Socioeconomic Temiar community in RPS Kemar, Hulu Perak

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Abstract. Forest is significant to Orang Asli communities, the exploitation of forest and transition in the trend of land use will be affected on the livelihoods of indigenous communities who once relied heavily on the forest are the most impacted. The Orang Asli rely on the forest in many aspects of their livelihood. Forest-related activities are the activities that they are involved in for their source of income. This study was conducted to identify the forest-related activities carried out by the Temiar community and determine their income from such activities. Data was collected from a structured questionnaire, in-depth interviews, government document, journal, books, and articles. The study site was selected based on the priority concerning the increase in such activities in Perak. The study was conducted at the Rancangan Pengumpulan Semula (RPS) Kemar, Hulu Perak. The findings show that the involvement of Orang Asli in forest-related activities at RPS Kemar, Hulu Perak is still strongly based on the most famous job that frequently does by respondents is forest product gathering either for their main revenue or side revenue.

1. Introduction

1.1 Forest Role

Forests play a key role in socio-economic development in Malaysia. The contribution is demonstrated by the overall value of wood exports that provides employment, produces state incomes, and leads to forestry-based regional production. The position of socio-economic growth and the harvested forest products' allocation to sustain their livelihoods within the forest are crucial for the forest resources.

Forests also offer many materials and serve society directly or indirectly. Timber, medicinal plants, wildlife, and genetic resources are among the examples of forest products, while examples of forest services include microclimate regulation, watershed protection, recreation and genetic conservation. Communities who live near the forest depend on the forest for many aspects of their livelihood [7].

1.2 Indigenous people

Orang Asli is loosely interpreted into "initial people" in the language of the Malaysia Peninsular, as well as "Orang Asli" in the context of the nearby forest owners [12]. In 2018, they constituted a minority community that accounts for about 0.58% of the overall population of Malaysia (31.53 million) [1]. Orang Asli's population grew from 54,033 in 1969 to 202,090 in 2017 by around 2.3% a year. According
to the 2018 Annual Report of the Department of Orang Asli Affairs, there were roughly 162,412 Orang Asli citizens in 869 families, representing nearly 60% of the national population.

Table 1. Orang Asli’s main group and subgroups in Malaysia Peninsular.

| Negrito | Senoi | Proto-Malays |
|--------|-------|--------------|
| Jahai  | Jahut | Jakun        |
| Kintak | Semai | Seletar      |
| Bateq  | Temiar | Kuala       |
| Kensiu | Semaq Beri | Temuan   |
| Lanoh  | Mah Meri | Kanaq     |
| Mendriq | Che Wong | Semelai |

Source: Department of Orang Asli Affairs, 2018

Three ethnic groups: Senoi, Negritos, and Proto Malaysia constitute the Orang Asli culture [14]. Senoi is the main ethnic community, with a combined number of roughly 55%, accompanied by 42% and 3% respectively of the Proto-Malays and Negritos. The Orang Asli were the major producers and suppliers of non-timber forest goods (NTFPs) such as rattan, resins, gums, and sap until the mid-19th century [3]. Non-timber forest product trade was primarily in the form of barter, and cash income exchange was not essential in their socio-economic wellbeing. After Malayan Independence, with policy development initiatives to bring the Orang Asli into the national economy's mainstream, they are now more vulnerable to cash economy [6] and wage earnings are more relevant [13]. Orang Temiar is one of the Orang Asli Senoi community groups found in Peninsular Malaysia. In the past, this community was referred to by several tribal reference names such as Tembe, Tembeh, Tembi, Tembir, Temeh, Temeok, Temer, Temia, Temiar, Temiau, Temiok, Timeor, Tumeor, Tumiur, Tummeoer, and Tummior [2].

