

## The Concept of Recycled Farming According to *Dayak Kanayatn* and the Cultural Dimension

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### Abstract

This research focuses on explaining the concept of recycled farming according to Dayak Kanayatn and its Cultural Dimensions. Talking about the Dayak Kanayatn cannot be separated from all their life activities. One of their most significant life activities is the farming practices of the Dayak Kanayatn tribe, which is rich in ritual ceremonies. The ceremony signifies the human relationship with nature and all its contents. Apart from that, the activities of the Kanayatn Dayak tribe, which are also essential to discuss, are economic activities. Supported by natural conditions, the Dayak people depend on the recycling farming system for their economy. However, the problem that arose later was the recycling farming system of the Dayaks, who were accused of destroying nature, encroaching on forests, and illegal loggers, thus disturbing and destroying nature. If we open history again, the Dayak tribe has managed nature in this way for centuries but has not caused any damage to nature. Departing from this accusation, the researcher explains how the Dayak Kanayatn people wisely manage nature with recycled farming. This paper aims to respond to accusations of Kanayatn Dayak as natural destroyers of their farming system. Then he wanted to explore one of the cultures of the Dayak people, especially the Kanayatn Dayak, which was almost extinct due to the times. Furthermore, it introduces the Dayak-style culture of nature management through the recycled farming tradition the Kanayatn Dayak represents. The author uses qualitative research methods and critical reading of the text without ignoring the author’s experiences and observations as a Dayak son. The findings of this paper are that the Dayak Kanayatn farming system not only reveals economic activity but also reveals community socio-cultural and religious activities. From how they work the fields with the balale’ system, it is implied that they are solid in solidarity with others. It was there that their solid community life was revealed based on kinship and brotherhood.

**Keywords:** Balale’; Cultural dimension; Kanayatn Dayak; Recycled farming

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## 1. Introduction

Farming activities are a tradition that must be kept from the life of the Dayak people. Farming activities are the identity of the Dayak people. Therefore, the Dayak people must have fields and other jobs (Kusmiran, 2002). As one of the many Dayak tribes in West Kalimantan, the Kanayatn Dayak tribe also places agriculture as their primary source of livelihood.

This research examines the Kanayatn Dayak concept of shifting cultivation (recycling). It must be admitted that the recycling farming system is not explicitly in mind, but looking at their techniques, it appears there is a “recycled farming system.” However, the problem that later emerged was the Dayaks’ recycling farming system, which was accused of destroying nature, encroaching on forests, and illegal loggers, thus disturbing and destroying nature (Dove, 1998). If we reopen the pages of history, the Dayak tribe has managed nature in this way for centuries but has not caused any damage to nature.

This theme wants to answer whether the Dayak farming system is the cause of the haze, landslides, and floods formulated in one term, “*biang keladi*” of environmental damage in Kalimantan? Why didn’t this disaster happen earlier when the Dayak people’s ancestors practiced this cultivation system? Why did this happen during the national development program, especially during the New Order regime? These are some of the questions that prompted researchers to raise this issue. To answer this question, we must study how the Dayak makes fields.

Researchers try to explain through this research how the Dayak people treat nature according to what was passed down by their ancestors. Nature, for the Dayak people, is a place to find sustenance. Therefore, if nature is treated arbitrarily, it will not provide sustenance to humans (Apo, 2022). Researchers also try to explore the relationship between Dayak humans and nature. Because it is a matter of the life of the Dayak people and their environment, the question arises whether the way of farming of the Dayak people contains ethnic norms or regulations if they do not want to be said to be destroying nature.

By examining the issues above, we are directed to the understanding that every Dayak people’s cultivation is not just clearing the forest. They have ethical norms that must be met before customary law is imposed on the perpetrator who does not heed the rules that have been set (Yeri, 2016). Because of that, it is also essential that we pay attention to several definitions of recycling fields.

According to W.J.S Poerwarda Minta in the General Indonesian Dictionary, fields mean land cultivated by humans and planted with rice, sweet potatoes, vegetables, and others without irrigation (Poerwarda Minta, 1986). Based on this understanding, there is only one type of field when there are many types of fields, and their processing cycles are also different. One of them is the shifting cultivation system. In shifting cultivation activities, the land is temporary agricultural land but is only cultivated for several growing seasons and then abandoned by farmers so that shrubs and trees grow back.

Recycling means the circulation of repeated periods (Rufinus, 1997). An attempt by humans to produce goods they need, not by processing raw goods (natural resources), but by reprocessing goods that have been used. The recycling system is expected to minimize the depletion of natural resources which are increasingly depleting. In the context of farming, with increasing human concern for the environment, experts have begun to develop ways to recycle nature wisely in the sense of not exploiting natural products without thinking about the consequences in the future (Adibroto, 1989). From the terms “farm” and “recycling,” it can be said that recycling farming is a human effort to process nature to meet its needs. That means

not letting the land become barren but replanting it with other plants, such as natural rubber or *tengkawang*, for Kalimantan land so that humans can reuse it at a specific time.

