

## Review: Local wisdom of Baduy people (South Banten, Indonesia) in environmental conservation

KIRANA NURUL ARIFIANI<sup>1</sup>, COVENANT KOINONIO WIDI WIJAYA<sup>1</sup>, IRFAN A.N.<sup>1</sup>, ANISA SEPTIASARI<sup>2</sup>,  
JOHAN ISKANDAR<sup>3</sup>, BUDIAWATI S. ISKANDAR<sup>4</sup>, RUHYAT PARTASASMITA<sup>3</sup>, AHMAD DWI SETYAWAN<sup>1,5,✉</sup>

<sup>1</sup>Department of Environmental Science, Faculty of Mathematics and Natural Sciences, Universitas Sebelas Maret. Jl. Jend. Urip Sumoharjo No. 179, Surakarta 57128, Central Java, Indonesia. Tel./fax.: + 62-271-663375, ✉email: volatileoils@gmail.com

<sup>2</sup>Biodiversitas Study Club, Department of Biology, Faculty of Mathematics and Natural Sciences, Universitas Sebelas Maret. Jl. Ir. Sutami No. 36A, Surakarta 57126, Central Java, Indonesia

<sup>3</sup>Department of Biology, Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran. Jl. Raya Bandung-Sumedang Km 21, Jatinangor, Sumedang 45363, West Java, Indonesia

<sup>4</sup>Department of Anthropology, Faculty of Social and Political Science, Universitas Padjadjaran. Jatinangor, Sumedang, 45363, West Java, Indonesia

<sup>5</sup>Biodiversity Research Group, Universitas Sebelas Maret. Jl. Ir. Sutami 36A, Surakarta 57126, Central Java, Indonesia

Manuscript received: 27 September 2019. Revision accepted: 23 November 2019.

**Abstract.** Arifiani KN, Wijaya CKW, Irfan AN, Septiasari A, Iskandar J, Iskandar BS, Partasasmita R, Setyawan AD. 2019. Review: Local wisdom of Baduy people (South Banten, Indonesia) in environmental conservation. *Asian J Ethnobiol* 2: 92-107. Baduy people live in Kanekes Village, Leuwidamar Subdistrict, Lebak District, Banten Province, Indonesia. Baduy people is a group of people who firmly adhere to the traditions of their ancestors where the entire social system is rooted in their religious system. The tribe that lives depends on nature and always maintains the balance of nature. This review is intended to find out the current state of life of the Baduy people in environmental conservation, the ability to utilize local wisdom (traditional ecological knowledge) to meet their needs and the possibility of sustainability in the future their way of life. This research was conducted by studying literature based on journals or other information media. The results showed that the Baduy people still hold strong beliefs and customs and day by day with great wisdom. Beliefs and customs that become *Pikukuh* (rules) have always been the philosophy of life and daily of Baduy. Traditional rules and *Pikukuh sapuluh* are the basis of life guidelines and produce Baduy culture both in thinking, acting and behaving. Mores as part of local wisdom still beholder firm considerably by Baduy people, and the mores have come to the self fortress for Baduy people in the face of modernization, included in matter preserve its environment. The forms of local wisdom behavior that are a form of sustainability of environment and conservation conducted by Baduy people, for example: (i) agricultural systems, (ii) residential systems, (iii) forestry systems, and (iv) conservation practices.

**Keywords:** Baduy people, beliefs, conservation, local wisdom, traditional customs

### INTRODUCTION

Indonesia is a large unitary state in the form of a republic (Azhari and Negoro 2019). The Republic of Indonesia is located on the equator between Asian Continent and Australian Continent and Pacific Ocean and Indian Ocean. According to the Ministry of State Secretariat of the Republic of Indonesia (2013), Indonesia has 17,504 islands included in the sovereignty of the Unitary State of the Republic of Indonesia. The territory of the State of Indonesia, which is separated by the sea and is located between the Australian Continent and the Asian Continent, makes Indonesia diverse (Gunawan and Sulistioningrum 2016). The diversity of the Indonesian state can be seen in the diversity of ethnicities, races, languages, and religions. The diversity of cultures and customs that are owned is a treasure in enriching national culture, of course also rich in abundant natural wealth in several regions in Indonesia. In essence, this archipelago is regulated and managed from generation to generation by customary law, followed by hundreds of belief systems and religions (Sinapoy 2018). According to the Central

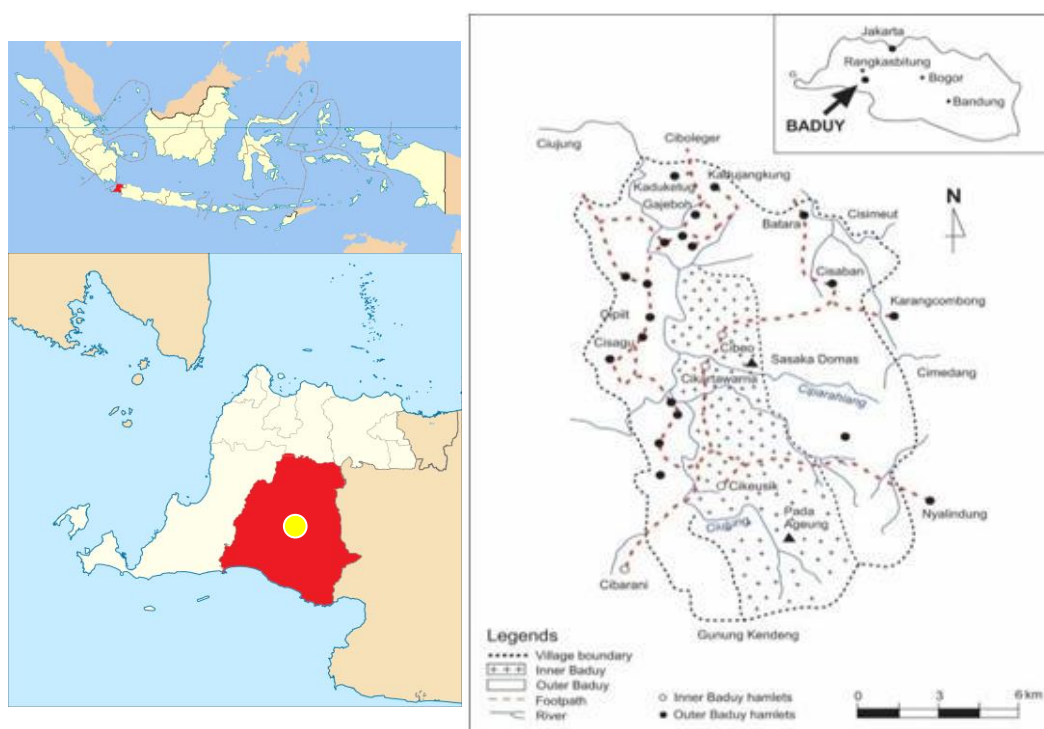
Statistics Agency or BPS (2010), the Indonesian state has 1,340 ethnic groups. The diversity of ethnic groups in Indonesia adds to the wealth and blessings of the Indonesian people. The factors that influence the emergence of ethnic diversity are geographic location, foreign cultures, and various climatic and natural conditions in Indonesia (Hidayah 2015). The benefits of cultural and ethnic diversity for a nation can be seen from various aspects, namely economic and social (Sutardi 2007). The benefits of diversity are an asset to the nation's wealth in the economic aspect. In total, cultural diversity is the country's identity (Ridwan 2015).

The biggest problem for Indonesia's cultural diversity is modernization (Ahimsa 2014). Modernization is changing in society regarding social norms, social values, the structure of existing institutions in society, patterns of social behavior, and all aspects of social life (Ritzer 2014). The main factor causing modernization is the rapid development of science and technology. The existence of science and technology or science and technology makes people dependent on science and technology. Over time, the cultural values that become life guidelines begin to

The Baduy people isolate themselves from outside life to remain firm in carrying out their customs and reject the development of science and technology and modernization (Andriana et al. 2017). According to their beliefs, the Baduy claim to be descended from *Batara Cikal*, one of the seven gods or Batara who were sent to earth (Permana 2003). The origin is often associated with Prophet Adam as the first ancestor. According to their belief, Adam and his descendants, including the Baduy people, have an ascetic (*mandita*) duty to maintain world harmony (Permana et al. 2012). The essence of this belief is indicated by the existence of absolute customary provisions that are adhered to the daily life of Baduy (Judhistira 1998). The most important content of the Baduy '*Pikukuh*' (compliance) is the concept of "without any changes" or changes as little as possible. The embedded motto is "*lojor heunteu beunang dipotong, pèndèk heunteu beunang disambung*" (Zidny and Eilks 2018). It means that what's long cannot be cut, what's short cannot be joined (Iskandar and Iskandar 2017).

## BADUY PEOPLE

The Baduy region is located at 6°27'27"-6°30'0" S and 108°3'9"-106°4'55" E. The Baduy people are an ethnic group that lives side by side and depends on nature. The Baduy people are also known as the Kanekes people (*urang Kanekes*), the indigenous peoples of the Banten. They live in Kendeng Mountains, i.e., Kanekes Village, Leuwidamar Sub-district, Lebak District, Banten Province, Indonesia (Figure 1). Especially in Kaduketug hamlet (*kampung*) for Outer Baduy and Cibeo hamlet for Inner Baduy. Its territory is arranged and connects between hills and valleys. Baduy settlements are usually located in hilly valleys, in flatter areas near groundwater sources or rivers. The total area as a whole is around 5,136.58 hectares Kanekes Village Index Book (2009). Figure 2 shows the environmental conditions and activities of the Baduy people.



