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SUNDANESE INDIGENOUS KNOWLEDGE IN SINDANG BARANG CULTURAL VILLAGE – BOGOR

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Abstract

The Sindang Barang Cultural Village was formed by the descendants of customary holders who live in Bogor to revitalize Sundanese culture. This is useful for preserving customs so that people can continue to live the Sundanese way (using indigenous knowledge and sticking to local wisdom) even though they live in the modern era. This study aims to identify the Sundanese indigenous knowledge possessed by them. This study uses a qualitative thematic analysis approach to identify it. The results of this study indicate that the themes of indigenous knowledge owned by the society are village landscape, agriculture, natural signs, health, and batik. The village landscape has sub-themes landscape of land and building position. The sub-themes of agriculture are the type of paddy, fertilizer, planting time, magic guard, and granary. Natural signs have the sub-themes of changing days and signs of calamity and disaster. The sub-theme of health is herbs. Batik has a sub-theme of motifs and natural dyes. This study found that some of the indigenous knowledge about herbs and batik had been lost from the people's memory.

Keywords: indigenous knowledge, *sindang barang*, Sundanese

Introduction

The Sindang Barang Cultural Village in Bogor district is the result of the efforts of traditional holders to preserve the Sundanese culture inherited from their ancestors. This effort is important because Bogor is one of the archaeological heritage sites of Sundanese culture. Abah Etong Sumawijaya (the former leader of Sindang Barang) continued the ancestral efforts to maintain the Sindang Barang culture to stick to Sundanese customs until 1971. From 1971-2005 Sindang Barang did not have a traditional head. This caused concern for Abah Entong Sumawijaya's grandson, Achmad Mikami Sumawijaya. In 2006, he together with traditional leaders, elders, and the community agreed to establish The Sindang Barang Cultural Village so that Sundanese culture stay maintained. The village was inaugurated by

the Governor of West Java on September 4, 2007. Achmad Mikami Sumawijaya (Abah Maki) was elected as *pupuhu* (the new leader). *Pupuhu* is responsible for maintaining Sundanese wisdom and ensuring that people continue to use indigenous knowledge in their lives.

Masekoameng & Molotja (2019) argued that there is no single definition of indigenous knowledge (IK). IK is usually described as indigenous knowledge from the community, the knowledge that is still traditional, or local knowledge that is only owned by certain communities. Mazlan & Omar (2012) explained indigenous knowledge is usually stored in the memory of traditional leaders, elders, and people who are considered experts in certain customs. It has not been explored and documented. Indigenous knowledge of the Sundanese can be seen in the research of Wicaksana & Sumaryana (2018) exemplifying the knowledge of Sundanese in Baduy-Dalam. The community in this traditional village calls Orion *kidang* and venus as *Bintang Timur* (the eastern star). Orion or *kidang* is used to indicate the time to farm. Venus is east direction. The result of the study by Nikmatullah et al. (2019) shows that the people in Baduy-Dalam know herbs. There are 54 types of plants that they used to make medicine.

Based on those two research results, we argue that other villages also have local knowledge that represents Sundanese culture. We chose Sindang Barang Cultural Village because it is located in Bogor. Bogor's relationship with Sundanese culture is explained by Gultom (2018) that the name Sunda is listed on the Kebon Kopi II Inscription found in Bogor. Pusparini et al. (2017) said, since the 17th century Bogor has been the center of civilization of the Padjadjaran Kingdom. Bogor's position as a historical city has continued into the modern era. In 2012 the Ministry of Public Works and Public Housing of the Republic of Indonesia through the Directorate General of Spatial Planning and Indonesian Heritage Preservation Agency designated Bogor as one of the Heritage Cities in Indonesia. Nature and culture in Bogor are considered to have a history that represents one of the tribes in Indonesia, namely the Sundanese.

One of the places in Bogor that are considered sacred by the Sundanese is Sindang Barang. Abah Maki explained that the land which is currently used as The Sindang Barang Cultural Village was formerly a sacred place for the Sunda Galuh kingdom (12th century) during the reign of King Wisnu Barata. Sindang Barang's position as a sacred place is evidenced by the menhirs, dolmens, punden terraces, Jalatunda wells, and Sri Bagenda Park around this cultural village. The status of Sindang Barang as a sacred place persisted until the Sunda Galuh Kingdom changed its name to the Padjadjaran Kingdom (13th to 15th centuries). The palace for Dewi Kentring Manik Mayang Sunda (one of the wives of Prabu Siliwangi or King Padjadjaran) was built on Sindang Barang land.

