



IMPACT OF DEFORESTATION ON FORESTRY AND FOREST VILLAGE COMMUNITY INSTITUTION (LMDH)

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ABSTRACT

The causes of deforestation in Indonesia have been widely discussed in the literature related to this matter, but this article discusses the impact and mitigation of deforestation in the Gunung Kawi forest area. The purpose of this study is to answer the questions that are at the heart of the problem, namely: (1) How do we define "forest", "deforestation" and "LMDH" and "Role of Forestry" in the Indonesian context? (2) What is the principle of the implementation of the cooperation between Forestry Malang Regency and LMDH Wonosari (actors who are grouped as the indigenous people of Gunung Kawi) to reduce deforestation and forest land degradation? The research method uses a descriptive qualitative approach.

The results of this study provide suggestions for Forestry Malang Regency to apply the principles of the Partnership Program with a Public Private Partnership which can eliminate the tendency to find a single cause of the failure of the cooperation program with LMDH Wonosari. Deforestation can be tackled by planting coffee trees "intercropping" and Taro Beneng plants among the pine trees in the Gunung Kawi Forest.

Suggestions for future researchers to be able to know with certainty the involvement of the Malang Regency Government and Forestry in providing deforestation and reforestation data in the Gunung Kawi Forest.

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INTRODUCTION

Deforestation will be stopped by agreement of one hundred countries (which represents 85% of the world's forests). This commitment was made within the new framework at the global climate change Summit (Summit) on Tuesday, November 2,

2021. Brazil, Russia, Canada, Colombia and Indonesia committed to halting deforestation and reversing forest loss and land degradation by 2030 in hCOP26 in Glasgow, Scotland (source: Kabar24.bisnis.com). According to data from the UK government, an area of forest the size of 27 football fields is lost every minute worldwide as a whole. This international pledge will later be supported by funds of US \$ 19.2 billion with details of US \$ 7.2 billion will come from companies and philanthropy. These funds could be used to increase deforestation-free soybean and livestock production in South America and to reactivate tree planting in forests. In addition to private funding, 12 countries including the UK will allocate US\$12 billion (8.75 billion pounds) of public funds from 2021 to 2025 to tackle forest fires, reduce land degradation and help indigenous peoples (including LMDH in Indonesia). These existing financial commitments contribute to reducing deforestation and forest land degradation. According to a UK government spokesman, 30 financial institutions including Aviva Plc, Schrodgers and AXA will also commit to eliminating investment in activities linked to deforestation. Investors, representing US\$8.7 trillion in assets under management, also pledged to stop investing in activities related to deforestation by 2025. (source: Kabar24.bisnis.com). Then, five countries, including the UK and the US, and a group of global charities also pledged to provide US\$1.7 billion to support the conservation of indigenous peoples' forests and to strengthen their land rights. "This overcrowded ecosystem – this natural cathedral – is the lungs of our planet," said British Prime Minister Boris Johnson also adding: "With today's unprecedented promise, we will have the opportunity to complete humanity's long history as a nation. conquerors of nature, and instead become their custodians," he added (in a statement quoted from Bloomberg).

Net Deforestation in Indonesia in 2019-2020 was 115.5 thousand hectares/ha (inside and outside forest areas). The area is the same the value with gross deforestation is 119.0 thousand ha minus 3.6 thousand ha. Net deforestation inside forest area is 67.0 thousand ha (58.0%), while outside forest area for Other Use Areas (APL) is 48.5 thousand ha (42.0%). This data comes from the Directorate of Inventory and Monitoring of Forest Resources, Director General of Forestry Planning and Environmental Management, Ministry of Environment and Forestry in 2021.

Sources from the Malang Regency Forestry Service. In 2015, the total forest area in the Malang Regency area reached 110,884.57 ha (34% of the total area of Malang Regency) and the total area of Malang Regency was 328,935 ha. Special Forest in Gunung Kawi which is located in Wonosari District which has an area of 707 hectares (ha). Meanwhile, the area of the Wonosari sub-district is 6,460 ha, so the forest area is 11% compared to the area of the Wonosari sub-district, Malang Regency.