**Figure 1.** Location of Baduy area, Kanekes Village (●), Leuwidamar Sub-district, Lebak District, Banten, Indonesia

**Table 1.** Hamlets in the Baduy area, Kanekes Village, Lebak District, Banten, Indonesia in 2009

<b>A. Baduy-Dalam Village</b>					
1.	Cikeusik				
2.	Cikartawana				
3.	Cibeo				
<b>B. Baduy-Luar Village</b>					
1.	Cigoel (Kaduketug 3)	21.	Cigula	41.	Cibagelut
2.	Cipondok (Kaduketug 2)	22.	Cicatang	42.	Batubeulah
3.	Kaduketug 1	23.	Cicatang 2*)	43.	Cibogo
4.	Kadukaso	24.	Kadukohak	44.	Pamoean
5.	Cihulu	25.	Cisaban	45.	Cipaler
6.	Balingbing	26.	Babakan Cisaban	46.	Cipaler
7.	Marengo	27.	Cijanar	47.	Cicakal Muara *)
8.	Gajeboh	28.	Leuwihandam	48.	Cicakal Tarikolot *)
9.	Kadujangkung	29.	Cicangkudu	49.	Cicakal Girang
10.	Babakan Karakal (Kadugede)	30.	Cisagu Landeuh	50.	Cicakal Girang 2
11.	Karakal	31.	Cijengkol	51.	Cicakal Girang 3 (Leuwibuleud)
12.	Kaduketer 1	32.	Cikadu 1	52.	Cijangkar
13.	Kaduketer 2*)	33.	Cikadu 2*)	53.	Ciranca Kondang *)
14.	Cikopeng	34.	Cipiit 1	54.	Kanengai *)
15.	Cibongkok	35.	Cilingsuh	55.	Cikulingseng *)
16.	Ciwaringin	36.	Cisagu pasir		
17.	Binglugemok (Cibitung)	37.	Cipiit 2		
18.	Batara	38.	Ciranji		
19.	Sorokokod	39.	Babakan Eurih		
20.	Panyerangan	40.	Cisadane (Leuwigede)		

Source: Kanekes Village Index Book (2009).

### Administration system

The Baduy area is divided into two main areas: Inner Baduy (*Baduy Dalam*, *Baduy Jero*, or *Tangtu*) and Outer Baduy (*Baduy Luar* or *Panamping*). The number of hamlets in Baduy area (Kanekes village) in 2009 was 58 hamlets, i.e., 3 in Inner Baduy, namely Cibeo, Cikartawana and Cikeusik, and 55 hamlets in Outer Baduy. In 2002, there were 50 hamlets in Baduy (Senoaji 2003). Within 7 years there were 8 additional hamlets, namely Cicatang 2, Kaduketer 2, Cikadu 2, Cicakal Muara, Cicakal Tarikolot, Ciranca Kondang, Kanengai, and Cikulingseng. The boundaries of the northern Baduy area (Kanekes village) is bordered by Bojongmenteng Village, Cisimeut Village, and Nayagati Village of Leuwidamar Sub-district; to the west it is bordered by Parakanbeusi Village, Keboncau Village, and Karangnunggal Village of Bojong Manik Sub-district; to the south it is bordered by Cikate Village of Cijaku Sub-district; and in the east it is bordered by Karangcombong Village and Cilebang Village of Muncang Sub-district. While the natural boundaries to the north are the Ciujung River, the south of the Cidikit River, the west of the Cibarani River, and the east of the Cisirneut River (Pemda Kabupaten Lebak 2001). Besides these two Baduy, there are also *Dangka* Baduy, they are Baduy descendants who embrace Islam, do not practice ancestral customs, receive education and technology, and live outside the traditional territory of the Baduy people. They generally live in two hamlets, i.e., Padawaras (Cibengkung) and Sirahdayeuh (Cihandam) (Permana 2001).

### Population

The number of Baduy residents in 2019, recorded a total of 11,699 people, consisting of 3,413 heads of families (BPS, Leuwidamar Sub-district 2019). 90% of the total population are Outer Baduy and the remaining 10% are residents of Inner Baduy. They are one of the Sundanese indigenous communities who practice a life isolated from the outside world. They limit themselves to being in touch with modernization and culture they perceive as external culture. The main occupation of the Baduy people is farming or *ngahuma* (Ichwandi and Shinohara 2007; Jamaludin 2012; Suparmini et al. 2013; Iskandar and Iskandar 2017a). Almost all Baduy people work as farmers and agricultural laborers. Farming for the Baduy people is considered an obligation in their religion, called Sunda Wiwitan. Based on Baduy customs, working on the fields applies various taboos or *taboos*, such as abstinence from using modern rice seeds, synthetic inorganic fertilizers and manufactured pesticides, and trading in field rice. They also don't work on the fields, raising buffalo, cattle, and sheep, cultivating commercial crops in monocultures, such as cloves, cocoa, rubber, teak, etc.

### Socio-education system

The language used by the Baduy is Sundanese (Adimihardja 2014). The Kanekes or Baduy people do not know written culture, so their ancestors' customs, beliefs, religions, and stories are only stored in oral speech. The Baduy people do not know schools because formal education begins with their customs (Widowati 2014).

They think that formal education in schools makes them smarter and can potentially destroy nature (Saleh et al., 2019). As a result, most Baduy people cannot read and write (Ahidin et al. 2018). The approach to education in Baduy is non-formal, which is carried out in homes and the field directly. The non-formal education taught is very simple. One of their Jaro (leaders) told them that they educate their people not to be smart but to be honest (Bintari 2012).

### **Social classification: tangtu, panamping, and dangka**

The Baduy people is divided into three groups, namely the *tangtu* of *Baduy Dalam* (Inner Baduy), *panamping* or *Baduy Luar* (Outer Baduy), and *dangka* (Muslim Baduy) (Permana 2001). Although divided into three groups, the status of relationship with each other is very close. The group structure of the isolated Baduy people is divided into two major groups, namely the Inner Baduy people (*Baduy Tangtu*) and the Outer Baduy (*Baduy Panamping*). The Outer Baduy area is 1,975 hectares with 1,083 people (281 families) spread over three hamlets. Meanwhile, the Inner Baduy area covers an area of 3,127 hectares with a population of 10,089 (2,667 households) spread over more than 55 hamlets (Prihantoro 2006). The difference between the two area can be seen from the distinctive clothes and the shape of the house. Outer Baduy is characterized by wearing black clothes and headbands (Erwinantu 2010). Meanwhile, the Inner Baduy wears its distinctive white clothing and headband. Then the difference in making a house where the Outer Baduy uses nails to connect the house's frame, while the Inner Baduy only uses ropes to connect the wood to make the house's frame. The type of baduy house is a house on stilts made of woven bamboo (cubicle), a house made of shape according to the existing morphology, if the land is sloping, adding stones is done to make the land flat (Suparmini et al. 2013). The *panamping* group or Outer Baduy people, has a place to live around the Inner Baduy people. This group is the people who have left Inner Baduy because of their wishes or have violated customary regulations. This community group has the characteristic of clothing and headbands colored dark or *tarum* (Senoaji 2010). The *Dangka* group is a Baduy people that lives outside the Baduy area. They leave the Sunda Wiwitan belief to embrace Islam, and have a lifestyle like the majority of Sundanese people. Due to outside influences, Kampung Dangka functions as a buffer zone (Permana 2003).

### **Belief system**

Humans are very dependent on the presence of the universe. This causes the concept of a belief system to grow from human understanding of the universe. This also happened to the Sundanese *buhun* (original/ancient), where their belief system was built on their dependence on nature (Miharja 2015). The belief of the Baduy people is referred to as the Sundanese Wiwitan teachings, ancestral teachings that are rooted in reverence for *karuhun* or ancestral spirits and worship of spirits of natural forces (animism). Although most aspects of this teaching are original from hereditary traditions, this ancestral teaching was also

slightly influenced by several aspects of Hindu, Buddhist, and later Islamic teachings in later developments. Sunda Wiwitan also has elements of ancient monotheism, namely above the gods and hyangs in their pantheon there is a single supreme, almighty, intangible God called *Sang Hyang Kersa* who is likened to God Almighty (Prawiro 2013). Broadly speaking, people's belief in a matter, condition, location, grave, and belief in ancestors reflects the meaning of mutual respect, between humans and nature and the environment. This situation is part of local wisdom/environmental wisdom (Sufia et al. 2016).

The animist belief system adopted by the Baduy people is Sunda Wiwitan. Where to believe and believe in one power, namely *Batara Tunggal*, yars cannot be seen with the eye but can be touched with the heart, omniscient knows who moves and acts in this world. Sunda Wiwitan has the most significant influence on the life of its people. The core of his belief is indicated by absolute customary provisions or *Pikukuh* (customary regulations) which are called the concept of no change at all or without any changes (Sugiwa 2015). The pattern of religious relations and activities of the people of Kanekes Village regarding the supernatural in the context of the Sundanese Wiwitan Religion is manifested in various activities of daily life (Supriatna 2012). The highest power of the Sundanese Wiwitan belief is in *Sang Hyang Kersa* (the Almighty) or *Nu Ngersakeun* (The Willing). He is also called *Batara Tunggal* (God Almighty), *Batara Jagat* (Lord of Nature), and *Batara Seda Niskala* (The Invisible). He resides in *Buana Nyungcung*. All gods in the Hindu concept (Brahma, Wishnu, Shiva, Indra, Yama, etc.) are subject to *Batara Seda Niskala* (Ahmad 2013).

*Sang Hyang Kersa* lowered seven *Batara* at *Sasaka Pusaka Buana*. One of the seven *Batara* is *Batara Cikal*, the oldest who is considered the ancestor of the Baduy people. Other descendants are *Batara*, who rule in various other areas in the land of Sunda. The meaning of *nurunkeun* (lowering) *Batara* is not giving birth but creating or creating. In Sundanese Wiwitan teachings, prayers are delivered by singing rhymes, songs, and dance movements. This tradition can be seen in the rice harvest thanksgiving ceremony and the New Year celebration, based on the Sundanese calendar known as the *Seren Taun* Festival. In various places in West Java, *Seren Taun* is always lively and is attended by thousands of people (Adisaputri and Widiastuti 2015). *Seren Taun* celebrations can be found in several traditional villages such as in Kanekes, Lebak, Banten (by Baduy people), Ciptagelar Kasepuhan Banten Kidul, Cisolok, Sukabumi, Kampung Naga, Tasikmalaya and Cigugur, Kuningan.

The holy place or place of worship that is considered sacred or sacred in the Sundanese Wiwitan is *Pamunjungan* or *Kabuyutan*. *Pamunjungan* is a punden with terraces usually found on a hill and in *Pamunjungan* there are usually *menhir*, *arca*, *cengkuk* stone, bowl stone, flat stone and others. There are many *Pamunjungan* or *Kabuyutan* in Tatar Sunda such as Balay Pamujan Genter Bumi, Cengkuk Site, Mount Padang, *Kabuyutan* Galunggung, Kawali Site, etc (Saringendyanti et al. 2018). At that time, the biggest and most luxurious *Pamunjungan* was *Pamunjungan*

Kihara Hyang which was located in Leuweung (forest) Songgom, or Balay *Pamunjungan* Mandala Parakan Jati (Sabri and Musyahidah 2015). This form of respect for the spirit of natural forces is manifested through the attitude of protecting and preserving nature; namely taking care of the surrounding environment (mountains, hills, valleys, forests, gardens, springs, rivers, and all the ecosystems in them), as well as giving the highest respect to nature, by caring for and maintaining prohibited forests as part of an effort to maintain the balance of the universe (Sucipto and Limbeng 2007).