According to the Dayak people in general and the Kanayatn Dayak, the field is called *uma tautn*, a land used by the Kanayatn Dayak to grow rice (Sinju, 1993). Etymologically, *uma taun* refers to the meaning of the cycle of cultivation, which can only be done once a year. *Uma Tahutn* is an agricultural pattern practiced by the Dayak people from the past until now (Sinju, 1993; Hendra, 2017). They clear the land, then after planting rice and other crops, they leave to look for new land again until, after a certain period (usually 1-10 years), they return to their original land. Thus this process occurs repeatedly. They call that a “recycled farming” (Tatang, 1996).

Dayak Kanayatn is very skilled in recycling farming. However, their skills are often misinterpreted as destroying nature (Bamba, 1993). For the Kanayatn people, the pattern of recycled farming has long been practiced and is the right technology to deal with natural constraints. They need to clear the forest. The selection of land for the fields is made with complete calculation because fields are an essential food source for life. Inappropriate land selection will affect crop yields.

The Kanayatn Dayak community knows agriculture, for example, the relationship between the root system and rice production (Tatang, 1996; Kusmiran, 2002). They are reluctant to plant rice on land that still has fresh and thick roots. The local term is called “*sagup*”. In the first year, the yield will be small. It is caused by the inability of the root tips of the rice to penetrate the soil layer, which is still thick with *sagup*. Another reason is that *sagup* has yet to be composed, so the soil absorbed by rice is limited. For yields to increase from the land like this, patience is needed to cultivate it again in the second year.

The fields of the Kanayatn people are not only planted with rice but also planted with various kinds of vegetables. Not all types of rice are planted in the fields. In particular, they plant two types of rice which in their language are called “*palawakng*” rice and “*poe*” *mototn* rice (Tatang, 1996). This pair of rice is believed to be given by *Jubata* to humans.

Apart from planting various vegetables, the fields of the Kanayatn people are also planted with sugarcane, sweet potatoes, and rubber. Because of that, the former fields are called *rame* or rubber plantations. Sugarcane for them is very important, namely to get sugar. The sweet potato leaves can be used for vegetables and fruit for snacks. The process of processing sugar cane into sugar is done traditionally. At that time, sugar factories did not exist in the Kanayatn community. Sugarcane juice processed into sugar is mixed with rice flour during traditional ceremonies.

Meanwhile, rubber plantations support their economy if the rice harvest in the fields fails (Aten, 1996; Bamba, 1999; Pahlevi, 2019). Rubber results can be enjoyed after the age of 5-10 years. Rubber can restore soil fertility. Because of this, the Kanayatn Dayak people can cut down rubber that is no longer productive so that the former rubber plantation area can be used as agricultural land.

Seeing how they cultivate the land like this, there is no good reason to accuse them of destroying nature. Those caught deliberately accusing and slandering the Kanayatn people as destroyers of nature will be subject to customary law called “*adat capa’ molot*”. The contents or traditional equipment are as follows: *talū* (three) *tail tengah* (half) *batang adat*, *talū* (three) *buah siam* (ancient jar), *talū eko’ jalu* (three pigs). One conjoined fruit and one pig for *kanyalahan*, one fruit and one pig for the word *be’atn* (apology), and one siam and one other pig to restore the good name of the person who was slandered earlier (Andasputra, 1999).

## 2. Research Methods

Researchers use qualitative research methods or critical reading of texts without ignoring the experiences and observations of researchers as sons of Dayak (Kwirinus, 2022). Critical reading of the text was carried out both before and during the writing of this paper. The literature researchers use includes books on philosophy, especially philosophy of culture, anthropology, and books on culture. Articles and scientific journals related to Dayak Kanayatn culture, mainly traditional Dayak culture, are also used. The data analysis researchers used the content analysis method. The analysis will produce research findings that become a construct in viewing Dayak culture in an authentic and relevant way.

The researcher uses observation and experience methods, considering that “scientificity involves not only the brain but also the heart and hands” (Kwirinus, 2022). After the observation process is complete, the data that has been collected will be analyzed using thematic analysis techniques. Prior to analysis, the researcher will conduct validity and validity of the results of the observations and interviews using the Source Triangulation method (Creswell & J. David Creswell, 2018). This theory originates from the field of qualitative research. It is based on the idea that using multiple data sources in research can increase the reliability and validity of research results. Source triangulation aims to ensure that data collected from various sources produce similar findings, increasing researchers’ confidence in the findings obtained.

According to Creswell (Creswell and Creswell, 2018), there are four stages in carrying out source triangulation techniques in research, namely:

1. Data Collection: Data collection was done using various methods, such as interviews, observation, and document analysis. The data obtained will then be used as material for analysis.
2. Data analysis: The data that has been collected will be analyzed using data analysis techniques according to the research method used. For example, the data analysis is thematic if the research uses a qualitative approach.
3. Data Integration: After data from various sources have been analyzed, data integration is carried out. Data integration is done by comparing findings from each data source and looking for similarities and differences between these findings.
4. Data interpretation: The final stage is data interpretation, namely interpreting the results of data analysis from various sources to obtain more accurate and credible conclusions. Data interpretation must be based on data analysis performed on each source so that the conclusions drawn have a solid foundation.

