Contribution of pine Resin's income in partnership with Central Mamasa forest management unit

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Abstract. The development of forest management Unit provides opportunities for forest exploitation and the opportunity of the parties to participate in managing forest resources in accordance with their characteristics and remain the surrounding community. This research aims to determine the contribution of pine sap tapping to farmers’ income, knowing how much regional income from the results of pine sap tapping activities, and describing the pattern of pine sap Business partnership. The study was conducted for four months from April to July 2019. The population of this research, namely pine sap farmers, the company, the Union of Central Mamasa forest management, and related stakeholders in forestry management and decision-makers. Data collection is done with in-depth interviews, focused group discussions, and observations. Data analysis is done in a qualitative descriptive and quantitative analysis. The results of this study showed that the activity of pine sap tapping will contribute farmers’ income from pine sap tapping partnership patterns of 60.688% of the total income of farmers every month. The pattern of the partnership that is located in pine resin in central Mamasa KPH is a pattern of cooperation and share for the result or benefit-sharing from the pattern of the cooperation of pine sap KPH, the central Mamasa with PT. Kencana Hijau Bina Lestari provide For the yield to the region of pine resin production amounting to 12.5% of the local benchmark price agreed per 1 (one) kilogram.

1. Introduction
The establishment of forest management Unit (KPH) provides forest mastery opportunities and the opportunity for the parties to participate in managing forest resources in accordance with the characteristics of its resources [1]. Therefore, KPH as a forest management unit at the site is considered a strategic solution. Development of KPH in the future is expected to become a semi-independent institution both financially and professionally able to accommodate the ecological, social and economic aspects that should be able to give a quick response to the needs of the field [2]. To realize the independent central Mamasa KPH must be supported by potential in the region of KPH. One of the potentials while developed today is pine sap. Pine sap Tapping in KPH Central Mamasa has not been optimally seen from the lack of interest of local people to tap this sap is seen from the number of buts imported by the company much more than local people with the results Production is much different [3] This is due to the lack of interest in local people in the wiretapping of pine sap and the absence of coaching to the farmer in tapping activities. On the other hand, pine forest removal for pine sap tapping activities tends to exploit the resources without any balance of security and
harvesting to get a lot of production results without heed to the rules with respect to sustainability and sustainable natural resources [4].

Without good management, changes in the value of a pine plant potentially cause the loss of pine plants in a period not too long, because the parties tend to make a lot of profit in a short period of time, and not think of the pine forests that currently exist due to the ecological process for decades. Due to the effort to have a high economic value, there is a long and medium-term planning that is based on accurate data, involving local communities, the central Mamasa KPH, the corporate party and government in a pattern of partnership with community-based forest management. Local communities participate in the program to gain management rights and minimize conflicts [5]. Through the partnerships of communities around the forest can coexist with the company in managing and forestry economically and still consider the sustainability of forests [6–8].

Central Mamasa KPH as one of the forest maintainers at the site level is given the authority by the State to manage forests in order to improve the welfare of the people, to contribute revenue to the country and become the forest manager. The sustainability aspects of forest resources. But in fact, if it is reviewed from the economic aspect of many communities of low-income forest areas [9]. It is shown more people who are out of town to find jobs and companies bring a grounding farmer imported from Java to meet production targets. Based on the fact, we need to do research on the revenue contribution of pine resin in the Forestry Partnership scheme between the central Mamasa KPH with PT. Kencana Hijau Bina Lestari.

This research aims to determine the contribution of pine sap tapping into farmers’ income, knowing the pattern of pine sap farming partnership and knowing how much the regional income from the share of the result (Benefit-sharing) from the rubber tapping pine. The results of this research are expected to be used by the KPH and become input to the central and local governments in the decision-making forest management at the site level another section of your paper

2. Research methodology

This research was conducted in the working area of central Mamasa KPH of Mamasa regency of West Sulawesi Province in April-July 2019. The research methodology is done in a qualitative descriptive and quantitative analysis. The population of this research, namely pine sap farmers, the company, the Union of Central Mamasa forest management, and related stakeholders in forestry management and decision-makers. Primary data collection is done with in-depth interviews with the help of questionnaire, focus group discussion (FGD), and direct observation, while secondary data is used as the primary data supporting data obtained from the literature study and Institutions that support this research.

