

# Local Wisdom Transformation of *Wetu Telu* Community on Bayan Forest Management, North Lombok, West Nusa Tenggara

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## Abstract

*Wetu Telu* Community in Bayan, North Lombok, applies *awig-awig* in community's forest management. Its success is proved by relatively maintained indigenous forests. Altered land-use in Bayan Area is only 3 (17.65%), less than 4 in Gangga (23.53%), and 10 in Kayangan (58.82%). Applications of *awig-awig* in these forests were up and down, influenced by government's policy. Purpose of this study is to determine the transformation of local wisdom in forest management of *Wetu Telu* Community in Bayan Area. Bayan's selected research sites are Karang and Bajo Villages by *purposive sampling*. Of the two villages, we selected four villages that have community's forests. The study was conducted from February to June 2013. Head of village and young man of each four village interviewed as respondents. Key informants in this study are elders of community, bureaucrats, NGOs and religious leaders, selected through *snowball sampling*. Data collections were by observation, interviews, documentation, and then descriptively analyzed using the model of Miles and Huberman. Observed variables were the transformation of local wisdom, i.e. 1) impacts of government policies on forest management; 2) the change on accessibility of forest resource usage; and 3) institutional changes of *awig-awig*. The results show that government policies fluctuate before and after the reformation era led to forest management pattern on *Wetu Telu* which transforms centralized into decentralized. The risk of exploitative practices can be avoided with the implementation of integrated control system mechanisms between civil society and the state. Accessibility of *Wetu Telu* forest resources in the pre- and post-reformation is fluctuated, in line with the accommodation of society's demands for forest management to be fair, democratic, indiscriminate and sustainable in *Wetu Telu* system, through the application of formal rules and custom rules. Institutional of *Wetu Telu* forest's *awig-awig* transformed as a result of stronger forms of social control through increased participation of civil society in order to achieve sustainable function and usage of forest resources that are flexible, participative, and accommodative.

**Keywords:** *Wetu Telu* Community, community's forest management, transformation of local wisdom

## 1. Introduction

Exploitation of forests for economic growth that occurred in developing countries – including Indonesia – resulted massive destruction of forests (Poffenberger 2006). Indonesia originally had 162 million ha of forest in 1950, only 94.4 million ha was remained in 2010 (FWI/GFW 2001; Indonesian Forestry Plan Document 2012).

Learning from the experience of past failures, then in the reformation era, Indonesia changing pattern of forest sector management, from centralized to decentralized pattern. This changes pattern provides greater opportunities for region actors, including local indigenous communities to participate in sustainable forest management (McCharty 2004; Nomura 2008) - one of which is the *Wetu Telu* Community.

*Wetu Telu* Community is a native people of Bayan area, a district in North Lombok Regency, which is located at the base of northern Mount Rinjani within ± 90 km from Mataram, West Nusa Tenggara capital. One of its uniqueness is to develop a pattern that combines the triad system of government, religious and customary system as a whole (Avonius 2004; Umam *et al.* 2006). For example, violation on forest consequences to not getting the services of the village administration, religious services of the chaplain, and the customs services of the Traditional Institute before paying off all its obligations.

As an institution, this community managed natural based local wisdom. In conjunction with the nature manifest (particularly those related to forest management), *Wetu Telu* Community always appreciate and maintain cosmological balance. They try to live in accordance with the nature, by appropriate forest usage to boundaries needs, without excessive exploitation (Umam *et al.* 2006; WWF NTB 2010). *Wetu Telu* Community applying local wisdom in forest management with the application of customary law called *awig-awig*. Application of *awig-awig* which sourced from customary rules (Avonius 2004; Vipriyanti 2008; Mukhtar *et al.* 2010), is not only confined to regulate all behavior of *Wetu Telu* Community, but also organize all villagers that will interact with the forest.