Even though people currently live in the modern era, they have not abandoned Sundanese cultural values according to the teachings of their ancestors since the days of the kingdom. Based on the results of our survey, it can be seen that the Sindang Barang Cultural Village holds the collective memory of the Sundanese people about their identity. In this place, there are traditional houses, rice storage warehouses, and halls. Those traditional buildings were built according to the Sundanese rules. Some residents also grow herbs. They plant it in front or beside the houses. Another thing that reminds us of the identity of the Sundanese is the position of the village which was established in the highlands. The terraced land

contour is the most suitable place to build a Sundanese village. This fact forms the basis of our argument that the Sindang Barang Cultural Village has indigenous knowledge that is typical of the Sundanese. Therefore, we are interested in research to identify the kind of indigenous knowledge.

Method

This study used a qualitative thematic analysis approach to identify indigenous knowledge in the Sindang Barang Cultural Village. According to Braun & Clarke (2013), qualitative research is research with data in the form of spoken, written, and image forms that is not intended for generalization. Qualitative research has thick descriptions of research results to interpret more local meanings. The Thematic Analysis (TA) approach is useful for identifying themes and patterns of meaning in the dataset according to the research question. The analysis is not shaped by theory but is shaped by the researcher's point of view based on epistemological principles without having to study theoretical constructions in depth.

Our data collection technique was carried out through direct visits. We saw the terraced land, traditional houses, herbal plants, batik, food storage warehouses, and paddy fields. We interviewed Abah Maki (*pupuhu*/customary leader), Abah Ukat (*kokolot*/elder), and Emak (one of the residents). The results of our observations are written in the form of a description of what is in the location (the land, houses, herbal trees, batik, warehouses, and fields). We also recorded the interview process. We copied the recordings of the interviews in written form. We read the texts from our observations and interviews repeatedly until we get the themes, sub-themes, and explanations. The results of our analysis are presented in the narrative. This is as stated by Braun & Clarke (2013) that the thematic analysis stages are reading data (textual or audio-visual data must be read, listened to, and watched many times), noting unique keywords, determining themes, defining the themes, creating subtheme map, explaining the subthemes, analyzing the relationship between the themes and subthemes, and displaying the results of the analysis.

Findings and Discussion

According to Gupta (2015), knowledge is part of a culture, created from various facts, and contains information. The knowledge that is identical to a particular culture, is traditional, and applies to local customs is known as indigenous knowledge (IK) that does not use written or printed learning media, is not created in the laboratory, and is not learned in formal education. It is created because of the long process of community interaction with nature. They recognize what is happening around them, and believe what they see and feel. Beliefs in the natural events they see are associated with religion. Although belief in the supernatural is sometimes perceived by modern society as a superstitious practice, indigenous peoples still regard the supernatural as a part of life. Indigenous knowledge is also owned by Sindang Barang as in table 1.

Themes	Subthemes	Brief Explanation
Village Landscape	the landscape of the village land Building position	Forest, settlement, and paddy fields Customary leader's house, meeting hall, paddy barn
Agriculture	Paddy type Natural Fertilizer Magic guard Planting time	<i>Ketan, cerei, sri kuning, and kewal</i> Salt used for fish preservation The Scarecrow Based on day, month, and constellation
Natural sign	Granary Change of days Signs of calamity and disaster	Rice storage Late afternoon Animal sound
Health	Herbs	Fever Pain in the stomach Skin disease Toothache Bruises
Batik	Motif Natural dyes	Especially for the royal family, commoners Leaves, fruit skins, flowers, and tree bark

Village landscape

The people in Sindang Barang have indigenous knowledge about the landscape following Sundanese customs. Customary leaders and elders always choose hilly locations as their territory. In general, they divide the territory into three positions (up, middle, and down). The upper part (such as the highest land or hilltop) is devoted to sacred places such as *human tupan* (forest prohibition), places of worship, and ancestral tombs. The middle position is a residential village (leader's house, meeting hall, rice barn, and residents' houses). Paddy fields, fields, farms, and ponds are in the lowest plains, usually next to rivers. An illustration of a village that is under Sundanese customs can be seen in Figure 1.

