

FIELD GUIDE

Small-Scale Tree Farming in Asia

19 - 23 March 2006
Java, Indonesia



Schedule of Activities (tentative)

| Date | Activity |
|-------------------------------|--|
| Day 0 March 18, Sat | 1235-1405 Butuan-Manila PR 478 Preparation of Presentation on Small-Scale Tree Farming with Caraga Participants |
| Day 1 March 19, Sun | 0830-1200 Manila-Singapore PR 503 1405-1515 Singapore-Yogyakarta GA 877 Check-in: Hotel Brongto (south Yogyakarta) Participants' Orientation & Expectation Setting |
| Day 2 March 20, Mon | Bus: Yogyakarta-Wonosobo Visit forest-related industries along the route 0830 Check-out Hotel Brongto for travel to Wonosobo 1000 Stop-over for Furniture Shop Visit Lunch 1300 Stop-over at small sawmill 1500 Stop-over at Bahar Abadi wood processing plant 1800 Arrive Wonosobo Check-in: Hotel Surya Asia, Wonosobo |
| Day 3 March 21, Tue | Land: Wonosobo-Bogoran Forest Visit, Village Discussions and Action Planning in Bogoran Village 0830 Check-out Hotel Surya Asia 0900-1000 Wonosobo Capital to Bogoran Village 1000-1300 Walk-through hutan rakyat farms 1300-1400 Lunch at Village Hall 1400-1600 Discussion with Village Groups 1600-1800 Participants' Action Planning Workshop Overnight with villagers in Bogoran |
| Day 4 March 22, Wed | Exchanges with Wonosobo District Authorities and Reflection Session Farewell to Bogoran Villagers 0800-0900 Bogoran Village to Wonosobo Capital Check-in Hotel Surya Asia 0100-1200 Meeting with Wonosobo District Government Lunch with District Officials 1400 Participants' Reflection Session Overnight at Wonosobo |

| | |
|---------------------------------------|--|
| <p>Day 5</p> <p>March 23, Thu</p> | <p>Exchanges with Gunung Kidul Tree Farmer Groups</p> <p>0630 Check-out Hotel Surya Asia</p> <p>0700 Wonosobo to Jogjakarta</p> <p>1200 Check-in Hotel Brongto</p> <p>1400 Jogjakarta to Gunung Kidul (1 hour)</p> <p> Meeting with Gunung Kidul Tree Farmer Groups</p> <p>1700 Gunung Kidul to Jogjakarta</p> <p> Wrap-Up</p> <p>Overnight at Hotel Brongto, Jogjakarta</p> |
| <p>Day 6</p> <p>March 24, Fri</p> | <p>0700-1010 Yogyakarta-Singapore GA 876</p> <p>1305-1645 Singapore-Manila PR 504</p> |
| <p>Day 7</p> <p>March 25, Sat</p> | <p>1045-1115 Manila-Butuan PR 477</p> |

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I. Background

In September 2005, the Philippine Working Group for Community-based Natural Resource Management (PWG) conducted an area visit to Butuan City and the province of Agusan del Sur, in the Caraga Region, Mindanao. This is an area that possesses many of the natural advantages for agriculture and agri-based economic activities. The national administration's development agenda for the country includes focusing on supporting and enhancing these initiatives, particularly for Mindanao.

In the province of Agusan del Sur, as well as in the entire Caraga region, tree farming is a major livelihood activity. The small-scale tree farming industry is a major source of livelihood, not only in Agusan del Sur, but in the entire Caraga region. The climate and soil conditions in Caraga are naturally suited to timber production, and labor is abundant, yet small-scale tree farming has not taken off as a major industry.

Tree farming is a widely-practiced livelihood activity with the potential for boosting both household incomes and provincial revenue. Yet, local people who have already invested in tree farming are considering shifting to other crops due to several hindering factors such as the absence of an enabling policy and supporting mechanisms, coupled with huge transaction costs to get their products to the market.¹

While tree plantation development on private lands appears to have great potential to meet both needs for timber and livelihood in the Philippines, the industry has not taken off as it has in other countries. This follow up international study tour is an opportunity to learn from the initiatives of Indonesian tree farms and identify what factors are needed in order to generate the same kind of growth in farm forestry in the Philippines.

Selected districts in Central Java, Indonesia match the context of Filipino participants from Caraga region in Mindanao, Philippines:

- ❖ Same species: both are dealing with *Paraserianthes falcattaria* and *Swietenia* spp. and so have basis to exchange experiences in planting, cutting and processing techniques
- ❖ Similar tenure arrangements: both are planting on private lands
- ❖ Similar culture: both come from the Malay race
- ❖ Similar nation-state dynamics: both come from an island nation
- ❖ Stakeholders from Wonosobo District in Central Java have already been exposed to the Philippine context during another Spark-sponsored visit to Mountain Province and Nueva Vizcaya in 2002.

