

## Ethnobotanic of Communities on the Outer Islands Aceh Province (Aceh Island Case Study)

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### Abstrak:

Pemanfaatan tumbuhan sebagai pesan simbolik dan praktek secara turun temurun dalam keluarga, baik untuk obat, upacara adat, simbol, dan kearifan lokal. Tujuan dari penelitian ini adalah untuk mengetahui jenis tumbuhan yang digunakan masyarakat sebagai kebutuhan obat-obatan, upacara adat dan kegiatan ritual lainnya di pulau nasi dan pulau breuh kecamatan pulo Aceh kabupaten Aceh besar. Terapat 25 Jenis tumbuhan yang di gunakan, baik sebagai obat, upacara adat dan acara ritual lainnya. Data tersebut tersebar pada dua lokasi yang berbeda yaitu kemukiman pulo Breuh dan kemukiman pulo nasi. Pada pulo breuh ditemukan 15 Jenis tumbuhan yang di gunakan sebagai obat, upacara adat dan kegiatan ritual. Sedang pada kemukiman pulo nasi di temukan 10 Jenis tumbuhan yang di dimanfaatkan. Organ tumbuhan yang paling banyak di gunakan terdapat pada organ daun sebanyak 55%, diikuti dengan batang 19%, kemudian 16% terapat pada akar dan yang terakhir 10% terdapat pada lainnya (bagian bunga, buah dan biji). Penggunaan tumbhuna sebagai obat terdapat 20 bentuk atau 61% digunakan sebagai obat tradisonal, kemudain terdapat 8 bentuk atau 24 % digunakan sebagai kegiatan upcara adat dan 15 macam atau 15% digunakan sebagai kegiatan ritual lainnya.

**Kata Kunci:** Pulo Aceh, etnobotani, tumbuhan yang dimanfaatkan.

### Abstract:

The use of plants as symbolic messages and practices has been passed down from generation to generation in families, both for medicine, traditional ceremonies, symbols and local wisdom. The aim of this research is to determine the types of plants used by the community for medicinal purposes, traditional ceremonies and other ritual activities on the islands of nasi and breuh islands, Pulo Aceh subdistrict, Aceh Besar district. There are 25 types of plants that are used, both as medicine, in traditional ceremonies and other ritual events. The data is spread across two different locations, namely the Pulo Breuh settlement and the Pulo Nasi settlement. On Pulo Breuh, 15 types of plants were found which are used as medicine, in traditional ceremonies and ritual activities. Meanwhile, in the Pulo Nasi settlement, 10 types of plants were found that were used. The most widely used plant organs are found in leaves at 55%, followed by stems at 19%, then 16% in roots and finally 10% in others (flowers, fruit and seeds). There are 20 forms of tumbhuna used as medicine or 61% used as traditional medicine, then there are 8 forms or 24% used as traditional ceremonial activities and 15 types or 15% used as other ritual activities.

**Keyword:** Pulo Aceh, ethnobotany, used plants.

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## 1. Introduction

Pulo Aceh (Aceh red) is one of the outermost islands in Indonesia, the island is located in the administrative area of Aceh Province, precisely in the Aceh Besar district. Aceh Island is one of the sub-districts in the Aceh Besar district, the island consists of two settlements, namely the Nasi Island settlement and the Breuh Island settlement. Nasi Island and Breuh Island are two islands that are next to each other and are located to the northeast of Sumatra Island and to the northwest of Weh Island.

Diversity of customs and culture in Pulo Aceh has become its own identity and a reflection of implicit local wisdom. The people of Nasi Island and Breuh Island are mostly immigrants who come from several areas in the Aceh Besar district. These immigrant communities usually develop the same customs and culture as the people in their areas of origin, even though they live in diverse ethnic communities. Knowledge passed down from generation to generation also causes some medicinal plants to be known and used only by a portion of the population. For this reason, it is necessary to carry out ethnobotanical studies of medicinal plants so that they can be used for further purposes, including the use of plants as part of life's necessities, both personally and in groups.