The Temiar community can generally be found in the state of Perak, Kelantan, and a small number can be found in the state of Pahang, namely in the Titiwangsa range area of Peninsular Malaysia. The area inhabited by the Temiar community extends from the Southern Cameron Highlands to the border of Negeri Sembilan. In the western part, this community can be found to the north, while in the eastern part, in the area around Ulu Kelantan. The largest settlement of the Temiar race is in Gua Musang district, Kelantan stretching to the Perak and Kelantan border. The penghulu decides the option of the tribe of Temiar in one place. It is achieved with 'berhalaq' or mimpi. The location to be occupied is far from the graveyard and free of hardwood like "merbau" etc. Even in swampy areas (water reservoirs), settlements are not established for fear of the guards. Likewise, waterfalls and large rivers are also not suitable so as not to upset princesses of the river/cascade. They collaboratively create houses out of timber (except hardwood). They designed longhouses at the early stages of the settlement. They relocated with their families and constructed their own houses after staying in the longhouse for a while. By rising, hunting, and discovering forest plants, they help the family.

2. **Orang Asli's Socioeconomic**

The economic activity of Orang Asli falls into two categories, namely economic activities in order to get money like rubber tapping and finding rattan and agar wood and economic activities aimed for self-sufficiency such as fishing, hunting, and agriculture. As usual, these activities are carried out separately,
which is according to the conditions and seasons, market, and their own inclinations. However, in such situations both economies also simultaneously run [6].

Most of the Orang Asli undertake economic activities based on self-sufficient. These activities normally involve hunting in the forest using their own traditional weapon and are based on materials found around their lives. Salary and wage from other employment is an important source of income for Orang Asli who live near the forest and can gain employment in various forest-related activities. The Orang Asli historically rely on forest land and its resources to support their daily lives. The forest environment offers all essential services, including fruit, construction materials, medicines, and religious traditions for their everyday sustenance. Orang Asli cleared the woodland areas for moving crops. The timber forest products (TFPs) have both been lawful and illicit, non-wood forest products (NTFPs) have been gathered, and animals are killed to generate family revenues [2].

Forest goods, such as rattan and aloes, are among the varieties of forest products that are the primary source of income for the Orang Asli tribe. The flow structure of the forest industry based on the capitalist structures often leads Orang Asli to a much smaller profit than it should be in the marketing of forest products. The intermediaries and distributors or city exporters gain higher profits. Similar situation was also defined by Endicott (1974). Based on the lives of the tribe of the Senoi, Endicott states that the reliance of the tribe on the forest is sufficiently high. The Senoi group is also symbiotic in economic development. Although forest reliance is considered as a source of food and other necessities, they do have network communication with external communities, in the field of forest product marketing.

Since their existence is strongly dependent on the forest wealth, the Orang Asli have been connected to the trees. There is a drastic shift in the forest environment with the growth of the forests, and this transition has done a great deal for the Orang Asli who still depend on it. They are no longer directly related to the gathering and harvesting of forest resources. Throughout the 1980s and early 1990s, when there was plenty of money, rattan harvest was a primary source of revenue. For years, the income from non-wood forest growth has decreased due to forest conservation activities. Most of them have taken an interest in new farming practices and modern manufacturing with the help of the government in the production of land plans. The earnings of salaries have become more significant.

Orang Asli’s social systems and the forest ecosystem have coevolved over millennia reaching in the process an accommodation compatible with the survival of both man and nature. The current rapid development of natural resources is threatening this accommodation. Vast areas of forest have been cleared and planted into monoculture stands of rubber and oil palm. Most of the remaining lowland forest will be gone by the end of the century, deriving the demand of their native habitat in the process. Many bands have already been regrouped into government-organised agricultural development schemes where they are expected to become sedentary farmers. Results to date are not encouraging given the incompatibility between their traditional nomadic cultural values and the demands of settled agricultural life (Endicott, 1974). Although the upland forests are less immediately threatened, the Senoi are also being resettled into large-scale development projects, mainly for security reasons. Not only will this have a significant effect on their culture, but the removal of people from large areas of forest will presumably have an impact on ecosystem functioning.

