Social innovation in social forestry: seeking better management for sustainable forest in Indonesia

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Abstract. The Indonesian state and local community have been conducting forest co-management as part of a new social forestry program initiative. This initiative is proposed to overcome environmental degradation as well as to enhance community well-being by increasing economic outcome of the forest. However, this program has the potential for conflict because of asymmetry between resources dedicated to approving social forestry permits versus capacity building, monitoring, and evaluating management outcomes. The social innovation approaches have been adopted as a potential solution to address complex social forestry program. This article aims to explore how social innovation and village governance in forest communities works. The research framework is designed by modifying the social innovation concept from the Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe (TEPSIE). Qualitative method is applied, by conducting in-depth interview and focus group discussion with forest policy experts, village authorities, and other stakeholders. Two neighbouring villages namely Sirnajaya and Tugu Utara in the Bogor District, West Java are visited. Sirnajaya represents village with strong government support by the Pilot Program for Incubation of Village Innovation in Local Economic Development (PIID-PEL), while Tugu Utara represents a strong society initiative in local development. The result reveals that social innovation has worked at different phases. However, good cooperation between formal and informal actors can have a better outcome on village development, compared to if each moves independently. The extension of social innovation and network of development can become an engine of village growth to the larger scope. The successful management for social forestry in Indonesia needs to be based on a hybrid governance model that needs to be “good” and “proper”. Therefore, the designs and practices for social forestry governance must be developed in more socially inclusive, reflected local social-economic, political, and cultural conditions.

1. Introduction

The Indonesian National Medium Term Development Plan (RPJMN) for 2020-2024 has boldly outlined that forest area management by community under the social forestry (perhutanan sosial) scheme can be reviewed from five main components. The first component is that social forestry management schemes, which refer to Ministry of Environment and Forestry (MoEF) regulation PP No.9/2021. These management schemes include village forest (hutan desa/HD), community forest (hutan kemasyarakatan/HKm), community forest plantation (hutan tanaman rakyat/HTR), customary forest (hutan adat/HA), and forest partnership (kemitraan kehutanan). Second, capacity improvement of community group in relation to regional management, institution and business. Third component is
developing investment or business partnership among investors with business group of social forestry. Fourth component includes industrial development, which processing products from business group of social forestry to value added improvement. Finally, providing facility of marketing or promotion of social forestry products to the business entity of social forestry. In short, forest conservation through maintaining sustainable economic benefits is an important principle of social forestry. The government of Indonesia has given permission to access for social forestry program since 2007, the increasing intention to obtain social forestry permits begun in 2014. To accommodate this rapid increase demand on social forestry, the government has launched integrated social forestry management in 2017. The objective of this program is to achieve over 10% (12.7 million of 126 million hectares) of social forestry designations within the total forest estate area. In 2020, this program has reached about 4.4 million hectares of forest area, 882,072 household with 6,697 permit holders [1].

Despite the successes of gaining economic benefit and expanding forest estate area, social forestry program is often associated with agrarian reforms issues and several obstacles from the heterogeneous characteristics of communities, physical typology of the villages and forest area, and the process to get permit access. Notably, the notion of social forestry provides the common ground between state interest and communities activities in the forest estate boundaries which support rural livelihood initiative and incentivize better conservation practices [2]. Hence, understanding the complex of social-ecological dynamics between formal and informal institution arrangement is important to maximize a positive impact of social forestry practices. Two important keys have been acknowledged in many studies in this regard, namely local policy initiative that support good governance effort and community participation [2-4].

Regarding the important role of social forestry, social innovation is commonly realised that could minimize the potential conflicts, which can grow during the process of social forestry activities [5]. In general, social innovation is often defined as "the process of inventing, securing support for, and implementing novel solutions to social needs and problems" [6]. It implies a unique approach to solve the social problem that is hard to be solved by single entity. As an activity or a specific case, social innovation often takes the form of collaboration across public, private, and citizen sectors, dissolving traditional boundaries. In this regard, social innovation could affect positively on society relation and enhance society's capacity to act, which runs both bottom-up and top-down, can accelerate achievement of those goals.

Social innovation itself is a multilayered and practice-led field [7]. Therefore, it is understandable if no commonly shared definition exists, and any search for a clear-cut, specific definition of social innovation is quickly overwhelmed by a multiplicity of contending interpretations. Thus, instead of attempting to pinpoint a singular definition of social innovation, for the purpose of the research, it is more appropriate to draw upon existing definitions and then to use core elements of our working definition for our case studies in two Indonesian Villages.

