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STRATEGY SUSTAINABLE LIVELIHOOD COMMUNITY AFTER IMPLEMENTATION OF CONSERVATION PARTNERSHIP IN NATIONAL PARKS BANTIMURUNG-BULUSARAUNG

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ABSTRACT

the status of the area, from a protected forest in to a national park caused the change of community the livelihood system. The government then issued a program to empower the community as well as preserve forest areas through a conservation partnership. The purpose of the study is to analyze sustainable livelihood strategies based on available assets or capital. Qualitative and quantitative analysis were used through 3 stages: asset livelihood analysis, SWOT analysis, and QSPM analysis. The results showed that of the six conservation partnership villages, namely Labuaja, Rompegading, Barugae, Patamamang, Mattampawalie, and Wanua Waru, the one with the highest assets and capital was Patamamang. From the analysis of internal and external factors that have the most influence on this livelihood system are external factors with a score of 4.26. SWOT analysis shows that the community's livelihood system is in a Growth Oriented Strategy (Quadrant I). Meanwhile QSPM analysis shows that the four emerging strategies are survival, consolidation, accumulation, and diversification indicating that the highest strategy with a score of 0.72 is a diversification strategy. The conclusion is that the sustainable livelihood strategy that is considered the most capable of improving the community's livelihood system in this conservation partnership permit is the diversification strategy.

Key words: l*ivelihood, community empowerment, conservation partnership, national park*

INTRODUCTION

The livelihood system is a household activity that utilizes available assets or resources (Sugiharto *et al.*, 2016). The application of this livelihood strategy concept can improve the welfare of people affected by changes in the status of the area (Kibria *et al.*, 2018). Changes in forest areas have an impact on the condition of people's livelihood assets that is livelihood strategy is needed for communities living around the forest (Wijayanto, 2019). The efforts of an individual or household in order to realize the achievement of livelihoods requires various assets and various strategies so that the management and utilization of available assets is carried out efficiently (Saleh, 2014). Assets include a variety of capital, namely; human capital, natural capital, financial capital, social capital and physical capital is an inseparable units. These various aspects are needed simultaneously to support and ensure the sustainability of each individual's livelihood strategy. The strategy to minimize the factors that will threaten the management of conservation areas is to secure the area and strictly enforce the law prioritized so that the threat of illegal logging and ecosystem degradation as well as clearing and land use conflicts can be reduced (Usmianto and Bismak, 2014) .

Bantimurung Bulusaraung National Park (TN) underwent an area conversion from a protected forest to a conservation area on October 18, 2004 by considering optimal land use according to SK.398/Menhut-II/2004. According to Cahya (2019) the change in area status in Bantimurung Bulusaraung National Park has resulted in reduced community access to forest areas so that the government issued a conservation partnership policy Permit KSAE Number 6 of 2018. Forestry partnerships in conservation areas are a collaborative effort between the heads of conservation area management units and local communities based on the principles of mutual respect, mutual trust and mutual benefit for the creation of self-sufficiency and community welfare.

Conservation partnership activities in the form of granting access to land management to communities in traditional zones. In addition to considerations for community empowerment, zone boundaries in National Parks are determined for forest protection so that biodiversity and ecosystems in National Parks are maintained (Syarif *et al.*, 2006). Activities that can be carried out in these traditional zones include collecting NTFPs, traditional cultivation such as planting coffee, porang and others traditional hunting for unprotected species, utilization of limited aquatic resources and developing ecotourism (Iksan, 2019).

Sustainable livelihoods means that people able to adapt to changes that are or will occur; maintain capacity and assets owned; guarantee livelihoods for future generations (Abdurrahim, 2015). This study aims to identify and analyze *sustainable livelihood strategies for* communities around the forest on the availability of asset livelihoods in Bantimurung National Park Bulusaraung after the implementation of the conservation partnership.

RESEARCH METHOD

The villages of Barugae, Rompegading, Patanyamang, Mattampawalie, and Wanua Waru, which are situated in Maros Regency, South Sulawesi Province, served as the locations for this study's six Conservation Partnership Villages of Bantimurung Bulusaraung National Park. Data collection was carried out in January 2022 – February 2022.