The concurrent loss of ecological and cultural diversity is lamentable but given the demographic and political dynamics of modern Malaysia, inevitable. It is even less possible to preserve traditional human adaptations in reservation settings than it may be to save sufficiently large tracts of undisturbed habitat to support viable populations of wild species. The Malaysian Government’s Department of Orang Asli Affairs has been wise enough to recognise this and has attempted to design its programmes to try to make the transition from traditional to new ways of life as smooth as possible. Orang Asli ’s activism and freedoms have sparked the development of numerous charitable organisations to preserve and improve the cultural life of these people. Several organisations, like the Center for Orang Asli Concerns (COAC) and Peninsular Malaysia Orang Asli Association (POASM), have been funded by voluntary groups called by titles who operate tirelessly for Orang Asli security and rights. There are also other agencies.
3. Materials and Methods

District of Hulu Perak is the largest in the State of Perak. The area is about 31.23% of the State of Perak that equivalent of 656,565 Ha. In Hulu Perak encompass of three small district such as Gerik (516,446 ha), Pengkalan Hulu (36,778ha) and Lenggong (103,341ha) [1]. This study was conducted in Kemar Resettlement Plan (RPS), Gerik, Hulu Perak because there was a complaint to the authority in 2018 by the Orang Asli community which appealed to the government to immediately address the problem of illegal settlers and river pollution which nearby Lake Temenggor. The issue was still pending and action was unknown by the authorities. The daily life and source of income of the Orang Asli community there are affected by the illegal logging that near the Permanent Forest Reserve in the area around Lake Temenggor [15]. RPS Kemar was consists of Kampung Akei, Kampung Bal, Kampung Cuwau, Kampung Jara Baru, Kampung Katong, and Kampung Rantau. The closest town to this village is Bandar Gerik which is about 35km. The total area of this village is about 739 hectares. This Orang Asli settlement comprises of 120 families with a total population of about 450 residents. The Orang Asli community in this village is from Temiar tribe and a quarter of them is Muslims. They used to be nomadic but now they have a living standard which the government supports by establishing the Rancangan Pengumpulan Semula (Resettlement Scheme or RPS), built for a distant and dispersed Orang Asli community.

Sampling consisted of two different groups. The first group is people in village and second group consist of officials from related governmental agencies who are directly or indirectly involved in the Orang Asli Affair. However, the findings from the officers were only used as supportive materials and are meant to provide a better understanding on the socioeconomic of Orang Asli, issues on environmental and guided a good questionnaire to distribute to the villagers. Location selected was based on severity encroachment practice, accessibility and near the PRF. Subsequently, purposive sampling was administrated to the entire village and the method used was to ensure availability and accessibility of respondents on the sites.

Pre-testing was done to identify ambiguities, misunderstandings or to identify any inadequacies in the questionnaire. As for the research, pre-testing was done on 25 civilian people and 25 government officers from the Department of Orang Asli Affairs prior to the actual data collection. Results obtained will enable adjustments being made to the questionnaire in order to achieve the most accurate and relevant answer.

The samples for this study were collected using purposive sampling method from people in the villagers. However, the number of the samples has been rounded to 150 samples since the population size from these villages are 250. There was a total of 150 respondents' welcome to the response and complete the studies.

Reliability and validity of the questionnaire are important aspects to be looked forward to ensuring that questionnaire given was measuring the specific objectives and answering the questions accordingly. Therefore, the researcher had employed the content validity which was established from feedback given by the respondents during the pilot study was conducted. As for this study, reliability analysis has been conducted and the analysis result has shown that all sections in the research instrument are good and have a high internal consistency.

Paired sample t-test was used to measure the score level perception of expectation (pre-test) and the score level of perception of performance (post-test) regarding assessment on socioeconomic Temiar community and forest activities in RPS Kemar, Hulu Perak. If the gap score is negative then the result will show that the respondents reject the assessment, however, if the gap score is positive then the result shows that respondents are agreed and satisfied on the assessment on awareness and perception of the forest offences.
The questionnaire consists of three main sections. The first section was about demographic background of respondents, while the second and third section was about participation in forest activities and their source of income. Analysis of data that related to demographic background data was analysed using descriptive analysis and the data on socioeconomic and involvement in forest activities has been analysed using correlation and cross tabulation.

The first analysis was carried out to describe the responses of respondents on demographic profile such as gender, age, number of households, education level, occupation, sub occupation and monthly income earned. While the second analysis carried out on the relationship of income generated and involvement in forest activities. Dependency between demographic profile and involvement in forest related activities also has been analysed using non-parametric test: Chi-square statistics to test the response of respondents on demographic profile and involvement in forest related activities.