The essence of this belief is indicated by the existence of *Pikukuh* or absolute customary provisions that are adhered to in the daily life of the Baduy (Garna 1993). The most important content of the '*Pikukuh*' (compliance) Baduy is the concept of "without any changes", or changes as little as possible: "*lojor heunteu beunang dipotong, pèndèk heunteu beunang disambung*". It means that what's long cannot be cut, what's short cannot be joined. The religious harmonization in the Baduy area is due to their strength in holding the principle that they originate from one descent or family (Hakiki 2015). The nobility of the community is seen in behavior, ethics, beliefs, customary laws which are adhered to in the routine of life (Nurislaminingsih et al. 2019).

#### HUMA: SWIDDEN AGRICULTURAL SYSTEM

The main livelihood of the Baduy people is *huma* rice farming, a swidden agroforestry model. In addition, they also get additional income from selling the fruits they get in the forest, such as durian and tamarind, and forest honey. There are various traditions and customs of the Baduy people that function as food security. The Baduy people are a group of people who live separately from the outside environment and their life is still very traditional (Bintari 2012). The Baduy people are essentially studious people with their daily activities. The working practice of the Baduy people means learning. Therefore, the Baduy indigenous people are prohibited from studying like city people (Sutoto 2017).

The Baduy ethnic group still prioritizes their lives and is with nature. They live in Kendeng Mountains with diverse habitat types, natural potential, and a high level of biodiversity (Khastini et al. 2019). Based on the Baduy category, the Baduy landscape can be divided into four types: forests, fields, gardens, and settlements. This type of landscape has been traditionally managed based on Traditional Ecological Knowledge and Beliefs. As a result, the Baduy people can continue to practice traditional swidden/shifting cultivation, even though the population is growing and the forest around them is thinning (Iskandar and Iskandar 2017b).

The Kendeng Mountains are dominated by forests, both protected and production forests (Permana 2010). The main livelihood of the Baduy people is the development of rice cultivation on dry land (*huma* or *ngahuma*) (Sutoto 2017). For five years, the Baduy farming system changes land with a fallow period (resting the land). The existence of

local wisdom of the Baduy people in farming shows a form of environmental conservation and concern for the environment embedded in community life. While waiting for the harvest or spare time, side jobs are making handicrafts from bamboo (*asepan*, *boboko*, *nyiru*, etc.), making *koja* (packages made of bark), going to the forest looking for rattan, bananas, *ranji*, taking fruit and *medu* (Iskandar 2012).

Baduy people have culturally maintained the *pranata mangsa* (referred to Baduy as *pananggalan*) for the annual practice of swidden cultivation (*ngahuma*) based on the traditional calendar. Baduy rice farming cycle is fixed annually with reference to an agricultural calendar. The various environmental perturbations have slightly affected it because the Baduy people have developed several strategies, such as organizing a traditional calendar and implementing traditional agroforestry whose production can be used for subsistence and commercial purposes (Iskandar and Iskandar 2016).

The *huma* has been culturally managed by the Baduy based on moral and interest purposes and managing a high diversity of crops/plants. In the swidden agroforestry of Baduy was recorded 41 species of food crops consisting of 9 species of carbohydrate food and 32 species of non-carbohydrate food (Iskandar and Iskandar 2015). By applying strategy to cultivate various local rice varieties (landraces), which are prohibited from trading for moral purposes, are mixed cropped with harmonious with non-rice crops/plants that are not prohibited from trading. The swidden agroforestry *huma* has been an important role in conserving local crop/plant diversity, including food crop diversity. In addition, conserving crops variety in the swidden agroforestry *huma* has been very useful in supporting and maintaining the food security of Baduy. With more intensive economic market penetration to Baduy village, the food consumption pattern of the Baduy household has dramatically changed. However, by the rapid economic market development, the Baduy people have properly adapted, such as selling non-rice crops and household handicrafts. As a result, Baduy has got cash and can be used to buy various household needs of the Baduy, such as sawah husked rice (*beras sawah*) to supplement the swidden rice. Moreover, the swidden rice production can be stored in rice barns (*leuit*) for more than fifty years, and food security of the Baduy can be maintained (Iskandar and Iskandar 2015).

In addition, the Baduy people also hunt animals, make roofs from kirai leaves, and make agricultural tools, such as blades and kored. In their spare time, the role of Baduy women, apart from encouraging their partners in the fields, they also make handicrafts by weaving. They weave materials using basic equipment that they make themselves (Permana 2001). For the Outer Baduy, apart from carrying out these activities, the job that distinguishes the inner Baduy is tapping sap or palm flower bunches to make sugar. Occasionally, the Outer Baduy people cultivate agriculture with seasonal crops, such as harvesting coffee and cloves, planting sengan wood, exchanging, and becoming laborers (Iskandar et al. 2019). The work is carried out exclusively for a decent living and is prohibited

from overproducing. Some of the agricultural products of the Baduy people are sold and some are only for personal use. Agricultural products in the form of rice are only for their own interests, they don't sell it. Usually, after harvest the rice is dried, it is directly put into a rice barn called *Leuit*. The rice barn (*leuit*) is woven bamboo strung together with large woods and has a *kirai* (coconut husk) roof. Each Baduy family has one or more *leuit*. Rice stored in the granary is used for daily food needs and is preferably used during traditional ceremonies, such as weddings or circumcisions.

The Baduy people have long practiced a form of swidden farming based on traditional ecological knowledge and beliefs about the cosmos. Therefore, Baduy have prohibited wet rice field cultivation on their lands. Moreover, in conserving their traditional swidden farming system, the Baduy people have resisted using modern rice varieties, inorganic fertilizers, and synthetic pesticides. Based on Baduy culture, their swidden-produced rice is not sold, and for at least the past 50 years, the harvested rice has not been stored away in barns but has been mainly used for daily home consumption and various traditional rituals. Nowadays, Baduy swidden farming is affected by many new pressures – particularly by population increase and increasing food demand – but the forest land used for practicing their swidden farming is limited. Therefore, to maintain the sustainability of their swidden farming system, the Baduy people, particularly the Outer Baduy, have developed cultural strategies that include temporary out migration (*nganjor*) to neighboring, non-Baduy areas where Muslim value-systems provide the main cultural dynamic. The Outer Baduy have maintained the sustainability of their swidden farming, by various means, especially by conducting contemporary out migration to non-Baduy areas in Muslim majority territory. They plant swidden rice in a way that fulfills multiple traditional rituals, and by diversifying their non-rice-trading options that include growing a variety of mainly tree crops in their swidden land (*huma*) and other anthropogenic lands. This involves occasional negotiated out-migration to non-Baduy areas for temporary swidden farming in surrounding Muslim majority territory. This has enabled the Outer Baduy to maintain long-term swidden farming system (Iskandar et al. 2018a).

The Outer Baduy people rely heavily on swidden cultivation for subsistence. They grow rice in the uplands every year, according to their calendar. Planting calendars and social events calendars are often closely related. There is also traditional ecological knowledge for land and forest conservation, such as zoning land-use systems. The productivity of the Outer Baduy swidden cultivation area is mainly determined by the period the forest is fallow relative to plants. The long-term success of the Outer Baduy swidden cultivation depends on how well the fallow period restores or maintains soil fertility. The Outer Baduy classifies soil based on color, water content, stoniness or rock parent material, and humus content. To maintain soil fertility in swidden cultivation, the Outer Baduy people have developed several strategies, such as determining the right fallow period, implementing no-tillage, and planting

legumes both in the swidden fields and in the fallow land. Traditionally, because the Outer Baduy are prohibited from using inorganic fertilizers, the length of the fallow period and the type of vegetation succession have an important role in maintaining soil fertility (Iskandar et al. 2018b).

Suparmini et al. (2013) said the prohibitions that must be obeyed in agriculture are as follows: (i) It is prohibited to use hoes when cultivating the land, (ii) It is prohibited to plant cassava, (iii) It is prohibited to use chemicals to eradicate pests. Pest eradication and crop fertilization are carried out traditionally, (iv) Going to the fields is prohibited on Monday, Thursday and Saturday, (v) It is prohibited to open fields in Leuweng or forest cover and it is prohibited to clear land in the village forest.

### ENVIRONMENTAL MANAGEMENT OF BADUY PEOPLE

The Baduy people living in Kanekes Village have a close life and depend on the environment. In essence, the main activity of the Baduy people is to save and protect the prohibited land that has been mandated by their ancestors (Senoaji 2011). Kanekes Village, where the Baduy people group or the Baduy people is located in the foot of the Kendeng Mountains with an altitude of 300-600 m asl., which has a hilly and undulating topography with an average slope of up to 45%, which is volcanic soil (in the north), sedimentary land. (in the middle), and mixed soils (in the south), the average temperature is 20°C. The Baduy people have customary land of approximately 5,108 hectares, they have the principle of living in peace, do not want conflict, and obey traditions and customary laws. The environmental conditions in Kanekes Village, where the Baduy people live, have a good environmental quality, characterized by a high diversity of biodiversity. There are many types of flora and fauna in Baduy but not found in other areas. Some of the animals that live there are classified as wild and rare, so they are protected by the Indonesian government. So that good environmental management needs to be done by the Baduy people. There are many types of flora and fauna in Baduy but not found in other areas.

Environmental management is a conscious effort to maintain and preserve and improve the quality of the environment to best meet human needs (Manik 2018). Environmental management aims to realize sustainable development that is environmentally sound in developing the whole Indonesian people and the development of all Indonesian people who believe and have devotion to God Almighty (Maryana and Rachmawati 2013). The goal in sustainable environmental management is the creation of harmony, harmony and balance between humans and the environment (Effendi 2003). Second is realizing humans who have attitudes and actions to protect and foster the environment. Third, ensuring the interests of present and future generations. Fourth, creating environmental functions and controlling the wise use of resources there. Environmental management is based on responsibility, sustainability and the principle of benefits (Purnaweni 2014).





