

ECONOMIC DEVELOPMENT OF FARMERS AT THE NAGARI FOREST AREA IN THE WEST SUMATERA PROVINCE

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Abstract

Background: There are 2 nagari forest areas out of 119 forest areas in the social forestry area in West Sumatra province. Collaboration is needed to manage forests to create new economic activity in the nagari forest area. Objective: This aim is to develop the economy of farmers in the nagari forest area in West Sumatra Province. Methods: The research utilized mix method with a sequential explanatory design with four indicators and the type of research used is survey research. The location of the research is in the South Coast Regency, Solok, Padang Pariaman, Pasaman, and West Pasaman. The qualitative method was taken from the results of filling out questionnaires and interviews with 35 respondents and 3 informants, and analyzed by Likert scale techniques, statistics, and Smart PLS applications. Results: The results of the study show that the respondents' perception of institutions involved in economic development activities is structured and tiered agricultural communities from the central government to farmer groups. Strategic issues related to creating collaboration between institutions involve human resources, institutional communication, funding support, and potential conflicts between institutions. Conclusion: The cooperative relationship creates synergy between institutions resulting in a Memorandum of Understanding (MoU) and a Memorandum of Agreement (MoA).

Keywords: Institutions, Hutan Nagari, Farming Communities.

INTRODUCTION

Village development is an important factor for regional development with the aim of alleviating poverty and reducing development gaps between regions. Village economic development is a way to limit the occurrence of large-scale urbanization and expect ruralization to occur for the progress of the village [1]. In Law number 6 of 2014 article 4 states that the purpose of village development is to encourage initiatives, movements, and participation of the village community for the development of village potential and assets for common welfare; advancing the economy of the village community and overcoming the national development gap. As we know that the majority of village people work in the agricultural sector [2]. In fact, development in the forestry sector cannot be separated from the agricultural sector. This is because people who live around forest areas generally work as farmers. The synergy of these two sectors can be seen from the concept of agroforestry [1], which is synergizing the cultivation of agricultural crops with forest plants. Forest land that has been cleared, either intentionally or due to forest fire disasters, can develop community economic activities by implementing the concept of agroforestry [3]. To legalize the application of the agroforestry concept, the Indonesian government issued a policy in the form of a social forestry program. Social forestry is a forum that can legalize communities to manage forest area to improve the community's economy [4]. One of the schemes in the social forestry program is village forests or in West Sumatra are named as Nagari forests [5]. In 2023 there are 119 Nagari forest areas in West Sumatra Province [6].

One form of farmer activity in the countryside is the use of forest products by forest farmers. Based on the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 9 of 2021 concerning Social Forestry Management, Village Forest (Nagari), hereinafter abbreviated as HD, is a forest area that has not been burdened with permits, which is managed by the village and used for the welfare of the village with management given to the Village Institution. Then in the village institution there are several farmer groups. Based on the research of Istiqomah (2019), the good performance of Forest Farmer Groups makes programs and activities in social forestry can run well [7].

The formed Nagari forest is expected to grow and develop the economic activities of the Nagari community. In its implementation, the management of Nagari forests is handed over to Nagari institutions and farmer institutions in the form of forest farmer groups [8]. One of the economic activities carried out in land clearing in the Nagari forest area is agricultural activities in the plantation and horticulture sectors, especially fruit crops [9]; [10].

However, only 2 Nagari forest areas are able to grow new economic activities. This condition shows that the performance of the social forestry program through the Nagari forest scheme has not been able to be achieved properly. One of the reasons is that government policies on social security have not provided adequate access to information, authority, financial capital, markets, technology, programs/institutions, and potential support for productive economic opportunities [11].

There are various stakeholders (Wulandari & Kurniasih, 2019) in the management of Nagari forests. Referring to Raharjo et al (2020), stakeholders in Nagari forest management are members of government institutions (Provincial Forestry Service, district-level Forest Management Units, Nagari Forest Management Institutions) and non-governmental institutions (Social Forestry Business Group/KUPS, Farmer Groups and NGOs). All of these institutions have different roles and functions in the management of Nagari forests [12]; [13].

