

Forest Conservation and Social Welfare: The Legal Perspective of Society-Based Forest Resource Management in Ngawi Regency, Indonesia

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Abstract: - Forest management in Java currently tends to be centralized. It is implemented in a top-down manner with state-based forest resource management, causing conflicts in the community. Thus, there needs to be a new paradigm, which is society-based forest management. The objective of this research is to analyze the society-based forest management in Ngawi Regency, East Java, Indonesia from a legal perspective. The legal perspective of society-based forest management is the essence of this policy because, without legal support, the management would be illegal. This study used the socio-legal research approach, with a naturalistic qualitative method. The results show that from the perspective of the legal implications, society-based forest management brings society benefits in the economic aspect. Such a benefit encourages society to protect the forest because it is more profitable for them if the forest is protected rather than destroyed. In the social aspect, it increases the welfare of the people. There is also legal certainty in the form of a cooperation agreement between the company and the forest farmers. In the ecological aspect, it contributes to forest preservation as forests are better maintained.

Key-Words: - forest, society-based, management, welfare, conservation, legal perspective, Indonesia.

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1 Introduction

Indonesian forest areas are known as the lungs of the world. Unfortunately, they are challenged with deforestation and land degradation, causing international and national concerns. Worse, in many areas, forest resource management is rampant with conflicts.

In Java Island, Indonesia, forest resource management is managed by Perum Perhutani (the General Company of State Forestry, i.e., the Indonesian governmental body which manages forest areas in Indonesia) since 1972, [1]. Perhutani's role is to implement policies in managing the state's forests so that the state may obtain foreign exchange. It also aims to bring optimum benefits to the company, the society, the development of the national economy, and the ideology of forest control, [2]. This 7 mandate is granted by the state and is regulated in the Republic of Indonesia's Governmental Decree No. 72 of 2012 regarding the General Company of State Forestry (Perum Perhutani). Unfortunately, there is a staggering rate of issues associated with forest

destruction and deforestation in this country. From a historical aspect 3, the forest resource in Java has been managed since the colonial era. Yet, until now, in the socio-economic aspect, it has not provided optimum benefit to the society's welfare, [3], [4], [5], [6].

Timber theft and plant destruction are not the only causes of destruction and losses in forests. But many factors lead deforestation to happen. In carrying out the forest development in Java, Perum Perhutani's main goal is uniting the interests of forest resource conservation and the interest of increasing the welfare of villagers that reside around the forest, [7].

In implementing forest management, some external problems must be faced, such as limited work opportunities and poverty in the villages. Meanwhile, the internal problems include the companies' feudalistic and bureaucratic culture as well as the human resources' level of professionalism. These problems result in conflicts between Perum Perhutani and the people around the forests.

This condition is inseparable from the interests in forest management and exploitation to fulfill the state's economic ambition to increase foreign exchange. The preamble of the Constitution No. 41 of 1999 regarding Forestry explains that the forest is a capital of national development which has real benefits to the life of Indonesians. These include ecologic, sociocultural, and economic benefits that must be balanced and dynamic. Because of that, the forest must be sustainably managed, taken care of, protected, and utilized for the welfare of the current and future generations of the Indonesian people.

In the context of regional autonomy, in managing forest resources, Perum Perhutani must change the state-based paradigm, [8], into that which is society-based, [9], [10]. Thus, it must coordinate and cooperate with regional governments to create areal planning, formulate policies, and organize empowerment programs for the villagers who live around the forests. To apply that work plan, there must be genuine partnership between the Perum Perhutani, stakeholders, forest village society, business owners, non-governmental organizations, and universities.

Since Perhutani established a social program with a prosperity approach, social forestry has been rampant with conflicts. The peak of this conflict happened during the Reformation Era when there were cases of forest looting. Such a case also happened in Ngawi Regency, East Java Province. From 1998 to 2001, forest looting escalated, reaching around 6000 ha. To handle this case, Perum Perhutani issued a policy on society-based forest resource management based on the Decree of the Head of Perum Perhutani's Supervisory Assemblage, which was then renewed with the Director's Decree No: 268/KPTS/DIR/2007 regarding Society-Based Forest Resource Management Plus.

