

# **Forestry And Livelihood Development: Sharing Knowledge And Experiences From Asia Pacific Forestry Net Workshop In China**

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## **1. Summary**

Forests play important role in the livelihood of people living in and near forest. Forest can be used as a source of livelihood for the community through activities utilizing forest area, utilizing environmental services, utilizing timber and non-timber. In Indonesia, forest use is to obtain the benefits of products and services from forest resources optimally, fair and sustainable for the public welfare.

Utilization of forest as a source of livelihood and income generation is diverse, depends on the types of the forest functions. In production forests the local community can utilize timber and non timber forest products, in certain parts can be used for agroforestry. In protection forests communities allow to utilize non timber forest product and environmental services. Where as in conservation forests, the community can utilize for ecotourism, environmental services and forestry partnership.

One form of utilization of forest as a source of livelihood is utilization of productive plants under forest stands such as coffee. The Forest Farmers Group Giri Senang in Bandung, West Java use land under pine forest stands with coffee cultivation. The results of growing coffee under the stands of pine forests are proven to increase the income of farmers in the village. Increased income of farmers in the village not only from the sale of coffee beans, but also income from the village of coffee as a place of recreation, a place of comparative studies and a place of education and training.

## **2. About The Worskhop**

Forests and forestry play important roles in the livelihood of people in all societies though the nature of livelihood derived varies in time and space. Most developing countries in the Asia-Pacific Region is still heavily relying on forest resources for rural community livelihoods and economic productivity despite of economic development efforts in the region, forestry agencies are facing a immense challenges of deforestation and forest degradation as well as marginalization of forest dependent communities in meeting the diverse demands on forests. Protecting the vast forest areas and helping to restore degraded forest areas, conserve biodiversity in the context of limited fiscal and human resources requires well-designed and well-implemented policies and programs that improve forest resources management contributing to income generation and livelihood improvement of local communities.

The aim of the workshop is in order to provide a better understanding of the forest-livelihood linkages and what may be done to enhance forest's contribution to improve rural livelihood.

The main objectives of the workshop are to:

- Access the linkage between forest management and rural livelihood improvement and explore the ways in which the livelihoods of rural communities might be improved through better forest management.
- Provide an overview of the experiences and best forestry practices aimed at enhancing rural livelihood development
- Analyse and assess implications of key policies, institutional and technological developments and the potentials and limitations for forestry based livelihood improvement

#### Issues Addressed

- Current understanding about the contribution of forests in improving the livelihood of rural communities.
- Changing roles of forests in fulfilling the livelihood needs of people in a rapidly evolving society.
- Making forest policies, legislation and institutions more effective in enhancing forestry's contribution to livelihood improvement.

#### Participations

- Fifteen participants from 13 member economies (countries) attended the workshop (Bangladesh, Cambodia, China, Fiji, Indonesia, Lao PDR, Malaysia, Mongolia, Myanmar, Nepal, Papua Nugini, Sri Lanka, Thailand and Vietnam).
- Three female participants (20%).
- It created a unique learning opportunity with diverse experience.



### **3. Learning From The Workshop**

#### **A. Introduction**

Activities carried out by local people around the forest can be used as a source of income generation and/or livelihood for people living in and around forest depends on land tenure system. Some countries adhere to socialist and communist land tenure system such as China, Vietnam, Lao PDR, Cambodia and Myanmar, all lands belong to the government. The government can grant the rights to certain community to use the lands or forest. Usually rights are given to the communities such as right to access and right to use or to get benefits. In democratic countries such as Indonesia, Thailand, etc, lands can be belongs to government and private (enterprise, community, customary and individual). As we know, land tenure is bundle of rights to the land, namely right to access, right to use/utilize or to get benefits, right to manage and right to own. Forests and forestry play important roles in the livelihood of people in all societies though the nature of livelihood derived varies in time and space. According to the estimate by the World Bank, there are around 1.6 billion people dependent on forests for their livelihood directly and indirectly, and the impact of forestry development on people's livelihood has been extremely varied while some have helped to improve livelihoods through provision of goods and services as also income from forestry based activities.

Forest has the characteristic of multi function holistic and long-term. Therefore, the existence of the forest is always closely related to the strategic issues that occur at this time, the national food security, climate change and global warming, energy, and water, population growth and poverty, and the carrying capacity for sustainable economic growth. One form of multi-functional characteristics of the actualization of the forest is its role in the life of Indonesian society. Many Indonesian people are living and livelihoods depend on forests, either directly or indirectly. Dependence of people whose livelihoods depend on forests, for example, the person/people who work in the forestry sector, the people whose livelihoods depend on non-timber forest products, people who use the forest area to be combined with agricultural activities (agroforestry), estate, animal husbandry, fisheries (silvofishery), silvopastoral and so forth. At the moment there are about 19,410 villages in the forest with a population of about 48.8 million people were living and relating to the forest life. The forest area can be used as a source of livelihood for local people who live in and around the forest.