The landscape of village land



Figure 1. Illustration of Sundanese village

According to Abah Maki, the location of the Sindang Barang Cultural Village is by the principle of *warugan lemah* (good land layout according to the Sundanese) namely *ngalingga manik* (land in hilly areas), and *bahe ngaler* (land extending to the north). This formation is suitable for traditional villages. The Sindang Barang Cultural Village was built in a hilly area with a land position that extends from south to north. Abah Ukat added, the lower part is used as paddy fields, vegetable gardens, and farms. This area is in the form of terraces and is usually next to or close to a river. Farmers often use rivers to irrigate rice fields during the dry season and bathe the livestock. Near the river also grow herbs that can be used for medicine.

According to Phungpracha et al. (2016), the form of terracing land is useful for farmers to regulate water for rice fields. Rice fields in hilly areas are also useful as a preventive measure for soil erosion. Camacho et al. (2016) explained that the Philippines has a land division system according to customary law. The zoning set by *Muyong* is the boundaries of settlements, forests, grasslands, fields, and terraced rice fields for maintaining harmonious relations between the community and nature and for avoiding land ownership disputes because there are sanctions that apply traditionally to people who violate this rule.

Building position

Abah Ukat explained that the ancient traditional village arrangement was also like Sindang Barang Cultural Village. When viewed from afar, Sindang Barang Cultural Village is located in the hills. *Imah gede* (the house of the leader) and the house of the elders are on the highest residential land (not parallel to the ordinary people's houses). Just like rice planting time, the best time to make a house is Thursday and Sunday. A good house position is facing south. In settlements, *leuit* (rice barns) and *saung talu* (a multipurpose buildings for entertainment performances, dance practice, and craft-making) are generally erected in the settlements.

Agriculture

According to Abah Ukat, some people in Sindang Barang are still farming traditionally (selecting seeds, calculating planting time, fertilizing, to getting rid of pests).

Paddy type

The paddy planted is large-grain paddy such as *padi ketan* (*Oryza Sativa* L. Var. *Glutinosa*), *cere* (*Oryza Sativa* L. Var. *Sinica/Japonica*), *sri kuning* or *gogo* (rice growing on dry land), and *kewal* (paddy typical of Banten). These types of rice are now classified as rare because farmers generally do not want to plant the reason that the harvest period is long, only once or twice a year. They prefer the type of rice with small grains that can be harvested up to three times a year. However, according to Abah Ukat, large-grain rice tastes much better than small-grain rice and is healthier because it is grown using natural fertilizers.

Natural fertilizer

Abah Ukat acknowledged that some farmers have used chemical fertilizers for rice. They reasoned practical and cheaper. Some other farmers still use natural

fertilizers, namely *garam krosak kuning* (yellow coarse salt). It is the salt used for fish preservation in the home industry for *pindang ikan cue* (boiled cue fish). They believe that this type of salt contains residual nutrients from fish so it is good when used to make fertilizer. According to Gondek et al. (2020), not all salt can be used for fertilizer but salt containing K^+ , Ca^{2+} , SO_4^{2-} , CO_3^{2-} , and NO_3^- can improve soil health to support plant growth.

Magic guard

The belief is the existence of supernatural powers that can protect paddy from calamities. They place *orang-orangan sawah* (scarecrows) in several corners of the fields as a medium to prevent disaster so that paddy can thrive and be free of pests. Respondents in the study of Król et al. (2019) explained that scarecrows are human-like dolls made of straw. This doll is wearing a shirt, belt, and hat. It is to protect the fields from pests, especially birds. The majority of farmers in Poland still install scarecrows at the end of the 20th century. They believed in her magical powers to protect the fields. This belief is still held firmly by old farmers.

