View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by UUM Repository

ID06

THE ROLES OF FOREST RESOURCES ON THE SOCIO-ECONOMICS OF PERIPHERAL COMMUNITIES

Mukrimah Abdullah[1]& Mohd Parid Mamat

Abstract

Forest provides a wide variety of social and economic benefits. Globally, it is estimated that over 2.4 billion people depend on forest goods and services for the food, fresh water, medicines, employment and cash income. Forest also provides ecotourism services which also able to generate income of people. These benefits made forests become fundamental to the livelihoods and well-being of people, not only for the people who live in them, but also for those living in peripheral landscapes. A socio-economic study was undertaken among peripheral communities in the Northern Region of Peninsula Malaysia; Perak, Kedah and Perlis. The present paper intends to assess the socio-economic impacts of forest resources on the livelihood of surrounding communities using data and information collected through rapid rural appraisal (RRA), focus group discussion and household survey guided by structured questionnaire. A total of 1,052 households were successfully interviewed. The study found the average monthly income per household of these communities was RM1,672, RM2,138 and RM2,278 for Perlis, Perak and Kedah respectively. Meanwhile, the percentage of dependency on forest resources as a source of income was 5.3% to 13.3% from the total income. If there is no income from forest resources the poverty level of these communities may increase up to 5%. From the findings, forest conservation strategies should pay more attention to balance the needs for conservation and socio-economic livelihood of forest peripheral communities especially at Northern Region of Peninsula Malaysia. For example, the development of ecotourism areas near peripheral communities has potential to create local business and job opportunities. Promotion of communities based ecotourism (CBE) can be created as alternative ways to increase income thus improve the livelihood of the communities.

Keywords: *Socio-economic, forest resources and livelihood*

INTRODUCTION

*Forest areas provide a range of ecosystem goods and services benefitting the peripheral communities. Besides meeting subsistence needs, forest goods and services such as food, fresh water, recreation and ecotourism sites contribute both direct and indirectly to the household income of these communities. There are four (4) main category of forest resources and it's related that benefited peripheral communities namely Non-timber Forest Products (NTFPs), Employment Opportunities, Recreation/Ecotourism and Forest Ecosystem services (**Figure 1**). The NTFPs defined as all biological materials, other than timber, which are extracted from forest for human use (NTFP, 2018). In traditional forest communities, many NTFPs may be used for subsistence while others are the only source of income. Some NTFPs have significant medicinal value and contribute to the community's health and well-being (CIFOR, 2018). In Northern Region of Peninsular Malaysia, there are still communities rely on NTFPs for their livelihood especially bamboo, wild fruits like petai and jering, tualang honey and medicinal plants such as Tongkat Ali, Kacip Fatimah and etc.*

Other that NTFPs, forest also creates employment opportunities through ecotourism and recreation, especially to communities live near Eco-park or known as "Taman Ekorimba". Communities not only become workers at private resort/chalets but also operated their own

[1] Social Forestry Programme, Forest Research Institute Malaysia (FRIM)

homestay and local business such as souvenir shop, cafes and outdoor activities operator like bicycle, ATV and jungle-trekking. Some of the communities also become logger's workers in forest concession areas as "kepala hutan", "kelindan" and etc. Besides that, forest also provides fresh water especially for household uses and agricultural purposes. In Northern Region this services known as "air masyarakat". This "air masyarakat" was monitored by State Health Department to ensure the fresh water safe to be consumed by locals and some of the areas were given permitted by State Forestry Department.

Figure 1. *Category of benefitted forest resources and its related*

*Forest in Peninsular Malaysia specifically Permanent Forest Reserves (PRF) is protected under Forestry Act 1984 and National Forestry Policy 1992, where Forestry Department of Peninsular Malaysia (FDPM) is responsible for the managing, planning, protecting and developing the PRF. In 2015, PRF in Peninsular Malaysia was recorded as 4,831,801 hectares, which is 37% of Peninsular Malaysia land area (**Table 1**). Out of it, 1,355,316 hectares located at Northern Region of Peninsular Malaysia, which include Perlis, Kedah, Penang and Perak. However due to lack of data availability, this study only focuses on three (3) states only which are Perlis, Kedah and Perak.*

Table 1. *Baseline information on forest in Northern Region of Peninsular Malaysia*

	Land Area	*Permanent Reserve Forest*	*Forested Area*
Peninsular	*13,184,629*	*4,831,801*	*5,784,870*
Kedah	*942,500*	*341,976*	*342,431*
Perak	*2,102,200*	*997,624*	*1,021,795*
Perlis	*79,500*	*10,615*	*11,532*
Penang	*103,100*	*5,101*	*7,761*
Total Northern Region	*3,227,300*	*1,355,316*	*1,383,519*
Percentage (%)	*24.5*	*28.0*	*23.9*

**Source: Peninsular Malaysia Forestry Statistic, 2016*

MATERIALS AND METHODS

Different approaches were used to obtain different types of data information. The approaches can be in form of personal interview, focus group discussion or household's survey. There are two types of data collected through this study, namely primary and secondary data. Primary data involves Rapid Rural Appraisal (RRA) and surveys on households. Secondary data involves collecting information from printed materials such as annual reports, books, journals and other related materials (Mohd Parid et.al, 2017).

