The Perceptions of Dayak Society of Losarang Indramayu to The Conservation of Natural Resources as Subsistence

Dian Permana Putri
Faculty of Education and Science Education, Swadaya Gunung Jati University
Jl.Perjuangan no.1, Cirebon West Java Indonesia
Corresponding author : dianpp@lecturer.unswagati.ac.id

Abstract. This study aims to investigate the perception of local society, especially in the Dayak society in Losarang Indramayu to the importance of the natural resources conservation as subsistence. The research method of this study is qualitative approach to investigate the perception of Dayak society. The result of the research shows that the majority of Dayak local society in Losarang Indramayu is farming rice and vegetables through intercropping. Dayak society of Losarang Indramayu really appreciates to the preservation of natural resources. They believe that if they keep nature, then nature will also be friendly with them. One of the way to save the nature is by doing Pepe ritual, becoming vegetarian, and do not destroy animals around them. Dayak society of Losarang believes that each animal would also like to have the desire to live, taste, and imagination just like humans. Furthermore, they also build a special building that is used to respect all kinds of animal. The building uses bamboo as walls and fibers as roof. In that building, they raise many kinds of farm animal such as chickens, cows, goats, and pigs. By preserving the fauna, they believe that the crops will be abundant every year. By making the society to be aware about the importance of the natural resource and express their aspiration to the policymakers is a step to establish the sustainability of natural resources. Furthermore, in the management of natural resources by the stakeholders, the local society perception needs to be appreciated, understood, and considered.

1. Introduction
Biodiversity is a term often heard today. The term biodiversity is used to define both the abundance of animals and plants found on earth. Biological resources have great benefits to support human life. The necessity of food, clothing, housing, cosmetics, medicines, and recreations can be fulfilled by biological resources. Every day we are dependent on the availability of vegetables, fruits, livestock, and medicines.

Indonesia has the potential beneficial biological resources of ecologically vital and valuable in the world. The variety of natural resources in Indonesia contribute to the biological riches of the world about 13% (Anonymous, 1989). Indonesia has an abundance of species richness of plants, animals and microbes. It is estimated that as many as 28,000 species of plants, 350,000 species of animals and 10,000 thousand microbes living naturally in Indonesia. Although, the area of Indonesia is only 1.32% of lands in the earth, 10% turned out to be the habitat of species of flowering plants, 12% of mammals, 16% of reptiles and amphibians, 17% of birds, 25% of fish, and 15% insects in the world. 36% of 515 species of mammals of the world are endemic in Indonesia, 18% of 33 species of primates are endemic, 40% of 78 types of parrots are endemic, and 44% of 121 species of butterflies of the world are endemic in Indonesia (Mc Neely et al., 1990). Indonesia is known as one of the countries with greatest biodiversity in the world and is the center of the world's biodiversity (Mac Kinnon, 1992).
There are many problems to preserve our biodiversity such as in 2007, Intergovernmental Panel on Climate Change at US announced that the temperature of earth has been increased 0.74°C within 10 years from 1996 to 2005 (Saijo et al., 2010). In the last 500 years, human activity is identified as one of the causes that affects to species extinction. Since 1996 (IUCN, 2016) the number of animal species that is threatened increased from 5.205 to 8.462. The existence of biological resources need to be maintained to keep the balance of ecosystems and biochemical cycles. According to Ramadoss & PolyaMolli (Putri, 2014) Biodiversity is one of the main assets that must be protected to ensure human welfare of current and future.

It is important to do some efforts to preserve the diversity of biological resources. It needs a way that conservation efforts provide benefits to the community and not making obstacles. It needs understanding of the basic needs of local communities and conservation in order to influence decision-making by policy makers. Sheil et al (2006) reported the results of conservation not only from the extent of protected areas, conservationists or just for professionals only, but biodiversity should be maintained in the region other uses. It requires the cooperation of local communities and other stakeholders, which also reflects a wide perception as well as their choice.