Planting time

Farmers rely on the constellation *waluku* (Orion). When the star is above (Oktober) is the best time to plant crops that also grow to the top (rice and corn). When the Orion is below (May), they use the land to plant plants that grow below (cassava and sweet potatoes). The rotation of rice, corn, cassava, and sweet potatoes on the same land is useful to complement the needs of the community for the need of main food. According to Masekoameng&Molotja (2019), the seasonal calendar is useful as a calculation of the right time for plowing, planting, fertilizing, weeding, and harvesting. Phungpracha et al. (2016) gave an example of farmers in Ban Pa village in Thailand also planting different plants at different times but on the same land. They plant corn, rice, and black beans alternately in one field for the community's needs.

Farmers in Sindang Barang believe that the good days for planting rice are Thursday and Sunday. Thursday is identical to the wind element and Sunday represents the cloud. They believe that wind and clouds greatly affect the growth of rice. They also believe that the best position of the farmer's body when planting rice is facing west because the rice needs sunlight. When harvesting farmers face east and south. The taboo position of planting and harvesting is facing the north. They believe that the north is a bad direction for agricultural activity. The day that is believed to be bad for agricultural activities is Tuesday. They will not plant, harvest, take paddy from the barn or pound it on Tuesday.

Sereenonchai & Arunrat (2018) argue that local farmers must have in-depth knowledge of agricultural systems and ecosystems in their respective areas. Tanyanyiwa (2019) said local knowledge about climate that will affect agriculture is still used by farmers in Zimbabwe. They know how to recognize climate change that has an impact on agriculture. Extreme climates will affect crop production. Low yields will have an impact on people's food security. According to Phungpracha et al. (2016), food security is a very complex national problem that involves the community's need for food and the challenges to fulfill it so that people are free from hunger.

Granary

Food security is a problem that is often faced by the community, not least in Sindang Barang. The main cause of this problem is crop failure due to bad weather, pests, and infertile fields. This became a valuable lesson for them until found a solution by making *leuit* (granary). *Leuit* is a traditional building. The walls are made of woven bamboo, the roof is made of palm leaves (*Arenga pinnata*), and the pegs of the sago tree (*Metroxilon sago*). Natural materials allow *leuit* buildings to have air cavities so that indoor circulation is maintained. Thus the rice will not become moist. This building is placed on a stone foundation so that the floor does not touch the ground so preventing it from getting wet, especially during the rainy season. The wooden floor is given *teureup* leaf (*Artocarpus elasticus*) to avoid insects. Special storage areas for foodstuffs also exist in southern Africa. Kamwendo&Kamwendo (2014) explains that people in Malawi make *msanja* as a place to store food (Millet, sorghum, unpeeled beans, peas) so that they do not run out of food throughout the year. *Msanja* is a tall table mounted above the fireplace (in the kitchen). The smoke from the stove will prevent the food wet.



Figure 2. Leuit

Farmers in Sindang Barang also know about preserving paddy so it is not moist when stored in *leuit*. The harvested paddy is then dried in the sun. If the rainy season, it is smoked until it dries. Mhache (2018) explained that the people in the Mbokomu (Kilimanjaro Region) also have their knowledge and system for selecting and preserving raw food. Big and smooth corn and bean seeds are selected immediately after harvest, dried in the sun, and hung on the kitchen roof so that they are exposed to the smoke from the stove. This smoke slowly keeps the seeds dry. Asogwa et al. (2017) admitted the importance of indigenous knowledge on food preservation for 240 million people in sub-Saharan Africa. They preserved food under the hot sun. They also fermented grains, fruits, and vegetables. This method has proven to be effective in ensuring the availability of food ingredients for years.

Natural signs

The Sundanese have a different calculation of the turn of the day with the modern calendar (AD). The change of day for Sundanese customs begins after sunset (6 p.m), not after midnight. Sundanese people also still believe in natural signs that indicate disaster.

Change of the days

Abah Ukat told, his family often taught him how to recognize natural signs to recognize the time, animal sounds, and signs of disaster. When dusk begins to darken (6 p.m), it is time for the turn of the day. After that hour, it will be the next day. If a child is born on Thursday afternoon (modern calendar) after sunset (around 6 p.m) then for Sundanese, he is born on Friday.

