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by Adi Rahmadi

Submission date: 22-May-2023 10:30AM (UTC+0700)
Submission ID: 2098833485
File name: Diana_Handayani_Adi_Rahmadi.2018._JBES-Vol-12-No-6-p-291-298.pdf (562.19K)
Word count: 3923
Character count: 21485

Journal of Biodiversity and Environmental Sciences (JBES)
ISSN: 2220-6663 (Print) 2222-3045 (Online)
Vol. 12, No. 6, p. 291-298, 2018
http://www.innspub.net

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RESEARCH PAPER OPEN ACCESS

Indigenous knowledge of Ethnic Bugis Pagatan in using of medicinal plants, South Kalimantan, Indonesia

Diana Handayani*, Gusti Muhammad Hatta, Hafizianor, Adi Rahmadi, Kissinger

Forestry Science, Faculty of Forestry, Lambung Mangkurat University, South Kalimantan, Indonesia

Article published on June 30, 2018

Key words: Medical plant, Traditional medicine, Ethnic Bugis Pagatan, South Kalimantan

Abstract

Based on field observations, ethnic Bugis Pagatan has been using medicinal herbs for health and other uses for the past. Society generally derives knowledge from oral tradition. Until now, data and information on utilization based on local wisdom is not yet available and well documented. This raises concerns about the extinction of traditional knowledge in the utilization of plants. This research was conducted on Bugis Pagatan community in Kusan Hilir Subdistrict, Tanah Bumbu Regency. The objectives of the study were to (1) identify the types of medicinal plants utilized by the ethnic Bugis Pagatan and (2) to identify 5 (five) types of medicinal plants utilized by the Bugis Pagatan community based on local wisdom. Data collection is done by interviewing the local community of Bugis Pagatan ethnic who know the benefits of plants as a medicine. The technique of selecting the informant as the research sample used in this research phase is by purposive sampling and snowball sampling method. Interviews aimed at traditional healers (*sanro*). Each medicinal plant is recorded in its local name, the part used, and how it is used and its use. This study obtained 49 (forty nine) kinds of medicinal plants used by the community, and 5 (five) types of medicinal plants based on local wisdom ie (1) Aju Jawa (*Lannea coromandelica Linn.*), (2) Allere (*Ipomoea pes-caprae Sweet.*), (3) Bujolo (*Scaevola taccada (Gaertn.) Roxb.*), (4) Paranga (*Avicenia marina (Forssk.) Vierh.*) And (5) Tawaro *(Metroxylon sagu Rottb.*).

***Corresponding Author:** Diana Handayani ✉ dhandayani@unlam.ac.id

Introduction

Medicinal plants have thousands of species. In total about 40,000 types of medicinal herbs that have been known in the world, 30,000 of them allegedly reside in Indonesia. The amount represents 90% of medicinal plants contained in the Asian region. Of these, 25% of them or about 7,500 species are known to have Herbsl or medicinal properties. However, only 1,200 species of plants have been used for raw materials of Herbsl medicines or herbs (PT Sido Muncul, 2015 *in* Salim & Mudani, 2017).

Apart from the rich diversity of these plants, Indonesia is also rich in tribal and cultural diversity.Na'im, A dan Syaputra, H. (2010) said Indonesia has 1,340 tribes spread from Sabang to Merauke. Each tribe has a different repertoire. Each tribe contains a wealth of local wisdom, including the use of plants for traditional medicine. The cultural tradition of using Herbsl medicine and traditional medicine is reflected in the use of medicinal plants in various ethnic groups in Indonesia. The ethnic uses of medicinal plants for the benefit of traditional medicine. They have different knowledge about traditional medicine, including knowledge of medicinal plants. One of the differences can be seen from the different herbs used for the same treatment.

The diversity of knowledge possessed by these ethnic groups is the cultural richness of the Indonesian nation which must be maintained to be developed. The first step to develop it is by documenting knowledge about the use of medicinal plants in various regions in Indonesia. Base on the knowledge they gain from experience and observation of their environment, they also develop various traditional/local wisdom. The norms that govern human behavior in interacting with their environment, coupled with their traditional wisdom, are environmental ethics that guide human behavior in managing their environment. One of the interesting groups to be studied in this research is the ethnic Bugis Pagatan in Tanah Bumbu District. Based on field observations, Bugis Pagatan community has been using medicinal herbs for health and other uses for the past.

