what has been written above, it is clear that palms can be utilized more for life (Wang dkk., 2019). Thus it is very important for the community to preserve palm species so that they do not become extinct by providing counseling (Dewi dkk., 2022). According to research by Ramli et al. (2019) The Saluki Tuwa Hamlet community utilizes 3 types of palm plants that can be used as handicrafts, namely Cocos nucifera L. Aren (Arenga pinnata) and rattan (Calamus Scipionum Loureiro).

There are 7 types of plants used as craft materials, namely, Arenga pinnata, Areca catechu, Borassus flabellifer (Ahmad dkk., 2019), Corypha utan, Cocos nucifera, Nypa

fruticans and Metroxylon sago. Palm parts that are utilized as craft materials are 2 types of coir, 1 type of fruit, 6 types of leaves, 1 type of situek, 3 types of stems, 1 type of stick, 1 type of senudang, 1 type of shell, 1 type of frond. The way of utilization in the form of webbing, Nypa fruticans and Metroxylon sago leaves (Azzam & Kildishev, 2021). The way of utilization is that the leaves are sewn with rattan rope, after being sewn in the sun so that they can be durable. (Roswita et al, 2023) The people of Seulimum Subdistrict widely utilize parts of arecaceae tree organs, namely coconut for building materials and rattan handicrafts for household crafts (Yuziani dkk., 2023). The utilization of palm plants by the people of Denpasar and Badung as tools, weaving and crafts is that coconut shells can traditionally be used to make handicraft items such as water dippers, bowls and various household tools (Yuziani dkk., 2023). (Pratiwi and Sutara, 2013)

As one of the functions of conservation knowledge in making traditional bubu for the sustainability of natural resources with very environmentally friendly technology and forming sustainable utilization patterns for generations, the knowledge of the Maybrat tribe in fishing or known as "Mji Wata" is made from palm plants (Egirani dkk., 2021). constructing local knowledge of ethnotechnoconservation of palm plants as materials for making traditional bubu by the Maybrat tribe in West Papua. Bubu is a passive fishing tool made traditionally or modernly as a fish trap made from rattan-based materials.

Rattan is utilized by the Dayak Randu community in Batu Buil Village using Arecaceae plants as craft materials (Arrazola dkk., 2021). Rattan stems can be woven into baskets, lamp decorations, fish traps, mattress beaters, rice winnowing (nyiruk) and so on. Rattan stems are woven into baskets that can be used to carry rice, fruits and vegetables, and even firewood (Jaja dkk., 2020). Nyiruk is a wicker used for rice winnowing or winnowing and can be used as a base for drying crackers (Cardoso Dos Santos dkk., 2020). The Dayak Randu community catches fish using fish traps made from woven rattan, fish traps are usually equipped with a lid that will close automatically when a fish enters or is trapped inside (Ababor dkk., 1970). The mattress beater is a simple racket-shaped racket with a head like a woven rattan wall, small in size with a long stalk.

Acehnese people in Gandapura Subdistrict who live in the mountains and on the coast have widely used plants from the Arecaceae species as materials for tools, weaving and crafts. Arecaceae (palm) which is so large can affect the level of diversity of forms of utilization by the community in Gandapura District, the use of palms by the community as tools, woven and handicrafts is divided into 7 types of plants, these types include coconut (Cocos nucifera) (Lee, 2023), sago (Metroxylon sago), nipa (Nypa fructicans) Lontar (Borrassus flabellifer) Ibus (Carypha utan) and enau (Arenga pinnata) (Petit dkk., 2020). To find out the benefits of Arecaceae plants as craft tools, research was conducted on the utilization of Arecaceae in the lives of Acehnese people in Gandapura District, Bireuen Regency, Nanggro Aceh Darussalam.

