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**LOCAL WISDOM AND ENVIRONMENTAL PRESERVATION
(STUDY ON SUNDANESE INDIGENOUS PEOPLE IN EAST
PRIANGAN, WEST JAVA, INDONESIA)**

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ABSTRACT

The aim of this research is to carry out the pattern of the East Priangan indigenous people's life on expressing local wisdom and environmental preservation. Getting their authenticity will be a part of shaping their original personality for the sake of developing their culture and environmental preservation.

To obtain the data of this research, qualitative study is taken. It's completed by the usage of participant observation technique. Thus the researcher will be an aid on observing and interviewing both the main and base informants there. The researcher will stay along in a few weeks in each village to observe and dig the information out through snow ball model which means seeking information to the next informant through the earlier one.

The result shows that they live along with nature and their trust on it is their religious belief. Those are the essential basic on guiding and becoming the purpose of their life. Simplicity of life which is obedient on their ancestry's norms and values is certainly the strongest fort. Thus they cannot be easily influenced by others. In conclusion, they do consider that their obedient on the ancestry is the guarantee of their safe life in the world and hereafter. Their relationship with nature proved that they are part of it. And their ancestral spirits are alive and unite with nature.

BACKGROUND

Besides population, environmental crisis has already been a big problem in the world. It threatens human life after the easing of nuclear bomb and chemical weapons. The heat of air temperature, the leaking of ozone layer, the melting of ice polar, coastal abrasion, the bigger waves which cause the higher sea surface, and the eroding of the beach that narrow the land.

Many disasters appear on the land; flood as the impact of the narrowness of water infiltration, none of big trees as its infiltration, huge amount of plastic waste, the narrowness of river surface in urban area due to the development of wild housing on its banks; the increasing of air pollution caused by vehicles and industries; many deforested and degraded land on the village due to rural economic pressure tend to have illegal logging; the indiscriminate capture of wildlife, the exploitation of natural resources; sand excavation, conducting rock mining without land reclamation.

Disasters are everywhere; flood and landslide happened on the land, on the shore; Tsunami, tidal waves, coastal abrasion; urban expansion has changed the field for food energy; rice field has been settlements and offices; water infiltration has been high walls; modern agriculture has produced degraded land and destroyed habitat due to the usage of chemical substance as a pest and fertilizer to accelerate plant growth.

When human don't get a decent living space, where can we live? Modernization and the desire of gaining wealth and welfare has become political program in every country. Only a few people are able to hold their passions to move ahead by keeping customary heritage through simple life and get the nature along.

Ancient philosophers in traditional societies are carried out to organize community life and integrate with nature. Natural law; *manunggaling gusti; manunggaling alam*; which means respect for nature; the consideration that nature has the same right as human is the philosophy of indigenous people. It appears along the local wisdom on several indigenous people in the world.

The research reveals many local wisdoms and environmental preservation which belong to Sundanese indigenous people. Its formulations of the problem are; how is Sundanese indigenous people's local wisdom in East Priangan? How is their relationship with nature? And how do they preserve the environment?

Kampung Kuta in Ciamis has got Kalpataru award from the president of republic Indonesia because of having adequate ability on preserving environment. As well as Kampung Kuta, Kampung Naga in Tasikmalaya has been very famous as indigenous tourism object. It shows the equal habit and life style; simple life, livelihoods as farmers and craftsmen, there is a pattern of integrated traditional agriculture among farming, rice fields, fisheries, and irrigation system which is managed traditionally to ensure the sustainability of that area.

The aim of this research is; to gain model, philosophy, pattern, the life of indigenous people which ensure nature sustainability. Human is not only being decided by themselves by also by the nature. It requires them to treat nature by feminism way. Eco-feminism has to be formulated in the real form after being reached from indigenous people. This is acceptable to consider them as the model in developing modern life along nature relationship which ensures human and environmental preservation. Earth as well as human is safe from destruction and extinction.

The combination of anthropocentrism philosophy and naturalism will be the best way to decide modern human behavior who want to save the life from damages and ensure the sustainability of life on earth. Neo-anthropocentrism will be the choice to survive and to become solution. It is modern and traditional life style combination.

It is characterized by having the advancement of science and technology that are used to explore the nature and manipulate it for the sake of satisfaction. While indigenous people has simple characteristic; being satisfied by keeping content with nature and trying to preserve it.

They belief that all objects in the world alive and have spirits. Those are treated the same as human to have soul and body. Hurting them (animals, plants, land, and rocks) without any permission by prioritizing human needs, they will punish human through suffering and pain. Those are the reasons to determine this research as essential thing. It can change human behavior in case of their relationship with nature and their limitation to use it without any damage as well as being able to ensure the survival of human life with very adequate prosperity.

The practical advantage of this research for modern society shows that the simplicity of life is able guarantee nature preservation, while endless satisfaction will cause the damage on it. The most effective way to preserve is by the existence of prohibition and suggestion. The law of environment should be implemented effectively. Keep loving environment must be spread and inculcated by society as well as young generation. Environmental mindset has to be completely changed soon. Life saving and simple life are absolutely suggested to be conducted along.

The leaders must direct people to do environmental-loving life and provide relevant philosophies along it. They have to be the model. Sundanese philosophy in environmental preservation, such as; *leuweung kaian*, *gawir awian*, *lebak caian*, *dadatar pelakan*, *walungan rumatan*. While in presrvinf forest, the philosophy is *leuweung hejo masyarakat ngejo*.