I. RAPID RURAL APPRAISAL

According to Liswanti et.al, (2012) RRA technique is a tool that enables a quick assessment of the existing environment and the possible impacts of the forest resource utilization and the other environmental services to the local socio-economics livelihood. While, Crawford (1997) stated that techniques applied in RRA include group interview; methods of cross-checking information from different sources; methods of obtaining quantitative data in a short time frame, direct observation at study site level and use of secondary data. This technique provides basic information and ethno-histories of the study site for baseline in questionnaire design. In this study RRA applied on the preliminary stage of the study to gather baseline information and understanding the roles of forest resources towards locals.

II. SURVEY IMPLEMENTATION

Sampling Technique and Sample Size: Selection of respondents in this study was assisted by District Forest Office in which respondents were chosen based on the distance 5km or less from the adjacent of Permanent Reserved Forest (PRF). Meanwhile, the estimation of sample size respondents was based on the number of household living at the selected study site, in which the households' data was provided by District Council Office, by using the simplified sampling formula from Yamane (1985) and taken 5% as level of precision. A total of 1,052 households were successfully interviewed during the survey.

*Questionnaire Design and Data Collection: The study involved household survey using structured questionnaire (**Figure 2**). It was constructed into few sections covering demographic characteristic of the households, household's income sources, and their perception toward the PRF. The household survey was conducted by well-trained enumerators. During the household interview, the respondents were briefed on the objectives and purpose of the survey. Time taken for each interview was about 30 minutes per interview.*

***Figure 2.** The structure/organization of questionnaire*

Section A: Demographic profile of the household's Section B: Perception toward the Permanent Reserved Forest conservation Section C: Sources of household's income

RESULTS AND DISCUSSION

A series of survey was conducted in 2013 until 2015 among peripheral communities in the Northern Region of Peninsular Malaysia; Perak, Kedah and Perlis. The survey successfully interviewed 31 villages and 1,052 households from all these three (3) states. Information on the surveyed villages as in ***Table 1****.*

Table 1. *Information of surveyed communities*

Perak	***Kedah***	***Perlis***
• *5 District Forest* • *387 households sampled* • *12 Villages:* ○ *Kg Sungai Itek* ○ *Kg Ulu Chepor* ○ *Kg Dendang* ○ *Kg Paya Ara* ○ *Kg Ulu Kernas* ○ *Kg Pecah Batu* ○ *Kg Kuak Ulu* ○ *Kg Bonggor* ○ *Kg Pahat* ○ *Kg Menteri* ○ *Kg Berchat* ○ *Kg Poh*	• *4 District Forest* • *418 households sampled* • *13 Villages:* ○ *Kg Puncak Janing* ○ *Kg Sungai Puntar* ○ *Kg Charok Tok Pong* ○ *Kg Lubuk Tualang* ○ *Kg Baru Nami* ○ *Kg Belantek Luar* ○ *Kg Belantek Dalam* ○ *Kg Bukit Berangan* ○ *Kg Ulu Mahang* ○ *Kg Belanga Pecah* ○ *Kg Kisap* ○ *Kg Ayer Hangat* ○ *Kg Kubang Badak*	• *1 District Forest* • *247 households sampled* • *6 Villages:* ○ *Kg Wang Kelian* ○ *Kg Pekan Kaki Bukit* ○ *Kg Wai* ○ *Kg Gua Ikan* ○ *Kg Syed Omar* ○ *Tasoh*

I. SOURCES OF HOUSEHOLDS' INCOME

*Communities' income generated from PRF and its related resources show its ability to generate income either in form of cash or income in-kind. Cash income refers to income gain from the sales or business related to forest products, while income in-kind refers to forest resources consumed such as food sources by households. Result shows Kedah has higher in-kind income compared to Perak and Perlis (****Figure 3****) with the percentage of 15%. Result also found that the average monthly household income were RM1,672, RM2,138 and RM2,278 for Perlis, Perak and Kedah respectively. The income level was lower than the average household income for Rural Malaysia (RM3, 080) and Malaysia (RM6, 141).*