This paper is following social innovation definition and guideline from the Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe (TEPSIE). In this guideline, the terms social innovations are including new solutions in products, services, models, markets, processes, etc. These solutions are simultaneously meet a social need that could lead to new or improved capabilities and relationships and better use of assets and resources. Following the definition raised by TEPSIE, it can be noted that there are at least five main dimensions of social innovation, namely: (1) novelty, (2) meeting a social need, (3) moving from ideas to implementation, (4) effectiveness, and (5) enhancing society's capacity to act. This processes was intended to reach the objective between the existing solution and social needs could create an effective outcome [8].

Thus, the objective of this paper is to explore and compare the implementation of social innovation in the field of social forestry in Indonesia. To the best of our knowledge, most of the previous studies on social forestry seem to have concerned more on conflicts related to decentralization policy, empowering local economic development, climate change mitigation, and preventing environmental degradation [9-11]. Little is known whether the concept of social innovation can enhance the best practice of social forestry program. Thus, this paper is intended to fill the gap in the literature on
managing forest by utilizing social innovation that comply with the concept of empowerment, inclusiveness, and proper governance.

This paper is organized as followed: first is the description of the objective and the concept of social innovation, the impact, and their related aspects. The next section describes the method that consist of data collection and the way of data analysis. Results of the assessment of social innovation will be presented with empirical evidence, discussion of finding in several points of outcomes will be offered in the following section. The last section is concluding remark and some general recommendations.

2. Research methods

2.1. Study site description

This research takes two villages, Sirnajaya and Tugu Utara that are in Bogor District, West Java Province. The villages have unique to each village; however, those are in one district. The uniqueness of each village is from a driven factor that makes those villages can develop their social-economic, politic, and culture in the basis of more socially inclusive. This research uses the data and information from those villages as a case study to find out better management for a sustainable forest in Indonesia by social innovation and social forestry concepts.

Sirnajaya village is one of village that receives the Pilot Program for Incubation of Village Innovation in Local Economic Development (PIID-PEL) program to develop local economy by commodity of coffee. The program was granted in 2019 from The Ministry of Village, Disadvantage Regions and Transmigration (Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi, Kemendes PDTT) by IDR 1.412 billion (USD 97,379). Moreover, Forest Village People Institution (Lembaga Masyarakat Desa Hutan - LMDH), as part of the village, is still processing the licensed social forestry with Perum Perhutani-KPH Bogor. This license requires proposal that should be proposed by LMDH for each social forestry that are willing to utilize tropical forest under Perum Perhutani authorization. The areas are estimated 400 hectares that will be utilized by LMDH ‘Karya Alam Mandiri’ in Sirnajaya. With the high potential for social-economic and keeping the sustainable forest, the village government will be granting the global warming grant from the Ministry of Home Affairs. Because the village obtain substantial support from government, the village is categorised as a strong state development lead.

Tugu Utara village is under the LMDH ‘Puncak Lestari’ with total area of social forestry about 610 Ha. The forest is under Perum Perhutani authorization. Using the motto “leuweung hejo, rahayat ngejo” means by keeping sustainable forest, people can have better prosperity. Farmer community in Puncak Lestari has not obtained PIID-PEL project and forest planting activities are mostly carried out by the community, especially by “Three-Brothers” (Mr. Kiryono, Mr. Jumpono, and Mr. Dasimto) who plant a lot of coffee trees and continue with other shade plants. Thus, Puncak Lestari LMDH reflects a development model that is more characterized by community support or strong society development lead, specifically with a large enough role from ‘the three brothers’.