Signs of calamity and disaster

Another natural sign is the unusual sound of animals. The crying sound of a cat and the sound of *kedasih* or *wikwik* bird (*Cacomantis meulis*) indicate that someone will die. The sound of the crow (*Corvus*) is a symbol of calamity, disaster, and news of sorrow. The roaring sound of a tiger is a reminder to perform the *seren taun* ceremony. Misno (2016) explains that *seren taun* is one of the Sundanese rituals to give thanks to the goddess of rice, *Nyi Pohatji* or *Dewi Sri*. People in Sindang Barang believe that *Nyi Pohatji* is the origin of paddy in West Java as well as the protector of it. They believe that if the *seren taun* ceremony is not held, their harvest will fail. Abah Ukat also explained that another natural sign that is often trusted by the community is a sign of disaster, such as a very strong wind blowing in the rainy season. Taremwa et al. (2016) said indigenous knowledge about weather patterns that often occur in Rwanda becomes knowledge to predict how and when natural disasters will occur. This prediction makes them alert so that they can plan disaster mitigation early.

Health

People in Sindang Barang know herbs. When a family member is sick, their grandparents or parents will make potions to cure it. When making medicine, they usually invite other family members to join in concocting herbs. The members will master the types of herbs and the technique of making potions. Abah Ukat also has some knowledge about herbs from his grandmother who worked as a *paraji* (traditional midwife). He was ordered to look for herbs around the house, garden, and near the river. His grandmother explained the medicinal benefits of each plant. When his grandmother mixed and boiled them, Abah Ukat also helped. This assistance activity made him understand herbs. Research by Agung et al. (2019) proved that various ethnobotanical studies recognize the importance of customary management systems on botanical resources. Indigenous knowledge owned by the community is useful for preserving medicinal plants, plants for aromatics, and cosmetics.

Fever

According to Emak, when the whole body feels sore, fever, and the head hurts, this is a sign that the body is not in a fit condition. People usually use *hantap* leaves (*Sterculia Oblongata* R. Brown) as fever medicine. One handful of fresh leaves is washed, crushed, dissolved in 1 cup of water, filtered, and drunk. They drink it twice a day. According to Susiarti et al. (2018), people living under Mount Gede Pangrango Bogor still drink *hantap* boiled water for fever. Pamungkas et al. (2014) made health drink products from *hantap* leaves (*Sterculia Oblongata* R. Brown). The leaf jelly drink contains fiber, carbohydrates, vegetable protein,

phenols, and antioxidants that are useful for health, especially for lowering body temperature or internal heat.

People in Sindang Barang also usually use *buntiris* or *cocor bebek* leaves (*Kalanchoe Pinnata* L) as fever medicine. The plant is mashed, boiled, strained, and drunk while still warm. Mashed *buntiris* leaves can be used to compress the forehead Fernandes et al. (2019) described that *Kalanchoe Pinnata* L. has many uses for treatment such as skin diseases (microbial infections, ulcers, diabetic wounds), respiratory diseases, gastritis, tumors, and cancer.

Emak also explained that *dadap* (*Erythrina Orientalis*) also can be used to relieve body heat by drinking boiled water leaves and compressing the forehead. Kaushal et al. (2020) recognized that medicinal plants are a gift from nature for human society to live a healthy life, for example, the genus *Erythrina*. Plant parts that can be used as medicine are bark, roots, leaves, and flowers. Kumari&Kumari (2017) explained that *Erythrina Variegata* L. contains various sources of nutrients (fiber, potassium, tannins, calcium, phosphorus, magnesium, potassium, sodium, and sulfur).

Pain in the stomach

Another traditional medical knowledge that is mastered by the people of Sindang Barang is healing digestive. They usually eat one piece of turmeric (2 cm) or drink the boiled water of *babadotan* (*Ageratum Conyzoides* Linn) for an ulcer. *Babadotan* used for medicine is a white flower. Singh et al. (2013) explained that *Ageratum Conyzoides* Linn provides analgesic, antimicrobial, and anti-inflammatory. Abah Ukat explained that other digestive problems are *masuk angin* (bloating, stomach bloating, nausea, dizziness, and fever). People often use a decoction of the leaves of *kahitutan* (*Pederia Foetida* Linn.) to cure it. Another way to use this plant is to tie the tendrils of stems to the waist. They believe that this plant will stimulate the stomach to expel gas. Ismawati et al. (2020) explained that people in the Gapura sub-district wrap the tendrils of the *Paedria Foetida* Linn tree around their waists to stimulate defecation. They also put crushed leaves into the stomach to soothe flatulence. According to Dubey et al. (2017), *Paedria Foetida* Linn is also a part of medicine in India because provides anti-inflammatory, antioxidant, antimicrobial, antidiabetic, and antiulcer benefits. In addition, this plant has analgesic and hepatoprotective properties.

