

# **Comparative Study of Customary and Formal Land Tenure System in Bali, Indonesia**

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## **SUMMARY**

The customary land tenure system has been shaping the custom in many areas. Customary land tenure system has been strictly regulated the relationship between member of indigenous community and, in the end, become the basis of the establishment of custom itself. Unfortunately, the formal land tenure system of Indonesia, which was established for eliminating land tenure dualism in Indonesia on 1960, has been lengthening the land tenure system dualism that had been going on since 1870.

Bali is well-known not only for its beautiful landscape but also for its unique culture. The Balinese culture was founded based on the culture of Hindu, which was further shaped by its interactions with local norms and values. In return, a harmony could be achieved due to the same norms and values upheld by any single Balinese individuals, including those from public, private and religion institution.

This paper highlights the comparison study of customary and formal land tenure system in Bali towards the re-engineering of formal land tenure system of Indonesia for leading to greatest benefit of People of Indonesia. In order to avoid this dualism, characteristic of each system is depicted, in which includes the background of establishment, the spatial administrative structure, the existing land tenure, the registration of land and boundary definition of each system. Having described all features of both systems, these features are compared and the status of land tenure in each system viewed by another land tenure system is depicted. The comparison of these systems further leads to the recommendations on re-engineering of formal land tenure system of Indonesia based on the customary land tenure system of Bali.

As it is almost impossible to create a unified land tenure system in Indonesia, especially due to the existence of many customary land tenure systems, the decentralization of land tenure system could be an option to avoid land tenure system dualism between customary and formal one. Furthermore, both of customary and formal land tenure system has their own strengths and weaknesses. A combination of all boundary definition principles could be valuable to both register all lands under formal land tenure system of Indonesia and capture the dynamics of customary land tenure arrangement without losing the level of detail for reconstruction of the physical state of the land.

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## **1. INTRODUCTION**

Culture is indeed acted as of important parts of human civilisation. According to Universal Declaration of Cultural Diversity, culture, specifically its diversity, is considered as the common heritage of humanity, as well as of important factors in development. On the larger extent, culture manages the relationship among human, between human and surrounding environment and even between human and God on various degrees. In return, the cultural preservation will maintain the sustainability of human civilisation, as well as the environmental carrying capacity for achieving sustainable development.

Custom has been acted as of important means on maintaining cultural values sustainability. Merriam-Webster Online Dictionary defines culture as the integrated pattern of human knowledge, belief and behavior that depends upon the capacity for learning and transmitting knowledge to succeeding generations. As Merriam-Webster Online Dictionary defines custom as a usage or practice common to many or to a particular place or class or habitual with an individual, custom regulates the implementation of cultural values, including the existing knowledge, belief and behavior, through either the written or unwritten law applied to past, present and future generation. The performance of custom thus will allow the cultural values to be transferred to succeeding generation, which, in return, will provide a means to preserve and apply the cultural values mirrored by custom.

The customary land tenure system has been shaping the custom in many areas. Of important features of land tenure system is to regulate the relationship between humankind and land by defining rights, restrictions and responsibilities of a single or group of person with regard to tract of land in question. While indigenous communities, either in the past or the present, have been depending very much to their surrounding environment, customary land tenure system has been strictly regulated the relationship between member of indigenous community and, in the end, become the basis of the establishment of custom itself.

The formal land tenure system of Indonesia, which was formally established through the promulgation of Act no. 5 year 1960 regarding Agrarian Principles, was established for eliminating land tenure dualism in Indonesia by employing custom as its main principle. The foundation of formal land tenure system of Indonesia was set up by Dutch Colonial Government through the establishment of Cadastral Agency on 1823. Furthermore, the second most important milestone of Indonesia's formal land tenure system is the promulgation of Agrarian Act on 1870 also by Dutch Colonial Government. As the result, considering that there were already existed customary land tenure systems in Indonesia, the promulgation of 1870's Agrarian Act fashioned land tenure system dualism in Indonesia, as it is clearly mentioned at the Article (c) of Consideration of Agrarian Principles Act. In order to eliminate

this dualism, Agrarian Principles Act was promulgated on 1960. According to Article 2.1 of Agrarian Principles Act; the State is in charge on management of land, water and air space. The State's authority could be transferred to indigenous community, as it is mentioned in Article 2.4 of Agrarian Principles Act, as long as it is in accordance to the interest of the nation. Furthermore, Article 5 of Agrarian Principles Act states that the agrarian law applied to the land, water and air space is customary law, again, as long as it is in accordance to the interest of the nation. The promulgation of Agrarian Principles Act thus was an attempt to establish a single, national land tenure system based on customary law.

Even though proponents of Agrarian Principles Act argued that such dualism was eliminated due to the promulgation of Agrarian Principles Act, dualism of land tenure system in Indonesia is still subsisted. The statement in Article 5 of Agrarian Principles Act is actually a double-edged sword. On one hand, it empowers the customary land tenure system, but, on the other hand, it affirms that there could be applied another land tenure system besides formal land tenure system restrained by Agrarian Principles Act in particular area. Furthermore, the authors argue that the security of customary land tenure could not be guaranteed by the formal land tenure system of Indonesia. Even the tracts of land belongs to Sultanate of Ngayogyakarta Hadiningrat, which has been granted special autonomy to govern City of Yogyakarta and its surroundings that was rented to Duct Colonial Government before the independence of Indonesia on 17 August 1945 due to its roles during the 1945-1949 independence war, as well as its status as the largest kingdom subsisted in Indonesia up to now, could not be guaranteed (see for details in Abdulharis *et al.*, 2008). The sultanate's land could not be registered as the Sultanate of Ngayogyakarta Hadiningrat is not considered as a legal institution. In City of Yogyakarta, the ownership of some lands belongs to the sultanate had already been registered under the name of those who are not even affiliated to the sultanate.