2.2. Method

This research collects both quantitative and qualitative data and information. Quantitative data are taking from the Village Potential Census (PODES) year 2014 and 2018 [12, 13]. PODES is the only regional-based data source that can describe the potential of all the smallest administrative areas throughout Indonesia. Qualitative data gathered from Focus Group Discussion (FGD) and in-depth interview. The two ways for collecting data and information that shows this research using a qualitative method for analysis. The qualitative method separates by two conditions. First, the researchers do in-depth interview for many institutions, which are Forum Komunikasi Kehutanan Masyarakat (FKKM); the People Village Empowerment Department (DPMD) Bogor District, and Perum Perhutani-KPH Bogor. Second, the team also do FGD to village government of Sirnajaya and Tugu Utara, the board of village owned enterprise/corporation (Badan Usaha Milik Desa - BUMDes), and community member. This qualitative method helps the researchers to develop a better management model for a sustainable forest in Indonesia using both social innovation and social forest concepts.
2.3. Research framework

This research adopts the social innovation concept from the Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe (TEPSIE) into our case study [8, 14]. According to this guideline, it could be identified and analysed the five elements of social innovation as follow. First, to investigate such cases that arise the so-called new social innovation to support social forestry program implementation in the two selected villages. It is not always the case that a new solution will emerge, and then will be accepted by community. Second, to examine selected cases of social innovation that address such needs fits social forestry program implementation. Third, to move from ideas to implementation entails the practical implementation of the idea of social innovation. In this context, how the governance framework is examined, or more specifically the management of social innovation, has been exercised in practical terms in the two selected villages. It implies that a successful management framework for bringing the idea of social innovation into practice must base on a "good" and "proper" governance [15]. In brief, define "proper governance" as an effort to build balanced relations between the state and society. Furthermore, it is stated that the "proper governance" concept should be based on four main principles, namely: development, democracy, social inclusiveness; and respect for local cultural and historical contexts. Fourth, the effectiveness of social innovation. This paper analyses whether social innovation could effectively contribute in the outcomes. The outcomes include quality, satisfaction, costs, or impact of existing solutions to the improvement of community welfare. In doing so, various outcomes of social innovation are examined in relation to social forestry program implementation. Fifth, Social innovation is accomplished by fulfilling unmet social needs effectively and applying the innovative process throughout society. Indeed, inclusive processes of social innovation involve various stakeholders particularly the marginalized people [16]. Then, this study is addressed to examine such impacts of social innovation on enhancing society’s capacity to act, including knowledge and skills, in both program implementation and its sustainability in the two selected villages. In brief, the conceptual framework for investigating social innovation in the context of social forestry program implementation can be illustrated in figure 1 below.

![Social innovation conceptual framework](image)

Source: Adapted from Theoretical, Empirical and Policy Foundations for Building Social Innovation in Europe (TEPSIE)

**Figure 1.** Social innovation conceptual framework.

3. Results and discussions

3.1. General overview

Srnajaya village, Pilo. The number of people living in Srnajaya in 2018 amounted to 7,532 people. While Tugu Utara village, Cisarua Subdistrict, is located at an altitude of 921 from the sea level with an area of 17.2 km². The number of residents of Tugu Utara in 2018 was 10,887 people.
Table 1. Planting Area, Rice Harvest and Production in Sirnajaya and Tugu Utara, 2018

| No  | Villages          | Broad Park (Ha) | Harvest Area (Ha) | Production (tons) |
|-----|-------------------|-----------------|-------------------|-------------------|
| 1.  | Sirnajaya         | 20.3            | 20.9              | 4.2               |
| 2.  | Tugu Utara        | 1,949.9         | 473.6             | 56.7              |

Source: Village Potential Census (PODES) 2018, Statistics Indonesia

Table 1 shows that the agricultural work is the main income sources of these two villages with rice production as primary commodity. Notably, the harvested area of paddy in Sirnajaya is smaller than that of in Tugu Utara, as consequence the paddy production in this village is higher than that of Sirnajaya village. Additionally, Sirnajaya is neither located on the edge of a forest area nor located within a conservation forest area. Table 2 supports this information and indicates that planting area in Tugu Utara is dominated by forest estate area with tea and coffee plantation as major production. In 2018, the agriculture remained the main resource income for Tugu Utara inhabitants, the tea and coffee production are generating household income beside paddy. In the wake of agro-tourism, some activities have emerged to support this business. It includes education activities how to plant tea and coffee, bike parking, café and restaurant.

