



The Use of SASAMBO Culture in Learning Natural Product Chemistry to Support Traditional Health Tourism in Lombok and Sumbawa Islands

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Abstract: The SASAMBO (Sasak, Samawa, Mbojo) tribe has a variety of medicinal plants. The abundance of SASAMBO tribal medicinal plants can be used in learning the natural product chemistry which are expected to support traditional health tourism on the islands of Lombok and Sumbawa. Natural product chemistry examines the chemical content associated with the efficacy of a medicinal plant. This linkage can provide scientific support for the use of SASAMBO traditional medicinal plants. The method used in this research is the study of literature and questionnaires. Data sources came from public records, the results of questionnaire responses, and scientific articles related to SASAMBO traditional medicine. The results showed that there were various SASAMBO medicinal plants which were potentially used in the study of natural product chemistry with details, Lombok (Sasak) 43 species, Sumbawa (Samawa) 25 species, and Bima (Mbojo) 35 species. Some of these plant species are used for the treatment of diseases caused by viruses, so it has the potential to be used to treat corona outbreaks. Lombok and Sumbawa islands have abundant medicinal plants, this makes the two islands potential as a traditional health tourism destination.

Keywords: Medicinal plants; SASAMBO; Health Tourism.

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Introduction

Indonesia, which is an archipelago, which certainly has a variety of tribes and traditions. The tradition is mainly in the health field, namely medicine. Clinically there are several medicinal plants used in medicine by the community. The plant was even planted in the home yard by the community. These medicinal plants include: Turmeric, Temu lawak, Kencur, Ginger, Galangal, Salam Leaves, Noni, Cat Mustache, Mahkotadewa, Soka, Jasmine, Papaya, Cocor Duck, Guava, Guava, Fruit Star, Betel, Lime, Katuk, Katuk, Turmeric White, Aloe Vera, Alang-alang, Starfruit Wuluh, Giring Giring, Sweet Potatoes, and

Beluntas (Jiwantoro, dkk 2017). One area in Indonesia that has a variety of medicinal plants is the West Nusa Tenggara (NTB) area. NTB has 2 large islands namely Lombok and Sumbawa. The two islands have 3 tribes namely the SASAMBO (Sasak Samawa Mbojo) tribe. The Sasak are on the island of Lombok, the Samawa and Mbojo are on the island of Sumbawa.

The SASAMBO tribe has medicinal plants used in the treatment of various diseases. There are various medicinal plants that can be used to treat diseases caused by viruses, so it has the potential to be used to treat corona outbreaks. The Samawa tribe has one of the most well-known traditional medicines, namely Sumbawa oil, said oil can cure various diseases and is

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used for generations by the people of Sumbawa. Sumbawa oil is made from a variety of plant species (Rahayu, 2016).

Traditional medical practices generally utilize various types of plants and animals for the treatment of diseases. Mild and severe diseases are treated by using herbs from certain types of plants and animals found around the yard of the house and in the forest. Such treatment can still be found among rural and urban communities (Sugiarto & Wulansari, 2018). The development of SASAMBO traditional medicine can make NTB a health tourism destination.

The direction of local government policy especially in the tourism sector in NTB is sustainable tourism management. The management of sustainable tourism is guided by the 4 pillars of tourism, namely the development of destinations, marketing of tourism, industry and institutions. To support this, the provincial government issued various policies such as the Visit Sumbawa Lombok Program, Friendly Lombok and the Enchantment of Sumbawa as branding (Munir, U., et al. 2018).

Various cultural properties of SASAMBO medicinal plants can be used in learning Natural Product Chemistry (NPC). In terms of NPC, the efficacy of a medicinal plant is related to the content of secondary metabolites. NPC examines the type, distribution, and function of secondary metabolite

compounds contained in organisms. The diversity of secondary metabolites comes from biodiversity. SASAMBO medicinal plant diversity is very high, so that it has the potential to advance the NPC.

Method

The method used in this research is the study of literature and questionnaires. Data sources came from public records, the results of questionnaire responses, and scientific articles related to SASAMBO traditional medicine. The data obtained were analyzed quantitatively and qualitatively. The data is processed through 3 three stages of analysis, namely data reduction, data display and conclusion.

