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### Local Knowledge System Dayak Ribun, Sanggau West Kalimantan

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#### Abstract

Knowledge systems are born from the experience and creativity of certain people to be used as clues or guidelines in carrying out activities for the survival of daily life. The knowledge system is passed from one generation to the next. Knowledge is gained through experience, information processing, experiments and thought processes such as imagination and critical thinking. This research specifically describes the local knowledge of Dayak Ribun which is unique and still survives today. The study uses ethnographic approaches in the collection, processing of information and data analysis. Field data collection is carried out by observation, interview and living with the Dayak Ribun community in Parindu Subdistrict. The findings of this study

contain three things, namely the knowledge of the Dayak Ribun community about natural symptoms that are closely related to their farming systems. Furthermore, the Dayak Ribun people's knowledge of the universe environment that they basically believe that the life of the universe in which they survive is a gift of the universe that must be maintained. As well as, the knowledge of the Dayak Ribun community about the types of crops that support their livelihoods and household food systems. The knowledge system is derived from hereditary inheritance from their ancestors, and the inheritance of that knowledge has been going on for a long time and is still found in the lives of this society.

**Keywords:** Knowledge System, local, Customs, Dayak Ribun

#### Introduction

Discussing about indigenous peoples in Indonesia, cannot be separated from discussions about their knowledge of forest and natural governance which has direct links to their cultural, spiritual, ecological, social, economic and political elements (see Kepkiewicz & Dale, 2018; Niko, 2020; Witter *et al.*, 2021) <sup>[10, 12]</sup>. Mitchell (2000) Indigenous peoples in various parts of the world, live in mountainous areas, river banks, to coastal areas, therefore many donor projects are trying to protect their natural resources (Clarke, 2010) <sup>[7]</sup>.

The distribution of the Dayak people in the interior of Kalimantan cannot be calculated by the number of sub-tribes in it (see White *et al.*, 2011). In West Kalimantan, the results of research conducted by Yusriadi (2018) <sup>[18]</sup>. This sub-tribe is the largest community group both in terms of number and distribution. Although there are no official figures, the number of this tribe reaches 30-40% of the total population of West Kalimantan. The Ribun Dayak is one of the Klemantan Dayak sub-tribes scattered in the interior of Sanggau Regency, especially in Parindu, Tayan Hulu, Tayan Hilir, Bonti and Kembayan sub-districts. The Dayak Ribun indigenous people still believe in supernatural values that come from nature (soil, water, and trees) (Arkanudin, *et al.*, 2021). This knowledge includes mystical elements that are part of the Ribun Dayak community.

In general, culture is seen as knowledge, skills, habits, attitudes and beliefs, as well as objects produced by a group of people that are transmitted from generation to generation. Thamam (2001) <sup>[17]</sup>, culture is a way to maintain the life of a society with the possession of knowledge, skills, and values that are described through language and transmitted from generation to generation with the aim of cultural preservation and survival.

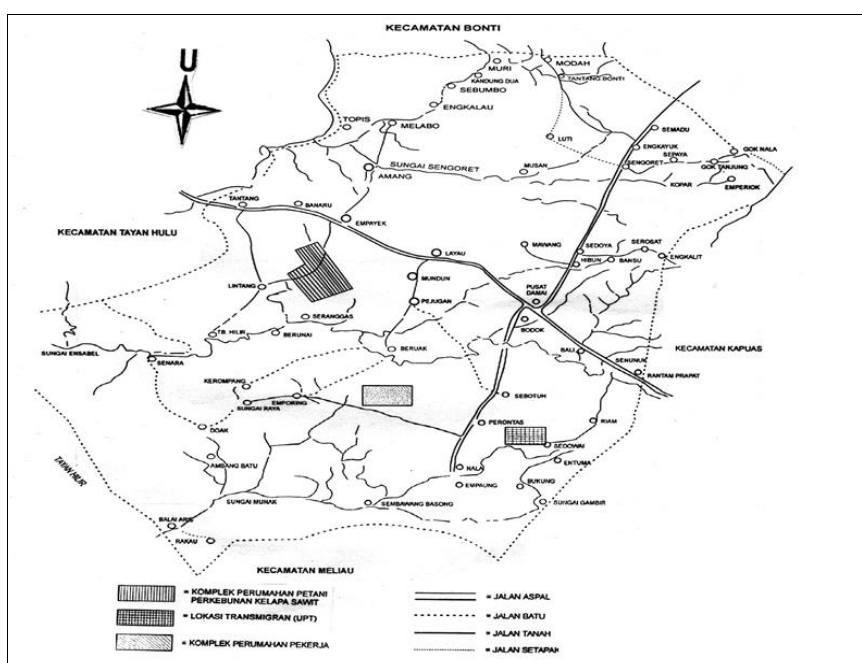
The culture that is owned by every society will inevitably experience diachronic changes from time to time as a result of both internal dynamics and the expansion of external forces. Changes in one element of culture will also affect other cultural aspects of the Dayak Ribun community in various regional distributions in Parindu District (Arkanudin, 2005; 2018; Arkanudin & Rupita, 2021) <sup>[3, 4, 2]</sup>.