Table 2. Natural Resources Indicators in Sirnajaya and Tugu Utara, 2014-2018

| Indicators                | 2014       | 2018       | 2014       | 2018       |
|---------------------------|------------|------------|------------|------------|
|                           | Sirnajaya  | Tugu Utara | Sirnajaya  | Tugu Utara |
| Around Forest             | No         | Yes        | No         | No         |
| Conservation Forest       | No         | Yes        | No         | No         |
| Main Income Source        | Paddy      | Tea and Coffee | Paddy | Tea, Coffee and tourism |

Source: Village Potential Census (PODES) 2014 - 2018, Statistics Indonesia

Regarding the development of tourism, environmental protection and forest conservation becomes a concern, then the local wisdom will take important role. Based on the finding, people in Tugu Utara have tried to take initiatives to develop their village and overcome the problems regarding environmental awareness. In this regard, the “Kuncen”, a person who give spiritual adviser to the community, have an authority to discipline visitor and resident to comply the forest preservation rule. This local wisdom needs to be introduced, developed, applied, and obeyed by the community to the outsiders as an effort to preserve culture and nature so people can open new perspectives in utilizing forest products without losing their function as nature preservation.

3.2. Social innovation in social forestry

3.2.1. Novelty, meeting social need, and local champion. Novelty does not mean absolute newness. It is rather the ‘perceived novelty to the unit of adoption’. This paper tries to investigate such cases that arise new ideas, including an invention of the new solution, or just about a reconstruction or elaboration of an existing solution, to support social forestry program implementation in the selected villages.

People in Sirnajaya are still carry out plantation activities in a traditional way, mainly in relation to harvesting techniques and post-harvest product processing. For example, in terms of harvesting techniques, people traditionally still treat coffee beans that are harvested in the same category. Meanwhile, differences in the quality category of coffee beans imply differences in selling prices. PIID-PEL has then considered this weakness as the focus in carrying out social innovations. More specifically, the PIID-PEL program attempts to put such innovations in coffee harvesting techniques and post-harvest product processing to increase economic added value. However, the findings indicate that no local champion has emerged in his role as a pioneer of development in Sirnajaya.
In contrast, Cibulao coffee farmers in Tugu Utara village cultivate coffee based on community initiatives. The Cibulao inhabitants are generally tea pickers on plantations owned by private companies. The low wages of tea pickers force them to do forest encroachment. These reasons make The Three Brothers introduced coffee cultivation activities in 2000 in this village. They inherited the skill from their parent and started to plant about 50 coffee seedlings brought from their hometown in Temanggung District, Central Java. However, this early stage of coffee planting failed due to the inaccuracy of choosing proper protective or shade trees (pohon pelindung). They were not giving up and then repeated their effort in 2002 by bringing 250 Robusta coffee seeds from their hometown with better preparation and knowledge about coffee cultivation, and it was successful.

In brief, Three-Brothers have made several innovations. Among other things, they have diversified coffee commodity types by planting Robusta coffee, as their father introduced early. Traditionally, the people of Cibulao have further developed Arabica coffee cultivation. However, the Three-Brothers family tried to introduce innovation by planting Robusta coffee because it is more suitable with Cibulao’s geographical conditions. The success achieved by the Three Brothers has become a pull factor for other villagers to be interested in doing the same business. With the increasing number of people around Cibulao getting involved in the coffee cultivation, in 2007, a Forest Farmers Group (Kelompok Tani Hutan/KTH) was formed under the name “Cibulao Hijau”, and Mr. Jumpono was appointed as the group leader.

Another innovation, namely diversification of business activities, then are developed by this farmer’s group. It is known that the period of coffee cultivation from planting seeds to harvesting generally takes about five years (for Robusta coffee). In order to support household income before reaching the coffee harvest period, they do some activities, which include horticultural farming (vegetables), goat livestock, mountain bike tourism activities (bicycle rental), and coffee agro-tourism Development. This concept is then referred to as the “Rantai Aktivitas Usaha KTH Cibulao Hijau” (Business Activity Chain of ‘Cibulao Hijau’ Forest Farmer Group).

3.2.2. Moving from idea to implementation and enhancing society capacity to act. In Sirnajaya, farming families have had a long tradition of coffee plantations since the Dutch colonial period. This historical background brought Sirnajaya as one of the pilot projects to develop the Robusta coffee plantation under PIIID-PEL program. However, they learned a lot from their neighbor (Cibulao farmers) how to plant this variant of coffee. The governments have fully supported coffee development in Sirnajaya. The Sirnajaya’s village-government has made BUMDes an important driver of coffee development.