One form of use is plants for medicinal needs, jewelry and complements to wedding customs, circumcisions, ritual activities and other expressions of gratitude which are part of community activities on the island. The people of Aceh Island, especially the people of Nasi Island and Breuh Island, have similar cultures in the use of plants. Among these cultural similarities can be seen the use of the patikan kebo plant (*Euphorbia hirta*) as a wound medicine, the use of betel leaves (*Piper bettle*) as a sign of gratitude during ceremonies. wedding parties, these two examples are similar in their processing and utilization so it is possible that many will be found during research. People's relationships with plants, both directly and indirectly, are part of ethnobotany. Knowledge of traditional communities, ordinary people who have used various kinds of plant

services to support their lives. Life support for food, medicine, building materials, traditional ceremonies, culture, dyes and others [1].

The use of these plants is limited to conveying them from parents to children and/or grandchildren as symbolic messages and practices passed down from generation to generation in the family. The use of these plants for medicine, traditional ceremonies, symbols and local wisdom only occurs when the activity is taking place, not in do this deliberately so that it is feared that in the midst of the current development of cultural modernization, the use of these plants could be slowly eroded by habits that could cause the loss of traditional knowledge held by the people on the two islands. Knowledge passed down from generation to generation also causes some medicinal plants to be known and used only by a portion of the population. The aim of this research is to find out the types of plants used by the community for medicinal needs, traditional ceremonies and other ritual activities on the island of nasi and the island of breuh, Pulo Aceh sub-district, Aceh Besar district. For this reason, it is necessary to carry out an ethnobotanical study of medicinal plants so that they can be used for further interest. Therefore, it is necessary to carry out research studies on the ethnobotany of plants in the outer islands, especially on the island of Aceh, as part of the rich biodiversity that is utilized by humans in society, both individually and in groups.

## **2. Research Method**

The method used in this research is a qualitative descriptive method with structured observations and interviews. Determination of respondents was based on purposive sampling. The respondents selected included traditional leaders, people over 40 years old, religious leaders and people who were considered knowledgeable about the use of plants as medicine, traditional ceremonies and other ritual activities. Interviews are used as an instrument to obtain research data, while observations are used to analyze data and community knowledge scientifically.

### a. Place and Time of Research

The research sites were carried out on Nasi Island and Breuh Island, Pulo Aceh District, Aceh Besar Regency, which includes several villages spread across the two islands. The tools and materials used in this research are as follows:

**Table 1.** Research Tools and Materials

No	Tool	Function
1	Camera	To take pictures of documentation of research activities
2	Stationery	To record things needed in research
3	Hp / Recording	To record sound during research
4	Observation Sheet	As a guide to initial data in the field
5	Interview sheet	As an interview guide
6	Identification source book	For source identification

### b. Population and Sample

#### 1. Population

The population is all or all research subjects. The subjects in this research are the people of Pulo Aceh subdistrict spread across Nasi Island and Breuh Island who use plants as an ethnobotanical activity for various needs including medicinal needs, traditional ceremonies and other ritual activities which are part of local wisdom in the area. There are 5 villages on Nasi Island including Lamteng, Deudap, Rabo, Pasi Janeng and Alue Reuyeung. Meanwhile, Breuh Island has Alue Raya, Lapeng, Meulingge, Rinon (North Pulo Breueh Mukim) then Blang Situngkoh, Gugop, Lampuyang, Lhoh, Paloh, Seurapong, Teunom and Ulee Paya (South Pulo Breueh Mukim).

#### 2. Sample

The samples in this study were traditional leaders, people >40 years old, religious leaders and people who were considered knowledgeable about the use of plants as part of ethnobotany. The number of respondents was divided into two, the first was 10 respondents on Nasi Island spread across 3 villages, namely Rabo, Pasi Janeng and Gugop villages. The second respondent was 15 people spread across five villages on Breuh Island including meulingge, lapeng, Lampuyang, Seraong and Gugop.

#### 3. Research Parameters

4. Parameter Is a measurable and constant variable or characteristic, dimension, property, or value of a set of data (population) because it is considered important for understanding the situation. The parameters in this research are the type of plant and the form of its use in the community of Pulo Aceh sub-district, Aceh Besar Regency

5. Research Procedures

a. Interview

Interviews are essentially the product of understanding field situations in a typical interaction. The interviews in this research were semi-structured interviews guided by a list of questions. The contents of the list of questions in the questionnaire include the respondent's name, age, occupation, local name of the plant used, part used, benefits and how to use it. In this stage, information is gathered about the community's knowledge of plants used as traditional medicine, by looking at how to use plants with medicinal properties. After the interview was conducted, the data that had been collected was then proven by photographing plants with medicinal properties and how to take the plants and process the plants as traditional medicine.

