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## **Subjective Norms Adopted by the Local Community in Preserving Environment of Settlement in the Watershed, Mamasa**

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### **ABSTRACT**

This study aims at determining the subjective norms adopted by the citizens who live in the area of the watershed in Mamasa. This research was a qualitative research. The data collection was a structured interview. Variable of this study was the subjective norms related to the customs at the area of the watershed in Mamasa in terms of the settlement preservation. The data analysis technique was a descriptive analysis namely: Describing and interpreting the results obtained from the interview. The results show some findings. First, the citizens at the area of the watershed in Mamasa have many subjective norms related to the life style. They abide the regulations as a moral bonding trust as well as customs, embraced in the past. Second, subjective norms related to preservation of the settlements consist of planting protective trees (Marrauk), selecting wood (mampile kayu), shipping wood (mangangku' kayu), building house (ma'pake'de' banua) and thanks giving (mambubung). The citizens comply with the norms of the subjective in the past. Therefore, the nature is sustainable. Now, the citizens are not heeding environmental sustainability so that it becomes damaged. According to some researchers, the watershed in Mamasa already belongs to a critical environment, reviewed from the angle of environmental preservation.

**Key words:** Subjective norms, implementation, preservation, environmental degradation

### **INTRODUCTION**

One of the watersheds that have an essential meaning in the South Sulawesi and West Sulawesi is the watershed in Mamasa, because it plays an important role as a source of water for the power station in Bakarluh which is the largest source of electric power in the island of Sulawesi that provide electricity to South Sulawesi, West Sulawesi and Middle Sulawesi Province.

In addition, watershed Mamasa plays an important role as a watercourse which is a source of water for irrigation and a source of water for rice fields in the Regency of Pinrang and Sidrap, Wajo, Enrekang. The rice fields are the main barn and sources of food in eastern part of Indonesia. Furthermore, the watershed also acts as a place of settlement for the people in this place. Watershed in Mamasa Regency consists of seven districts, fifty-eight communities and six villages. There are 69.131 inhabitants (BPS, 2012). They consist of rural and urban population with different behaviour in building and managing their environment. Moreover, environment settlements, at the watershed in Mamasa, are initially set by subjective norms, i.e., values to protect and manage the sustainable environment. Subjective norms, adopted by the community at the area of the watershed in Mamasa, create some of the indigenous communities

in the tops of the hills and it is a beautiful and fascinating landscape. They live by the rule of customary law which is passed down through their generations. There are several reasons that community of Mamasa managing their livelihood in preserving their environment. The reasons are the existence bonding ancestry, the existence of a strong relationship with the environment, as well as the presence of a system of values that define the regulation of economic, political, social and legal issues. The indigenous communities from generation to generation with the order preserved customs inherited from their ancestors become social cultural characteristic community in the mountain, particularly around the watershed in Mamasa.

The arrangements of the traditional village, survived for hundreds of years, maintained and preserved the environment by the community that supports the culture namely Aluk Mappurondo (ancestral religion) who inhabited a wide area around the watershed in Mamasa in the past. At that time, the balance of nature is maintained. There is no disaster, either flood or landslide. The source of water is also abundant everywhere so, it is a very fertile area. In a further development, the watershed is in line with the change of community civilization in this region, accompanied by the increasing number of population growth that requires sharing of necessities of life. Therefore, natural resources are exploited to meet their needs. As a result, the forests that had been a nature reserve turned into a functioning agricultural land and plantations, as well as the settlements.

The role of the humanity, who lived in the area of the watershed is important to keep the Mamasa environmentally sustainable livelihood. Therefore, the function of the environmental education plays an important role to provide the knowledge to society. Through the knowledge, the citizens can shape awareness attitudes and ultimately will be able to influence or change the behaviour of the community in preserving environmental settlements. Another phenomenon that appears is the consciousness of society in preserving or maintaining the environment, especially their neighbourhood environment that is increasingly reduced. It is apparent on the citizens lived along the banks of the river. They built their homes by not paying attention to the wastes, roads and rivers. The facilities such as environmental sanitation and household sanitation still lacking. Their housing is not well-ordered. They dispose off domestic waste and human waste directly into the river. Community farmers build a corral around the river and they dispose of agricultural waste into the river. The problems are the result of the behaviour of societies which are not environmentally because they have a very limited understanding about the importance of environmental conservation.