THEORITICAL STUDY

Socio-cultural change

It is believed that society evolves from traditional to modern and even post-modern in which categorized by high consumption. Classic modernization theory stated that modern society is signed by rationale thinking and throw the irrational traditional thought away (Suwarsono & Alvin Y.So; 2010).

Traditional society's theologies oriented. They believe that human is managed by natural sentries; nature determines human life. Thus, human should live together and depend on nature. The law of nature should be obeyed. It has mystical power; all things in this universe are considered to have soul to show their existences. Prohibition, restriction, and suggestion exist to keep human live and prevent them from curse of nature. It becomes the guidance that is used by indigenous people whose life is harmonic with nature.

In modern life, human thought changes from natural sentries to Anthropocentrism; human determine the nature. They develop their ability to explore nature as satisfying their needs. They have endless needs as long as being provided by nature. They will keep trying and manipulating nature as they want through technology.

The more rapid the progress of science and technology is, the worse nature will be. The usage of them lead human to exploit environment; such as exploration, exploitation, petroleum transformation have caused environmental problems like air and water

pollution. As well as urban development activities have changed geomorphology like hills disappearing, the change of river flow, deforestation, declining groundwater level, plants extinction, erosion, etc.

The selfishness of only thinking themselves materialistically has not been balance to altruism in protecting environment. Even though post materialistic has

existed such as taking bicycle instead of car to visit office by Dutchmen and forbidding vehicles to enter some institutions. Sociobiology theory stated that “the closer the kinship is, the bigger the altruism will be. Because the more genes they have, the farer kinship will be and the smaller altruism can be” (Soemarwoto, 2010). If the hen sacrifices itself for its descendent, the indigenous farmers will do the same, so why don't others keep good kinship with flora and fauna.

Although forest has economical role but excessive forest exploitation will eliminate its ecological function. Because it can absorb carbon from air and return fresh oxygen for human. Forest can also filter air pollution caused by vehicle and industries, thus environmental preservation is absolutely essential. Cooperation among societies who live around forest is needed. Soemarwoto (2010) stated that “only in optimal environment human can grow well. And only with wise people, environment can develop more optimally”.

Environmental preservation

The biggest possibility of human extinction is caused by environmental impact. Those are occurred through nuclear war, spread of diseases due to biological warfare, as well as chemical war. Global warming is worse and unrepaired; ozone layer disappeared and human life fell down. Without being recognized, natural resource exploitation and changing its shape as people need, have caused serious problem on it, ecosystem destruction, breaking ecological cycles, eliminating habitat which disturb its balance. Global warming, greenhouse effect, ozone layer damages, the melting of ice polar, nuclear waste that destroys marine biota, garbage problem, land, air, and water pollution caused by industrial waste and vehicles. All are due to unfriendly treatment on it.

Changing the behavior mean changing the attitude and knowledge, because it is the same as changing moral. They will relate to formulated attitude and habit. Anthropocentric must be natural sentries or environmental determinism which means environment will determine human life. Morally, human will be the real human after living along the others in a society or is called as social cooperative self. It doesn't observe other facts that indigenous people's life mostly depends on nature. Human is not the only one social being.

Personality theory shows that someone's personality is mostly affected by society and environment (Soerjono: 2009); as people living in cool area will have the different personality as those who live in dry area; so as people living in mountainous area will be different with those who are in coastal area or known as geographic determinism. Thus nature will influence human personality.

The ethics of human life in modern society only manage the kinship between one to another (social ethics), it doesn't lead the relationship between human and nature. Human can live in nature as they wish without considering environmental preservation at all. It only exists in indigenous people. Ancient philosophy shows that things have soul and strength, human should obey on law of nature, and there is harmonic kinship between human and nature.

Local wisdom

Local wisdom relates to the unique area as indigenous people. They are tied closely through the heritage of their ancestors, including life style, religion, and environmental preservation. According to Ajip Rosidi (2011: 29), it is a translation of local genius which means local culture. It relates either to myths, the given story to guide certain way of the society, the way they act out in daily life. It involves life requirements to obey. They will be afraid to leave it due to its consequences such as curse and disasters.

Think globally and act locally, is Robin Attfield's statement (2010) on discussing the issue of environmental destruction. It cannot be avoided that Earth is getting worse and unrepaired, how can global warming be restored? How can ozone layer be repaired? There is no choice instead of slowing down the damage by changing mindset and behavior. Those should be traditional local wisdom-based. According to **The World Conservation Union** (Sonny Keraf, 2010), "approximately 6000 culture in the world, there are 5000 of them or about 80% are indigenous people". They consider themselves, nature, and the kinship through religious perspective. Nature is determined as sacred and holy thing. There is a harmonic relationship between human and nature. There is a belief that the spiritual will be gathered with the material. Harmony and balance are comprehended as the most important principles and values in cosmic level.

There are many examples on indigenous people whose life is gathered with nature, such as Javanese seek to find the unity of their life, *manunggaling lan urip*. Vandana Shiva (in Sonny Keraf: 2010) stated that "soil is not only the womb of biological reproduction life but also the cultural and spiritual reproduction". Darrell Addison Posey's research (in Sonny Keraf: 2010) the prayer of Lakota's from Indian "all is my relatives"; Lamohot in East Florest greet animals, trees, or certain place by saying "belle"; Mentawai in west Sumatera believe in all God's creatures as a harmonic union. Subtle spirits are everywhere of this nature, animals, plants, forests, mountains, and rivers; all has each soul and character; they can be taken after being permitted. Everything is sacred.

