The Synergy of Military and Civil Society in High-Value Timber Production: Developing Forest Institutions Above the Ruins of Conflict

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A B S T R A C T

Maluku is a province in eastern Indonesia that has experienced prolonged conflict due to racial and sectarian issues. This conflict can be resolved when the state, through the military, changes its approach from security to prosperity, so society more easily accepts it. With the synergy of the military and civil society as the basic foundation of the Green Gold program, Maluku has transformed into a producer of high-value timber such as agarwood (*Aquilaria Malaccensis*) and sandalwood (*Santalum Album*) from their production forests. This research aims to analyze the institutional governance of production forests in Maluku using the Institutional Analysis and Development (IAD) framework as an analytical tool. This research used a descriptive qualitative approach with data collected from interviews and literature studies. The research results showed that: First, in terms of Attributes of the Resource, it was found that local users have managed the production of forest resources quite well, but they still have a high dependence on military assistance. Second, regarding the Attributes of the Users, it was found that the community has a high sense of belonging to the forest. It is assumed that if they do not manage the forest well, it will be difficult for them to escape from conflict. Therefore, the military gradually reduced its role in implementing community self-government over the forest.

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INTRODUCTION

In the seventeenth century, the Maluku archipelago was one of the trading centers in eastern Indonesia. At that time, Maluku was famous for producing high-quality spices such as cloves and nutmeg, which became essential trading commodities in Europe. The Dutch East India Company (Dutch: *Vereenigde Oostindische Compagnie* – V.O.C.) established Maluku as its first administrative center before moving it to Batavia, which is now Jakarta (Frank, 2021; Ricklefs, 2008). After the V.O.C. moved its administrative center to Batavia, Maluku's prestige gradually began to be marginalized. Even after Indonesia's independence,

Maluku became an area of prolonged conflict due to racial and sectarian issues. The most significant battle occurred in 1999 and caused massive social and economic losses to the community (Schulze, 2017; Bertrand, 2002).

The Indonesian government has tried various ways to resolve the conflict, but the conflict has not entirely disappeared. Even though the peace charter was signed in 2002, sparks of conflict are still easily ignited (Ernas, 2012; Sudjatmiko, 2008). This situation forced the government to look for other approaches to resolve the dispute fundamentally. In 2015, new hope emerged when Lieutenant General Doni Monardo was assigned as Commander of the Regional Military Command (Bahasa

Indonesia: *Komando Daerah Militer* – KODAM) Pattimura based in Ambon, the capital city of Maluku province. Despite having a military background, Monardo does not only use a security (traditional military) approach to resolve the conflicts. He saw that the primary root cause of this conflict was not racial or sectarian but rather economic problems and development inequality between western and eastern Indonesia. Therefore, he changed his approach from security to prosperity.

The change in approach from security to prosperity was in two programs, Blue Gold and Green Gold. This program is based on Monardo's idea that Maluku's great natural potential should make the community harmonious, peaceful, and prosperous. So far, most of the people of Maluku have not been able to experience abundant natural wealth due to the many protracted conflicts (Lalhakim, 2016). Blue Gold does not mean blue gemstones but the management of marine aquaculture with high-value commodities such as grouper and snapper. Meanwhile, Green Gold does not mean green precious metal but controls the production of forest resources with high-value plants such as agarwood, sandalwood, and other endemic trees. Through these two programs, the community is invited to forget conflict persuasively with more productive activities. From both programs, the synergy between the military and civil society began.

In this Blue Gold and Green Gold program, the military sought to attract conflicting groups to work on projects together. In addition, the communities were united with cultivation programs in adjacent land or waters, with the same tools and methods and harmony created between them. In other words, this program turns enemies into friends. Since the program was rolled out to the people of Maluku, the military claimed that they could reduce the number of potential conflicts significantly. The prosperous Maluku people are no longer easily drawn into the conflict (Fitriati et al., 2019). Therefore, the welfare aspect needs to be continuously developed to maintain peace in Maluku. Through this program, thousands of people who were originally in conflict now have much income as fish cultivators in floating cages and timber farmers in production forests. Welfare is the key to keeping the conflict away from Maluku, which has been going on for decades.