In line with the epistemological statement while the feminists above, Banawiratma emphasized that scientific, social research without social involvement needs to be questioned about its scholarship (Widjono, 1998). The researcher worked on this article not from a distance but from choices and actions for and with the Kanayatn Dayak community. The collective action and social involvement meant by the researcher here are that everyone, especially the Dayak people, loves culture and thinks critically about all the elements that are part of the local culture. More than that, traditional leaders should prioritize dialogue and cultural studies to find Christian values in each tradition.

## 3. Results and Discussion

The term “Dayak” immediately reminds us of the name of a tribe in the interior of Kalimantan. Many people ask why it is named “Dayak.” It has yet to be made clear when and

where this term appeared. Several anthropologists try to provide a view of the term “Dayak” as a name for the tribe, for example, Alferd Bacon Huson and H. Gomes.

Alferd Bacon Huson, in the *Encyclopedia Americana* (Huson 1973), says that “Daya (without the “k”) is a term commonly used by the Dutch to refer to non-Muslim natives of Kalimantan. By the British, the term refers to the Dayak Iban (Sea Dayak) and Dayak Darat from Sarawak.

H. Gomes, MA quoted by Stepanus Djuweng in “Dayak, Dyak, Daya’, and Power Reflecting the Blur of an Identity” (Djuweng, 1992), emphasized that the origin of the term “Dayak” is difficult to trace. Some opinions say that this term comes from the word “Daya” which in the Brunei Malay dialect means interior, whereas the Dayak Darat said that Dayak means a man. From this confusion of opinion, Gomes assumes that any word can be considered the origin of the term “Dayak.” However, using the term Dayak as a name for all tribes in the interior of Kalimantan is inappropriate because many tribes are not Dayak at all. Their language, customs, and traditions differ significantly (Djuweng, 1992).

According to Kanayatn folklore in Albert Rufinus (Rufinus, 1994), at first, the indigenous tribes of Kalimantan lived along the river. Pressured by migrant tribes, especially Malays and Bugis, they moved upriver to avoid disputes with these tribes. So the word “upstream” according to the dialect is “Daya.” Those living upstream are called Daya people (without the “k”). Becoming a Dayak because people cannot pronounce the pressure on the word Daya’. It can be proven from their daily dialog: “*Ampus ka’ maea’ kita?*” (Where are you going?), then the answer will be: “*Aku mao ampusa’ ka’ daya!*” (I want to go upstream to the Dayak village).

From the three sources above, can it be ascertained when the word “Daya” became “Dayak” (plus the letter “k”) became the designation for the native tribes of Borneo Island? The three sources also needed to provide factual information. However, from this ambiguity at the National Seminar on Dayak Culture in Pontianak in November 1992, it was decided that Daya’ accompanied by the letter “k” to become Dayak is the designation for indigenous tribes throughout the island of Borneo, including Sabah and Sarawak (Malaysia).

Our next question is, where did the Dayak tribe come from? The emergence of the Dayak tribe in Kalimantan is generally very difficult to talk about it. The reason is that there are many conflicting opinions. Even so, the researcher found the following opinion from several sources that the researcher had studied.

According to Thomas R. William “Borneo” in the *Encyclopedia Americana* (William, 1973), it is estimated that 50,000 years ago or more, the population of Borneo came from the Australoid nation. Then followed by the Mongoloids (approximately 15,000 years ago). The mixing of these two nations gave birth to nomadic tribes.

Mikhail Coomans in the *Past, Present, Future Dayak Man* (Coomans, 1978), argues that the Dayak people are the descendants of immigrants from the Yunan region in South China. The first groups to enter the Kalimantan region were the Negrid and Wedid, then the Proto Malays, a larger group. Before reaching Kalimantan, they stopped in several places, such as the Philippines, Sumatra, and Java.

According to local folklore quoted by Stepanus Djuweng (Djuweng, 1996) in “Observing the pattern of Dayak Chinese relations in West Kalimantan”, the ancestors of the Dayak tribe came from the Chinese region. It can be seen from some similarities in culture and body shape. From these three theories, it cannot be answered with certainty where the Dayak tribe is. However, it can be said that the ancestors of the Dayak tribe came from the plains of Asia.

Meanwhile, the Dayak Kanayatn are revealed in detail in the oral tradition. From this oral tradition, it is told about the creation of the universe and humans. There are two different versions of the creation story.

The three Jubata personalities who created the world and humans are *Ne'Jubata Panitah*, *Jubatan Ne'Patama or Ne'Pajaji*, and *Jubata Ne' Pangedokng*. According to the creation story, these three personal names for *Jubata* do not mean there are three *Jubata*, but only one person of the Creator. According to *Jubata Ne' Panitah's* order, a human from the clay was affixed to his image (Andasputra, 1997).