Local wisdom is a culture or habit of society in maintaining them as the heritage from their ancestors. Their belief is born over the history and believed by the community descend. Abstinance, prohibition and suggestion are their guidance; in Panjalu, Ciamis (Dodih Heryadi: 2007) it is forbidden to kill bat in sacred forest in Panjalu lake; as well as Kampung Kuta, Tambaksari, Ciamis (Sadian Suphadi: 2005) it is not allowed to cut palm trees since the tiger live under them. Kampung Naga, Salawu, Tasikmalaya is also instructed to build a house made of bamboo and palm leaves as the roof (Awan Mutaqin: 2008).

All indigenous people; abstinance, prohibition, and suggestion are always related to environmental preservation (Keraf: 2010). There are prohibitions of cutting trees as a source of clean groundwater and palm trees as source of livelihood for those who produce palm sugar. Furthermore building bamboo house with palm leaves roof is a suggestion, because to live in valley, creating the walls and taking the tiles will be so hard. They should pass many steep swales stairs, while bamboo and palm are the easiest materials to get.

Another suggestion is taking bath using *kapirit* root, leaves, and *honje* fruit. Soap utilizing is forbidden because of water pollution (Awan Mutakin: 2008). Cutting big trees is also prohibited in Panjalu, breaking the rule will cause the tiger angry, it's its shelter (Dodih Heryadi: 2007). Catching fish using *buwu* (traditional fish trapping made of bamboo) is also not allowed. Logically, it catches either big or small fish, they will be extinct absolutely. The philosophy of simple life is found in almost indigenous people, such as the society of Baduy, Kuta, and Naga. If they want to live modernly, they have to exclude themselves from the community. These are called outer Baduy, Kuta, and Naga.

Indigenous people show their simple life style. The simplicity is their belief. Based on the research of Ahman Sya in Kampung Naga (2009), it is stated that simplicity of life is a must for Kampung Naga people. It is recognized by the expression of: *teu saba, teu banda, teu boga, teu weduk, teu bedas, teu gagah, teu*

pinter; which means they are not inherited much more things by their ancestors, thus live simply is the only one choice. Their treatment to the animals and plants are the same, no changing and exploiting the nature but also keep striving as nature demands.

The belief on the objects to have soul, either physical or spiritual, such as rice which is trusted to have spirit as Dewi Sri well known as Sangiang Sri (Ahman Sya: 2009). Darusman's findings in Kampung Kuta Ciamis (2014) is the prohibition of cutting palm trees. For those who cut them, they will be hunted by tiger. It causes there are many palm trees there, and it make Kampung Kuta as the producer of palm sugar. Planting them is hard to do by human. It is grown through natural process of *luak's* feces. It will consume the matured fruit of palm, its feces contain palm seeds and it grows on feces piles.

RESEARCH METHOD

The research is carried out in indigenous people which has many local wisdoms in east Priangan, namely (1) Kampung Naga in Desa Neglasari Kecamatan Salawu Kabupaten Tasikmalaya, (2) Kampung Kuta in Desa Karangpaningal Kecamatan Tambaksari Kabupaten Ciamis, and (3) Kampung Pulo in Desa Cangkuang Kecamatan Leles Kabupaten Garut.

It pays particular attention on local wisdom in relation to environmental preservation including society and ecology. Those mean the ethic of organizing the relationship among people (social relationship) and the relationship between human and nature. The local wisdom ethics like suggestion, prohibition, and abstinence will manage the kinship among people. While ecology wisdom like abstinence, prohibition, and suggestion will set the relationship toward nature (land, water, rocks, animals, plants).

To gain the data, qualitative approach is taken here. It's completed by using participant observation which means researcher's role is an aid to observe and interview the source of data or both main and base informant of indigenous people. The researcher stays along for several weeks there to observe and explore the information thoroughly, also to have deep interview. Informant will be determined by applying snow ball model, getting information to the further informant based on the previous one.

After getting the data, it is arranged and coded based on research issue. Member check and triangulation are done to keep the data valid. It is then reflected, reduced, and produced as interpretative data. Discussion along cultural experts is taken to keep the data reliable. After being classified and its matrix about data correlation, then interpretation is given in the form of findings conclusion, behavior, traditional thought, relationship between people and nature, as well as the belief in the occult which is used to regulate human life traditionally.

Data source

Research is done qualitatively by taking data through observation and interview or participant observation. Researcher stays together in every location within 4 weeks with the indigenous people to gain primer data whose validity is guaranteed. Thus 6 months is needed. It is natural-setting based research by the formal community leaders as data source, namely tourism officer, head of village as base informant, and head of community, village keeper, and indigenous leaders, youth leaders and the people themselves as main informants. The sample is taken as purposive sample over snow ball approach. Besides, other informants are taken, those who are competent in comprehending the tendency of the research as further data resource.

Data analysis

Collecting data is done through observation and deep interview, practically it is included participant observation, which stays together within four weeks, lives along, joining several traditional ceremonies, such as earth celebration, planting rice ceremony, harvesting rice ceremony, and visiting all sites there. Validity and reliability are done through member check and data triangulation on different informants and always being referred and discussed with sociologist, anthropologist, environmental expert who are being in Siliwangi University, and earlier relevant books and researches.

Information and findings are arranged based on research focus, being classified, correlated from one informant to another, and then interpreted. Analysis is taken since the research runs based on every finding by giving interpretation on reflective data, and then being reduced and verified to data source or other informant for the sake of keeping data valid to be interpretation data.