Malang Regent Drs HM Sanusi MM (as *the keynote speaker*) who was present at the *Forum Group Discussion* (FGD) organized by Jawa Pos Radar Malang on April 20, 2022, said that he took a helicopter to observe forest conditions in Malang Regency. "I

saw that many were bald, so there was a flood and the regent was blamed. In fact, the one who manages the forest is Forestry. There were lots of logs that were washed away following the flood and the pieces of wood that came from upstream were none other than forest wood resulting from logging. There must be a solution for this. Forestry should be open about deforestation which results in the shrinkage of forest areas. Forestry should be able to explain the amount of deforestation in Malang Regency. In the past, there were 110 thousand hectares, now how many thousand are actually forests. So that protected forests are not eroded, there should be a mutually agreed solution. It's time for a moratorium to be made not to carry out deforestation. In addition to explaining the problem of logging in the forest, the Regent of Malang also reviewed the contradictions of the rules. Local governments have the authority to manage their territory, including forest areas. This is stated in Article 66 paragraphs 1 and 2 of Law (UU) 41 of 1999. Sanusi was accompanied by Deputy Regent of Malang H. Didik Gatot Subroto, Regional Secretary (Sekda) of Malang Regency Wahyu Hidayat, and dozens of heads of Regional Apparatus Organizations (OPD) Malang Regency Government.

But there is Government Regulation (PP) Number 72 of 2010 concerning State Forestry Corporation which states that forest area management is Perum Forestry. This is stated in Article 3 paragraph 1. "The PP annexed regional autonomy, which should have been managed by the regional government, but in Java it was managed by Forestry," he explained. In fact, according to the principle of law, PP is a rule under the law, so it should not conflict with the law. According to him, this PP also gives Forestry more authority and limits the role of regional governments. Therefore, in this FGD opportunity, he said that forest management must involve the thinking of academics who are oriented towards saving the forest. His party seeks a moratorium on logging in the forest. "Perhaps in the future, if someone does deforestation by cutting down wood in the forest, they will be subject to criminal sanctions. Whoever it is, be it the people or Forestry," said the Malang Regent.

The administrator of Perum Forestry KPH Malang Hengki Herwanto responded to the Malang Regent's statement by saying that his party did not mind if there was a moratorium on logging in the forest. "Regarding the moratorium, yes, sir," said Hengki, who sat opposite the Malang Regent (Sanusi). On that occasion, Hengki explained the duties and functions of Forestry. According to him, Forestry has carried out its duties and functions according to the regulations. "We have two legal umbrellas, namely Law Number 41 of 1999 and PP 72 of 2010," said Hengki in a relaxed tone. If his task in managing the forest is considered to be under the authority of the regional government, he will leave it entirely to the central government. "Forestry is only an operator, the regulations are in the central government," he said. Hengki confirmed that his party cut trees in the forest. However, regarding the cutting of the tree, it has gone through the specified procedure. Among other things, there is clear cutting. However, the area is not

large, only about 10 percent of the total forest area in Malang Regency. Regarding this logging, Forestry has carried out monitoring and evaluation (monev). Hearing Hengki's statement regarding this monev, the Director of Jawa Pos Radar Malang Kurniawan Muhammad who was the moderator of the forum asked: "Are the results of the monev also conveyed to the local government?" Before Hengki could answer, Sanusi responded quickly. "Yes, I never (received the results of monev, ed)," said Sanusi, which was immediately greeted by laughter from the FGD participants. "Well, I don't know," answered Hengki with a smile. According to Hengki, monev is under the authority of his superiors at the central Forestry office. In addition to delivering monev, his party is doing reforestation. "We will replant the trees that are cut (reforestation)," he said. "Indeed there is reforestation, the tree will not take root before five years. So, the solution is a moratorium," said Sanusi. In the forum which took place from 15.00 to 17.30, Sanusi interrupted Hengki's conversation several times. From this FGD, it was sparked to realize the MoU between Malang Regency Government and Perum Forestry KPH Malang Regency. (Source: <https://radarmalang.jawapos.com/malang-roya/kabupaten-malang/21/04/2021/bupati-malang-perjualan-otoritas-Forestry/>).