Based on the description above, the problem of this research is: How is the legal perspective of the society-based forest resource management in Ngawi Regency to achieve social welfare?

2 Research Method

To analyze this paper, the authors used the socio-legal research method. The socio-legal research method was field-based research. With this approach, the law is positioned as a social symptom that needs acceptance from the public, because without acceptance from the public, the law is just some text without any meaning. It connects the reality of the actions of individuals and people with the law. In the socio-legal approach, a phenomenon

is not solved by merely providing information on the legal stipulations. But it must be combined with approaches from other perspectives, [11], [12], [13]. This is qualitative research that profoundly and comprehensively analyzes data, [14].

The qualitative (naturalistic) research contains the following basic considerations:

- This research analyzes society-based forest resource management based on natural settings,
- The researcher acts as a research instrument,
- This research describes and provides an interpretation of the data found in the field, and
- This research analyzes the phenomena found in the data in the field.

After the data was collected and analyzed, they were then described in the form of sentences, to obtain a detailed, complete, and clear description of the research problem, [15].

The primary data of this research were obtained from observing the field or the society around the forest and their socio-cultural conditions. Then, the researcher obtained secondary data from journals, books, and other sources such as laws, treaties and jurisprudence.

3 Results and Discussion

3.1 The Forest Condition in Ngawi Regency

Geographically, the Ngawi Regency is located in the western area of the East Java province, which borders the Central Java province. The width of this regency is 1.298,58 km². Around 39% of the area, or 504,8 km² is wet rice field land. In the administrative aspect, it is divided into 19 districts and 217 villages, where 4 out of the 217 villages are sub-districts. In the aspect of territorial administration, Ngawi Regency is divided into 17 districts, 4 sub-districts, and 213 villages.

In 2012, the number of people living in Ngawi Regency was around 865,627 people, consisting of 423,083 males and 442,544 females. On average, there are 3,94 members in a family. The population density is 668 people per kilometer square.

The width of the Ngawi Regency area is 1.295,98 km², with a topographic stretch of 25 m to 1000m above sea level. In the aspect of land use, 50,644 ha (35,19%) of the Ngawi Regency land is used as people's agricultural land. It has yards with a width of 18,075 ha (12,89%), 14,744 ha (8,67%) of moors, 2,632 ha (3,33%) of plantations, 45,428.6 ha (50,63%) of state forests, and 3,712.9 ha (4,47%) of people's forests. Generally, Ngawi is categorized into climate C according to Schmidt and Fergusson,

because it is dominated by lowland plains, and agricultural land, [16].

Regarding the areal condition of Ngawi Regency, almost fifty percent of its area is a forest area, which is managed by three Forest Management Units (*Kesatuan Pemangkuan Hutan/KPH*). They border other Forest Management Units, such as the Padangan Forest Management Unit, the Bojonegoro Forest Management Unit, the Purwodadi Forest Management Unit, and the Randublatung Forest Management Unit. Administratively, the three Forest Management Units which manage the forest area in Ngawi Regency are as follows:

1. Ngawi Forest Management Unit manages 44.500 hectares of forest land, including \pm 35.000 hectares of productive forest which produces teak, and \pm 25 hectares of protected forest.
2. Lawu Forest Management Unit, with 7.737,60 hectares of forest area, consists of 2.210 hectares of productive forest with pine trees as the main plants and 5.527,60 hectares of protected forest, with jungle plants and pine trees.
3. Sadaran Forest Management Unit with 2.037,1 hectares of forest area. It consists of 2.035,90 hectares of productive forest with teaks as the main plants and 1,20 hectares of protected forest. In the forest area of the Sadaran Forest Management Unit, there are two water dams, i.e., the Pondok dam and the Sangiran dam.