It needs to gather information about public perception related to maintaining biological resources mainly as a source of subsistence. Local people's perceptions about the importance of biodiversity will build mutual understanding, enrich the knowledge regarding land use, improve biodiversity conservation efforts, protect the interests of local as well as considerations in decision making by policy makers.

There hasn’t been a lot of information about community perceptions Dayak Losarang Indramayu on natural resources as a source of subsistence, the society of Dayak Indramayu Losarang is different from the Dayak community living in Borneo. Administratively, this Dayak Segandu tribe lives in the Krimun village Losarang district, Indramayu. This community does not live and isolate in the jungle, but they blend with the local community. They have beliefs, habits, and different appearance to the public in general. Besides, their life philosophy is nature, nature is the center of all their activities, so the perception of Dayak Losarang Indramayu regarding biological resources as a source of subsistence is interesting to be investigated.

2. Research Method
The approach used in this study is a qualitative approach. This study was conducted on May and July 2016. This study is located in the village of Dayak Segandu, Krimun village, Losarang Indramayu. In general, data collection techniques performed in this study refers to observation, interview and documentation. Methods and data analysis technique used qualitative descriptive analysis. This analysis emphasizes on deductive and inductive inference and scientific logic. There are two kinds of descriptive analysis used in this study that is descriptive explorative analysis. This method emphasizes on exploring / investigating information deeply and focused on the goal of analysis results to be achieved. This method is used to identify and describe the characteristics of the environment, social conditions, perceptions and aspirations of the communities about biodiversity and its conservation.

3. Result and Discussion
3.1. The History of Losarang Dayak Indramayu
Segandu Dayak village located in the village of Krimun Losarang Indramayu. This community has beliefs and lifestyle different from the communit /villager as usual. There is no relation between this community with Dayak community in Kalimantan. They call themselves as Suku Dayak Hindu – Budha Segandu Indramayu. But it doesn’t mean Hindu or Budha religion. They have beliefs to one God but not wrapped in the performance of religion. The founder of this tribe is Eran Ta'mad Diningrat Gusti Alam in 1970. In the former time, this community named as Dayak tribe SS Multipurpose institution. It because of the founder feel bored with the government rules. Because of seeing the condition of the environment, Ta'mad start to self-reflection and realize that it is the best way for
humans. In 1972 the institution of SS Dayak Multipurpose Sciences changed its name into Dayak JakaUtama, 1994 turned into Dayak Siswa and in 2000 turned back into a Dayak Hindu-Buddha Bumi Segandu Indramayu. Based on the interviews with the warlords of the Dayak Hindu-Buddha Bumi Segandu Indramayu, Tarxim bin Kalsim, Suku means the foot. The point is that every human being standing on their own feet. Dayak is derived from the word meaning sifter or sieve that means can sieve or filter out which ones are good and which one is correct. Hindu means uterus or womb, Buddha means Udha or naked. The philosophy is that every human being is born naked (nature) does not bring anything. Bumi means thing, which Segandu means the whole body, Indramayu "In" means the core of the deepest, meaningful Darma means the elderly and Ayu means women. Overall from the literal meaning, the tribe Dayak Hindu-Buddha Bumi Segandu Indramayu, means foot stepped on beliefs that has been taken from the womb to devote to nature, the elderly and women. Their philosophy is natural. It is the best way to get closer to nature. They believe that the core beliefs in life is nature.

In 2016, Dayak Hindu-Buddha Bumi Segandu Indramayu renamed Dayak Adat Jawa Petani Bumi Segandu Indramayu. Adat means habit, anywhere and in any way, this community will not eliminate habits or traits that have been attached, both in appearance and attitude. Jawa means Losarang native Dayak people is Javanese people not Kalimantan. Petani means this community come from the farmers. The origin of Dayak community is farmers that are humble, patient, work hard, and honest. So that philosophy means the foot stepped on faith, habits, patience, work hard and honest who had been taken from the womb to devote nature, the elderly and women.