The impact of deforestation, deforestation poses risks to all forms of life, and forests are shrinking as a direct result of looting of land for agriculture, mining and plantations (Wahyuni, 2021). Deforestation in Indonesia has very serious impacts both at the national and international levels. This is due to uncontrolled forest fires, destructive logging, land clearing for plantations, fuel dredging, and the development of transmigration areas, all of which have an impact on the socio-economic life of the people who live there and their daily lives. They depend on nature or forest products and have the potential to cause huge financial losses for the whole community and the nation as a whole (Nordhaus, Toben, & Fauziyah, 2019). Research has recently begun to pay attention to the issue of global warming, which shows that Indonesia is a major contributor to climate change and is more sensitive to its impacts. It is estimated that Indonesia's emissions from the forestry sector and land use change were 2,563 megatonnes of carbon dioxide in 2000. This amount is expressed in megatons (MtCO_{2e}). In addition, the annual emissions generated by the energy industry, agriculture sector, and waste management sector reach 451 MtCO_{2e}. When compared with Indonesia's overall emissions, it reached a total of 3,014 MtCO_{2e}, while China's emissions reached a total of 5,017 MtCO_{2e} and the United States' emissions reached 6,005 MtCO_{2e}. The rapid rate of deforestation not only has a negative impact on the surrounding natural environment, but also has the potential to disrupt the social life of local residents (Carlson, Heilmayr, Gibbs, Noojipady, & Burns, 2018).

The human factor for clearing agricultural land and plantations in forest areas is the main factor in deforestation by burning forests to shorten land clearing (Putra, Oktari, & Putriana, 2019). LMDH (Forest Village Community Institution) is a forum for indigenous

peoples to help manage forests in their area. LMDH Wonosari, which manages forests on the slopes of Gunung Kawi, Malang Regency, uses a pattern of implementing cooperation for the purpose of reforestation and reducing land degradation into productive land and the welfare of the surrounding community can be achieved. This research article describes the collaboration carried out by Perum Forestry KPH Malang Regency and LMDH Wonosari in managing forests with the research title "Impact of Forest Deforestation for Forestry and LMDH (Study on LMDH Wonosari District, Malang Regency)".

METHOD

To determine forest areas that are currently undergoing deforestation and the efforts made by Forestry and LMDH for reforestation, this article is a type of descriptive research using a qualitative approach. "(Sugiyono, 2014) states that qualitative research is an action research that is applied simultaneously with data analysis". The research procedure examines descriptive data in the form of words (can be spoken for religious, social, cultural research, local policies and philosophy) as well as from sources of records that are correlated with meaning, meaning, and values (Arianti, Rizatania, Fasitasari, & Sarosa, 2009). The data collection technique of this research is by applying documentation techniques, interview techniques, listening techniques, and note-taking techniques (Moleong, 2011). Documentation techniques are used to obtain data in the form of review texts published in magazines and newspapers. The interview technique with key informants and additional informants to obtain data and data that has been collected is then studied thoroughly using the listening technique. The note-taking technique is carried out to record data findings related to the structure and variations of the structure of the review text (Leksono, Haq, Iqbal, Soelami, & Merthayasa, 2013).

The validity of the data in this study was tested by triangulation. According to "(Moleong, 2014) triangulation is a technique of checking the validity and validity of data using other sources outside the data. Triangulation is used to determine the validity of data from research data sources. The data analysis technique implements the Miles and Huberman (1992) model in the article (Sugiyono, 2014) namely data collection, data reduction, data processing, and application of conclusions and checking/verification.

RESULT AND DISCUSSION

The results of research that answer the main problems:

- (1) How do we define "forest", "deforestation" and "LMDH" and "Role of Forestry" in the Indonesian context?

Forests

More than 91 million hectares, or about 53 percent of Indonesia's total land area, are covered by forests in Indonesia. In general, there are three different functions performed by forests: conservation, protection, and production of forest products.

Conservation forest, forest with wide biodiversity, including protected plants, animals and their habitats. In addition, the stored biomass of this type of forest is not less than 433.5 metric tons CO₂/ha, making it an important component in combating the adverse effects of climate change. Protected forests, as community livelihoods, can be obtained from protected forests through protection of soil fertility, prevention of erosion and flooding, and maintenance of groundwater sources. This protected forest is of great importance to the millions of people who live on the slopes of some 150 volcanoes getting an average annual rainfall of 2,702 millimeters. Production forest is a forest that is utilized as much as possible for the benefit of its economic function; the trees that make up the production forest can be cut down in whole or in part. In 2009, this forest category was responsible for more than \$3.2 billion in gross value added to the Indonesian economy. Logs, rattan, pine resin, wood resin, sandalwood oil, and various other products can be obtained from this forest type (Respatiadi, 2016).