People in Sindang Barang believe that the leaves of *hanjuang* tree (*Cordilyne fruticosa*) can treat hemorrhoids. Naher et al. (2019) said *Cordilyne fruticosa* leaves can be used in the treatment of diarrhea. According to Abah Ukat, *emak paraji* (traditional midwives) often make special herbs to be drunk by mothers who have just given birth. One of the herbs used is *paku rane* leaves (*selaginella plana*). Sutoyo et al. (2021) have proven that *Selaginella plana* contain steroids, saponins, phenolics, flavonoids, alkaloids, and tannins that are useful for the body. It is a traditional medicine to treat internal wounds (respiratory tract infections, liver disorders, and urinary tract infections), rheumatism, and increase immunity.

Skin disease

People in Sindang Barang also know about treating diseases on the skin. They treat ulcers using mashed leaves of *jawer kotok* (*Plectranthus scutellarioides*) by placing the paste on the wound. They also believe that bathing with Piper Beetle L.

boiled water will cure itching in the body while reducing body odor. Another leaf that can be used for itching on the skin (ringworm, tinea versicolor, ringworm, and scabies) is *ketepeng* (*Cassia alata*). Mix the leaves and salt, mash finely, then apply to the skin. Sagnia et al. (2014) explained, *Cassia alata* contains antioxidants and anti-inflammatory. Antioxidants are useful for reducing the effects of free radicals. Anti-inflammatory is useful in the natural healing process. Abah Ukat and Emak also used to use the *peteui* leaves (*Parkia speciosa* Hassk) for itching on the skin due to herpes or insect bites. The crushed leaves are attached to the skin. Nikmatullah et al. (2019) explained that the *Baduy-Dalam* (Sundanese village in Banten) people also still use *Parkia speciosa* Hassk to treat itching on the skin.

Toothache

People in Sindang Barang know a natural medicine for toothache, *kamboja* tree (*Plumeria* sp). The sap from this tree (flowers, stems, or leaves) is dripped directly onto the cavities. They also used to drip sap on cotton to apply to a tooth that hurts but doesn't have a cavity. Bihani et al. (2021) explained that *Plumeria obtusa* L. contains essential oils with pharmacological activities such as inhibiting microbial growth, reducing pain in inflammation, and healing wounds. Bihani (2021) added *plumeria rubra* L. is traditionally used to treat skin diseases (wounds, leprosy, boils, itching, and acne), toothache, and earache.

Bruises

Sundanese has a special potion to treat bruises on the body due to bumps, sprains, falls, or after being hit. This herb is named *Cimande* Oil. This oil is also often used by fracture specialists to massage patients when returning the bone to the correct position. Abah Ukat only mentioned two main ingredients to make the oil, namely sugarcane juice (*Saccharum Officinarum* Linn) and coconut oil (*Cocos nucifera*). He kept the secret about the other ingredients. Another requirement in making this oil is that the maker must be menopausal woman. If massage oil is made by women who have not been menopausal, then the benefits will be reduced or even lost. Tlhompho (2014) said, Rre Makoi's traditional knowledge in South Africa also forbids women who are menstruating to be involved in treatment. A woman who is menstruating is considered not to be in a holy state so the medicine she makes will not give healing to the patient.

Abah Ukat also suggested for people who are suffering from bruising drink boiled water from the leaves of *remek daging* (*Hemigraphis colorata* Hall F.) or *ki urat* (*Plantago Major*) to prevent heartburn and Moringa leaves (*Moringa oleifera*) to smooth blood flow and reduce inflammation. Prakashbabu (2017) explained that *hemigraphis colorata* has an anti-inflammatory for wound healing. Hussan et al. (2015) explained that *plantago major* has anti-inflammatory properties to reduce the effects of the injury. Aekthammarat et al. (2020) proved that moringa leaf extract is useful for lowering arterial blood pressure.