Interviews were carried out by bringing prepared instruments. The instrument contains questions regarding the ethnobotany of plants used in everyday life, both in religious ceremonies and traditional ceremonies. Then conduct interviews with respondents who have been designated as samples regarding a summary of information related to ethnobotany which includes the types of plants used in certain events that use plants. The respondents who will be interviewed in this research are healers, traditional leaders, community 40 ≥ and religious leaders. Where traditional leaders know about traditional activities, the community is 40 ≥ more experienced in using plants both as medicine, in traditional ceremonies and so on.

b. Observation

After obtaining information from interviews with respondents regarding the types of plants used in certain activities, then observe the types of plants with the respondents selected as samples. This stage aims to find out directly the types of plants used and how to use them

### c. Documentation

Documenting samples regarding the types and uses of plants as needed in certain activities, including medical activities, traditional ceremonies, religious activities and also documenting the method and processing as well as the parts used. For types of plants whose scientific names are not yet known, samples of leaves, flowers, stems, fruit, seeds, tubers, rhizomes and roots are taken for identification.

## 6. Data Analysis Techniques

Research data includes primary data sourced from interviews with respondents. Especially data about the types of plants and animals used in traditional ceremonies. The results of the primary data obtained were analyzed descriptively, which were then displayed in the form of tables, graphs and pictures. Primary data is data or information obtained by researchers directly from the source [3]. This research data is in the form of primary data, namely data sources obtained directly from interviews with the people of Samalanga District about the plants used in Acehese traditional ceremonies along with the symbolic meaning of these plants and the parts of the plant organs used. The results of the primary data were analyzed descriptively. made in the form of tables, plant pictures, graphs, traditional plant types (regional names, scientific names, families), parts of organs used Quantitative data will be analyzed using the following percentage formula:

$$\% = \frac{\sum \text{Score Acquisition}}{\sum \text{Total score}} \times 100\%$$

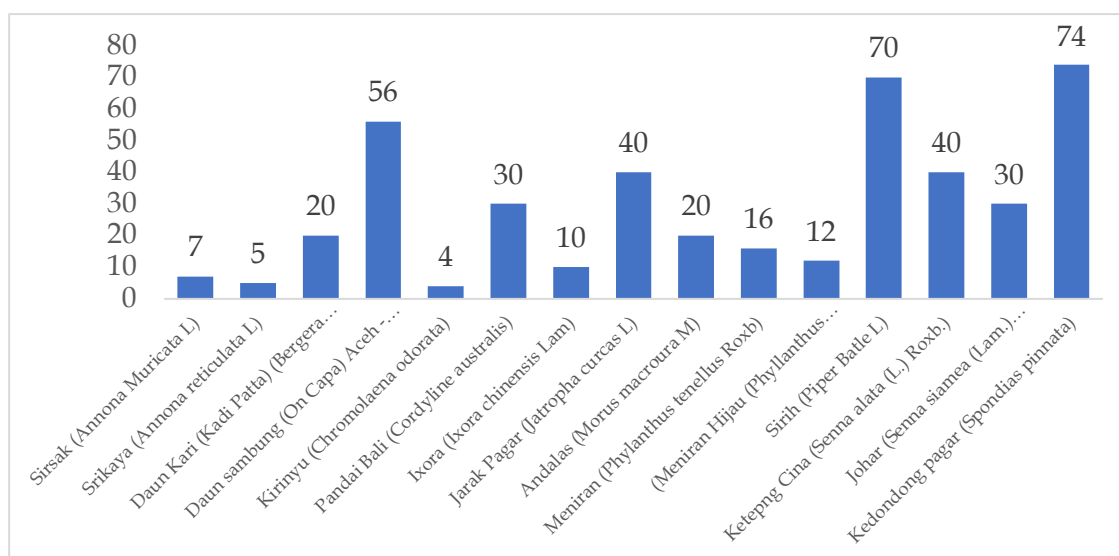
## 3. Results and Discussion

There are 15 types of plants that the people of Pulo Aceh use, spread across the two settlements of Pulo Nasi and Pulo Breuh. Most of these plants are used as medicine and food. Generally, plants are processed into medicine and food, but other uses are also inseparable from the needs of traditional ceremonies and other ritual activities. Apart from that, the plants used in the *peusijuek* tradition are wild plants that can be easily found everywhere, not

plants that are rare or difficult to find or expensive [14]. From this we can see the philosophy of the Acehnese people who view that examples of life can be taken from anywhere, and they do not look down on examples taken from plants that can be said to be worthless. Everything created by Allah SWT in nature must have benefits and advantages that humans can use or benefit from.