The second version of the universe is centered on the water of a giant tamarind tree (*Pusat Ai' Pauh Janggi*). According to the story, this great tamarind tree is called the tree of life, the source of all creation and to which all creation will return. Humans come from the cosmic marriage of *Popo'* with two ribs (the Coolness of the Mud and the Ribs). They gave birth to a pair of humans: a man named *Ne' Galeber* and his wife named *Ne' Anteber*. This pair of humans is considered the ancestor of the Dayak Kanayatn tribe (Andasputra, 1997; Aseng, 2023). Where they came from was hitherto unknown. Oral tradition only says that they came from '*Binua Aya*' (Binua Besar or mainland), which is unclear where. Then they inhabited Mount *Bewakng*, located on the border between Samalantan District (Sambas Regency) and Bengkayang District, which is now in the reform era and has become a separate district.

Regarding the word Kanayatn, according to living witnesses who are sources of oral literature, none of these Dayaks say they are "Kanayatn". They are only called Bukit Dayak. Kanayatn is meant to include the Bukit Dayak with all its existing sub-tribes. MC. Scade, a Civil Service Controller, in his article entitled *Bijdrage Tot De Kennis Van Den Godsdienst Der Dayaks Van Landak en Tajan* (Andasputra, 1903), does not mention the Dayak Kanayatn in his research on religion. He only uses the term "Kanayatn" for the Dayak tribe who live in the Pontianak Regency area and partly in Sambas Regency. Then, Kanayatn, as a designation for one of the Dayak sub-tribes, was first published by a Catholic missionary P. Donatus Dunselman OFM.Cap in his book "*Budrage Tot Kennis Van Taal En Adat Der Kandajan Dajaks Van West-Borneo* (1949).

### 3.1. Field Types

Dayak Kanayatn has laws regarding the establishment of cycles of cultivation. The legal basis is stated in the decision letter of the II Dayak Kanayatn Customary Deliberation No. X/KEP/MUSDAT-II/DK-Kab-Pnk/1991 Date, 12 February 1991, concerning the composition and management personnel of the Dayak Kanayatn Traditional Council for the period 1991-1996. Through this MUSDAT decree, it has been determined that the structure of the Adat Dayak Kanayatn consists of protectors, advisers, and administrators whom their bureaus complement. The core board consists of a chairman and his deputy, a secretary and a deputy, and a treasurer and his deputies. Meanwhile, the bureaus consist of cultural, business, organizational, youth, and planning bureaus. This customary structure functions to explore, preserve and develop customs (Florus, 1994; Said, 2020).

Following the function above, the Customary Council has established several traditional ceremonies related to the cycle of cultivation, namely the *Lala' Nagari* ceremony is held every May 28, the *Babatak Ngawah* ceremony is held every June 5, the *Nabo' Uma* ceremony is held every December 7, the *Ngilratn Antu Apat* ceremony is held every February 17, and the *Naik Dango* ceremony is held every April 27 (Florus, 1994). Currently, the time and date of implementation are adjusted to the circumstances and conditions that support these activities.

After knowing the legal basis above, the researcher will describe the types of fields owned by the Kanayatn Dayak people. The goal is for non-Dayak people to understand that not all fields can be applied to a shifting system.

### 3.1.1. *Uma Mototn* (Hill Farm)

It is called *uma mototn* (hill field) because the land is hilly or on mountain slopes (Rufinus, 1997). In this field, various crops are planted (rice, corn, cucumber, cassava, sugarcane, rubber, and others), but the main crop is still rice. In particular, corn and cucumber are planted before rice. Certain types of cucumber are mixed with rice seeds and then planted together. Hill farms do not use an irrigation system. The amount of rice planted is limited. Usually, it is only planted with two types of rice, namely *palawakng* rice and *mototn poe'* (glutinous rice) rice. According to tradition, this field must use a migratory pattern.

### 3.1.2. *Uma Tawakng* (Tawang Farm)

Tawang field (*tawang*) is agricultural land cultivated by the Kanayatn Dayak people to grow rice (Miden, 1997). This type of field soil is wet (naturally watery) and quite fertile. These fields can be found on the edges of jungle forests which are still very rich in storing water under the ground. The water stored underground flows every time so that it is irrigated according to the needs of the rice to grow. The *tawakng* fields in particular only plant *palawakng* rice and *poe'* rice. There are no other crops. The *tawakng* fields can still be cultivated the following year. So you do not have to move to find new land anymore. According to their custom, after cultivating the land for 1-3 consecutive years, they can look for new land again (Miden, 1997; Darmadi, D., & Prasajo, 2021). The planting system applied to this land is a direct sowing system. Rice seeds are put into holes in the ground made with a tool called a *tugal*.

### 3.1.3. *Ladang Limaukng* (Farm by the River)

This field is located on the bank of a river. The soil type is moist, wet, and fertile because it absorbs water directly from the river that flows around it. In addition to planting rice, the *limaukng* fields are planted with various plants, including sugar cane, corn, cucumber, spinach, mustard greens, and medicinal plants for traditional ceremonial purposes. (Miden, 1997).

