

Traditional Hill Paddy Cultivation Practices Among the Kenyah Ethnic in Sarawak

Tunung Robin^{1,2}, King Jie Hung^{1,3}, Ribka Alan², Philip Lepun³,
Adrian Daud^{1,2}, Anita Rosli^{1,2}, Dayang Shobihah Abang Abai²,
Zahora Ismail¹, Mohamad Maulana Magiman²

¹ Institut EkoSains Borneo, Universiti Putra Malaysia Bintulu Sarawak Campus, Nyabau Road,
97008 Bintulu, Sarawak

² Faculty of Humanities, Management and Science, Universiti Putra Malaysia Bintulu Sarawak
Campus, Nyabau Road, 97008 Bintulu, Sarawak

³ Faculty of Agricultural and Forestry Sciences, Universiti Putra Malaysia Bintulu Sarawak
Campus, Nyabau Road, 97008 Bintulu, Sarawak

Corresponding Author: Email: tunungrobin@gmail.com

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Abstract

The Orang Ulu community in the state of Sarawak, Malaysia has cultivated hill rice as the main source of food for generations. The traditional practice of hill paddy cultivation does not require large amounts of water and periodic fertilization. However, due to the trend of agricultural development that requires quick cash returns to meet current socio-economic needs, the practice of hill paddy cultivation is also affected and faces the threat of change. Therefore, documenting information about the culture and traditional practices is important to ensure that the knowledge related to the unique method of hill paddy cultivation can be preserved for future generations. Thus, this study identifies and documents the culture and practices in the cultivation of hill rice among the Kenyah ethnic group. The sampling approach used face-to-face interviews and observation methods involving three Kenyah villages in Belaga and Tatau districts, Sarawak. Based on the results, the hill paddy cultivation process involved important phases such as area selection, land clearing, drying, burning, clearing debris, planting rice and side crops, weeding, harvesting, post-harvest and storage. In

conclusion, this study can be used as a source of reference for the Kenyah ethnic traditional practices in hill paddy cultivation in Sarawak.

Keywords: Kenyah, hill paddy, culture, Sarawak, economy

Introduction

The Kenyah community is one of the native communities of Borneo Island, originally inhabiting Sarawak interiors and Kalimantan. In particular, they are an indigenous, Austronesian-speaking people of Borneo, living in the remote regions in Sarawak, including Baram, Belaga, Tatau, Tubau, and Kapit. In the late 20th century, the Kenyah were estimated to number 25,000 in Sarawak and 44,000 in Kalimantan (Kjellgren, 1999; Britannica, 2016).

Traditional Kenyah economy is based on the shifting cultivation practices, in which the hill paddy is planted after the jungle clearings, where the forest is cut and burned, and the rice seed is planted in the small holes in the ground among the ashes. Hill paddy planting and shifting cultivation has been practiced for generations among the Kenyah community. The forest is an important part of their life as it is a source for their food (Brady, 1996; Sari, 2009; Britannica, 2016). Their traditional customs and cultures are known to be closely related to agriculture practices especially hill paddy cultivation to prove their land ownership and placement of the territory. Even today, the Kenyah communities are still very active and are experienced hill paddy growers. This activity is still the main economic activity practiced to this day even though many Kenyah people have ventured into other economic sectors such as business and governmental occupations. Hill paddy cultivation is very suitable as an economic resource because this crop does not require a complicated drainage system and can be grown in hilly areas. This is very much in line with the living conditions of the community in the interior.

However, due to modernization and changes in socio-economy, the traditional cultural practices associated with hill paddy cultivation are also changing slowly. Their cultural traditions are facing a threat of change either due to internal factors as well as external factors in their daily lives. Culture plays an important role in any society and it may add to its social and economic benefits (Gilmore, 2014). Local experience shows that agricultural activities can be affected by the cultural beliefs that the local communities have (Southwell, 1999). These traditional cultures and heritage reflect the ethnic's values, beliefs, and aspirations, thereby defining the Kenyah's identity. Preserving the cultural heritage may keep the ethnic's integrity and may assert some positive impact to the agriculture ecosystem. To date, information and documentation on the traditional practices of the Kenyah people in hill paddy planting are very scarce and limited.

Hence, there is a need for knowledge preservation and to document the traditional cultural practices, to ensure that the knowledge does not vanish, and is important for future generations to know and appreciate the unique traditions and cultures. This study therefore aims to identify and document the traditional practices involved in hill paddy planting among the Kenyah community. The findings of this study will contribute to the documentation of the cultures and practices in hill paddy planting among the Kenyah ethnic in Sarawak.