Result and Discussion

Medicinal plants in the Sasak tribe are about 163 types of plants with different properties and ways of making and using drugs. In addition to Sasak tribe, Sumawa tribe also has various types of medicinal plants, there are about 40 medicinal plants found in Batu Bangka village, Sumbawa. The Mbojo tribe also has traditional medicinal plants, there are about 45 types of medicinal plants that are used for generations by the mbojo (Bima) tribe community (Ani, N. et al, 2018). The SASAMBO medicinal plants are shown in the Table 1.

Tabel 1. SASAMBO Medicinal plant data

Regional Name	No	Name of Medicinal Plant			Use
		Local Name	Indonesian name	Latin name	
Lombok (Sasak)	1	Api-api	Api-api	<i>Avicennia officinalis</i>	Treat smallpox
	2	Ati beru	Ajang Kelicung	<i>Diospyrus vilaria</i>	Treating tiwan and hernia
		Ayan/kelicung			allergy "borot"
	3	Banten		<i>A. grandiflora</i>	Treat rheumatism and ulcers
	4	Bebele	Maja	<i>Aedle marmelos (L) Correa</i>	Treating gonorrhoea and mumps
	5	Barora	Katimaha	<i>Klenhovia hospita</i>	Treat thrush
	6	Blandengan	Lamtoro/petai cina	<i>Leucaena glauca (lamk) de wit benth</i>	Anthelmintic
	7	Bunga kumbi		<i>Tabernaemontana sphaerocarpa BI</i>	Eye medicine
	8	Daun bakung	Daun bakung putih	<i>Crinum asiaticum</i>	Wound medicine
	9	Daun bebenyah	Daun akar aur-aur	<i>Commelina diffusa Burm f.</i>	Medication for menstruation, fever, and headaches
	10	Daun empet-empet	Daun sisik betook	<i>Desmodium triflorum (L) DC</i>	Medication for wounds and diarrhea
	11	Daun geronong bodok		<i>Crotalaria usaramoensis Baker f</i>	Red eye drops
	12	Daun pecut jaran	Daun pecut kuda	<i>Stachytarpheta jamaicensis (L) Vahl</i>	Cough and tonsill medicine
13	Daun seripa	Daun tempuh wiyang	<i>Emilia sonchifolia (L) DC</i>	Wound medicine	
14	Daun Sesapa	Daun sembung	<i>Blumea balsamifera (L) DC</i>	Treating rheumatism, joints,	