Institutions, especially here, are institutions in forest management that are expected to be a means that are able to mobilize resources in order to achieve the goals that have been set. However, the current institutional condition of forestry is still weak from the central level to the provincial and district levels [11]. The weak institution is due to the lack of regulations governing forestry institutions, limited human resources, facilities and infrastructure, and lack of funding [14]. This condition is also experienced in the economic development of the community in the Nagari forest area [15].

One of the institutions in charge of community economic development is KUPS. Based on data from the West Sumatera Provincial Forestry Service in 2023, as many as 33% of KUPS are in the blue classification, for KUPS which are in the silver classification of 34%, KUPS which are in the gold classification of 12% and KUPS in the platinum classification of 1 new KUPS, namely the KUPS of the Tabek Village Economic Multi-Business Cooperative in Nagari Talang Babungo Hiliran Gumanti sub-regency. This condition shows that the KUPS that were granted permission to manage every social forestry scheme in West Sumatra has not fully achieved the program's objectives, namely improving community welfare, especially from the economic aspect of the community around social forestry [16]; [17].

Based the data above, it can be seen that KUPS holders of social forestry management permits in West Sumatra have not shown performance as expected. One of the factors causing the low performance of the KUPS is the weak institution [18]. Local institutions play an important role in the management of Nagari/Village Forests [12]. Likewise, as revealed by Rubynski et al (2018), the role of institutions is important in ensuring the sustainability of community-based forest management. The institutional conception is actually a regulation of human behavior that is agreed upon by all members of society and is a regulator of interaction in certain situations that are repetitive. Institutional variables consist of: a) leadership; b) doctrine; c) work program; d) resources; e) internal structure [19].

According to Laksemi (2019), the sustainability of social forestry management can be successfully influenced by the performance of institutions that manage programs and activities on social forestry [20]. In other studies it is also said that the institutional gapoktan has an important role that serves to regulate the activities of the community individually or in groups in managing the community forest [21]. While in their research has a different opinion, it is said that in addition to the institutional role at the farmer level, the role of the Forest Management Union (KPH) is needed to optimize the achievement of social forestry programs, however, KPH has limited room for manoeuvre due to the limitation of authority and funding limitations. In line with this opinion, Salaka (2020) states that institutions in the form of cooperatives are much more effective when compared to institutions at the farmer level in managing the People's Park Forest [22].

From previous research, it seems that the KUPS institution cannot run on its own. Collaboration with other institutions related to the economic development activities of the community in the Nagari forest area is required. Such collaboration can be carried out between government agencies with non-governmental agencies. Moreover, the collaboration created can synergize the goals pushed by each stakeholder [23]. While studies have been done by previous researchers, none has focused on inter-institutional collaboration to improve the economy of agricultural communities in the Nagari forest area. The gaps in previous studies make this study different from previous studies. Therefore, this research aims to construct a pattern of collaboration between institutions involved in the economic development of agricultural communities in the Nagari forest area. So, this research will bring many benefits and contributions not only to the society but also to the development of science especially in institutional theory [24].

METHOD

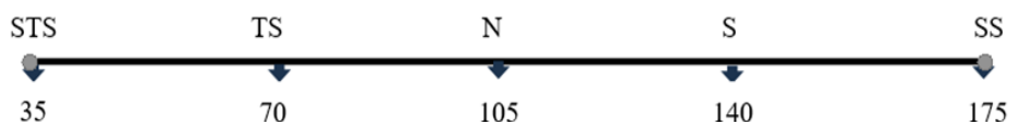
The study was conducted over 4 months in 2023. The location of the study was determined using a purposive technique by establishing several considerations, including: a) The location is a Nagari forest area designated by the West Sumatera Provincial government; b) There are institutions that manage Nagari forests; c) The availability of data and information from various sources. Based on these considerations, the research was carried out in South Coast, Solok, Padang Pariaman, Pasaman and West Pasaman Districts.