Methodology

In this study, a purposive sampling approach through interviews and observations were used (Alan et al. 2022). The target group in this study were hill paddy farmers from Kenyah villages

in Belaga and Tatau districts. These locations are known to be among the more common residential for Kenyah communities, and their populations are among the higher numbers of Kenyah villages in Sarawak. The villagers are also known to still actively practice hill paddy planting.

The locations involved in this study were; a) Data Kakus, Tatau, b) Lepo' Badeng, Sungai Asap Koyan, Belaga, and c) Lebu' Kulit, Sungai Asap, Belaga. A total of 30 elders and expert farmers from the three Kenyah villages were selected for interviews to identify the traditional practices in hill paddy cultivation. Observations on the traditional hill paddy planting processes were carried out steadily throughout the planting season. Permission and approval from the Head of Village and the elders were received before the study was carried out.

Results and Discussion

From the study, the phases involved in traditional hill paddy cultivation among the Kenyah

2.	Land clearing	- <i>Lidik</i> - <i>Nepeng</i> - <i>Miting</i>	- Cutting grasses and small trees. - Cutting down big trees. - Cutting tree branches.
3.	Drying	<i>Paang kayu</i>	Letting the cut down trees and plants to dry up.
4.	Burn	<i>Nutung</i>	Burning down the dried trees and plants.
6.	Paddy planting	<i>Nogan</i>	Paddy planting activity by putting seeds in holes.
7.	Weeding	<i>Mabau</i>	Removing unwanted plants or weeds.
8.	Harvest	<i>Majau</i>	The process of collecting the mature rice crop.
9.	Post-harvest	- <i>Puang padai</i> - <i>Miek</i> - <i>Napan</i> - <i>Petokak</i>	- Drying the rice crop under the sun. - Separating the grain from the straw. - Separating the rice from the husk by sifting. - Measuring the rice yield
10.	Storage	<i>Lepubung</i>	Rice is stored in small huts called " <i>lepubung</i> ".

community were identified (as shown in Table 1). The phases involved include selecting the area or location, land clearing, drying, burn, debris clearing, paddy planting, weeding, harvest, post-harvest, and storage.

Table 1.

Common phases involved in traditional hill paddy cultivation among the Kenyah ethnics.

No.	Phase	Kenyah language	Brief Description
1.	Select area	<i>Mita tanak</i>	The process of selecting a suitable area or location.
5.	Debris clearing	<i>Mekup</i>	Clearing or gathering all the debris after burning.

Select area

The first step in hill paddy cultivation is selecting a suitable area or location. In Kenyah language, it is called *“mita tanak”* or looking for a suitable farmland area. There are several things that the Kenyah community consider when selecting an area. This includes the size of land that is suitable, its distance from their home, the condition and type of soil, and availability of nearby resources such as water source. They will also consider the group of people that will be doing hill paddy planting nearby the selected area, current economic situation, and predicted weather such as rain and drought. During this phase, the farmers need to mark his area of farmland (*“oyan sa’ang”*) using small poles called *“petujuk”*. They also build a small hut at the field, which is used for resting and other purposes during the whole process of hill paddy cultivation. It is called *“lepau”* in Kenyah, which translates as a small hut for temporary use. Kenyah farmers begin selecting the area around the month of March.

Land clearing

The next phase is land clearing. This stage involved three different main works. The first work is the process of cutting grasses, herbs, climbers, lianas, creepers, ferns, shrubs, and small trees less than 5 cm diameter in the farmland area. This activity is called *“lidik baie”* in the Kenyah language. This work uses a large, heavy knife called *“baing”*. The second work is called *“nepeng”* which is an activity of cutting down big trees in a suitable direction using an axe or a chainsaw. Figure 1 shows the activity of cutting down trees or *“nepeng”*. The third work is called *“miting”* where the tree branches were cut down further, so that during the burning process later on, the fire could reach all the branches and the dried leaves of the trees. This stage is commonly carried out around the month of June.



Figure 1.
Cutting down trees or *“nepeng”*.

Drying

This phase is called “*paang kayu*” in Kenyah (Figure 2), which is a process of drying all plants that have been cut down and the lettering on farmland floor to dry in about a month, for easier burning at the next phase. The indicator of identifying that the plants were dry was by breaking twigs of the felt trees. If the twigs with the sizes of one centimetre are already very fragile, that means the farmland is ready to be burned. This stage is usually done in the month of August.



