The challenges and opportunities in developing empowerment programs for communities living surrounding the forest with special purposes

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Abstract. Forest with Special Purpose (FwSP) is the type of forest management in Indonesia, which involves a university or training center as the main caretaker. FwSP is specifically designated to advance forestry’s research and development, education, and training in Indonesia. This article aims at mapping the problems the management of FwSP facing in dealing with the communities living surrounding the FwSP. It requires strong collaboration between local people and the FwSP to ensure that FwSP is able to preserve forest sustainability. The research utilizing mix method to collect the data from all universities FwSPs in Java Island, through online questionnaires and in-depth interviews with the directors of FwSP. The findings show FwSP face medium to serious challenges with regard to creating cooperation with local people. While all FwSP has created and implemented community development programs, building strong cooperation with local people is perceived to still require a long way to go to succeed. Most of FwSP targeted the activities to improve the quality of life i.e. alternative sources of income for local people. Developing local tourism with FwSP as the destination and involving local in developing the destination is one main long-term program agreed upon by the majority of FwSP directors.

1. Introduction
Kawasan Hutan dengan Tujuan Khusus (KHDK), also known as Forest with Special Purpose (FwSP), is a type of forest dedicated, namely, to facilitate training and research in forestry, in Indonesia. Ministry of Environment and Forestry (MoEF) grants FwSP to training centers, schools, and universities, which are considered to be able to utilize the FwSP to its fullest potential. Currently, 24 FwSP are managed by universities, all over Indonesia. Seven FwSP are managed by universities in Java Island. The grant is regulated through Permen no 15/2018 [1], which covers how the universities/training centers should protect and manage the forest to its full potential under several limitations pertained to the goal to support forest sustainability.

For universities, FwSP may serve the purpose to conduct education/training, research, and community services activities. Especially, for universities running Forestry or/and Agriculture study programs, having an FwSP will support the university in broadening the teaching and research programs. In addition, it will also expand the intellectual capital pertaining to the biodiversity available in the FwSP. For instance, Previous researches on flora and fauna that inhabited the UNS FwSP, have found that some species of flora and fauna, have taken UNS FwSP as their habitat. Some rare species of butterflies and
birds are found to habit in the forest (1a,1b). Some other FwSP in Java island are granted with beautiful landscape and a high potential for tourism development within the FwSP areas [2,4].

Besides education, training, and research, universities with FwSP also have responsibility for community service activities [2,5,6]. This is because most of the FwSP granted to universities were previously managed by Perhutani, a state-owned company focused on forest management. In most cases, Perhutani has developed a certain relationship with local people, that enables them to work on the land in between harvest-replanting the hard trees. After the transfer of management from Perhutani to universities, the nature of the relationship between local people and FwSP may be changed gradually. On the university side, the changes in management may shift the nature of the relationships between local people and the forests. The university management through the head of FwSP may be perceiving the relationship between local communities and FwSP as either assets or liabilities for the university, pertaining to the nature of the previous relationship developed between Perhutani and local communities. Becoming liabilities if the relationship with the local people requires more resources to change and maintain, to comply with FwSP policies. Becoming assets when local people are motivated to work together with the FwSP to improve the aspects of their life and to work together to maintain the forest. Maintaining this relationship is one of the hardest challenges FwSP has in managing the FwSP [3-5].

This paper will discuss the problems, the challenges, and the opportunities in managing the relationships with communities surrounding FwSP: While education and research activities are relatively manageable, community service activities related to the communities living surrounding FwSP is a different challenge. Managing FwSP offers challenges in dealing with different communities living surrounding FwSP [7-9]. Few numbers of research have been targeted to understand these challenges and solution implemented by FwSP. Some consequences of FwSP establishment are as follow but not limited to: tension may raise over time during the transfer of management from Perhutani to universities; different approach and law enforcement method by FwSP may be disagreed or disregarded by the communities; changes in the ongoing ways the communities have related to FwSP, may trigger resentment among communities, and also unresolved disagreement may bring negative effect in the long run [4,8,9]. Data collected through an online survey targeted to the head of FwSP in Java island. The survey then followed up with an in-depth interview using an online platform. We expected that the online survey and in-depth interview will produce richer information on how to manage the relationships between FwSP and local communities.

We address questions pertained to the relationships between FwSP and local communities living surrounding FwSP: How FwSP perceive the local communities living surrounding FwSP? How FwSP develops the partnership to build a strong bond with local communities surrounding FwSP, what problems experienced by FwSP related to building cooperation with locals? How would FwSP solve the challenges raised in developing empowerment programs for local communities.