Learning Objectives

General Objectives

- ❖ Increase opportunities for learning and sharing of knowledge and experience in NRM.
- ❖ Inform decision-making and improve CBNRM practices and influence policy.
- ❖ Strengthen and support stakeholders in NRM in implementation of projects and activities.

Specific Objectives

For Filipinos and Indonesians to exchange experiences in:

- ❖ economically and environmentally sustainable planting regime and agroforestry practices
- ❖ efficient cutting and processing techniques
- ❖ effective mechanisms for market access

- ❖ policies affecting small-scale tree farming
- ❖ details of tenure arrangements
- ❖ potentials of and constraints to certification of small-tree farms

Desired Outcomes

It is hoped that this exchange of experiences between Philippines and Indonesia will:

- ❖ Get participants to learn something about their own situation while getting to know the context in other areas.
- ❖ See processes and systems that can help stimulate new ways of thinking and new ways of doing things.
- ❖ Help participants set aside formal, hierarchical relationships and develop the sense that during the visit they are learning together as a country team. It is also hoped that this sense of teamwork will carry on even after the visit when participants return to their daily routines.
- ❖ Provide government officials who do not normally have a chance to go to the field to learn about community situations.
- ❖ Give the knowledge and inspiration to work together in further developing the small-scale tree farming industry.
- ❖ Contribute to international knowledge on small-scale tree farming in Asia which at present is quite limited.

II. Overview of Small-Scale Tree Farming Industry in Indonesia

In Indonesia, small-scale tree farming operates in **hutan rakyat**, or people's forest. The Forestry Law defines these areas as "forest grown on the land with ownership or other rights". Generally, areas considered as hutan rakyat are:

- forests managed by the owner, other person, or corporation
- forest on privately-owned land, or other land based on legislation
- forest which can be owned with approval of the Ministry of Forestry²

Ministry of Forestry considers areas as hutan rakyat if farm size is at least 0.25 hectares and crown density is more than 50%, or the tree density of the first year is more than 500 trees. Tree species grown are sengon (*Paraserianthes falcataria*), mahogany (*Sweitenia* sp.), para rubber (*Hevea brasiliensis*), sungkai (*Peronema canescens*), lamtoro gung (*Leucaena glauca*), akasia (*Acacia auriculiformis*) or cendana/sandalwood (*Santalum album*), teak (*Tectona grandis*), merkusii pine (*Pinus merkusii*),³ Many civil society groups regard hutan rakyat in the broad sense to include other tree-oriented land uses such as the typical Javanese home gardens (*pekarangan*), part of dry fields (*kebun*), and mixed tree gardens (*tanah yang ditanami kayu-kayuan*) and other tree-oriented land uses.

In Java, hutan rakyat areas cover around 391,000 hectares or 13% of total land area. In Wonosobo District, one-fifth of the land area is covered by trees or tree crops on private lands.⁴ In Banyumas District, one-fourth of the land area is managed under hutan rakyat.⁵ These areas are privately owned agroforests that farmers manage at the household level.

Market

In 1999, hutan rakyat areas produced 895,000 cubic meters and supplied 11% of the total wood needs in Java. Production on hutan rakyat areas averaged 2.29 cu.m./ha/year of timber, three times more than the average annual productivity per hectare in large plantations managed by the state. In Central Java Province, hutan rakyat areas are mainly planted with **sengon** (*Paraserianthes falcattaria*) and mahogany (*Swietenia* spp). Indonesian farmers intercrop these trees with annuals and perennials for daily culinary use or for selling.⁶

Farmers who cultivate sedentarily upland fields have introduced sengon as a fast-growing timber/pulp species by mixed-planting with their agricultural crops. Not all farmers can grow sengon on their plots because of crop competition. On large areas of upland fields, however, they have successfully established sengon stands by combining them with perennial crops such as banana, coffee, *salak* (*Zalacca edulis*), clove (*Syzygium aromaticum*), and coconut palm.

Wood products from hutan rakyat areas supply primary forestry industries such as sawmills, plywood, blockboard, chopsticks, matches, chipmills, pencil slats, pulp and

paper. Wood demand from hutan rakyat areas are most likely coming from sawmills that operate independently from forest concession operations. There are 1,493 independent sawmills all around Indonesia that need 7.4 million m³ of wood per year.⁷ Many plywood, blockboard, and chipmill industries likely source wood from forest concessions that have integrated processing in their operations. The pulp and paper industry operates solely under forest concessions.