RESEARCH FINDINGS AND DISCUSSION

Local wisdom on indigenous people in East Priangan

1. Local wisdoms of Kampung Naga Tasikmalaya

As indigenous people, Kampung Naga holds their heredity tradition toughly. They believe in the heritage which is considered to have magical power. Those things are put in the building called as *Bumi Ageung* that is inhabited by an old woman whose descendent line is quite close to Kampung Naga. They have the rights to preserve their ancestors' culture. Breaking them mean ungodly or *sieun doraka*.

In facing rapid development coming from outside, they have a guidance; *pamali*, *teu wasa*, *buyut* or taboo or abstinence are recognized as life guidelines. Philosophical values within the words of "*amanat, wasiat, dan akibat*" suggestion, guidance, and effect are carried out as daily rule. They live simply, their life much more depend on the leader to manage the life in society. There are many titles such as; *kokolot sentries*, *puun setries*, *olot sentries*, or *kuncen sentries*. The leadership is run in heredity. There is a change found on several things such as television, chairs, or home appliances, and radio without changing basically.

Some local wisdoms in Kampung Naga;

- a. *Nyalindung na sihung maung, ditekernya mementeg, ulah aya guam, bias tuliskeun, teu bias kanyahokeun, sok mun eling moal laput salamet*. It means don't fight the insulting coming from others, try to avoid ourselves and keep being honest.
- b. *Teu saba, teu soba, teu banda, teu weduk teu bedas, teu gagah, teu pinter*. It means preventing ourselves from financial thing and never determining ourselves to be better than others.
- c. The principle of togetherness; being equal, no caste, all are the same, and the principle of simplicity. At home there is no chair and table, all is on the floor. In agriculture there is a tradition of having granary belongs to all people. It is built from the charity of getting abundant harvest. Subsistent farmers are planting for their own consumption. The house is 5 x 8 meters. It faces to two sides; south and east, based on ancestors' suggestion.
- d. Local wisdom in agriculture and building house. Rice is sowed is not from super varieties, but it is local rice such as; *pare gede, jamlang, lokan, sesrek, padi puteuy, regol, sari kuning, cere*, and *ketan*. Those are planted heredity. The tools are traditional one, like *cangkul, garpuh, linggis, gagaruan, caplak, garuk/lalandak, congkrang, parang arit, kored* and *etem (ketam) tampir, giribig, tolobong, dingkul badag, aseupan, nyiru, lisung, halu, dulang, jahas, hihid, pangarih, golok, patik, gergaji, dudukuy cetok, dudukuy galabag*. Planting season is

twice; January and July (*Janli*). Organic fertilizer is spread from leaves, especially *karinyuh* leaves which is mixed with the urine of chicken and rabbit, sheep or goat.

The story of Galuh kingdom stated that there are three messengers for spreading Islam. One is sent to north area such as Cirebon. Now is inherited by “*watek kabeungharan*” with the talent of agriculture. Other is sent to *tatar kulon*. It is Banten, and inherited by “*watek kawedukan*” and “*watek kapiteran (witchcraft)*”. And the last is set down to middle area, which is Tasikmalaya, exactly Kampung Naga. The messenger is given by “*watek kabodoan and watek kajujuran*”. It is implied from self-concept of Naga people: “*teu saba, teu soba, teu banda, teu weduk teu bedas, teu gagah, teu pinter*”. The honesty of Naga is also implied from the prohibition of; “*maling, madon, maen, mabok, maehna, bohong, nipu, ngarinah, jail, jeung kaniaya ka pada manusa*”. The messenger is Naga’s ancestor who sent down *seuweu siwi Putu Naga*, which is *Sembah Dalem Singaparna*.

There are many values appears in Kampung Naga. They are village settlement, agriculture, fishery, animal husbandry, religious life, water system, forest, belief, waste, and river. Although rivers is liquid waste disposal, but the water is clean and being avoid from pollution because it passes recycle phase. It flows from pond to rice field and ended in the river. Household waste, sheep and goat livestock waste, rice mortar waste, all enter the pond and become source of fish food, then flow to the rice field to be organic fertilizer. Solid waste is accommodated in a reservoir at the edge of the village.

Although the forest is crossed by the village, it keeps being sustainable. No one treat inappropriately to break the wood in sacred forest. The rice fields in the hills with terrace system are organized well and tidy without occurring landslide. Simple housing but eligible to be clean home appears clean, tidy, and maintained. The shape of the building is a landscape of the original house of *Ki Sunda* with an elongated top hood and the roof (*suhunan*) “*Julang ngapak*” like a flying *Julang* bird.

Honesty, innocence, simplicity, obedience toward the commitment of culture heritage, discipline in life behavior, loyal, and obey to the leaders, loving the ancestors, respecting the senior, living together, mutual cooperation, and peace. All can be supervised in the behavior of *seuweu siwi naga*.

Naga is not an isolated village of others. The distance to other village is relatively close. It can be reached about fifteen minutes on foot. They keep in touch in everyday life, but Kampung Naga keep being as Naga people whose belonging and commitment are tough. Naga people respect another culture without being influenced by it. It is what *Ki Sunda* needs in protecting the unity and Sundanese cultural preservation. Who will support, preserve, and develop Sundanese except Sundanese themselves?