The research uses a mixed method research method that combines the use of quantitative research methods with qualitative methods. The design used sequential explanatory design is the first stage using quantitative methods, then to explain the

quantitative results using qualitative methods. The type of research used is survey research. The types of data used in this study are primary data and secondary data.

The data collection techniques used are: a) Questionnaire technique. The form of the questions in the questionnaire is a closed question; b) Interview technique. The instrument used in conducting interviews is a structured open list of questions; c) Documentation techniques. The total number of respondents used in this study was 35 and informants were 3. The determination of the respondents and informants of the research was done with a purposive technique, where the main consideration used was the key individuals directly involved in the Nagari forest management institutions. The focus of the data used is: a) stakeholder perception of Nagari forest management; b) strategic issues related to collaboration between agencies; c) hierarchy between Nagari forest management agencies; d) patterns of collaboration between agencies involved in the economic development of agricultural communities in Nagari forest areas. Quantitative data is analyzed by several techniques, namely: Data collection techniques used are: a) Questionnaire techniques. The form of the questions in the questionnaire is a closed question; b) Interview technique. The instrument used in conducting interviews is a structured open list of questions; c) Documentation techniques. The total number of respondents used in this study was 35 and informants were 3. The determination of the respondents and informants of the research was carried out with a purposive technique, where the main consideration used was the key individuals directly involved in the Nagari forest management institutions. The focus of the data used is: a) stakeholder perception of Nagari forest management; b) strategic issues related to collaboration between agencies; c) hierarchy between Nagari forest management agencies; d) patterns of collaboration between agencies involved in the economic development of agricultural communities in Nagari forest areas. Quantitative data is analyzed by several techniques are [25]

- 1) The Linkert scale technique: This technique is used to measure respondent perceptions (Joshi et al, 2015). In its application, the respondent is asked to respond to the question provided the answer options. As for the answer options provided: a) a score of 5. Strongly agree (SS); b) score of 4. Agreed (S); c) score 3. Neutral (N); d) score of 2. Disagree (TS); e) Score is 1. Strongly Disagree. To get the total score on each answer choice, the following formula is used: T (total number of respondents who chose) \times P_n (Likert number of choice scores). To be able to interpret the calculation scores, the highest score is $5 \times 35 = 175$ (strongly agree) and the lowest score is $1 \times 35 = 35$ (strongly disagree). Whereas the intervals used to interpolate the scores of the respondents' questions are



- 2) Quantitative descriptive analysis by utilizing mathematical calculations to produce means and percentages. To describe the results of the mathematical calculations, the 5 W + 1 H approach is used
- 3) Analysis of the data with the software Structural Equation Model-Partial Least Square (SEM-PLS). The SEM_PLS used is the measure model. This model allows only a unidirectional model of the relationship between variables. The principle is the same as in multiple linear regression. In this case, it relates all the manifest

variables (x) to their latent variables (y). To measure reliability, Cronbach's Alpha was used with a minimum value of 0.7 and an ideal value of 0.9. The absolute correlation between the latent variables and their indicators must be > 0.7 (absolute value of the raw external loadings). Reflective indicators should be removed from the measurement model if they have an external raw loading value below 0.4 (Garson, 2016).

Qualitative data is analyzed using the data synthesis technique, which is a step in the systematic review process where extracted data (study findings) are combined and evaluated. In addition, it also uses interpretation techniques, which are methods of interpreting data that are performed to search for the results of a research process.

RESULTS AND DISCUSSION

A. Takeholder Perceptions of The Management of Nagari Forests

Perception is the process of recognizing or identifying something using the senses [26]. A person's perception is influenced by several factors, including the individual's physiological state, attention, interests, needs, experiences and memories, and mood. In addition, a person's perception can also be influenced by external factors such as stimulus, the color of the object, uniqueness, intensity and movement.