The progress of the Blue Gold and Green Gold programs under military guidance is promising. The program even brought the initiator the award of an honorary doctorate in resource management (Monardo, 2021). However, it should be remembered that as a military general, Monardo will not always serve at the Maluku. This situation has become a concern among the army and local communities that the two gold programs will be abandoned when

Monardo gets a new assignment elsewhere. Seeing this situation, the military, assisted by the local government, agreed to develop greater community involvement. One of the ways was that the local community, initially positioned as assisted residents, would change the status to local users who can manage their resources. Alternatively, in other words, there needs to be more robust local self-government embedded in the natural resources dimension of community rights (Haugen, 2014) so that they can carry out self-governance for their waters or forests.

Based on the above situation, developing local institutional governance becomes interesting to study more deeply. In this research, the author will focus on the production of forests as part of self-reliance in the Green Gold program; the reasons are: First, the development of potential production forests in Maluku has not received as much attention as fisheries development. Apart from being supported by the position of the bay, which is very suitable for aquaculture, the significant potential for marine tourism makes coastal areas receive greater attention. Second, during the authoritarian New Order regime, the forests in Maluku were exploited without adequate reforestation. So, after the down of the regime, forests need greater attention and public participation. Therefore, it needs to be emphasized again that in a local forest plan, resident participation could be a process of information collection and facilitate communication through better information (Wang & Thongma, 2014).

METHOD

To analyze the institutional governance of production forests in Maluku, especially related to military and civil society synergies in the production of high-value timber, the author uses the Institutional Analysis and Development – IAD – framework as an analytical tool (Ostrom, 2011; Ostrom, 2005). Based on the IAD Framework, Ostrom divides the affecting factors into two sets: the Attributes of the Resource and the Attributes of the Users. Attributes of the Resource consist of feasible improvement (R1), indicators (R2), predictability (R3), and spatial location, terrain, and extent (R4). Meanwhile, the Attributes of the Users consist of salience (A1), common understanding (A2), discount rate (A3), trust and reciprocity (A4), autonomy (A5), and prior organizational experience and local leadership (A6).

However, before discussing IAD in the Green Gold program of Maluku, the author reviewed prior research to strengthen and sharpen the novelty of this research. Research on the development of local institutions for forest governance has been carried out in various countries such as Nepal, India, Uganda, Bolivia, and Ecuador, as summarized in the book entitled People and Forest from

International Forestry Resources and Institutions – IFRI – network (Gibson et al., 2000). Apart from those mentioned in the book, research using IAD has also been carried out in some other countries such as Swaziland (Sithole, 2020), Botswana (Mogende & Kolawole, 2016), the United States (Mattor & Cheng, 2015), and Taiwan (Wang & Thongma, 2014). In all the research collected, the authors found only one study conducted in Indonesia, namely in Central Sulawesi province (Yatim et al., 2020).

Meanwhile, in research discussing the Green Gold and Blue Gold program in Maluku, the authors also found limited sources, such as research by Raditya et al. (2019), which described the military's primary role in encouraging community empowerment in the Blue Gold and Green Gold programs. In addition, research from Lalhakim (2016) explained that the implementation of the Blue Gold and Green Gold programs initiated by Monardo positively impacted regional resilience in Maluku from the threat of conflict re-emergence. By looking at the two studies, it can be concluded that research related to the gold programs in Maluku is always studied from the perspective of conflict management. Based on the review above, this research's novelty or significance becomes clear: First, this research will enrich the scarcity of references on resource management and forest governance in Indonesia with the IAD framework. Second, this research will be the first to analyze the Green Gold program in Maluku using a perspective other than conflict management, particularly with the IAD framework.