Determination of the sample area is done by purposive sampling, namely determining sampling intentionally with certain considerations [10]. The selection of the research site was selected intentionally based on pine sap tapping activities. While the respondents in this research was a farmer of 25 people, the central Mamasa KPH 5 people, PT. Kencana Hijau Bina Lestari 5 people, head of village and Forestry Department of West Sulawesi Province 1 person. According to Sugiarto [9], data analysis methods are spelled out with the following equation models:

\[ TC = FC + VC \]  \hspace{1cm} (1)

Description:
\( TC \) : Total Cost (Rp/month)
\( FC \) : Fixed fee (Rp/month)
\( VC \) : Variable cost (Rp/month)

To know the amount of income gained in pine sap tapping activities, then used the formula (Fahmi, 2013)

\[ I = TR - TC \]  \hspace{1cm} (2)
Description

I : Income
TR : Total Revenue or total receipts (Rp)
TC : Total Cost or Total cost (Rp)

To calculate the contributions used the formula as follows:

\[ K = \frac{\text{I}}{\text{TC}} \times 100\% \]  \hspace{1cm} (3)

Description:
K : Revenue Contributions (%)
L : Amount of Farmer's income from pine sap tapping (RP)
It : Farmer's total income amount (Rp)

3. Results and discussion

The development of pine forest management in central Mamasa KPH has started since 2010 through the activities of pine resin. The district government of Mamasa began backing up pine forest in 2010 by issuing clearance of pine sap to PT. Milatronika Karya Niaga. Along with the regulatory changes and the District’s LAW. No. 23 year 2014, where forestry affairs turned to the province then the permits issued by the District government are no longer valid. In the year 2017, the provincial government of West Sulawesi issued clearance of pine resin intercepts in the central region of KPH Mamasa to PT. Kencana Hijau Bina Lestari (KHBL) in accordance with cooperation agreement number: 415. A/33/KPH-MT/7/2017 and Number: 029/KHBL-KPH/SB /MTE/IV/2017. In the Year 2018 Directorate General of Control of river basin and protected forest Ministry of Environment and Forestry and PT. Kencana Hijau Bina Lestari make cooperation agreement with the number: PKS. 17/PDASHL/SET/KUM. 3/12/2018, Number: 013/ KHBL/HO/XII/18 about the cooperation of pine sap poll on the union of Central Mamasa Forest management of West Sulawesi province with an area of about 4,000 ha (four thousand hectares).

Cooperation agreement that has been issued by the Ministry of Environment and Forestry which is guided by the regulation of the Minister of Environment and Forestry number:P. 49/MENLHK/SETJEN/KUM. 1/9/2017 on the cooperation of forest development in the forest management unit, supported by a memorandum of understanding between the Forestry service of the province of West Sulawesi with PT. Kencana Hijau Bina Lestari Number: 008/DISHUT/SPPBH-I/2019: Number 009/KHBL/HO/I/2019 On financing system and yield patterns for pine sap poll cooperation in UPTD KPH Central Mamasa Province of West Sulawesi.

To follow up on the cooperation agreement between the Ministry of Forestry and Environment and the Forestry Department of West Sulawesi Province with PT. Kencana Hijau Bina Lestari then the party KPH Mamasa Tengah made operational Cooperation agreement between the Unit Technical Implementing agency (UPTD) of the Central Mamasa Forest management unit with PT. Kencana Hijau Bina Lestari Number: 415.4/157/KPH-MT/PKSO-XII/2019 and Number: 018/KHBL/HO/XII/2018 On Pine sap poll in UPTD KPH Mamasa Central Province West Sulawesi, which regulates the operation of pine sap resin in the region of central Mamasa KPH [11].

Pine sap tapping activity in KPH Central Mamasa is found in 11 (eleven) villages, 4 sub-districts: Messawa Sub-district is located in Sepang Village, Tanete Batu Village, Matande Village, Makuang Village, and Rippung village with a total of 52 people. Sumarororong District is located in Sibanawa village and Sasakan Village with a total of approximately 31 people. The district of Tandukkalua is located in Balabatu and Salurano village with a total of 15 people, while Balla district is located in the village of Balla Barat and Pidara with a total of approximately 20 people, so that the number of local is 118 people and Comer (POH) for about 31 people.
4. Conclusion

Conclusions derived from the results of this study indicate that: Contribution of farmer's income from pine SAP tapping Partnership pattern is Rp. 1,852,487,- from the total revenue of Rp. 3,052,487 or 60,688% of the total income of farmers every month. Thus it can be stated that more than half of the farmer's total income comes from the tapping of pine sap. The pattern of the cooperation that is available in rubber in KPH Central Mamasa pattern of joint operations Share the result or benefit-sharing of the cooperation pattern of pine SAP CPH, the central Mamasa with PT. Kencana Hijau Bina Lestari contributes to the yield for the region of the production of pine resin amounting to 12.5% of the local benchmark price Agreed per 1 (one) kilogram, with a 6% (six percent) share for the provincial government and 4% (four percent) for the district government and 2.5% (two-to-five percent) for the central Mamasa KPH. The contribution of the proceeds is deposited directly into the district of West Sulawesi Province of 8.5% (eight points five percent) and the district treasury of the District at 4% (four percent).

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