Table 1: Stakeholder Perceptions of the Management of Nagari Forests in West Sumatera

No	Indicator	Average score of respondents' perceptions				
		KPH Pesisir Selatan	KPHL Solok	KPHL Bukit Barisan	KPHL Pasaman Raya (Pasaman Regency)	KPHL Pasaman Raya (West Pasaman Regency)
1.	Community-based management of Nagari forests.	4 (Agree)	3,5 (Neutral)	3,8 (Agree)	3,3 (Neutral)	4,4 (Agree)
2.	The community has the authority to manage Nagari forests.	4,2 (Agree)	3,4 (Neutral)	3,8 (Agree)	3,7 (Agree)	4,4 (Agree)
3.	The community can be used for the management of Nagari forests.	4,1 (Agree)	3,5 (Neutral)	3,7 (Agree)	4,1 (Agree)	4,3 (Agree)
4.	Nagari forest management requires a structured institution.	3,4 (Neutral)	4 (Agree)	3,4 (Neutral)	3,6 (Agree)	4 (Agree)
5.	The Nagari forest management agency has been legalized	4,3 (Agree)	3,5 (Neutral)	3,6 (Agree)	3,3 (Neutral)	4,3 (Agree)
6.	The number and composition of full and qualified Nagari forest managers.	3,8 (Agree)	3,9 (Agree)	3,4 (Neutral)	3,3 (Agree)	4,2 (Agree)
7.	There is a sufficient allocation of funds for the Nagari forest management agency.	2,9 (Disagree)	3,3 (Neutral)	3 (Neutral)	2,9 (Disagree)	3,8 (Agree)
8.	There is a complete set of tools and infrastructure	2,7 (Disagree)	3,2 (Neutral)	3 (Neutral)	2,9 (Disagree)	3,9 (Agree)

	to run the program	e)				
9.	There is government support for the Nagari forest management agency..	3 (Neutral)	3,5 (Neutral)	3 (Neutral)	2,8 (Neutral)	3,4 (Neutral)
10.	The performance of the Nagari forest management agency is in accordance with the duties and functions..	3,5 (Neutral)	3,9 (Agree)	3,7 (Agree)	3,3 (Neutral)	3,9 (Agree)
11.	The community is experiencing the economic benefits of the Nagari forest.	3 (Neutral)	3,2 (Neutral)	3,5 (Neutral)	3,9 (Agree)	4 (Agree)

Source: Results of interviews with respondents, 2023

Based on the data in the table above, it can be seen that the perception of respondents from various stakeholder groups (KPHL, KPHP, KUPS, LPHN, State Government Devices and local communities) is highest at an average of > 4 which means they agree with the statements provided, while the average value of the lowest perception statements is at < 3 meaning they only give a satisfactory response to the available statements [27].

In general, respondents to this study agreed that social forestry is managed in a community-based manner. This is because the community has broad authority in implementing social forestry management. In addition, the potential of community resources in the area of social forestry is also one of the capitals that can be used in managing social forestry.

To organize the human resources of social forestry managers, you need a body that is integrated into formal institutions. It was agreed by the respondents that the institution became a vehicle for social forestry management SMEs. According to the perception of the respondents, the actors or SMEs incorporated into social forestry institutions must have a complete number and their competence is considered competent in carrying out their tasks and functions. According to the respondents, social forestry management agencies have been established for each of its administrative levels. Similarly, the availability of social forestry managers is considered sufficient. However, the competence of the SDM managers still requires capacity building measures to enable them to carry out their duties and maximum functions. In addition to institutions, managers are the main instrument in the institution of social forestry, the financing of activities is also a strategic element in ensuring the implementation of programs and activities under the control of social forestry. These programs and activities are aimed at improving the well-being of the community by using the improvement of the community's economy as a measure of its success. In fact, the allocation of funds for the development of community economic activities in social forest areas is not yet fully available.