In the context of culture, the knowledge system is one of the elements of culture that is universal in nature, which is found in almost all cultures, no matter how simple the culture is. Koentjaraningrat (1990) <sup>[11]</sup> states that elements of culture can be found

indigenous knowledge is highly recommended as a reference in implementing sustainable development on the condition that it must be inclusive, grounded and integrated in intervention programs from the start (Briggs, 2013) [6].

Koentjaraningrat (1990) <sup>[11]</sup> says that every ethnic group in the world has knowledge of: (1) the natural surroundings; (2) natural flora in the area where they live; (3) fauna in the area where they live; (4) substances, raw materials and objects in their environment; (5) the human body; (6) the nature and behavior of fellow human beings; and (7) space and time. Based on the scope of the knowledge system, this paper explores the local knowledge of the Dayak Ribun community in Parindu District which is important to be documented.

The qualitative research approach used in this study is an ethnographic approach. Ethnography itself is characterized by its in-depth, qualitative, and holistic-integrative analysis. Therefore, we explored the local knowledge of Dayak Ribun through participant observation, interviewee



**Fig 1:** Subdistrict Parindu map

## Results and discussion

## Thousands of Dayak Indigenous knowledge

The Ribun Dayak tribe in this sub-district is based on the results of Arkanudin's research (2011) that it is estimated that there are 26,000 people or reaching 50% of the 78.23% of the total Dayak tribe. This condition illustrates that the Ribun Dayak ethnic group in this sub-district is the majority ethnic group or in other words is a large tribe and has a diverse culture. In this case, their culture can also be said to have possessed what C. Kluckhohn calls the seven elements of universal culture which include language, technological systems and means of production, livelihood systems, knowledge systems, religious systems, and art systems.

Of course, the elements of the Dayak Ribun ethnic culture are not static, as described by Alif (1993) <sup>[1]</sup> that life is traditional, simple, monotonous, innocent, honest, and several other stereotypes. According to Sulistiyono (2014) <sup>[16]</sup> culture also undergoes diachronic changes from

**Table 1: Research informants**

S. No.	Initial name	Gender
1.	VD	Man
2.	XA	Man
3.	KT	Woman
4.	JG	Man
5.	YE	Woman

Source: Researcher, 2020

time to time as a result of both internal dynamics and the expansion of external forces. In addition, changes in one aspect of culture will also affect other aspects of culture.

In each ethnic group, they must have their own knowledge system, the knowledge system they have is basically an accumulation of knowledge obtained from their ancestors and from their experiences, both groups which are then institutionalized to become part of the culture of the local community. Likewise, the Ribun Dayak tribe in the Parindu Sanggau District, West Kalimantan, also has its own knowledge system obtained from hereditary inheritance from their ancestors. Or in other words that the knowledge system they have basically comes from the daily experiences of their ancestors and is socialized from generation to generation. Based on the results of field research, it was found that the Dayak Ribun tribal knowledge system related to: (1) Knowledge of natural phenomena or places of residence; (2) Knowledge of the physical environment; and (3) Knowledge of plant species.

### Knowledge of natural symptoms

Koentjaraningrat (1990) <sup>[11]</sup> explains that knowledge about nature, for example about the seasons, the nature of natural phenomena, about animals, and so on. This knowledge of nature often approaches the realm of religion. Knowledge of nature is also often in the form of fairy tales that are considered sacred, such as cosmology and folklore in literature.

The knowledge of the Ribun Dayak people about the natural phenomena around them, namely regarding the seasons, and these natural phenomena they use to determine when to plant or cultivate. Farming is the livelihood of the Dayak people and has given birth to a knowledge system that can understand the nature of natural phenomena that affect cultivation.

According to them, natural phenomena related to cultivation

are knowledge of the seven stars. When the seven stars have appeared then at night the air will be very cold until the morning is a sign that people have arrived at the time to start clearing the fields. If the star is seven in the East, while the one star is lower than the seven star signifies that people are allowed to start planting rice.