This research used a descriptive qualitative approach. In addition, the authors conducted interviews and literature studies to collect data regarding the development of local institutions for forest governance in Maluku. Interviews were conducted with seven key informants. Considering that this research was conducted during the Covid-19 pandemic, the interview was conducted remotely. In the context of the Covid-19 period, there are two main challenges related to the development of qualitative research: time constraints and physical distancing (Tremblay et al., 2021). Therefore, it is essential to consider that the consequences of interview studies must be addressed regarding possible harm to the subject and the expected benefits of participating in the research (Brinkmann & Kvale, 2018). Furthermore, the literature study in this research is carried out by reviewing selected textbooks, journal articles, printed mass media, the internet, and other sources that provide related information. All data that has been collected is processed using an interactive model (Miles et al., 2019), starting from data reduction to selecting important information, presenting a series of data systematically, and drawing solid conclusions.

RESULTS AND DISCUSSION

As stated in the introductory section of this study, the Green Gold program is land management with high-value plants such as agarwood (*Aquilaria Malaccencis*) and sandalwood (*Santalum Album*), and local endemic trees. With the principle of maintaining the balance of nature, the land used in the development of this program is production forest and idle land. Idle land is a condition of land that has been unused and unproductive for a long time; through this program, the land is transformed into a new production forest. In addition, the military (KODAM Pattimura) donated the land as a nursery area to support this program. Apart from agarwood and sandalwood, various hard tree seedlings, such as ironwood, were also planted, with 16,485 plants in the nursery. In addition, seeds of fruit plants such as durian, breadfruit, matoa, mango, mangosteen, orange, and soursop, with a total of about 17,630 plants, were also planted. A more detailed analysis using the IAD framework is as follows.

Attributes of the Resource

First, feasible improvement (R1). In this factor, it is interpreted that the forest is not considered to be in a declining situation, so it does not need to be managed or underutilized, so little profit is generated from organizing. In the Green Gold program of Maluku, the military, as the program initiator, does not force the community to join the local organization. For the military, the community's willingness to leave the conflict and participate in empowerment programs is considered extraordinary progress. The local users of the production forest in the Green Gold of Maluku program must have the awareness to carry out maintenance following the conditions of the forest they manage. As local users, they naturally expect their forests to always be in good condition. Otherwise, it is improbable that they will organize or invest in efforts to protect their forests which are the hope of improving post-conflict livelihoods.

However, although the military does not force communities to join local organizations, it continues to stimulate community awareness for self-governance in their production forests. It aims to reduce the community's dependence on the assistance of military personnel as the community needs to consider the sustainability of this program. It should be recalled that the initiator of the Green Gold program, Lieutenant General Monardo, has a possibility that he will transfer to another military unit at any time. The community must consider that when Monardo is no longer in Maluku province, this program will continue to be managed independently by the local community. It is crucial to ensure that the Green Gold

program, built with various efforts and achieved success, doesn't just stop without anyone continuing.

Second, indicators (R2). In this factor, it is interpreted that changes in the quality and quantity of forest products provide reliable and valid information about the general condition of the forest. Local users assisted by the military conduct periodic assessments of forest conditions before deciding which plants to harvest. In the Green Gold of Maluku program, several types of trees have different planting periods. Thus everyone involved must be careful in determining the harvest period, as the illegal harvesting of forest products can result in sanctions and consequences. Considering that the military initiated this program, the community understands that they must be disciplined. Although the Indonesian military is known to be close and friendly with people, discipline is still a priority when participating in the empowerment program. Discipline in forest assessment will directly impact the accuracy of other supporting activities such as maintenance, harvesting, and subsequent planting.

Third predictability (R3). In this factor, it can be manifested that the availability of forest products is relatively predictable. It should be understood that the uncertainty of crop growth patterns in forests makes plant maintenance more expensive and limits harvests for sustainable yields. In the Green Gold program of Maluku, the predictability of forest products is relatively high. There is not much difference between one forest and the other, so it is not significant in explaining the differences between communities. In addition, as a production forest used for the cultivation of high-value trees such as agarwood, sandalwood, and ironwood, it is important to predict the exact harvest period to ensure that good quality is obtained when harvesting. Harvesting too early will be detrimental to the maintenance costs incurred for irrigation and fertilization because the price and quality of the wood will drop drastically.

