

Ecological Adaptation Patterns and Household Livelihood Strategies for Purun Craftsmen Around Peatlands in Ogan Komering Ilir Regency, Indonesia

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Abstract. Ogan Komering Ilir Regency is a district with social dynamics in the community with the economic activities of local communities living around peatlands, namely the Purun (*Eleocharis dulcis*). The purpose of this study is to see how the patterns of ecological adaptation and household livelihood strategies of purun craftsmen are currently. This study uses a qualitative approach which is supported by a quantitative approach. The results showed that the ecological adaptation pattern of purun craftsmen was influenced by the existence of plantation concessions, which limited the presence of the community's culture that had been passed down from generation to generation. The livelihood strategies carried out by purun craftsmen in the research area are quite varied, namely dual livelihood and migration, indebtedness, and casual labour.

Keyword: Ecological, Adaptation, Patterns and Household, Livelihood Strategies, for Purun Craftsmen Around Peatlands

1. Introduction

Since the 1970s, Ogan Komering Ilir Regency, especially the people of Pedamaran and Pedamaran Timur Sub-districts, have been using peatlands in a wise and environmentally friendly way as a habitat for Purun, which is a source of livelihood. [1] Purun Tikus (Chinese water chestnut or *Eleocharis dulcis*) is a grass or weed species that commonly grows in peatlands [2] [3].

Communities generally use peatlands traditionally and continuously as a place to forage for firewood, fish, and purun as a raw material for making mats. The craftsmen use purun as an additional income and even as a regular income to meet household needs if they no longer have access to other limited livelihood opportunities. [4]. However, in the late 2000s, the use of purun began to decline because the raw material had decreased a lot. This is due to peat swaps being used extensively for oil palm plantations [5] [6].

To deal with this risk, the household of purun craftsmen has created a livelihood structure to minimize the risk. In the struggle for economic survival, Purun craftsmen usually carry out

various activities and their social encouragement skills to survive and improve their standard of living. This is necessary because the ecological conditions of the peatland on which Purun grows have changed along with changes in the management and use of the area. In the context of the above conditions, this study aims to investigate the extent to which the ecological adaptation patterns and livelihood strategies of Purun craftsmen in Ogan Komering Ilir regency currently exist.

2. Methods

This study was conducted in Ogan Komering Ilir Regency, South Sumatra Province, Indonesia, with three selected districts: Pedamaran District, East Pedamaran District, and Pangkalan Lampam District, there are communities where most of the residents are active groups of purun woven craftsmen.

The basis for determining the study area is the peatland area in Ogan Komering Ilir Regency in South Sumatra Province, where it is a physiographical type of peat swamp that is not affected by river tides or sea tides [4]. The peatlands of the study area are located in the Pedamaran Hydrological Unit of the Sibumbang River and Komering River, the largest part of which is located in Pedamaran District, the East Pedamaran District, and Pangkalan Lampam [5].

A qualitative approach was adopted to obtain as much data and information as possible in a relatively short period of time. The method of in-depth interviews and direct observation of several community households in the community to get an overview of the livelihood system of households in the community and the choice of livelihood strategies. Group discussions with village officials and literature studies of village and sub-district level documents provided additional data and information to support the findings of the individual and household levels interviews and direct observations.

3. Results and Discussion

3.1 Ecological Adaptation Patterns: Purun craftsmen are socio-economically unstable

Based on the characteristics of the research site, land clearing that triggered the scarcity of purun raw materials in the research location began in 2007. Nevertheless, the site was generally not opened until 2009. The total area of study site is about 10,000 ha, of which 6,500 ha are core plantations, of 4,500 ha have been planted, and 3,500 ha are plasma plantations (2,000 ha have been produced). As of August 2016, the cleared area is about 7,000 ha, and the area that is frequently burned is about 100 ha. Fires always come from outside the plantation [5]. Fires frequently occur in areas directly adjacent to the Limited Production Forest (HPT) at the research site. The community said the fire started from HPT, spread and eventually burned the plantation area. About 90% of the plantation area is peat with an average peat height of 1-6 m and a peat maturity classified as capricious. Groundwater depth was between 50-60 cm above the soil surface on August 5. This is due to the fact that peatlands converted to oil palm plantations have a higher probability of flooding [7]. In addition, drainage by the company may also cause soil subsidence in peatlands [8].

This condition is undoubtedly prone to friction that may cause conflicts, considering that peatlands are one of the livelihood for the community, especially those who use Purun. However, looking at the existing conditions, the potential for conflict still seems to be in a

gray area. Indeed, voices of discomfort are widely heard in the community, especially the craftsmen. Although cultivation rights (HGU) for oil palm plantations tends to be exploitative for them, the community is also aware that HGU is an alternative source of income for them. Therefore, the people who live near the peatlands can only accept and live with the existing dynamics.