If in the sky there are lines like walls and clouds resembling fish scales, then according to the belief of the Ribun Dayak people, the dry season will come. On the other hand, if the sky above looks red in the morning and the clouds clump together like mountains, it is a sign that the rainy day or season is coming. Other natural phenomena that signal the arrival of the rainy season can also be seen from the roots of the wood, if the roots of the wood growing on the banks of the river sprout and many fruit trees bloom, this is also believed to be a sign of the arrival of the rainy season.

Based on signs such as the arrival of the dry season, the Ribun Dayak people began to prepare themselves for farming. All the equipment needed to work the fields such as machetes and pickaxes as farming tools began to be sharpened so that they did not encounter obstacles when it was time to open the fields. Farm work must pay close attention to the rotation of time and understand its characteristics. The mismatch between natural conditions and the stages of farming will result in crop failure and if this happens it is a disaster for the population.

Furthermore, in determining the length of the fallow period, it is not only determined by time, but is more determined by the characteristics of the soil type and certain types of plants that grow in the location of the land to be cleared for cultivation. So the benchmark for clearing fields is seen from certain types of trees (remboik, ubah, etc.) whose trunks are 20 centimeters in diameter, and there are wild grass plants such as resam, kukut, sit leaves, senggang, and the like.

**Table 2:** Knowledge of Opening the Field

Date	Activity
1 - 7	Tusa (crescent) month, which is considered a very good time to plant rice seeds
8 - 10	Muntar moon, that is, the moon looks like it wants to be round or round, rice seeds when planted at that time, the plants will look yellow or die
11 - 12	Month of livestock, rice seeds when planted at that time yield good results
13 - 15	The month of the rat, that is, if it is planted at that time, planting rice will be attacked by rat pests
16 - 18	Autumn month, that is, when rice seeds are planted at that time it is believed that the results are not good
19 - 21	The moon is full, that is, when rice seeds are planted at that time, the rice plants will be attacked by locusts
22 - 25	The moon is low, that is, when rice seeds are planted at a time when it is believed that the results will be good
26 - 27	Empangau month, that is, when rice seeds are planted at that time, the rice plants will be attacked by fierce locusts
28 - 30	The moon is out, that is, at this time it is not good to plant seeds, because the plants will be attacked by caterpillars

**Source:** Sapardi (1991); Arkanudin (2005) <sup>[3]</sup>

After the rice plants are one month old and begin to look green, which is about 20 centimeters from the ground, a religious ceremony called ngemale lubakng is carried out. Coming home from the field, carrying a few leaves of rice that are a bit old and then placed on a raft, which is a kind of small boat. According to the belief of the Dayak Thousands of rice diseases will disappear with a small boat that is washed away in the river. After returning from drifting the small boat containing a few leaves of rice, the people in the household began to do balalak, which is to do various abstinence. The duration of abstinence is only one day and one night and during that time people are not allowed to visit the fields, are not allowed to make loud noises, are not

allowed to whistle, are not allowed to bring leaves and meat into the house and are not allowed to receive guests.

Abstinence in the traditions of the Ribun Dayak community contains values related to their beliefs or beliefs and their beliefs in divinity or the universe of the Creator. Durkheim in Daud (1997) <sup>[8]</sup> explains that religion must exist in society and a religious phenomenon consisting of belief systems and ceremonial systems (beliefs and rituals) in everyday life. In line with that, it proves that one of the prevailing cultures in the Ribun Dayak community is still well maintained.

Then knowledge about field work activities starting with finding locations to harvesting their field products based on the time calendar as follows:

**Table 3:** The Time Sequence of Farming Thousands of Dayaks

No	Month	Activity
1	April	ngawah – time to find a location
2	April May	minu – time to cut trees
3	June July	Timuk – time to cut down trees
4	August	nicol - time is starting to burn
5	September	tomuroh – time to plant seeds
6	October	nyobuh – time to start grazing
7	February – March	ngotump – harvest time

Source: Sapardi (1991); Arkanudin (2005) <sup>[3]</sup>

Their knowledge system also teaches that if you want to collect materials to build a house, you should not cut down wood and bamboo trees during the montar month, because wood and bamboo rot quickly. The right time to gather wood and bamboo building materials is when the moon recedes.