Thus the forest is an area that plays an important role in maintaining the balance of the environment, the forest itself must be protected so that it continues to exist. At the moment the status of forests in Indonesia is very worrying, as the country's natural forest cover is being cut down at an alarming rate, resulting in a continuous reduction in forest area from year to year (deforestation). The conversion of forest functions such as housing development, livestock, agriculture, mining plantations, infrastructure development, and processing of wood products that are used as the main raw material for industry are all potential causes of deforestation. Communities will suffer as a result of the deforestation that will occur as a result of this (Elvirandini & Ma'ruf, 2018 ; Hasil et al., 2016).

Deforestasi

Deforestation is the act of replacing a forest area into permanently non-forested land for human activities. Deforestation indirectly changes the function of the forest which was originally for the preservation of the environment and its ecosystem into human interests. Deforestation is a phenomenon that occurs when the amount of forest area decreases as a result of using land for other purposes, such as agriculture, mining, or plantations (Kubitza, Krishna, Urban, & Qaim, 2018). There is a link between deforestation and illegal logging that endangers all forms of life. Deforestation caused by forest fires contributes to climate change (Panel & Change, 2018). Climate change that causes global warming is a significant concern that arises as a direct result of deforestation activities. deforestation is carried out recklessly and ignores the negative impact on the environment that they have experienced on this earth until the last few decades (Panel & Change, 2018). The destruction of Indonesia's forests is getting worse, and it is clear that the country's forest cover is shrinking at an alarming rate; this has a negative impact on Indonesia and the rest of the world (Cisneros, Kis-katos, &

Nuryartono, 2021). Information from Greenpeace, Indonesia is the third country that contributes carbon gas emissions, after the United States and China. Around eighty percent of these emissions are caused by forest fires, which have a negative impact on human health, such as causing prolonged shortness of breath (Nordhaus et al., 2019). Conditions of increasing temperature that are getting hotter are evidence of global warming. Irregular weather patterns are another sign that global warming is on the way. Various human activities, such as the burning of fossil fuels, industry, and massive deforestation, are the root causes of global warming. These activities naturally produce carbon emissions that have an impact, known as the greenhouse effect and have a long-term impact on life. As a result, humans are required to reduce activities that can damage forests or activities that can cause emissions (Panel & Change, 2018). The phenomenon known as global warming, in which the temperature is gradually increasing over almost the entire planet, has a detrimental effect on the environmental sustainability index (Kubitza et al., 2018).

LMDH

LMDH is an abbreviation of the Forest Village Community Institution, which is a community institution located in the Village Forest. After the socialization action is completed, the next step is institutional development (Subairi & Suharso, 2021). The formation of community institutions occurs so that community goals can be accommodated and so that community members can take part in actions designed to maintain and conserve local forests. LMDH where people living around forest areas act as members and administrators of the institution. Perum Forestry, the village, and the residents themselves worked hand in hand to establish LMDH. This is done in a coordinated effort. The LMDH management was chosen through a deliberation process, which was then formalized into a Decree (SK) on the establishment of LMDH by the Village Head. Then proceed with the making of a notarial deed to further strengthen the legitimacy of the LMDH implementation. LMDH is a bridge between the community and Perum Forestry to coordinate in the management and preservation of forest sustainability. In addition, the function of LMDH is to accommodate the aspirations of forest village communities in the maintenance and management of forest resources. After LMDH is formed, Perum Forestry and LMDH will make a cooperation agreement with each other. The forest management program cooperation agreement with the community, also known as PHBM, is an agreement between Perum Forestry and LMDH to work together in the management and conservation of forest resources. MoU (Memorandum of Understanding) or a memorandum of understanding signed by the head of LMDH and Perum Forestry is required for the formation of a cooperation agreement after the community has signed one of these documents. that they each agree and are able to apply the PHBM method in forest management. Then, in order to encourage cooperation

in the management of forest resources, a Cooperation Agreement (PKS) was formed between the Perum Forestry community and forest village communities. The notary of the cooperation agreement aims to provide a more authoritative atmosphere in the agreement. When carrying out CBFM operations in the LMDH lap forest area, this partnership agreement will serve as a guide in the future (Subairi & Suharso, 2021).