The tools used in this study are: writing instruments, voice recorders, laptops that are integrated with Microsoft Office Excel software, and questionnaire. The materials included demographic data for each village, focus group discussion, and other supporting data.

Both primary data and secondary data were used in this study. Primary data obtained through field observations and interviews. While the secondary data was gathered from collecting data at the TLKM (Community Forest Service Team), Village, and Bantimurung National Park offices.

Primary data for this study were collected through questionnaires of respondents and key informants. The 126 responders are KTH members from six conservation partnership communities that were chosen by census, with up to 21 people per KTH. In-depth interviews were conducted with 10 key informants, including two from TLKM, one from a resort, one from the Bantimurung Bulusaraung National Park office, and six from KTH.

Data analysis in this study was carried out qualitatively and quantitatively to obtain an overview of the level of livelihood and the factors of the population's livelihood, as well as the level of vulnerability that affects livelihoods. The collection of qualitative data is intended to enrich the findings. The results of the qualitative data are in the form of written or spoken words originating from the respondents and the behavior that needs to be observed. For quantitative data this study uses 3 stages of data analysis:

1. Livelihood asset analysis. According to Saleh 2014, the asset livelihood analysis includes an analysis of 5 assets that can support the community's livelihood system. The 5 livelihood capitals, namely human capital, natural capital, social capital, financial capital, and physical capital, are weighted and rated on a scale of 1 to 5 for each asset owned in each village through expert judgment and then processed using Microsoft Excel.

2. SWOT analysis. According to Kusumadmo 2008, this analysis is an identification of the internal and external factors of the livelihood system arising from the assets owned by the community. The analysis uses the Internal Factor Evaluation (IFE) matrix to identify internal factors while external factors use the External Factor Evaluation (EFE) matrix. This analysis uses quantitative data in the form of weights and ratings from the previous livelihood analysis so that it will produce a score to indicate the most influential factor of the assets that have been analyzed previously with the following percentages:

weight = livelihood asset value

Score = weight x rating

Rating: 1 – 5, 3 -5 = Strength, 1 – 2.9 = weakness

Data from the IFE and EFE matrices were analyzed again using the Strength Weakness Opportunity Threats (SWOT) matrix. Data analysis on the SWOT matrix analyzes the strengths, weaknesses, threats, and opportunities that occur in the field. This SWOT matrix analysis is also inseparable from the results of the IFE and EFE matrix analysis.

3. Quantitative Strategic Planning Matrix (QSPM) analysis. According to Kusumadmo 2008, this QSPM analysis aims to evaluate possible strategies. This QSPM planning can present an analytical method to be able to compare what strategy is the most superior through the quantitative data obtained. The matrix produces a Total Attractive Score (TAS) value which is considered the most suitable alternative strategy to be implemented or can prioritize strategies from the highest to the lowest TAS value with the following percentages: Total Attractive Score = Weight x Attractive Score.

RESULT AND DISCUSSION

1. Analysis of Livelihood Assets

The conservation partnership village in Bantimurung Bulusaraung National Park has different livelihood assets ranging from natural capital, physical capital, human capital, financial capital, and social capital. The livelihood strategy chosen by the community or household is very dependent on the livelihood assets they have. The five different livelihood assets are still related to one another which are presented in the form of a pentagon asset (Figure 1).