Until now, data and information on utilization based on local wisdom is not yet available and well documented. Society generally derives knowledge from the oral tradition. This raises concerns about the extinction of traditional knowledge in the utilization of plants. Some species of medicinal plants are efficacious based on local wisdom is very valuable. Until now, data and information about the knowledge of the use of medicinal plants based on local wisdom is not yet available and documented. Based on this, it is very important to be able to dig up information and identify how the knowledge of the use of medicinal plants in local communities Bugis Pagatan ethnic mainly to plants based on local wisdom. The information obtained is expected to be used as information, inputs and considerations in decision making and conservation efforts of medicinal plants in the region in the future.

Materials and methods

Materials

The tools used in this study consist of questionnaires (questionnaires), stationery, digital cameras, GPS, tally sheets, machetes, and computers for data processing. The object of research is the community of Bugis Pagatan ethnic and plants that are used as medicine in Bugis Pagatan community, Kusan Hilir subdistrict, Tanah Bumbu regency.

Methods

Data collection is done by interviewing the local community of Bugis Pagatan ethnic who know the benefits of plants as a medicine. The technique of selecting the informant as the research sample used in this research phase is by purposive sampling and snowball sampling method (Sugiyono, 2007). Interviews aimed at traditional or *sanro* in Bugis Pagatan language. Each medicinal plant is recorded in its local name, the part used, and how it is used and its use. Research and data processing is done within 3 (three) months. Data obtained on all plants used as medicine in Bugis Pagatan community then determined as many as 5 (five) types of plants based on local wisdom. Furthermore, the data obtained in the field is presented in tabulation form. Data analysis was done descriptively according to the purpose of the study (Hamzari, 2008).

Results & discussion

The area inhabited by Bugis Pagatan people in addition to settling in Pagatan Village, also includes those who live in the villages located on the beach. This indicates that indeed the term "Pagatan" behind the term 'Bugis' does not refer to the current Pagatan Village area, but refers specifically to the area of the former Pagatan Kingdom, which is the coastal region (Akhmar *et al*., 2017). The knowledge of medicinal plants was obtained from interviews with traditional healers or shaman of ethnic Bugis Pagatan, known as 'Sanro'. Sanro in this society is divided: (1) *Sanro Mabura-bura* is a traditional healer; (2) *Sanro Mimm* mana' shaman giving birth; (3) *Sanro Pakkadudu* is a shaman massage, and (4) *Sanro tasiq* is a *mappenretation* shaman (beach party). Based on the information obtained, sanro who knows about medicinal plants is *sanro mabura-bura, sanro mimm mana' and sanro pakkadudu.* But in this study, the three informants are all *sanro mabura-bura*. Characteristics of informants ethnic Bugis Pagatan are seen in Table 1.

Table 1. Characteristics of Informants Ethnic Bugis Pagatan.

No.	Informants	Sanro1	Sanro2	Sanro3
1	Name	Pangka	Nurdin	Murdani
2	Gender	Woman	Man	Man
3	Age	78 years	47 years	75 years
4	Education	-	High School	Elementary School
5	Village	Wirittasi	Betung	Pejala
6	Ethnic	Bugis Pagatan	Bugis Pagatan	Bugis Pagatan

Based on the results of interviews, plants used as medicines as many as 49 species of plants coming from the forest and the surrounding environment. Plants utilized as medicine based on *sanro* information are seen in Table 2.

Table 2. Plants Utilized as Drugs by ethnic Bugis Pagatan.