Lack of public knowledge, about environmental conservation at the watershed in Mamasa, has a negative impact on both the environment preservation of their own neighbourhoods and caused the wider impact. Muchtar (2006) stated that watershed conditions in Mamasa now can be classified as a critical area. It needs a good treatment and management. Similarly a study stated that "The shallowing in Bakaru occurred since 2005. If it is not anticipated hereafter, five years later, Bakaru will become a museum". It also argues that since the formation of the Regency Mamasa, physical developments in the region raises much sedimentation in the rivers of Mamasa resulting directly at the Bakaru power station. However, the sedimentation is not only caused by physical development, but also the behaviour of the citizens. They opened up the forest and made the land into plantations or rice field acreage in order to support their lives.

A study of Japan International Cooperation Agency (JICA) collaborates with the Environmental Impact of South Sulawesi and Hasanuddin University (JICA, 2001). The study results reported that: "The average sediment load in the watershed Mamasa with an area of 108,000 ha is estimated at  $133 \times 10,000 \text{ m}^3 - 126 \text{ m}^3 \text{ km}^{-2}$ . It is equivalent with loss of soil layer of

0.13 mm year<sup>-1</sup>. Therefore, the reservoir in Bakaru is estimated to receive sediment of 480,000 year<sup>-1</sup>”.

Based on the above opinions, the researchers concluded that the behaviour of citizens in the region and the centre of the watershed in Mamasa have a very broad impact on downstream areas, particularly in the power station Bakaru that should receive sedimentation all the time. The area requires maintenance to clean the sediment so that it can result in high operating costs, for the largest power station in the South and West Sulawesi. Even the broad impact is not only harming the downstream but also the middle and upper of the river. They get many impacts. The impacts are bringing victims of flooding, such as flooding in the upstream region, in 2011. The incident damaged settlement, produced a victim, as well as swallowed considerable property. Thursday (08/11/12), there has been a flood in the central region at three villages in Batanguru, Sumarorong sub district. The incident has claimed the lives of 15 persons and many properties.

These last few years, there is a trend of shifting the value so that the citizens abandoned the customs. They switched to modern civilization, including the maintenance of environmental settlements. Socio-cultural values that had long been rooted, are the subjective norms. The norms are no longer as a handle in the intercommunication among citizens, including preserving their environment.

Therefore, in this study, it is revealed that the subjective norms held and maintained by the citizens who lived at the watershed in Mamasa, in the past. The norms have already abandoned especially for environmental preservation. Thus, the issue raised in the discussion is: How are the subjective norms of citizens who live in the area of the watershed, Mamasa in the past related to environmental preservation?

The word of norm defines as: "Rules or conditions binding on citizens group in the community. The norm used as order and controllers of appropriate and acceptable behaviour." The norms are also defined as: "The control, size and the principle used as a benchmark to assess or compare something" (Lullulangi, 2007).

The word subjective means: "Pertaining to, or according to the views or feelings, not directly on the subject matter" (Lullulangi, 2007). Then Ecols and Shadily (2003), said: "Subjective based on the subject matter." Levine and Strube (2012) stated: "Social norms or formal regulation demands a change in behaviour". This theory is very clear that social norms and formal rules such as laws, government regulations and customary norms are crucial. These are a requirement in order to change the behaviour of a community.

Ho *et al.* (2011) revealed the theory posits that the behavioural intention is affected by both attitudes and the subjective norms. In this theory Ho stated: "Attitudes refer to individual thoughts on behaviour, while the subjective norm refers to social customs, opinions, or pressure from others." In this theory, the subjective norms are more related to habits in the society, such as customary norms. They relate to a growing opinion in the community. In addition, they related to the pressure from community groups, especially from the more dominant in a particular community.

Fishbein and Ajzen (1975) in Darnton (2008) presented some definitions about subjective norms. First, the subjective norms related to most of the people who are important for them. Second, the subjective norms expect individuals to do or not do certain behaviour. Third, the subjective norms are the important people later being a reference or benchmark to drive behavior. Believes and motivations to comply and determine the subjective norm. Perceived Behavioral Control (PBC) according to Ajzen (1991) is personal perceptions about whether or not an individual is easy to perform behaviours. It is a reflection of the experiences occurred before as well as the anticipated barriers. Perceived Behavioral Control (PBC) has two factors, such as belief control and perceived facilitation.