Bali is well-known not only for its beautiful landscape but also for its unique culture. The Balinese culture was founded based on the culture of Hindu, which was further shaped by its interactions with local norms and values. In return, a harmony could be achieved due to the same norms and values upheld by any single Balinese individuals, including those from public, private and religion institution.

This paper highlights the comparison study of customary and formal land tenure system in Bali towards the re-engineering of formal land tenure system of Indonesia for leading to greatest benefit of People of Indonesia. Within the description of customary and formal land tenure system in Bali at the Section 2 and 3, characteristic of each system is depicted, in which includes the background of establishment, the spatial administrative structure, the existing land tenure, the registration of land and boundary definition of each system. At the Section 4, features of both customary and formal system are compared and the status of land tenure in each system viewed by another land tenure system is depicted. The comparison of these systems further leads to the recommendations on re-engineering of formal land tenure system of Indonesia based on the customary land tenure system of Bali at the Section 5.

## 2. CUSTOMARY LAND TENURE SYSTEM IN BALI

### 2.1 Background

Maharsi Markandya is a Hindu priest who was initially in charge on the overspreading of Hindu religion in Bali. His first attempt to disseminate Hindu in Bali was unsuccessful due to the illness that caught his cohorts during the phase of opening up the land in Bali.

In order to avoid the mistakes from his first attempt to be happened again, at his second attempt, Maharsi Markandya and his cohorts performed a ceremony called *Bhuta Yadya* at the place where Pura Besakih is now located before performing the opening up the land. His second attempt achieved a great success and Maharsi Markandya, after the successful attempt to open up the land, distribute lands for settlement and cultivation area to his cohorts. The descendants of his cohorts further established new settlements and cultivation areas all around Bali Island.

### 2.2 Spatial Administrative Structure

The spatial administrative structure of indigenous community of Bali was basically established based on concepts and philosophy of Hindu. The smallest unit of customary spatial administrative structure in Bali is village, which is known as *Desa Pakraman* (*Pakraman* Village) in the local term. The term of *Desa Pakraman*, which is directly translated as customary village, has been utilized in order to create distinction between it and the village under formal, spatial administrative structure, which will further be explained in this paper. *Desa Pakraman* could become an autonomous body, known as *Sima Swatantra* in Balinese term, while it has been able to fulfill four requirements, known as *Chatur Bhuta Desa*, which are *Parimandala* that means the village has its own territory; *Karaman* that means that the village has already citizens; *Datu* that means the village has its own governmental structure; and *Tuah* that means the village is protected by *Sang Hyang Widhi*. The physical representative of *Tuah* is the existence of *Kahyangan*, the place where the citizen of *Desa Pakraman* could pray for bless and protection to *Sang Hyang Widhi*.

As the pillar of performance of custom in Bali, *Desa Pakraman* is responsible for maintaining both religious and social values. In order to preserve the above mentioned values, each *Desa Pakraman* has either written or unwritten law called *Sima Awig-Awig*. As the implementation of *Sima Awig-Awig*, each *Desa Pakraman* should be functioned as the facilitator for development of religious, cultural and social sector performed by formal governmental institution; performance of *Sima Awig-Awig* at *Desa Pakraman* in question; providing customary legal status to either institution or individual for maintaining link between customary and religious interests; development of customary values of Balinese in order to enrich, preserve and develop Indonesian culture in general and especially Balinese culture; and preservation and exploitation of the natural and cultural resources belongs to *Desa Pakraman* for the greatest benefit of citizens of *Desa Pakraman*.

A large *Desa Pakraman* comprises of smaller spatial administrative structure called *Banjar Adat*. *Banjar Adat* is headed by *Kelihan Banjar*. For a large *Banjar Adat*, it usually comprises of settlement areas in which called based on their relative position, called *Tempekan*, within *Banjar Adat*. Thus, possible names of these settlement areas are *Tempek Kauh* that means western settlement area, *Tempek Kangin* that means eastern settlement area, *Tempek Kaja* that means northern settlement area and *Tempek Kelod* that means southern settlement areas. Each *Tempek* is headed by *Kelihan Tempek*. See Figure 1 for spatial administrative structure within a large *Desa Pakraman*.