### Knowledge of the universe

The natural environment of the Dayak Ribun people is forest, forest and land for the Dayak Ribun people, of course, it has a very important meaning in their lives. In addition to being used as a place to live, the land will also be used as a location for cultivation to meet the needs of life. Therefore, based on the results of research conducted by Arkanudin, Mashudi & Sutandar (2021) <sup>[5]</sup> they have extensive knowledge of various types of forests as places for farming, and distinguish forest areas into 5 types, namely:

1. "Forest" (primary forest) is a forest that has tall and large trees, while at the bottom of the tree there are thin shrubs.
2. "Dodak" (secondary forest) is a forest with tall young and small trees, but at the bottom of the tree there are thick shrubs.
3. "Domun" (young secondary forest) is a forest that is overgrown with young and small trees and at the bottom of the tree there are thick shrubs.
4. "Jamih" (groves) is a thicket forest that grows quite thick and there are several young wood trees that are still small.
5. "Lalang" (field of reeds) is a stretch of ex-field land that has recently been abandoned. Usually, they leave this Imperata grassland for a relatively long period of time (6-10 years) it will become "Jamih" again. Small trees are scattered about starting to appear to grow.

Among the five types of forest, according to them the best for farming is Rimba and Dodak. To ensure soil fertility, they usually examine the condition of the growing trees and the soil on the surface. If there are large and tall wood trees, it means that the land has not been cultivated for a long time and therefore the humus is very fertile.

To ensure soil fertility, he observed by inserting the tip of the machete into the soil about 10 cm. When the machete is pulled back, the soil attached to both sides of the machete can show the fertility of the soil. If a lot of soil attached to both sides of the machete and loose blackish means the local soil is fertile. On the other hand, if the local soil conditions are thin, then the sandy soil attached to the two sides of the machete is sandy.

Another natural environment known as a farm is the land located in the valley between the hills. This type of soil is called the payak-labak or payak soil type. The condition of the marshland is always watery and muddy. Fields on

marshland are usually monocultures and can be planted with rice for 3 consecutive years. After the third year, the marshland is left for 2-4 years to be planted again. The forest which is the source of life for the Dayak Ribun people is now facing a lot of expansion of oil palm plantations. Knowledge about protecting the forest is mostly done by women, therefore indigenous women are a source of knowledge in natural management (Niko & Rupita, 2020) <sup>[14]</sup>.

### Knowledge of plant types (flora)

According to Koentjaraningrat (1990) <sup>[11]</sup> that knowledge about flora is of course one of the basics for human life in small communities, especially if their livelihood is from farming, but it is also possible for people with other livelihoods to feel the need to have knowledge about flora in numbers. treating diseases, spices for eating, religious ceremonies, witchcraft, poison weapons, and so on.

In the Dayak Ribun community, knowledge about flora is obtained from generation to generation. Various types of plants and herbs are known as flora to be eaten, used as medicine either grown or grown naturally in the forest and also for hunting and fishing. Types of plants for own consumption except rice, also known as chili (*Capsicum annum* L), cucumber (*Cucumis sativus* L), corn (*Zea mays* L), cassava (*Manihot utilissima* L), young bamboo or bamboo shoots (*Bambusa spinosa*), umbut roa, banana heart, kempidin leaf, nail leaf, sweet potato leaf, eggplant, sparrow eggplant and others. Palawija crops and vegetables are planted in an intercropping way on the fields. The most fruit trees planted around the house or village are durian, sengulan, rambai, jackfruit, cempedak, mangosteen, rambutan, star fruit. These various types of fruits are not cultivated properly so that they are more impressive as fruit trees that grow wild on the lands of former fields. Besides that, they also know various types of fruits that grow naturally in the forest.

### Conclusion

Based on the results of research on the local knowledge system of the Dayak Ribun Parindu Sanggau West Kalimantan, it is based on the research that the Dayak Ribun tribe in general have a knowledge system about: (1) Knowledge of natural phenomena or appropriate residence; (2) Knowledge of the natural environment; and (3) Knowledge of plant species. This knowledge system is obtained from the inheritance from generation to generation from their ancestors, and the inheritance of this knowledge has been going on for a long time and is still found in the life of this community.

Then based on the results of this study, it is suggested that the uniqueness of the Dayak Ribun knowledge system which is sourced from customs and habits can be maintained and become the cultural heritage of the archipelago. To document that the knowledge of the Dayak Ribun community, which is an ancestral heritage, is not just a myth, it is necessary to carry out continuous studies and research with various (multidisciplinary) approaches.

### References

1. Alif MJ, Akien. Kehidupan Sosial Ekonomi Masyarakat Dayak, Pontianak: Dalam Kalimantan Review, Nomor 03 Tahun II, Januari-April, 1993.