No	Local Name / Indonesia Name	Latin Name	Habitus	Section use	Benefits	How to Use	Cultivation Status	Place to Grow
1	Aju Jawa/Kayu Jawa	*Lannea coromandelica Linn.*	Pohon	Stem bark	Treatment of all internal diseases	Boiled, drunk	Cultivation	SJ
2	Aladi/Keladi	*Colocasiae sculenta* Schoot	Herbs	Tubers	Diabetes	Boiled, drunk	Cultivation	K
3	Allere/, Katang-katang	*Ipomoea pes-caprae*	Bush	Leaf	Skin stung by jellyfish	Shoots kneaded, smeared	Non Cultivation	H
4	Baka, Etnisn	*Artocarpus communis*	Pohon	Root	*Malo'ilaleng* (Deep wound)	Boiled, drunk	Cultivation	K
5	Bampeng/Bambu	*Calamus sp*	Bush	Root	Lumbago	Boiled, drunk	Non Cultivation	H
6	Binahong	*Basselaru bralinn*	Herbs	Leaf	Cholesterol	Boiled, drunk	Cultivation	K
7	Bingkudu/ Mingkudu	*Morinda citrifolia*L.	Tree	Fruit	*Lua dara* (Coughing up blood), cholesterol, uric acid, high blood pressure, lack of appetite, vomiting (*tetalua)*	Drinking grated water	Cultivation	P
8	Bujolo/Beruwas Laut	*Scaevola taccada*	Herbs	Seed	Mata rabun, infeksi	Water from the ripe seed (white color) directly dripped into the eye	Non Cultivation	H
9	Bunga	*Hibiscus rosa-*	Herbs	Root	Coughing up	Boiled, drunk	Cultivation	P

No	Local Name / Indonesia Name	Latin Name	Habitus	Section use	Benefits	How to Use	Cultivation Status	Place to Grow
	sapatu,/Kemba ng Sepatu	*sinensis L.*			blood			
10	Cangkuk manis/katuk	*Sauropu sandrogynus*	Shrubs	Leaf	Streamline breast milk	Boiled, made vegetable	Cultivation	P
11	Daung ungu	*Graptophyllum pictum*	Shrubs	Leaf	*Peddeseng*/ Constipation, Hemorrhoid	Boiled, drunk	Cultivation	K
12	Daung landrang	-	Herbs	Leaf	*Urelolo* (rheumatism)	Boiled, drunk	Non Cultivation	SJ
13	Gayam	*Inocarpus fagifer*	Tree	Stem bark	Diabetes	Boiled, drunk	Non Cultivation	SJ
14	Ilalang/ Alang-alang	*Imperata cylindrical Raeusch.*	Grass	Root	cholesterol	Boiled, drunk	Non Cultivation	SJ
15	Jampu paturukala/ Jambu Seed	*Psidium guajava*	Tree	Shoots	*jambang-jambang* (diarrhea)	Refined, drunk	Cultivation	P
16	Jampu Sereng/ Jarnbu Mete	*Anacnrdiun zoccidentale*	Tree	Stem bark	*Collongpello* (Hemorrhoid) makate (Itchy)	Refined	Cultivation	K
17	Kadondong/ Kedondong	*Spondias dulcis*	Tree	Fruit	Drug wounds diabetes	Shredded wounded around the wound	Cultivation	P
18	Kajulare/ kangkung	*Ipomoea aquaticaForsk*	Herbs	Leaf and Bark	Low blood pressure	Vegetable	Cultivation	K
19	Kaliki/Pepaya	*Carica papaya L.*	Tree	Leaf	malaria	Boiled, drunk	Cultivation	K
20	Kelapa	*Cocos nucifera*	Tree	Oil from Fruit	gray hair	Direbus sampai berminyak	Non Cultivation	SJ
21	Karamunting	*Ochthocharis bornensis Bl.*	Bush	Leaf	diabetes	Boiled, drunk	Non Cultivation	H
22	Galingkang/ gulinggang	*Senna alata L*	Shrubs	Sap and Leaf	Drugs for skin	The sap is immediately digested	Non Cultivation	SJ
23	Katapang/Keta pang	*Teminalia catappa*	Tree	Stem bark	Medication after childbirth	Boiled, drunk	Non Cultivation	H
24	Kiloro/kelor	*Moringa Oleifera*	Tree	Leaf	Blood booster	Boiled made vegetables	Cultivation	K
25	Kumis kucing	*Orthosiphon aristatus* Benth.	Herbs	Leaf	Streamline urine	Boiled, drunk	Cultivation	P
26	Tagalolo /Awar-awar	*Ficus septica*	Tree	Leaf	*Boro*, Swollen	Refined, smeared	Cultivation	P
27	Luntas/ Beluntas	*Pluchea indica L. Less*	Bush	Leaf	High blood pressure	Boiled, drunk	Cultivation	P
28	Meniran	*Phyllanthusurinaria*	Herbs	Leaf	Bladder stones	Boiled, drunk	Non Cultivation	K
29	Nipa/Nipah	*Nypa fruticans* Wurmb	Tree	Fruit	Facilitate digestion, fever, thrush, asthma (poso)	be eaten	Non Cultivation	H
30	Onyi tedong/ temulawak	*Curcuma xanthorrhiza*	Herbs	Tubers	Skin smoothing	Refined, smeared	Cultivation	P
31	Onyi lotong/ temuireng	*Curcuma aeruginosa Roxb.*	Herbs	Tubers	Internal medicine	Refined, smeared	Cultivation	P
32	Ota/Sirih	*Piper betle L.*	Herbs	Leaf	Postpartum care	Boiled, drunk	Cultivation	P
33	Pamadeng	-	Herbs	Leaf	High blood pressure	Boiled	Non Cultivation	SJ
34	Pannodara/	*Alpinia galanga*	Herbs	Leaf, Tubers	Anthelmintic	Refined, drunk	Cultivation	K