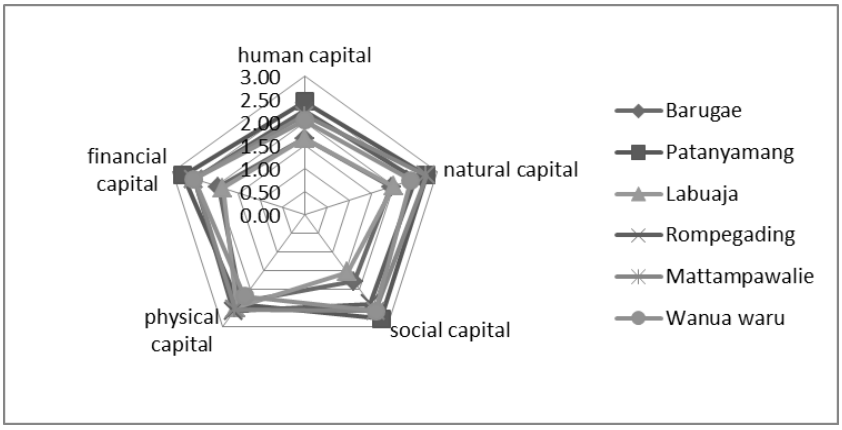

Figure 1 Pentagon Asset Livelihood

Human capital can be assessed from the knowledge, skills, ability of the workforce, and health to carry out livelihood activities to earn income (Cahya 2014). 3 potential relationships can occur in interrelated conservation partnership programs, namely partnerships for potential conflicts, partnerships for potential mutual benefits, and potential for cooperation (Dimas, 2017). The Forest Farmers Group (FFG) in the partnership village with the highest human capital was from FFG Patamanang with a value of 2.45 while the lowest human capital was in FFG Labuaja and Barugae with a value of 1.65. This shows that Patamamang has human resources who are skilled at managing available assets, while the villages in Labuaja and Barugae have less skilled human resources in using assets in livelihood activities.

Natural capital is a very important capital because starting from fulfilling daily needs, and environmental services to production needs for livelihood systems depend on nature (Saleh 2014). The highest natural capital is owned by FFG Patamanang and Mattampawalie, namely 2.75, while the lowest natural capital value is at FFG Barugae with a value of 1.95. This shows that Patamamang and Mattampawalie have a variety of natural resources to manage so that their livelihood systems can work quite well. Meanwhile, Barugae has very limited natural resources to manage.

Social capital can also be called a social network where a household has interactions with other households or the community. This social capital is capital that cannot be measured or is intangible which consists of participation, kinship, social networks and community organizations, and so on (Saleh 2014). The highest social capital is FFG Patamanang with a value of 2.80 while the lowest social capital is FFG in Labuaja Village, which is 1.55. This shows that Patamanang is a FFG that has strong participation, kinship, and social networks between communities. Meanwhile, Labuaja has participation, kinship, and social networks that are still weak among FFG members or the community.

Physical capital is usually in the form of asset ownership by households so that these households get access in the form of facilities and infrastructure that can support these households in carrying out livelihood activities. The highest physical capital was owned by FFG Rompegading at 2.60 while the lowest physical capital was owned by FFG Wanua Waru at 2.20. This shows that Rompegading has good facilities and infrastructure because Rompegading is located closest to the main road. Meanwhile, Wanua Waru has quite poor access, as can be seen from the main access road to Wanua Waru which is very far.

Financial capital can be referred to as an economic asset of a household, namely finance which is usually in the form of savings, wages, credit, debt, etc (Saleh 2014). The highest financial capital is owned by FFG Patamamang with a value of 2.75 while the lowest financial capital is at FFG Labuaja, each of which is 1.85. This shows that Patamamang can manage its finances well, while Labuaja is still classified as bad at managing its finances

2. Analysis of the sustainable strategy of the community

a. Internal strategy factor analysis (IFE *Matrix*)

The Internal Factor Evaluation Matrix (IFE matrix) is a matrix that shows the strengths and weaknesses of various assets owned and managed by the community (Table 1). Table 1 shows that internal factors have 4 strengths and 5 weaknesses with a total strength of 2.67 and a total of weaknesses 0.70. The main strength of this matrix is that each community manages and owns private land with a score of 0.85. This shows that the utilization of personal assets is the strongest livelihood system carried out by the household group. While the main weakness in this matrix is the lack of adaptability to seasonal changes in livelihood management with a score of 0.19. This shows that the ability of FFG to be creative in utilizing available assets is still lacking, causing the livelihood system to decline. This weakness is one of the reasons that greatly influences the low productivity of society.

b. External strategy factor analysis (EFE *Matrix*)

This EFE matrix shows an analysis between available assets and their management and then presents the respective opportunities and threats that arise from external factors (Table 2). Table 2 shows that there are 7 opportunities and 3 threats with a total opportunity of 3.86 and a total threat of 0.40. The main opportunity for this external factor is to increase skills in production and community livelihood systems with a score of 0.61. This shows that if an individual or group can improve their skills, then the opportunity to get a household's livelihood system will increase. While the main threat from these external factors is the limited marketing or sales of products with a score of 0.15. This explains that poor marketing greatly affects the low productivity of the livelihood system of an individual or group.