2. Research methods
This research focused to understand how FwSPs perceive the problems, challenges, and opportunities that come in developing relationships with local communities. how to strengthen the bonds with local people and how FwSP solves the problems and challenges in delivering the empowerment programs for local communities. Using the Google form platform, an online questionnaire was set up for data collection. All FwSPs managed by universities in Java island are the targeted respondents. The first part of the questionnaire asked respondents about the legality of the FwSP (the year the FwSP was granted); the second part asked the general strategy of the FwSP. The third part asked the respondents about the challenges and opportunities in working with the local communities. The fourth part asked the respondents about the challenges in implementing the regulations pertained to the management of FwSP.

The links to the online questionnaire were sent through the WhatsApp application and/or email. The research targeted seven universities’ FwSP in Java Island. Out of the seven respondents, four respondents completed the online questionnaire. After the responses were collected, online in-depth interviews related to the response were set up. One more respondent responded through an online in-depth interview, hence in total out of 7, five respondents have completed the questionnaire.
Responses were analyzed qualitatively and descriptively to extract patterns in the responses. A SWOT analysis was employed to categorize and group the responses into four different patterns, which are strengths, weaknesses, opportunities, and challenges (threat) [10,11].

All respondents are the heads of FwSPs. All FwSPs were established within five years (2015-2020). Because of the current regulations, the respondents manage FwSP with different sizes, ranging from 622.5 ha to 75 ha. The newest regulations have limited the FwSP grant to only 100 ha maximum in Java Island, and a maximum of 500 outside Java island. Due to the nature of Perhutani operations, the FwSP inherit mostly pine tree family on Java island

3. Findings
All FwSP are bordered with communities’ villages, with one to 8 villages surrounded each of the FwSPs. One FwSp reported one community living in the forest area illegally. The local communities’ prior transfer of management of FwSP, previously have related to Perhutani activities as members of Lembaga Masyarakat Desa Hutan (LMDH); as laborers to extract the pine sap or in other activities inside the FwSP. Most of the FwSPs provide the water spring for communities’ daily needs, cattle fodder, and firewoods. Some of the FwSP have local people utilize the land before replanting hardwood plants to plant seasonal or annual plants such as cassavas, bananas, peanuts, chilis, tomatoes, and other short-term plants. Based on the responses through the online questionnaire and in-depth interviews, the relationships between FwSP and local communities are mapped based on the analysis as follows.

3.1 Strength
FwSP considers communities as valuable partners in protecting the FwSP. Particularly, most of FwSP lack human resources to guard the forest fully. Having a strong relationship with local communities will support the role of FwSP to guard the forest, i.e., from illegal logging, bush fires, and forest fires.

Since the transfer of management of FwSP to universities, all FwSPs have been involved in community empowerment activities in the form of training, socialization, and Focus Group Discussions. These activities were employed to understand the perception of the local people and to gain an understanding of what the local people expect from the FwSP, especially after the transfer of management from Perhutani to university. In order to strengthen the relationships, potential economic activities have been identified by FwSPs that might benefit the local people and the FwSP. Some of the economic activities identified are: coffee plantations, apiary, tourism development, and pine sap collections.

Some of the FwSPs have utilized the intellectual capital repository available within the university to plan further the possible economic activities within FwSP. It is expected that the available research findings may improve the economic value of the FwSP and may benefit the FwSP in general.

3.2 Weakness
One feature that the FwSPs have in common is the resource limitation in terms of monetary and human resources in managing the FwSP. All the FwSP agreed that regulations from two ministries (Ministry of Education and Culture and Ministry of Environment and Forestry) that FwSP is required to work with have limited the room for improvisation for the management of FwSP. While two ministries have different terms and conditions of funding, these differences limit the amount of budget allocated for the FwSP from the university, while the Ministry of Environment and Forestry (MoEF) at the moment does not have the policy in giving funding to the FwSP managed by universities. In other words, funding from third parties is mostly sought after to avoid the complexity of the funding mechanism.

Other than limited resources, the current bureaucracy puts FwSP at a disadvantage. Planning and execution of planning of the FwSP programs require FwSP to consult intensively with MoEF. Especially in the area of forest utilization. This consultation in practice requires time to get approval. On the other hand, the same program may take a longer time to be implemented because of the complexity of the funding mechanism by universities. These obstacles may result in slow program implementation, one of which is the empowerment programs.
3.3 Opportunities
In terms of opportunities available for FwSPs, communities, in general, are eager to involve, to work together with FwSP. However, stronger leadership is needed to guide the direction of involvement. The typical feature of the local communities surrounding the FwSP is that they prefer immediate results although receiving less economic values than more benefits but with a longer waiting time. Hence planting seasonal and annual plants is more preferable in utilizing the land in the FwSP areas. This is because the economic values of these plants can be easily predicted. A demonstration of the long-term benefits is required to convince the communities to follow and behave in accordance with the FwSP plans.