Regional Name	No	Name of Medicinal Plant			Use
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					influenza, diarrhea and menstrual pain
	15	Daun Srikaya Bayan	Daun srikaya	<i>Annona squamosal L.</i>	Treat wounds, ulcers, boils, coughs and fever
	16	Daun telinga bangket	Daun pegagan hijau	<i>Centella asiatica (L) Urban</i>	Medicine for fever and urine laxative
	17	Daun terinjing	Daun tempuyung	<i>sonchus oleraceus L</i>	Wound medicine
	18	Entut-entut	Daun kentut	<i>Paederia foetida L</i>	Treat stomach aches and back pain
	19	Geguthu	Kanyere badak	<i>Bridelia stipularis (L) BI</i>	Treating dysentery
	20	Gambir	Gambir	<i>Uncaria gambir</i>	Treating dysentery
	21	Grepek	Dadap	<i>Erythrina sp</i>	Treat smallpox
	22	Inggu	Asafetida	<i>Ferula asa-foetida</i>	Treating migraines
	23	Jambokan	Patikan kebo	<i>Euphorbia hirta L.</i>	Medication for wounds and dysentery
	24	Jarak	Jarak	<i>Jatropha curcas L</i>	Medication for worms, flatulence and wounds
	25	Jeringo	Jeringau	<i>Acorus calamus</i>	Treat stomach aches and pain
	26	Jeliti	Mentaok	<i>Wrightia javanica</i>	Treat rheumatism
	27	Jowet	Jamblang/jambu keeling/duwet	<i>Eugenia cumini</i>	Treat stomach aches, silent dysentery and ulcers
	28	Kekosok	Ardisia	<i>Ardisia javanica DC</i>	Treating smallpox
	29	Kelokos udang	Daun salam	<i>Syzygium polyanthum</i>	Treating scaly skin
	30	Kendal	Kendal	<i>Cordia obliqua willd</i>	Fever medicine
	31	Kethuk	Bira	<i>Alocasia sp</i>	Treat snake bites, malignant ulcers and nerve rashes
	32	Kulit batang durenan		<i>Knema sumatrana (blume) W.J. de wilde.</i>	Malaria medicine
	33	Lebui	Kacang gude/kacang kayo	<i>Cajanus cajan</i>	Treating urinary stones
	34	Daun lekong	Daun kemiri	<i>Aleurites moluccana (L)</i>	Treat silu and cold allergies
	35	Lembukik bulu	Pohon ara	<i>Ficushispida L</i>	Shortness of breath medicine
	36	Lita	Pulai	<i>Alstonia scholaris</i>	Treat ulcers
	37	Meniran	Meniran	<i>Phyllanthus niruri</i>	Treat kidney, diabetes and eczema
	38	Randu	Kapuk randu/kapuk	<i>Ceiba pentandra</i>	Treating tartar
	39	Sereto	Serut pagar	<i>Ehretia microphyla</i>	Treat malaria
	40	Suren	Surian	<i>Toona sureni</i>	Treat boils
	41	Songgo langit	Gletang	<i>Tridax procumbens</i>	Treat lumbago, kidney, high blood pressure and cholesterol
	42	Tanaman sumangge	Daun asam kecil	<i>Oxalis corniculata L</i>	Cough medicine
	43	Wareng	Wareng	<i>Gmelina asiatica L</i>	Medicine for itching and earaches
Sumbawa (Samawa)	1	Aren	Enau	<i>Arenga pinnata Merr</i>	Treat kidney stones and canker sores
	2	Cabe jawa	Cabai jawa	<i>Piper retrofractum</i>	Treat toothache and enter angina
	3	Ceplukan	Ceplukan	<i>Physalis Angulata L</i>	Treat hypertension and diabetes
	4	Dadap	Dadap	<i>Phyllanthus acidus L</i>	Treating fever, intestinal worms and launching menstruation in women
	5	Gadung	Gadung	<i>D. hispida</i>	Treating leprosy, and calluses
	6	Gambir	Gambir	<i>Uncaria gambir hunter R</i>	Treat thrush and diarrhea
	7	Gayam	Gayam	<i>Inocarpus Fagiferus</i>	Diarrhea Medication
	8	Kecubung	Kecubung	<i>Datura suaveolens Humb</i>	Treating rheumatic asthma and

