Community empowerment strategy at KPHL unit VI (Minahasa Utara-Bitung-Manado) North Sulawesi

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Abstract. This study aims to determine appropriate community empowerment strategies in the use of non-timber forest products and environmental services in the Protection Forest Management Unit (PFMU) with the SOAR method. Data were collected by observation, interview and questionnaire. Sampling using random sampling and secondary data obtained from the relevant agencies. Based on the results of SOAR analysis, community empowerment strategies using village funds to improve forest management and social forestry, improve training and develop the quality of farmers in utilizing NTFPs and utilize existing environmental services, provide access to communities in utilizing non-timber forest products and forest products and improve cooperation with village communities, especially with village-owned enterprises to utilize environmental services (nature tourism, water tourism and drinking water use).

1. Introduction

Law Number 41 of 1999 concerning Forestry and Government Ordinance Number 34 of 2002 concerning Forest Arrangement and Preparation of Forest Management Plans, Forest Utilization and Use of Forest Areas, explains that the form of utilization of protected forests is limited to the use of the area, utilization of environmental services, and collection of yields. non-wood forest (NTFPs). Utilization of the area in protected forests can be in the form of cultivation of medicinal plants, beekeeping, captivity. Whereas the utilization of environmental services is a form of business that utilizes the potential of protected forests by not damaging the environment such as ecotourism, challenging sport tourism, water use, and carbon trading. These forms of utilization are intended to increase regional income, increase welfare and awareness of the community around the forest of the function and preservation of protected forests [1,2]

The establishment of FMUs provides opportunities for forest tenure as well as the opportunity for parties to participate in managing forest resources in accordance with the characteristics of their forest resources. Therefore FMU as forest management unit level, the site is considered to be a strategic solution. FMU development in the future is expected to become a semi-independent institution both financially and professionally capable of accommodating ecological, social and economic aspects that must be able to provide rapid response to field needs [3].

FMU Unit VI of North Minahasa-Bitung-Manado is one of the FMUs that has problems in implementing development in their area both in terms of economic and social aspects. Those problems
resulted in the construction of the FMU is not working properly, so that its implementation needs to be done jointly between the government and the public. Studies show that the general public access rights already contained in the planning document FMU in the form of the development of that partnership, and community-based forest management. Local communities participate in this program to obtain state forest management rights and can optimize land-use conflicts [4,5].

The area of PFMU Unit VI North Minahasa-Bitung-Manado based on the Decree of the Minister of Forestry Number: SK.796 / MENHUT-II / 2009 covering an area of 29,380 ha consisting of 19,159 Ha of protected forest and 10,221 Ha of limited production forest and divided into 4 locus of forest management namely Block of forest management namely Core and Utilization Block in protected forest areas, IUPPKH-HTR Block consists of licensed and reserve areas, Utilization Block, Environmental Services and Non-Timber Forest Products in Production Forest [6].

Non-timber forest products and environmental services of forests is a major commodity as the designation of the area as PFMU. Therefore, these products should be featured PFMU VI unit in both the short and long term. The challenge must be formulated as a policy is the management of this potential can give receipts through the internalization of products in the market mechanisms at the local, national, regional and global. Therefore how the value of forest products such as the main products can be considered as a source of economic contribution of the forest sector in North Sulawesi region especially in the districts/municipalities in which scattered PFMU region [6].

According to the results of a preliminary study, data on the potential for non-timber forest products and the use of environmental services that have been used and require management interventions so that the direction of utilization provides a real economic contribution and does not have a negative impact on the biogeophysical and socio-cultural environment, for the main potential environmental services is water resources. Commercial utilization of water resources includes: utilization for drinking water needs are managed by local water companies, the use of bottled mineral water industry, utilization for the development of freshwater fisheries, as well as the direct use by the public for drinking water is sourced from springs around forests [6].

Community empowerment is a concept that is widely used in efforts to resolve land tenure conflicts. The community empowerment approach is carried out by placing the community in the position of the perpetrators as well as beneficiaries of the process of finding solutions. Implementation of a community empowerment scheme in an area needs to pay attention to the character of the community found in the area [7].

Community empowerment is seen as an effort to increase the ability and independence of the community to obtain the benefits of forest resources optimally and fairly through capacity building and granting access in order to improve the welfare of the local community. While [8] states that there are several issues that need to be considered for the implementation of forestry development, especially activities related to empowerment in and around forests. These problems are from policy issues, institutional issues, forest resource issues, human resource issues, and socioeconomic issues. These five issues will lead to various impacts in the future if they are not minimized. This is supported by [9] stating forests as assets of national development are very beneficial for life that provides ecological, cultural and economic benefits in conditions where forests are properly utilized if managed, protected and utilized as needed.

