DEVELOPMENT PRINCIPLES FOR THE IMPLEMENTATION OF SOCIAL FORESTRY PROGRAM: A CASE STUDY OF PULUKAN VILLAGE, BALI PROVINCE, INDONESIA

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ABSTRACT

Increasing human needs and economic development encourage the use of land for settlements and agriculture and even encroach on areas around forests and even within forest areas. This condition can affect forest damage and have negative impacts such as flooding, decreased soil fertility, loss of flora and fauna and biodiversity, including climate change. Therefore, a sustainable and community-based forest management program is needed by paying attention to local wisdom in the community in order to create sustainable forests and provide social, economic, and other benefits. One of the forest management programs carried out in Bali Province is social forestry. This study aims to describe the implementation of social forestry and the principles of its implementation in an effort to improve the welfare of local communities and forest conservation. Social Forestry program has some goals, such as to (i) improve the condition of natural resources in forest areas in order to provide benefits for agriculture and communities around the forest; (ii) provide materials for firewood needed by communities around the forest; etc. To achieve this goal, social forestry implemented by the community at the study location through the Social Forestry Group (SFG) has implemented several important principles, namely productive, productivity, the welfare of farmers and local community, and sustainability. Some efforts needed are empowering the capacities of local community through the programs of socialization, agricultural extension and training for farmers through their groups related to agricultural diversification.

Keywords: Social forestry, productivity, welfare, sustainability, training

1. INTRODUCTION

In developing countries, the development of the agricultural sector (food crops, horticulture, plantations, livestock, fisheries, and forestry) has a significant role in economic development (Salako, 2015). This condition is seen in the relatively large number of people working in the agricultural sector, and the contribution of the agricultural sector to gross regional domestic income is also relatively large. Some of the roles of the agricultural sector are to provide food for the population, provide employment opportunities, provide raw materials for industry, utilize industrial products, and also increase foreign exchange ((Sedana and Astawa, 2019; Gollin et al, 2002; Khorami et al, 2013).

2. RESEARCH METODOLOGY

In this study, the forest management scheme studied is a village forest that is carried out by a social forestry program, namely in Pulukan Village, Jemberana Regency, Bali Province, Indonesia (see Figure 1). The location of this village was chosen considering that the local community has high enthusiasm and participation in the implementation of the social forestry program. The local community in the village has also formed a social forestry group as an important part of the implementation of the social forestry program. In addition, the consideration is that the village government supports the social forestry group that was formed. Several key respondents were

selected in this study, such as government staff from the Environment and Forestry Service, village heads, social forestry group administrators and members of the social forestry group.

Figure 1. Location of study

Several data collection techniques in this study were direct interviews using questionnaires and interview guidelines, direct observation and documentation. The collected data were analysed using descriptive methods.

3. RESULTS AND DISCUSSION

3.1 Implementation of Social Forestry

Various programs have been taken by the government through the Ministry of Environment and Forestry to maintain forest sustainability and provide benefits to the community and the environment as well as the economy at the village, district, provincial and national levels. One of these programs is social forestry, which is a national program that aims to encourage economic equality and reduce economic inequality in various regions. The components included in social forestry include land, business opportunities, and human resources. Until now, the area of forest covered by the social forestry program that has been given management rights to communities around the forest is 12.7 million hectares. Several forms of forest area management are distinguished based on management schemes, namely village forests, community forests, community plantation forests, customary forests, and forestry partnerships.

Social Forestry is a sustainable forest management system implemented in state forest areas or private/customary forests by local communities as the main actors to improve their welfare through forest conservation and maintaining environmental, socio-cultural, and economic balances (Chambers, 1994). Several studies have shown that social forestry in Indonesia has been initiated more than 30 years ago through various forms of activities, such as intercropping programs between horticultural crops, plantation crops and timber trees under the coordination of the Ministry of Agriculture (Agrawal, 2007; Agusthe et al 2021; Gilmour et al., 2004). This concept has also been accepted and recognized as one of the approaches to achieve forest sustainability (Gunawan & Afriyanti, 2019; Kamaluddin & Tamrin, 2019). Even in the late 1990s, the government has provided opportunities for local communities to participate in the management of state forest areas as regulated in Law No. 41 of 1999 concerning Forestry because forests are one of the most important resources for people living around them to meet their needs (Pujo et al, 2018).

In the implementation of social forestry in Pulukan Village, the government through the Forest Management Unit under the Environment and Forestry Service, Bali Province has involved local communities (villagers living around the forest area) since the beginning of the program. A participatory approach is highly prioritized in the implementation of the social forestry program with the hope that the community will have a strong sense of ownership and a high sense of responsibility for forest management. Social forestry in villages has been carried out through the Village Forest scheme. In this scheme, village communities are given certainty of land rights in the form of Village Forest Management Rights.