3.2 Conflict of the Bringin Forest in Ngawi Regency

The Forest Management Sub-Unit (*Bagian Kesatuan Pemangkuan Hutan/BKPH*) of Bringin is part of the Sadaran Forest Management Unit area. It is an area of Ngawi Regency which experienced massive forest looting between 1998 and 2001. At that time, 931,8 hectares of forest were looted, with a timbre volume of 394.738,508 m³. The looted areas included plots of land planted with trees that were categorized as level IV to VIII aged wood. The losses are not limited to the elimination of the forest's components, but the looting process also took the lives of people and the apparatus. This cannot be separated from the economic crises which put people under pressure. This caused them to feel the need to obtain free resources from the forests.

People did not have access to the forest's natural resources. This caused outbursts of people's anger, making them obtain the forest's resources through looting. Perhutani's total loss due to forest looting was as follows:

1. In the Bringin Forest Management Sub-Unit, the width of the forest looted was 931,8

hectares, with a total timbre volume of 394.738,508 m³;

2. In the Rejuno Forest Management Sub-Unit, the width of the forest looted was 988,2 hectares, with a total timbre volume of 329.628 m³; and
3. In the Pajaran Forest Management Sub-Unit, the width of the forest looted was 823,4 hectares, with a total timbre volume of 751.850 m³.

But worse than that, the forests' condition experienced terrible degradation. During the period where looting escalated from 1998 to 2001, the accumulative area of Ngawi's looted forests both in the highland and lowland plains was \pm 6.000 hectares.

The state-based forest resource management applied by Perhutani caused people who live surrounding the forests to feel marginalized. They had no access to the forest's natural resources and they cannot obtain any benefit from them. The looting was a form of the "society's reaction" to use the forests' natural resources which must be viewed as a normal phenomenon. But, if this looting reaction tends to create forest degradation and ecosystem destruction, a solution must quickly be found. It must be considered that most of the people in that area are forest farmers whose lives depend on the arable land given by Perhutani with the intercropping system. Thus, so far, the forest farmers' activities are limited to contract workers who plant teak trees for two years with the intercropping system. After two years, they must leave their share of the land. Since that time, people's access to the forest is closed. This system causes the people to be marginalized as they have no access to supplies of needs that were formerly obtained from the forest. The low ownership of land causes the people surrounding the forest to become poor. It causes a higher level of dependency, making them have more interaction with the forest area, [17].

Based on the research results on the issue between poverty and the forestry sector in Ngawi Regency, the causes of this phenomenon are as follows: (1) Perhutani's policies regarding the work contract with a period of 2 to 3 years cause the poor people who do not have land stay poor when the arable land contract is over, (2) around the forest, the land consists of badlands. Thus, people's plants that are grown there have low productivity, causing people's income to also be low, (3) there is low ownership of land, as most of the available land is owned by people who have a good economic condition. Because most people do not have land to work on and there is a lack of development

programs, there is a limited number of work opportunities, (4) there is looting or illegal logging, which is caused by the policies which are not society-friendly. There is low law enforcement, thus the people around the forest lost their sources of income, (5) The poor people who live around the Perhutani forests do not usually obtain any guarantee of having their basic physical needs fulfilled. Yet, they have low access to the forest natural resources, (6) The poor people who live around the forest are not involved in formulating forest management policies, and (7) there is the tradition/ritual of contribution called *adat hajatan*, which causes a lot of expenses. Thus, it decreases the amount of money that may be allocated to people's basic needs. It also causes them to have debt to other parties.

There must be innovative strategies to decrease the rate of poverty associated with forest natural resources. The state-based forest resource management model must be shifted into that which is society-based. The efforts to decrease poverty associated with the forestry sector must be well-planned. The main points of this new forest resource management model are as follows:

(1) There must be an increase in society's position in influencing forest management. With an increased societal position, society can be empowered. Thus, they are not in a desperate position which makes them have no choice but to loot the forest.