Role of Forestry

The regulation and efficiency of forest resource management is the responsibility of Perum Forestry which is a member of the State-Owned Enterprises (BUMN) organization. Community-based forest management is one of the basic principles applied by Perum Forestry in terms of forest resource administration (PHBM). Strategy or idea of Community-Based Forest Management (PHBM) is an approach or concept that involves the community in managing forest resources with the aim of prioritizing the interests of the community. To look at the various problems that disrupt forest ecosystems, Forestry needs to have the necessary skills to manage forest resources effectively. Not a single exception was made for the lives of those living near the forest. The purpose of forest resource management is to increase the number of available job opportunities, conserve biodiversity, and work to increase the country's foreign exchange sources, while taking into account the interests of the people living around the forest (Hasil et al., 2016).

(2) What is the principle of the implementation of the cooperation between Forestry Malang Regency and LMDH Wonosari (actors grouped as the indigenous people of Gunung Kawi) to reduce deforestation and forest land degradation?

The implementation of the joint program carried out between Perum Forestry KPH Malang Regency and LMDH Wonosari uses a Public Private Partnership namely Cooperation/Collaboration which has seven principles according to Keban (2009) in (Elvirandini & Ma'ruf, 2018) namely: Transparency, Accountability, Participatory, Effectiveness, Efficiency, Consensus, and Mutual Respect and Benefit. This application approach can describe the involvement of Perum Forestry KPH Malang Regency in the implementation of cooperation with LMDH Wonosari. These approaches are grouped with the same items so that they can be used to analyze the implementation of the Cooperation Program as a whole. This is a description of the principle of the approach:

1. Transparency between collaborating parties, especially when providing data/information needed for the implementation of cooperation. This is in accordance with the Principles of the Partnership Program because when implementing cooperation, it must meet all the needs of both parties to realize common goals. In addition, the principle of transparency is also in accordance with the principle of competition because

it is stated that the choice of cooperation partners is carried out through a transparent, open and fair selection. The stages of partnership that require the principle of transparency are the partner selection process during the implementation of the Partnership Program as stated in the MoU and carried out by Perum Forestry and LMDH Wonosari. This can create good cooperation between Forestry and LMDH Wonosari. The determination of LMDH Wonosari as a cooperation partner through a survey of critical forest land due to degradation and deforestation. This has been mapped by Perum Forestry Malang Regency by determining suitable land for the implementation of the application of the intercropping system, namely in Wonosari District. After determining the area to be used as a location for the application of coffee and taro being intercropping plants. Then the initial communication was carried out by Perum Forestry and LMDH Wonosari to the people of Kebobang Village who were members of LMDH Wonosari. Meetings and dialogues with the community also ensured the readiness of the Kebobang Village community to implement the Partnership Program. To realize this Partnership Program, the partnering parties are: the Department of Agriculture, Perum Forestry KPH Malang Regency and LMDH Wonosari by maximizing existing resources so that the Partnership Program can be implemented successfully and reliably. In this Partnership Program, the *sharing* only carried out between Forestry and LMDH Wonosari. The Agriculture Service does not get *sharing* because the Agriculture Service only provides service tasks to farmers. The profit sharing applied between Perum Forestry and LMDH Wonosari for pine tree sap is 75% for Forestry and 25% for the community. The distribution is not applied in the form of pine tree sap, but after the sale is realized. For LMDH Wonosari's business results in the form of coffee, taro beneng, vanilla, ginger, turmeric and other herbal plants, there is no *sharing*/profit sharing with Forestry. 100% of the crop yields are enjoyed by the people who do intercropping (coffee plants are planted between pine trees). The main requirement is that indigenous peoples (LMDH Wonosari) must be responsible for caring for the main plant that has grown in the forest, namely pine trees. The implementation techniques of the Partnership Program are: (a) The community can take pine resin which can be used for the paint industry; (b) The community can plant coffee plants on the sidelines of the pine trees; (c) The community can plant taro beneng between the coffee plants; (d) the community can plant vanilla plants on the sidelines of the coffee plants; (e) the community can plant ginger, turmeric and other empon plants between the pine trees; (f) the community can also plant elephant grass between the pine trees.