**Figure 2.** A-C. Face of Baduy people: adult males (A), young girls (B), boys (C), white clothes for Inner Baduy and black/blue clothes for Outer Baduy. D-F. The position of the Baduy settlement in side the forest. G-L. Upland rice farming, as the most important production of the Baduy: Swidden farming (G-H), Drying of the rice, prior to store in *leuit* (I), pound rice (J). K. Honey, the most important non-tree forest product of Baduy. L. Durian, one of the most valuable agroforestry products. M-Q. Typical house and housing of Baduy. R. *Leuit*/rice storage house. S-T. Several model of bridges, as many rivers flow in the Baduy area (U). V-X. Weaving is a skill that must be mastered by Baduy female. Y-AA. Several handicrafts made and sold by Baduy people. AB-AD. Several types of Baduy musical instruments: *angklung* (V), *sitar* (W) and *seruling*/flute (X). AE-AG. *Seba*, the most colossal traditional ceremony where thousands of Baduy men face government officials with harvested gifts

Incorrect environmental management can cause damage to the environment (Atmojo 2013). Environmental damage can occur due to the dynamic activities of nature and human activities. Human or anthropogenic activities in managing the environment can cause environmental damage. One of the human activities that can damage the environment is development activities that ignore the environment. The human perspective on nature greatly influences environmental awareness and how to manage the environment and natural resources (Dharmawibawa 2019). An environmentally sound development needs to be carried out (Dahuri 2003). Environmentally sound development is implemented to be able to process natural resources wisely. This is so that the implemented development can sustain sustainable development to improve the quality of life of the people, from generation to generation throughout the ages. So that with environmentally sound development, it can support a sustainable and harmonious environment. Finally, development can be carried out sustainably that continuously improves humans' quality and the environment (Mukono 2005).

Sustainable environmental management activities have been reflected in the local wisdom or local wisdom of the Baduy people Group. Local wisdom is the attitudes, views, and abilities in managing its spiritual and physical environment, which gives the community resilience and strength to grow in the community's area. In other words, local wisdom is a creative response to a geographic, political-historical and situational situation that is local (Dahlani et al. 2015). Local wisdom becomes a view of life and knowledge and various life strategies manifested in local community activities in responding to challenges and fulfilling life. Local wisdom is considered very valuable and has its own benefits in people's lives. The system was developed because of the need to live, maintain, and live in accordance with the situation, conditions, abilities, and values that are lived in the community concerned. In other words, local wisdom then becomes part of their wise way of life to solve all life problems they face. Thanks to local wisdom they can continue their life, even develop sustainably.

One of the local wisdom still firmly held by the Baduy people group or the Baduy people is the *Pikukuh*. *Pikukuh* is divided into two, namely *Pikukuh sapuluh* and *Pikukuh karuhun*. *Pikukuh sapuluh* (dasa sila) are ten guidelines of life that the Baduy people must implement. *Pikukuh karuhun* is a hereditary rule made for the Baduy people and outsiders who visit Baduy, this rule regulates the procedures for carrying out life in Baduy (Suparmini et al. 2013). *Pikukuh* teaches honesty and always maintains the truth and goodness for the benefit and safety. *Pikukuh* means not changing something or it can be interpreted as accepting what already exists. *Pikukuh* or customs and norms are not only references for all their behavior, but also guidelines as well as social control over their behavior. The Baduy people consider land or land to be ambu or mother, land is ambu rarang, the upper part of the land or sky is ambu luhur, while the world where humans live is the middle world controlled by ambu Tengah. Respect for

land is on par with that of the mother, demonstrating the close bond that a mother has with her children. Ambu is all the sources of life for humans, and the source of the three worlds, the sublime world, the middle world, and the handap world.

*Pikukuh sapuluh* contains: (i) *Moal megatkeun nu lian* life (not killing other people); (ii) *Moal mibanda pangaboga nu lian* (not taking other people's things); (iii) *Moal linyok moal lying* (not denying and not lying); (iv) *Moal mirucaan kana inuman nu eye drunkenness* (not involving oneself in intoxicating drinks); (v) *Moal midua ati ka nu sejen* (not double-minded to others / polygamy); (vi) *Moal goods dahar dina when kungkung peting* (eat at midnight); (vii) *Moal make development of jeung seuseungitan* (do not use flowers and fragrances); (viii) *Moal ngageunah-geusan sare* (not slumbering); (ix) *Moal nyukakeun ati ku igel, gamelan, kawih, or tembang* (displeasing with dancing, music, or singing); and (x) *Moal made gold or salaka* (not wearing gold or jewels).

*Pikukuh karuhun* includes: (i) It is prohibited to enter the forbidden forest (*leuweung kolot*) to cut trees, open fields or take other forest products; (ii) It is prohibited to cut down any types of plants, such as fruit trees, and certain types of trees; (iii) It is prohibited to use chemical technology, such as using fertilizers, and drugs to eradicate pests and plant or poison fish; and (iv) Farming must comply with customary provisions, etc.

The Baduy people divide the Kanekes area into three zones: the lower, middle, and upper zones. The area in the valley of the relatively flat hill is the lower zone used by the Baduy people as a residential zone. The Baduy people call this zone the "*dukuh lembur*" zone which means village forest. They set up houses in this zone in groups (Suhartini 2009). The traditional Baduy house is in the form of a simple and traditional stage. The materials used are obtained from the natural surroundings, such as wood for poles, bamboo for walls and coconut leaves for the roof. Their settlement is at an altitude of 250 m asl (above sea level), with the lowest area at 150 m asl while the highest is up to 400 m asl. The second zone or the middle zone is above the village forest. This land is used as intensive agricultural land, such as garden fields and mixed gardens. Their way of farming is still traditional, namely by clearing forests to be used as agricultural land and gardens (Laily 2017). Forest cleared for fields is a type of secondary forest or production forest. The land for farming is used for one year, after which the land is left to become forest again for at least 3 years. The third zone or the upper zone represents the hilltop area. This area is a conservation area that is not allowed to be made for fields, it can only be used for limited timber extraction. The Baduy people refer to this area as "*leuweung kolot*" or "*leuweung titipan*" which means old or *titipan* forest to be preserved.

In addition, the Baduy people groups differentiate forests based on their function and location. Based on its function, forests are divided into three types: forbidden forest (*leuweung kolot*), *dudungusan* forest, and arable forest (*leuweung reuma*) (Senoaji 2011). Protected forest prohibited forest that cannot be entered by anyone, even Baduy people or traditional leaders. *Dudungusan* forest is a

protected forest because in the upper reaches of a river, or in it there is a sacred place or Baduy ancestors, and arable forest is a forest that can be used as a field or *huma*. Forbidden forest is located in the south of the Baduy *Tangtu* settlement, located in the deepest and highest location of the forest area in Baduy. In the forest there are many types of tall wooden stands with shady canopies or canopy, there are also perennials and trees under them. Palm, ferns, vines, shrubs, lubrication, and other inferior plants cover the forest floor (Senoaji and Simon 2011). In the forbidden forest, various animals, insects, and microorganisms can also be found that complement the forest ecosystem. The denser the forest, the richer the potential for stored air reserves and the richness of biodiversity. It is respected as the source of the power of the forest that supports, supplying nutrients to the excess forest below, gardens, fields, and yards around the house. From this forbidden forest, the Cijung and Cisemeut rivers flowed. Baduy Forbidden Forest is treated with special care, so that its integrity, integrity and health are maintained. Anyone who is prohibited from entering, is prohibited from disturbing him, taking anything from him, even a piece of leaf, twig, or even a drop of honey is not taken from the forbidden forest. This is a forbidden forest, not because it is haunted or sacred, but because the Baduy people really respect and value nature based on an understanding of the potential it contains (Iskandar 2012).

Protected forest is basically like a forbidden forest that must be maintained for its integrity, sustainability and health. So that the original potential is not disturbed and is maintained. The difference between protected forest and prohibited forest is that the Baduy people around it are allowed to take and utilize protected forest products but on a limited basis. Arable forest is a forest area that functions as a field or *huma*. A kind of perennial land for intercropping, or food crops, namely rice and garden commodities. Baduy people think that their territory is the core of the universe, with the right to remain nurtured and not disturbed by changes, because the disturbance will create an imbalance in the universe including ourselves. The Baduy see the universe as 'a sky distance, a weak one'. The obligation of the Baduy people for prohibitions is to maintain them as best as possible according to the will or message of the karuhun (ancestors) (Iskandar 2012).

### **ENVIRONMENTAL CONSERVATION AND PRESERVATION BASED ON LOCAL WISDOM OF THE BADUY PEOPLE**

Local wisdom is an unwritten rule of thumb that becomes a reference for the community covering all aspects of life (Ahmad 2010). Local wisdom can be understood as ideas, values, and local (local) views that are wise, full of wisdom, good values that are embedded and followed by members of the community (Koentjaraningrat 2010). Local wisdom can also be interpreted as a view of life and various life strategies in the form of activities by local communities in responding to various problems covering all elements of life; religion, science, technology,

social organization, language and communication, and arts. Permana et al. (2011) state that there is a link between local wisdom and local communities. The local wisdom of Sundanese culture is contained in the idea, activities and artifacts that are always used as guidance in relationships with others, the environment and the Creator (Saleh et al. 2013). The local Baduy people in Kanekes Village generally applies their daily local wisdom in protecting and preserving the environment. In addition, they also carry out conservation efforts that play a role in supporting sustainable development in the life of the community itself. Sustainable development emphasizes the economic income system alone and prioritizes the community's socio-cultural system and environmental sustainability efforts for the future (Akbarini 2016). The application of a sustainable development system in society can be applied by integrating local knowledge of the community and scientific knowledge in managing their environment. This is expected to understand better certain systems owned by the community (Taylor and Loë 2012). Local wisdom inherent in the community in protecting the environment is attractive for further investigation to maintain customs without reducing conservation efforts so that it becomes an object of special attraction and can be developed to increase the economic income of local communities. The local wisdom about protecting the environment they use indirectly emphasizes rules that are physically material in the form of environmental processing procedures and emphasizes psychological changes to form good and praiseworthy human character (Satriadi 2018).

The Baduy people and other Sundanese people view the natural environment as not something that must be subdued, but must be respected, nurtured and cared. Human life is closely related to the natural environment because it depends on ecosystems that ensure survival (Niman 2019). In essence, the attitude of the Sundanese people in relation to nature is more adaptive to nature (Indrawardana 2012). The attachment of humans or Sundanese people to the surrounding environment sometimes positions humans "as if they are submissive" to nature. In fact, the Sundanese people who work as farmers must adapt to nature so that nature indirectly forms the mentality of Sundanese people (farmers of the past). Understanding local communities in using natural resources wisely and realizing that humans are part of the natural spectrum to preserve sustainability is a concept of ecological awareness that must be adhered to (Anshoriy and Sudarsono 2008). Changing the paradigm and behavior of society towards nature is very important for environmental balance. This principle leads to limiting the exploitation of nature by considering the conservation of biological resources (Arda et al. 2015).