The forest is so important function as a life support system, where the role of forests as water system management, climate regulation and carbon sinks as well as micro genetic resources of flora and fauna. In addition, the forest is also a food provider. As these food providers, utilization can be done directly or indirectly. Direct use as a source of food from plants and animals while indirect utilization by utilizing forest areas to produce food resources in production forests and protected forests, utilization zones and zones of rehabilitation, conservation of forest traditional zone or buffer zones of protected forest.

In Indonesia, the forest management paradigm has changed; from sustainable forest management and prosperous communities to forest management to improve community welfare towards sustainable forests. Without the welfare of the people around and within the forest area it is very difficult to create sustainable forests.

Villages bordering these forest areas are generally pockets of poverty. Poverty of people who live around and in the forest is a trigger and a driver of forest destruction.

Forest use by the community as a source of food has actually been done a long time with the pattern of utilization of diverse, ranging from the direct harvest of forest types of commodities to exploit forest land to produce food.

Forests in Indonesia have various functions, namely as production forests, protection forests and conservation forests. All of these forest types can be used as the source of livelihood of local community, although the types of activities on those forest types are diverse. In production forests the local communities can utilize timber and non timber forest products, in protection forests communities can only utilize non timber forest products and environmental services. Whereas in conservation forests, the community can utilize for ecotourism, environmental services and forestry partnership.

Livelihood by utilizing timber forest products in production forests include:

- In natural forests: utilization of timber and forest product utilization restoration results.
- In the plantation: Industrial Plantation Forest , Community Forest Plantation and Forest Crops Reforestation.
- Utilization of non-timber forest products: the natural forests and forest plantations in production.
- Harvesting wood forest products.
- Collection of non-timber forest products.
- Utilization of forest land belonging to the people.



A variety of non-timber forest products can be used as a source of livelihood of local communities.





Using floor of forest under forest stands by using planting various types of spices and medicinal plants



Planting coffee plants below forest stands can constitute community livelihoods around forest.



Porang growing under forest stands in Nganjuk teak stands in Forest management Unit (FMU), East Java



Soybean plantation among rows of Ngawi FMU, East Java



Forest utilization can be used as a source of livelihood for the community through activities utilizing forest area, utilizing environmental services, utilizing timber and non-timber. One example of forest use as a source of livelihood for local communities is the utilization land under forest stands to grow annual crops such as coffee. Forest Farmers Group Giri Senang in Bandung West Java is an example of using under forest stands to grow coffee, proven to increase the income of the local community in the village.

Forest Farmers' Group Giri Senang is located in the Giri Mekar village, Cilengkrang Sub District, District of Bandung, West Java.



Using land under pine forest stands by planting coffee



Forest Farmers' Group Giri Senang

## **B. Utilization of Forest as a Source of Livelihood and Income Generation**

Forest utilization can be used as a source of livelihood for the community through activities utilizing forest area, utilizing environmental services, utilizing timber and non-timber, optimal and fair to the welfare of society while maintaining sustainability (Government Regulation No. 6 of 2007 and No. 3 years 2008 on Forest Management and Forest Management Planning and Forest Utilization).

The purpose of forest use is to obtain the benefits of products and services from forest resources optimally, fair and sustainable for the public welfare.

### **1. Forest Exploitation Activities**

- Utilization of forest area that is using the existing land within the forest for various cultivation, include: food cultivation, cultivation of medicinal plants, ornamental plant cultivation, mushroom cultivation, beekeeping, cultivation of *Arenga pinnata* (produce brown sugar), spices cultivation, breeding animals, cultivation and cultivation of rare birds' nests.
- The use of forests for community forestry, forest villages and customary forest.
- Utilization of environmental services, including: service utilization of water flow, water utilization, Nature, biodiversity protection, rescue and environmental protection, and the absorption and / or carbon storage.
- Use of timber forest products, in production forests, including:

- On the Natural Forest: utilization of timber and forest product utilization restoration results.

At Forest Plants: Industrial Plantation Forest, Community Forest Plantation, Reforestation and Forest Crops.

- Use of non-timber forest products: the Natural Forest and Forest Plants in Production Forest.
- Harvesting timber forest products.
- Collection of non-timber forest products.
- Utilization forest land for agriculture.