This is evidenced by the perception of respondents who generally disagree that the current budget funds have been made available in accordance with the needs of social forestry management to improve the economy of the community [28]. As well as the availability of supportive facilities and infrastructure to support the smooth implementation of community economic development programs and activities in social forest areas. Some social forestry that exists in some KPHs already have the support

of means and infrastructure, but there are also KPHs that do not have the support of means and infrastructure according to their needs as found in KPH Pesisir Selatan and KPHL Pasan Raya that are in the administrative area of Pasaman Regency. The inadequacy of these supports and infrastructures has hampered some social forestry managers in achieving their goals. Looking at the performance of social forestry management agencies, respondents generally stated that social forestry agencies at the KUPS and KTH levels perform their duties and functions sufficiently. That is, implicitly, the respondents assess that the social forestry management institutions (KUPS and KTH) are not optimal or maximum in carrying out their tasks and functions. Although some of the respondents stated that the performance of social forestry management agencies has been good, but not all of them can perform their tasks and to the maximum functions.

Respondents also stated that communities have benefited from the existence of social forestry programs in their area. Among the benefits they feel is the addition of new sources of livelihood from the activities organized in the social forest area. However, some of the respondents also stated that they have not experienced the economic benefits of social forestry activities. In carrying out social forestry management programs and activities, most of the social forestry institutions have involved youth and women. Youth and women's engagement is actually participatory. What this means is that the young men and women involved are the productive age populations that exist in the social forest. Of course, the SDM that reside in the Nagari level social forestry management institution has elements of youth and women.

B. Strategy Issues Related to Inter-Institution Collaboration

Based on the results of interviews with several informants, the relationship between stakeholders of social forestry management is more instructional and facilitative. The management of social forestry is carried out in succession from the level of ministries, provinces, districts to the lowest level at the Nagari level. At the ministerial level there is a focus on accelerating the management of Social Forestry. At the provincial level there is a social forestry department that is under the auspices of two assistants in the field of economics. The tree was planted by people from the forestry service of the province of West Sumatra. Then at the district level there is the UPTD which is divided based on the DAS. The UPTD is composed of KPHL Pasaman Raya, KPHL 50 Kota, KPHL Agam Raya, KPHL Bukit Barisan, KPHL Sijunjung, KPHL Solok, KPHL Ulu Batang Hari, KPHP Pesisir Selatan, KPHP Dharmasraya and KPHP Mentawai Islands. It is also known as the Mentawai Islands. Each KPHL or KPHP consists of several LPHNs (Lembaga Perhutanan Nagari). LPHN or some also call it with KPS is an institution for managing social forestry at the Nagari level. Then each LPHN has a KUPS (Social Forestry Enterprise Group). THIS is where the communities around the forests get their livelihoods from.

The KUPS could have originated from that group and had a clear organizational structure. Some of the KUPS that have developed well and made a great contribution to its management are Nyarai and Solok Rajo KUPS. Each KUPS is required to be active and creative in managing and utilizing the potential they have. However, the success of KUPS is not independent of the help of LPHN, KPHL/KPHP and other institutions. Therefore, each Institution should be able to build good relationships with all relevant stakeholders. More clearly the relationship between stakeholders in social forestry management can be described as follows.

