Implementation of *Awig-Awig* Towards Protected Forest Management Based on Local Wisdom in Selat Pandan Banten Village, Buleleng Regency

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**Abstract**

The purpose of this study was to know the implementation of *Awig-Awig* as a rule of law towards protected forest management based on local wisdom in Selat Pandan Banten Village, Buleleng Regency. The method applied in this study was descriptive qualitative method, using data from villagers who live around protected forest areas, *Pecalang Jagawana* (man in charge of protecting the forest based on local wisdom), and Forest security officers of Forestry and Plantation Service of Buleleng Regency through observation and in-depth interviews. The results showed that the implementation of *awig-awig* in managing protected forest was realized through the formation of *Pecalang Jagawana* as the local wisdom in Selat Pandan Banten, Buleleng Regency that have responsibility for ensuring forest order and security from several human activities that destruction of forest sustainability. This in in accordance with Law No. 32 of 2009 on the Protection and Management of the Environment, Law No.41 of 1999 on Forestry, and Law No.18 of 2013 on Prevention and Eradication of Forest Destruction.

**Keywords**: *Awig-awig, forest management, local wisdom, pecalang jagawana.*

**Introduction**

Forest damage in Indonesia has entered a very alarming stage. Based on data Ministry of Environment and Forestry, the forest area in Indonesia until 2017 is 125,922,474 hectares. If compared with forest area data in 2015, the forest area in Indonesia still around 128 million hectares. In general, the forest area in Indonesia has decreased. Referring to the calculation of the Directorate General of Planology, Ministry of Environment and Forestry, Indonesia’s deforestation rate for 2014-2015 period reached 1.09 million hectares and 2015-2016 became 0.63 million hectares. Besides that, the critical area in Indonesia reached 30,196,799 hectares. Deforestation can be planned or legal, and unplanned or illegal. Planned deforestation, usually related to central and regional government policies in developing plantations, agriculture, or property. While illegal logging and encroachment are illegal activities. activities illegal. The factors of deforestation and forest degradation caused form the existence of interest groups such as the mining industry, plantations, especially oil palm, community needs for timber and other forest products, to the international interests that are closely related to national interests in terms of forest utilization and management.

Besides, technology also has a significant influence on forest utilization and management. Through technological development, humans can maximally manage and preserve their environment. Entering the Industrial Revolution Era 4.0, technology in all fields was increasingly developed. But along with increasing human needs and the low level of awareness of forest conservation, humans and groups exploit forest products by utilizing various technological, such as use of machinery to accelerate deforestation, use of heavy equipment in extensive land clearing. Illegally forest products exploitation has caused Indonesia’s forest area to decline, increasing the critical land, and natural disasters such as floods, landslides, erosion, forest fires, and many more. Such conditions become very contradictory in the hope that the main pillars of economic, social and environmental aspects (Widodo, Ribut, & et al, 2012). To overcome various problems related to forest destruction, the government has actually implemented various national regulations such as Law No.
Year 2009 on the Protection and Management of the Environment, Law No.41 Year 1999 on Forestry, and Law No.18 Year 2013 on Prevention and Eradication of Forest Destruction. However, the problem of forest destruction in Indonesia still occurs. For this reason, sustainable innovation is needed in the Digital Era that is able to overcome the problem of forest destruction in Indonesia.

One that has a high level of awareness of forest preservation and management is Selat Pandan Banten Village, Buleleng Regency (hereinafter called Pakraman Selat Village). Pakraman Selat Village is one of the villages in the Bali Province is located on a hillside and surrounded by a protected forest named Pucak Landep with an area of about 590 hectares based on statistical data from the Forestry and Plantation Service Buleleng Regency. Local people believe that there is a close relationship between humans and nature as the philosophy of *Tri Hita Karana* which becomes the local wisdom of Balinese people. *Tri Hita Karana* based on article 1 number 6 of Bali Province Regional Regulation Number 16 Year 2009 on Bali Province Regional Spatial Planning for 2009-2029 is a philosophy of Balinese life that contains three elements that build a balance and harmony between human and God, human and other, and human with their environment. Those are a source of prosperity, peace and happiness for human life. The Pakraman Selat villagers realizes that if the forest in their environment is not saved and maintained, so it will have an impact on the occurrence of drought in the plantation and agricultural areas downstream due to lack of water supply generated from springs in protected forests.