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					back pain
	9	Kenanga	Kenanga	<i>Cananga odorata</i>	Treating shortness of breath, malaria, bronchitis, scabies, and jaundice
	10	Kesambi	Kesambi	<i>Schleichera Oleosa Merr</i>	Treating scabies and scars
	11	Kluwih	Kluwih	<i>Artocarpus camansi</i>	Treat toothache and cholesterol
	12	Kumis kucing	Kumis kucing	<i>Orthosiphon Aristatus</i>	Treating kidney stones and diabetes
	13	Mangkokan	Mangkokan	<i>Polyscias Scutellaria</i>	Treating inflammation of the breast and difficult to urinate
	14	Mengkudu	Mengkudu	<i>Morinda citrifolia L</i>	Treat hypertension and inflammation of the intestine
	15	Meniran	Meniran	<i>Phyllanthus Niruri L</i>	Treating gonorrhea, inflammation of the stomach and malaria
	16	Merambung	Merambung	<i>Vernonia arborea</i>	Treat thrush and fever
	17	Mindi	Mindi	<i>Melia azezarach</i>	Treating high blood pressure and intestinal worms
	18	Mundu	Mundu	<i>Garcinia, spp</i>	Treat mumps and wounds
	19	Patikan kebo	Petikan kebo	<i>Euphorbia Hirta L</i>	Treating strep throat and bronchitis
	20	Randu	Randu	<i>Ceiba pentandra</i>	Treat hemorrhoids, dysentery and heartburn
	21	Saga	Saga	<i>Abrus precatorius</i>	Medication for thrush and tonsils
	22	Sambung nyawa	Sambung nyawa	<i>Gynura procumbens</i>	Treating cysts, cancer and tumors
	23	Serut	serut	<i>Streblus asper,,Lour</i>	Hepatitis drugs and boils
	24	Srikaya groso	Srikaya	<i>annanasquamosa</i>	Treating intestinal worms and digestive disorders
	25	Tanjung	Tanjung	<i>Mimusops elengi L</i>	Treat headaches and fever
Bima (Mbojo)	1	Anggo	Kersen	<i>Muntingia calabura</i>	Treating gout, stomach cramps and antioxidants
	2	Dungga Mbudi	Jeruk purut	<i>Citrus hystrix</i>	Treat joints and gout
	3	Dungga Ncia	Jeruk nipis	<i>Citrus auratifolia</i>	
	4	Duwe	Jamblang	<i>Eugenia cumini</i>	Treat stomach aches, silent dysentery and ulcers
	5	Garoso Jawa	Sirsak	<i>Annona muricata</i>	Treating cholesterol and gout
	6	Garoso mbudi	Srikaya	<i>Annona squamosal</i>	Treating intestinal worms and digestive disorders
	7	Golka	Kirinyuh	<i>Chromolaena odorata</i>	Treat ulcer and vertigo
	8	Jambu Doro	Jambu batu	<i>Psidium guajava</i>	Smooth the digestive tract and increase blood platelets
	9	Kajabu	Sintrong	<i>Crassocephalum</i>	Prevents cancer
	10	Kajara Sarui	Bayam duri	<i>Amaranthus spinosus</i>	Treating gonorrhea and hemorrhoids
	11	Kakapi Na'e	Ketapeng cina	<i>Cassia alata</i>	Treating eczema, tinea versicolor and ringworm
	12	Kambesi	Katuk	<i>Sauropus androgynous</i>	Treat wounds and anemia
	13	Kana'a	Patikan kebo	<i>Euphorbia hirta</i>	Treating strep throat and bronchitis
	14	Kana'a Keta	Patikan cina	<i>Euphorbia thymifolia</i>	Treating dysentery and hemorrhoids
	15	Mahoni	Mahoni	<i>Swietenia mahagoni</i>	Treating constipation and menstrual pain
	16	Mangge	Asam	<i>Tamarindus indica</i>	Streamlining the digestive system
	17	Nceha	Tapak Liman	<i>Elephantopus scaber</i>	Treating inflammation, influenza and vaginal discharge

Regional Name	No	Name of Medicinal Plant			Use
		Local Name	Indonesian name	Latin name	
	18	Nonu	Mengkudu	<i>Morinda citrifolia</i>	in women Treat hypertension and inflammation of the intestine
	19	Ntonu	Lempuyang Gajah	<i>Zingiber zerumbet</i>	Treat allergies and infections
	20	Pataha	Kemangi Hutan	Kemangi Hutan	Treating colds, headaches and intestinal worms
	21	Pate	Lamtoro	<i>Leucaena leucocephala</i>	Treating intestinal worms and ulcers
	22	Pawu Keta	Bandotan	<i>Ageratum conyzoides</i>	Treat ulcers
	23	Rera sawa doro	Lidah Ular	<i>Hedyotis corymbosa</i>	Decay urine and maintain kidney health
	24	Rondu	Bungur	<i>Lagerstromieia speciosa</i>	Treating toothache and coughing up blood
	25	Ro'o Parongge	Kelor	<i>Moringa oleifera</i>	Treat cholesterol and nourish the eyes
	26	Ro'o Praja	Cincau rambat	<i>Cyclea barbata Miers</i>	Treat fever and diabetes
	27	Sabia	Cabai Hutan	<i>Piper retrofractum</i>	Treat anemia, cholera and bronchitis
	28	Sambi	Kesambi	<i>Schleichera oleosa</i>	Treating eczema, scabies and ulceration
	29	Soka	Krokot	<i>Portulaca sp.</i>	Maintain eye health
	30	Songga	Bidara Laut	<i>Strychnos lucida</i>	Treat rheumatism and wounds
	31	Supa	Secang	<i>Caesalpinia sappan</i>	Treat diabetes
	32	Tamba	Brotowali	<i>Tinospora crispa</i>	Treating gout and diabetes
	33	Tatanga	Jarak Pagar	<i>Jatropha curcas</i>	Treat wounds, colds and flatulence
	34	Tula	Pulai	<i>Alstonia scholaris</i>	Treat ulcers
	35	U'a	Pinang	<i>Areca catechu</i>	Treating intestinal worms and glaucoma