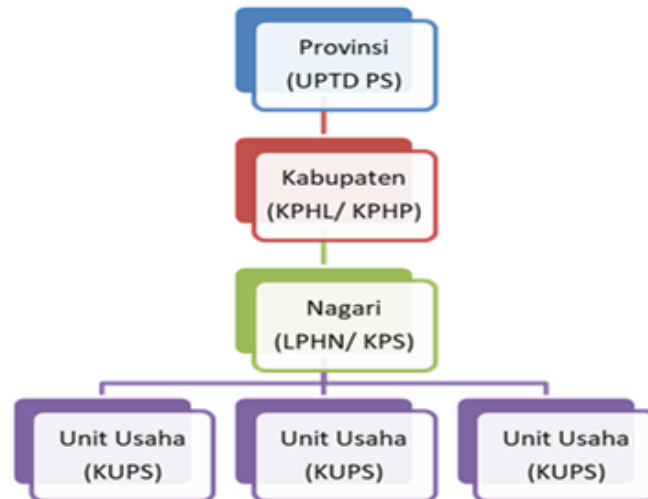


Figure 1: Stakeholder Relations of Social Forestry Managers

From the picture above it can be seen that there is a reciprocal relationship between the institutions. Higher institutions provide interruption and facilitate institutions with lower levels. The lower institution still has to coordinate with the higher institution regarding the activities or programs to be implemented. This shows that social forestry management cannot be implemented without the collaboration of all stakeholders.

The success of social forestry management can be seen in the success of KUPS in developing its business units. The activity and creativity of KUPS in managing the natural resources contained in the Social Forestry Area cannot be separated from the participation of LPHN, KPHL and UPTD at the provincial level. There are three main variables that affect the performance of the Institute namely administration and institutional, group activities and reporting, all three variables are said to affect when the correlation value is greater than 0.7. [29]; [30]. This is the first time that the United States has done so. The three variables were used to assess the performance of the Social Forestry Institute in West Sumatera. A Sem-PLS analysis was conducted to see what variables most affected the performance of social forestry institutions.

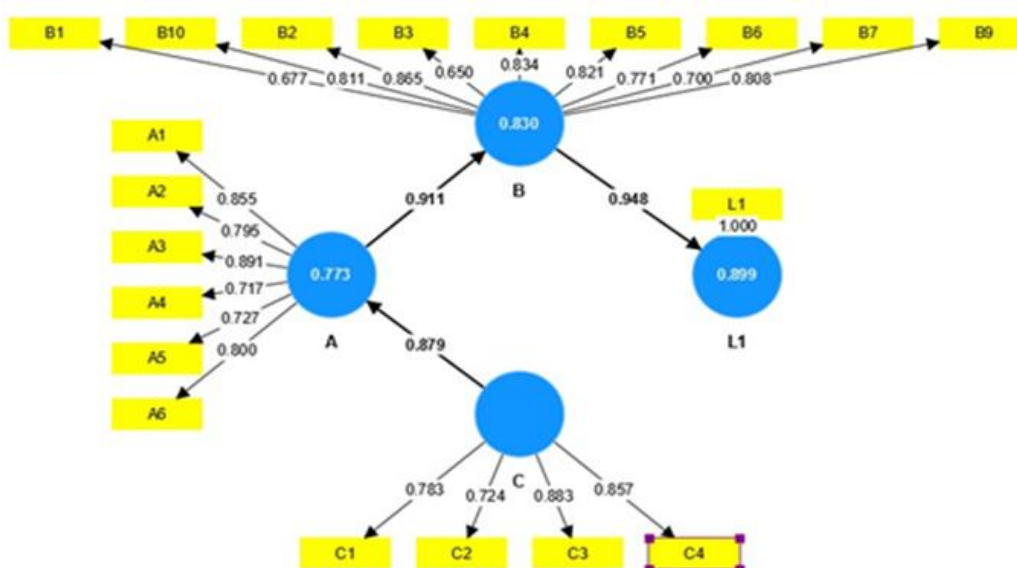


Figure 2: Diagrams of the PLS Sem

From the results of the PLS Sem analysis, it is known that administrative and institutional variables, group activities and reporting affect the performance of the Institution although they do not affect it directly. The above figure is the result of PLS Sem's analysis that explains the influence of these three variables on the performance of the Institution. From the above figure it can be seen that Variable group activity is a variable that directly affects the performance of an Institution. This is shown by the value of B to L is 0.948. Where B is the group activity variable and L is the performance of the Institution.

However, without the support of variables A and C, variable B would not have a significant impact on the performance of the Institution. The reporting variable C will affect the administration and institutional variables A. The reporting variable has a significant influence on the administration and institutional variables. This is indicated by its correlation value of 0.879. Then the administrative and institutional variables exert a significant influence on the group activity variable, which is indicated with a relationship value of 0.911.