Some of the Palm sub-families used as tools, weaving and handicrafts found in the gandapura sub-district are (Lo, 2023):1. Arenga piñnata (Aren).Aren is a genus of the palm family, the climate and rainfall required by arenes are located in the mountainside, arenes require high temperatures, at least 250 C air temperature, at night the ability to live

arenes change to slow. A more decisive environmental factor is rainfall, arenas prefer to be planted in areas where rainfall is evenly distributed throughout the year, or where rain falls for 7-10 months a year (Wisam, 2007. 2. Areca catechu (betel nut). This plant is common in Southeast Asia. It is thought to have originated in the Philippines. It is now widely distributed from the east coast of tropical Africa to the island of Fiji. This species can grow at an altitude of 750 m above sea level. Betel nut has a straight stem and is rather slippery. Average height of 10 meters. It has slightly curved fin leaves. The midrib of the leaf is in the form of a shrimp. The leaflets are broad. The flowers are arranged in a spikelet. The female flower is located at the base, while the male is at the end, in addition to weeding the endosperm of the fruit of this plant is used for lacquer material.3. Borrassus flabellifer (Lontar,). This palm is a single-growing, straight-trunked tree that can reach up to 30 m in height. The trunk is like that of a coconut tree or even larger. The surface of the trunk is smoother and slightly blackish in color. The leaves are shaped like a round fan. The edges have many sharp indentations. The leaves do not fall off immediately but remain attached to the end of the trunk, making the crown of the tree round. The inflorescence is cluster-shaped. The male and female inflorescences are each located on different trees. The fruit is large, round, filamentous inside, juicy and three-seeded. 4. Cocos nucifera (Coconut). The tree is erect, sometimes curved, with a round trunk. Height between 5-30 meters. The leaves are even-pinnate. The flowers are yellowish or greenish in color arranged in panicles. Flowering is continuous throughout the year. In the cluster, the female flowers are located at the base while the male ones are at the end of the cluster. The fruit is round, stringy, pegged and fleshy, the fruit is large. Coconuts are found growing in coastal areas, on saline soils. It grows well below 300 m above sea level with average rainfall between 1270-2550 mm/year. 5. Nypa fruticans (Nipah) This plant is familiar to coastal residents. The leaves are commonly used for roofing, or for handicraft tools such as mats, (tika) baskets, (raga) hats, (tudong) umbrellas (payong) rolling cigarettes (rukok on) and others. 6. Metroxylon Sago (Thatch). is a clumping palm tree, with long and branched rhizome roots. Unbranched cylindrical trunk with a diameter of 50-90 cm, leaf-free trunk can reach a height of 16-20 m at harvest time. Leaves are large, pinnately compound, up to 7 m long, with leaflets up to 1.5 m long; long-stemmed and fronded.Like gebang, thatch flowers and fruits once (monocarpic) and then dies. Wreaths are cob-shaped, up to 5 m long. Monoecious, thatch flowers have an unpleasant odor. Young sago trees have thinner skin than mature sago. The sago trunk consists of a layer of hard outer skin and an inner pith or sago content containing fibers and starch. The hard outer skin is about 3-5 cm thick. 7. Corypha utan, (Ibus) single-trunked, about 15-20 m tall. Large, fan-shaped, rounded-ovate leaves 2-3.5 m in diameter, clustered at the stem end; stalks up to 7 m long, wide, deeply grooved and with spines attached at the edges. The leaf scars on the stem form a spiral pattern. Ibus flowers and fruits only once, at the end of its life. Wreaths appear at the end of the stem (terminal), after all the leaves have died, in the form of large tall panicles of 3-5 m, with hundreds of thousands of greenish-yellow, sweet-smelling flowers. The fruit is a short-stemmed ball, green, 2-3 cm in diameter.