The PIIID-PEL program has been implemented in Sirnajaya Village since 2019. The program is expected to strengthen the value chain of village products, expand access to pre-and post-harvest technology, strengthen financing, and develop innovations based on local wisdom, and increases productivity and capacity of economic institutions in the village on an ongoing basis to achieve village independence. The Ministry of Village projects that the Local Economic Development Program in Sirnajaya would create 93 new job opportunities and an income of IDR 1.35 billion (USD 93,103) per year. This economic target can be achieved by increasing coffee production in 230 Ha and promoting natural tourism of Situ Rawa Gede of 5.8 Ha.

The series of LED programs include training for production processes and support post-harvest activities to reach this goal. Training in the downstream side includes facilitating selected youths in Sirnajaya Village to attend a barista school in Bandung, with further opportunity to be selected for advanced barista training in Germany. The actors involved in the partnership in Sirnajaya are LMDH and farmer groups (coffee cultivators and coffee processors to produce green beans); BUMDes Sinar Makmur beside helping in processing (roasting, grinding and packaging of coffee products). Is also manages Situ Rawa Gede and plans to establish a coffee processing business unit; as well as CV. Titan De Cremona (engaged in the production of processed coffee or roaster and cafe management) as an off-taker or as a regular buyer of the green bean and roasted bean coffee products from Sirnajaya, and promotes the products through their coffee community networks.

The following story from coffee farmers in Tugu Utara is interesting to be discussed. Farmers are very rational in juxtaposing forest conservation agenda with economic benefits. Cibulao coffee farmers

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prefer Robusta coffee compared to Arabica because Robusta coffee is relatively faster to produce (in the age range of 2.5-3 years), easy in maintenance, and resistant to pests. The planting of coffee trees is carried out very intensively. Consequently, the number of coffee plants has increased rapidly in the last ten years from around 200 trees to more than 130,000 trees. As the coffee harvest area increases, the farmer’s group is more motivated to develop the coffee market outside the region. Apparently, there has been a transformation from a simple conservation goal to a business activity that continues to grow. After winning the coffee contest in 2016, Cibulao coffee is well known across the island, and the demand for this coffee continues to increase. However, the economics of scale matters when the market keeps going to increase. The capacity and capability of farmers to meet the demand then become an important issue.

In the absence of government support, the farmer’s group needs to seek other investor or farmer groups’ support. The two villages in our sample are located nearby and produce the same variant of coffee with different brands. The extent to which the triple bottom line be considered, it is essential to reinforce farmers from that village to mutually cooperate and enhance capacity to overcome their challenges in developing coffee production under the social-forestry program. Technology adoption in post-harvesting, for instance, farmers need coffee dryers with large engine capacity and packaging machines that incurred their production cost. The inducement of proper technology is one of the components of social innovation. Therefore, the government issued the Minister of Village Regulation No. 23 of 2017 about establishing Posyantekdes (Appropriate Technology Service Post in the Village). Technological service posts are institutions located in sub-districts for inter-village services (Posyantek) or in villages (Posyantekdes), which aim to provide technical services, information, and orientation regarding various types of appropriate technology. Business units managed by Posyantek/Posyantekdes can also be part of the local BUMDes or Joint BUMDes.

3.2.3. Effectiveness: social innovation outcomes. The dual purpose of social forestry, sustainable forest, prosperous community, or local term called "leuweung hejo, rahayat ngejo" is easy to claim but facing a more complicated situation in its implementation. People understand that they must keep and protect the forest, but they will put the basic needs on their first list to be fulfilled daily. It means that the implementation of social forestry requires a fine balance between environmental and welfare issues. The social innovation process is internalizing the resources from local champions initiative and proper technology such as the decision making in commodity choices, the input of capital, expertise and sources of innovation accessed by the local community during the production process, and the marketing.

In this context, understanding social innovation as a cyclical process should include different successive phases. The social innovation phase includes principles, proposals, prototypes, sustaining, scaling, and systemic change[16]. The scaling up of the effectiveness of social innovation is the final stage to achieve the main goal of social innovation before creating a new systemic change that persists for a longer time. At this final stage, diffusion of knowledge by imitating technological concepts, particularly systemic changes in the mainstream of institutional context, is subject to open-ended processes. The context can be expressed from social, economic, political, and environmental conditions resulting from a specific and endogenous regional development path. The village, as the lowest level of government, expresses the mainstreams of those contexts. Hence, in table 3, it is summarized the effectiveness of social innovation between the distinctive capacities (drivers) to overcome related obstacles.