The awareness of Pakraman Selat Villagers towards the preservation and management, legitimate through the implementation of *awig-awig* (customary rules) and the establishment of forest rescuers called Pecalang Jagawana. The results of previous studies revealed that before the establishment of Pecalang Jagawana, widespread theft of forest products and illegal logging. In the Pakraman Selat Village also occurs drought due to lack of water absorption. Peoples around protected forest are not aware that the activities such as graze for animal feed and take firewood for their daily needs actually have an impact on forest destruction, and even affect the water availability in Pakraman Selat Village (Windari & Dodik, 2013). By enactment of awig-awig and establishment of Pecalang Jagawana, the condition of forest destruction in the Pakraman Selat Village has been reduced. Even independent movements are increasingly being developed through collaborative projects with the Natural Resources Conservation Agency (KSDA), which specifically conducts forest rescue activities, peridoc reforestation, and plans to breed endangered species and preserve rare plants in the forest area of Pakraman Selat Village and surrounding area.

In the context of indigenous peoples, adherence to customary law often exceeds compliance with national laws or regulations. This is proofed by the existence of customary law in Indonesia’s positive law. The results of previous studies also state that both neutral and non-neutral customary law are still recognized, even becoming a source of law that can be referred to anticipating global developments (Abubakar, 2013). Including the application of customary law to protected forest management through the awig-awig Pakraman Village. Therefore, researching the implementation of awig-awig on protected forest management in Selat Pandan Banten Village, Buleleng Regency is very important through descriptive qualitative methods or empirical legal studies related to extent of effectiveness of the awig-awig implementation on protected forest management based on local wisdom in Selat Pandan Banten Village, Buleleng Regency. This research is expected to provide an overview or find the right model for solving the problem of forest destruction in Indonesia as a sustainable innovation in the Digital Era.

**Method**

The method used in this study is desriptive qualitative method, which aims to describe various facts systematically and accurately about the existence of Pecalang Jagawana as an implementation of awig-awig on protected forest management in Pakraman Selat Pandan Banten Village, Buleleng Regency. The research subjects were determined using a purposive sampling technique, that is the sampling technique of data sources based on consideration of research purposes (Sugiyono, 2010: 218), consisting of villagers who live around protected forest areas, *Pecalang Jagawana* (man in charge
of protecting the forest based on local wisdom), Adat leader and Forest security officers of Forestry and Plantation Service of Buleleng Regency through observation and in-depth interviews. Data analysis was carried out by collecting data related to the existence of protected forest in Pakraman Selat Village, national regulations and awig-awig which formed the legitimacy of protected forest management, legal basis for the establishment of Pecalang Jagawana in Pakraman Selat Village, and effectiveness of awig-awig for protected forest management based on local wisdom. The collected data are grouped and reduced according to the problems in this study, then presented and concluded.

Results and Discussion

Juridically, a forest is defined as an ecosystem unit in the form of a stretch of land containing biological natural resources which are dominated by trees in the natural alliance of the environment, which cannot be separated from one to another. This is stated in the Article 1 paragraph (2) of Law Number 41 Year 1999 on Forestry (hereinafter referred as the Forestry Law). Most of the forests in Indonesia are state-owned and administratively these forests are mapped accurately by the government based on their use and function. The existence of forests as one of the determinants of life support systems and the source of people’s prosperity must be maintained optimally. For this reason, various regulations related to forest management and conservation have been implemented in Indonesia, such as Law No. 32 Year 2009 on the Protection and Management of the Environment, Law No.41 Year 1999 on Forestry, and other implementing regulations. Based on Article 5 paragraph (1) of the Forestry Law, the status of forests in Indonesia consists of state forests and rights forests. In this case, State forests including customary (Adat) forests located in the Adat Law Communities area. Whereas, if viewed from the aspect of its function, Article 6 paragraph (2) of the Forestry Law, affirms that the government determines forests based on the main functions are (a) conservation forests; (b) protected forests; and (c) production forests.

Although regulations related to forestry have been implemented in Indonesia, forest destruction still occurs. Based on Forest Watch Indonesia’s research, Indonesia is experiencing the world’s fastest tropical forest loss. Data from the Ministry of Forestry, at least 1.1 million hectares or 2% of Indonesia’s forests are decreasing each year. Of the 130 million hectares of forest left in Indonesia, 42 million hectares have already been cut down. The biggest deforestation in Indonesia caused by illegal logging, unlicensed mining, conversion of forests to plantations, forest fires, and forest exploitation for residential property, industry, and due to encroachment. Forest destruction has become a crime that has a extraordinary impact, that organized and carried out with a sophisticated modus operandi. To prevent forest destruction and able to give a deterrent effect, Law No.18 Year 2013 on Prevention and Eradication of Forest Destruction was implemented.