The success of forest management based on local wisdom is proved by relatively maintained indigenous forests located in Bayan. Currently, indigenous forests in North Lombok only remained four of the five districts. Of the four districts, Bayan has the highest number and the widest indigenous forests. Results of Research and Assessment Team of West Lombok (2006) showed that Bayan have 16 indigenous forests with total area of 251.2 hectares or 65,28% of the total existing, followed by seven forests in Gangga (110,26 ha/28, 65%), five forests in Tanjung (13,95 ha/3,63%), and two forests in Kayangan (9,40 ha/2,44%).

Several similar studies have been performed, Senoaji (2003) in Baduy, Banten; Sahlan (2010) in Wana, Central Sulawesi; Burrirat & Thamsenamupop (2010) in Ban Nong Hua Khon and Tambon Nong Muen Than, Roi-Et Province, Thailand, and Ayuninggar *et al.* (2011) in Tengger tribe, East Java. They all showed that the application of local wisdom in their independent forest management to maintain the harmony of ecological functions, economic, and social culture. This fact – according to Larson *et al.* (2007) and Devkota *et al.* (2010) – is evidence that the local community can also preserve the forest if they get involved.

The existence of local wisdom, was received threats, especially from globalization (Hawley *et al.* 2004; Mungmachon 2012; Suryanto *et al.* 2012), and various local government and central government policies which unfavorable for the interests of local communities (Engel & Palmer 2006; Nomura 2008). Emerging threats, not only will erode local wisdom in fostering the relationship between the three entities (God, others, and nature) (Umam *et al.* 2006), but also has the potential to create a conflict of interest between the various parties involved in forest management (Yasmi 2003; de Jong *et al.* 2006; Yasmi *et al.* 2009; Maryudi & Krott 2012a).

As a product of culture, local wisdom is not sterile of change (Briggs & Sharp 2004; Mungmachon 2012; Orchardton 2012), as well as *Wetu Telu* Community. The trend is the further indigenous forests of Bayan was located (as the main base of *Wetu Telu* Community), the more susceptible to altered-function for implementation and society's compliance to *awig-awig* getting loose. Findings of Research and Assessment Team of West Lombok (2006) showed that the number of altered function on indigenous forests in Bayan is only 3 (17,65%), which is relatively less compared to 4 in Gangga (23,53%), and 10 in Kayangan (58,82%).

The purpose of this study was to describe the transformation of local wisdom used by *Wetu Telu* Community on indigenous forest management in Bayan Area. Assessment of the transformation was limited to: 1) the impact of various government policies (local or central government) on the implementation of forest management; 2) accessibility change of forest resource management; and 3) institutional changes of *awig-awig*.

## 2. Material and Methods

### 2.1 Study Area

The experiment was conducted in the Bayan and Karang Bajo village of Bayan subdistrict, North Lombok regency (Figure 1). Both villages were selected by purposive sampling, as the main base of *Wetu Telu* Community (Suliadi 2011).

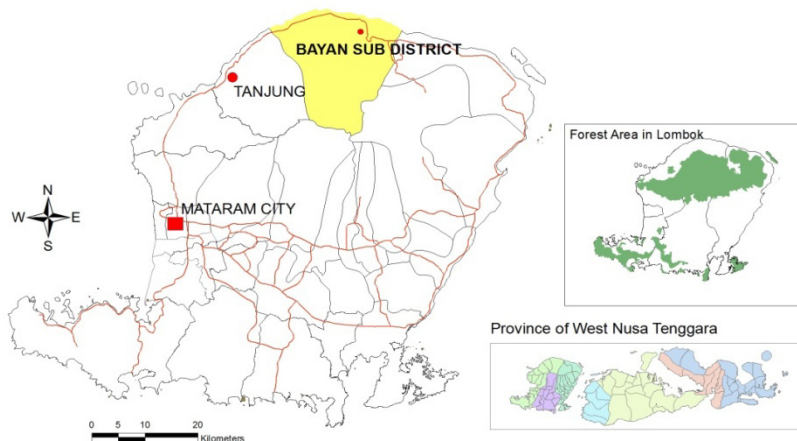


Figure 1. Study Area of Bayan, North Lombok Regency

Of the two villages, we selected four sub-villages that have community forests, i.e. in Bayan village: Mandala (*Pawang Mandala*), Teres Genit (*Pawang Bangket Bayan*), and Batu Jompang (*Pawang Tiu Rarangan*). While Karang Bajo village were represented by Ancak Timuk (*Pawang Singang Borot*). The study was conducted from February to June 2013.