2. Accountability is the principle of cooperation between parties with responsibilities for all activities related to the applied cooperation. This principle is in line with the principles of Risk Control and Management because it is stated for cooperation that risk assessment, development of implementation strategies, and prevention/mitigation of

risks that may arise must be applied. The method applied between collaborating parties in maximizing the results obtained from the Partnership Program is by implementing mentoring, socialization, and training for indigenous peoples (LMDH Wonosari) to process and obtain benefits and carry out asset monitoring from forestry land provided by Perum Forestry Malang Regency. Other forms of accountability are coaching, mentoring, directing, and providing other supporting facilities, so that they can be carried out successfully. The implementation of this Partnership Program involves all parties to make a report on the results of the collaboration as a form of accountability for their performance. Until now, reports regarding the new partnership program will be prepared by the Malang Regency Perum Forestry which later the report will be given to the Main Administrator of Perum Forestry KPH Malang. The responsibility of LMDH Wonosari is to submit reports regularly to Perum Forestry KPH Malang Regency. The report is made every 3 (three) months in the form of a report relating to the sale of existing pine resin.

3. Participation is a principle that must be applied in the form of dialogue to set goals to be realized. This cannot be separated from the involvement of the parties who work together. The implementation of this Partnership Program involves the actors of Perum Forestry KPH Malang Regency and the indigenous peoples of Wonosari Sub-district in LMDH Wonosari. Every actor involved in implementing the Partnership Program has a role for the success of the program. Perum Forestry acts as a provider of forest land that will be used to plant intercropping plants (plants planted between pine trees). The role of LMDH Wonosari is implementing a partnership program with indigenous peoples in LMDH Wonosari implementing planting in the Gunung Kawi forest area and conserving forest assets in collaboration.

4. Efficiency is evidence of the realization of the business carried out to obtain optimal results with minimal resources. This resource is the implementation of the Partnership Program by providing forestry land by Perum Forestry KPH Malang Regency for intercropping by the LMDH Wonosari community. The implementation of this Partnership Program can reduce deforestation and land degradation so that forest land productivity can increase and bring prosperity to the community and the forest remains sustainable. This is realized because the management of land and production plants will be optimal when the Partnership Program is held because there is community involvement and participation. The implementation of this Partnership Program can increase the role of indigenous peoples in LMDH Wonosari to manage available forest land, and can even change the habits of indigenous peoples who used to only provide straw as animal feed and then provide elephant grass (products from forest land). Monitoring the realization of this Partnership Program can be carried out routinely with regular monitoring and evaluation.

5. Effectiveness is something that must be considered in implementing cooperation. Measuring the success of the program must be made with comparisons referring to the targets/objectives that have been set with the actual results. The realization of the objectives in the implementation of the Partnership Program are: (a) The productivity of critical forest lands due to degradation and deforestation must be increased. (b) The involvement/role of indigenous peoples around the forest in forest reforestation must be increased because the role of the community is consciously willing to carry out the care and protection of existing forest land assets so that the sustainability of the forest is maintained. (c) The risk of forest reforestation failure which has been solely borne by Perum Forestry can be minimized. The active participation of indigenous peoples in managing and protecting forests is proof of the responsibility given by Forestry to indigenous peoples. (d) The independence of indigenous peoples around the forest can be empowered and enhanced. This can be realized because with the implementation of the Partnership Program with a long period of time so that intercropping agricultural businesses appear on the sidelines of pine trees in forest areas such as coffee farming, industrial processing of pine resin into turpentine/paint, management of herbal plant products. so that it will open up employment opportunities for indigenous peoples/around. (e) The central government program can be realized, namely national food sovereignty. The existence of the Partnership Program in Wonosari District has led to an increase in the welfare of indigenous peoples in the agriculture, animal husbandry, paint industry, tourism and the economy of indigenous peoples. In addition, the objectives of implementing this Partnership Program can also be realized.

6. Consensus on the implementation of the Partnership Program with cooperation that there must be an agreement which is a meeting point of interest on all parties for an approved decision. This consensus was drawn up by all the parties working together. The implementation of this Partnership Program arises because of problems that arise in the agricultural sector and the forestry sector in Malang Regency. The existence of this problem has forced the Malang Regency Government and Perum Forestry to solve the problem by making and signing the MoU and its realization.

7. Mutual respect and mutual benefit are principles that must be realized when implementing a cooperation. This principle is the basis for making decisions or implementing cooperation mechanisms. This principle is in accordance with the principle of usefulness which states that cooperation is implemented to contribute to the economic and social benefits of the community. The implementation of this Partnership Program involves all parties who work together so that they never lose and can get many benefits.