Controlling forest damage cannot be carried out only by government, but also requires active participation from the Adat community. The existence of Adat community in Indonesia constitutionally recognized through Article 18B paragraph (2) of the 1945 Constitution of the Republic of Indonesia which states that State recognizes and respects customary law community units along with their traditional rights as long as they are alive and in accordance with the society development and the principle of the Unitary Republic of Indonesia. In the current development, the existence of Adat forests and the role of Adat community are increasingly emphasized by the Constitutional Court Decision Number 35/PUU-X/2012 regarding the judicial review of Law No.41 Year 1999 on Forestry. Ideally, the implementation of forestry must contain people soul and spirit, justice, and sustainability, including in terms of considering the role Adat community in forest management policies (Ubbe & et al, 2013), as has been done by the Pakraman Selat Pandan Banten Village, Buleleng Regency.

The Balinese people recognize two types of villages, namely Pakraman Village or traditional village that has existed since ancient times, and the Formal village which has been regulated in legislation. Those condition become one of the unique social cultural and create a special attraction (Windari, 2012). Based on this, the Regional Regulation of Bali Province No. 3 Year 2003 on Desa...
Pakraman Village is a form of customary (Adat) law community unit that has a unity of tradition, community life manners from generation to generation. There are at least 1,488 Pakraman villages in Bali who are members of the Pakraman Village Assembly (MDP). Pakraman Selat Village is one of 14 villages in Sukasada District, Buleleng Regency with a population of 7,687 people. Geographically, the Pakraman Selat Village is at an altitude of 200 meters to 900 meters above sea level. The total area of the Pakraman Selat village is ± 96.16 hectares, the allocation of ± 654 hectares as agricultural land and ± 590 hectares consists of forest area called PucakLandep as a protected forest area (Source: Forestry and Plantation Service Statistics of Buleleng Regency, 2018).

Based on the Decree of the Minister of Agriculture No.821 / Kpts / Um / 82 dated November 10, 1982, the boundaries of protected forest areas are located in the Pakraman Selat Village area, which is 26.6 km long and 590 hectares wide. The protected forest area was then through the Decree of the Forestry and Plantation Office of Buleleng Regency No.433 / Kpts-II / 1999 named PucakLandep Protection Forest Area (Source: Forestry and Plantation Service Statistics of Buleleng Regency, 2018). Furthermore, based on Forestry Minister Regulation P.14 / Menhut-II / 2010, the forest is categorized as Village Forest. This condition is reinforced by the issuance of the Bali Governor's Decree Number: 2017 / 03-1 / HK / 2015 on the Granting of Village Forest Management Rights in Protected Forest Areas (Rideng & et al, 2018).

Administratively the management and supervision of the PucakLandep forest was given to the Sukasada Forest Police Resort (RPH). Besides, the PakramanSelat Village as a unit of customary (Adat) law community which has a unity of tradition, social conduct of manners, has the duty and authority in regulating various matters related to religion, customs, education, arts and ceremonies, including in terms of sustainable forest management. Village forest management is carried out based on the concept of local wisdom namely Tri Hita Karana, by making and enforcing awig-awig (rules) pakraman village which was ratified since May 4, 2006. Implementation of the awig-awig in maintaining protected forests is by the establishment of Pecalang Jagawana who served as a guardian of the forest, chaired by Mr. PutuKanten and consisting of 12 people and officially authorized on 14 October 2007 by the local KlianAdat (adat leader). The existence of the PecalangJagawana as a means of managing forest areas is not a common thing for villages in Bali. PakramanSelat Village has its own model of local wisdom compared to other regions.

Pecalangin Balinese (celang) which means sharp senses of sight and hearing (Wiana, 2002). Pecalang is a tool for traditional village, chosen and appointed by traditional villages to maintain orderliness, security and sanctity of traditional villages. Pecalang is also called Jagabhaya, which is guarding traditional villages when there are natural disasters (Agung, 2005: 123). Juridically, the existence of legitimate pecalang is based on Article 17 of the Regional Regulation of Bali Province Number 3 of 2001 concerning Desa Pakraman Jo. Regional Regulation of Bali Province Number 3 of 2003 concerning Amendment to Regional Regulation of Bali Province Number 3 of 2001 onDesa Pakraman, which states that: (a) Security and orderliness in Pakraman village are carried out by pecalang; (b) Pecalang carry out security duties in the Pakraman village area in relation to customary and religious duties; (c) Pecalang is appointed and dismissed by Pakraman village based on village paruman (traditional meeting). The process of selecting pecalang members / officers other than through paruman (the results of village meetings) / banjar, must also fulfill several requirements, among others, capable of being born physically, and purified with a mejaya-jaya ceremony (ceremony to invoke victory). Residents who are entitled to become pecalang are residents of Pakraman village.