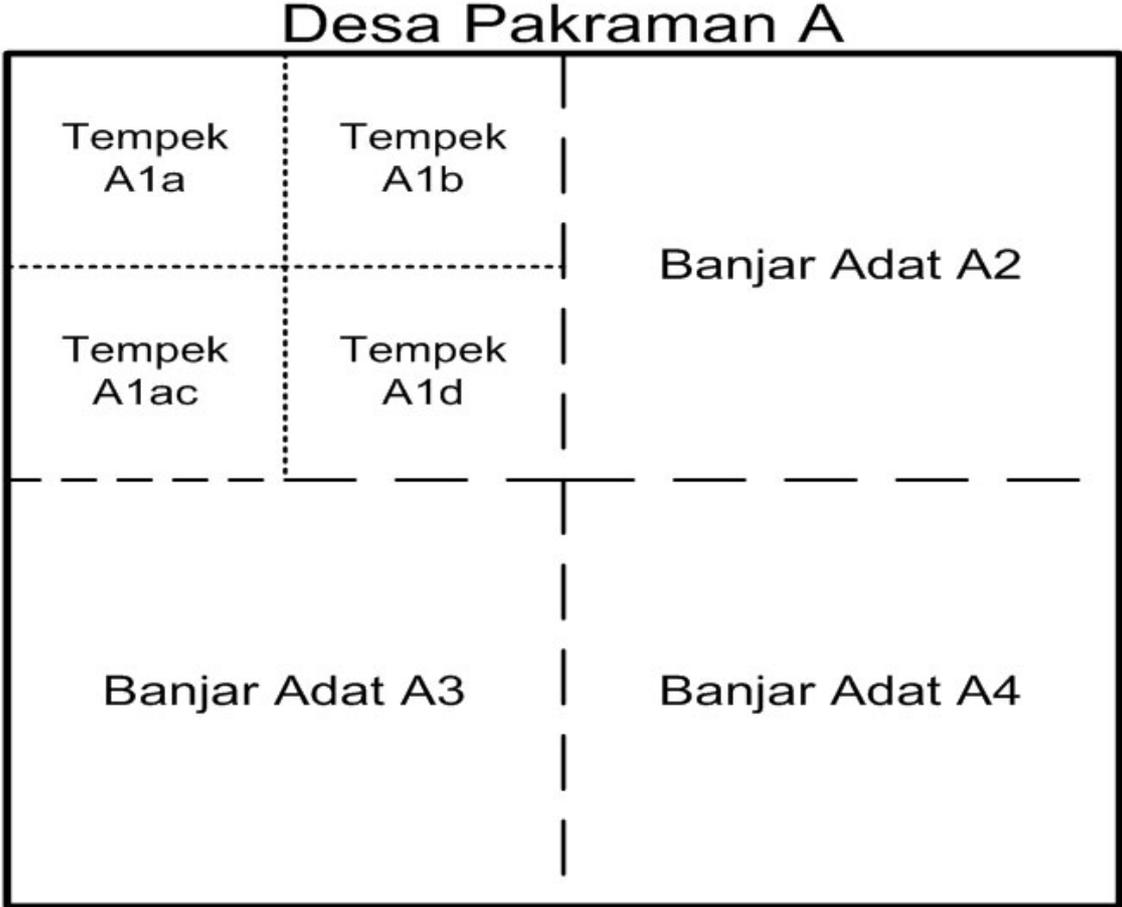


Figure 1 Spatial administrative structure of *Desa Pakraman*

Furthermore, there are two super-ordinates of *Desa Pakraman*, which are *Desa Adat Agung*, directly translated as Grand Customary Village, that level is equal to a province; as well as *Desa Adat Madya* that level is equal to a municipality. Up to date, there are only one *Desa Adat Agung* and nine *Desa Adat Madya*.

During the Dutch Colonial Era, there were established villages under formal, spatial administrative structure between 1906 and 1908. This new system was introduced to substitute the customary system for the purpose of strengthening the colonialism of Dutch in

Bali. However, the customary spatial administrative structure was still existed during the occupation of Bali by Dutch Colonial Government as *Desa Pakraman* has been upholding important religious and social functions for Balinese, in which incomparable to them of formal administration of village. These villages, which are so called *Desa Dinas*, are still existed up to now and, since the independence of Indonesia, the spatial administrative structure of Bali established by Dutch Colonial Government was inherited by the Government of Indonesia.

After the independence of Indonesia, these two different spatial administrative structures are inseparable to each other. Each structure upholds its own functions and supports to each other within the overlapping jurisdiction. Every single individual in Bali, including government officers, will always affiliated to a *Desa Pakraman* on the religious matters, while, on the other hand, all formal administrative matters, including for example the establishment of *Pura*, will be taken care by formal spatial administrative structure, either in the level of *Desa Dinas* or its super-ordinates. See also Figure 2 for spatial relationship patterns between *Desa Dinas* and *Desa Pakraman*.