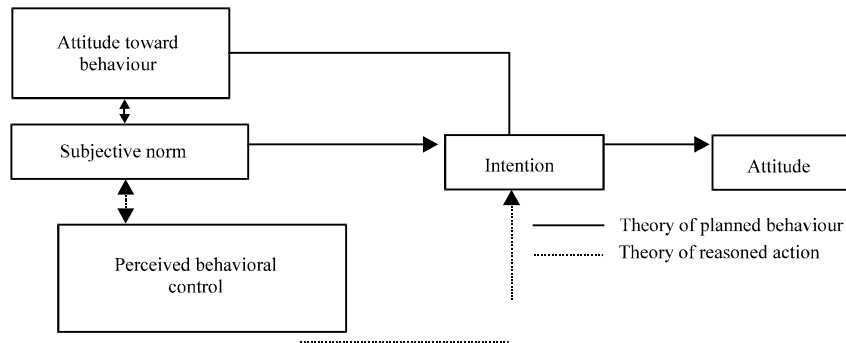


Fig. 1: Comparison between the theory of reasoned action and planned behaviour

Theory of the subjective norms is also expressed by Dharmmesta (1998) in Istiana *et al.* (2008), they described the theory as shown in Fig. 1.

Dharmmesta presented some explanations. First, the attitude toward the behaviours shows the degree to which a person has a good evaluation or less well to certain behaviours. Second, subjective norms as social factors, show the perceived social pressure to perform or not to perform a particular behaviour. Third, perceived behavioural control is a variable that determines the ease or difficulty of doing the intended action. This variable has a direct causal effect on the variable intention to perform an action or indirectly through intention variable which is not mediated by other variables.

Ima (2011) explained that: "Subjective norms are an individual's perception toward the environmental pressure in doing or not doing certain behaviours." The perception is subjective, so that the influence of environmental factor is also known as the subjective norm. The subjective norm is influenced by individual confidence gained from his view of nature, or the surrounding environment. The subjective norm is also determined by the normative belief and motivation factors of the individual to meet the demands imposed for him.

Based on some of the above definitions, the researchers concluded that subjective norms are rules or provisions bonding the citizens or groups in the community. The rules are used as behaviour controller according to their own views in the community.

## METHODOLOGY

This research was a qualitative research. The data collection was a structured interview. Variable of this study was the subjective norms related to the customs at the area of the watershed in Mamasa in terms of the settlement preservation. The data analysis technique was a descriptive analysis namely: Describing and interpreting the results obtained from the interview.

## RESULTS AND DISCUSSIONS

**Subjective norms of society in watershed, Mamasa:** Mamasa community has many forms of the subjective norms in organizing social life in various aspects of life that are inherited from their ancestors until this moment. Motto maintained by the citizens is: "United we stand, divorced we collapsed" (*Mesa kada dipotuo pantan kada dipomate*). One form of subjective norm in the order

of social life is giving an inspiration for everyone in the community to maintain unity and mutual assistance in building a life together.

In various aspects of life, there are many forms of subjective norms maintained and conducted to support each activity related to aspects of life. The subjective norms are to maintain and preserve the environment in general and neighbourhoods, environment in particular. Through some of the literature and preliminary research conducted, it was revealed that there is some form of habit, inherited from generation to generation that can be included in the category of subjective norms in the field of preservation of settlements as follows:

**Planting protective trees (marraruk):** Marraruk is an initial activity when a location will be transformed into a settlement area or township. The ritual usually performed in the past is cutting three types of animals (ditallu rara). This activity was served by determining the boundaries of the areas to be used as residential areas. It is usually conducted by community leader by surrounding areas while the leader is followed some people to plant tabang trees (ditabanggi). Furthermore, the boundaries of such area will be planted with a wide variety of plants such as wood and bamboo as landscape (raruk). It is a protector of wind. The traditional villages are founded on the hilltops that have strong wind blowing.