Naga people’s obedience is higher than others. It is expressed in their philosophy. It is; *parentah gancang lakonan, panyaur geura temonan, pamundut gancang caosan*. Local wisdom in agriculture actually has big advantages, those are: (1) keeping environment clean, (2) preserving environment, (3) decreasing pollution, (4) keeping ecosystem balance, and (5) reducing the risk of natural disasters.

2. Local wisdoms of Kampung Kuta Ciamis

Knowledge and technology system used people are Local Knowledge and Technology System (SPTL) or local-characteristic or indigenous people which is from traditional values and being developed in society. Knowledge and technology related to agriculture such as determining rain and dry season by counting months, March (*ret*) means stop raining or drought comes. September (*ber*) means rain falls, as well as October, November, and December. Besides it can be recognized by natural

phenomena like animals and plants. Barres (*turaes*) that keep sounding shows dry season or if we see many butterflies (*papatong*). Likewise, the fallen-leaves of mahogany directs dry season. Based on the above description, they can decide the most appropriate time to plant the rice in the field.

The knowledge of farming, they use calculation of *kahiji*, *kadua*, *katile*, *kaopat*, *kalima*, *kagenep*, and so on. *Kahiji* and *kadua* are the transitional period from rainy to dry season; *katilu* is dry season, *kaopat* and *kalima* is the transition from dry to rainy season, and *kagenep* is the peak of rainy season. People plant in *kaopat* season, because rain starts falling even though it has not been determined.

Good and bad day calculation in doing certain thing is important in order to get goodness, safety, prosperity. It is usually done by experienced figure called as *puun*, such as determining date of marriage, circumcision, naming a new born baby, working, and house building. The calculation is based on *naptu*, born day, born date, such as in the case of building house.

3. Local wisdoms of Kampung Pulo Garut

Kampung Pulo is born as acculturation between west Java/Sundanese and central Java exactly in this case is Mataram Kingdom. It occurs in religious issue. It can be recognized from the existence of the temple as Hindu relics and mosque as Islam relics. It is a part of knowledge system and indigenous culture of Kampung Pulo. It is also a dimension of local knowledge and local value dimension of local wisdoms from Kampung Pulo.

On every 14th of *Mulud* (Islamic Calendar), they will held a ceremony to purify sacred things by water from seven springs known as *ngawinkeun tujuh cai*. The interpretation is regular agenda done by Kampung Pulo indigenous people to keep purifying themselves and hearts for being blessed by the almighty. Furthermore it is done to keep the water in the lake sustainable and being protected from drought. From this ritual, it can be a disaster preventer. It is *cangkaruk mulud (congcot) tumpeng* rice (made to be as similar to the mountain) and *uyah mulud* (salt) which are used when there is a big windy rain by pouring it on the roof. It is also a part of religious system and ceremony of Kampung Pulo culture. It is local value dimension and solidarity dimension of local community in local wisdom of Kampung Pulo.

Wednesday is sacred day by the people, because they are forbidden to do every activity except reproducing dhikr and learning religion. These are done because long time ago before Mbah Dalem Arif Muhammad spreads Islam there, Wednesday is used to worship Lord Shiva, and after he spreads Islam people keep being prohibited to do activity except deepening the knowledge about Islam.

The people believe *Rebo Wekasan* too, it is the last Wednesday in *safar* month. On that day people believe that God sends down 360 disasters for human being, thus they do *Rabu Wekasan*. The interpretation of this ritual is an acculturation between Hindu and Islam. It is the result of interaction and adaptation occur in the people themselves. It is the belief of sacred Wednesday as earlier belief to consider it as good day to worship lord Shiva and the belief of 360 disasters sent down on last day of *safar* month. Then disaster preventer is done by Islamic ritual, those are prayers and charity, ended by putting *kupat salamet* and *dupi* on the outer door as the symbol of redeemer and disaster preventer for the people of Kampung Pulo. It is local value dimension and solidarity dimension of local community in local wisdom of Kampung Pulo.

People know the way to create paper from the bark of *saeh* (*Broussonetia papyrifera vent*) which is usually called as *daluang*. It interprets the usage and dependence of the people toward the nature in producing a cultural work such as *daluang* paper from the bark of *saeh*. It is part of technology system and cultural tools of Kampung Pulo. It is also a part of local value dimension and solidarity dimension of local community in local wisdom of Kampung Pulo.

The people also have the best way to make traditional ink to write on the paper made of the bark of *saeh* (*Broussonetia papyrifera vent*) which is called *daluang* and its ink is made of white sticky rice and soot called as *mangis hideung*. It interprets the utilization and dependence of the people toward natural surroundings to produce a cultural work namely traditional in from white stocky rice and soot that is called as *mangsi hideung* by using traditional tools.

Day turnover system on Kampung Pulo people is different with other as common. Generally it starts at 12 am (midnight), while here it begins at 3 to 4 pm in the afternoon. By this turnover system, the Sundanese naming time is as follow:

Table 1

Day turnover system of Kampung Pulo indigenous people

Hour	Description of Sundanese Time
3 pm – 4 pm	<i>Mengok</i> (The beginning of new day)
4 pm – 5 pm	<i>Tunggang gunung</i>
5 pm – 6 pm	<i>Sariak layung</i>
6 pm – 7 pm	<i>Sareupna</i>
7 pm – 8 pm	<i>Harieum beungeut</i>
8 pm – 9 pm	<i>Sareureuh budak</i>
9 pm – 10 pm	<i>Tumoke</i>
10 pm – 11 pm	<i>Sareureuh kolot</i>
11 pm – 12 am	<i>Indung peuting</i>
12 am – 1 am	<i>Teungah peuting</i>
1 am – 2 am	<i>Tumorek</i>
2 am – 3 am	<i>Janari leutik</i>
3 am – 4 am	<i>Janari geode</i>
4 am – 5 am	<i>Kongkorongok hayam</i>
5 am – 6 am	<i>Balebat</i>
6 am – 7 am	<i>Carancang tihang</i>
7 am – 8 am	<i>Meletek panon poe</i>
8 am – 9 am	<i>Ngaluluh taneuh</i>
9 am – 10 am	<i>Haneut moyan</i>
10 am- 11 am	<i>Rumangsang</i>
11 am – 12 pm	<i>Pecat sawed</i>
12 pm – 1 pm	<i>Tangage</i>
1 pm – 2 pm	<i>Lingsir</i>
2 pm – 3 pm	<i>Kalangkang satangtung</i> (the end of the day)

Source: Museum, Mr. Tatang/*kuncen*, Mr. Umar, Mr. Iri, Mr. Zaki, Mrs. Naah, Mrs. Aah, and Mrs. Omoh

The above system is based on the circulation of the moon by using Sundanese traditional time. The nature becomes the direction of day turnover based on the rise of moon which is occurred in about late afternoon. This is also a part of knowledge and technology sytem of Kampung Pulo indigenous people, and is part of of local value dimension and solidarity dimension of local community in local wisdom of them.

Their abstinences are the direction, the destination, and forbidden days. Those are used by the people in many ways, such as travelling to distant places should be passed by staying overnight, determining several celebrations like marriage and circumcision, and also starting an activity like building or repairing house, gardening and running a business like trading.

Table 2

Abstinence of the direction and forbidden days

Months	Directions	Forbidden days
<i>Muharam , safar, mulud</i>	<i>Wetan</i>	Saturday, Sunday
<i>Silih mulud, jumadil awal, jumadil akhir</i>	<i>Kidul</i>	Monday, Tuesday
<i>Rajab, rewah, puasa</i>	<i>Kulon</i>	Wednesday, Thursday
<i>Sawal, hapit, rayagung</i>	<i>Kaler</i>	Friday

Source: Museum, Mr. Tatang/*kuncen*, Mr. Umar, Mr. Iri, Mr. Zaki, Mrs. Naah, Mrs. Aah, and Mrs. Omoh

The interpretation for various agendas is doing everything and activities can be done carelessly. It is for avoiding bad thing that will occur if the abstinence of direction and forbidden days are broken. This is handed down for generations. The most possibility to have those things is the events experienced by their ancestors in the past. It is part of knowledge system and religion of the people, and also as a part of local knowledge dimension.

For every interest of life, they always use *jampi-jampi*. It is prayer alike. They utilize it to get something easily and successfully. Its meaning is actually the acculturation among Sundanese, Islam, and Hindu belief. It is known by the language used on it. It is expressed for the almighty through their ancestors' spirit for doing certain thing in daily life. By its existence, it shows their strong belief and trust against their ancestors' spirit, nature, and the creator in supporting the sustainability of their life.

The *jampi-jampi* is used God's words and Mohammad's hadith. It is from pre-Islamic period and the one without using them is taken from Hindu and Sundanese period. It is part of religious system, belief, and language of Kampung Pulo indigenous people.

In the philosophy of Kampung Naga life, the obedience to parents and ancestors are sacred values. They do understand that the success cannot be obtained if we become the one or generation who are ungodly to their parents and ancestors. The expression of obedience, not only being uttered in prayers and praises which are proposed to their ancestors, but furthermore it should be the real action to give offerings to the ancestors and the creator.

The offering interpretation means there is a very badly close relationship between ancestors and their descendants. There is also a strong belief against natural power, ancestors, and the creator to keep the sustainability of people's life. It is the gratitude for the ancestors and the creator for keep protecting the people. It is part if religious system and belief of people's culture.

Environmental preservation on indigenous people in East Priangan

1. Environmental preservation in Kampung Kuta

The people of Kampung Kuta in relation with nature is the effort of preserving nature by having various taboos, such as; don't disturb animals and take any kind of things which is taken from sacred forest or *leuweung gede*. Breaking the rule will mean bad thing or disaster. Other is the prohibition of spitting, urinating, and defecating there, because it is considered as holy place that should be kept. It is because of its relation toward its history in spreading Islam in Cirebon. The next is the prohibition of taking fire there. And the last is burying corpse there is also forbidden. It is allowed to be buried outside the sacred forest.