So group, administrative and institutional activities and operations have an impact on the performance of social forestry institutions. But it's not a direct influence. Variables that directly influence the performance of the institution are the activities of the group while other variables are the supporting variables of the institution's performance. However, if one variable is removed, it will affect the other variables, which will eventually interfere with the performance. Without reporting, the administration and the institutions will not function properly. When the administration and the institutions are not functioning properly, the activities of the group will not be carried out to the fullest. If the activities of the group do not go well, then the performance of the Institute will not go well.

Table 3: Pvalue table of the analysis of the PLS

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
A1 <- A	0.855	0.857	0.037	22.963	0.000
A2 <- A	0.795	0.791	0.061	13.125	0.000
A3 <- A	0.891	0.894	0.032	27.754	0.000
A4 <- A	0.717	0.713	0.091	7.893	0.000
A5 <- A	0.727	0.726	0.074	9.846	0.000
A6 <- A	0.800	0.803	0.067	11.872	0.000
B1 <- B	0.677	0.681	0.125	5.422	0.000
B10 <- B	0.811	0.810	0.056	14.399	0.000
B2 <- B	0.865	0.876	0.033	26.442	0.000
B3 <- B	0.650	0.651	0.080	8.157	0.000
B4 <- B	0.834	0.840	0.045	18.679	0.000
B5 <- B	0.821	0.818	0.052	15.914	0.000
B6 <- B	0.771	0.772	0.067	11.584	0.000
B7 <- B	0.700	0.698	0.076	9.246	0.000
B9 <- B	0.808	0.807	0.045	18.103	0.000
C1 <- C	0.783	0.788	0.060	13.129	0.000
C2 <- C	0.724	0.729	0.128	5.654	0.000
C3 <- C	0.883	0.882	0.036	24.600	0.000
C4 <- C	0.857	0.852	0.080	10.778	0.000
L1 <- L1	1.000	1.000	0.000	0.000	0.000

A. Administration and Institutionalism

1. There's a chain of custody.
2. The existence of a cash book, a register of members and a book of investors
3. The existence of the certificate of authentication of the Institution
4. Complete administrative and institutional facilities and infrastructure
5. There's a budget.
6. Inter-institutional communication was established

B. Group activities

1. Have a work plan.
2. Group members understand and implement the work plan
3. Group members have been cultivating in social forestry according to the work plan
4. Members of the group have undertaken the development of social forestry ventures according to the work plan
5. Members of the Institute get maftaan from social forestry area
6. Have a cooperative and already partnered
7. Has carried out timber and non-timber forest products processing activities
8. Conduct regular meetings within the membership of the Institute and also between the institutions
9. There's a budget for social forestry management.
10. Availability of means and infrastructure for social forestry management

C. Reporting

1. Deliver the report in a timely manner and in accordance with the specified completeness
2. Have all documentation of activities
3. Have and implement a reporting system
4. Carrying out monitoring and evaluation for each activity already implemented

From this analysis it can be concluded that the success of KUPS in West Sumatra is influenced by its wetland performance. As described above there are three main variables that affect the performance of the Institution. So, to improve the success of the Institute we have to start by improving the performance of the Institute. In conclusion, if we want to make social forestry a source of livelihood for the people around the forest, then the performance of the Institution that manages the social forestry must be improved and maximized. Because at the moment the low KUPS value is not due to the lack of resources but due to the performance of the Institution that is not yet maximum. From the results of this study, it can be concluded that the performance of social forestry management institutions has not been demonstrated by the following:

1. lack of facilities and infrastructure in the institution
2. many institutions do not have certificates

3. limited human resources to cultivate or develop the business
4. there is no cooperative yet
5. Budget funds are still limited
6. Monitoring and evaluation are not fully functional.