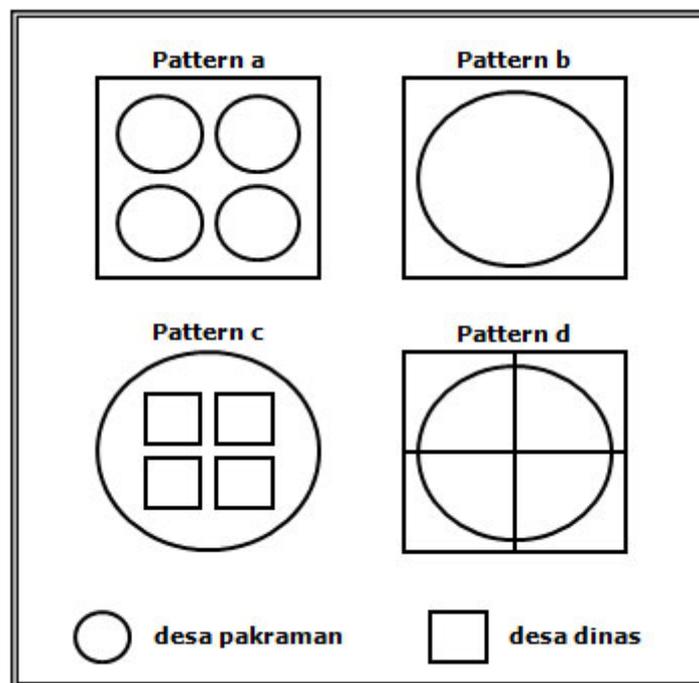


Figure 2 Spatial relationship pattern between *Desa Dinas* and *Desa Pakraman*

### 2.3 Land Tenure

The most important milestone of establishment of Balinese's customary land tenure system was the proliferation of *Tri Murti* as the religious basis for Balinese. *Tri Murti* Conception was established as a resolution for a dispute among six sects of Hindu and a sect of Budha Mahayana regarding the implementation of these religions. Besides defining *Tri Murti* as the

religious basis for Balinese, there are four other statements regarding the implementation of *Tri Murti* as follows:

1. Each *Desa Pakraman* should allocate special tract of land, including the supporting structure, for *Kahyangan Tiga*, which is a *Kahyangan* specifically devoted for the implementation of *Tri Murti* conception;
2. Each house should have *Sanggah* or *Merajan*, holy structures under *Tri Murti* conception;
3. Tracts of land allocated for *Sanggah* or *Merajan* and *Kahyangan Tiga*, as well as for supporting the performance of administrative function of *Desa Pakraman* are not allowed to be sold;
4. The name of Balinese's religion under *Tri Murti* conception is *Ciwa Budha*.

All tracts of land in Bali are common lands and not transferrable. This is due to the *Tri Murti* conception, as well as considering that, according to Regulation of Government of Province of Bali no. 3 year 2001 regarding *Desa Pakraman*, all tracts of land in Bali is owned by *Desa Pakraman*. Each of customary land has economic, social and religious functions attached in it.

These lands are further classified under the customary land tenure system of Balinese as comprising of *Tanah Druwe*, *Tanah Pelaba Pura*, *Tanah Pekarangan Desa* and *Tanah Ayahan*. *Tanah Druwe* and *Tanah Pelaba Pura* are strictly common lands, while *Tanah Pekarangan Desa* and *Tanah Ayahan* are common lands that could be utilized for private purposes with specific arrangement. *Tanah Druwe*, or *Druwe Land*, is tract of land restrained by *Desa Pakraman*, especially for the social purposes such as market, open spaces and cemetery.

*Tanah Pelaba Pura*, or *Pelaba Pura Land*, is land occupied by *Desa Pakraman* that had been allocated for *Kahyangan Tiga*, which is physically represented as *Pura*, the praying infrastructure of Hindus. Besides its function to uphold *Pura*, *Tanah Pelaba Pura* is functioned as well as capital for financing various activities related to *Pura* from routine ceremonies to maintenance of *Pura*.

*Tanah Pekarangan Desa*, or directly translated as Village's Yard Land, is tract of land allocated for settlements. For those live in *Tanah Pekarangan Desa*, they are obliged to maintain *Pura* of *Desa Pakraman* in question. Furthermore, they are also obliged to put *Sanggah* and *Merajan* in their yard. For those who have other beliefs than Hindu, they are obliged to pay rent to *Desa Pakraman* per month. This type of tenure is inheritable but only for those who are in the direct family line with the initial holder of this tenure. While there is none of descendant of initial holder of this tenure left, the land would be returned to *Desa Pakraman*'s occupation.

*Tanah Ayahan*, or *Ayahan Land*, is land occupied by *Desa Pakraman*, in which management could be conveyed to citizen of *Desa Pakraman* with a clear definition of rights, restrictions and responsibilities of conveyed individual or institution. *Tanah Ayahan* is mostly allocated for cultivation area with profit sharing agreement between the conveyed individual or

institution and *Desa Pakraman*. This type of tenure has the same feature as *Tanah Pekarangan Desa* in relation to the inheritance issue.

## 2.4 Land Registration

The customary land registration system of Balinese is considered as equal to Private Conveyancing, with *Desa Pakraman* acts as the administrator, registry and register. *Desa Pakraman*, as a customary, public institution on its own right, has autonomy to administrate its own territorial and citizen. *Desa Pakraman* could allocate every single tract of land under specific type of tenure. Of the effects of *Desa Pakraman* as an autonomous body, no direct public notice to super-ordinates of *Desa Pakraman* is required. On the other hand, public notice for citizen of *Desa Pakraman* is already included within the procedure of land allocation itself as it requires conformity from citizens, or at least citizens' representatives.

Moreover, *Desa Pakraman* acts as both registry and register. Every transfers of interest in land are conveyed by *Desa Pakraman*. On the other hand, as all tracts of land are occupied by *Desa Pakraman*, *Desa Pakraman* principally conveys its own land during the transfer of interest in land.