### 2.2 Determination of the Respondents and Key Informants

Respondents were selected of two elements, i.e. the village head and the village's youths from the four samples to be interviewed through focus group discussions, with separated sessions. Key informants also selected through *snowball sampling*, consisted of *Wetu Telu's* elders, Village Head, District Head, Department of Forestry, professionals of education, Environmental NGO's leaders (Koslata) and *Tuan Guru* as a religious figure.

### 2.3 Data Collection and Data Analysis

Data was collected through field observation, interviews, focus group discussions, and documentation. There are three observed variables in this study: 1) the impact of government policies on forest management, 2) accessibility change of forest resource management, and 3) changes of *awig-awig*. The observed impact of government policy is local and central government policy on the weakening or strengthening of forest conservation efforts that undertaken by the community. Accessibility changes in forest resource management were observed during the period of the Old Order, New Order, and the Post-Reformation era on the timber extraction, utilization of non-timber forest resources, water use, the implementation of spiritual activities, and ecotourism activities. Observed *Awig-awig* focused on elements which subjected to change and the reason of their changes. Data were analyzed by descriptive analysis using the model of Miles and Huberman.

## 3. Result and Discussion

### 3.1 Government Policies and Their Impact on Forest Management

Interviews results of key informant and focus group discussions show five government policies direct impact on the application of local knowledge on forest management in Bayan. Three of them, in fact, have eroded the role of traditional institutions in applying local wisdom of *Wetu Telu* Community (Table 1).

Table 1. Various Government Policies and Their Impact on Application of Local Wisdom in Forest Management in Bayan Area

No.	Government Policies	Impacts on Local Wisdom Application
1.	Local transmigration program for the northern part of West Lombok district in 1975	Increasing the number and composition of the population and the emergence of socioeconomic gap
2.	Enactment of Regulation No. 5/1979 on Village Government	The weakening role of customary institutions replaced by formal institutions
3.	Efforts to improve the teaching of <i>Wetu Telu Islam</i> to <i>Islam Waktu Lima</i>	The emergence of negative stigma against <i>Wetu Telu Community</i> is the concept of a harmonious relationship between human life, God and nature
4.	Enactment of Regulation No. 22/1999 on Local Autonomy	Opportunities for the local community to manage its own environment through the development of local government
5.	North Lombok Regency formation by Regulation No. 26/2008	Opening up opportunities for <i>Wetu Telu Community</i> to revitalize local wisdom

Source: Primary Data; Sudarsono *et al.* 1999; Avonius 2004; Susilo 2006; BPS KLU 2011; Suliadi 2011.

Local transmigration program conducted by West Nusa Tenggara Government by transfer the migrants from West Lombok, Central Lombok and East Lombok, to Northern West Lombok (currently called North Lombok). The goal is to flatten the distribution of population in North Lombok which at that time is still relatively rare (Sudarsono *et al.* 1999; Avonius 2004). The program cause varies effects, including the opening of new land for transmigration settlements (indigenous forest conversion), the increase of population, and the social gap between the immigrant population and local residents. The results of Sudarsono *et al.* (1999) in Senaru village, Bayan District (one of transmigrant location) found a striking gap between the citizens, because of differences in lifestyle, belief systems and customs. Local residents feel inferior when dealing with the immigrant population. In addition, the immigrant population is also reluctant to local residents, because of the stigma that local residents unreliable and misleading beliefs.