Figure 2.
Drying or “*paang kayu*”.

Burn

The most important phase in shifting cultivation or hill paddy activity was during the burning process, because this phase plays an important role in the success level of hill paddy planting. Burning of the farmland involves burning down the dried trees, plants, and debris on the farm floor. This burning activity is called “*nutung*” in Kenyah. Figure 3 shows the burning stage or “*nutung*”. This burning activity was done after all the plants on the farmland area were found to be totally dried at least for a month, and the area did not receive rainfall for a week. Several factors considered in the burning process are such as timing, sunny days, movement of wind in the area, and consent from the neighbours or farmers in the area.



Figure 3.

Burning phase or “*nutung*”.

The burning process of the farmland area is mostly done at around twelve to two o'clock in the afternoon during good sunny days. The movement of wind is important to consider the starting point of the burning process, and for the farmers to plan their access out of the farmland area. This is also important for their safety measures because if the wind is considerably fast, then the burning point must be a little bit further. In the Kenyah community practices, all activities on the farmland area for all farmers at the same site must be done at the same time. Traditionally, if there is one person among the majority who would not follow the activity at the same time, the majority may ask for cultural punishment from their community. Group activity is important to ensure higher rates of success for the paddy planting cultivation.

Debris clearing

The next phase involved clearing or gathering all the debris after burning, such as roots and branches, if the burning process of the farmland was not really successful or a hundred percent burned. In Kenyah language, this activity is called “*mekup*”, which was done a day after the burning activity. In this phase, all branches and debris which were not burned properly will be piled up in one place. All the debris and twigs were collected and stacked, and then burned again. This “*mekup*” activity in the farmland depends on the success of the burning process. Figure 4 shows the debris clearing stage or “*mekup*”. During this phase too, farmers will normally start to plant other vegetables such as corn, cucumber, mustard, pumpkin, water gourd and many more.



Figure 4.
Debris clearing or “mekup”.

Paddy planting

In this next stage, the villagers will start to plant paddy. This activity is called “nogan” in Kenyah language. During this phase, the villagers always practice activities in groups, also called “senguyun”. The men will make holes using a stick or “tugan”, with the distance between each holes about 30 centimetres. The women will put the paddy seeds in the holes. Figure 5 shows the paddy planting phase or “nogan”, and Figure 6 shows the planting of seeds in the holes. The duration of doing this activity depends on how wide the area of the farmland is, the distance and any difficulties that may occur during the process. Paddy planting is commonly done around the month of August to October of the year.



Figure 5.
Paddy planting or “nogan”.



Figure 6.
Paddy planting or “nogan”.

Weeding

After a few weeks of planting hilly paddy, at certain sites of the farmland, weeds and unwanted plants may grow faster than the paddy. Farmers will need to do weeding as soon as possible. The phase of weeding is called “mabau” in Kenyah language, and this activity is not only to remove or kill the weeds, but to also make sure that there are no hosts for pest and disease to survive. Figure 7 shows the weeding phase or “mabau”.



Figure 7.
Weeding or “*mabau*”.

Harvest

Before the paddy matures, there is a phase called “*ngelunau*”. At this stage, farmers will take some paddy that is half ripe or almost ripe to make a traditional rice snack called “*obek*” (Figure 8). Good paddy grain but is still at a young stage can also be eaten fresh, and is called “*pusit*”. This activity of taking paddy as “*obek*” and “*pusit*” is called “*ngelunau*”.



Figure 8.

Rice snack or “*obek*”.

During this stage also, farmers will start to build small huts, called “*lepubung*” (Figure 9), to be used as a storage place for their harvest later on. The size of the hut depends on their expectations of their harvest for that year. Bigger hut size means the yield is expected to be high that year.



Figure 9.

Storage hut or “*lepubung*”.

Next is the harvesting of the paddy or “*majau*”. The fields are ready for harvesting when the rice plants have reached maturation, by looking at the paddy stalks that have all turned yellow. Figure 10 shows the harvesting activity or “*majau*”. It usually takes up to six months from the paddy planting stage to the harvesting stage. Once the paddy matures, harvesting activity needs to be carried out quickly. This is because the paddy could drop down or overmature, which is called “*pepek*” in Kenyah language.



Figure 10.

Harvesting or *"majau"*.

During harvesting, farmers will usually use a traditional small sharp knife called *"ilang"*, as shown in Figure 11, to cut and collect paddy. Then the paddy will be collected or put in a traditional rattan basket called *"engen"* (Figure 12).