Besides the long harvest period, the main factor that makes agarwood and sandalwood so challenging to find and expensive is the difficulty of cultivating the seeds. Nevertheless, the people of Maluku want to get profits as soon as possible from this cultivation. In this condition, the military's role is obviously to instill awareness in local users to be more patient in waiting for the trees to be adequate enough so that timber prices are maximized. Therefore, the military assists the community starting from the nursery stage. The sandalwood tree is a parasitic plant that requires a host as a source of life. Sandalwood seeds do not have a strong root system, so they must absorb nutrients from their host to survive. This situation creates obstacles in cultivating sandalwood trees. However, despite having a tricky nursery method, sandalwood is a plant whose growth age is relatively easy to predict.

Fourth, spatial location, terrain, and extent (R4). In this factor, it can be manifested that by understanding forest details, users can develop accurate knowledge of external boundaries and the internal microenvironment, and they can develop low-cost monitoring arrangements. The forest's spatial location, extent, and terrain are critical to developing successful management regimes by local groups or the government. Small communities seeking to manage spatially dispersed forests face the most difficulty in creating low-cost monitoring arrangements. Maluku is an archipelago consisting of the main island and many small islands with many hills or plateaus. Although the infrastructure in the era of President Joko Widodo was built massively, with this landscape monitoring the Green Gold program in Maluku is not always easy. For now, monitoring is still mainly assisted by military facilities. However, it is necessary to develop monitoring facilities that the community can carry out in the future.

Attributes of the Users

First, salience (A1). This factor explains that local users depend on forests for most of their livelihoods or for other things that are important to them. In the introductory section, it was stated that one of the leading causes of conflict is an economic problem, so the Green Gold program is to reduce poverty and increase community welfare. This statement was widely discussed by all stakeholders involved in the Green Gold program. The military, the local government, and the local community agree with this statement. From this situation, it is clear how the people of Maluku currently have a high dependence on forest products in the Green Gold program, especially high-value trees. Forest products have improved their living standard. Without production forests as a source of their welfare, they are still in conflict. So, besides being a source of life, forests are also a source of peace.

Second, common understanding (A2). This factor explains that users have a shared image or attribute about the forest and how their actions affect each other and the forest. The emergence of peace, which ended the prolonged conflict, is clear evidence that the people have the same view of their future. Conflicts that occur because of their respective interests have now become cooperation in caring for production forests as their source of life. As a collaborative program, the Maluku people realize that Green Gold will be successful if they share the same views and attributes about forest management that produces high-value timber. The community is highly aware that one person's action will impact others in the success of forest management. Everyone involved had a sense of belonging to the urgency of protecting their forest because they didn't want to return

to the gloomy times of conflict. In short, the feeling of escaping from battle and moving towards a future in the forest has become a common understanding among all stakeholders involved in the Green Gold program.

Third, discount rate (A3). This factor describes that most users have a sufficiently low discount rate concerning the future benefits of the forest. Too little production will result in a drastic increase in prices and a decrease in people's purchasing ability. In contrast, excessive production will decrease prices, so producers will lose. This logic is starting to be understood by the local community. The military emphasizes this logic so people do not plant as many trees as possible without considering future impacts. Since agarwood and sandalwood are trees of high value, the community thought that if they grew as much as possible, they would also get as much profit. The military straightened out this understanding that prices would decrease if there were overproduction. Therefore, local users as producers of high-value wood must be able to read market needs to avoid shortages of goods and overproduction.