PFMU Unit VI selected as the study site because until now the activity of the public in using forest products that NTFPs and environmental services are still running and does not involve the authorities in the management and beneficiaries, it is necessary to study to assess community empowerment strategies in PFMU unit VI correctly can increase people's income, KPH support autonomy and support the management of sustainable forest resources in accordance with the current conditions and future.

This study aims to find out the community empowerment model (existing model) so far in the utilization of environmental services and non-timber forest products in PFMU Unit VI. The results of this research can be used for FMU development in North Sulawesi province, especially in the development of forest utilization in PFMU Unit VI, to become a business unit owned by KPH.
Material inputs to the central and local governments on decision making necessary for the development of FMU management in site level.

2. Methods

This research was conducted in the Unit VI Protection Forest Management Unit (PFMU) North Minahasa-Bitung-Manado for 3 months starting in June 2019 - August 2019 in Talawang Village, Talawang District, North Minahasa Regency. Primary data collection is done by in-depth interviews with the help of questionnaires, group discussions, and direct observation, while secondary data is used as supporting data for primary data obtained from literature studies and institutions that support this research.

The population in this study are farmer groups and communities that conduct non-timber forest exploitation and environmental services contained in the Unit VI Protection Forest Management Unit. The research sample was determined intentionally (purposive sample) as many as 20 people consisting of 1 Head of PFMU, 1 Head of Division in charge of social forestry, 1 Head of Village, 2 heads of Forest Farmers Group, 10 members of Forest Farmers Group 2 community leaders and 3 administrators of village-owned business entities and parties involved in the development of PFMU and utilization of environmental services and existing NTFPs.

The empowerment pattern was analyzed using SOAR analysis. The concept of SOAR (Strengths, Opportunities, Aspirations, Results) as an alternative to the SWOT analysis originates from the Appreciative Inquiry (AI) approach. Appreciative Inquiry is a new approach developed by David Cooperider in his book Introduction to Appreciative Inquiry to help individuals or communities achieve and realize their dreams. Appreciative Inquiry focuses more on identifying and building strengths and opportunities rather than problems, weaknesses and threats [10]. SOAR matrix serves to draw up strategic factors that describe how the strengths and external opportunities encountered can be tailored to the aspirations and the results of its.

| Strategic Inquiry (Internal) | Strength (S) | Opportunity (O) |
|-----------------------------|--------------|-----------------|
| Appreciative Intern         | Register 5-10 internal strength | Register 5-10 internal strength |
| (Eksternal)                 |              |                 |
| Aspiration (A)              | Strategi S-A | Strategi O-A    |
| Register 5-10 external strength | (Create strategies that use power to achieve aspirations) | Create strategies that are oriented towards aspirations that are expected to take advantage of opportunities |
| Result (R)                  | Strategi R-A | Strategi R-O    |
| Register 5-10 external strength | Create a strategy based on strength to achieve measurable results | Strategies that are oriented towards opportunities to achieve measurable results |

Figure 1. SOAR analysis

The SOAR matrix explanation is as follows:

a. SA Strategy: This strategy is made by utilizing all the power to achieve the aspirations expected
b. OA Strategy: This strategy is designed to identify and fulfill the aspirations of every stakeholder who is oriented towards the opportunities that exist
c. SR Strategy: This strategy is designed to realize the power to achieve measurable results
d. OR Strategy: This strategy is oriented towards opportunities to achieve measurable results

3. Results and discussion
Community empowerment strategies on PFMU Unit VI is directed by SOAR analysis. In using SOAR analysis, it starts with identifying and inventorying the elements of strength, opportunities, and aspirations. Then formulate results that can be measured from the strength of the opportunities and aspirations that have been obtained.

The following will explain the analysis of the conditions encountered in community empowerment at the PFMU at the research location which includes the analysis of internal conditions and external conditions as follows:

3.1. Analysis of internal factors

3.1.1. Strength
a. Support from the village fund for social forestry activities
b. Support government policies in forest management and social forestry
c. Master Plan for forest management planning
d. Accessibility provided towards the forest area is very high
e. The community has a high interest to participate in development activities
f. An understanding of the sustainability and preservation of the environment
g. Protected from land disputes
h. Freedom in the management and development of tourism

3.1.2. Opportunities
a. High demand for NTFP products
b. Knowledge of Forests Plants growing business
c. Activity of environmental services (natural tourism, drinking water and water use) has grown

3.2. Analysis of external factors

3.2.1. Aspirations
a. The government is expected to provide aid and venture capital in the processing of NTFPs
b. Training and development of farmers' quality of NTFPs and environmental services manager
c. Management of environmental services that is expected to work closely with rural communities
d. Improve the facilities and infrastructure that already exists

3.2.2. Results
a. Increased utilization of forest land through the use of environmental services of forests, including nature
b. Increasing public awareness about the role of ecosystem services in improving the welfare of forest communities
c. Increasing the participation and involvement of rural communities and stakeholders in the management, utilization and exploitation of environmental services and nature
d. Increasing the welfare of society.
Furthermore, the formulation of results that can be measured from the strength of opportunities and aspirations that have been obtained, is presented in Table 1.