No	Local Name / Indonesia Name	Latin Name	Habitus	Section use	Benefits	How to Use	Cultivation Status	Place to Grow
	Lengkuas							
35	Panreng/ Pandan	*Pandanus amaryllifolius Roxb.*	Herbs	Leaf	Postpartum care	Leaf	Cultivation	K
36	Paranga/ Api-api	*Avicenia marina*	Tree	Sap Leaf, Leaf, Resin bark	Drugs Dental pain, fever, cleansing the uterus, birth control cure	smeared	Non Cultivation	H
37	Pesajang	-	Herbs	Leaf	The ulcer drug	Boiled, drunk	Non Cultivation	P
38	Pude/Nyamplung,bintangur	*Calophyllum inophyllum*	Tree	Leaf, Sap	Pari toxic drugs	Boiled / smeared	Non Cultivation	H
39	Ruku-ruku	*Ocimum tenuiflorum*	Herbs	Leaf	High blood pressure	Boiled, drunk	Non Cultivation	P
40	Sapat	*Macaranga triloba*	Tree	Leaf	Diabetes, diabetes, cholesterol	Boiled, drunk	Non Cultivation	H
41	Sarikaja/Sirsak	*Annona muricata L*	Tree	Leaf	High blood pressure	Boiled, drunk	Cultivation	K
42	Sere wangi/Sereh Wangi	*Cymbopogonnardus L*	Herbs	Root, Bark	Smell of sweat, fever	Boiled, drunk	Cultivation	K
43	Seruga	-	Herbs	Leaf	Hot fever	Boiled, drunk	Cultivation	P
44	Tampak lorong/ penawar sampai, Brotowali	*Tinospora Crispa L.*	Herbs	Bark	Medicine worms, diabetes, high blood	Boiled, drunk	Cultivation	P
45	Tatau	-	Tree	Stem bark	Diarrhea	Boiled, drunk	Non Cultivation	SJ
46	Tawak-tawak bembe, Tambora	*Duabanga moluccana*	Rumput	Leaf dan Bark	Deep wounds (intestines, ulcers)	Boiled, drunk	Non Cultivation	SJ
47	Tawaro/ RTubersa	*Metroxylon sagu*	Tree	Root	*Jambang dara*(Dysentery), cancer	Boiled, drunk	Non Cultivation	H
48	Tebulotong/ Tebu Hitam	*Saccharum officinarum L*	Rumput	Root	Vomiting blood	Soaked, drunk	Cultivation	K
49	Tolasi/Selasih	*Ocinum Bassilum L.*	Herbs	Seed	*Pellalaleng*, Panas dalam	Soaked, drunk	Cultivation	K

Description: H: Forests, P: Grounds K: Gardens, SJ: Around the Road.