Table 1 Matrix IFE

No	Internal Factor	weight	rating	score
	Strength			
1	The community is very active in partnership activities	0.11	3.00	0.32
2	Produce more than one commodity	0.16	4.50	0.71
3	Each community owns and manages private land	0.17	4.90	0.85
4	Agriculture and partnership land is a source of livelihood	0.17	4.75	0.8
	Total Strength			2.67
	Weakness			
5	Low education of FFG members	0.04	1.20	0.05
6	People tend to work individually	0.07	1.85	0.12
7	Lack of dynamic Forest Farmers Groups	0.07	1.90	0.13
8	Lack of skill in managing raw materials produced into a product	0.07	1.95	0.13
9	Production materials are very limited	0.07	2.00	0.14
10	Lack of adaptability to seasonal changes in livelihood management	0.08	2.30	0.19
	Total weakness			0.76
	Total Score IFE			1.91

Table 2 Matrix EFE.

no	External factor	weight	rating	score
	Opportunity			
1	Increase production quantity	0.12	4.85	0.60
2	Minimize production time	0.12	4.70	0.56
3	Can keep up with technological developments	0.12	4.85	0.60
4	Prepare funds in case of an emergency	0.10	4.10	0.43
5	Expanding networking and marketing of products	0.11	4.50	0.51
6	Improve skills in community production and livelihood systems	0.12	4.90	0.61
7	Foster intimacy and increase cooperation in every community	0.12	4.70	0.56
	Total opportunity			3.86
	Threats			
8	Limited marketing or sales of products	0.06	2.42	0.15
9	Reduced job opportunities	0.06	2.45	0.15
10	Society must suppress or minimize spending	0.05	2.00	0.10
	Total threats			0.40
	Total Score EFE			3.46

c. **Analysis matrix SWOT *(Strength Weakness Opportunities Threads)***

SWOT analysis shows the location of the selected strategy in the SWOT quadrant which is obtained from the total score of the IFE matrix and the EFE matrix. However, it should be noted that the strategies resulting from this SWOT analysis are ongoing in general and have not been included in the livelihood strategy grouping specifically. From the results of this SWOT quadrant analysis, the livelihood strategy in the Partnership Village of Bantimurung Bulusaraung National Park is in quadrant I (Figure 2), which means that the strategy is a growth-oriented strategy. The growth-oriented strategy in the SWOT analysis shows that the strategy in the Conservation Partnership Village is at a stage where the community is developing its productivity well so that it is possible to continue to expand.

d. Analysis *Quantitative Strategic Planning Matrix* (QSPM)

This QSPM analysis shows priority livelihood strategies so that both the community and the government can see which strategy is most suitable to be implemented in the Bantimurung Bulusaraung National Park Conservation Partnership Village in its livelihood system (Table 4).

Table 3 shows that there are 9 priority sequences of sustainable livelihood strategies for Conservation Partnership Villages through QSPM analysis which are then grouped into 4 groups, namely survival strategies, accumulation strategies, consolidation strategies, and diversification strategies.