The beliefs to preserve the nature always occurs in society. Orang Rimba Jambi has traditional rule not destroy the forest (Takiddin, 2014). Suku Baduy assume that they are part of nature that must protect and preserve natural resources in this world (Erwinantu, 2012). Every society has a unique habit and tradition but they have similarities in gaining the purpose of honoring and preserving the nature.

Based on the way they dressed and habits of the Dayak community Losarang Indramayu divided into three groups such as:

3.1.1. Dayak Preman. This class is the majority of the people living in the village and blend with other society in the village as usual. Forms of housing, clothing, food, habits, lifestyle, like society in general. They have an identity as a citizen.

3.1.2. Dayak Seragam. This group knowing by the color of cloth. They are wearing black shirt and black trouser. They don’t have a religion and no identity card as a citizen.

3.1.3. Dayak Asli. This Dayak is only wearing a pair of black and white pants without a shirt. This outfit symbolizes the sky and the earth. Or it could be said to represent the state of the world, that everything is in pairs. There is good and bad. They don’t have a religion and no identity card as a citizen. They doing some rituals and being vegetarian.

Costume is as the salience that Baduy society has. Baduy society can be distinguished by their habit of life such as Baduy Luar and Baduy Dalam. The salience of Baduy Dalam is that they are wearing white shirt and black pants (Erwinantu, 2012). Different from Dayak society that they are only wearing short black and white pants without shirt. The similarity of the way they dressed shows that there is equality, there is no one is higher social statutes than other.

3.2. The Perception of Dayak Community to The Sustainability of Natural Resources as a Subsistence. This community lived in the area which has approximately 100m². There are a gate and a main hall, there are also a building that serves as an animal cage. They live with other communities that are not a community of Krimun village. Most of members of this community are farmers (80%) and others are entrepreneur. Based on the way they dressed and habits of life, Dayak Losarang Indramayu has three categories namely, Dayak Preman Dayak Seragam, and Dayak Asli. This Dayak are the ones who are considered as the original Dayak that is not dressed and wearing only short pants with black and white
color. The member of this Dayak are 100 followers. Beside the use of clothing that became his trademark they also have different habit with two other Dayak category. This community opened to the development of technology. In farming they also use tractors plowing their fields. But they do not know about formal education, because this community refused to fill out the form ID card (KTP). The reason is because they have animism beliefs, while in making KTP, they should fill the name of religion and take a picture that wearing cloth. They are not associated with political parties, social organizations and elections. This condition is the same with Baduy society, although they respect to the government as the main authority in a country but they don’t follow the politics party. Time to time the phenomenon and life serve some choices, although for the strict community. The society of Baduy Dalam supported the election by praying to make the election goes honestly and safely, they try to rely their aspiration on Baduy luar society that is more familiar with the culture of other society (Erwinantu, 2012).

Dayak Asli community has some customs and rituals. They have a philosophy of nature. They believe that if they safe the nature, so the nature will also be friendly with them. One of their habits is to become vegetarian. This Dayak did not consume animal foods, such as meat and eggs. They believe that every animal also would like to have the desire to live and taste just like humans. To Respect the welfare and conservation of animals, they build a special building. The building is a cage with bamboo walls and fibers roof. In that place lives some various type of livestock such as chickens, cows, goats, and pigs (figure1a). By preserving the fauna, they believe that the agricultural products that they generate will remain abundant annually.