The benefits of these trees also serve as protective as well as structural materials if the houses in the village will be renovated. In addition, the bamboo trees are crucial to use in some traditional ceremonies such as thanks giving (rambu tuka') wedding ceremony and death ceremony (rambu soloq). The bamboos are very useful for making temporary home (barung) as a place to make the ceremonies. It will be demolished and used as firewood if the ceremony has been completed.

In terms of the ecology, the subjective norm is supporting environmental sustainability. Result of this local wisdom, makes that traditional village being gorgeous and integrating with nature. In addition to its function for the needs of society as mentioned above, the ecological functions are also very important as retaining water and preventing erosion and land slides.

**Selecting wood (Mampile Kayu):** Mandadung (1999) described that: "Mampile Kayu is the first stages when the citizens in Mamasa are selecting the best wood for building custom houses". Tandiran and Bonggalangi in (Mithen, 2007) explained that before cutting the trees, the first process that should do, is to look for a good day (dipetari-tarianni). The next process is cutting trees and creating potions in the forest (marreto). This process typically takes place within some months. At the full moon (bulan kadake or indona bulan), the process has to be stopped because the citizens believe that the month is the fire month and the house built on the month is flammable.

Traditional values that are contained in mampile kayu activity are a form of subjective norms that are directly related to the maintenance of the environment. In modern terms, it is known as selective cutting system. It is a wise action that should be performed to preserve the biodiversity of the natural resources in particular forest resources. This system was kept by the citizens in Mamasa since a long time ago. This system is a form of subjective norms related to environmental conservation inherited by their ancestors. However, the subjective norms have been abandoned in this modern era.

**Shipping wood (Mangangku' Kayu):** The next stage of activity in building home is shipping wood (mangangku' kayu). The citizens are carrying material structures or building construction

materials for houses from the forest. This activity is usually conducted on the day that is considered good by carpenter (Tomanarang). All citizens are obliged to engage in this activity. For citizens who do not want to get involved, there is a kind of social sanction that will be borne, if they want to build a house, no one who would help him.

From the point of environmental preservation, this was not related to the biotic component of the environment but it is more to the feel of the social environment. In a residential environment, the social environment is also important to maintain because it concern the peace of mind in living together in a community.

**Building house (Ma'pake'de' Banua):** After building materials have been collected in the village, carpenter started to work for measuring, cutting, punching holes in the wood according to the model construction to built. After completion, the carpenters determine a day that is considered good for building a house. This activity is usually carried out before sunrise. The citizens involved in this activity. Although it is not a must for everyone, they are expected to come to take part in this activity if they had a chance. Homeowners would have to slaughter the animals primarily pork and chicken as a side dish for people who engage in this activity.

There is a provision that must be followed. If there is someone who died in the village, the activities in the house had to be stopped for a while until at last the whole series of rambu soloq related deaths was complete. Homeowner and carpenter should not follow the funeral ceremony before the entire set of house construction is completed. This subjective norm is also not directly related to the natural biotic environment but it is more nuanced social environment or social solidarity within the community.

**Thanksgiving (Mambubung):** Mambubung is the peak activity or the last step in building a traditional house in Mamasa. This activity is carried out when the whole development process of traditional houses have been completed.

There are some terms for these activities. There are some villages that call this activity as Ma'basse bubung but some also that call it as Mambubung.

In this event, all relatives and citizens in the village are invited. There are usually many animals such as pigs and chickens were slaughtered. It depends on the ability of the person who built the house. Close relatives also came with pigs and chickens for slaughter. Moreover, every person who comes feels bad if they do not bring something, such as rice and chicken. This event usually takes place a full day. It begins with a ritual performed by community leaders and carpenters.

They with their role according to customary rules perform the ritual by slaughtering animals as a sign of gratitude and offered to the gods. After that, the event continues with a common meal for all the visitors. In this event, the carpenters get preferential treatment from the owner of the house. They are given a unique dish (Diangkai) in a traditional plate of wood with a high leg (dulang). Nuance preservation of the environment, also related to the social environment as a sense of solidarity and togetherness in the community.

**Subjective norms in song form:** Local poet modifies the songs in Mamasa. The songs are diverse for social life. There is a shade of the worship of God. There is also a nuanced as social critique and social relationships. There is even a local poet who composed the song related to the maintenance of the environment, such as the lyrics of the song entitled "People working diligently" (Tobassa' Mengkarang). The fragment of the song lyric is as follows:

“.....Tobassa’ ma’bela’ taek bassa’ ma’sumpun. Tobarring pariu, taek maningo api. Yate kuli’ padang lino tatongkonni latakandapa pada-pada.....Susimite pepakilalanna Puang Pepakari’di Dewata....”