The existence of a monolithic policy with the enactment of Law No. 5/1979 on Village Government, is an attempt to marginalize the role of traditional institutions which carried out systematically during the New Order (Peluso & Vandergeest 2001; Syarifudin *et al.* 2011), as experienced by *Wetu Telu Community*. Traditional institutions of *Wetu Telu Community*, which previously had a strong role in forest management, continued to weaken after the emergence of the policy, as marginalized and replaced by formal institutions that initiated by the state. In the end, they become isolated in their own native land.

Efforts to improve *Wetu Telu Islam* to *Waktu Lima Islam* led to a negative stigma against local wisdom possessed by *Wetu Telu Community* (Suliadi 2011; Syarifudin *et al.* 2011). The negative stigma arises because the values that they believe are deemed inconsistent with contemporary values. This stigma leads to weaken the social and political role of *Wetu Telu Community*, including in terms of forest management.

Unlike the three previous government policies, the enactment of Local Autonomy Act No. 22/1999 on Regional Government, May 7<sup>th</sup>, 1999 (Susilo 2006) and the formation of North Lombok by Act No. 26/2008 July 21<sup>st</sup>, 2008 (BPS KLU 2011), provide greater opportunities to the local community to revive the role of local institutions (McCharty 2004; Engel *et al.* 2006; Wollenberg *et al.* 2006), including the customary Institution of *Wetu Telu Community*. For *Wetu Telu Community*, these opportunities should be utilized as much as possible to revive local wisdom, while for government this opportunity should also used to organize while maximizing local participation in natural resource management.

### 3.2 Changes in the Accessibility of Forest Resources Management

There is a change of government policy in terms of forest management during the Old Order, New Order, and Post-Reformation era (Nawir & Rumboko 2008; Nomura 2008; Wahyudi & Krott, 2012a; Maryudi & Krott, 2012b; Magdalena *et al.* 2013). The policy change also affects the role and accessibility of *Wetu Telu Community*

in managing indigenous forests of Bayan (Table 2).

**Tabel 2.** Wetu Telu Community's Accessibility Changes in Forest Management During the Old Order, New Order, and the Post-Reformation Period

No.	Regulated Activities	Forest Management Period		
		Old Order	New Order	Post-Reformation
1.	Timber Extraction			
	a. Construction	Regulated by Customary Insitution	Regulated by village's officer and military back up	Regulated by Customary Insitution
	b. Firewood	Regulated by Customary Insitution	Regulated by village's officer and military back up	Regulated by Customary Insitution
2	Exploitation of non-timber resources (vegetables, honey, tubers, animal feed, etc.)	Allowed with the permission of Customary Insitution (Elders) limited to consumption	Regulated by village's officer and military back up	Allowed with the permission of Customary Insitution (Elders) limited to consumption
3.	Water Resources			
	a. Toilet	Regulated by Customary Insitution	Regulated by Customary Insitution	Regulated by Customary Insitution
	b. Drinking water	Regulated by Customary Insitution	Regulated by Customary Insitution	Regulated by Customary Insitution
	c. Irigation	Regulated by <i>Pekaseh</i> (P3A)	Regulated by <i>Pekaseh</i> (P3A)	Regulated by <i>Pekaseh</i> (P3A)
4.	Spiritual activities	Freely, as regulated by the Customary Insitution	Less Freely, regulated by the village's officer/ military	Freely, as regulated by the Customary Insitution
5.	Ecotourism	undeveloped	undeveloped	Initial programmed