## 2.5 Boundary Definition

There are two types of boundary definition applied in the customary land registration system of Balinese, which are general and topological boundary. General boundary principle is applied for binding the common lands, such as *Tanah Druwe* and *Tanah Pelaba Pura*, as well as the territory of *Desa Pakraman*, as well as its super- and sub-ordinates. The hierarchy of types of tenure is the highest among other types of tenure due to its function to uphold religious and social matters. Due to the same reason, the boundary of these types of tenure could be extended as necessary. While, according to the Regulation of Government of Province of Bali no. year 2005 regarding Spatial Plan of Province of Bali, the perimeter of *Pura Sad Kahyangan* and *Pura Dang Kahyangan* is located minimum in radius of 5,000 m and 2,000 m from the outer *Pura*'s wall, defining the extent of *Tanah Pelaba Pura* is still considered as the autonomy of *Desa Pakraman*.

Furthermore, the topological boundary principle is mostly applied for defining the extent of *Tanah Pekarangan Desa* and *Tanah Ayahan*. Differing from the modern conception of land parcel, a tract of customary land could sometimes not be bounded by boundaries of other tracts of land. The latter types of tenure are basically placed on top of common land and issued based on the actual needs only. In relation to issuance of individual's right to land for a dwelling under *Tanah Pekarangan Desa* scheme, the boundary of a tract of land occupied by a citizen of *Desa Pakraman* is defined based on the exact location of rundown of rainfall from the roof of house belongs to citizen in question. Furthermore, the size of citizen's yard is also taken as a consideration on defining the boundary under these types of tenure as there is an obligation to place *Sanggah* or *Merajan* on every yard of Hindus. Thus, the topology of boundary is entirely predisposed by the dwelling's construction and See Figure 3 for common

layout of *Tanah Pekarangan Desa* and Figure 4 for a description on defining individual's right to land for a dwelling under *Tanah Pekarangan Desa*.