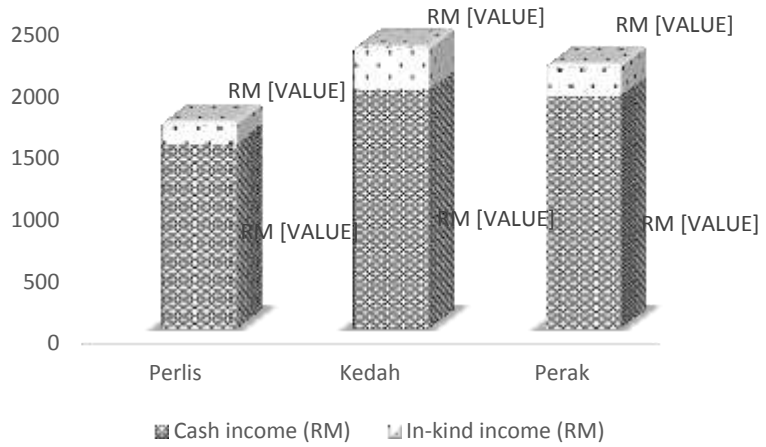

Figure 3. *Cash and In-kind Income of households*

II. IMPACT TOWARDS HOUSEHOLDS' INCOME

*Impact of forest resources towards socio-economic of communities can be assessed through the household's monthly income generated from forest related (**Figure 4**). The result also showed the average monthly income generated from forest resources and its related were RM250, RM103 and RM150 for Perak, Kedah and Perlis respectively. The result also show the percentage of dependency on forest resources as a source of income was 5.3% to 13.3% from the total income. At Perlis, the highest income generated from forest related was contributed by local business especially food stalls, restaurants and cafes.*

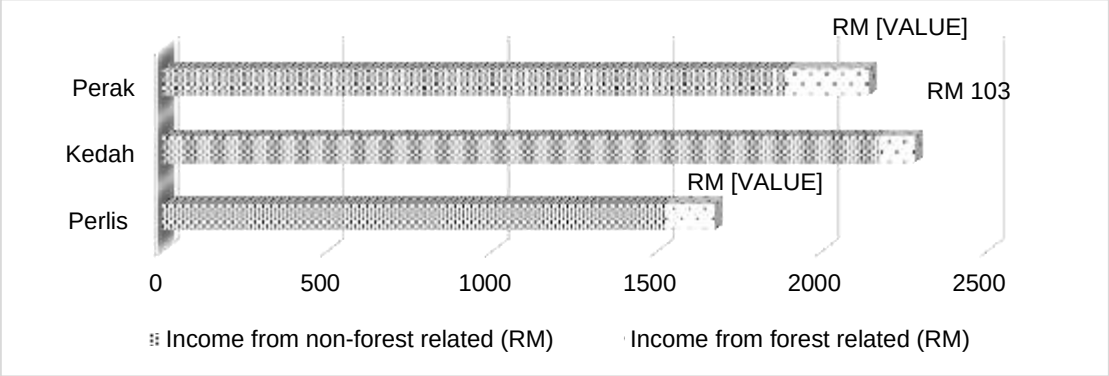

***Figure 4.** Average monthly income generated from forest related*

III. POVERTY LEVEL

The extent of poverty among these peripheral communities could be seen from the incidence of poverty among the households in the area. Poverty in Malaysia is measured on the basis of a minimum expenditure level or the poverty line income (PLI) to separate the poor from non-poor" (Government of Malaysia 1986a). Taking into consideration the rise in the consumers' price index, the per capita PLI was calculated to be RM216 in 2016 and this was used to measure the incidence of poverty in the village studied. Poverty level at Perak was 13.2%, meanwhile Perlis 14.6% and Kedah 19.4%. If there is no income from forest resources the poverty level of these communities may increase up to 5% from current poverty level.

CONCLUSION

From the findings, forest conservation strategies should pay more attention to balance the needs for conservation and socio-economic livelihood of forest peripheral communities especially at Northern Region of Peninsular Malaysia. For example, the development of ecotourism areas near peripheral communities has potential to create local business and job opportunities, thus can be used as a tool to reduce poverty at the national, regional and rural areas in Malaysia. Other than that, promotion of communities based ecotourism (CBE) as alternative ways to increase income of these communities thus improve the livelihood of the communities.

ACKNOWLEDGEMENT

Special thanks to Forest Research Institute Malaysia (FRIM), Forest Department of Peninsular Malaysia (FDPM), Forest Department of Perak, Forest Department of Kedah and Forest Department of Perlis

REFERENCES

CIFOR. Forests and non-timber forest products. Retrieved on 14 July 2018 from https://www.cifor.org/publications/corporate/factSheet/NTFP.htm

Crawford I.M.1997.Marketing Research and Information Systems (Marketing and Agribussiness Text4) Chapter4.Food and Agriculture Organization of the United Nations,Rome.

Forest Department of Peninsularr Malaysia.2016. Peninsularr Malaysia Forestry Statistic. Kuala Lumpur.

Liswanti N., Shantiko B., Fripp E., Mwangi E., and Laumonier Y.2012.Practical Guide for Socio-economic livelihood, land tenure and rights surveys for Use in Collaborative Ecosystem-based Land Use Planing.CIFOR,Bogor, Indonesia.

Mohd Parid M, Mukrimah A. & Lim HF. 2017. Field Manual of Socio Economic Survey. 89 Pp.

NTFP-EP. What are NTFPs. Retrieved on 14 July 2018 from https://ntfp.org/
Yamane, J.F. 1985. Statistic: A Tool for Social Research. USA: Wadsworth publishin