Source: Primary Data

In the Old Order era, the role of customary institutions in managing forests of *Wetu Telu* Community was very strong. Forest management activities that related to timber extraction (timber and firewood), utilization of non-timber forest resources, water resources utilization, and spiritual activities, organized by Customary Institution based on deliberation (*Gundem*). Forest sustainability was relatively maintained, because its utilization is not done to excess, but always considers the ecological, economic and socio-cultural aspects. All use of forest's products, used for the common good, and have permission from the Elders. The use of construction wood to repair historical buildings (Old Mosque, Traditional Houses, etc.), may also be used by the citizens. For example, a newly married young couple were allowed to take the wood to build homes, and assisted with mutual cooperation by their neighbourhood. Likewise, the utilization of non-timber forest products may be used by residents to meet their own needs and to the extent of consumption (not for sale). Therefore, forest management (from planning, implementation, and supervision) performed by indigenous peoples collectively could prevent the cases of illegal logging. This fact, according to Sunderlin *et al.* (2005), Campbell & Vainio - Mattila (2003), and Laumonier *et al.* (2008), is evidence that local wisdom is relevant to sustainable forest management efforts, but the policy makers often ignored it for reasons of economic growth alone.

The opposite condition occurred during the New Order period. The enactment consequence of the Law No.5/1979 on Village Government, is the authority of customary institutions of *Wetu Telu* in managing forests became reduced even trimmed, since replaced by the formed formal institutions of government (Sudarsono *et al.* 1999; Avonius 2004; Resosudarmo *et al.* 2012). The impact of the too strong state dominance to forest

management is neglected the fulfillment of basic rights of local communities (Ribot & Peluso 2003; Sari 2009). So during the New Order, all authority management of natural resources, including forests under the control of government (village officials and military personnel) (Peluso & Vandergeest 2001; McCharty 2002; Yasmi 2003; Purnomo 2011; Magdalena *et al.* 2013). All access associated with the utilization of forests (economic, political and socio-cultural) were inhibited (Sudarsono *et al.* 1999; Avonius 2004). Certain elements which claimed on behalf of the government, is freely exploit the forest. Not only unilateral logging (involved private companies), but also divert forest land function without involving local institution of *Wetu Telu*. One of the reasons is to prepare the land for settlements of local migrants. Research and Assessment Team of West Lombok (2006) found that North Lombok has at least 17 indigenous forests function-changed during this period, i.e. 17 forests in Kayangan, 4 in Gangga, and 3 in Bayan.

After the reformation era, Traditional Institution of *Wetu Telu* regains its authority to manage the forest, although incompletely because of the absence of ownership certificate over their customary forests. At present time, Traditional Institution of *Wetu Telu* began realignment to revitalize their local wisdom. An effort made for the purpose according to Fahri (District Head of Bayan) is to obligate every village which has indigenous forests to make village regulation on Indigenous Forest Management. The purpose of this policy – besides regulated by Traditional Institution through *awig-awig*, indigenous forests is also protected by village regulations (as one form of responsibility and concern of government in helping to preserve indigenous forests). This meant that at least this current indigenous forest remaining in the district Bayan (16 indigenous forests, with a total area of 251,2 ha or 65,28 % of the total North Lombok), can be kept and maintained jointly by governments and indigenous community.

### 3.3 Changes of *Awig-awig*

Information obtained from key person and focus group discussions show that the exact time of *awig-awig* enactment is actually unknown. It is informed that *awig-awig* received from their ancestors as they are. In further development, *awig-awig* of *Wetu Telu* was not experienced a significant change. Changes occur only in the amount and type of sanction given to offenders for moderate violations on *awig-awig* (scarcity factor) (Table 3). Certain animals, such as buffalo, current population in Bayan already limited severely, due to various reasons. In addition, certain objects, such as perforated *Kepeng* (ancient coin) which was used as a custom symbol, now its existence is also increasingly rare.

Along with the scarcity increasing of buffalo (hard to found), then the sanctions in the form of buffalo, in the new *awig-awig*, can be replaced with cow. This is understandable because the population of buffalo in Bayan particularly, and on the island of Lombok in general tend to decrease. The reason, besides cattle is relatively easy bred, it also the role of buffalo as plow, recently had been replaced by tractors.

Related to the number of material units that charged to the offender as a sanction *awig-awig*, one of the most interesting things is the use of *Kepeng* (ancient coin). In the submission process of sanctions, there must be 244 *Kepeng*. If the perpetrators has trouble to get it, because its existence is scarcer, then it is prepared by traditional institutions in according to needed amount. Perpetrators only pay a sum of money (agreed by consensus based on customary institutions).