The difficulty experienced during interviews with informants is the existence of language barriers. Two informants are elders Bugis Pagatan ethnic who can only speak Bugis, cannot use Indonesian or Banjar Language. The language barrier that occurred during the interview was overcome with the help of the immediate family and neighboring informant as a language translator. The information obtained from sanro is that the commonly used herbs of sanro have also been widely used by the general public such as *Leafg ota* (*Piper betle*), *panreng* (*Pandanus amaryllifolius*), and *Leafg sarikaja* (*Annona squamosa* leaves).

If when patients who seek treatment at home sanro not get the supply of medicinal plants especially taken from outside Pagatan area, then patients prefer sanro using spells or water bidders. In addition to using water bidders and plants, usually the treatment also uses prayers (reading the holy verses of the Qur'an), sometimes even accompanied by objects such as needles or pins. Syuhudi (2015) in his research also states *sanro* treat medical treatment (medical) and nonmedic (due to the disturbance of spirits, in the form of jinns and demons) in the traditional way, in the form of prayers derived from the Qur'an, water that was given jampi, plants and pressing the nerve

points on the body by using supernatural powers. One of the ways to retain patients, shamans apply several cultural strategies, including forming a social network. This social network is formed by patients, patient friends, and patient families, as well as friends of shamans and families of shamans. Traditional medicine needs to be preserved and is a local wisdom.

The forty-nine types of medicinal plants obtained from interviews, then determined as many as 5 (five) types of plants based on local wisdom. Things to be considered in determining 5 (five) types of plants based on local wisdom, namely: (a) derived from plants most widely used as a drug based on local wisdom; (b) fulfill representativeness in the characteristics of medicinal plant habitat of ethnic Bugis Pagatan; (c) having sufficient quantities of plants for the purpose of taking the test sample; and (d) are included in the conservation priority scale, among others: the utilized parts are stems and roots or parts that can kill plants, have an annual life cycle and/or depend on the presence of other species, have a clustered distribution so as to be susceptible to disturbance (Zuhud, EAM and Wisdom, A. 2009). Five types of plants are presented in Table 3.

Table 3. Five Types of Medicines Plants Ethnic Bugis Pagatan Based on Local Wisdom.

No	Local Name	Latin Name	Section use
1	Aju Jawa	*Lannea coromandelica* Linn.	Stem bark
2	Allere	*Ipomoea pes-caprae* Sweet.	Leaf
3	Bujolo	*Scaevola taccada*(Gaertn.) Roxb.	Seed
4	Paranga	*Avicennia marina* (Forssk.) Vierh.	Leaf
5	Tawaro	*Metroxylon sagu* Rottb.	Root

Description 5 (five) types of plants based on local wisdom are described as follows

1. (a) Indonesia Name: Kayu Kuda; Local Name: *Aju jawa;* Famili: Anarcadiaceae;
Latin Name: *Lannea coromandelica* Linn.
(b) Usefulness and usage: Internal disease (diabetes, cancer, cholesterol);
Drinking water stem bark
(c) Important information: *L.coromandelica* is not a native plant in the Kusan
Hilir area, but is brought from Sulawesi and planted in the coastal area of Pagatan. *L. coromandelica* in Bugis Pagatan community is usually planted according to its utilization that is as border of cattle livestock enclosure, house, or land.

2. (a) Indonesia Name: Tapak Kuda, Katang-katang; Local Name: *Allere;* Famili: Convolvulaceae; Latin Name: *Ipomea pes-caprae*
(b) Usefulness and usage: Skin affected by jellyfish stings; Leaf squeezed, smeared.
(c) Important information: Ethnic Bugis Pagatan resides in Pagatan Coastal, with some communities livelihood as fishermen.*I. pes-caprae* from Ethnic Bugis Pagatan besides used for the medicine is also used as a rope to tie the results of fishermen

3. (a) Indonesia Name: Beruwas Laut; Local Name: *Bujolo;* Famili: Goodeniaceae*;* Latin Name: *Scaevola taccada* (Gaertn.)
(b) Usefulness and usage: Eye health, myopia; The liquid from the seeds that have been cooked (white) directly diteteskan to the eye.
(c) Important information: *Sanro* who has been using this plant routine to prove the goodness of his vision when reading small text.