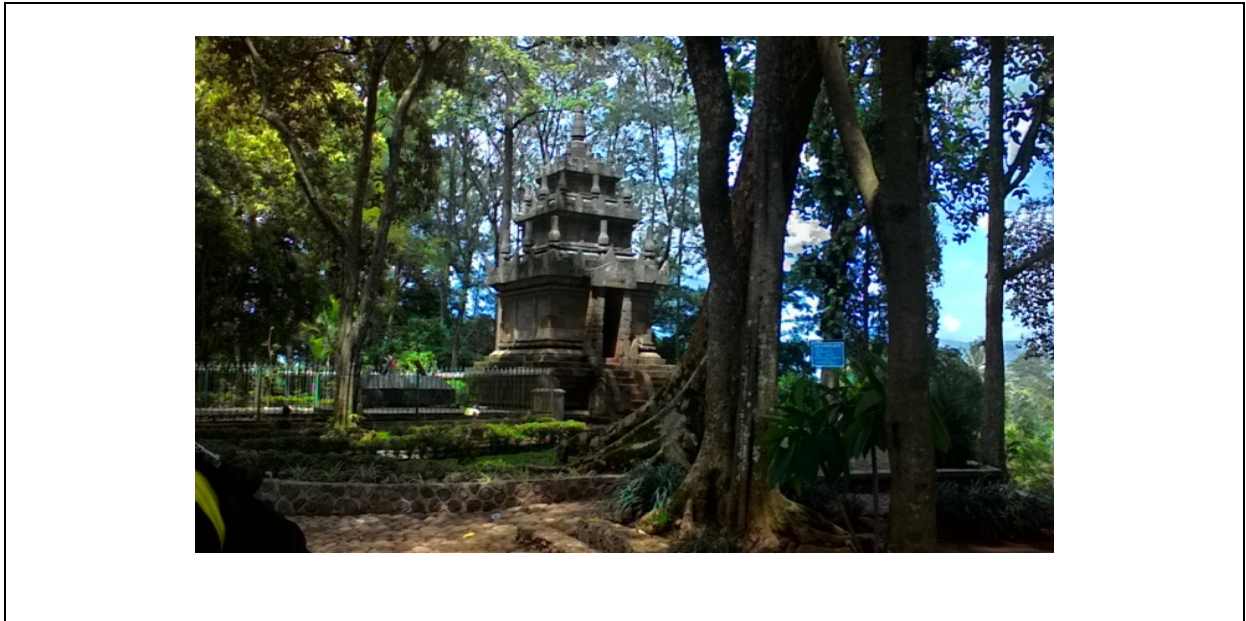
Taboo is to build house from wall with precarious roof, because the roof is made of soil. Soil should be the base of footing. It has the same meaning as *nyuhun tanah* or lifting soil. Taboo is to have ground water. It breaks soil and water supply as ancestors warned. It can be got because Kampung Kuta is surrounded by the cliffs, soil excavation can move the soil to be unstable. It has high risk of landslide. The suggestions of environmental preservation are; presenting a marriage means planting at least two trees. Delivering a baby means planting at least a tree. Besides being considered as environmental preservation, it is also a reminder (*ciciren*) toward important moments such as marriage and delivering baby. Taboo is to enter the forest by taking on the shoes or sandals. Taboo is also to wear clothes or uniform, black dress and golden jewelry.

The prohibition of wearing uniform is related to the story of Dewi Naganingrum who has been hidden because she is hunted by a king. It is because of delivering male baby in Galuh Kingdom period with its king Aria Kebondan. Don't obey the rule means stepping down for the officials. Don't wear golden jewelry means a suggestion to live simply. Gold is a symbol of wealth which usually distinguishing someone's social status. In daily life, it is a must to have simple life without showing the wealth.

The woman who gets her period is forbidden to enter the sacred forest. There is a suggestion to keep protecting their purity, both spiritually and physically. Only those who are pure that will save in the world and here after. The next prohibition is talking impolitely and rude. It disturbs the ancestors' souls who live there. If they are disturbed, bad thing will happen. Someone has ever lost his way after breaking this prohibition. We have to act politely in our daily life in order to be respected by others. In the saying "*who sows the wind, he will reap the storm*". Sowing the goodness then we will reap the same.

2. Environmental preservation in Kampung Pulo

The trees in Kampung Pulo are well maintained. It is in relation to have Kampung Pulo as cultural heritage and recreation place. Besides, there is a rule or prohibition of indigenous people to preserve the forest. Cutting the trees in core area is not allowed. It is around the temple and the cemetery of Mbah Dalem Arif Muhammad. It is believed by the people to get many obstacles if they cut the trees in both places.



Picture 1

This core area is around the temple and the cemetery of Mbah Dalem Arif Muhammad at which the trees are prohibited to cut.

The source of water in Canguang lake is from the spring of Cicapar Kecamatan Leles. The water looks fresh. It is clean, plain, and smells normally. It is used to breed some plain-water fish and transportation facilities to Kampung Pulo. Besides, the people use it as irrigation ditches for their farms and become the spring for 3 subdistricts, namely Kecamatan Leles, Leuwigoong, and Kadungora.

In preserving the water, the people arrange a schedule to keep water flows from Cicapar river to Canguang lake in turn. It is called as *ngandir cai*. there are also some warnings found there to throw the garbage appropriately. Garbage cans are provided there. The holes for rubbish are also made by the people and the manager of cultural heritage. Thus, almost there is no rubbish both on land and in the lake itself.

Bayongbong water plants are around the lake. Even though there is only a few, but it is believed to purify the water of the lake, because they can separate the garbage, soil, and sand that flow to the Canguang lake. Bayongbong plants grow on the soil with plenty of water; the stem's height will be around one to two meters. They have small leaves. If they are mature enough, they will have yellow flowers.



Picture 2

Bayongbong water plants can separate the garbage, soil, and sand that flow to the Cangkuang Lake. Thus they can keep purifying the water.

In the process of cultivating the soil, most of the people still use traditional tools. To dig the soil, they use a hoe and *kored* (small hoe). To cultivate the rice field, they usually use hoe, *gasrokan* (tool for flattening the soil), and plough pulled by buffalo come from the outside of Kampung Pulo, because there is prohibition in keeping big four-legs animals.

Fertilizing the plants is by the organic one. Such as the animal manure and residual plans that have decomposed. Chemical fertilizer is also used to have the rapid growth. Although it can damage the soil fertility for long term effect but it can be solved by balancing both of them.