Figure 11.

Traditional small knife or *"ilang"*.



Figure 12.
Rattan basket or “engen”.

Post-harvest

Once the paddy is harvested, the product must be dried to reduce the moisture content. This can be done by drying it under the sun, usually laid out on a rattan mat called “*taing*”. This drying process is called “*puang padai*” in Kenyah (Figure 13). In order to facilitate the process of separating the rice from the stalk later on, the rice stalk needs to be dried first.



Figure 13.

Drying the harvested paddy or "*puang padai*".

After that, the rice grain will be separated from the straw, called "*miek*" in Kenyah language. "*Miek*" is a process to separate the rice grains from the rice stalks by stepping on or sliding the stalks between the soles of the feet and pressing them downwards. The "*miek*" method uses two types of tools; 1) using rattan mats or "*taing*" (Figure 14), or 2) using "*birit*" which is made from stems or splits of rattan stems that are woven with a distance of approximately 0.5 cm (Figure 15).



Figure 14.

Separating grains from straw using rattan mat.



Figure 15.

Separating grains from straw using “*birit*” usually on a special hut above ground.

Next, the separated grains will be laid out to dry on a rattan mat (Figure 16) for a few hours depending on the heat of the sun until the rice grains are hard enough (called “*latak*” in Kenyah language). After drying, the next step is a dehusking process. Traditionally, farmers will pound the grains in big wooden mortar, before sifting. The rice or “*baa*” is separated from the husk by sifting or winnowing using a woven basket called “*tapan*”. This sifting activity is called “*napan*” (Figure 17). Nowadays, villagers use basic automated machines to do dehusking of grains. The rice or “*baa*” (Figure 18) will then be measured to record the yield. This measuring activity is called “*petokak*”, usually using simple tools such as tin cans for measuring.



Figure 16.
Drying of grains.



Figure 17.
Sifting of rice or "*napan*".



Figure 18.
Rice or “*baa*”.

Storage

The rice is stored in high-leveled huts called “*lepubung*” (Figure 19). This is to reduce postharvest losses due to animals, insects or pests. This hut structure is mostly made from wood such as from the *Eusidroxylon zwageri* tree (“*belian*”) for the pole, and *Shorea* tree (“*meranti*”) for the other parts such as the walls and floors. The pole of the “*lepubung*” is usually covered with zinc to prevent mice from climbing into the storage hut and eating the paddy.



Figure 19.
Storage hut or “*lepubung*”.

Conclusion

This study has identified and documented the traditional practices of the Kenyah ethnic community in hill paddy cultivation. Majority of the community of Kenyah ethnic still actively practiced hill paddy planting, and the traditional phases involved in hill paddy cultivation are still maintained. The methods involved in the processes are still done manually, in example, planting, harvesting, and post-harvest. This finding is very important in preserving the knowledge and culture of the Kenyah people, especially for the future younger generations and the global audience. This study will also benefit the community as a source of reference for traditional hill paddy cultivation in Sarawak.

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References

- Kjellgren, E. (1999). Into the art of Borneo: The Kenyah-Kayan tradition. Vol:4/Summer/Autumn1999.
<https://web.archive.org/web/20100222033103/http://www.tribalarts.com/feature/borneo/>. Accessed on 9 March 2022.
- Britannica, The Editors of Encyclopaedia. "Kenyah". *Encyclopedia Britannica*, 18 Apr. 2016, <https://www.britannica.com/topic/Kenyah>. Accessed 9 March 2022.
- Brady, N. C. (1996). Alternatives to slash-and-burn: a global imperative. *Agriculture Ecosystem & Environment* 58, 3-11.
- Sari, E.N.N. (2009). Changes in communities' land-use patterns and forest concessionaires: A study in East Kalimantan. *International Journal of Social Forestry*, 2(2), 185-208.
- Gilmore, A. (2014). Raising our quality of life: The importance of investment in arts and culture. Centre for Labour and Social Studies Policy Papers.
http://classonline.org.uk/docs/2014_Policy_Paper_-_investment_in_the_arts__Abi_Gilmore.pdf
- Southwell, H. (1999). *Uncharted Waters*. Clagary, Canada: Astana Publishing.
- Alan, R., Tunung, R., Saupi, N., Lepun, P. (2022). Wild pepper species consumed as green leafy vegetables among Orang Ulu groups in Asap-Koyan, Belaga, Sarawak. *Food Research* 6 (2), 166-171.