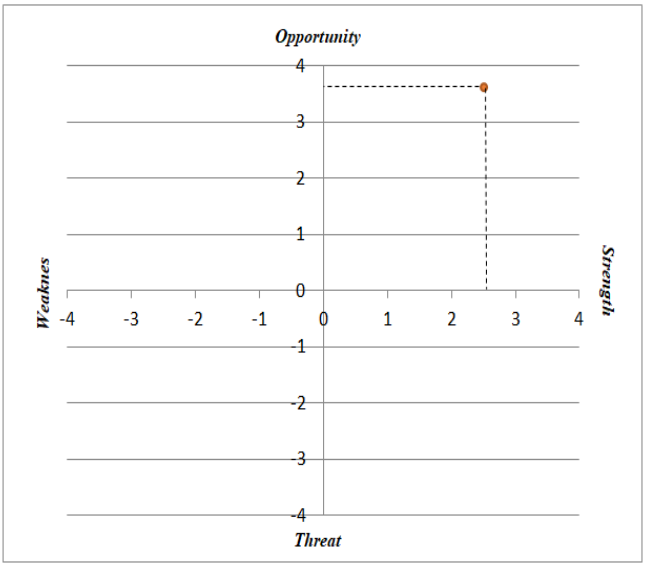

Figure 2 Quadrant SWOT

Table 4 Analysis QSPM

Order	Sustainable livelihood strategy	TAS
1	Doing a double income pattern by making the best use of the partnership land (WO - 2)	0,72
2	Maximizing the use of production tools that have been provided in the production of partnership land and private land (SO – 1)	0,60
3	Maximizing the planting of commodities that have great opportunities (SO – 2)	0,55
4	Conduct training to attract community interest and improve their skills in dealing with existing changes (WO – 1)	0,55
5	Utilization of the yard and raising livestock (WT – 1)	0,52
6	Strengthening ties between FFG members and outside FFG (SO – 3)	0,51
7	Expanding networking outside between FFG and network utilization to the companies involved (ST - 1)	0,47
8	Procurement of savings every FFG (ST – 2)	0,43
9	Reduce unnecessary expenses (WT – 2)	0,21

1. Survival Strategy

The survival strategy relies on human capital assets by combining several strategies vigorously but the results are very limited. From the previous QSPM analysis, what is included in the survival strategy is strengthening kinship between FFG members and outside FFG (rank 6) and reducing non-essential expenses (rank 9). Strengthening kinship is considered important for this strategy so that each household can reproduce the strategy or system of earning a living through other people. Meanwhile, it is also very important to emphasize spending by households so that their economic conditions remain stable. Maybe this WT-2 strategy is considered trivial, but for households in this survival strategy, spending emphasis is very important because their income is very limited.

2. Consolidation Strategy

This strategy is the use of household members' labor, the use of the yard of the house, and so on. In the previous QSPM analysis, the consolidation strategy group included the use of yards and livestock (rank 5) and the provision of savings for each FFG or household (rank 8). As previously explained, the use of home yards and raising livestock is very important in this strategy to increase income sustainably. Similarly, the provision of savings is very necessary for the urgent needs of a household or group.

3. Accumulation Strategy

The accumulation strategy shows that a household can take advantage of its excess assets to increase them as other business capital. This accumulation strategy is influenced by the structure and work process or productivity of a household or group to improve its livelihood system (Saleh, 2014). From the QSPM analysis, the alternative strategy included in the accumulation strategy is to maximize the investment of commodities that have great opportunities (rank 3) and expand networking outside KTH and network utilization to the companies involved (rank 7).

4. Diversification Strategy

This diversification strategy involves productivity from on-farm and off-farm together and the community has a high interest in many new things. This dual income pattern strategy also attracts the community to manage the ability of farmers to farm on non-agricultural land so that the community's source of income can increase by utilizing partnership land (Sambas and Tatang, 2005). The previous QSPM analysis shows that there are 3 alternative strategies included in the diversification strategy group, namely carrying out a double income pattern by making the best possible use of the partnership land (rank 1), Maximizing the use of the production tools that have been provided in the production of partnership land and private land (rank 2) and conduct training to attract community interest and improve their skills in dealing with existing changes (rank 4). These three strategies are strategies for a double livelihood pattern, increasing community interest, and expanding land productivity which is considered very important in maximizing the livelihood system to improve a household's livelihood system in a subsistence manner.

CONCLUSION

The highest livelihood asset score is found in KTH in Patamamang Village, while the lowest asset score is in Labuaja Village KTH. Livelihood assets include human capital, natural capital, social capital, physical capital, and financial capital. Four livelihood strategies are developed as a result of the identification of the assets for sustaining livelihoods in order to best implement the partnership policy's sustainable livelihood system. The diversification strategy is the most effective strategy in the livelihood system out of the four currently used methods since it has the greatest TAS value.

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