The role of the Baduy people related to their local wisdom lies in three dimensions of local wisdom, namely: (i) local values, they maintain their attitudes and behavior by the teachings given by their parents and convey it in the form of knowledge to tourists; (ii) local resources, they still fulfill the obligation to cultivate and use every available resource as best as possible without exploitation and commercialization; and (iii) solidarity with local groups,

they uphold tolerance and continue to work together to maintain good relations with fellow members of the Baduy people and outside communities (Firdaus et al. 2019). Examples of forms of local wisdom in the Baduy people in agriculture, forestry and settlement are described as follows.

#### *Local wisdom of the Baduy people regarding the agricultural system*

The agricultural system of the Baduy people is an agricultural system. Baduy people cultivate rice in a field system based on local ecological knowledge and beliefs (Iskandar and Iskandar 2018). In agriculture, they do not recognize modern agricultural facilities and infrastructure and only recognize the cultivation system. The Baduy people really respect their environment while maintaining the balance of their ecosystem. They have the principle that if the balance is not maintained, then calamity will come and will befall them too. Some of their farming activities that show the values of local wisdom include having reliable knowledge of astrology. The Baduy people still use the manual farming system because they follow the rules of their ancestors which do not allow the use of modern fertilizers. Baduy people use fertilizers from nature, such as leaves. In addition, Baduy people do not use modern agricultural tools, but use traditional tools in accordance with the rules of their ancestors (Putri et al. 2019). When starting rice planting in the fields, the Baduy people don't forget to stick the stems or branches of pelah leaves with a distinctive smell. This is done to prevent attacks from pests and rodents. The Baduy people use plant fertilizers and prevent plants from being attacked by pests and diseases. Fertilizers and pesticides are made from a mixture of various leaves that are finely ground and mixed with kitchen ash. The ingredients for making natural pesticides are *Pinanga coronata* fruit, *Zingiber cassumunar* rhizome and water sand are mixed and while chanting the tawa kungkang spell (Iskandar and Iskandar 2017c). All these materials are very environmentally friendly and the materials are available in their environment. This shows their independence in farming as well as their wisdom towards nature. They have recognized and applied integrated pest management, which is highly recommended in modern agriculture today. Meanwhile, the type of rice planted is local rice, which results from self-selection. This is another form of their independence in agriculture.

The fields applied in Baduy are mobile. Every year the rice harvest is only once. The length of the rice planting period is five to six months. Land left behind by a cultivator must be left on before other residents make land to maintain its fertility. The time lag before the soil can be planted again is getting shorter. Changing fields is generally done after one to two harvests, although there are also residents who have just moved their fields after four harvests. Yields on the same land will continue to decline every year. Every time you open a new field, three jobs are done: cutting existing plants, burning plants, and clearing the soil from objects that disturb the cultivation. Land is not plowed to maintain the strength of the land in Baduy land. After the soil is ready, start planting rice, known as

ngaseuk. Before starting to plant rice, the Baduy people holds a ceremony to praise Dewi Sri, known as the rice goddess, for protecting their land. In this ceremony, there are mantras accompanied by the strains of angklung and small drums (dog-dog). And angklung players are in charge of reciting spells. This ceremony must be held in every village and residents who can hold this ceremony for each of them. The ceremony held by each family is not mandatory because for this ceremony the host must provide food and other necessities. The rice planting period in Baduy villages began when *Puun* had planted rice. After *puun*, residents started planting (Sutisna 2019).

Some residents have good days which they use as a guide to start planting rice. After the planting period, the Baduy people no longer regularly take care of their *huma*. They only clear the fields of plants that can reduce rice production. Irrigation of fields is carried out without irrigation and only relies on rain. In general and broadly speaking, the work stages of farming in the fields of the Baduy people are clearing and clearing land areas, then cutting down large trees using an ax, patik or baliung (a type of large ax), then burning the forest that has been cut down for accelerate the decay process. After burning the seeds are planted in the form of grains and other grains. This activity is carried out by men and women, this job is called ngaseuk, which is to make a hole in the ground to plant the seeds with an aseuk (a wooden stick about one and a half meters long with a slightly pointed tip). Apart from rice, nuts and seeds are also planted on land, such as maize, and even in Banten, people have started to plant tree crops, such as coconuts and fruits. The last stage is harvesting. Women usually carry Harvest work in mutual cooperation, while men are tasked with transporting the harvest to their respective homes. Harvesting activities are always accompanied by a celebration ceremony so that the agricultural business does not experience disruption or attack by pests. The ceremony manifests belief in the supernatural in human life, as part of a culture of animism and dynamism (Suparmini et al. 2014).

Local wisdom on agriculture of the Baduy people related to Baduy food security is carried out by maintaining agricultural cultivation procedures and maintaining foodstuff management by still following the ancestors' rules (Iskandar and Iskandar 2015). The Baduy people have a customary law structure that is subject to and obedient to the *Puun* as the highest leader of the customary government and religious leaders in Cikeusik Village, Cibeo Village, and Cikartawana Village. The customary legal structure system of the Baduy people plays an important role in protecting all its citizens both in the community sector and in managing the natural environment (Senoaji 2012). The community must carry out local wisdom which has become the norm, the rules for a long time. Community businesses related to food security in Baduy, carried out by carrying out the concept of self-Koran, pamali culture and mutual cooperation. The concept includes agricultural regulations, foodstuff management and views on the resilience of the cultural views of mutual cooperation in Baduy so far there has been no change in

local wisdom because people still adhere to the mandate conveyed by their ancestors (Iskandar 2012).

#### *Local wisdom of the Baduy people in settlements*

Baduy people's settlements are determined by *puun*. *Puun* is the highest leader of the Baduy people. In his life, *Puun* is a descendant of Batara and is considered the ruler of the Sundanese Wiwitan religion who must be obeyed by all his commands and words (Suparmini et al. 2013). The building to be erected must be in accordance with the soil structure and topographical location of the area. The house's condition, shape, and arrangement of the rooms have been adjusted according to customary provisions. All customary rules are always related to the existence of orders from ancestors which the Baduy people continue to care for. The settlement of the Baduy people follows the Sundanese settlement pattern, which is centered and surrounds the square or field. The Baduy settlement is in the form of a stage with a height of about 0.5-1 meters. This aims to reduce the effects of the earthquake because the surrounding area is hills and mountains (Pratiwi 2017). The form of residential buildings for the Baduy people has the same shape, namely the house room is divided into three parts, namely the terrace (*sasoro*), the living room (*depas*), and the kitchen (*imah*). The architectural form of houses and other buildings is associated with environmental conditions such as roofs made of palm leaves (*kirey*) and palm fibers, which function to prevent water from entering the house and facilitate the entry of direct sunlight so that the house is protected from moisture. The poles are made of mahogany, because mahogany is the strongest wood so it is anticipated that the house does not collapse quickly and is resistant to natural disasters such as wind, rainwater, and earthquakes. The house walls are made of bamboo (in woven form). Its function is resistant to wind and provides a cool effect in the house. The use of building materials in general uses materials from bamboo (building frames, roof trusses, and booths) and *kirai* roof coverings (*ateup*) suggest a very strong Sundanese and offering styles (Khamdevi and Andrey 2018). Besides that, the buildings of the Baduy people have the same shape, this shows simplicity in the community. The form of settlement of each house is grouped according to the existing topography.

#### *Local wisdom of the Baduy people on forestry*

According to Sahlan (2012) forests have important functions for the lives of surrounding community members, especially in state forests with a processing system that aims to empower local communities without disturbing their main functions. For people who live and live in the vicinity of the forest, the existence of the forest with all the potential natural resources contained in it is very important for the survival of the community. Forest is interpreted as a source of food, drink, medicine, fulfillment of life necessities, protection and comfort, a place for rituals and institutions of belief, as well as a place to develop social solidarity for members of the local community. The Baduy people in Kanekes Village use non-timber forest products for their daily needs, one of which is forest honey. Non-

timber forest products are a natural resource that is still widely available in Indonesia and its existence is used for livelihoods by the community. One of the non-timber forest products is generally collected from natural forests and only a small portion is harvested from the forest. One of the potential non-timber forest products, namely forest honey, is a beekeeping product that has been recognized by the public around the world, including Indonesia. Non-timber forest products are all products or products produced from forests. One of the potential non-timber forest products, namely forest honey, is a beekeeping product that has been recognized by the public around the world, including Indonesia. Non-timber forest products are all products or products produced from forests. One of the potential non-timber forest products, namely forest honey, is a beekeeping product that has been recognized by the public around the world, including Indonesia. Non-timber forest products are all products or products produced from forests.

Given the importance of the function of forests for the survival of these communities, local wisdom is formed and developed to preserve environmental functions. Among the local wisdoms that result from the adaptation experience of the community with its environment, particularly forests, is the concept of "prohibited forest" which is derived from the views and knowledge of the community (traditional knowledge) in traditional environmental management efforts. Through the concept of prohibited forest, the community applies norms to control attitudes and behavior in forest management by conducting forest management, utilization, development, maintenance, restoration, supervision and control (Iskandar 2012). A social intermediary that is friendly to nature, Indigenous peoples have sufficient capacity to carry out rehabilitation and restore forest damage in concession areas. The role of indigenous peoples in forest management in the future, among others, indigenous peoples have a strong motivation to protect forests compared to other parties, indigenous peoples have indigenous knowledge how to maintain and utilize forest resources in their habitat, indigenous peoples have customary laws that are enforced, and indigenous peoples have customary institutions that regulate the harmonious interactions between them and their forest ecosystem.

The Baduy people's view of life towards the forest is that they consider mountains and forests to be the source of livelihood for the Baduy people, nature is not only for the Baduy people but for the wider community. The Baduy people think that nature is not a resource that must be exploited to get the maximum benefit, but that nature is a gift from God to be protected by humans so that it can be used by future generations. Baduy people are aware that the inhabitants of the world and the duty to care for nature is not their own task, but the task of all human beings on this earth, because all humans have the same status, namely they need the goodness and generosity of nature as a source of life (Kesum 2013). The Baduy people believe that they were created to protect the prohibited land, the center of the earth. They are required to save the entrusted forest by implementing a simple lifestyle regulated by customary

norms. Among the various customary laws scattered in Indonesia, the Baduy customary law is one example of the customary law that has been in effect regulating the Baduy indigenous people for hundreds of years from generation to generation. Until now, the law in Baduy is still binding on each member of the community (Fathurokhman 2010). Therefore, the main activities of the Baduy people essentially consist of land management for agricultural activities (*ngahuma*) and forest management and maintenance for environmental protection. Work is not a livelihood, but also a form of worship that is part of the pillars of Baduy. Farming activities are considered sacred because they married the rice goddess or Nyi Pohaci Sanghyang Asri. Farming activities will always be followed by ceremonies led by traditional leaders.