The plants here have a very important role and position in human life. Most of the plants still grow in the forest and have become a life support for the local community. People use these plants not only as food ingredients, but also as medicines, materials for housing, and raw materials for crafts and industry. Plants can be beneficial to society if used appropriately. [4]

Most of the plant organs that are processed into food and other things are the leaves, roots and stems. The processing process varies, some are crushed, boiled and some are used directly on the body. The percentage of parts used can be seen in the following graph:



**Figure 1.** Types of plants used for medicine, ceremonies and rituals

Based on the results of interviews and observations carried out in the Pulo Aceh sub-district, 25 types of plants were found to be used, both as medicine, in traditional ceremonies and other ritual events. The data is spread across two different locations, namely the Pulo Breuh settlement and the Pulo Nasi settlement. On Pulo Breuh, 15 types of plants were found which are used



as medicine, in traditional ceremonies and ritual activities. Meanwhile, in the Pulo Nasi settlement, 10 types of plants were found that were used.

These plants are spread across Pulo Aceh sub-district, Aceh Besar district, these plants are used in various forms, starting as medicines, wedding ceremonies, circumcisions, religious holidays and Kanduri Laut activities (*Kanduri laot*) Aceh-ed. In general, the form of use is almost the same as the use in other areas of Aceh, this is because differences in ethnicity and language are the basis for the similarities in each plant use. especially in island areas which generally use plants as a basic need to fulfill daily needs, for food and other needs. People use these plants not only as food ingredients, but also as medicines, materials for housing, and raw materials for crafts and industry. Plants can be beneficial to society if used appropriately. [4]

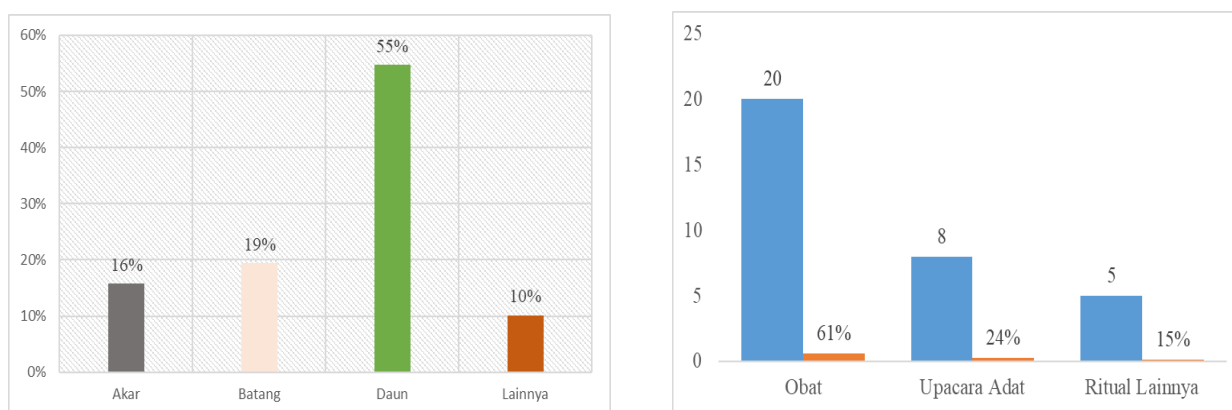
About the plants that the people of Pulo Aceh use, there are 15 types spread across the two settlements of Pulo Nasi and Pulo Breuh. Most of these plants are used as medicine and food. Generally, plants are processed into medicine and food, but other uses are also inseparable from the needs of traditional ceremonies and other ritual activities. The use of plants among Indonesian tribes tends to be diverse. The diversity of ethnic groups that inhabit this region of Indonesia is equal to the large diversity of traditional rituals which continue to be preserved by each tribe in Indonesia. Various kinds of plants are found in certain tribal environments which are processed or used directly for food, medicine and other purposes. medicine and traditional rituals [5].