Management of non-timber forest products by local communities, community groups or entities so many different kinds or known by various names forestry business. Some examples of various forestry businesses that produce non-timber forest products include beekeeping, mushroom cultivation timber. natural silk, the culture of ornamental plants, cultivation of rare plants, swift's nests, medicinal plants, aloes, essential oils, bamboo, Arenga pinnata and others.

In every activity of using forest area shall be equipped with licenses that include: forest utilization permit (IUPK), Use Licence for environmental services, Use Licence timber forest products, Use Licence for non-timber forest products, Permit Harvesting timber forest products, Permit Collection of non-timber forest products, Agreement on implementing social forestry.

## 2. Utilization of forest land belonging to the people.

Utilization of forest and forestry business or permissions granted by the government to the community can serve as the people's livelihood, the forest utilization activities utilizing forest areas, environmental services, timber and non-timber as well as the utilization of productive plants under forest stands (like the kind empon- empon, yam, Dioscorea esculenta, porang, arrowroot, vanilla, etc.), optimal and fair to the welfare of society while maintaining sustainability.

## 3. Utilization of environmental services:

- Utilization of services of water flow,
- The use of water (drinking water, using water for household purposes, agriculture, etc)
- Natural tourism,
- The protection of biodiversity,
- Saving and environmental protection, and
- Absorption and / or carbon storage.

Use of environmental services can also be a source of community livelihood. Utilization of natural tourist environment has multiple benefits, not only natural attractions, but there are business opportunities for local communities to businesses or home stay accommodation for tourists, a food stall, souvenirs, tour

guides and others. Development of forestry businesses, there are three, namely business management of forest products such as wood, non-timber forest products and environmental services business development.

Business management of timber and non-timber products and environmental services generated from state forests and forests (forest owned by community, customary forests).

Development of forestry businesses which is a source of community livelihood can be done through the granting of forestry businesses. Granting licenses to businesses in forestry to produce wood mainly in production forests in the form of natural forests and plantations. While granting permission to manage non-timber forest products can be carried out in production forests and protected forests. Granting permission for the use of environmental services such as water supply and for tourism can be given to forest conservation (national parks, theme parks, hunting parks) or protected forest.

### **C. Social Forestry Scheme**

In the 2015-2019 Mid Term National Planning an area of 12.7 million hectares of forest area is targeted for social forestry through the community forestry, forest villages, community plantation forest, customary forest, and forestry partnerships. These efforts are expected to be a way out of tenure conflicts that characterize the development of the forestry sector.

The Ministry of Environment and Forestry is currently opening space for the community to access forest use through the Community Forest (HKm), Village Forest (HD), and Community Plantation Forest (HTR) mechanisms. Besides customary forests are also encouraged by the use of indigenous peoples, as long as its recognition has been established in the Regional Regulation. The policy for granting access to forest utilization for the community has been issued Minister of Environment and Forestry Regulation No. 83 / MENLHK / SETJEN/KUM-1/10/2016 regarding Social Forestry, so that the people can already feel the alignments of the Government's programs to improve the welfare of communities around the forest.

Concerning the social and political dynamic, the regulation related to social forestry also revised. In 2021 the Ministry of Environment and Forestry has been established Minister of Environment and Forestry Regulation No. 9/2021 regarding Management of Social Forestry.

The purpose of this Ministerial regulation is to provide guidelines for granting management rights, permits, partnerships and customary forests in the field of social forestry. The purpose of this Ministerial regulation is to resolve tenure and justice issues for local communities and customary law communities that are in or around forest areas in the context of community welfare and preservation of forest functions. With the issuance of the Minister of Environment and Forestry regulation, it is expected to reduce poverty and unemployment of the people, especially those who live around and in the forest through efforts to provide legal access to the local community. The legal access is in the form of village forest



management, community forestry business permits, community plantations, forestry partnerships or recognition and protection of customary law communities for community welfare and the preservation of forest resources. Through this ministerial regulation will also reduce inequality in management / utilization of forests in forest areas.

General government policy in the context of improving community welfare and increasing community income through social forestry programme. In general, the purpose of the social forestry programme is to provide opportunities for the community to become forest managers in order to increase the income of people in and around the forest area

#### **D. Forest Farmers' Group Giri Senang**

Forest Farmers' Group Giri Senang is located in the Giri Mekar village, Cilengkrang Sub District, District of Bandung, West Java. The village area comprises sloping area and hilly. The altitude between 1200 - 1800 above sea level. The livelihood of the villagers are mostly as farmers. They grow vegetables crops as cabbages, carrots, tomato, chili, egg fruit, etc,



Giri Mekar village, Cilengkrang Sub District, District of Bandung, West Java.