4. Results and Discussion

The findings in Table 2 show that the number of male respondents is higher than that of female respondents with 120 men and 30 women. Table 3 indicates the proportion of respondents by generation. Based on the table, the percentage of respondents in age groups between 40 and 49 years of age is 28 per cent higher. In age classes of 60 and over, the number is the lowest at 1.3 per cent. The youngest respondents in this sample are 18 years old, and the oldest is 63 years old.

| Gender   | Frequency | Percentage |
|----------|-----------|------------|
| Male     | 120       | 80.0%      |
| Female   | 30        | 20.0%      |
| Total    | 150       | 100.0%     |

Table 2. The demographic distribution of the respondents.

| Age class       | Frequency | Percentage |
|-----------------|-----------|------------|
| below 19 years old | 18        | 12.0%      |
| 20 - 29 years old   | 33        | 22.0%      |
| 30 - 39 years old   | 30        | 20.0%      |
| 40 - 49 years old   | 42        | 28.0%      |
| 50 - 59 years old   | 25        | 16.7%      |
| 60 and above       | 2         | 1.3%       |
| Total             | 150       | 100.0%     |

Table 3. Age-class distribution of respondents.

Table 4 indicates that the presence in the plantation segment was the most significant percentage of occupation. The sector itself adds 63 workers (42.0%) to the growth of the plantation industry. 24.0% of the respondents representing self-employment who involved in selling of NTFPs and handicraft sector represent 4.0%. Just 0.7% of respondents served as civil employees, while 2.7% of respondents are unemployed and have no primary profession. Gathering forest goods, forestry operations, and the handicraft industry are the practices perceived to be land-related operations. This result showed that 37.3% of forest-related activities were their key source of income.
Table 4. Distribution by profession of the respondents.

| Main Occupation          | Frequency | Percentage |
|--------------------------|-----------|------------|
| Plantation sector        | 63        | 42.0%      |
| Forest product gathering | 36        | 24.0%      |
| Others (Fisheries & etc.)| 26        | 17.3%      |
| Logging sector           | 14        | 9.3%       |
| Handicraft               | 6         | 4.0%       |
| Unemployed               | 4         | 2.7%       |
| Government sector        | 1         | 0.7%       |
| Total                    | 150       | 100.0%     |

The maximum level of profits was 20.7% for a total of RM401 – RM500. The revenue distribution came largely from the wage-earnings of the plantation industry. The lowest amount is 6.0% (RM701 and above) and is effectively the profits of the logging industry. The forestry industry provides the highest volume of revenue to respondents relative to other employment. On the other hand, the lowest wage level was RM1-RM100, which comes mostly from the handicraft market.

Table 5. Gross monthly profits for respondents.

| Monthly income  | Frequency | Percentage |
|-----------------|-----------|------------|
| RM1 - RM100     | 21        | 14.0%      |
| RM101 - RM200   | 18        | 12.0%      |
| RM201 - RM300   | 13        | 8.7%       |
| RM301 - RM400   | 20        | 13.3%      |
| RM401 - RM500   | 31        | 20.7%      |
| RM501 - RM600   | 27        | 18.0%      |
| RM601 - RM700   | 11        | 7.3%       |
| RM701 and above | 9         | 6.0%       |
| Total           | 150       | 100.0%     |

The population in this village prefers to engage in forestry practices, such as harvesting forest goods, crafts and fishing for their key occupation. There are respondents who collected forest products such as rattan, bamboo, medicinal plants, and edible fruits to be sold for income generation and own consumption. A few respondents collected NTFPs, such as rattan, bamboo, mengkuang, and palm leaves, to make them handicrafts, and most women were involved in this kind of activity. In addition, those respondents who were involved in the logging sector worked as chainsaw operators, heavy machinery
drivers, sawmill workers, and general assistants. However, most respondents (31.3%) do not engage in forestry events, but their families often engage in them. The respondents who do not engage in forestry activities produced their income by earning wages from rubber and oil palm plantation, government business, mechanics, and other employment.