Apart from that, the plants used in the *peusijuek* tradition are wild plants that can be easily found everywhere, not plants that are rare or difficult to find or expensive. From this we can see the philosophy of the Acehnese people who view that examples of life can be taken from anywhere, and they do not look down on examples taken from plants that can be said to be worthless. Everything created by *Allah SWT* in nature must have benefits and advantages that humans can use or benefit from. Many plants are used in traditional ceremonies carried out by the community, such as rice (*Oryza sativa* L.), cassava (*Manihot esculenta* Crantz.), areca nut (*Areca cathecu* L.), garlic (*Allium sativum*



L.), galangal (*Kaempferia galanga* L.), papaya (*Carica papaya* L.), coconut (*Cocos nucifera* L.), turmeric (*Curcuma longa* L.), and sugar palm (*Arenga pinnata* Merr.) [6].

Most of the plant organs that are processed into food and other things are the leaves, roots and stems. The processing processes vary, some are crushed, boiled and some are used directly on the body [7]. stated that people usually use certain types of plants which have their own meaning for their events and are a very important aspect in them.



**Figure 2.** Organization and Use of Plants in the Pulo Aceh Community

The most widely used plant organs are found in leaves at 55%, followed by stems at 19%, then 16% in roots and finally 10% in others (flowers, fruit and seeds). The use of plants as a suggestion for meeting needs, both direct and indirect, is very diverse, ranging from small plants to large plants. This use can be adjusted to suit needs, whether as medicine, traditional ceremonies and other ritual activities. There are 20 forms of plants used as medicine or 61% used as traditional medicine, then there are 8 forms or 24% used as traditional ceremonial activities and 15 types or 15% used as other ritual activities.

Plants used in traditional ceremonies have a main function related to symbolic meaning [8]. For example, betel leaves (*Piper betle* L.) symbolize harmony, rice (*Oryza sativa* L.) symbolize food sufficiency, and flowers symbolize fragrance [9]. plants in traditional ceremonies, knowledge and use of plants by the community is decreasing, so that their existence is not noticed

Plants are processed and used in various ways, such as chopping, soaking, dredging, hanging or eating as part of special dishes served at ceremonies [10]. Apart from preserving culture, the implementation of rituals also plays a role in efforts to preserve the plants used. This is because as long as the ritual continues to be carried out there is a need for the use of plants.

In general, traditional communities live their lives with simplicity and in harmony with the natural environment. Local intelligence (local genius), local policy (local wisdom) and local knowledge (local knowledge) are often conceptualized with the term local wisdom. According to Quaritch Wales, local genius is the ability of local culture to deal with foreign cultural influences when the two cultures come into contact. In general, local wisdom can be understood as local ideas that are wise, full of wisdom, have good value, which are embedded and followed by members of the community. [11]

The people of Pulo Aceh use medicinal plants based on knowledge about the use of medicinal plants that has been passed down from generation to generation. These medicinal plants are used as traditional medicine. Based on the processing method, most still use traditional methods such as grilling, cooking, grating, pounding, kneading and brewing. Knowledge about a community group regarding the use of plants that is inherited from generation to generation is known as ethnobotany [12].

Of these methods, the one that is most widely used is boiling, because most of the illnesses experienced are internal diseases that are used by drinking. Apart from that, processing this method is very easy and economical because it can be boiled repeatedly. Plants are widely used as food, clothing, medicines, cosmetics, boards and household utensils, ropes, weaving, dyes, complements to traditional ceremonies or rituals and social activities. Apart from that, it can be used as literature in the field of education and as a guide for ordinary people to utilize various types of plants that exist [13]

The level of community knowledge is closely related to the use of plants and the parts of plants used in traditional processions. Plants in traditional ceremonies are used fresh, this proves that the plants used are only sought, if

necessary, the rest are left to live without being disturbed by their existence in nature and there are several types of plants that are used dry, such as rice, paddy, gambier, sandalwood, cloves, and tobacco. [15].

#### 4. Conclusion

There are 25 types of plants that are used, both as medicine, in traditional ceremonies and other ritual events. The data is spread across two different locations, namely the Pulo Breuh settlement and the Pulo Nasi settlement. On Pulo Breuh, 15 types of plants were found which are used as medicine, in traditional ceremonies and ritual activities. Meanwhile, in the Pulo Nasi settlement, 10 types of plants were found that were used. The most widely used plant organs are found in leaves at 55%, followed by stems at 19%, then 16% in roots and finally 10% in others (flowers, fruit and seeds). There are 20 forms of plants used as medicine or 61% used as traditional medicine, then there are 8 forms or 24% used as traditional ceremonial activities and 15 types or 15% used as other ritual activities.

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