#### *Local wisdom of the Baduy people in conservation practices*

The concept of sustainability that is implemented by the Baduy people clearly originates from their belief and derived from customary law which they adhere to. The rules for avoiding changes to the form of nature in all aspects of life are forms of preserving nature between generations. The structure of government and custom is combined to maintain the existence of customary law and remain part of the external environment. The economic principles that are applied are also the key to the sustainability of the Baduy people, namely that activities aim to meet daily needs which are primary needs such as clothing, food and shelter. Baduy people perceive needs outside the primary as fulfilling their lust or desire and the desire to trigger the exploitation of natural resources and social inequality. If depicted in the form of a triangle, nature is the pinnacle of the Baduy people order. People must serve nature, as a form of service so they always worship nature as their life provider. This relationship between humans and nature creates a high respect for the environment to create a sustainable life. Conservation practices carried out by the Baduy people can be realized in terms of: (i) For the Baduy people, the forest is considered sacred so the indigenous people respect their forest area. (ii) The concept of environmental management with a zoning system has been known and practiced by the Baduy people from generation to generation. Through local wisdom, both traditional ceremonies and the concept of environmental management, which have been a practice of hereditary life and have been preserved, confirm that the Baduy people can exist. These life values are still actual and necessary for everyone in their present and future lives (Nadroh 2018). The traditions and customs of a community can act as an attraction for an area itself (Henri et al. 2018).

#### **MODERNIZATION AND BELIEF SHIFT IN BADUY PEOPLE**

The beliefs held by the Baduy people are often referred to as Sunda Wiwitan which are based on ancestor worship (animism). The essence of this belief is indicated by the existence of *Pikukuh* or absolute customary provisions that

are adhered to in everyday life. *Pikukuh* is divided into two, namely *Pikukuh sapuluh* and *Pikukuh karuhun*. *Pikukuh* teaches honesty and always maintains the truth and goodness for the benefit and safety. Even though the Baduy people still believe that obeying their religious beliefs will lead to community integrity, prosperity, and peace, Baduy people are also aware and believe that with changing times, changes will occur around the Baduy people. It would be impossible to deny it. The symptoms of change show a higher frequency in the *panamping* Baduy (Outer Baduy) than the *Tangtu* Baduy (Inner Baduy) people. Changes in the social dimension, including the beliefs of the Baduy people, can be caused by several factors such as modernization and outside influences. Changes in the beliefs of the Baduy people can be exemplified by the change in animist beliefs (Sundanese Wiwitan) to Islamic, Buddhist and Hindu beliefs. The influence of modernization also affects changes in farming systems, religious activities, changes in the use of clothing and language, and various other living systems (Maftuh 2018).

The outside world also affects the lives of the Baduy people. The traditional way of life of the Baduy people is simple and full of tolerance and sees life further into the future, so that their life remains sustainable. Protection of the environment is carried out to maintain the life of the Baduy people so that it remains intact and can continue to meet their needs. Management and utilization of the natural environment is an effort that has been prepared since humans occupy certain lands so that the sustainability of natural resources can be enjoyed by future generations (Fahmi 2017). They assume that environmental damage or changes to the shape of the environment will threaten their livelihoods resulting in hunger and economic deprivation. The destruction of life due to environmental damage will lead to the extinction of the Baduy people. Therefore they also prohibit and even fight against outsiders who try to damage their environment. Because the influence from outside can shift the socio-economic life of the Baduy people (Bintari 2012). The presence of outsiders can have both good and bad effects. The good impact of the arrival of newcomers or tourists for the Baduy people is that it can increase family income. The bad impact is disruption of culture to the Baduy people. The impact is the way of life of the Baduy people, especially the Outer Baduy, which is becoming contaminated with the times. The social and cultural dynamics of the Baduy people impact the management of forests, land and the environment (Senoaji 2010). The community maintains this culture because immigrants must obey and obey the rules applicable in the Baduy people, and this is done without exception.

To protect the environment from outside influences, many of their efforts are repressive or preventive (Sugiwa 2015). Some of the preventive efforts that have been carried out are by not accepting development assistance from any party which is thought to damage their environmental conditions or social structure. In addition, they also continue to urge both local and national governments to make their area a protected area and are supported by regulations issued by the government so that it is binding for people outside Baduy. Repressive efforts

are made firmly by directly taking action against anyone who tries to damage their environment. To control land use by the community, Baduy has no land ownership. The existing land is customary land which is used collectively. In addition, there is no system of buying and selling or renting land. With such a system, adat can control land and its allocation. The land that can be used as agricultural fields is used in rotation by the families there. For the Outer Baduy area, there is a land rental system. Rent is done for agricultural land with a production sharing system. The family who rents the land pays with their agricultural produce to the land owner, the amount is determined by agreement at the beginning of planting. The form of environmental conservation and conservation behavior carried out by the Baduy people is reflected daily. This high awareness of the relationship between the sustainability of life and the natural environment is what shapes Baduy people's behavior to be very environmentally friendly. In making decisions about new problems that arise, it is always based on the interests of the environment as a priority.

### CONCLUDING REMARKS

Baduy people are peoples who always apply their traditional customs and beliefs in their daily lives. The Baduy people is a society that is known to have full authority in regulating the natural environment and customs. The Baduy people has strict customary rules and is carried out with full regulating their natural environment and traditional customs. The belief held by almost all Baduy people is Sunda Wiwitan. In Sundanese Wiwitan belief, protecting nature is an obligation from the foundation of the pillar of religion. The rules or laws that apply in the life of the Baduy people are *Pikukuh*. *Pikukuh* is divided into two, namely *Pikukuh sapuluh* and *Pikukuh karuhun*. *Pikukuh* has become a philosophy of life and social control over the behavior of the Baduy people. In essence, the main activity of the Baduy people is to save and protect the forbidden land that has been sacred by their ancestors. Therefore, the behavior of the Baduy people is always directed at managing the forest and its environment and managing land for agricultural activities (*ngahuma*). Through a system of beliefs, traditions, and traditional customs, as a form of local wisdom to maintain the balance of nature, the Baduy people are proven to support themselves, protect their environment, and preserve nature. The behavior of local wisdom which is a form of environmental conservation and conservation carried out by the Baduy people includes: (i) agricultural systems, (ii) residential systems, (iii) forestry systems, and (iv) conservation practices.

### ACKNOWLEDGEMENTS

The authors would like to thank various parties for all their contributions in the completion of this review manuscript.

### REFERENCES

- Adimihardja, K. 2014. Orang Baduy di Banten Selatan: manusia air pemelihara sungai. *Antropologi Indonesia* 61: 47-59. DOI: 10.7454/ai.v0i61.3383. [Indonesian]
- Adisaputri YD, Widiastuti I. 2015. Territorial identification of vernacular settlement Cigugur through the practice of *Seren Taun* Ritual in Kuningan, West Java. *Procedia-Social Behav Sci* 184: 196-205. DOI: 10.1016/j.sbspro.2015.05.080.
- Ahidin U, R. Handayani, Suraya A. 2018. Penyuluhan manajemen informasi dengan mempertahankan kehidupan sosial budaya masyarakat Suku Baduy. *Jurnal Pengabdian Dharma Laksana* 1 (1): 1-10. [Indonesian]
- Ahimsa HS. 2014. Keragaman budaya dalam rangka keragaman bahasa: Ancaman dan tantangan. Makalah Prosiding Seminar Tahunan Linguistik UPI (setali) Agustus. Universitas Pendidikan Indonesia, Bandung. [Indonesian]
- Ahmad HA. 2010. Kearifan lokal *Sebagai* landasan pengembangan bangsa. *Harmoni Jurnal Multikultural Multireligius* 34 (9): 5-8. [Indonesian]
- Ahmad M. 2013. Spiritualitas agama lokal: Studi ajaran Sunda Wiwitan aliran Madrais di Cigugur, Kuningan, Jawa Barat. *Al-Adyan* 8 (1): 89-102. [Indonesian]
- Akbarini D. 2016. Pohon pelawan (*Tristanopsis merguensis*): Spesies kunci keberlanjutan taman keanekaragaman hayati Namang-Bangka Tengah. *Al Kaunyah Jurnal Biologi* 9 (1): 66-73. DOI: 10.15408/kaunyah.v9i1.3500. [Indonesian]
- Andriana E, Syachruraji A, Alamsyah TP, Sumirat F. 2017. Natural science big book with Baduy local wisdom base media development for elementary school. *Jurnal Pendidikan IPA Indonesia* 6 (1). DOI: 10.15294/jpii.v6i1.8674. [Indonesian]
- Anshoriy N, Sudarsono. 2008. Kearifan Lingkungan dalam Perspektif Budaya Jawa. Yayasan Obor Indonesia, Jakarta. [Indonesian]
- Ardan AS, Ardi M, Hala Y, Supu A, Dirawan GD. 2015. Need assessment to development of biology textbook for high school class X-based the local wisdom of Timor. *Intl Educ Stud* 8 (4): 52-59. DOI: 10.5539/ies.v8n4p52.
- Atmojo SE. 2013. Penerapan model pembelajaran berbasis masalah dalam peningkatan hasil belajar pengelolaan lingkungan. *Jurnal Kependidikan: Penelitian Inovasi Pembelajaran* 43 (2). [Indonesian]
- Azhari AK, Negoro AHS. 2019. Desentralisasi dan Otonomi Daerah di Negara Kesatuan Republik Indonesia. Intrans Publishing, Malang. [Indonesian]
- Badan Pusat Statistik Kecamatan Leuwidamar. 2019. Kecamatan Leuwidamar Dalam Angka 2019. Badan Pusat Statistik, Leuwidamar. <http://www.bps.go.id/> [Indonesian]
- Badan Pusat Statistik. 2010. Indonesia: Sensus Penduduk 2010. <http://www.bps.go.id/> [Indonesian]
- Bintari R. 2012. Sejarah perkembangan sosial ekonomi masyarakat baduy pasca terbentuk Propinsi Banten tahun 2000. *J Indonesian History* 1 (1): 18-22. [Indonesian]
- Dahlioni D, Soemarno I, Setijanti P. 2015. Local wisdom inbuilt environment in globalization era. *Intl J Educ Res* 3 (6).
- Dahuri R. 2003. Keanekaragaman Hayati Laut: Aset Pembangunan Berkelanjutan Indonesia. Gramedia Pustaka Utama. [Indonesian]
- Desa Kanekes. 2009. Buku Indeks Desa Kanekes Tahun 2009. [Indonesian]
- Dharmawibawa ID. 2019. Kearifan lokal masyarakat Desa Seloto dalam pengelolaan sumberdaya alam di Danau Lebo. *Abdi Masyarakat* 1 (1): 29-35. DOI: 10.36312/abdi.v1i1.941. [Indonesian]
- Eddy S, Iskandar I, Ridho MR, Mulyana A. 2016. Dampak aktivitas antropogenik terhadap degradasi hutan mangrove di Indonesia. *Jurnal Lingkungan dan Pembangunan* 2 (2): 292-306. DOI: 10.31219/osf.io/xd9cb. [Indonesian]
- Effendi H. 2003. Telaah Kualitas Air, Bagi Pengelolaan Sumber Daya dan Lingkungan Perairan. Kanisius, Jakarta. [Indonesian]
- Erwinantu. 2010. Saba Baduy: Sebuah Perjalanan Wisata Budaya Inspiratif. Gramedia Pustaka Utama, Jakarta. [Indonesian]
- Fahmi RF. 2017. Mitos danau *Sebagai* pelestari lingkungan. *Deiksis-Jurnal Pendidikan Bahasa dan Sastra Indonesia* 4 (2): 65-75. DOI: 10.33603/deiksis.v4i2.639. [Indonesian]
- Fathurokhman F. 2010. Hukum pidana adat Baduy dan relevansinya dalam pembaharuan hukum pidana. *Jurnal Law Reform* 5 (1): 1-38. DOI: 10.14710/lr.v5i2.12493. [Indonesian]