**Table 1.** SOAR Matrix community empowerment strategy for unit vi protected forest management unit

| Strategic Inquiry (Internal) | Strength | Opportunities |
|-----------------------------|----------|---------------|
| a. Support from the village fund for social forestry activities | a. High demand for NTFP products |
| b. Support government policies in forest management and social forestry | b. Knowledge of Forests Plants growing business |
| c. Master Plan for forest management planning | c. Activity of environmental services (natural tourism, drinking water and water use) has grown |
| d. Accessibility provided towards the forest area is very high | |
| e. The community has a high interest to participate in development activities | |
| f. An understanding of the sustainability and preservation of the environment | |
| g. Protected from land disputes | |
| h. Freedom in the management and development of tourism | |

| Appreciative Intern (Eksternal) | Aspirations | Strategy SA | Strategy OA |
|---------------------------------|-------------|-------------|-------------|
| a. The government is expected to provide aid and venture capital in the processing of NTFPs | 1. Use of village funds in improving forest management and social forestry | 1. Providing aid and capital for NTFP processing businesses through community empowerment activities to increase production output |
| b. Training and development of farmers' quality of NTFPs and environmental services manager | 2. Enhancing Training and developing farmers' quality in utilizing NTFPs and utilizing existing environmental services | 2. Training and developing quality of NTFP farmers and managers of environmental services to increase knowledge about the Plantation Forest business |
| c. Management of environmental services that is expected to | 3. Providing access to the community in utilizing non-timber forest products and other forest products | 3. Increasing cooperation with village communities, especially with village-owned enterprises to utilize environmental services |
work closely with rural communities

| Results | Strategy SR | Strategy OR |
|---------|-------------|-------------|
| a. Increased utilization of forest land through the use of environmental services of forests, including nature | 1. Improve the utilization of forest land through the utilization of environmental services including the nature of their funding supported by the village fund and the regional government through government policies in forest management and social forestry | 1. Procurement activities that can improve the function of forests as well as activities that can increase incomes in the utilization of NTFPs and environmental services. |
| b. Increasing public awareness about the role of ecosystem services in improving the welfare of forest communities | 2. Increasing public awareness about the role of environmental services in improving the welfare of people around the forest with activities that make the community interested in wanting to participate in empowerment activities | 2. Training and development of quality local farmers and rural communities about the role of environmental services and non-timber forest products in improving the welfare of forest communities |
| c. Increasing the participation and involvement of rural communities and stakeholders in the management, utilization and exploitation of environmental services and nature | 3. Procurement activities involving rural communities and stakeholders in the management, utilization and exploitation of environmental services and nature as well as the use of media for promotion information that will hopefully help improve the welfare of the community. |
| d. Increasing the welfare of society | | |

Based on the results of the analysis above, the Community Empowerment Program Design can be carried out as follows:

3.3. *Non-timber forest product business development plan (NTFPs)*
This plan is intended for the management of NTFPs for business activities so as to support the economy of the Talawaan Village community. This plan needs to pay attention to important aspects that can be a challenge, especially in developing NTFP businesses. [11] state that the challenges of...
business development cover broad aspects including (a). Improving the quality of human resources in terms of management capabilities, (b). Organization and technology, (c). Broader access to capital, and (d). Transparent market information.

3.4. Business development plan for the utilization of environmental services

This plan is in the context of utilizing the environmental services available in the Talawaan Village Protection Forest so that the utilization of the forest is not only limited to NTFP collection. The development of an environmental service business includes a plan to develop a natural waterfall business. Thus the plan for the utilization of environmental services like this has quite interesting opportunities for the people of Talawaan Village to believe that efforts to protect forests will be difficult if the benefits to the environment are not appropriately valued in money or through a payment system.

4. Conclusion

Capacity building needs as identified through the five aspects of the show that the condition of the villagers Talawaan currently has a high level of dependency on government programs and others; the lack of public access to capital, markets and science and technology leading to their bargaining position in the low partnerships; forest destruction will increase because people are less involved in forest management; weak capacity of government officials as facilitators so that the ability of human resources effectively; and people are less motivated to entrepreneurship because of the lack of capital and economic infrastructure available so that people's income is still relatively low. Preparation of the village community empowerment strategies appropriate Talawaan current conditions that include community empowerment policy design that is transparent, participatory, consistent and targeted; institutional capacity building plan based partnership; the design of community-based forest resources; designed to build the capacity and competence of human resources by government officials; as well as a plan to improve access and strengthen the socio-economic community. Increased collaboration between local governments and village-owned enterprises to increase community interest in managing and utilizing existing forest resources in the form of non-timber forest products and utilizing environmental services in the form of waterfalls to improve the welfare of rural communities.

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