The social benefits that can be realized during the implementation of the Partnership Program are: (a) Land readiness to plant high value industrial plants such as: coffee, vanilla, taro beneng, ginger, turmeric, other herbal plants and elephant grass for animal feed can be fulfilled by planting grass elephants on the sidelines of pine trees on existing forestry land. (b) Can reduce deforestation and land degradation (c) can improve community welfare. (d) Forest preservation and security can be maintained. (e) The establishment of an industry related to herbal plants originating from intercropping agriculture between the Pine Trees. (f) This intercropping agriculture can reduce unemployment because the surrounding community can be involved in it. (g) The fertility of forest land increases and affects pine trees and their sap yields because they receive regular/periodic fertilization.

CONCLUSION

Based on the explanation of the results of the research, in the Partnership Program collaboration organized by Perum Forestry KPH Malang Regency and LMDH Wonosari in forest management with the Partnership Program, it can be concluded that the implementation of the cooperation can be realized successfully. This article describes the 7 (seven) principles of cooperation according to Keban (2009) in (Elvirandini & Ma'rif, 2018) namely: Transparency, Accountability, Participatory, Efficiency, Effectiveness, Consensus and Mutual Respect and Benefit. The principle of transparency can be seen and stated in the process of determining partners which is realized between Perum Forestry KPH Malang Regency and LMDH Wonosari. LMDH also surveys the location of critical forest lands that have been mapped by Perum Forestry, then determines the land that matches the criteria with intercropping plants, namely in the Gunung Kawi forest, Wonosari District. Furthermore, there were initial discussions which were realized through meetings and dialogues with indigenous peoples. The meeting also ensured the readiness of the Wonosari District community in implementing the Partnership Program. All parties also prepare their own resources to support the implementation of the continued implementation of the Partnership Program. Profit sharing/sharing is only applied between Perum Forestry and LMDH Wonosari. In the principle of accountability, it is explained that all parties involved in cooperation have a method and form of accountability for maximum results from the Partnership Program. The physical form of accountability given by Perum Forestry is in the form of socialization, assistance, guidance and direction during the initial and final planting process. Meanwhile, LMDH Wonosari carries out forest conservation by safeguarding the assets (forest land) that it collaborates with. The form of accountability for the performance results of all collaborating parties is required to compile reports related to the development of the Partnership Program. Based on the participatory principle, the actors who participate in the implementation of this Partnership Program are Perum Forestry KPH Malang Regency and the indigenous

peoples who are members of LMDH Wonosari. Both actors play a role in the success of the objectives of the Partnership Program. The principle of efficiency is stated through the implementation of the Partnership Program which can increase the fertility of forest land and increase the yield of industrial crops belonging to the community. This is realized because the productivity of intercropping more optimal when the Partnership Program is implemented due to the active involvement of indigenous peoples in it. Monitoring and evaluation of the implementation of this Partnership Program is carried out by Perum Forestry KPH Malang Regency on a regular basis. The principle of effectiveness can be stated through the implementation of the Partnership Program in Wonosari District, namely the change in productivity that increases in the agriculture, forestry, and indigenous peoples' economy. The purpose of implementing this Partnership Program is also realized by evidence of an increase in the economic welfare of the community. Then the principle of consensus can be stated through the implementation of cooperation in this Partnership Program based on the Cooperation Agreement (PKS) between the Chairperson of LMDH Wonosari and the President Director of Perum Forestry as evidence that the Partnership Program cooperation has been implemented. However, until now/currently the PKS for this Partnership Program is still in the process stage. In addition, this consensus principle also explains the problems and obstacles that arise during the implementation of the cooperation program, so that they can be resolved through collaboration and coordination methods between the collaborating parties. Coordination/collaboration that is held between the parties who work together to solve problems that arise must be in accordance with the problems that arise in the field. The implementation of this Partnership Program wants to be carried out continuously because it is a long-term program. This program also wants to be applied in other areas. The last principle is mutual respect and mutual benefit, which can be explained regarding the implementation of this Partnership Program, which can contribute benefits from both economic and social aspects. During the implementation/implementation of this Partnership Program, the collaborating/collaborating parties do not lose out because of the perceived benefits.

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