- Firdaus MN, Budiaman, Herminasari NS. 2019. Peran komunitas pramuwisata Baduy Luar dalam mempertahankan kearifan lokal. *Edukasi IPS* 4 (1): 11-20. [Indonesian]
- Garna J. 1993. "Masyarakat Baduy di Banten" dalam Koentjaraningrat. *Masyarakat Terasing di Indonesia* 120-152. [Indonesian]
- Gunawan I, Sulistyoningrum RT. 2016. Menggali nilai-nilai keunggulan lokal kesenian Reog Ponorogo guna mengembangkan materi keragaman suku bangsa dan budaya pada mata pelajaran IPS kelas IV Sekolah Dasar. *Premiere Educandum: Jurnal Pendidikan Dasar dan Pembelajaran* 3 (1). DOI: 10.25273/pe.v3i01.59. [Indonesian]
- Hakiki KM. 2015. Keislaman Suku Baduy Banten: antara Islam dan Slam Sunda Wiwitan. *Refleksi* 14 (1): 25-54. [Indonesian]
- Henri HL, Batoro J. 2018. Kearifan lokal masyarakat *Sebagai* upaya konservasi hutan pelawan di Kabupaten Bangka Tengah, Bangka Belitung. *Jurnal Ilmu Lingkungan* 16 (1): 49-57. DOI: 10.14710/jil.16.1.49-57. [Indonesian]
- Hidayah Z. 2015. Ensiklopedi suku bangsa di Indonesia. Yayasan Pustaka Obor Indonesia, Jakarta. [Indonesian]
- Ichwandi I, Shinohara T. 2007. Indigenous practices for use of and managing tropical natural resources: A case study on Baduy people in Banten, Indonesia. *Tropics* 16 (2): 87-102. DOI: 10.3759/tropics.16.87.
- Indrawardana I. 2012. Kearifan lokal adat masyarakat Sunda dalam hubungan dengan lingkungan alam. *Komunitas* 4 (1): 1-84. DOI: 10.15294/komunitas.v4i1.2390. [Indonesian]
- Iskandar J. 2012. Ekologi Perladangan Orang Baduy Pengelolaan Hutan Berbasis Adat Secara Berkelanjutan. Penerbit Alumni, Bandung. [Indonesian]
- Iskandar BS, Iskandar J, Irawan B, Partasasmita R. 2019. The development of coffee cultivation in the traditional agroforestry of mixed-garden (Dukuh Lembur) to provide social-economic benefit for the Outer Baduy people, South Banten, Indonesia. *Biodiversitas* 20 (10). DOI: 10.13057/biodiv/d201026.
- Iskandar BS, Iskandar J, Partasasmita R. 2018a. Strategy of the Outer Baduy people of South Banten (Indonesia) to sustain their swidden farming traditions by temporary migration to non-Baduy areas. *Biodiversitas* 19: 453-464. DOI: 10.13057/biodiv/d190212.
- Iskandar J, Iskandar BS. 2016. Ethnoastronomy-The Baduy agricultural calendar and prediction of environmental perturbations. *Biodiversitas* 17: 694-703. DOI: 10.13057/biodiv/d170244.
- Iskandar J, Iskandar BS, Partasasmita R. 2018b. Site selection and soil fertility management by the Outer Baduy People (Banten, Indonesia) in maintaining swidden cultivation productivity. *Biodiversitas* 19: 1334-1346. DOI: 10.13057/biodiv/d190421.
- Iskandar J, Iskandar BS. 2015. Ethnobotanical study on food crop diversity in swidden agroforestry agriculture to support food security of Baduy people. *Pros Sem Nas Masy Biodiv Indon* 1: 1265-1272. DOI: 10.13057/psnmbi/m010601.
- Iskandar J, Iskandar BS. 2017a. Kearifan ekologi orang Baduy Dalam konservasi padi dengan "Sistem Leuit". *Jurnal Biodjati* 2 (1): 38-51. DOI: 10.15575/biodjati.v2i1.1289. [Indonesian]
- Iskandar J, Iskandar BS. 2017b. Local knowledge of the Baduy people of South Banten (Indonesia) on the traditional landscapes. *Biodiversitas* 18: 928-938. DOI: 10.13057/biodiv/d180309.
- Iskandar J, Iskandar BS. 2017c. Various plants of traditional rituals: Ethnobotanical research among the Baduy people. *Biosaintifika* 9 (1): 114-125. DOI: 10.15294/biosaintifika.v9i1.8117.
- Iskandar J, Iskandar BS. 2018. Etnoekologi, biodiversitas padi dan modernisasi budidaya padi: Studi kasus pada Masyarakat Baduy dan Kampung Naga. *Jurnal Biodjati* 3 (1): 47-62. DOI: 10.15575/biodjati.v3i1.2344. [Indonesian]
- Jamaludin. 2012. Makna simbolik *huma* (ladang) di Masyarakat Baduy. *Jurnal Ilmu Humaniora* 11 (1): 1-91. [Indonesian]
- Judhistira, Garna. 1988. Perubahan sosial budaya Baduy dalam Nurhadi Rangkuti (Peny.). *Orang Baduy dari Inti Jagat*. Etnodata Prosindo, Yogyakarta. [Indonesian]
- Kesum AS. 2013. Kerukunan umat beragama dan resolusi konflik studi kasus umat beragama pada Masyarakat Suku Baduy perbatasan di Provinsi Banten. *Jurnal Tapis* 9 (2): 118-134. [Indonesian]
- Khamdevi M, Effend AC. 2018. Karakteristik arsitektur di Kampung Cikadu Indah, Tanjung Lesung-Banten. *Jurnal Ilmiah Penelitian* 1 (2): 1-6. DOI: 10.33510/marka.2018.2.1.1-8. [Indonesian]
- Khastini RO, Wahyuni I, Saraswati I, Alimuddin, Nuangchalerm P. 2019. Ethnobotanical study of medicinal plants utilized by the Baduy people used as a learning resource. *Jurnal Pendidikan Biologi Indonesia* 5 (2): 197-206. DOI: 10.22219/jpbi.v5i2.7219. [Indonesian]
- Koentjaraningrat. 2010. *Pengantar Ilmu Antropologi*. Rineka Cipta, Jakarta. [Indonesian]
- Laily N. 2017. Konservasi alam dalam novel *baiat cinta* di Tanah Baduy Karya Uten Sutendy (Kajian Ekokritik Greg Garrard). *Jurnal Sapala* 3 (1). [Indonesian]
- Maftuh SA. 2018. Agama dan perubahan sosial masyarakat adat: Studi tentang pergeseran ketaatan terhadap *Pikukuh* pada Masyarakat Baduy. [Thesis]. UIN Sunan Gunung Djati, Bandung. [Indonesian]
- Manik KES. 2018. *Pengelolaan lingkungan hidup*. Kencana, Jakarta. [Indonesian]
- Maryana R, Rachmawati Y. 2013. *Pengelolaan lingkungan belajar*. Prenada Media. [Indonesian]
- Miharja D. 2015. Sistem kepercayaan awal masyarakat Sunda. *Al-Adyan* 10 (1): 19-36. [Indonesian]
- Ministry of State Secretariat of the Republic of Indonesia. 2013. *Geografi Indonesia*, Jakarta. [Indonesian]
- Mukono J. 2005. Kedudukan amdal dalam pembangunan berwawasan lingkungan yang berkelanjutan (Sustainable Development). *Jurnal Kesehatan Lingkungan* 2 (1).
- Mustomi O. 2017. Perubahan tatanan budaya hukum pada masyarakat adat Suku Baduy Provinsi Banten. *Jurnal Penelitian Hukum De Jure* 17 (3): 309-328. DOI: 10.30641/dejure.2017.V17.309-328. [Indonesian]
- Nadroh S. 2018. *Pikukuh* Karuhun Baduy dinamika kearifan lokal di tengah modernitas zaman. *Jurnal Pasupati* 5 (2): 196-216. DOI: 10.37428/pspt.v5i2.117. [Indonesian]
- Niman EM. 2019. Kearifan lokal dan upaya pelestarian lingkungan alam. *Jurnal Pendidikan dan Kebudayaan Missio* 11 (11): 1-178. [Indonesian]
- Nurislamingsih R, Erwina W, Rohman AS. 2019. Pemetaan pengetahuan lokal sunda dalam koleksi di Museum Sri Baduga. *Lentera Pustaka: Jurnal Kajian Ilmu Perpustakaan, Informasi dan Kearsipan* 5 (2): 109-120. DOI: 10.14710/lenpust.v5i2.26426. [Indonesian]
- Pemda Kabupatatan Lebak. 2001. Peraturan Daerah No. 32 tahun 2001 tentang Perlindungan atas Hak Ulayat Masyarakat Baduy. *Rangkasbitung*. [Indonesian]
- Permana CE, Nasution IP, Gunawijaya J. 2012. Kearifan lokal tentang mitigasi bencana pada masyarakat Baduy. *Hubs-Asia* 15 (1): 67-76. DOI: 10.7454/mssh.v15i1.954. [Indonesian]
- Permana CE. 2001. *Kesetaraan Gender dalam Adat Inti Jagat Baduy*. Wedatama Widya Sastra, Jakarta. [Indonesian]
- Permana CE. 2003. *Arca Domas Baduy: Sebuah Referensi Arkeologi dalam Penafsiran Ruang Masyarakat Megaliti*. Indonesian Archeology on the Net. [Indonesian]
- Permana CE. 2003. *Religi dalam Tradisi Bercocok Tanam Sederhana*. Indonesian Archeology on the Net. [Indonesian]
- Permana R, Eka C. 1996. *Tata Ruang Masyarakat Baduy*. [Tesis]. Program Pascasarjana, Universitas Indonesia, Jakarta. [Indonesian]
- Permana RC. 2010. Kearifan lokal Masyarakat Baduy menghadapi perubahan sosial. In *Makalah disampaikan dalam forum Seminar Antarabangsa Bersama Universiti Kebangsaan Malaysia dan Universitas Indonesia (SEBUMI 3)* 16-18. [Indonesian]
- Permana RCE, Nasution IP, Gunawijaya J. 2011. Kearifan lokal tentang mitigasi bencana pada Masyarakat Baduy. *Makara, Sosial Humaniora* 15 (1): 67-76. DOI: 10.7454/mssh.v15i1.954. [Indonesian]
- Pratiwi RCE. 2017. Strategi komunikasi berbasis kearifan lokal dalam penguatan upaya lumbung pangan (leuit) untuk menunjang ketahanan pangan. [Skripsi]. Universitas Brawijaya, Malang. [Indonesian]
- Prawiro, Bambang AM. 2013. *Baduy pluralism: from myth to reality*. Al-Albab: Borneo J Religious Studi 2 (1): 111-124. DOI: 10.24260/alalbab.v2i1.27.
- Prihantoro F. 2006. *Kehidupan Berkelanjutan Masyarakat Baduy*. Asia Good ESP Practice Project, Jakarta. [Indonesian]
- Purnaweni H. 2014. Kebijakan pengelolaan lingkungan di Kawasan Kendeng Utara Provinsi Jawa Tengah. *Jurnal Ilmu Lingkungan* 12 (1): 53-65. DOI: 10.14710/jil.12.1.53-65. [Indonesian]
- Putri GS, Meiliyana M, Oktapiandi RN, Fasya M. 2019. Conservation of organic agricultural systems in ethnoagricultural lexicons (ethnolinguistic study in Baduy Traditional Village). *SSRN Electron J* 1 (1): 1-25. DOI: 10.2139/ssrn.3431167.
- Ridwan R. 2015. Problematika keragaman kebudayaan dan alternatif pemecahan. *Madaniyah* 5 (2): 254-270. [Indonesian]
- Ritzer G. 2014. *Teori Sosiologi: dari Sosiologi Klasik sampai perkembangan*. Pustaka Pelajar, Yogyakarta. [Indonesian]