The empirical case in Tugu Utara illustrates how social innovation involving the innovation led by community members has greater involvement than the service/project-based development from the state actors. The social innovation emerged by the three brothers brought a significant impact on local economic development. According to Villages Potential (PODES) 2014, Tugu Utara had successfully recorded the village income from business activities that is IDR 129 million or USD 8,896 (12% of the total village income) in a year[12]. Moreover, the reputation of Cibulao Coffee is also contributing to increasing local people’s income.
### Table 3. Social innovation outcomes in Sirnajaya and Tugu Utara

| Social Innovation Outcomes | Sirnajaya | Tugu Utara |
|----------------------------|-----------|------------|
| Drivers (local champion)   |           |            |
| Vulnerability groups       | Poor people based on certain criteria. | Migrant worker |
|                           | The needy people | Less-land farmers |
| Economic outcomes          | Working within farmer group and creates opportunity to joint venture production (firms-BUMDes) | Create opportunity job and additional income for migrant worker (individual). |
| Technology adoption        | The decision-making process to choose a prompt technology takes long process. Many farmers group must make consensus which technology that apt to all members. | Promote new technology on coffee plantation in the forest area was easy to be implemented and followed by other community members. |
| Environmental prevention   | Less effective in respond to natural hazard and hardship | Reduce potential flash flood |

Sources: Author's, 2021

On the other hand, changing climate and weather variability risk led to disasters such as drought, landslides and floods in the last three years of 2018 (PODES 2018) [13]. Moreover, the Covid-19 pandemic led to the people's activities restriction. Thus, tourists could not visit the village and this reduces the village income as well. Even though the coffee farmers are also trying to keep the sustainable forest, that may not prevent the disasters. Thus, the societal development led originally came from the local champion that effectively improved people's welfare. Social innovation may create more passionate individuals and local champions. This responsive government is crucial to building up local capacity to ensure that social forestry continues to make a long-term contribution to a socially sustainable development forest management and rural transformation for better community welfare. However, the local economic development initiated by the state government may not generate more incredible social innovation than societal development led. The result from FGD and in-depth interview reveal the village's problem that is about the promotion of their plantation products such as coffee seeds, vegetables, and others.

It should be emphasized here that the two categories of development models stated above are not intended to create a "black and white" or "good and bad" dichotomy, but rather to distinguish the “locus” of roles in initiating and governing the so-called social innovation. The best solution that must be carried out in the future is to develop what we refer to as a “hybrid model” for Community Based Development Resilience (CBDR) which can create an optimal synergy between the State-led and Society-led development models.
In brief, figure 2 depicts the construction of the “Hybrid Model” of social innovation (such as: novelty and meeting social needs); this has been valued as the first determinant factor for the realization of the so-called Community Based Development Resilience (CBR). However, social innovation will not produce optimal outputs and outcomes if it is not accompanied by a second determinant factor, namely proper governance. In short, these two determinant factors (social innovation and proper governance) must work to complement each other. In doing so, a proper collaboration between the role of the state (state-led development) and the role of society (society-led development) is needed to reach optimal outputs and outcomes from the social innovation process. The collaboration between state and society in this context covers at least four main dimensions; institutional setting, financing scheme, mentoring, and sustainability of development programs that will manage better sustainable forest and meet the dual purposes of social forestry.

4. Conclusion
The basic principles of the social forestry program include any activities from the form of organization of forest utilization to protect the environment surrounding the forest. This concept provides room for farmers and other stakeholders to create and seek the best practices balancing between improving farmers' welfare and preserving the sustainable forest. Social innovation offers a novel solution by enhancing community capacity to cope with their unmet social needs and problems. Both villages in this study have utilized forest area for coffee plantation, but the drivers who initiate and develop the business are different, implying that the ways to apply the concept of social innovations are not the same across society and time.

Hence, to pursue the concept of social innovation that could create systemic changes for the villagers, the neighbouring villages are suggested to enhance their collaboration instead of competition in their production process. In this context, a proper collaboration among stakeholders is needed to reach optimal outputs and outcomes from the social innovation process. Therefore, the Hybrid Model for Community Based Development Resilience (CBR) proposed above may be considered a future better management for the sustainable forest in Indonesia.

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