The activities carried out by the Forest Farmers' Group Giri Senang are agroforestry with *Eucalyptus (alba)*, *Anthocephalus cadamba*, *Gmelina arborea*, jack fruit, avocado and egg fruit. People forests usually grow *Paraserianthes* sp, mahogany; planting under a forest stand with coffee plants, coffee nurseries; bamboo for traditional angklung music and ecotourism.

The socio-economic conditions of the people in the study area of Giri Mekar Village, Cilengkrang Sub District, Bandung District, West Java generally have a livelihood as farmers with low income levels. Therefore, other livelihood activities are needed so that local people can increase their incomes. One of the livelihood alternatives is to become a coffee farmers in the forest area.

The types of coffee grown under forest stands are arabica. The total annual coffee harvest is between 140-150 tons. The number of trees per hectare is 1,000

stems with an average production of 1,000 tons of coffee beans per hectare per year.

Income Coffee farmers about Rp. 8 millions to 10 millions/hectare/year. The price of coffee is Rp. 7,000 / kg in the form of cherries. If the coffee beans are processed in the form of coffee powder the price can reach Rp.60,000 per kilogram (Amir, et al. 2017). To increase farmers 'income, they also grow other horticultural crops and plant rice on farmers' land. Farmer income is not only sourced from the sale of coffee beans, but also comes from other businesses such as agricultural and agroforestry businesses and bamboo crafts for making angklung traditional music. Forest Farmers Group Giri Happy to sell coffee products in various forms of processed namely green bean, roasting, coffee grounds and cafe. The coffee sold is given the Palasari" hill coffee brand."The marketing brand "palasari""comes from name of hilly arean in the Giri Mekar villages.

KTH GIRI SENANG (Jawa Barat)			
<b>PROFIL KTH</b> <ul style="list-style-type: none"> <li>- Giri Mekar Village, Cilengkrang Sub District, Bandung District.</li> <li>- Number of members: 147 people</li> <li>- Forestry extension officer: Muhammad Yusuf</li> <li>- PKSM : 4 orang</li> <li>- As location of forest education and training for other FFG</li> <li>- Comodity Coffee Robusta dan Arabica dengan <b>Productivity</b> : 1.000-1.500 tonnes/ year in form of cherries.</li> <li>- Absorb <math>\pm</math> 250 workers</li> <li>- Income <math>\pm</math> Rp. 30 millions/month/ person</li> <li>- Coffee land management area <math>\pm</math> 1 ha/org</li> </ul> <b>Achievement :</b> <ul style="list-style-type: none"> <li>- Wana Lestari Champion FFG Category KTH th 2016</li> </ul>	<b>KELEMBAGAAN</b> 	<b>KEGIATAN KTH</b> 	
	<b>JENIS USAHA</b> 	<b>PRODUKTIFITAS</b> 	

In 2002 The local community in Bandung has a joint program forest management with the Government owned forest state enterprise. The local people are allowed to grow annual crops such as coffee under the pine forest stands. Members of Forest Farmers' Group Giri Senang and local community allowed to use land under forest stands to grow coffee. Coffee plants can flourish under pine stands. The area of forest planted with coffee in the area is about 155 hectares.



Cultivation coffee under pine forest stands



Cultivation coffee under pine forest stands

In 2002, communities around the forest area were involved in forest management, through a joint forest management programme. Local communities are allowed to grow annual crops such as corn in the forest area. But the results of the annual crop growers were not able to significantly increase the income of the local community.

In 2009, Forest Farmers' Group Giri Senang and the Government owned state enterprise collaborated in the use of land under forest stands with coffee cultivation. Coffee cultivation under forest stands is not only for economic purposes but also for protecting ecological purposes.

The aim of formation of Forest Farmers' Group Giri Senang is

- Improve farmers' knowledge and skills in the forestry sector through education and training;
- Preventing forest fires through the activities of the Utilization of Land Under Forest Stands;
- Controlling erosion by planting trees on critical lands;
- Opening new jobs in rural areas, especially in the area of the Giri Senang Forest Farmers Group;
- Improve the quality of coffee processing so as to create a creative economy;



- Community economic empowerment through management of non-timber forest products (NTFPs);
- Building a tourist area;
- Creating training and apprenticeship sites in the forestry sector, specifically the use of land under forest stands with coffee cultivation.

In 2012, Forest Farmers' Group Giri Senang was pleased to receive the grant a coffee processing machine from local government. With the existence of the coffee processing machine, the community can process coffee that has a higher selling value, while at the same time increasing the income of coffee farmers in the area.