- Rochwulaningsih Y. 2017. Dinamika gerakan lingkungan dan global environmental governance. *Jurnal Sejarah Citra Lekha* 2 (2): 151-160. DOI: 10.14710/jscl.v2i2.16188. [Indonesian]
- Rosana E. 2011. Modernisasi dan perubahan sosial. *Jurnal Tapis: Jurnal Teropong Aspirasi Politik Islam* 7 (1): 46-62. [Indonesian]
- Rosana E. 2015. Modernisasi dalam perspektif perubahan sosial. *Al-Adyan: Jurnal Studi Lintas Agama* 10 (1): 67-82. [Indonesian]
- Rozah U. 2021. Environmental maintenance through the application of adat (criminal) sanctions on Baduy Communities. *Indian J Forensic Med Toxicol* 15 (2).
- Sabri M, Musyahidah S. 2015. Agama mainstream, nalar negara dan paham lintas iman: menimbang *Philosophia Perennis*. *Jurnal Diskursus Islam* 3 (1): 73-101. [Indonesian]
- Sahlan. 2012. Kearifan lokal masyarakat Tau Taa Bulang dalam mengkonservasi hutan di Provinsi Sulawesi Tengah. *Jurnal Ilmu Hukum Perdana* 2 (4): 278-287. [Indonesian]
- Saleh F, Soejadi, Lasiyo. 2013. Makna "Silas" menurut kearifan budaya sunda perspektif filsafat nilai: Relevansinya bagi pemberdayaan masyarakat miskin. *Sosiohumaniora: J Soc Sci Humanities* 15 (2): 158-166. DOI: 10.24198/sosiohumaniora.v15i2.5745. [Indonesian]
- Saleh I, Atmaja IS, Syahadat RM. 2019. Prohibition in Baduy Dalam community: soil and water conservation perspective. *Adv Soc Sci Educ Humanities Res* 429: 180-182.
- Saringendyanti E, Herlina N, Zakaria MM. 2018. *Tri Tangtu* on Sunda Wiwitan Doctrine in the XIV-XVII Century. *Tawarikh: J Historical Stud* 10 (1): 1-14. DOI: 10.2121/tawarikh.v10i1.1056.
- Satriadi YP. 2015. *Huma* Orang Baduy dalam pembentukan sikap swasembada pangan. *Patanjala* 7 (3): 559-574. DOI: 10.30959/patanjala.v7i3.119. [Indonesian]
- Senoaji G, Simon HH. 2011. Pengelolaan hutan dan lingkungan oleh Masyarakat Baduy dalam perspektif etnoekologi. [Dissertation]. Universitas Gadjah Mada, Yogyakarta. [Indonesian]
- Senoaji G. 2003. Kearifan Lokal Masyarakat Baduy dalam Mengelola Hutan dan Lingkungannya. [Thesis]. Pasca Sarjana Universitas Gadjah Mada, Yogyakarta. [Indonesian]
- Senoaji G. 2010. Dinamika sosial dan budaya masyarakat dalam mengelola hutan dan lingkungan. *Jurnal Bumi Lestari* 10 (2): 302-310. [Indonesian]
- Senoaji G. 2011. Perilaku Masyarakat Baduy dalam mengelola hutan, lahan dan lingkungan di Banten Selatan. *Jurnal Humaniora* 23 (1): 1-15. DOI: 10.22146/jh.1006. [Indonesian]
- Senoaji G. 2012. Pengelolaan lahan dengan sistem agroforestry oleh Masyarakat Baduy di Banten Selatan. *Jurnal Bumi Lestari*. 12(2): 283-293. [Indonesian]
- Sinapoy MS. 2018. Kearifan lokal masyarakat adat Suku Moronene dalam perlindungan dan pengelolaan lingkungan hidup. *Holrev* 2 (2): 513-542. DOI: 10.33561/holrev.v2i2.4513. [Indonesian]
- Sucipto T, Limbeng J. 2007. Studi tentang religi masyarakat Baduy di desa Kanekes provinsi Banten. Direktorat Jenderal Kebudayaan. [Indonesian]
- Sudarsih S. 2011. Konsep hedonisme epikuros dan situasi Indonesia masa kini. *Humanika* 14 (1): 1-8. [Indonesian]
- Sufia R, Sumarmi, Amirudin A. 2016. Kearifan lokal dalam melestarikan lingkungan hidup (studi kasus masyarakat adat Desa Kemiren Kecamatan Glagahkabupaten Banyuwangi). *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan* 1 (4): 726-731. [Indonesian]
- Sugiwa I. 2015. Pengembangan pariwisata berbasis keunikan penduduk lokal di wilayah Banten (studi di wilayah Baduy). *Jurnal Penelitian dan Pengembangan Humaniora Epigram* 12 (2): 133-144. [Indonesian]
- Suhartini. 2009. Kajian kearifan lokal masyarakat dalam pengelolaan sumberdaya alam dan lingkungan. *Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan MIPA. Fakultas MIPA Universitas Negeri Yogyakarta, Yogyakarta*. [Indonesian]
- Suparmini S, Setyawati S, Sumunar DR. 2013. Pelestarian lingkungan masyarakat Baduy berbasis kearifan lokal. *Jurnal Penelitian Humaniora* 18 (1). DOI: 10.21831/hum.v18i1.3180. [Indonesian]
- Suparmini S, Setyawati S, Sumunar DR. 2014. Mitigasi bencana berbasis kearifan lokal masyarakat Baduy. *Jurnal Penelitian Humaniora* 19 (1): 47-64. DOI: 10.21831/hum.v19i1.3511. [Indonesian]
- Supriatna E. 2012. Upacara *Seba* pada Masyarakat Baduy. *Patanjala* 4 (3): 481-496. DOI: 10.30959/patanjala.v4i3.160. [Indonesian]
- Sutardi T. 2007. *Antropologi: Mengungkap Keragaman Budaya*. PT Grafindo Media Pratama, Bandung. [Indonesian]
- Sutisna T. 2019. The local farming system based on custom and tradition to achieve sustainable agriculture in Baduy indigenous community. In *IOP Conf Ser: Earth Environ Sci* 383 (1): 012032. DOI: 10.1088/1755-1315/383/1/012032.
- Sutoto. 2017. Dinamika transformasi budaya belajar Suku Baduy. *Jurnal Penelitian Pendidikan* 17 (2): 138-148. DOI: 10.17509/jpp.v17i2.8249. [Indonesian]
- Syah H. 2013. Urbanisasi dan modernisasi (Studi tentang perubahan sistem nilai budaya masyarakat urban di Pangkalan Kerinci Kabupaten Pelalawan). *Toleransi: Media Ilmiah Komunikasi Umat Beragama* 5 (1): 1-12. [Indonesian]
- Taylor B, Loe RCD. 2012. Geoforum conceptualizations of local knowledge in collaborative environmental governance. *Geoforum* 43 (6): 1207-1217. DOI: 10.1016/j.geoforum.2012.03.007.
- Widowati D. 2014. Perubahan perilaku sosial Masyarakat Baduy terhadap perkembangan teknologi informasi dan komunikasi. *Lontar: Jurnal Ilmu Komunikasi* 3 (1): 1-8. [Indonesian]
- Zidny R, Eilks I. 2018. Indigenous knowledge as a socio-cultural context of science to promote transformative education for sustainable development: a case study on the Baduy people (Indonesia). *Building Bridges Across Discip Transformative Educ Sustain Future* 29: 249-256.