(2) There must be a mutual commitment between the people, the Regional Government, and the Perhutani in creating forest management that is sustainable, just, and democratic. This must be encouraged because the commitment between all of these parties can create mutual prosperity as they can each benefit from the preserved forest.

(3) There must be the protection of the poor people's rights to access the benefits of the forests' resources. By granting the people the right to access forest resources, they can gain better economic welfare. It would be more beneficial for the poor people if they can harvest forest honey, tree saps, and grass. They can sell honey and sap. Then, they can use the grass to feed their cattle. Next, they can farm in the forest or collect forest fruit to increase their economic income.

(4) There must be the participation of the forest village people in formulating the policies regarding the forest natural resources which uphold the principles of justice and sustainability. This is so that the law can truly cater to the needs of the people that live around the forest as they are the ones whose lives depend on these forests.

3.3 The Legal Perspective of People's Cooperation in the Forest Natural Resource Management in Ngawi Regency

In the regional autonomy era, one of the developmental visions and missions of Ngawi Regency is to increase the welfare of the people as optimally and as quickly as possible through the optimization of all potentials, including natural resource and human resource potentials. With regional autonomy, the forestry sector's role must be increased to solve the problems in regional development. There must be basic changes in forest management, from that which is centralistic to that which is decentralized. This may be implemented by giving more power to the regions in managing forests in a democratic, participative, and transparent manner. It must have an orientation toward the people's welfare. The spirit of regional autonomy is the starting point for increasing the roles of the regional government, the people, and other stakeholders in managing the state forest. This is to create a forest management model which is sustainable, just, and democratic to increase people's welfare.

There are some obstacles in encouraging the roles of the regional government and the people in forest resource management. It includes the institutional problem of forest managers where it does not run as it should. The existence of the Regional Government Constitution has not yet holistically resolved the dualism problem of the institutions which manage the forests in the regions. These two institutions are the Regional Forestry Service, which has the responsibility to manage forests outside the state forest territory, and Perum Perhutani, which has the responsibility to manage the state forests. With such conditions, the regional government and the society do not yet have full access to be involved in managing the state forests. Villagers surrounding the forests cannot proportionally use the forest's natural resource potential, even though they highly depend on the forest area.

The effort to elaborate the institutions in the forest resource management of Ngawi Regency is carried out through some commitments, which are:

(1) The commitment of the Ngawi Regency government to not acquire the assets and roles of Perum Perhutani; (2) Giving optimum roles to the parties in implementing the Decree 136/Kpts/Dir/2001 on the society-based forest management; (3) the formation of the Ngawi Regency Society-Based Forest Management Communication Forum through the Regent's Decree No. 188/26/415.011/2003 on March 14th, 2003; and also (4) growing society's awareness on carrying out

disaster mitigation to prevent actions and behaviors which destroy the environment and the forests.

The Ngawi Regency government issued the society-based forest management program for the first time in 2003, which was the result of cooperation between the stakeholders of the Ngawi Regency. These stakeholders are the Ngawi Regency Government, Ngawi Forest Management Unit, Sadaran Forest Management Unit, and Lawu Forest Management Unit. As a pilot project, the society-based forest management program was carried out at twelve villages, which were spread over four Forest Management Sub-Units and three Forest Management Units. Administratively, these villages were located in four Districts which were facilitated by non-governmental organizations, i.e., the Bintara Yogyakarta and LeSEHan Madiun. The village areas facilitated by the Bintara Yogyakarta non-governmental organization were as follows: four villages of 49 hectares under the Ngawi Forest Management Unit, two villages with an area of 45,5 hectares under the Sadaran Forest Management Unit, and three villages in Lawu Forest Management Unit with the area of 22,5 hectares. Meanwhile, the three villages in the Sadaran Forest Management Unit with an area of 425,7 hectares were facilitated by the LeSEHan Madiun non-governmental organization. To support these facilitating activities, each non-governmental organization sought income from donor institutions. The Ngawi Regency government has only so far supported the funds for meeting activities and socialization.