Forest management is an effort to realize sustainable forest management based on forest management plans, forest utilization, forest rehabilitation, forest protection and conservation. To achieve sustainable forest management, all forest areas are divided into KPH which is the smallest forest management area according to its main function and designation that can be managed efficiently and sustainably. The KPH concept has been mentioned in PP 6/2007 in conjunction with PP 3/2008 concerning Forest Management and Preparation of Forest Management Plans and Forest Utilization, where based on this concept forest areas in Indonesia are divided into KPH, which are part of strengthening the national forest management system, provincial governments and district/city governments. To realize sustainable forest management, all forest areas are divided into KPH (Rizal, et al., 2009). The organizational structure of KPH could be seen in Figure 2.

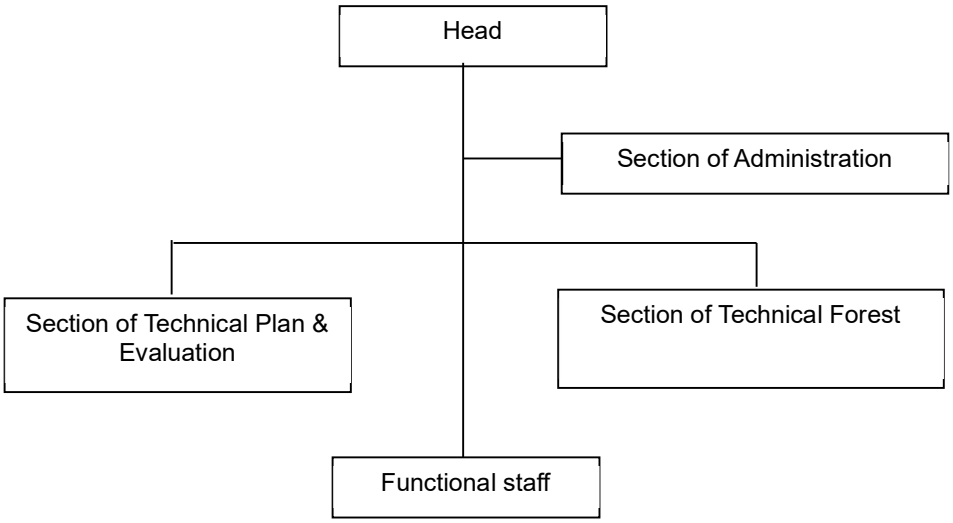

Figure 2. The organizational structure of KPH

Pulukan Village
Boundaries of Pulukan village
a. The north is bordered by the State Forest.
b. The east is bordered by the Pulukan River / Pekutatan Village.
c. After the South is bordered by the Indonesian Ocean.
d. West side is bordered by Medewi River / Medewi Village

The Pulukan Village area is divided into 6 sub villages:
1. Pulukan
2. Tinggi
3. Ledok
4. Arca
5. Arca Dwipa
6. Pangkung Medahan

Table 1. Population of Pulukan village (as of 2023)

No	Subvillages	Household (people)	Male (people)	Female (people)	Total (people)
1	Pulukan	301	373	377	750
2	Tinggi	205	333	336	669
3	Ledok	273	424	406	830
4	Arca	212	358	370	728
5	Arca Dwipa	294	482	459	941
6	Pangkung Medahan	232	396	398	794
	TOTAL	**1,447**	**2,366**	**2,346**	**4,712**

Source: Village office, 2024

Among those sub villages, only the sub village of Arca Dwipa which is located nearby the forest.

Some of the requirements needed by the Ministry of Environment and Forestry for village governments to obtain rights to forest management with the social forestry program. These requirements needed to apply for social forestry through the village forest scheme include (i) village regulation about village forest management institutions (VFMI); (ii) decree of the village head on VFMI management board; (iii) map of proposals on a scale of 1:50,000; and (iv) letter of application to the Minister of Environment and Forestry.

Government staff convey several important things to local community who will be encouraged to form social forestry groups through village forest management institutions. Some of these are matters relating to:

1. specific objectives of a particular social forestry program; such as several indicators to be achieved within a certain period of time, and beneficiaries in the social forestry
2. land status in forest areas, rights and obligations of local residents, including government obligations in the social forestry program;
3. the role of village forest management institutions in the social forestry program; and
4. Forms of active participation of local residents and cooperation with other parties, such as the government and other stakeholders

3.2 Principles of managing social forestry programs implemented in Pulukan village

Some of the objectives to be realized in the implementation of the Social Forestry program are to (i) improve the condition of natural resources in forest areas in order to provide benefits for agriculture and communities around the forest; (ii) provide materials for firewood needed by communities around the forest; (iii) provide animal feed and raw materials for industry; (iv) maintain the natural beauty of the landscape;

(v) create tourist attractions, namely as ecotourism and agrotourism; (vi) provide employment opportunities; (vii) improve the welfare of communities who are given the right to manage forest areas by the government (Supriatna et al, 2024). To achieve this goal, social forestry implemented by the community at the study location through the Social Forestry Group (SFG) has implemented several important principles, namely productive, productivity, the welfare of farmers and local community, and sustainability.