It means that:

“.....Diligent people working in the farm or the fields, they do not like to burn the woods and to play with fire and the environment where we live is must be maintained.....this is a warning and a message from God that we must obey.....”

This song has a very deep meaning as social criticism and a warning to people, not to burn the forest and preserve the environment.

### **Implementation of subjective norms in the past and the present**

**Past:** In the Past, when the entire community in the watershed area, Mamasa still adopts ancestral religion (Aluk Mappurondo), whole subjective norms should be implemented because these things are a part of the customs and believes that must be conducted. Thus, it is an unwritten law. It binds the whole community of people who exist in this region. At the moment, if people who do not obey the subjective norms, they will get a sanction. They have to slaughter animals such as pigs or chickens to compensate mistakes or omissions of the offense. Animals to be sacrificed must be adjusted to the level of their mistakes. So, at that time, all people especially those who limit economic ability, preferring to obey the rules of the existing customs than they should be fined for their negligence.

Therefore, the community life is very harmonious relationship. The relationships are: Between humans and humans, between humans and other living beings, as well as between humans and natural biotics. These relationships are going well.

**Present:** The present begins with the arrival of the Dutch in 1905. It was the first time foreigners in this region. Therefore, it gets fierce resistance from local communities. Heroes who performed against the Netherlands are recorded in local history. It is in line with the national historical echoes and the heroes of the revolution for the independence of Indonesia.

The arrival of the Dutch society was changing the order of life. They opened schools and spread Christianity. Many people were baptized en masse because their fear of the Dutch. The thought of Aluk Mappurondo is abandoned and replaced with the Christian religion.

In addition to schools, the Dutch also undertakes the compulsory program associated with VOC program. In this fertile region, the community should plant Robusta coffee, although previously there had been a local coffee plant. The local coffee is Arabica coffee that comes from their ancestors in Toraja.

The Dutch also forced people to work in building the road axis between Polewali–Mamasa. The road connects the coastal and mountain areas. After the street had opened, there were many people who come to trade had brought the East Coast fish and salt from the coast. They buy resin, rattan and Arabica coffee in this area because the Dutch entirely takes robusta coffees.

The next development, Bugis traders, began to assimilate with the local community. There is a marriage between them and build new settlements. Moreover, they spread the teachings of the Islamic religion for the residents who still adhere to the teachings of the Aluk Mappurondo. This creates some Islamic communities such as Aralle and Mambi.

During this time, good subjective norms are considered as ancestral religious teachings which are not in accordance with the doctrine of Christianity or Islam. Therefore, many subjective norms, particularly relating to ritual matters have been abandoned.



In subjective norms implementation at present, there are still defended by remnants of Mappurondo around Buntumalangka and Aralle. However, the amount was not much. For adherents of Christianity and Islam, only a small portion is retained. It is something that does not conflict with their faith, for example, holding Thanks giving after completion of building a new home. The name is still Ma'basse bubung or mambubung, but the sense has been different.

Marraruk and Mampile kayu activities directly related to the preservation of the ecology had long been abandoned. Therefore, damage to the environment is getting worse and concern. All the results of the study by researchers at the watershed in Mamasa lately, concluded that this region already belongs to the critical region in terms of preservation of nature.

The impact is also felt in particular in the region of lower Austria. Thus, the power station Bakaru is in danger with the large number of sedimentation and reduces river water discharge in Mamasa.

## **CONCLUSION**

This study concluded that:

- The watershed area in Mamasa has many subjective norms related to the life of the community. The norms are adhered to the community as a moral bonding toward the beliefs and customs that are embraced in the past
- The subjective norms related to preservation of the neighbourhoods, essentially consists of: Marrauk, mampile kayu, mangangku' kayu, ma'pake'de' banua and mambubung
- Subjective norms implementation in the past is honoured. Therefore, nature is being preserved. However, at the present time, the norms are ignored. Thus, nature is being broken. Moreover, this region according to researchers already belongs to a critical region in terms of environment preservation

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