In this field, land management systems can be applied in a sedentary way. The land can be cultivated again the following year. While waiting for the following year's farming season, farmers can plant their land with other crops, such as peanuts, green beans, long beans, spinach, and others. They sell the results to buy kitchen needs, such as cooking oil, kerosene, gas, and table salt, and the rest to buy clothes. Cultivating the land awaits the arrival of the following year's farming; in their language, it is called "*nadak*". That is processing or utilizing used land without opening new land. This land does not need fertilizers or other chemicals to restore the fertility of the plants. Farmers know when it is time to return to their original state. If the land is no longer fertile after being cultivated from year to year (approximately the next 1-5 years), they will naturally allow the land to grow with bushes and trees. Thus within 1-3 years, soil fertility will return. The established planting system is the same as in the *tawakng* fields.

### 3.1.4. *Uma Jakat* (Ordinary Rice Field)

*Jakat* is agricultural land that is processed using a traditional irrigation system. It is considered traditional because it still depends on small rivers that flow around the land. There

has been no intervention of modern technology to provide water when the dry season arrives. The Dayak Kanayatn farmers only need to make ditches around the land to overcome water shortages when the dry season comes. They also made bunds, then divided the water in each paddy field as evenly as possible (Miden, 1997).

*Uma Jakat* (rice fields) are planted with various types of rice. The types of rice planted are those whose stems are resistant to wind. If the land is far from the reach of irrigation, the type of rice must be able to grow with little water. The *Uma Jakat* land can be cultivated like rice fields on Java Island; the difference is that fertilizer is used in Java, while the Kanayatn rice fields do not use fertilizer. However, for now, they have also used fertilizers. The planting system used on this type of land is a nursery system.

### 3.2. Cultivation Stages

According to Dayak Kanayatn, the discussion on the perception of land and the selection of types of fields has led us to the understanding that not all forest areas can be used as agricultural land. Faced with that reality, they determine the best day to start farming. This auspicious day is marked by the appearance of the *Bintakng Ada'atn* (guidance star), which is also called the *Bintakng Tujuh*, *Bintakng Oakng*, *Bintakng Pati'*, *Bintakng Ra'akng* (jaw star). They believe this star is a guide for farming to get maximum rice yields.

Kanayatn's astrology knowledge is similar to calculating the days in the Chinese calendar. They named the days of the month as guidelines for carrying out agricultural activities:

*"Sa'ari Bulatn, Sego, disebut hari tikus. Dua Ari Bulatn, Kerap, Ari Pipit. Talu Ari Bulatn, disebut ngalu: baik untuk mendatangkan rezeki. Ampat ari Bulatn: apa yang diinginkan mudah didapat. Ari Lima, ari anam, ari tujuh: ari baik (harus lihat bintangnya). Ari Sembilan, Sepuluh, Sebelas: ari baik. Ari dua belas, abis bulatn. Ari Talu Balas disebut Kira: ari jahat. Ari ampat balas, ari aya'. Lima belas disebut pariama: bulan purnama. Anam balas, Riripatn. Tujuh balas disebut Ngaluakng: semua binatang kepalanya mengarah ke hari dua. Dua puluh dua disebut kadakng: binatang banyak keluar dari perut bumi, tengkuyung dan binatang malam mudah didapat. Dua puluh talu, dua puluh ampat, dua puluh lima, dua puluh anam, dua puluh tujuh: semuanya baik untuk kegiatan pertanian. Dua puluh lapan, Kira, hari jahat. Apa yang ditanam mudah mati muda. Dua puluh sembilan, kalah idup. Suka bimbang. Tiga puluh, Ari tutup, kurang baik"* (Aseng, 2023).

#### 3.2.1. Inner Preparation

The inner preparation referred to is the traditional ceremony that is carried out before clearing the fields. Traditional ceremonies are carried out so that they feel free, without guilt, when working in the fields.

##### a. *Upacara Nabo' Panyugu*

This ceremony is held every year in June. All villagers are required to be involved in this ceremony. They held a prayer together at *Panyugu Nagari* (a place of worship for the *ketemenggungan*) to ask *Jubata* for permission that they would open agricultural land. This ceremony is preceded by *balala'* (abstinence) for three days and nights. During that time, no one was allowed to go to work, pick all kinds of leaves, kill all kinds of animals, and eat them. Also, people are prohibited from bathing in the river. Especially for bathing purposes during *balala'* day, each family has prepared as much water as needed. If someone violates



these taboos, customary law will prosecute the culprit (Rufinus, 1992; Pide, 2014; Sulastri, 2015).

#### **b. Ngawah (Selecting Land)**

For 7-10 days *nabo' panyugu* is performed. Once again they pray there with *ngawah* (determination of agricultural land). Prayers are held in the morning, and then in the afternoon, there is *ngawah*. The decision to designate agricultural land must follow the signs given by nature. The sign is the sound of a certain bird; *kunikng*, *keto*, *kalingkoet*, *tampi*, *seak* and *ada'atn*. If the birds sing on the hills, it means that agriculture in the highlands will be thriving. The rice fields will be gloomy if they sing in the valleys or if agricultural production is in the lowlands (Rufinus, 1997). Moreover, again, when the birds sound towards the back of the *panyanghatn* (priest) praying during *Nabo' Panyugu*, it is a sign of land that *Jubata* wants to approve. Conversely, the desired land is not approved if it reads opposite the priest.