Pecalang Jagawanaas one of the forms of local wisdom of the local community is the main organization especially in terms of safeguards, preservation and management of protected forests based on the characteristics and legal rules of Adat community (awig-awig) in the Pakraman Selat Village. In addition to having the task of safeguarding and preserving protected forests, PecalangJagawana also has the right to crack down on residents (krama) who carry out forest destruction, based on the awig-awig as its legal basis. The PecalangJagawana is domiciled, its role and function guarantees forest order and security from several human activities that lead to destruction of forest sustainability including fire threats (Rimbawa, 2006: 5). Based on this research, the formation of
the PecalangJagawana besides being an initial effort from the local village to implement the awig-awig PakramanSelat Village which regulates forest preservation, this formation was also caused by limited supervisory and law enforcement personnel (forest police) which resulted in weak security against protected forest areas.

The Pecalang Jagawana organization was originally an idea of Adat community which was subsequently facilitated by the Forestry Service in order to create a means to preserve and secure forest areas. This is based on Bali Provincial Regulation No. 3 of 2001 as amended by Regional Regulation No. 3 of 2003 which regulates the duties and responsibilities of Pecalang namely maintaining the security and comfort of the Pakraman village area. The formation of the PecalangJagawana is also based on the awig-awig PakramanSelat Village of Pawos (article) 71 paragraph 3 as follows:

“About the Forest:
1. The village community should preserve the forest and its contents in the Selat Pandan Banten Village;
2. Anyone who sees people who destroy forests and hunts must report to the instructors of the Selat Pandan Banten Village;
3. Regarding forest sustainability and its contents are managed by village leader, assisted by pecalang.”

The PecalangJagawana work program also refers to Government Regulation Number 6 of 2007 on Forest Arrangement and Preparation of Forest Management Plans, as well as Forest Utilization which was amended by Government Regulation Number 3 of 2008, Forest management activities as mandated in Article 9 include: (1) Forestry arrangement forest management plan; (2) Forest utilization; (3) Use of forest areas; (4) Forest rehabilitation and reclamation; and (5) Forest protection and nature conservation.

Based on information from local community leaders, timber theft that occurred before the formation of the PecalangJagawana was a frequent activity. Even people who live on the edge of the forest expand their personal territory. This has an impact on the reduced area of protected forests. Since 2007 the problem of handling protected forests in PakramanSelat Village has begun to receive serious attention from village leaders. The PecalangJagawana together with the village leaders apply the customary law regulations called the awig-awig on the forest. Various problems that were considered difficult to resolve by reporting to the forest police were subsequently agreed upon by the local Adat community to be resolved by imposing customary sanctions. Regulations on customary sanctions related to acts of forest destruction are found in the awig-awig PakramanSelatPandanBanten Village of Pawos (article) 72 as follows:

“Sanctions for damaging forests and hunting”

Villagers or other people who cut wood/trees in the forest, graze, plant crops, look for firewood, rerampon wood, etc. will be subject to sanctions in the form of:

a. For those who are looking for firewood, are fined a maximum of IDR. 250,000, - and should plant wood seedlings of at least 10 trees.

b. For those who are looking for ronamon wood, be fined a maximum of IDR. 1,000,000, and should plant wood seedlings of at least 50 trees.

c. For those graze, be fined a maximum of IDR. 500,000, - and should plant as many wood seedlings as the place where the grass is sought.

d. Those who take forest areas as plantation areas are fined a maximum of IDR. 5,000,000 - and should plant as many wood seedlings as the area taken.

e. If those charged with fines do not pay fines, they will be handed over to the authorities.

f. If those who destroy the forest instead of the krama (residents) of the PakramanSelat village, will be continued according to the current government law.

g. Anyone who hunts in the forest area of PakramanSelat Village will be fined according to the village agreement or proceed according to government law.
h. If those who commit forest destruction are prajuru (village leaders) or pecalang, they will be fined twice.

i. Anyone who does not obey the awig-awig, will be fined in the form of Kasepekang (ostracized).