RESEARCH METHODOLOGY

Area Description

Gandapura is a sub-district within the district of Bireuen. The sub-district capital is located between the coast and the mountains. The sub-district has an area of approximately 3,615 Ha and there are 40 villages with a population of 24,596 people (Badan Pusat Statistik Kabupaten Bireuen, 2022) as shown in the following table:

Table 3.1 Description of the Region and Demographics of the Research Location

N0	DESA	LD	JP(JIWA)					Livelihood				PL	
			LK	PR	PTN	NLY	PDG	IRT	PNS	BPS	LL	S	BS
1	Cot Rambat	100	91	91	93	-	1	8	8	15	-	38	62
2	Ujong Bayu	100	152	177	180	-	6	2	3	1	15	40	60
3	Pante Sikumbong	100	135	160	85	-	6	1	14	6	39	36	64
4	Lapang Barat	75	363	378	47	22	20	12	28	14	10	21	54
	Jumlah	375	741	806	405	22	33	23	53	36	64	135	240

Description

LD = Village Size IRT = Home Industry JP = Total Population PNS = Civil Servant LL = Male BPS = Laborer Private Employee Pr = Female LL = Other PTN = Farmer PL = Land Use NLY = Fisherman S = Sawah PDG = Trader BS = Not Sawah

Tools and Materials

The tools and materials used in the research include the research location, questionnaire list, as a supporting tool for the library, sound recorder, stationery and field books, camera and equipment for making herbarium such as newspapers, plastic bags, alcohol and others.

Population and Sample

The population in this study are people who live in four villages of Gandapura District, namely West Lapang village with a population of 785 people, Cot Rambat village with a population of 228 people, Pante Sikumbong village with a population of 338 people, and Ujong Bayu village with a population of 373 people. These four villages were selected based on the criteria that the population is still native, still upholds customs and lives close to forests and beaches. The sampling method was carried out by purposeve sampling method, namely the population has homogeneous and stratified elements / members, namely samples taken based on age groups, namely young adults (aged 20-35) medium adults (aged 36-50) and parents (> 50 years).

Implementation of Research

In the field

At the time of taking specimens of Arecaceae plants, researchers were assisted by someone who had knowledge about the utilization of these plants. Then observations were made and collected. Each Arecaceae plant specimen that has not been known by scientific name is taken and given a hanging label that has been given a collection number and recorded the name of the area and then done description.

Data collection techniques

Questionnaire

The questionnaire is a list of questions made based on indicators of research variables that must be responded to by respondents. To measure people's knowledge about the utilization of Arecaceae plants in daily life, researchers used a sample questionnaire of 6 questions.

Interview

Interviews were conducted by means of semi-structured interview techniques and free and in-depth interviews guided by a list of questions such as: local names of plants, parts used, ways of utilization, plant status (wild/cultivated). Interviews were selected from resource persons who were considered to have broader or more specific knowledge of cultural customs. These resource persons included community leaders, traditional elders and their officials, traditional healers (dukun, tabib) and ordinary people who had knowledge of Arecaceae both planted and growing wild in their environment.

Observation techniques are used to obtain empirical facts that are visible (visible to the eye). How to obtain data and Participatory observation is that the researcher only comes to the place of activity of the person being observed, but does not participate directly in the activity. Documentation techniques are carried out by utilizing written documents, images, photographs, or other objects related to the aspects studied.

RESULT AND DISCUSSION

Based on the results of interviews with the community in Gandapura District, there are several plants used, namely: Lipah leaves (Nypa fruticans), Meria leaves (Metroxylon sago), Iboh leaves (Corypha utan), and Bak teue leaves (Borassus flabellifer) Crafts and plaits such as mats, baskets, hats are daily tools that are often used in traditional ceremonies. Local wisdom-based woven crafts can be used as a medium to preserve the potential of each region. (Patria & Mutmainnah, 2015). Woven crafts are one of the cultures that humans have had since prehistoric times in order to fulfill the need for clothing and improve the economy and daily supporting equipment. (Patria et al, 2015). According to Mutmainah, (2014) In ancient times, baskets made from woven crafts were made from sago fronds, sago leaves and nipa leaves.