2. Arkanudin, Rupita. Keberlangsungan Adat Suku Dayak Ribun di Sanggau Kalimantan Barat: Suatu Tinjauan Etnografi. *Ideas: Jurnal Pendidikan, Sosial dan Budaya*. 2021; 7(3):27-34.  
Doi: <https://doi.org/10.32884/ideas.v7i3.419>
3. Arkanudin. Sebuah Penelitian Antropologi, Perubahan Sosial Masyarakat Peladang Berpindah. Pontianak: STAIN Press, 2005.
4. Arkanudin. Perubahan Sosial dan Kebudayaan, Dalam Perspektif Antropologi. Yogyakarta: K-Media, 2018.
5. Arkanudin, Mashudi, Sutandar E. Sacredness of Dayak Ribun Forest: Knowledge, Livelihood and Belief. *SCIREA Journal of Sociology*. 2021; 5(5):277-287.
6. Briggs J. Indigenous Knowledge: A false dawn for development theory and practice? *Progress in Development Studies*. 2013; 13(3): 231-243.  
Doi: 10.1177/1464993413486549
7. Clarke G. From ethnocide to ethnodevelopment? Ethnic minorities and indigenous peoples in Southeast Asia. *Third World Quarterly*. 2010; 22(3):413-436.  
Doi: 10.1080/01436590120061688
8. Daud, Alfani. Islam dan Masyarakat Banjar, Deskripsi dan Analisa Kebudayaan Banjar, Jakarta: Raja Grafindo Persada, 1997.
9. Johnson M. Research on traditional environmental knowledge: its development and its role. In Johnson, M., ed., *LORE: capturing traditional environmental knowledge*. Dene Cultural Institute: International Development Research Centre, Ottawa, ON, Canada, 1992.
10. Kepkiewicz L, Dale B. Keeping 'our' land: property, agriculture and tensions between Indigenous and settler vision of food sovereignty in Canada. *The Journal of Peasant Studies*. 2018; 46(5):983-1002.  
Doi: <https://doi.org/10.1080/03066150.2018.1439929>
11. Koentjaraningrat. Pengantar Antropologi, Jakarta: Rineka Cipta, 1990.
12. Niko N. Gender Struggle: What Can We Learn from the Dayak Benawan Women? *Walailak Journal of Social Science*. 2020; 13(2):269-292.  
Retrieved from: <https://so06.tci-thaijo.org/index.php/wjss/article/view/234156>
13. Rosyadi. Sistem Pengetahuan Lokal Masyarakat Cidaun- Cianjur Selatan Sebagai Wujud Adaptasi Budaya, Bandung: Balai Pelestarian Nilai Budaya, Kementerian Pendidikan dan Kebudayaan, 2014.
14. Rupita R, Niko N. From Socialism to Capitalism: Structural Poverty of Indigenous Women in West Kalimantan, Indonesia. *JSW (Jurnal Sosiologi Walisongo)*. 2020; 4(2):187-200.  
Doi: <http://dx.doi.org/10.21580/jsw.2020.4.2.5786>
15. Spradley, James P. Participant Observation. United State of America: Holt, Ronehart and Winston, 1980.
16. Sulistiyono ST. Mengenal Sistem Pengetahuan, Teknologi, dan Ekonomi Nelayan Pantai Utara Jawa. *AGASTYA: Jurnal Sejarah Dan Pembelajarannya*. 2014; 4(2):1-24.
17. Thaman KH. Towards Culturally Inclusive Teacher Education With Spesific Reference To Oceania. *International Education Journal*. 2001; 2(5).
18. Yusriadi. Identitas Dayak dan Melayu di Kalimantan Barat. *Handep: Jurnal Sejarah dan Budaya*. 2018; 1(2):1-16.
19. Werren DM. Using indigenous knowledge in agricultural development (English). World Bank discussion papers; no. WDP 127 Washington, D.C.: World Bank Group, 1991. Retrieved from: <http://documents.worldbank.org/curated/en/408731468740976906/Using-indigenous-knowledge-in-agricultural-development>
20. White B, Borras SM, Hall R, Scoones I, Wolford W. The new enclosures: critical perspectives on corporate land deals. *Journal of Peasant Studies*. 2012; 39(3-4):619-647.  
Doi: <https://doi.org/10.1080/03066150.2012.691879>
21. Witter R, Suiseeya KRM, Gruby RL, Hitchner S, Maclin EM, Bourque M, *et al*. Moments of influence in global environmental governance. *Environmental Politics*. 2015; 24(6):894-912.  
Doi: <https://doi.org/10.1080/09644016.2015.1060036>