

Prohibition in Baduy Dalam Community: Soil and Water Conservation Perspective

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Abstract—Baduy tribe is one of traditional community that live in Banten, Indonesia. They live in groups that still uphold to their ancestors' habits especially in farming. The purpose of this article is to explain their habits and prohibitions in their community in perspective of soil and water conservation. We used direct observation and literature review to describe the prohibitions. There are several prohibitions that they adhere to such as they cannot enter to the larangan forest, they are not allowed to tillage and change the contour of soil, using the chemical in farming (pesticide and inorganic fertilizer), making an irrigation that can change the river flow, and they can cultivate some crops in specific area. All of those rules prevent the environmental damage such as erosion, landslides, flood, drought, and water pollution. The other advantage of the prohibition is preservation of the biodiversity. Their traditional life makes a unique way for them to save the forest and river including springs from the environmental damage.

Keywords: *erosion, farming, forest, organic, pollution*

I. INTRODUCTION

Baduy community is one of tribe that located in Kanekes village, Lebak district, Banten Province, Indonesia. They are very unique community because their life is still traditionally and strictly obeying their ancestors' rules. Baduy is divided into two groups, namely Baduy Luar (Baduy Panamping) and Baduy Dalam (Baduy Tangtu). Baduy Luar is more open to changing in their culture than Baduy Dalam. Baduy Dalam is still strictly adheres to their customs until now.

There are three villages in Baduy Dalam (Cibeo, Cikeusik, and Cikartawana) and 54 villages in Baduy Luar. Total area of Baduy is about 5101.85 ha that consisted of settlement area (0.48%), protected forest (48.85%), and farming area (50.67%). More than 50% of farming area is fallow land because they still use shifting cultivation method. Baduy people know three concepts of landscape such as forest (*leuweung*), mountain, and hill (*monggor*). Forest is an area with many big and old trees, mountain is a high land with many big trees, and hill is a high land although there are no trees [1].

Some of Baduy ancestors' rules refused modernization like clothing model, how to make a house, which crop that they can cultivate, and how to cultivate some crops, etc. Therefore, they have a unique tradition that is very different with modern

community today. Their livelihood is farming. All of Baduy Dalam people and about 98.6% men from Baduy Luar are farmer [2]. Dry land rice is main commodity that was cultivated there. They also cultivate the other crops such as corn, eggplant, banana, chili, etc. They get some food like rice, vegetables, and fruits from own harvesting. Their dependence on nature is very high so they have a principle that they have to keep the balance of nature, otherwise they will get a punishment like a natural disaster [3].

There are some facts in Baduy community such as, they burn the forest to open land for farming but forest fires never happened and their settlement is in riverside but there was never a flood in their settlement [3]. Those facts show that they are very care with their environment and they are very compliant to their customary rules to save the nature.

There are some prohibitions in their rules and we can analyse those prohibitions in scientific perspective. The purpose of this study was to investigate and analyse the prohibition in Baduy Dalam in perspective of water and soil conservation.

II. METHODS

The research was conducted at September 2018. The method that used was descriptive research. The information was collected from direct observation, interview with Baduy people, and the other source such as journal article or text books.

List of prohibition in Baduy Dalam community is described scientifically to explain why they do it in relation to keep the sustainability of their environment.

III. RESULTS AND DISCUSSION

A. *Social Life of Baduy Dalam Community*

Baduy dalam community lives in area which has hilly topography with a slope until 45° [1]. Meanwhile, they cultivate dry land rice for their food in this area. They divide the area into three parts. The first part is located at the top of hills. This area becomes a conservation area and they named as "*leuweung kolot/leuweung titipan*" that means forest that entrusted from their ancestors. The second part is crop field. It is located at the middle of hills. Baduy people can use this area

to cultivate some crops like dry land rice. The last part is settlement area or “*dukuh lembur*”. It is located at the lowest area because this location is near with the river [1].

Almost people in Baduy Dalam are farmer. They used shifting cultivation method. This method is traditional farming that is still used in Baduy community. They open the land by burning the forest and cultivate some crops especially dry land rice. They cultivate local varieties of rice because they are more resistant to their environment. That activity is done once a year. After the rice is harvested, they will leave that area in order to recovery soil fertility for five years before it will be replanted [4]. They are not allowed to sell the rice because it will be consumed by them [2]. They stored rice in a place that called “*kumbung*”. They plant what they need for food such as rice, fruits, and vegetables. They only buy the fish or meat as source of protein [5].