C. The Hierarchy Between Nagari Forest Management Agencies

In order to develop the community economy through social forestry programs in West Sumatra requires collaboration between institutions and related stakeholders. Such collaboration can only be realized when the network of cooperation has been well established. It is undeniable that the economic activity of the community around the social forestry area is dominated by agricultural activities in the broad sense (farming of food crops, horticulture, plantations, fishing and livestock). Such conditions require the managers of social forestry institutions not to operate within the scope of the mono sector. To that end, the study also generates potential collaborations that can be done to optimize social forestry institutions in improving the economy of the community as seen in the following figure.



Figure 4: Potential for Inter-institutional Collaboration in the Management of Social Forestry in West Sumatera

Opportunities for cooperation between social forestry management agencies with other institutions or agencies related to the improvement of the community's economy can be done by establishing a written cooperation. The written cooperation is in the form of MoA and MoU between the institutions. The institutions that can be built in collaboration are:

(a) Government offices

The economic upliftment of communities is not only achieved through social forestry activities alone. There are several other government agencies that carry out this activity, such as the Agriculture Department of Food Plants, Housing, Livestock, Fisheries, Industry Department and UMKM, Tourism Department. Programs and activities carried out by KUPS can actually be synergistic with programs promoted by other government agencies. Since the social forestry program is a government policy, it would certainly not be difficult to synergize it with the community economic empowerment programs carried out by other government agencies.

(b) College

In order to develop the quality of the products, the added value of the products and other innovations needed by KUPS can be done in cooperation with the University (PT). This is because PT has responsibility in terms of developing science and technology that can be applied by KUPS. In addition, PT has an obligation to devote to the community in order to help the realization of the empowerment of the community economy.

(c) Prison establishments

The community institutions in this case are more aimed at the Society's Volunteer Institutions (NGOs) that are engaged in the field of social forestry and or economic empowerment of the community. Cooperation with NGOs can help improve the competence of social forestry management agencies. Generally, NGOs have programs and activities oriented to increase the capacity of their target objects, such as conducting trainings.

(d) The business operator/ the association

Cooperation can also be done with local and regional players or even those who already have a large scale. Cooperation with business actors can help KUPS and KTH overcome the problems of marketing the products resulting from its activities. This can also apply to KUPS that are oriented towards tourism activities and other business sectors. Sometimes the operators of some plantation products are also incorporated into the associations or unions they form. Therefore, cooperation with these associations can also be built to help solve product marketing problems.\

(e) Public and private

The cooperation built with the public/private sector is more oriented towards finding the capital solutions needed by KUPS and KTH. These institutions generally have a community empowerment fund in the form of CSR. Once the cooperation has been established, it will be easier for KUPS to apply for capital assistance in carrying out community economic development programs and activities in the social forestry area.

CONCLUSION

- 1) Perception for each stakeholder in relation to the institutional conditions of social forestry management in West Sumatra is at rank 2-4. This condition shows that the respondents agreed with some of the perception variables, however, some were not approved by the respondents related to the availability of funds for the implementation of programs and activities as well as the availability of means and infrastructure in carrying out programs and activities. That is, social forestry management institutions at the nagari level face constraints in terms of funding, availability of means and resources they need to carry out activities mainly to improve the economy of the community.
- 2) There are three main variables that affect the performance of the Institution namely administration and institutional, group activities and reporting. These three variables are interrelated in influencing the performance of social forestry institutions in West Sumatra. Where administrative and institutional variables have a significant influence on the activities of the group and can affect the performance of social forestry management institutions in West Sumatra. The performance of the

Institution is influenced by the activities of the group described by nine indicators, namely the existence of a work plan, running a work plan, having a business, benefiting from the business, environmental services, having cooperatives and partners, the added value of existing resources, the allocation of funds and supported by infrastructure.

- 3) Opportunities for cooperation between social forestry management agencies with other institutions or agencies related to the improvement of the community's economy can be done by entering into a written cooperation. The written cooperation is expressed in the form of MoA and MoU between institutions including government agencies, colleges, community institutions / NGOs / NGOs, entrepreneurs / associations, Nagari -owned enterprises and private companies.

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