In terms of the number of *Kepeng*, the question that arises is why it is should be 244. Interviews with key informants and FGD show no one sure the philosophical significance of the number 244. However, according to Raden Gedarip (one of the traditional leaders/elders) in Bayan, the must number of units is 44, whereas the 200 nominal is flexible, means that it could be replaced with a certain amount of money (based on the consensus of customary institutions).

The replacement of sanction's type and material unit given to violators solely for humanitarian reasons and is not intended to reduce the main purpose of imposing sanctions, which is the deterrent effect. This is in accordance with all key informants and FGD that the actual social impact of sanctions in the material form is much lighter than the social sanctions that will be received from indigenous community. Application of traditional sanctions is much more effective than if the perpetrator handed over to law enforcement officials. In terms of changes in local wisdom, Akhmar & Syafrudin (2007); Lertzman (2010) states that local wisdom is not something that is static and not taboo for changes. Therefore, to keep its functionalism, Ife & Toseriero (2008) suggest that local wisdom must always adapted to the present context, it must not be inconsistent with the values of human rights and religion.

Table 3. Rules Changes in Old *Awig-awig* and New *Awig-awig*

No.	Regulated points in Old <i>awig-awig</i>	Regulated points in New <i>awig-awig</i>
1.	Activities that are not allowed, consists of 13 case	Remain (unchanged)
2.	Allowed Activities, consist of five matters	Remain (unchanged)
3.	Obligated Activities, consist of three matters	Remain (unchanged)
4.	Sanctions:	
	a. Light Sanction	Remain (unchanged)
	b. Moderate Sanction	b. Moderate Sanction
	1) a chicken	1) a chicken
	2) a buffalo	2) a buffalo/cow
	3) a sack of rices	3) a sack of rices
	4) a package of brown sugar	4) a package of brown sugar
	5) 244 <i>Kepeng</i>	5) 244 <i>Kepeng</i> /prepared by traditional institution by cast certain amount of money
	6) plant 10 seedlings as the same species of logged trees	6) plant 10 seedlings as the same species of logged trees
	c. Heavy Sanction	Remain (unchanged)
5.	Sanction mechanism	Remain (unchanged)

Source: Primary Data

## 5. Conclusion

We concluded that the changes of government policy before and after the Reformation era led to transformation on pattern of *Wetu Telu* forest management from centralized into decentralized. Changes in this pattern allows each party (state and indigenous community) to develop a mechanism that control and integrate systems balance, so the risk to over-exploitation of the forest resources by each party can be avoided.

Meanwhile, community access to forest resources in *Wetu Telu* before and after the reformation era are fluctuative, in line with the accommodated demands of society for forest management to be fair, democratic, non-discriminatory, and sustainable in *Wetu Telu* system. Regulation on accessibility of forest resources is no longer monopolized by the formal rules of the state, but also applies the local rules based on the community habits through the application of customary law.

Institutional forest *awig-awig* is used as a reference by *Wetu Telu* transformed due to the strengthening of community control over forest management, marked by increasing civil society participation in public decision-making in post-reformation era. Institutional transformation of forests *awig-awig* provides greater space for civil society to participate in the effort to achieve sustainability of function and utilization of forest resources which is flexible, participative, and accommodative.

## 6. Recommendation

- *Wetu Telu* Community need a clear regulations that managing the system of decision-making in forest management to ensure the realization of local community interests as well as forest conservation expected by the state.
- *Wetu Telu* also required a clear division of authority between the state (local government) and traditional institutions of *Wetu Telu* in forest management activities, in order to ensure certainty in the public accessibility of forest resources, while avoiding power misuse on every head shift leading.
- *Wetu Telu* need a forum for the information exchange, which can be used as a public space for local community to channel the aspirations and also used by the government to promote programs in forest management policies.

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