Coffee processing machine

In 2013, the Forest Farmers' Group Giri Senang formed a joint business group which was an embryo of the Giri Senang Forest Farmers Cooperative.

Forest Farmers' Group Giri Senang is not only a coffee cultivation business but also has other businesses such as the use of non timber forest products, namely bamboo, which is used for making traditional musical instruments called angklung.

Forest Farmers Group Giri Senag developing businesses in the form of ecotourism, coffee villages, motor cycle circuit and mountain bike as well as making fertilizer from coffee processing waste





Forest Farmers' Group Giri Senang



Giri Senang Forest Farmers Cooperative

Through various publications in the form of print media (leaflet, booklet, magazine), social media and websites, Forest Farmers' Group Giri Senang can be known by various parties. Forest Farmers' Group Giri Senang often receives visits from various parties both for comparative studies (benchmarking) and places of practice for training participants both in training organized by training centers and from universities.



As place of education



As place of education

### **Role of Forestry Extension Worker and The Local Government**

The success of the Forest Farmers Group Giri Senang in managing forest farmer groups and group businesses is inseparable from the role of a forestry extension worker and local government and coaching from various parties. Coaching towards Forest Farmers Group Giri Senang is intended to:

- Strengthening the Forest Farmer Group Giri institution
- Cultivation of coffee in the land under the pine forest stands, ranging from coffee plants nursery, planting and maintaining coffee plants, so that the productivity of coffee beans is quite a lot with good quality coffee beans.
- Development of forest farmer group businesses including post-harvest treatment, processing of coffee bean products, packing, promotion, marketing and building networking. Waste as result of coffee bean processing is also processed into fertilizer.

To increase the marketing of Forest Farmers Group Giri Senang's coffee production, the Local Government often organizes festivals to promote coffee drinking.

Forest Farmers Group Giri Senang to date has 147 members, chaired by Mr. Asep Rohman. The main activities of Forest Farmers Group are agroforestry, planting of land under forest stands and bamboo handicrafts. Planting under the most dominant stand today is coffee cultivation, a type of arabica. In addition, Forest Farmers Group Forest Farmers Group is also developing bamboo crafts, especially angklung traditional musical instruments.

Bukit Palasari Arabica Coffee is a superior product produced by Forest Farmers Group Giri Senang, successfully winning the Coffee Festival in Bandung in 2014. The plan of Forest Farmers Group Giri Senang in the future is to develop a business in the form of ecotourism in the form of a coffee village that is integrated with a trail bike circuit and mountain bike tours and the provision of fertilizer / production input.



As place of training





Forest Farmers Group Giri Senang Achievement

One of tasks forestry extension worker is empowering forest farmers.

Community empowerment, including communities around the forest, can not be separated from four aspects, namely: aspects of natural resources, economic aspects, aspects of capacity building / human resources, and aspects of social capital.

Strengthening community institutions is an essential activity that absolutely must be carried out in community empowerment activities. Strengthening community institutions that are currently considered the most appropriate and complete in terms of economy, capacity building / human resources, development of social capital and natural resources are cooperatives.

Forest Farmer Groups are expected to have more access to information on technology, capital and marketing so that they can improve their ability to carry out good and sustainable business governance and have high competitiveness. Thus the impact on increasing the income and welfare of its members.

### E. Lesson Learn

Many activities that can be carried out by the communities around the forest can be used as a source of livelihood for people living in and around the forest. One of the activities as a source of livelihood that can be carried out by people living in a forest area is planting productive plants under a forest stands.

To increase the income of the community around the forest, the production of plants under the forest stands is not sold in the form of raw materials, but must be processed and packaged attractively to increase the value of sales. Promotion, marketing and network factors are very important to expand marketing and increase the income of coffee farmers in the village. The institution of forest farmer groups must also be strengthened. Forest farmers' groups need to establish business groups such as cooperatives as a vehicle to sell their



production and place to obtain production facilities such as fertilizers and production equipment. Forest farmer group business development can be developed as a place of recreation, education and training.

The success of the Forest Farmers Group Giri Senang is because there is assistance from a forestry extension worker and guidance from the local government. Forestry extension worker always gives encouragement to all members of forest farmer groups in order to develop the coffee business that they have produced.

## **F. Conclusion**

Many activities can be carried out in the forests that can be used as a source of livelihood for the people living in and around the forests

Planting productive plants under a forest stands can be one of the livelihood alternatives for people who live around the forests.

The success of the Forest Farmers Group Giri Senang is because there is assistance from a forestry extension worker and guidance from the local government.

Empowering of forest farmers Group Giri Senang is important in order to strengthen forest farmers, establish business and cultivation of coffee plants in the land under pine forest stands.

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