### **3.2.2. Physical Preparation**

The intended physical preparation is when people work on the designated land. His work begins with *ngaratas*, namely determining land boundaries with neighboring land. Physically the land cultivation process is divided into the following stages:

1. Nempot and *nabakng*
2. Making up *raba'* and *nunu*
3. Nugal and *merumput*
4. Bahanyi (harvest)
5. Naik *Dango*

#### **a. Nempot and Nabakng (Menebas and Menebang)**

*Nempot* (slashing) means cleaning bushes and small wood around the land. The goal is that the bushes and small wood dry quickly, making it easier for the next job. The tool used is a long machete. Meanwhile, *nabakng* (cutting down) means breaking down trees while standing upright in a field (Lahajir, 2002). Cutting is preceded by a traditional "*baremah*" ceremony, making offerings for *Jubata*. The goal is to ask *Jubata* to make the logging work smoothly and ensure the people whom do it get to safety. After "*baremah*" the cutting is done.

Not all of the wood is cut down. There are certain types of trees, and large ones may not be cut down. This tree is left upright in the middle of a field, and only the branches may be removed (Dove, 1998). Why is that? According to the belief of the *Kanayatn* people, a tree is a place where the *Tinkakok* bird (a bird of blessing for rice) perches, which protects and cuddles the rice fruit.

For the *Kanayatn* people, cutting down trees in the fields has rules. Trees that are felled must be knocked down in one direction. It is done by cutting another tree in half, then overlapping it with an enormous tree. This method speeds up logging. The tools used for felling are machetes to remove fallen tree branches and pickaxes to cut down large trees. Nowadays, people are logging in using a chainsaw (logger machine).

#### **b. Ngarangke Raba' and Nunu (Drying and Burning)**

*Ngarangke raba'* is drying shrubs and trees that have been cut down for a particular time to be burned. *Nunu* (burning) is the final process of *ngaranke raba'*. Before burning, a *ngaraki'* ceremony is first held to clear the entire edge of the land about one meter wide. That is done to prevent the spread of fire to other places. Burning is usually carried out in the

afternoon or after twelve o'clock in the afternoon. Previously, all kinds of spirits were expelled in the middle of a field with rice mixed with salt. Burning starts from the edge of the land, considering the wind direction. It is what determines the success or failure of combustion.

If the combustion is not successful (raw), one more stage must be passed, which significantly slows down the carving process. Dove, who has examined the farming systems of the Dayak Katu' tribe, said that re-burning after burning is a stage with burning. In contrast to Katu', Kanayatn, similar to Dayak Rentenukg, considers this work a separate stage. This stage is called *mumputn*, which means collecting the remaining branches of wood that have not been burnt down to be burned again (Rufinus, 1992; Pide, 2014).

There are several purposes for burning:

1. They are turning the chopped vegetation into ashes. The change process releases nutrients in trees, leaves, branches, and humus. The roots of rice suck up this substance.
2. Remove obstacles on the land surface so that the work at the next stage runs effectively and efficiently.
3. Kill the plants still alive in the fields, especially tree shoots and bushes, which are difficult to cut down during felling and prevent the growth of new shoots.

If these obstacles are not removed, they will rival rice plants for sunlight, dew, and nutritious food (Soetjipto, 1990).

Seen from an ecological point of view, according to Greetz, quoted by Lahajir as saying:

*"A large proportion of the mineral energy that feeds the crops in the fields, especially grains, comes more from the forest ashes that are burned than from the soil itself, so that the complete combustion is the most important factor to determine the success of the harvest, which is a fact that is recognized by all the cultivators"* (Lahjir, 2002).

### c. *Nugal and Merumput*

*Menugal (nugal)* is planting rice seeds in a hole in the ground made with a tool called a *tugal*. The drill hole spacing is not specified. *Nugal* is preceded by a *nyangahatn mata'* and cooked *nyangahatn* ceremony by cutting a chicken. The goal is to ask for the fertility of rice seeds that will grow and be free from pests and diseases. Furthermore, when the rice is knee-deep, a traditional *nabo'uma* ceremony is held by cutting a chicken. When the rice becomes pregnant or pregnant, the traditional *ngaladakng buntikng* ceremony is held again by cutting a chicken (Kusmiran, 2002). This ceremony aims to ask *Jubata* to contain the rice seeds.

What if pests attack rice? Hama in the Kanayatn language is called *baho*. They have the wisdom to deal with *baho* (rice pests or diseases). *Baho* was not killed, but the spirits of each of these pests were summoned, fed, and then ordered to return to their place of origin. The origin of the *baho* is in the underworld, which is also inhabited by evil spirits, including demons. They were controlled by *Nek Inguman Bujang Tunggal* (Goretti, 1999). Returning the *baho* is called the "*Ngiliratn Baho*" ceremony (washing away the rice disease into the river).