4. (a) Indonesia Name: Api-api; Local Name: *Paranga;* Famili: Verbenaceae*;* Latin Name: *A. marina* (Forssk.) Vierh.
(b) Usefulness and usage: Tooth ache; The leaf bud sap is dropped directly onto the sore tooth.
(c) Important information: Its vegetation is found clustered with a solid sand dune and is one of the pioneering communities of mangrove forests (Mackinnon *et al*., 2000).

5. (a) Indonesia Name: Sagu; Local Name: *Tawaro;* Famili: Arecaceae*;* Latin Name: *Metroxylon sagu* Rottb.
(b) Usefulness and usage: Dysentery; Root is boiled, then the water is drunk.
(c) Important information: *Tawaro (M. sagu),* the sticks are used for cooking. Sago in Borneo may

originate from the islands of Irian and Maluku but have been cultivated or grown half wild in freshwater swamps along the coast of Borneo (Flach, 1983 *in* Mackinnon *et al*., 2000). Natural sago stands are found in freshwater swamps whose soils comprise over 70% clay and 30% organic matter. In Kalimantan, sago in addition to food substitute for rice, residents also use sago starch as duck food. (Flach, 1983 *ini* Mackinnon *et al.*, 2000). The Fig. 1. shows the parts of the plant used as a medicine.

Naming plants on the Bugis Pagatan Ethnic there was a similarity with the name of the plant origin Sulawesi region. This is known after an interview with *sanro*. The similarities, among others, *Beruwas Laut* (*S. taccada*) named *Bujolo* by Bugis Pagatan Ethnic was found on Wawonii Island, Southeast Sulawesi was found under the name *Buntolo* (Rahayu, *et al.*, 2006). *Kayu Jawa* (*L. coromandelica*) is named *Aju jawa* from ethnic Bugis Pagatan as well as in the region of Sulawesi (Cahyani, 2017). *Tapak kuda* (*I. pes-caprae*) is named *allere* by Ethnic Bugis Pagatan and named after *lalere* by Bugis Sulawesi).

Utilization of medicinal herbs in addition to the treatment of diseases as well as for health care. This is in line with the research conducted by Radam *et al.* (2016) of plant species utilized in medicinal treatment in Tanah Bumbu District, South Kalimantan stated that 18 (eighteen) plant species were exploited by the coastal Banjar for treatment, 11 (eleven) species by Bugis ethnic and 14 (fourteen) species by Ethnic Dayak. The knowledge of medicinal plants obtained on the Bugis Pagatan ethnic is expected to be informed back to other communities in order to remain documented and still be utilized even though public health facilities already exist. The knowledge they gain is information passed down from their parents. It is still preserved until now. The use of medicines from plants is expected to remain the choice of Bugis Pagatan community.

Conclusion

Traditional healers Bugis Pagatan ethnic is known as 'Sanro'. This research produces 49 (forty nine) kinds of medicinal plants used by Bugis Pagatan ethnic community.

In addition, there are 5 (five) types of medicinal plants based on local wisdom that is (1) Aju jawa (*Lannea coromandelica* Linn.), (2) Allere (*Ipomoea pes-caprae* Sweet.), (3) Bujolo (*Scaevola taccada* (Gaertn.) Roxb.), (4) Paranga (*Avicenia marina* (Forssk.) Vierh.) and (5) Tawaro (*Metroxylon sagu* Rottb.).

References

Abdiyani S. 2008. Diversity of medicinal plants bottled efficacious drugs in Dieng plateau. Journal of Forest Research and Nature Conservation **5,** 79 - 92.

Akhmar AM, Arafah B, Padirman W. 2017. Cultural strategy of Bugis Pagatan in maintaining Bugis identity in multicultural society. Kapata Archaeological Journal **13,** 73 - 82.