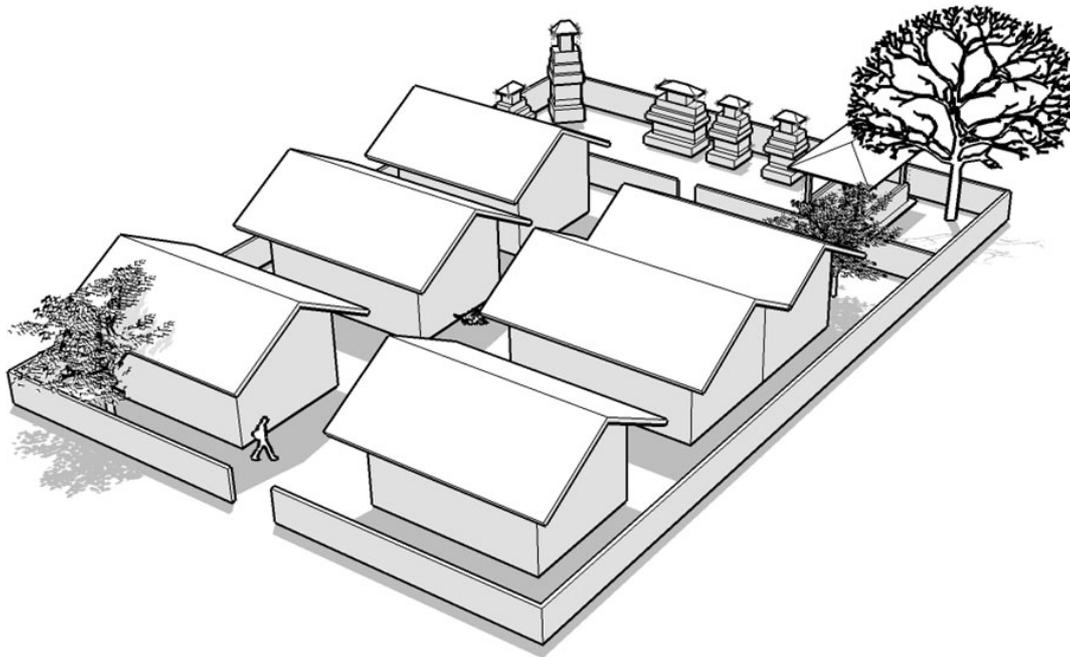


Figure 3 Common layout of *Tanah Pekarangan Desa*

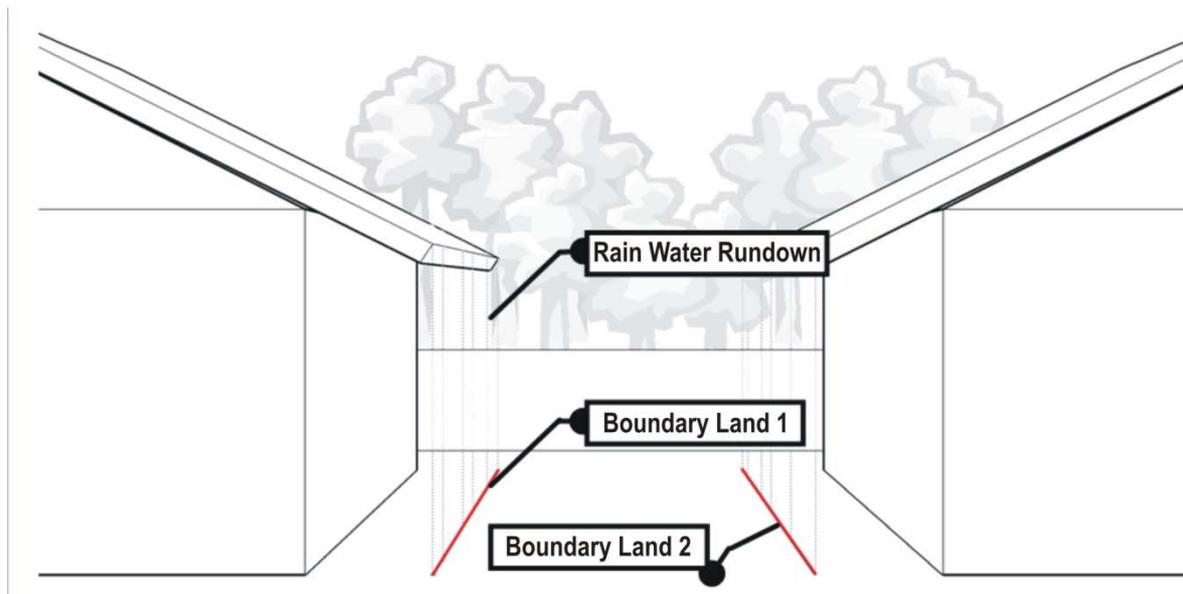


Figure 4 Boundary of individuals' dwelling within *Tanah Pekarangan Desa*

### **3. FORMAL LAND TENURE SYSTEM OF INDONESIA**

#### **3.1 Background**

The basis of formal land tenure system of Indonesia was initially instituted by Dutch Colonial Government on 1823 by the establishment of Cadastral Agency. Due to the arising needs to administer the land in Indonesia, Dutch Colonial Government promulgated Agrarian Law on 1870. The promulgation of Agrarian Law was followed by promulgation of regulations for administering land in some specific areas such as Sumatera and City of Manado, as well as Southern and Eastern part of Borneo.

Soon after Indonesia's independence on 17 August 1945, the Constitution of Republic of Indonesia of 1945, further called as the Constitution of 1945, was promulgated. The Constitution of 1945 provides the basis of management and administration of land, water, airspace and natural resources. In Article 33.3 of Constitution of 1945, it is stated that all land, water and natural resources are gifts from God to Indonesia as a nation, in which management is conveyed to the State for the greatest benefit of people of Indonesia.

The unity was considerably an issue during the early years of Indonesia's independence, in which also affected the land tenure system of Indonesia at that moment. Considering the existence of land tenure system dualism between colonial and customary one, Act no. 5 year 1960 on Agrarian Principle, known as well as Agrarian Principles Act, was promulgated on 24 September 2004 in order to abolish this dualism. Instead of referring to colonial one, Agrarian Principles Act was established based on the refined customary land tenure systems, in which also embedded by conception of unity and socialism of Indonesia.

#### **3.2 Spatial Administrative Structure**

In order to manage the total land territory of 1.9 million square kilometers and 7.9 million square kilometers of territorial waters, including an exclusive economic zone, Indonesia is divided into 33 provinces. Each province comprises of several regencies and municipalities.

Since 1999 Indonesia has been shifting from centralised to decentralised type of governance. This is due to the promulgation of Act no. 22 year 1999 on Regional Governance, which has been abolished and substituted by Act no. 34 year 2004. The provincial and local governments thus should put on more local knowledge on the development processes for the greatest benefit of people as it is mandated by Constitution of 1945. The authorities of regional and local government are further explained by Government Regulation no. 25 year 2000. Provincial and local government thus could exercise its power freely without having to be controlled by higher authority.

#### **3.3 Land Tenure**

As previously mentioned, the formal land tenure system of Indonesia has been mainly regulated by Agrarian Principles Act. The Act re-emphasizes the principle stated in Article

33.3 of Constitution of 1945 that land, water and airspace are gifts from God to Indonesia as a nation. Through the power given by the people of Indonesia, the Government of Indonesia occupies all lands, waters and airspaces for the greatest benefit of people of Indonesia. Based on the above principle, the State occupies every tract of land, water and airspace that have no tenures attached on it.

Through this act, the types of tenure, including the rights, restrictions and responsibilities applied to tenure holder, are promulgated. Article 16 of Agrarian Principles Act defines the tenures under the formal system as comprising of seven land tenures, as well as three water and airspace tenures. The defined land tenures are Right of Ownership, Right of Cultivation, Right to Use Buildings, Right to Use, Right of Lease, Right to Clear the Land and Right to Collect Forestry Product. Besides the above mentioned land tenures, Agrarian Principles Act also regulates the water and airspace tenure, in which comprises of Right to Cultivate Waters, Right to Cultivate and Catch Fish and Right to Use Airspace.

Within seven land tenures and three water and airspace tenures, only the Right of Ownership that is considered as equal as freehold, while the rests are equal to easement such as Right to Clear the Land, Right to Collect Forestry Product and Right to Cultivate and Catch Fish; and leasehold. Tenures that are equal to easement are based on customary tenures.

However, it is argued that the main characteristic of customary land tenure system, which is communality, was not fully adopted in this act, when the promulgated act tends to individualise land tenure arrangement (Abdulharis, 2005). Furthermore, the Indonesia's land tenure has been progressively advancing, in which creates pluralism manifested by overlapped jurisdiction of tenureship of urban and rural, forestry, mining and coastal areas that are regulated by different acts.