The *Baho* consists of rats, *limpango* (horny bugs), sparrows, ground dogs, and others. According to the beliefs of the Kanayatn Dayak people, each type of *baho* has a place. For example, rats come from the underworld, the realm of people who die bleeding (accidents, murder, suicide, and others). Therefore, a traditional *nyarapa'* ceremony must be held to return rats to their country of origin. The traditional equipment: *pabayo*, a large plate, seven pieces of *lemang*, seven *bontokngs* and *tumpi Jubata*, a grilled chicken, a boiled egg halved, a

stick, *palantaratn*, fertilizer (a small offering taken from grilled chicken meat mixed with salt), plain flour, betel leaf, lime, areca nut, gambier, tobacco wrapped in nipa leaves tied with cooked betel (Gorreti, 2002). After the ceremonial equipment is fulfilled, the priest *panyangahatn* prays a specific prayer in the fields or rice fields. *Panyangahatn* put fertilizer on the former pest rats to feed them. Fertilizer is placed in three places on the edge of the field or rice field, and the intention is to signal the rats to return to their ruler, *Nek Inguman Bujang Tunggal*.

#### d. *Bahanyi* (Harvest)

*Bahanyi*, or harvest, is a happy time for every farmer, and so are the Kanayatn people. However, before harvesting, several things must be done (Mides, 2002). First, the *ngabiti*' ceremony is held when the rice turns yellow—custom equipment; a chicken egg. Consequently, the yield will be small if this ceremony is not carried out. So the purpose of this traditional ceremony is to ask for blessings on rice plants. Second, the traditional ceremony of *Nyempak* with the standard equipment of cutting a dog, a chicken, and an egg. This ceremony occurs at the graveyard (crossroads leading to the village cemetery). Third, the *Ngaleko* traditional ceremony is carried out the day after the traditional *Nyempak* ceremony. In this ceremony, the harvest is symbolized because only a few stalks of rice are picked directly from the grass. The picked rice is then dried in the sun and pounded into *leko* (a type of chip). The *leko* was distributed to every family in the village concerned. After the *Ngaleko* ceremony is carried out, then the big harvest is carried out. Usually, they work together (*balale*') to harvest rice in the fields or rice fields.

All harvested rice is put into the barn, and some are not. Rice that is not included is used for daily purposes. Abundant crops should not be sold. The Kanayatn Dayak tribe cultivates fields, using the results for daily needs. The harvested rice is not for sale and purchase but for the needs of daily life. Even though the harvest is abundant, they only sell rice occasionally. They have done this for generations since the ancestors of the Dayak Kanayant tribe came and declared their existence.

#### e. *Naik Dango*

*Naik Dango* is the last stage of the entire farming stage of the Dayak Kanayatn (Julipin, 1993). This ceremony is a big ceremony that every resident of Kanayatn village carries out. Observing the work ethic of the Dayak Kanayatn farming, which is so neatly arranged through the stages described above, one is then confronted with the reality of Kalimantan, which has been battered as it is today; frequent floods, landslides, forest fires, smog and dry rivers, forests, and jungles are almost no longer visible. Is it due to farming that is the cause of these various disasters? Several activists who joined the Indonesian Forum for the Environment (Walhi) answered.

According to *Timanggong* Manimas Miden Sood (Miden, 2002), deforestation, the occurrence of smog, was not caused by cultivators. The practice of recycled farming has been carried out for centuries, but it has never caused as many disasters as it does now. Why? Because farming has rules that must be implemented. The Dayak people, in general, and the Kanayatn Dayak cut down the forest only a little for fields and housing materials. Wood in the forest cannot be cut down indiscriminately, and there are rules too. There are forests where the trees can be taken, and there are those that cannot. Those who violate it are immediately subject to Kanayatn customary law, which is called *Siam Pangalabur* custom, with the customary material being a *Pahar Batangung, Jalu Dua Lear* (if valued at around Rp. 250,000). If the

violator does not want to pay, the person is cursed by society with being destitute seven times on land and seven times at sea. As a result of the curse, the offender will experience a life of poverty for seven generations. With the entry of many companies with government permits, protected forests are the first to be sought. They cut down and burn hundreds of thousands of hectares of forest for plantation areas. Burning such vast land is the primary source of disaster in Kalimantan.

According to Lourensius Majun (Majun, 1997), the emergence of fog, shallow rivers, and flooding during the rainy season does not originate from cultivators. It is caused by plantation projects, industrial forest land (HTI), and forest concession rights (HPH) currently operating. Haven't farmers been carrying out slash-burn-planting activities for hundreds of years? However, why didn't things happen like they are now? All of this is because cultivators have rules for farming (Saeng, 2011). Their contribution to environmental damage is still there. However, not as big as that caused by the companies.

According to Emmy Hafild (Hafild, 1997), the causes of floods accompanied by mud and landslides are not farmers. The environmental movement found that indigenous peoples have sustainably managed the environment. However, because they are a political and population minority, they are devalued and marginalized. Because indigenous peoples were eliminated, the actual knowledge of how to manage the environment sustainably was replaced by HPH, HTI, and others. They were the ones who cleared the forest on a large scale because they were given written permission.