![Image](a)

![Image](b)

**Figure 1.** The conditions on Dayak community, Losarang Indramayu. (a) the special building for various livestock, (b) Place for kungkum ritual

The Dayaks have a ritual sunbathing or known as pepe tradition. They do this tradition in the morning while enjoying the morning air and sun. This tradition is one of the teachings of Ta’mad Diningrat Gusti Alam or Ki Ta’mad who is the leader and founder of the Dayak community Losarang. Pepe is one of the rituals that they do in their daily live. Then continued with the kungkum ritual or soak in the afternoon when the sun is scorching (figure1b). It Begans at 9 until noon, kungkum or soaking in water to the extent of the neck. Chanting and compliment the natural and mender or telling story about wayang (traditional drama performance of Java that play with leather puppets). Pepe ritual and kungkum carried for four months in a year. The aim of this activity is to feel someone’s feeling. This ritual also aims to appreciate the preservation of natural resources, reassurance and control anger. Tradition ritual that has not only spiritual value but also becoming salience of Baduy society. They do the Ngawalu ritual for 3 months that usually start from the end of December to March. Kawalu month marked when the rice start efflorescing to harvesting. In this ritual the society of Baduy do one day
fasting in every Kawalu month and Kawalu ritual closed by Ngalaksa (grinding the rice together, then making the grinding rice becomes Laksa - like noodle made from rice flour) then it will be distributed to all Baduy society (Erwinantu, 2012). But different from Dayak society that is always welcome to the visitor in the moth ritual, Baduy society don’t welcome to the visitor in ritual month.

Being a vegetarian and carry out the rituals is one way in which the Suku Dayak Losarang Indramayu for the preservation of nature, especially to meet their needs in food. Besides the needs of the construction, accessories and future needs. Accessories worn by the community in the form of bracelets, necklaces and belts pants. These accessories have several different meanings based on its constituent materials. The accessories made of pring ireng or black bamboo means historical significance of Java. Then the yellow bamboo or ivory means farmers, while those made from barley means pure cultural history. The use of this material based on abundance of natural resources around them. What is interesting in their neck emblem Pancasila always used. Based on the interview with one of the members of the Dayak Tarxim bin Kalsim this case means "Besides symbolizing the country, Pancasila also symbolizes the unity of us all. Despite differences, but we are united with the symbol of Pancasila ". Dayak community to be open, in daily they also mingle with local residents, yet limited. Although impressed exclusive, but they are known are friendly and helpful. Like in Baduy society, Erwinantu (2012) states that Baduy society is welcome and gracious to other society but always watchful, and one of the effort to maintain the rule that the visitors don’t allow to stay in more than one night. If it is needed, the visitors can stay outside the village like in shelter in the field. The visitors should follow the traditional rule of Baduy society if they come to their society.

Based on interviews and questionnaires which are represented by the 10 respondents (table 1) showed that the Dayak community Losarang Indramayu, the majority argued that maintaining the preservation of animals and plants is important as a form of inheritance to descendants. As well as one effort to maintain the availability of food and guarantee harvests abundant. Furthermore, other respondents argued that maintaining natural resources as valuable to the local community and as an auxiliary seed dispersal. This opinion in line with the traditional society of Kuta and Baduy (Efendi, 2014; Erwinantu, 2012) that community states that knowledge, attitude, and behavior affect the existence of their life and environment. Baduy has the proverb “Gunung teu meunang dilebur, lebak teu meunang dirusak, Arey teu meunang diteuteuk, cai teu meunang ditua’ (mountain cannot be changed, valley cannot be destroyed, shrub cannot be cutted, water springs and river cannot be contaminated. Kuta traditional society has proverbs Leuweung Ruksak, cai Beak, Manusa Balangsak” (the destroyed forest, the water is empty, human will suffer). That proverb is part of knowledge to the environment of life that is maintained and taught from generation to generation.

| Statement                                      | Respondents who chose the answer |
|------------------------------------------------|----------------------------------|
| 1. Worth to local communities                  | 2                                |
| 2. Animals as auxiliary seed dispersal          | 1                                |
| 3. Animals and plants as a legacy for descendants| 6                                |
| 4. Do not know                                  | 1                                |