Source: Public records, questionnaire responses, and scientific articles (Yamin, et al., 2018; Jannah & Safnowandi 2018)

The data in Table 1 shows the diversity of traditional medicinal plants owned by the SASAMBO community. The diversity of medicinal plants provides evidence that the rich nature of Indonesia. Various medicinal plants, indicating the efficacy of these medicinal plants. Ranging from treatment for minor illnesses to treatment for severe illness. All parts of the medicinal plant can be processed based on a hereditary prescription from the ancestors. Several species of plants are used to treat diseases caused by viruses, so it has the potential to be used to treat corona outbreaks.

Literature studies show that various parts of the SASAMBO medicinal plant can be formulated as a healing herb, namely:

1. Leaves

The process of compounding the leaves of medicinal plants as a healing herb, namely: (1) the leaves are ground, (2) given a little water and placed on the body that feels pain. As for other ways of processing medicinal plant leaves namely. (1) boiled leaves of medicinal plants, (2) then drink the water. (Jannah, & Sasnowandi, 2018).

2. The stem

The process of compounding the stems of medicinal plants as a nutritious concoction, is done in a way that is, (1) the stems of medicinal plants are boiled in a container filled with water and (2) the boiled water is drunk (Ariadi, L. M, 2017).

3 pieces

The processing of medicinal plants is carried out in several ways, namely: (1) the fruit is ground (mashed) (2) then filtered the fruit that has been mashed (3) add water to the screening process. (Yamin M, et al, 2018).

4. Root

The process of processing the roots of medicinal plants is carried out in several ways, namely: (1) the roots are boiled in a container filled with water (2) the boiled water is drunk. (Jannah, & Ridwan, 2017). Flower are usually used without being processed and directly used by the community. (Sugiarto, & Wulansari, 2018).

The concoctions produced by the SASAMBO community are diverse and nutritious. If the medicinal plants and concoctions of the SASAMBO community

are well managed, they can become a separate income for the SASAMBO community. This management can be in the form of community empowerment and the provision of facilities in the development of health tourism (herbal). Herbal tourism is one of the attractive tourist destinations for tourists because of its natural beauty, herbal products, and the friendliness of its people (Waruwu, et al, 2020).

The SASAMBO medicinal plants described above can be used in learning Natural Product Chemistry (NPC). NPC examines the type, distribution, and function of secondary metabolite compounds contained in organisms. The secondary metabolite compounds referred to are terpenoids, steroids, phenyl propanoids, polyketides, flavonoids, and alkaloids.

Learners can do a project-based learning by isolating secondary metabolite compounds found in SASAMBO medicinal plants. Learning projects can vary each year by replacing plant species that have been isolated from their chemical contents. This activity will give students the opportunity to improve higher order thinking skills such as critical thinking skills, creative thinking skills, decision making skills, and problem solving skills related to the process of isolating secondary metabolites from SASAMBO medicinal plants.

Conclusion

The diverse medicinal plants of the SASAMBO community and the effective concoction of concoctions can make the island of Lombok and Sumbawa as a health tourism destination (herbal). The various SASAMBO medicinal plant species can be used in the study of natural product chemistry (NPC). NPC examines the chemical content associated with the efficacy of a medicinal plant. These skills can provide scientific support for the use of SASAMBO traditional medicinal plants.

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