After running for one year, to push the acceleration of the society-based forest management implementation in Ngawi Regency, there was a cooperation agreement between the Ngawi Regency government; Ngawi Forest Management Unit, Sadaran Forest Management Unit, Lawu Forest Management Unit of Perum Perhutani; and non-governmental organizations (Bintara non-governmental organization, Lesehan non-governmental organization, Pinbuk non-governmental organization, and Prima non-governmental organizations) regarding the society-based forest management on May 26th, 2004.

In this cooperation agreement, the Ngawi Regency government was regarded as the first party. The second party was Perum Perhutani, and the third party consisted of non-governmental organizations. In that agreement, the first party was obliged to provide facilities, infrastructure, licensing, and the budget needed to support and ease the establishment of activities according to the capability of the Ngawi Regency Regional Budget and Expenditures. Then,

the second party was responsible to provide facilities and infrastructure, licensing, and the budget needed to support and ease the establishment of activities. Lastly, the third party was responsible to organize the development, coaching, and technical or non-technical coaching to the people who live in the location where the society-based forest management is applied.

Then, the supporting policies of the society-based forest management in Ngawi Regency are classified into two policy groups, which are:

a. District-level policies. At this level, some Regency Decrees issued were as follows:

1. Ngawi Regency Decree No. 188/26/415.011/2003 on March 14th, 2003 regarding the Society-Based Forest Management Forum of Ngawi Regency.
2. The cooperation agreement of the Ngawi Regency No. 522/06/PK/415.011/2004 on May 26th, 2004 which involved the Ngawi Forest Management Unit, the Sadaran Forest Management Unit, the Lawu Forest Management Unit of Perum Perhutani and developmental non-governmental organizations.
3. Decree of the Ngawi Regent No. 188/295/404.013/2007 on June 18th, 2007 regarding the Ngawi Regency Society-Based Forest Management Forum.

b. Technical operational policies. Some decrees were issued by the Head of the Forestry and Plantation Service, which are:

1. Decree of the Head of the Forestry and Plantation Service of Ngawi Regency No. 821.2/471/404.104/2006 on June 29th, 2006 regarding the Facilitated Village Area and the Main Roles of Forestry and Plantation Instructors.
2. Decree of the Head of the Forestry and Plantation Service of Ngawi Regency No. 522/108/404.104/2007 on February 1st, 2007 regarding the Agreement of the Society-Based Forest Management Instructor of 2007 in Ngawi Regency.
3. Warrant No. 522/117/404.104/2007 on February 9th, 2007 to the Society-Based Forest Management Instructor of Ngawi Regency.
4. Decree of the Head of the Forestry and Plantation Service of Ngawi Regency No. 522/192/404.104/2007 on February 28th, 2007 regarding the Agreement of the Institutional Strengthening Activity of the Society-Based Forest Management of Ngawi Regency Team Coordination Program, the Budget Year of 2007.

Referring to the policies above, there are many related services that were involved in establishing Society-Based Forest Management, such as the Food and Horticulture Plant Service; Animal Service; Environmental, Mining, and Energy Service; Cooperative Service, Industrial and Trade Service; Societal Empowerment Service; the National Unity and Societal Protection; Head of the Food Security and Agricultural Instruction Agency, etc.