When asked about what other herbs are commonly used for treatment, Abah Ukat admitted that he forgot because now his family has used chemical drugs more often due to simple. The fact that Abah Ukat and the community are starting to forget about some of the indigenous knowledge indicates that this knowledge is still in the form of tacit knowledge. The fading of indigenous knowledge (IK) in the community is considered normal by Tharakan (2015) because the nature of IK is

indeed unstable, delivered by verbal, and direct practice. Chergui et al. (2018) emphasize the importance of making explicit knowledge of it. This can be done by recording objects. Suprihono (2022) gave an example of a solution in preserving local culture. The creative team from the Yogyakarta Royal Palace digitized it then uploaded them on social media. Thus the local culture will still be seen and remembered by the community.

Batik

People in the Sindang Barang Cultural Village also know Sundanese batik. Abah Maki is keeping the *waroge* motif (an antidote to calamities) which is the king and his family motif. The *waroge* motif represents an evil supernatural being. This image aims to tell evil supernatural beings not to disturb the wearer. An example of a batik with a *waroge* motif can be seen in Figure 3. Abah Maki and Abah Ukat admit that at Sindang Barang there is only 1 person who is an expert in making batik.

Batik Motif

Waroge motifs are *wawayangan*, *wangapah*, *ratuning tutulak*, *watu panggilang*, *sungke buana*, dan *rajah karatun*. Another motif that is only allowed to be used by the royal family is the motif of the *pakujajar* or *kipaharé* plant (Pteridohyta). This is a typical plant of Bogor which is the symbol of the Padjadjaran kingdom. *Waroge* and *pakujajar* motifs are sacred motifs that should not be used by ordinary people. In ancient times, making special batik for the royal family began with a ritual (reverence to God) before painting the *waroge* motif. This motif was made based on the hope of salvation, blessing, and glory for the king and his family. The happiness of the king is the happiness of the people.



Figure 3. Waroge motif

Natural dye

Batik craftsmen in Sindang Barang used to use natural dye (from fruit skin, leaves, and flowers). Mangosteen rind will produce a reddish-brown color. Rambutan skin gives a dark brown color. Duku peel and mango leaves produce a light brown or pale cream color. The flower used for batik dye is a dried *telang* flower for blue. Batik's making begins with drawing a motif on the cloth, waxing it (using *malam*), coloring it, washing it, and drying it in a shady room. Batik is not dried in the sun but must be aerated. According to Aizat et al. (2019), mangosteen rind will produce a dark purple color that is useful for giving color to food or

textiles. Natural dyes are biodegradable and non-toxic so they do not pollute the environment. Paramita et al. (2017) showed that rambutan peel can be used for textile dyes. Rambutan peel extract added with FeSO_4 will produce a gray color. A mixture of $\text{Al}_2(\text{SO}_4)_3$ produces a light or pale brown color while a mixture with CaCO_3 produces a yellowish-brown color.

Conclusion

The themes of indigenous knowledge owned by the people of the Sindang Barang Cultural Village are about village landscape, agriculture, natural signs, health, and batik. The village landscape has a sub-theme landscape of land and building position. The sub-themes of agriculture are the type of rice, fertilizers, planting time, magic guard, and granary. The sub-theme of natural signs consists of changing days and signs of calamity and disaster. The sub-theme of health is herbs. Batik has a sub-theme of motifs and natural dyes.

The results of this study can be a reference for other researchers who are interested in analyzing the reasons why people in the Sindang Barang Cultural Village still use local knowledge even though they currently live in the modern era. This study found that some of the indigenous knowledge about herbs had been lost from the people's memory. This village also only has 1 expert in making batik which will have an impact on the loss of knowledge about traditional Sundanese batik. This fact requires attention from all stakeholders, including researchers, academics, and the government. This problem can be a source of reference for further research on the causes of the loss of some Sundanese indigenous knowledge about medicine and batik.

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