While the public advice on tackling environmental damage at the surrounding, which is represented by the 10 respondents by multiplying the planted crops (70 %), reforestation (20 %) and to the protection of plants considered rare (10 %). Assuring the public to realize the importance of the natural resources that they have and express its aspirations to policymakers is a step that determines the sustainability of natural resources. One of the way that the government and stakeholder can do to support the Dayak community is Education for Sustainable Development (ESD). Segara (2014) states that ESD is a conscious way to protect and preserve the nature environment, social, and culture as the existence of human life. Furthermore, in the management of natural resources by the stakeholders, the local perception needs to be appreciated, understood and consider. In this case supported by Barr et al (2001) that the development of local democracy opens the opportunity to manage the field and resources. The paradigm may not follow the change of local democracy, for example in planning land
used is still not effective and consultative. Not only the politician and government employee. All parts that involved in conservation policy need to be encouraged to have more consultation with the local people.

4. Conclusions and Suggestions
Dayak Losarang community has three categories, namely Dayak Preman, Dayak Seragam, and Dayak. Among the three classes of Dayak majority of farmers are the ones who are very consistent in maintaining the sustainability of natural resources. Their efforts, among others, to become a vegetarian, do some rituals like pepe and kungkum and build a special building to respect of livestock. They believe that these measures will keep the nature and maintain an abundance of crops. Several factors are the reason for the community to sustain natural resources, among others because of natural resources is a legacy for the descendants, valuable for local people and animals as helpers seed dispersal. While the public advice on tackling environmental damage that occurred around that is by multiplying planting crops, reforestation and perform protection for plants considered rare.

This research can be used as a baseline for future studies. Further research is needed on how to identify the species by the Dayak community, who need it, how much it needed and the way to maintain the value of natural resources in the future.

6. References
[1] Anonymous 1989 Strategi Nasional Pengelolaan Keanekaragaman Hayati (Jakarta: Kantor Menteri Negara KLH RI) p 3
[2] Barr C, Wollenberg E, Limberg G, Anau N, Iwan, R, Sudana 1 M, Moeliono, M and Djogo T 2001 The Impacts of Decentralization on Forests and Forest-Dependent Communities in Malinau District, East Kalimantan: Case studies on Decentralisation and Forests in Indonesia (Bogor: CIFOR) p 25
[3] Efendi A 2014 Social Science Education Journal 1(2) 2014 211-8
[4] Erwinantu 2012 Saba Baduy: Sebuah Perjalanan Wisata Budaya Inspiratif (Jakarta: PT. Gramedia Pustaka Utama) pp 41-86
[5] IUCN 2016 Annual Report 2015 (Gland Switzerland) p 17
[6] Mac K K 1992 Nature’s Treasurehouse-The Wildlife of Indonesia (Jakarta: PT Gramedia Pustaka Utama) p 292
[7] Mc Neely J A, Miller K R, Reid V W, Mittermeier A R and Werner T B 1990 Conserving The World’s Biological Diversity (Gland: Switzerland) p 25
[8] Putri P D 2014 J. Ilmiah Lemlit Unswagati Cirebon March 2014 10(7) pp 42-49.
[9] Saijo T and Hamasaki H 2010 Chapter 6: Designing Post-Kyoto Institutions: From the Reduction Rate to the Emissions Amount. at Adaptation and Mitigation Strategies in Climate Change. (Tokyo: Springer) p 85
[10] Segara N B 2015 Social Science Education Journal 2(1) 2015 22-30
[11] Sheil D, Puri R K, Wan M, Basuki I, van Heist M, Liswanti N, Rukmiyati, Rachmatika I and Samsoedin I 2006 Ambio 35 17–24
[12] Tarkiddin 2014 Social Science Education Journal 1(2) 161-9

Acknowledgments
Thanks to Mr. Tarmim bin Kalsim who have helped provide information about the history, customs and practices of the Dayak community LosarangIndramayu. Ms. Hesti Mulawati and Lala Lestiana for their help so that this research took place without any major obstacles.