The children were not allowed to get formal education at school. They learn to write and read by themselves at home. They assume that formal education at school make them cleverer and potentially to damage the nature. Their education is only focused to “*buyut kiruhun*” on how to utilize and save the environment for example prohibition to pollute river water [6].

B. Prohibitions in Baduy Dalam Community

Based on observation in Baduy Dalam and interview with Baduy Dalam people, there are several prohibitions in Baduy Dalam community. The prohibitions that are related to soil and water conservation are:

- They are not allowed to enter the forbidden forest or “*hutan larangan*” and take something from that forest even it is a dry leaf. *Hutan larangan* is located in the southern of Baduy Dalam settlement. The prohibition to enter the forbidden forest is It is the highest place in that area. It is protected by Baduy community because there is spring is located in the southern of Baduy Dalam settlement. It is the highest place in that area. It is protected by Baduy community because there is spring as a source of Cisemut and Ciujung river [3]. Because there is a spring, it means that forest is rain water catching area. The exploitation of this area is much forbidden. Headwaters ecosystem is very important area because it acts as protection to all of part of river below [7]. If there is exploitation in this area, it will be erosion or flooding. Furthermore, decreasing area to absorb rain water because deforestation can cause the drought in dry season. Cultivate some crops near water spring is also prohibited because it will reduce water quality [8]. River is one of the important thing for Baduy Dalam people because they dependent to the river in their daily life. They take water from river to cook and wash their clothes.
- They are not allowed to change the river flow for some reasons. They cannot use water from river to irrigate their crops. The changing of river flow may cause decreasing of water quantity especially in dry season. The result of research showed that the dams and

floodgates in Huai River reduced remarkably [9]. Because of that, Baduy people cannot use

- They are not allowed to use soap or detergent when they take a bath and wash in the river. The using of soap and detergent the water. As described before, they use river water in daily life such as to cook and drink. The pollution of river water is dangerous for their health. The detergent supports the growth of some microorganism such as *E. coli*, *P. vulgaris*, *Pseudomonas*, and *Bacillus* [10]. Another research showed that the using of detergent caused fish in the river poisoning [11].
- They are not allowed to tillage the soil by using hoe and make a terrace to plant rice. Soil that cultivated intensively without any conservation will be powdery, have a bad texture, low organic matter content, and dries faster [12]. Baduy people cultivate in hillside. That area is prone to erosion and landslide. Hillside is one of factor that can cause erosion and landslide. The steeper the slope is the greater the volume and run off of the water that potentially Therefore, they do not tillage the soil before planting some crops. They just make a hole to put the seed [13]. Baduy people burn the trees and shrub to clear the land that will be planted by rice, so they do not need to tillage the soil before planting season.
- They are not allowed to use chemical pesticide and inorganic fertilizer. The using of chemical pesticide was considered damage the ecosystem because it would adverse effects on non-target organism like predator of pests [14]. Moreover, the pest more resistant to pesticide. Baduy people prefer to use biological pest control such as dragonfly and owl [3]. Owl is used control the population of mouse and gophers [15,16]. The using of inorganic fertilizer will damage the soil structure. The using of inorganic fertilizer is potentially decreased soil pH [17]. Therefore, Baduy people use organic fertilizer and likewise to control pests. To recover the soil fertility, they leave that land after harvesting and will be replanted after five years. The shifting cultivation method that used by Baduy Dalam is a system that depend on natural mechanism such as return and decomposition of organic matter. As long as the soil fertility can be restored, that system will not give the negative effect to the environment [18].

Some communities have their own way to safe their environment from damage or pollution. Their local wisdom is very effective to protect their environment. Something that is considered taboo is more effective to obey than scientific explanation. They are not allowed to get formal education so they have limitations in terms of scientific science. However, prohibitions from their ancestors can be explained scientifically and proven to protect their environment from environmental damage.

The negative effect of modernization is environmental damage such as deforestation or logging for various purposes. Deforestation releases CO₂ to atmosphere that can increase earth temperature [19]. Local wisdom of Baduy community

prevents modernization so the negative effect can be minimized.

IV. CONCLUSION

All of those rules prevent the environmental damage such as erosion, landslides, flood, drought, and water pollution. The other advantage of the prohibition is preservation of biodiversity. Their traditional life makes a unique way for them to save the forest and river including springs from the environmental damage.

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