From the results of the study, it is shown that some factors encourage the establishment of society-based forest management in Ngawi Regency as follows:

1. The people who live around the forests have the awareness and willingness to rebuild their forests which were destroyed and deteriorated due to looting. This is because their lives are very dependent on the forest products, such as the need for arable land to plant on with the intercropping system. They also need comestibles such as firewood to be sold and leaves for feeding the cattle which are their sources of income. With the destruction of the forest, they cannot use forest products anymore. This causes them to become poor.
2. Ngawi Regency's forest areas, especially the Bringin Forest Management Sub-Unit is a buffer zone for the continuity and the sustainability of the Pondok dam which is already threatened. The condition is that there is a decrease in the dam's water capacity. This makes it difficult for people to find clean water during the dry season. They also have trouble watering their crop for irrigation. As the forest is destroyed, there are often cases of natural disasters such as floods and landslides. Thus, it forces people to be more aware. It encourages them to rebuild their forest with society-based forest resource management.
3. The society-based forest resource management provides products and a profit-sharing mechanism for the resources obtained from the forest. It motivates the forest farmers to be more aware and more enthusiastic even though it needs a rather long time. Before the society-based forest resource management, the people may only manage the arable land for two years with the intercropping mechanism. And then, they must leave the land as the people's access to the forest is closed.

Meanwhile, the factors which become the obstacle to establishing society-based forest resource management are as follows:

1. There is a lack of socialization on the society-based forest resource management by Perhutani as the location is hard to access. This is because the area consists of hills that may only be

accessed through footpaths. Thus, it makes it hard for the officers to provide socialization. Apart from that, the people around the forest lack education. Thus, they do not understand society-based forest resource management. This makes them unable to comprehend their rights and responsibilities in that program, causing them to have various perceptions and thoughts regarding the forest. They only understand that there is only the intercropping program, where after two years, they must leave the arable land and their access to the forest is closed.

2. Before the society-based forest management program was established, a lot of budgets were allocated for the management of forest resources, starting from land clearing until the planting process. There was also a need for subsidized fertilizers and seedlings. Because the company's financial condition is limited, the budget allocated for forest management is minimized as much as possible. This makes people reluctant to participate in forest management. Apart from that, the *pesanggem* (the people who have the responsibility to work on the arable land of Perhutani's forests) also have a limited understanding of society-based forest management. This is because the Perhutani has not given enough socialization regarding this program.
3. The arable land which must be worked on is much too wide compared to the number of *pesanggem*. Thus, they prefer working on arable land which is closer to their houses or their residence. This is so that it is easier to supervise the land. Thus, the shared land which is located far away will be abandoned. It is not taken care of properly; thus the success level of the principal plants' is terrible. Apart from that, there were some cases where the *pesanggem* fought over more fertile lands.
4. Usually, only aged *pesanggem* are enthusiastic about working on the arable land. Meanwhile, young people prefer working in big cities such as Surabaya and Jakarta. They also prefer working as Indonesian Migrant Workers overseas, as they are promised a higher income compared to being forest farmers.
5. The texture of the arable land is not very fertile. It is rocky and chalky. The topography consists of hills. Thus, a lot of budget is needed to work on the arable land to produce maximum farming results. Yet, the workers still have trouble fulfilling their daily living expenses. Thus, this will influence the success level of the plants.

6. The *pesanggem* still has trouble marketing their farm products. Moreover, at harvest time, the prices of farming products tend to drop, thus the money obtained is not enough to cover the production cost. Because of that, there is a cooperative which collects the farmer's products and buys them at a stable price.

Based on the research results, it can be seen that society-based forest management has not yet run well. In the aspect of legal effectivity, there are some factors that cause this to happen. There are four components of the legal system which must be known regarding the operation of the legal system as a process:

- a. The structure of the legal system component consists of interrelated legal institutions, including the law-making institutions, the court institutions and their structure, and other related agencies.
- b. The substance of the legal system component consists of the legal regulations and the legal decisions produced by the lawmakers or the government.
- c. The culture of the legal system component. It consists of a set of values and behaviors which are related to the law.
- d. Facilities and infrastructure.

These four components are interrelated and they influence one another. But the central point is the legal culture. This is because the legal culture contains principal things which become the characteristics of a society. This character will then give contents to the substance which becomes the basis of the regulations. Historically, there is a chance that the substance is formed by the legal structure, [3].