The existence of awig-awig in the basic context and effectiveness of enactment according to law can be measured by the way the Adat community accept and obey these rules. The force of awig-awig in Balinese Adat community grew out of the sincerity of Adat community and the existence of religious magical characteristics that caused awig-awig to be adhered in the interests of the peace and harmony of Adat community. In awig-awig there is a concept known as Tri Hitakarana, which is a harmonious relationship between humans and God, humans and the environment, and humans and humans. This concept is a manifestation of human existence in an environment that cannot be separated from other components of the environment, as well as the basic relationship between humans and God as the creator of the universe. Awig-awig is flexible and can continue to be adapted to the conditions of a very dynamic society. Forest management based on Adat community with a local regulation model is a very appropriate and effective choice in managing protected forest areas for Adat community.

Awig-awig's existence and implementation is not only determined by the sense of belonging and recognition of the Adat community, but also in accordance with the laws and regulations, basic principles of human rights, and applicable national law (Karidevi et al, 2012). The results showed that the implementation of the awig-awigpakraman village in relation to protected forest management in the PakramanSelat village had gone well. This is evidenced by the implementation of the role of the PecalangJagawana in the management and preservation of protected forests, as well as the declining rate of forest destruction and theft of forest products. The role of the PecalangJagawana in PakramanSelat Village can be seen from the Forestry Conservation Plan Year 2008-2013 for the JagawanaPecalang, are: (1) Establishing cooperation with farmer groups; (2) Establishing cooperation with land owners on the outskirts of the forest; (3) Hold regular patrols; (4) Providing guidance for people who violate the rules; (5) Hold greening at all times with the community; (6) Maintain water sources in the middle of the forest and on the banks of rivers; (7) Establishing cooperation with village, sub-district, district and provincial government officials; (8) Establish several forest security posts located on the edge of the forest. Besides that, various problems that were felt difficult to resolve by reporting to the forest police were agreed upon by the local Adat community to be resolved by imposing customary sanctions according to the implementation of the awig-awigPakramanSelat Village Pawos(article) 72.

Of course in the implementation of the awig-awigon protected forest management in the PakramanSelat Village, there were several obstacles both internally and externally. The obstacles that occur are: (1) there is no regulation regarding actions/sanctions including compensation mechanisms provided for people living on the forest borders who plant productive trees; (2) the imbalance of the number of ranged Pecalang with the area of forest that must be maintained so that it has an impact on the intensity of patrols carried out by pecalang; (3) lack of supporting facilities for PecalangJagawana in carrying out their duties and responsibilities. Based on those obstacles, the implementation of awig-awigpakraman village is strongly influenced by the substance or content of awig-awig, understanding of pawos (article) in awig-awig, the role of customary institutions in facilitating various obstacles faced by Pecalang Jagawana, as well as the involvement of the community participation in the Pakraman Selat Village.

The management of protected forests in PakramanSelat Village is inseparable from the presence of awig-awigpakramanSelat village as a form of local wisdom of Adat community. The establishment of the PecalangJagawana as one of the implementation of the Awig-awigPakramanSelat village in protecting and overcoming the damage to protected forest areas has a significant impact on protected forest management. The implementation of the awig-awigPakramanSelat village will not run optimally without the support of the local community. For this reason, improvements need to be made to the traditional management system which has been carried out by designing a forest
management strategy in the village of Pakraman Selat which consists of a long-term, medium and short-term strategic plan while still referring to local wisdom and various applicable laws.

Conclusions

The implementation of awig-awig on protected forest management in Selat Pandan Banten Village, Buleleng Regency is shown by the establishment of the Pecalanglagawana as forest guards based on Pawos (article) 71 paragraph (3) and the application of customary sanctions for perpetrators of forest destruction based on Pawos (article) 72. The application of awig-awig in Pakraman Selat Village is a manifestation of local wisdom in the form of Tri Hita Karana’s conception, namely the harmonization between humans and God, humans and others, and human beings with nature. Awig-awig characteristics as customary rules that are recognized and adhered by the local community become more value in creating law enforcement amid the rampant forest destruction that occurs. The application of awig-awig or customary rules that emphasizes substance or content improvement, optimization of involvement of customary and community institutions, and improvement of traditional management systems that have been carried out by designing long, medium and short term forest management strategies referring to local wisdom and various regulations nationally like Law No. 32 Year 2009 on Protection and Management of the Environment, Law No.41 Year 1999 on Forestry, and Law No.18 Year 2013 on Prevention and Eradication of Forest Destruction is one of the sustainable innovation forms in the Digital Era that is able to overcome the problem of damage forests in Indonesia.

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