The people habits are twice in planting rice and once in planting corn or vegetables. It is absolutely useful for soil fertility. Because it can return its fertility through natural decay done by microbe toward the plants remain. It will be organic fertilizer for the plants themselves.



Picture 3

The condition of Kampung Pulo rice field which tends to be lake alike because there is water supply all year long

The food prosperity of the people here is the availability of it. Their harvest from fields and gardens are quite fertile because there is water supply all year long. Apart from farming is as their main income, their food safety is fulfilled as well. It is part of livelihood system of Kampung Pulo indigenous people culture.

3. Environmental preservation in Kampung Naga

Kampung Naga as indigenous people has simple life. It influences much toward the effort of environmental preservation because their tradition and custom are from their ancestors. Their ancestors' cemetery namely Dalem Singaparna is in the west of sacred village. Every plant there becomes sacred forest that is keep being preserved. Their life depend on nature, their main livelihood is farming by traditional way; local rice seeds of long-live seed, soil cultivating use traditional tools such as hoe and fertilizing use manure and compost from the foliage.

Processing the seed-head into rice use mortar and pestle, there is no grain threshing machine. All is processed manually based on the custom to preserve sustainability. Utilizing bamboo, wood, and palm roof are house materials. Thus forest sustainability is well protected. They take the woods, bamboo, and palm roof from the sacred forest. They need a spring for clean water needs, watering the ponds, and irrigating the rice fields. All are taken from spring flown from sacred forest. The preservation of water and forest is basic need for ensuring the sustainability of Kampung Naga people's life.

From the forest they take palm water to produce palm sugar. They preserve palm trees. They take the leaves and plants for medicines. They catch the fish from the river by fishing or taking them with traditional tools such as *sair* or hand-picked. Garbage and waste are thrown in rubbish can. None of waste is thrown to the river. The water is not polluted, flows smoothly, and never causes flood. Household waste is kept in the pond before entering the river.

CONCLUSION AND RECOMMENDATION

Conclusion

Indigenous people generally are from figures that live earlier in certain place. They become the first inhabitant there. They are also the descendant of a king, such as Mbah Dalem Singaparna in Kampung Naga is from Galuh Denuh kingdom in Galunggung. As well as Ki Bumi in Kampung uta is from Galuh Wiwitan in Bojong Manggar or Karang Kamulyan and Mbah Dalem Arif Muhammad in Kampung Pulo, Cangkuang, Garut, is from Islamic kingdom of Mataram.

All of new inhabitant in every village is the forerunner of indigenous people. The altitude of science mastery becomes the heritage for their descendants. The obedience over their parents in the past shows vertical-oriented Sundanese culture; imitate the leaders, parents, and seniors. Likewise, the seniors should become good model for their juniors.

Disobedience to the parents, grandparents, great grandparents, or the ancestors is a sinful act. It will cause miserable life. Almost the ancestors' sacred heritages are guidance, rule, suggestion, prohibition, abstinence for their generations. In further development is call as myth.

Local wisdom can be considered as the suggestion of Sundanese cultural development. Indigenous village's entire livelihood is agriculture by keeping the earlier model of traditional way. Cultivating the field traditionally is nowadays called as organic agriculture. Simple life style is the impact of the obedience toward the belief of traditional values inherited by the ancestors. It will absolutely be useful to build behavior pattern of human relationship toward nature; avoiding exploration and exploitation toward nature, and will ensure the environmental preservation.

The leaders of indigenous people follow their ancestors' leadership. It is full of wisdoms, good model, and obeyed by their society even after being gone. The lessons are considered to be spiritual belief by the followers. The greatness and the lessons represent their existence and are considered to be alive and keep looking at their followers. Religion and science on indigenous people are not influenced by other culture. The existence is mostly the same as their great ancestors. Nowadays is almost the same as their past because they don't want to change them. They are afraid of the ancestors' anger in case of disasters and doom.

The preservation of soil, water, animals, and plants is the heritage. It should be kept by the people. All of the suggestion, abstinence, and prohibition toward the nature are from the lessons of their ancestors to obey. Violation or neglecting the suggestion means inviting doom and disasters for them. Philosophy, values, behavior which is packaged in a myth is the guidance of organizing the life of indigenous people. Abstinence, prohibition, and suggestion in the form of *pamali* limit their behavior toward the nature. Nature is holy. There is a spirit that manages whole life, on the land, water, mountain, valley, sea, animals, plants, rocks, all nature relations are considered to have soul. It is treated as human do. They need to eat, drink, respect, honor, and appreciation.

Environmental preservation in indigenous people is caused by their belief toward nature whose treatment is the as for human. There is an ethic to interact with it. They are aware that life depends on nature. It means respecting and preserving are a must. There is a balance and harmony of behavior that nature is not only to be utilized but also the existence should be protected. The interaction is not only rationally but also emotionally. There are much more local wisdom which are relevant to modern people such as; the same grade (*sanaga*) no caste among them, kinship and helping each other, and brotherhood (the same fate) will be useful to counteract individual modernization.

Recommendation

For the leaders of modern people better to cooperate with academics in arranging development policies that is environmental-based and sustainable. The life model of traditional people in relation with the nature is a good model to have the new one for modern society. Simple life from traditional people, religious model, and independence model according to modernization can be formulated as new model, namely religious model. It shows the love of preserving environment and ensuring the environmental conservation.

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