The obstacle in social life which causes the minimum awareness of the law is the lack of legal communication. According to Friedman as quoted by [3], legal communication is a principal requirement of the legal system. Not one person can behave according to the law if he/she does not know the contents of the law. Legal communication has certain aims, including creating a mutual understanding so that there is a change in thoughts, behaviors, and actions. Legal communication in societal life is connected to the legal socialization process. This process is needed so that the people act according to the applicable legal stipulations. The law is hoped to carry out its important role in regulating the actions of society. Because of that, there needs to be an understanding of how the awareness of the law and how the sense of justice develops and grows in society, and how far the law can influence actions.

Based on the writer's analysis, there are some differences between the condition before and after the society-based forest management program was applied.

Before society-based forest management, the condition was as follows:

- a. There was still a gap in the partnership between the people/*pesanggem* and the Perhutani officials. There is no good communication as there was a patron-client relationship and the policies were applied top-down.
- b. The forest farmer groups were not yet organized. The groups were made based on the division of the plots of land formed by Perhutani.
- c. The programs were not clear and the forest farmers were individualistic.
- d. The forest farmers had a depleting trust in the Perhutani officials, as the officials had the tendency to act arrogantly. They also used the approach of becoming like security guards.
- e. The period of arable land management rights for the farmers from the Perhutani was limited to 2-3 years. If the plants are already tall, they must move so the farmers' access to the forest is closed.
- f. Forest farmer groups did not make any regulations to regulate their own mechanisms. Farmer associations in the Forest Farmer Group were not yet strengthened.
- g. There was a low insight into the organization and the society tended to be isolated.
- h. The forest's sustainability was not guaranteed. The security of the forest resources was a complete burden of Perhutani.

After the society-based forest management, the condition is as follows:

- a. There is already an equal partnership between the *pesanggem* and the Perhutani, which is a mutualism symbiosis.
- b. There is the strengthening of the forest farmer groups which are organized by the Forest Resource Management Society or the Forest Farmer Groups.
- c. There are scheduled meetings between the committee and the members of the Forest Farmer Groups, the Perhutani officials, and the local Head of the Village which strengthen the communication between them. It also strengthens the institution.
- d. There is a change in behavior. The parties formed a relationship of mutualism and they have the feeling of being on the same boat.
- e. The forest farmers have started to grow trust in the Perhutani officials.

- f. There is a guarantee for the Perhutani forest land and arable land management rights until the end of the planting cycle. There is also a sharing system for forest products.
- g. There is a plan for an open organization. The people around the forest start to form relationships with external organizations. They obtained coaching from non-governmental organizations and other parties who have an awareness of this issue.
- h. There is a growing awareness of the importance of forest sustainability with the security system which becomes the responsibility of the Perhutani officials and the Forest Resource Management Society officials and members.
- i. The bargaining power of the forest farmers or *pesanggem* increased.

4 Conclusion

From the legal perspective, society-based forest management implies the economic aspect, where forest farmers can tend to wider arable land and gain benefits from it. Thus, the economic needs and the welfare of the people around the forest are guaranteed. Then, in the social aspect, the people's welfare is increased. There is legal certainty in the relations between Perhutani and the forest farmers (*pesanggem*) through the cooperation agreement on the management of the forest resources, thus the rights and responsibilities are clear. In the ecological aspect, there are protective and regulative functions for the forest as an ecosystem. Thus, the forest natural resources' quality is sustainable. The environment is also guaranteed to bring welfare to the people.

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Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

Badollahi: Conceived the research and provided an original idea for the study.

Ruslan: provided materials and data for the research.

Budiono: carried out field research and collected secondary legal materials.

Assaad: designed the methods and selected research data.

Nugroho: interpreted the data and wrote the paper.

Nurkhaerah: analyzed the data and provided a description.

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