3.2 Purun Craftsman Household Livelihood Strategy

The economic dynamics of the Purun craftsmen at the study site forced their households to develop livelihood strategies in order to survive. Livelihood strategies are any activities or decisions made by household generally use the capital available to them, which is also referred to as the source of income. In Dharmawan [9], capital is divided into four types, namely: (1) natural capital in the form of natural resources, (2) economic or financial capital, which is very important in pursuing a livelihood strategy, (3) human capital, and (4) social capital. Based on the four capitals, the livelihood strategies that can be developed, especially by Purun craftsmen households, can be divided into two types, namely the dual livelihood pattern (livelihood diversity) and the migration.

3.2.1 Double Income Pattern

The limited Purun resources force most purun craftsman households to use non-Purun capital, mainly human and financial/economic capital. With their money, most households develop a double income distribution strategy. The dual income pattern that households commonly adopt is that all working-age household members earn a different income. In addition, the existence of oil palm or rubber enterprises around Purun, some of which are located in the study area, is used by some residents to generate additional income. The enterprise also allows some residents to work as laborers, such as rubber manufacturers. Craftsman households in Purun use the labor of household member working outside the area to open a small business that the community needs. The same is true for several individuals who work not only as Purun Craftsman, but also as motorcycle taxi drivers, garden caretakers, Islamic teachers, traders, carpenters, and, in the Puskesmas as midwives.

3.2.2 Migration

Another livelihood strategy chosen by Purun craftsman household, especially those with relatively young family members, is migration. Migration, especially for girls, is done by becoming working outside the region, such as Kayu Agung and Palembang. The type of work carried out is being a housemaid. For some households, the migration of one of its members provides an opportunity to obtain funds and use it as an alternative source of income to open a business or purchase specialised tools for purun processing, such as mashing equipment or other businesses.

The livelihood migration strategy is also used in big cities on the islands of Java and Kalimantan. Some women who have graduated from schoolwork as maids, and a small proportion become laborers/company employees. Exceptionally few men choose to migrate, especially if there are dependent parents or children in the family. Single men usually choose to migrate. For married men, work in the service sector, e.g., as motorcycle taxi driver or in rubber and palm oil processing, remains the top priority. The livelihood strategies by Purun

craftsman households typically combine at least two types of livelihood strategies. The limitations of purun resources, human resources, and financial resources force families to make every effort to secure their livelihoods.

3.3 Moral and Social Ethics in Livelihood Strategies

Economic actions in preparation of household income of craftsmen are formed on the basis of ethics and morality. Morality forms the character that constitutes a community of craftsmen. The formalist group considers human actions in performing economic activities as rational [10]. The substantial moral economic group, on the other hand, relies on the basic principle of embeddedness. These economic activities affect people's lives and status and are influenced by the norms, expectations, and values of the community. In other words, economic activity and the resulting surplus are used to support and improve social life. In the case of Purun craftsmen, economic morality is based on subsistence ethics, where social arrangements within the community are focused on subsistence needs [11]. The socio-collective ethics is still visible in some economic activities, but the current commercialization has shaped the material-individual ethic. This ethic forms the basis for the livelihood activities of Purun craftsmen, both at the household and community level.

Some of the livelihood strategies of Purun craftsmen based on collective social ethics and the subsistence needs satisfaction can be seen in the various strategies employed, including (1) Debt Strategy, (2) Srabutan Strategy, (3) Migration Strategy. (See table 1).

Table 1. Livelihood Strategies and Moral Ethics of Purun Craftsmen

Livelihood Strategy	Moral Ethics	Description
Debt Strategy	Social-Collective Ethics	Craftsmen who are in debt to relatives are based on trust because there are no guarantees, and various agreements are built without written evidence.
Srabutan/Random Strategy	Fulfillment of Subsistence Needs	In addition to being craftsmen, the community also became rubber farmers, laborers, traders, motorcycle taxi drivers, and others.
Migration Strategy	Fulfillment of Subsistence Needs	Migration / wandering out of the area is carried out as a survival strategy, mostly carried out by several household heads and the younger generation who do not want to continue their parents' work as purun craftsmen.

Source: Primary Data Analysis, 2022.

4. Conclusions

The limitations of purun, human and financial resources force the craftsman households to adopt various survival strategies, especially in the face of livelihood threats to craftsman productivity due to limited sources of capital. In addition, limited purun resources encourage craftsman households to seek various alternative sources of income within and outside the villages.

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