Table 6. Respondent encourages participation in forest-based events.

| Frequency | Percentage |
|-----------|------------|
| Involved  | 103        | 68.7%      |
| Not involved | 47       | 31.3%      |
| Total     | 150        | 100.0%     |

Forest items obtained by the Temiar population in RPS Kemar, Hulu Perak are made up of flora and fauna. The analysis showed that NTFPs such as *Musa acuminata*, *Manihot tesculenta*, *Piper betle* L., and *Parkia speciosa* are the main forest products collected from forests for their own consumption. The rest are sold via a nearby middleman. Herb crops such as *Labisia pumila* and *Euricoma longifolia* are cultivated for medical purposes and income production. Agarwood or *Aquilaria malaccensis* provide them with strong monetary value as the market for these organisms is strong. *Bambusa sp.* was used in handicraft production and *Calamus sp.* too. The Orang Asli often use these materials to create devices for hunting and farming, as well as to construct shelter. Other than this, they gather ornamental plants such as orchids and Tanduk Rusa. Besides that, some edible fruits such as kelubi, keranji, sentula, durian, and many more were also picked.

Several types of fauna, such as spawning springs of fish or eels and a few bird organisms, are gathered by respondents from the forest. Such items had to be marketed and used by themselves. They did not concentrate so much on the collection of fauna as the selection of flora gives them more revenue owing to the market for other types of flora. Majority of the respondents worked in the plantation and fisheries sector as their primary income. They worked in a rubber plantation, oil palm plantation, and fishing in freshwater near Banding Lake.

The study revealed that the Temiar community in RPS Kemar, Hulu Perak were involved in three major sectors of forest-related activities: logging sector, forest product gathering, and handicraft making. The most important job that is frequently done by respondents is forest product gathering (93 respondents) either for their primary income or side income. They collect medicinal plants, bamboo and rattan, edible fruits, honey, edible shoots, aquatic life, and many more. These products are collected either for their own consumption or sold to a middleman, which depends on the demand and market price. In this community, most of them are doing more than one job in generating their income.

Medicinal plants, *Gaharu* (agarwood), rattan, and bamboo were collected for income generation. Rattan and bamboo are sold as raw materials to the middleman for furniture manufacturing or used in the making of handicrafts such as baskets, pouches, bracelets, and mats. Other than these, they also collect edible fruits, wildlife, aquatic sources, ayam hutan, and some species of birds. The respondents are also involved in logging activities to generate their income. Their settlement is near the forest so they worked with the logging companies near their colonies. This sector offers a high range of income. Lastly, handicraft making in this settlement is commonly dominated by females. In the making of handicraft, the materials used are from forest resources such as mengkuang, palm leaves, rattan, and bamboo. These products were sold to the retailer for side income.

5. Conclusion

The analysis showed that the involvement of Orang Asli in forest-related activities at RPS Kemar, Hulu Perak is still strong with 68.7% involvement. It was noticed that the Temiar Community in RPS Kemar, Hulu Perak conducts three types of forest-related activities: logging, forest processing, and handicraft manufacturing. It is also noted that forest-related operations are becoming more heavily engaged in
(62.0%), accompanied by forestry (10.0%) and the industrial sector (6.7%). For non-timber forest items (NTFPs) such as bamboo and rattan, they have either been harvested for sale as raw materials or transformed as handicrafts.

The analysis also showed that income dependency on forest activities was explored by relating their income and side-benefit to their activities. Overall, the RPS Kemar, Hulu Perak respondents still rely on the forest product to generate their revenue. The largest revenue level is from the forestry sector RM250 – RM850, accompanied by forest product selection (RM50 – RM750), while the lowest amount is from the handicraft sector RM50 – RM100.

In implementing these policies and projects, the government is dedicated to developing indigenous communities and is becoming more successful in the highly demanding current of globalisation. When such sustainability goals are not met, the communities that have been set up for thousands of years will be lost. Once construction research is possible, societal stability, strong economies, and values must be prepared to cope and evaluate the knowledge in line with modern times and the planning of different challenges and barriers.

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