Another important feature of Agrarian Principles Act is the arrangement regarding the eligible tenure holder. Only Indonesia citizen and legal corporate that is established under Indonesian law are eligible to uphold one or more tenures from above.

In spite of shifting to decentralized governance, land tenure is still considered as of centralised issues. Even though there are agencies that were established in order to control land administration in some provinces in Indonesia, the land tenure matters are managed by National Land Agency and its sub-ordinates in provincial and municipal level. While some articles in Constitution of 1945 have been revised, Article 33.3, which acts as the fundamental of land management in Indonesia, has been maintained.

### **3.4 Land Registration**

Land registration system of Indonesia is basically similar to German-Swiss Registration System. This is due to the involvement of specialized notary on tenureship called land deed official on land registration in both the registration of land for the first time and registry data updating as according to Article 37 of Land Registration Regulation. Article 6 of Land Registration Regulation also mentioned that it is compulsory for the Head of Land Registry

Office to be supported by either land deed official or other appointed officials. Furthermore, Article 40 of Land Registration Regulation mentions that land deed official should submit the deeds in question at most seven days after the signing of the deeds.

Concerning the dispute resolution of interests on land, Indonesia adopts the negative registration system as Article 55.3 of Land Registration Regulation mentions that the court has an authority to nullify the right to land, as well as the Apartment Ownership Right. Therefore, there is no guarantee on the security of the title in Indonesia once it is registered. The only control to certify the legitimacy of a title is lied in the procedure of deeds registration by land deed official (see further Article 39 of Land Registration Regulation). The deeds would be one of the evidences for refusing applications for the registering the rights to land due to the alienation of the land as mentioned by Article 45 of Land Registration Regulation. However, there is no evidence on Land Registration Regulation, as well as which are mirrored by court's decisions, on race and/or notice statute on land dispute resolutions.

Besides regulating the registration of tenure, the Land Registration Regulation gives evidence on possibility to register joint ownership. The Article 31.3 of Land Registration Regulation explains that an apartment ownership right is jointly owned by a number of individuals or corporate bodies. The division and merging of rights to land are also regulated by Article 43 of Land Registration Regulation in which mirror the possibility to register joint ownership.

### **3.5 Boundary Definition**

As other formal systems in the world, the land registration of Indonesia applies fixed boundary principle for administering the land. This is mirrored by Article 14.1 of Land Registration Regulation states that the physical data collection, as well as its processing, should be in the form of surveying and mapping activities. Furthermore, Article 14.2 of Land Registration Regulation mentions that land parcel boundaries should be fixed by surveying and mapping activities.

## **4. COMPARISON OF CUSTOMARY AND FORMAL SYSTEM**

### **4.1 Features' Comparison**

In this section, features of customary and formal land tenure system are being compared. Those features are the basis of establishment of the system, spatial administrative structure, type of land tenure, land registration system and boundary definition. See Table 1 for details.

Even though it is stated in Article 5 of Agrarian Principle Act that the valid agrarian law is customary law, the authors argue that custom only supplements the act that was established based on Dutch Land Tenure System, which was built based on Roman Law. Table 1 provides evidences of the previously mentioned statement, particularly from the type of land tenure. The formal land tenure system of Indonesia emphasizes individual tenure, while no individual tenure at all existed in Balinese's customary land tenure system.

Table 1 Comparison of customary and formal land tenure system in Bali

No.	Land Tenure System	Customary System	Formal System
	Feature		
1	Background	Customary Law	Roman Law
2	Spatial Administrative Structure	Regional-Local	National-Regional-Local
3	Land Tenure Type	Common	Individual
4	Land Registration System	Conveyancing	Registration of Title: German-Swiss System
5	Boundary Definition	Topological- Natural	Fixed

Customary spatial administrative structure has become the basis of the establishment of formal spatial administrative structure as the formal spatial administrative structure was established mostly by considering the ethnicity matters. In relation to the effort to provide a single means of management of land tenure in Indonesia, ethnicity is of prevalent obstacles. As most of provinces in Indonesia were established due to their ethnic identity, a single, centralized and unified land tenure system is almost impossible to be built. Each ethnic has its own custom, with its own customary land tenure arrangement.

Another contradictive feature of customary and formal land tenure system in Bali is the type of land tenure. Customarily, none of customary land tenure is linked to individual, while, on the other hand, the formal land tenure system of Indonesia only recognizes land ownership by individual or legal corporate. Even though land tenure under the formal land tenure system of Indonesia has social function attached in it, it is the common value upheld by performance of customary land tenure system that could not be guaranteed by the formal system, especially because of individualization of tenure applied within the formal system. Even though customary land tenure could be converted into one of tenures under formal land tenure system, some important features of customary land tenure such as the prohibition to sell the customary land could not be guaranteed by the formal system. Furthermore, as all customary lands in Bali are occupied by *Desa Pakraman*, which is not considered as either individual or legal corporate, none of *Tanah Pekarangan Desa* is registered. Consequently, all *Tanah Pekarangan Desa* at this moment is formally occupied by Regency or Municipal Government as the representative of the State in local level. In return, the existence of land tenure dualism creates confusion and tends to be the source of conflict in the future.