Table 1. Plants producing tools, weaving and crafts

No	Scientific Name	Parts Used	Uses
1	*Arenga pinnata*	Bulee jok (ijok)	Brooms, brushes, ropes, water filters.
2	*Araca catechu*	Fruit, leaf, skin,	Fabric dye, timba, flower making material

		situek	
3	*Borassus flabellifer*	Leaf, stem	Tudong, abrasion barrier
4	*Corypha utan*	Leaf, stem	Mats, rengkan, ropes, fans, burlap, lom ungkot (tuasan)
5	*Cocos nucifera*	Leaf, stick, coir, senudang, shell	marriage, ketupat sarong, salop boh giri, broom, rope, firewood, charcoal
6	*Metroxilon sagu*	Leaf, leaf blade	Roof, chicken cage, tepaih
7	*Nypa frutican*	Leaf	Roof, tudong, rolled cigarette

In the growth that is used to produce tools, woven and handicrafts, the parts that are widely used are the leaves, sticks, coir and situek (betel nut fronds) are crafts that are often made by the community. Generally, the parts of the palm that can be used as handicrafts come from the leaf bones, fibers and roots. Figure 1 below is an example of weaving and handicrafts that are almost in every house of the people who live in Gandapura District

Figure 1. (a) Flowers made from coir and situek areca nut (b) Eraman telur
(c) Making broom sticks (d) Woven mats.

Bak teue (Borassus flabellifer), which grows in West Lapang Village, is usually used by the community to make tudong while On ueu (coconut leaf) leaves are used to make woven raga, bleuet, rengkan and chicken stance. Raga (basket) is used for making bean sprouts, and rengkan is a container usually made of woven coconut leaves with an open top surface. The method is to take several coconut leaves divided into 7 parts, the parts of the leaves are placed crosswise in a circle and tied with a rope so that they do not come off. The seven parts are separated into 5 parts, then woven or wrapped around a circle and tidied up. The back is woven again into a circle as a holder. The rest is discharged and wrapped around the side of the rengkan stand. This craft is still very often made because there are still many people using belanga from the ground, because most mothers there still also cook using firewood even though there is a gas stove.

Meanwhile, bleuet is used for drying star fruit and well walls. On the chicken bowl, the way several leaves have been taken and then woven alternately to form a rectangle. At each end it is tied with raffia so that it does not come loose. The community utilizes

chicken shells as a place for chickens to lay eggs (incubate their eggs). Roswita et al. (2023). There are 7 types of plants used as craft materials, namely, Arenga pinnata, Areca catechu, Borassus flabellifer, Corypha utan, Cocos nucifera, Nypa fruticans and Metroxylon sago. Palm parts that are utilized as handicraft materials are 2 types of coir, 1 type of fruit, 6 types of leaves, 1 type of situek, 3 types of stems, 1 type of stick, 1 type of senudang, 1 type of shell, 1 type of frond, 1 type of frond. The way of utilization in the form of webbing, Nypa fruticans and Metroxylon sago leaves. The way of utilization is that the leaves are sewn with rattan rope, after being sewn in the sun so that they can be durable. The results of research on the utilization of lontar plants (Borassus flabellifer L) in the lives of the Raijua island community, Raijua District, Savu Regency are very high they utilize plant parts by slicing, cutting, tapping and weaving, the parts that are widely used are roots, stems, stalks, leaves, flowers and fruit. leaves are widely used for handicraft businesses such as baskets, hats, carpets, brushes, mats and traditional musical instruments (Age et al, 2019).

Figure 2: (a) Palmyra plant (b) Tudong made from palmyra leaves (c) Bleuet plait made from coconut leaves and (d) Raga and rengkan plait made from coconut leaves. from coconut leaves and (d) Woven raga and rengkan from coconut leaves.

CONCLUSION

From the results of research that has been carried out on several types of palms that have the potential as tools, plaits and crafts in the Acehnese community in the Gandapura sub-district of the Bireuen district, it can be concluded that:

1. The number of palm plants utilized as many as 7 types, namely, Bak jok (Arenga pinnata), Bak pineng (Areca catechu), Bak teue (Borassus flabellifer), Bak iboh

(Corypha utan), Bak u (Cocos nucifera), Bak meria (Metroxylon sago), Bak lipah (Nypa fruticans).

2. The greatest potential of palm plants producing tools, plaits and crafts is Cocos nucifera, the parts used are leaves, sticks, coir, senudang and shells.

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