Productive

The meaning of productive in the social forestry development approach is utilizing land according to its designation, such as planting fruit trees, flowers, cocoa, coffee, durian, bananas and so on. In the study site, the local people or farmers has implemented agroforestry program which integrated forest trees with various agricultural crops and plantation trees to optimize the land while making the improvement of soil health and getting some production to have additional agricultural revenue. This means that productive land in forest areas through social forestry programs is related to agricultural diversification or integration between the tress for forest function with the crops for economic functions. Land use in forest areas is expected to provide multi-functions, such as economic, forest conservation, strengthening socio-cultural-religious, and so on. The local people in Pulukan village planted some commodities, such as durian, cocoa, coffee, glove, banana, avocado in the forest area.

Productivity

Agricultural productivity is the ability of land to produce crops with optimal quality and quantity. Agricultural productivity can also be interpreted as a comparison between the final result (output) and the materials used (input). In the site, the local people under the coordination of West Bali Forest Management Unit (FMU) have productively cultivated the land on forest areas because they expected to produce high and quality products. Based on the interviews and data analysis, the quality products in large quantities tend to obtain high prices for the farmers who cultivate forests land. Increasing the productivity of land and plants managed in forest areas takes into account several things that affect agricultural productivity, including: land area, physical, biological and chemical conditions of the soil, rainfall, water availability, fertilization, pest and disease control.

The welfare of farmers and local community

In general, welfare is a condition related to the fulfilment of basic needs for individuals or groups, such as food, education, health and other needs. According to the staff of West Bali FMU, farmers and local communities living around forest areas and given the right to manage forests through social forestry must be encouraged to realize their welfare through the improvement of productivity of land and trees and crops planted. Economically, products produced (such as avocado, coffee, cocoa, durian, banana) by farmers with high prices will increase their income so that they become a strong economic incentive to manage social forestry. Or in other words, high farmer income through social forestry programs will be able to realize forest conservation, because they will not cut down trees.

Sustainability

Sustainability of social forestry is the sustainable management of forests carried out by communities around the forest. The goal is to improve community welfare and preserve the environment. The social forestry program does not stop when the government no longer continues its activities in the forest area and its surroundings. The principle of sustainability is more emphasized on the ability and empowerment of communities who are given the right to manage forests to continue to carry out program activities and even further develop them in order to increase their benefits for them and also forest conservation. Some components included in this sustainability are economic, socio-cultural, and environmental aspects. In relation to

the socio-cultural values of the Balinese people, this principle of sustainability has been reflected in its philosophy, namely tri hita karana (three causes of happiness) which is based on harmony and balance between the three components. The three components are (i) parhayangan, namely the harmonious relationship between humans and God; (ii) pawongan, namely the harmonious relationship between humans and humans; and (iii) palemahan, namely the harmonious relationship between humans and their environment.

Efforts made by the social forestry program

The government has long had and implemented one of the programs aimed at alleviating poverty in communities, especially those around forests, namely social forestry. Based on the principles of social forestry mentioned above, this program is highly expected to be a model for realizing harmony and balance between humans (welfare, socio-culture) and nature (hydrology, ecology of forest areas and their surroundings). Increasing welfare can be used as one of the main goals along with sustainable forest conservation. Therefore, human resources (local communities) are the central point in the development of social forestry programs. Local community participation has also been encouraged by West Barat FMU staff in the implementation of social forestry programs. Communities are involved from the beginning, especially in aspects of decision making, planning, human and forest resource management to ensure optimal and sustainable forest utilization.

Efforts made to realize the principles of productive and productivity are empowering local communities' programs through the programs of socialization, agricultural extension and training for farmers through their groups related to agricultural diversification. The extension and agricultural training activities are focused on increasing the capacity of local communities in Pulukan Village who are members of SFG so that they have the technical and non-technical skills needed for sustainable forest management.Technically, in the agricultural extension and training, the use of agricultural technology is required, such as the provision of quality seeds and seedlings, land management, fertilization, agricultural mechanization, pest and disease protection, agricultural diversification. In addition, the human resource factor is very significant in realizing the principles of productivity and productivity. Therefore, the quality of farmers and other stakeholders in rural areas and around forest areas must be further improved to be able to apply the introduced agricultural technology.

4. CONCLUSION

The implementation of social forestry in Pulukan Village is under the coordination of the West Bali Forest Management Unit (KPH). The involvement of local communities from the beginning of the program is very important up to monitoring and evaluation. Some of the objectives of the Social Forestry program are to improve the condition of natural resources in forest areas so that they can provide positive benefits for agriculture and communities around the forest; provide raw materials for firewood needed by communities around the forest; and others. To achieve these objectives, social forestry implemented by the community at the study location through the Social Forestry Group (SFG) has implemented several important principles, namely productivity, productivity, welfare of farmers and local communities, and sustainability. These principles are applied in several efforts to develop social forestry, such as empowering local communities to increase their capacity through socialization programs, agricultural extension and training for farmers through farmer groups related to agricultural diversification.

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