In relation to difference between customary and formal land registration system, theoretically the formal land registration system should provide more security to all registered lands. Even though there are similarities on procedure to register the land in both customary and formal system, the institutionalization of land registration system, if managed properly, will provide well-maintained land registration record, which could be accessed within a longer period of time compared to the access to written or unwritten record of land registration under customary conveyancing system.

Finally, the boundary definition principle of Balinese's customary land tenure system is a mixed between topological and natural boundary, while, on the other hand, the formal system has been applying fixed boundary principle. Fixed boundary principle could provide legal assurance to the land owner as the boundary is recorded as 2D coordinate in national or local coordinate system. However, fixed boundary principle is quite inflexible for recording the dynamics of customary land and its tenure.

#### **4.2 Status of Customary Land under Formal Land Tenure System**

After the promulgation of Agrarian Principles Act on 1960, all types of tenure from existing systems should be converted into a type of tenure under Agrarian Principles Act that suits the characteristic of the tenure from the previous system. Conversion Provision of Agrarian Principles Act provides the basis of automatic conversion all types of tenure under different land tenure systems existed in Indonesia before the promulgation of Agrarian Principles Act into different types of tenure under Agrarian Principles Act. However, even though the provision mentions about automatic conversion of tenures from pre-1960 systems into 1960's system, the conversion could only be done when the owner of the land re-registers his/her land to local land office.

According to Article II.1 of Conversion Provision of Agrarian Principles Act, up to 1986, none of the above customary types of tenure could be converted into freehold. This is due to requirement on the eligibility of tenure holder stated in Article 21 of Agrarian Principles Act. It is stated in the latter mentioned article that only individual whose citizenship is Indonesian and legal corporate established under Indonesian law are eligible to hold one or more land tenure(s) in Indonesia. Since 1986, according to Decree of Minister of Interior no. SK 556/DJA/1986 regarding Appointment of *Pura* as Religious Legal Corporate, *Tanah Pelaba Pura* could be registered for a freehold. However, as all tracts of land in Bali are occupied by *Desa Pakraman* and there are other customary land tenures besides *Tanah Pelaba Pura*, disputes due to the existence of land tenure dualism in Bali are continually arisen. To date, all tracts of land occupied by *Desa Pakraman* are officially State's land. Even though the religious matters have been put as the highly prioritized issues in Bali, occupation of lands belongs to *Desa Pakraman* by the State is considered as an imminent danger for the security of customary land in Bali, as well as the sustainability of Balinese's culture in general.

### **5. RECOMMENDATION**

As it is almost impossible to create a unified land tenure system in Indonesia, especially due to the existence of many customary land tenure systems, the decentralization of land tenure system could be an option to avoid land tenure system dualism between customary and formal one. However, in order to administer the land, water and airspace unit for the greatest benefit of the people of Indonesia as stated in Article 33.3 of Constitution of 1945, the mandate on land tenure arrangement relegated to regional and local government should be limited only on the conversion of customary land tenures into the formal land tenures under the formal system. Furthermore, it is advisable to also relegate mandate to regional and local government

to establish new types of tenure that suit the customary land tenure arrangement in region in question for providing the legal assurance to customary land tenure by the formal land tenure system of Indonesia. The previously mentioned recommendations are possible to be applied as, according to Article 16.1 of Agrarian Principles Act, it is possible to issued other types of tenure besides those tenure that have been stated in this Act through promulgation of an act. Moreover, the Regional Governance Act is indeed acted as supportive supra-structure on relegation of mandate to manage customary land.

Both of customary and formal land tenure system has their own strengths and weaknesses. In relation to land registration system feature, conveyancing performed under customary land tenure could not provide a means to maintain registry records in a long term such as it is provided by the formal land tenure system. By creating new tenures specifically designed to cope with the specialties and dynamics of customary land feature, customary land's title could be registered and the title would be assured by law.

On the other hand, fixed boundary principle applied by the formal land tenure system of Indonesia provides inflexibility, in particular on dealing with the dynamics of customary land arrangement. Thus, a combination of all boundary definition principles could be valuable to both map the registered land under national coordinate system to facilitate the good performance of land registration system and capture the dynamics of customary land tenure arrangement without losing the level of detail for reconstruction of the physical state of the land.

## REFERENCES

Abdulharis, R., Sarah, K., Hendriatiningsih, S., Hernandi, A. and Zevenbergen, J. 2008, The Customary Land Tenure toward the Sustainable City Development: the Case Study of Yogyakarta, Indonesia, in: Proceeding of FIG Commission 3 Annual Meeting and Workshop on Spatial Information Management towards Environmental Management of Mega Cities, 18-21 February, Valencia, Spain

Abdulharis, R., 2005, Land Administration in Post Disaster Areas: The Case of Banda Aceh, Aceh, Indonesia, M.Sc Thesis, Delft University of Technology, Delft

Act no. 5 year 1960 on Agrarian Principles

Act no. 22 year 1999 on Regional Governance

Act no. 34 year 2004 on Regional Governance

Constitution of 1945

Decree of Minister of Interior no. SK 556/DJA/1986 regarding Appointment of Pura as Religious Legal Corporate

Dutch Colonial Government's Agrarian Law 1870

Government Regulation no. 24 year 1997 on Land Registration

Government Regulation no. 25 year 2000 on Regional Governance

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