Two of the FwSPs samples have shown that through intensive empowerment programs, reluctant communities have seen the real long-term benefits offered by the FwSP. The empowerment programs were bee apiary which targeted some group of local communities. This program has been implemented by two FwSP. Agroforestry programs which involve i.e., coffee and fruit planting have shown a positive impact on communities’ attitude toward forest sustainability. One of the FwSP samples has explained the progress in its empowerment program through this kind of agroforestry. This change in local communities’ attitude resulted from continuous consultative and persistent empowerment efforts, which allows the communities to see the long-term benefit of working on economic activities other than opening the forest for seasonal plants. This long-term benefit has created a stronger motivation for the communities to work together with FwSP. Indeed, the shift of attitude of the communities requires time. Specifically, as has been demonstrated, designed empowerment programs are needed to ensure the attractiveness of the programs for the local communities.

3.4 Threat
Communities have been accustomed to their ways around things related to FwSP, from their previous experiences with Perhutani. Changing this custom behavior requires strategies by FwSP so that local communities will change their behavior in accordance with the regulations set by FwSP.

Different communities that are living surrounding FwSp express different expectations toward the FwSP, hence specifically designed programs are required to fulfill the expectations. Challenges surface when the number of communities is more than the resources available within FwSP management. An FwSp mentioned that it has 8 different communities living surrounding the FwSP. With different expectations and empowerment, working with these communities poses quite a challenge for the FwSP, especially in terms of funding to implement the empowerment program for all communities. One FwSp with a fewer number of communities suggests a relatively high complexity the FwSP face when working with the community, especially the ones living inside the forest. One respondent stated that FwSP so far has not experienced difficulties working with the communities however, the motivation of the community is considered to be low level.

Most communities interact with FWSPs only in part timely. FwSP is not the main source of income, which is a good thing for FwSP. However, because the interaction with the FwSP only part-time, gaining full cooperation from communities is not simple. Especially when the interest of the communities focuses only on utilizing the land in the FwSP areas. Shifting this interest and gaining more involvement from the communities are also big challenges for FwSP.

4. Discussion
Based on the findings, it can be concluded that there are indeed challenges in working with local communities and crafting empowerment programs for the communities. This discussion will focus on the weakness and challenges profile in working with local communities surrounding the FwSP.

The communities living surrounding FwSPs and their relationships with FwSP can be considered as a potential asset for FwSP sustainability. However, few internal weaknesses faced by FwSP might hinder this potency to bloom properly. The main problem to develop the potential is in securing the funding to customize the empowerment programs. The hierarchy of decision-making in two ministries that supervise the FwSP is a weakness for the FwSP management. The heads of FwSPs have a common opinion that there should be an evaluation and review of the current regulations that limit the extent to which FwSPs may utilize the forest product. The long bureaucracy should be reviewed and rearranged.
to enable swift and effective decision-making. In terms of securing a budget for development, third-party involvement is preferable and sought after [7,11].

Convincing local communities to work together with FwSP is not an easy task. Due to different expectations from the different communities, the empowerment programs may not work uniformly, hence customized programs are preferable. Consequently, customized empowerment programs require more investment and longer time to accomplish. Another challenge with the local communities surrounding FwSP is in changing the customs and behavior of the communities. Due to the difference in goal in managing the forest, FwSP may be managed differently than before, hence, FwSp may expect different behavior from the communities in their relationship with FwSP[2,3,8,11,12].

Shifting the focus of the local communities, which is more on land usage and to get short-term benefits from working on the land, is another challenge. As long as the communities think about utilizing the land for economic benefits, empowerment programs may not work well. Systematically shifting this attention to other more productive activities and improving the quality of the natural FwSP environment has become the priority of FwSP management. Some fields that have been considered as shifting areas are: apiary, tourism development, coffee productions, and planting valuable tuber plants [5-7].

The empowerment of FwSP has socialized, trained, and created regular dialogs with local communities, to gain the communities’ full and strong cooperation. To increase the attractiveness of the forest for other than the land use, specifically designed empowerment programs are needed to fit the needs of FwSP and local communities. In the long run, socialization, training, and dialogs are expected to be continued to strengthenChallenges in working with local communities are considered high for the FwSPs [3,5]. The management the relationships with the local communities.

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