Aliadi A, Roemantyo. 1994. Relation of traditional medicine with preservation of medicinal plant utilization. Paper in Preservation Book of Indonesian Tropical Forest Diversity Utilization. Bachelor degree essay, Bogor Agricultural Institute and Indonesia Tropical Nature Institute (LATIN). Bogor.

CGGJ van Steenis. 2013. Flora. PT. Balai Pustaka. Jakarta.

Cahyani AI. 2017. Antioxidant activity test from bark wood leaf extract with method of DPPH (2,2 Difenil-1-1Pikrilhidrazil). Bachelor degree essay, Syarif Hidayatullah State Islamic University, Jakarta.

District of Tanah Bumbu. 2016. The strategic plan District of Kusan Hilir 2016-2021, Tanah Bumbu.

District of Tanah Bumbu. 2017. District of Tanah Bumbu in Fig. s. Central Bureau of Statistics, Tanah Bumbu.

Indriyanto. 2005. Forest Ecology. PT. Bumi Aksara. Jakarta.

Mackinnon K, Hatta G, Halim H, Mangalik A. 2000. Borneo Ecology. Prenhallindo. Jakarta.

Muanmar, Suleman SM, Nurdin M. 2017. Types of plants on the coastal coast of Tibo village and its utilization as a learning medium. EJIP BIOL **5,** 58 - 71.

Na'im A, Syaputra H. 2010. Citizenship, ethnicity, religion, and everyday language indonesian population census population results 2010. Central Bureau of Statistics. Jakarta.

Pirnanda D. 2016. Draft field guide to the type of mangrove in the national park area of Sembilang South Sumatera. Bioclime- GIZ.

Purwanti, R. 2016. Etnobotani study utilization of mangrove types as a medicinal plant in Sulawesi. Proceedings of the 50th Indonesia National Medicinal Seminar 340 - 348.

Radam R, Soendjoto MA, Prihatiningtyas E, Rahmadi A, Rezekiah AA. 2016. Plant species utilized in treatment by three ethnicities in Tanah Bumbu District of South Kalimantan. Paper in Proceedings of National Seminar and Degree of Product, SENASPRO 81 - 93.

Rahayu M, Sunarti S, Sulistiarini D, Prawiroatmodjo D. 2006. Utilization of traditional medicinal plants by local people in Wawonii Island, Southeast Sulawesi. Journal of Biodiversity **7**.

Salim Z, Mudani E. 2017. Info commodity of medicinal plants. Agency for the Assessment and Trade Development of the Ministry of Trade of the Republic of Indonesia.

Sandra E, Kemala S. 1994. Overview of tropical forest demand for Indonesia. Paper in Preservation Book of Indonesian Tropical Forest Diversity Utilization. Department of Forest Resources Conservation Faculty of Forestry IPB and Indonesia Tropical Nature Institute (LATIN). Bogor.

Subdistrict of Kusan Hilir. 2017. Subdistrict of Kusan Hilir in Fig. s. Central Bureau of Statistics, District of Kusan Hilir. Kusan Hilir.

Sugiyono. 2007. Statistics for Research. Alfabeta. Bandung.

Syuhudi MI. 2015. Sanro makassar: treatment mechanism and patient maintenance strategy. Jurnal WALASUJI **6,** p 61-72.

Wahyudi. 2013. Handbook of nontimber forest products. International Tropical Timber Organization (ITTO). Yogyakarta.

Zuhud EAM, dan Hikmat A. 2009. Indonesia Tropical Forest as Natural Medicinal Material Warehouse for the Nation's Independent Health. Paper in the Book of Biofarmaka Rampai Forestry Indonesia from Forest Plants for the Excellence of the Country and Country. Center for Research and Development of Plantation Forest. Agency for Forestry Research and Development. Ministry of Forestry, Jakarta.

Zuraida, Lelana A, Nuroniah S. 2009. Development of Forest Biopharmaca. Paper in the Book of Biofarmaka Rampai Forestry Indonesia from Forest Plants for the Excellence of the Country and Country. Center for Research and Development of Plantation Forest. Agency for Forestry Research and Development. Ministry of Forestry, Jakarta.

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