Fourth, trust and reciprocity (A4). This factor describes that users trust each other to keep promises and reciprocate. If a local user violates an agreement, they have to pay significantly higher enforcement fees, reducing or depleting the benefits they can achieve. One of the conditions for ending a conflict is mutual trust and reciprocity. It is the basis for the military's approach when uniting warring groups in Maluku through empowerment programs such as Green Gold. The results of an interview with a former commander of a separatist group in Maluku said that sectarian conflicts were extreme in the past. However, after the military's empowerment program, everything gradually improved. Initially, the separatist group was also hesitant to accept the offer.

Nevertheless, the military's strong will to make peace with all groups and bring all prosperity fostered trust. For example, in the past, Muslim groups fought and attacked each other with Christian groups affiliated with the separatists. They live in peace and work together to build production forests for a better future. With trust and reciprocity, peace and prosperity grow together.

Fifth autonomy (A5). This factor suggests that users can define access and harvesting rules without external authority. It has been explained that military involvement is very strong in the Green Gold program. Even the military also donated land for nurseries and production forests. In addition, the military is trying to make the harvest period a stage that can be managed autonomously by the community as local users. The military continues to accompany local users so that they can harvest with no

over-production and negative impacts. In the future, the military will further reduce this role to create community autonomy for managing production forests. So, when Monardo is no longer on duty in Maluku province, the community can sustainably manage the Green Gold program.

Sixth, prior organizational experience and local leadership (A6). This factor suggests that appropriators have learned minimal organizational and leadership skills through participation in other local associations or learning how neighboring groups are organized. Maluku has been caught in a long conflict. The warring groups attacked each other, and many deaths were in vain. From this situation, we can imagine how difficult it is to find leadership figures and organizations that protect people in peace. The interview results showed that the current leadership figure admired by the community is Monardo, a military leader. Military such as KODAM Pattimura, which has been described as a rigidly hierarchical organization, became humanist and close to the local community when Monardo was in charge. Therefore, the community believes that to succeed in the Green Gold program, they can get an example of leadership from Monardo. In the end, Monardo became a central figure or patron for the people of Maluku in various aspects of life. His leadership became the inspiration for empowerment programs in Maluku through Green Gold and other programs in the future.

CONCLUSIONS

The Green Gold program has reduced the prolonged conflict in Maluku. The synergy of the military and civil society results in the Maluku community being transformed into a producer of high-value timber, such as agarwood and sandalwood, from its production forests. This study aims to analyze production forest governance institutions in the Green Gold program by using the Institutional Analysis and Development (IAD) framework. Regarding Attributes of the Resource, in R1, the military, as the initiator of the Green Gold program, does not force the community to join local organizations. However, although the military does not force communities to join local organizations, they continue encouraging community awareness to self-regulate in their production forests. In R2, local users assisted by the military carry out periodic assessments of forest conditions before deciding the types of plants to harvest. As the Maluku Green Gold program has several types of trees with different planting periods, all parties involved must be careful in determining the harvest period. In R3, the predictability of forest products in the Green Gold program is relatively high. As a production forest for cultivating high-value trees, it is crucial to predict the correct harvest period to ensure good quality. While in R4, monitoring can be carried out

properly because military facilities assist it. However, in the future, it is necessary to develop monitoring facilities that can be carried out independently by the community.

Second, in terms of Attributes of the User, in A1, the community currently highly depends on forest products in the Green Gold program. Without production forests as a source of their welfare, they are still in conflict. In A2, as a collaborative program, the community realized Green Gold would be successful if they had a standard view on forest management. The feeling of breaking away from conflict has become a shared understanding among all stakeholders. In A3, the military, as the initiator, reminded the community not to plant as many trees as possible without thinking about future impacts. Users must be able to read market needs, so there is no shortage of goods and excess production. In A4, people understand that mutual trust and reciprocation are conditions for ending conflicts. The community lives in peace and works together to build a production forest for a better future. In A5, the military assists local users to prevent overproduction at harvest. The military will further reduce this role to create community autonomy in the future. In A6, the community believes that to protect production forests, they can get a leadership example from Monardo, who embraces all groups.

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