### 3.3. The Cultural Dimension of Dayak Kanayatn Recycling Farms

The Dayak Kanayatn farming system contains a series of economic activities and a series of socio-cultural expressions. The economic activity is evident, and a field is expected to produce a good harvest from rice and other side crops. Apart from self-consumption, produce is also sold, especially other plant products such as vegetables, sugarcane, cassava, and cucumber (Djuweng, 1996). While socio-cultural (cultural) expressions appear in the following terms:

1. Living Together with Others
2. The spirit of *balale'* (solidarity or cooperation)
3. The image of nature and its relationship with humans

#### 3.3.1. Living Together with Others

As a socio-cultural (cultural) expression, the Dayak Kanayatn farming system is an actualization of an infinite life economically. The point is the relationship between individuals and groups, groups and groups based on mutual respect that creates and strengthens unity and integrity in society. These socio-cultural expressions mutually show the Kanayatn people's awareness that they cannot live without other people. The Kanayatn people know they must live alongside others (Dilen, 1997).

#### 3.3.2. The spirit of *Balale'* (Solidarity or Cooperation)

Horizontal social relations (living together with others) in the Kanayatn Dayak community are manifested during *balale'* when completing the fieldwork. Not only *balale'* in fieldwork but also when preparing for the *Naik Dango* party ceremony up to the day of the celebration. All preparations for parties and celebrations are carried out in the *radakng* (long house). Longhouses are the heart of life, where cultural values can be learned and internalized

(Adasputra, 2000). During the *balale'*, preparing for the *Naik Dango* party and celebration, young people exchange rhymes as expressions of joy.

Meanwhile, the tribal elders tell their ancestors' experiences and history and listen to happy songs. The atmosphere of brotherhood, warmth, and love, giving and receiving each other, really felt in it. That is where the spirit of togetherness and solidarity is manifested to lighten one another's burdens together (Rufinus, 1992). Apart from growing, a sense of togetherness, security, mutual respect, and need in this life journey also grows from such socio-cultural events. Therefore, apart from fulfilling the economy, *balale'* is also a means of horizontal social-emotional fulfillment between individuals and individuals, individuals and groups, and between one group and another (Djuweng, 1992).

### 3.3.3. The image of nature and its relationship with humans

Natural images and human images are creations of the Absolute, namely *Jubata*. As creatures, humans and nature can exist and may not exist (Andasputra, 2000). Man and nature have the soul of the Creator. Therefore, existing creations such as water, rice, trees, and rivers have the *Jubata* Spirit. As mentioned in another prayer, *Jubata Kayu Ara* (big wooden Jubata), *Jubata Ai'* (Water Jubata), and *Jubata* dwell all over the place (Regina, 1997). So it can be seen that Jubata is everywhere. He transcends space and time and permeates all creation.

Humans and nature have a harmonious relationship. A concrete example: humans cannot do anything to the environment around them. He must maintain the harmony of the relationship that has existed since the beginning. Why? Because if humans destroy the forest, it interferes with *Jubata's* existence in that relationship. Humans must first hold a traditional ceremony if they cut wood in the forest. All ceremonies are addressed to the *Jubata*, who animates all creation. Therefore, the harmonious relationship between humans and nature must be maintained. Nature is not only a human object but also a subject that provides experience and wisdom to teachers. As teachers of wisdom, humans learn a lot from nature, and the customs that apply are also the result of human encounters with nature.

## 4. Conclusion

From the point of view of socio-cultural anthropology, recycling farming of the Dayak Kanayatn is the most suitable method for forest ecosystems with wet tropical climates. The Dayak tribe has long practiced recycled farming, and has been proven to cause no environmental disturbance. Integrity and sustainability are maintained. Environmental destruction occurs precisely because of giant companies with forest tenure rights (HPH) and the opening of industrial plantation forest areas (HTI).

The Dayak Kanayatn cultivation system is a local agricultural culture and pattern following the conditions of society and nature to meet the needs of cultivating families or households. The land is processed through stages in a systematic, integrated, and sustainable manner in space and time. It is carried out by moving as the main feature of ecological wisdom and the location of fields from one field to another to rest the forest soil in the annual cycle of fields. It is one characteristic of Kanayatn Dayak culture.

The Dayak Kanayatn farming system reveals the economic activity and the community's socio-cultural and religious activities. From how they work the fields with the *balale'* system, it is implied that they are solid in solidarity with others. It was there that their powerful community life was revealed based on kinship and brotherhood. Recycled farming, perceptions about land, reforestation of land through sacred forest systems

or *tembawang*, and customary laws that apply are wise ways for the Kanayatn Dayak tribe to manage God's creation so that future generations can still enjoy the results.

## 5. Acknowledgment

The resulting writing can provide views and insights to the Dayak community, especially the Kanayatn Dayak community, because of the help and support from various parties. The author would like to express thanks to all who were involved and helped the author during the process of this research, namely: Petrus Yuniarto has been involved in writing and translating this article. Currently, he is in Licentiate Program on Major Pastoral Theology at the University of Santo Tomas in Manila, the Philippines.

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