Annual production capacity of all wood-based industries (within and outside forest concession operations) is estimated to be between 40-100 million cu. m. Due to limited wood supply, some companies have gone bankrupt and closed down but many companies are being encouraged to keep up production to service foreign and domestic debts incurred during the last years of the Suharto era.⁸

In the medium-term, the government aims to reduce wood processing capacity to 20 million hectares per year, decrease legal allowable cut in natural forests from 5 million to 2 million m³ per year, encourage industries to source raw materials from timber plantations or log imports, and attract private investments for tree plantations.⁹

The furniture industry in Indonesia has been expanding since the early 80s at an annual growth rate of 7%. In 1982, there were 150 plants with employment of 20 or more workers. Only four of these plants produced for export markets. Capital requirements for furniture and wood working enterprises often are lower than for the primary wood-based processors and cheap labor is available. The production cost for furniture factories however, has been high due to transportation cost from Sumatra and Kalimantan.¹⁰

Management

Indigenous agroforestry in Java often imitate the floristic diversity of natural forest ecosystems, though the actual species composition may be different. Javanese farmers have developed highly complex home gardens, with hundreds of productive plant species found in a single village. Javanese “forest gardens” contain wood trees, fruit trees, seasonal crops, cattle feed, and many other types of vegetation.

The hamlet land management system of the Javanese is called **wono dusun**. The wono dusun exhibits many features that characterize intensive agroforestry such as ecological diversity, stratification, multiple use, ecological sustainability and greater economic stability.

Wono dusun areas have multiple uses—agriculture, livestock raising and forestry. In this way, wono dusun maximizes the use of available land resources through spatial and chronological stratification of the various species. Spatial stratification is the arrangement of various plants within a unit of land while chronological stratification is the changing of composition of the stand over time. Wono dusun blocks are usually stratified into multiple layers, with plants arranged according to their different requirements for light, nutrients and moisture. The stratification that results mimics a number of the aspects of the ecological balance that natural forests provide.

A number of wono dusun areas are dominated by *senгон* (*Paraserianthes falcataria*) and mahogany (*Swietenia macrophylla*). Annual crops grown are cassava, kapulogo (*Amomum compactum*), vanilla (*Vanilla planifolia*) and corn (local variety). Some perennial crops that can be found are kemukus (*Piper cubeba*), salak (*Salacca edulis*),

jenu (*Derris caudatilimba*), chili and cloves. The community also mixes these with other crops such as, suruh (*Piper betle*), suren (*Toona sureni*), coffee and other plants for daily culinary use or for selling.

Staggered land use and continuous seasonal crop production is integral to this agroforestry system. In cutting sengon for example, everyone does not cut at the same time and the area suffers limited disturbance while other crops are still in production. The reasons they gave for having this practice was that they wait for the differently aged trees to mature before harvesting and from what they have seen in state forestlands, clear cutting results in soil degradation.

Communities see the value of this traditional practice in several ways. Apart from the protection it gives to crops against diseases, the variety of plants is a way to buffer their livelihood against market fluctuations. When a price of one product drops, they still have other products to sell. It provides them with subsistence products that can be harvested more immediately to meet daily needs. Chili could be harvested every 15 days, while kapulogo is available monthly. Grass, legumes and corn tops sustain cattle and goats. Their mid-term needs are covered by selling coffee, cloves, coconut, cassava and salak. They see timber as a way of saving to anticipate long-term needs such as marriage, education, house building, and pilgrimage to Mecca. As a result, financial yield of the land is more stable and generates greater value for the communities than less diverse plots. Compared to monoculture systems, wono dusun blocks are seen as more socially resilient and less subject to environmental stress.

Villagers usually practice the wono dusun system on private titled lands that are generally in the name of household heads (*hutan rakyat*). The land can be passed on as inheritance, can be sold to others, and can be used as collateral for bank loans. Resources on these lands are statistically accounted for under the agricultural sector. *Hutan rakyat* is one type of community forestry in Indonesia, wherein community forestry (*perhutanan masyarakat*) is a term used to describe forestlands that are not under state or industrial management.

There is some indication that *hutan rakyat* areas may be getting classified as forest cover. Global Forest Watch estimates that forest cover in Java increased by almost 600,000 hectares — from 1.27 million hectares in 1985 to 1.87 million hectares in 1997. This increase is likely due to the spread of areas where people practice intensive agroforestry.

Governance

The Bupati heads the executive arm of the district government and is responsible for signing off on policies recommended by the District Legislative Assembly.

The District Legislative Assembly is grouped into five committees. The Committee on Economic Development (*Komisi B*) is in charge of developing policies concerning trade, industry, agriculture, fisheries, livestock, forest produce and other estate crops.

In 1999, Wonosobo District got 60% of its local taxes and 40–50% of non-oil exports come from forest products. *Hutan rakyat* areas contributed Rp 12 billion (PhP 2.1

million)¹ to the district government's processed wood export revenue. Hutan rakyat areas cover around 20,000 hectares or 20% of Wonosobo land area of 98,468 hectares.

The District Forest and Estate Crops Office (Dinas Kehutanan dan Perkebunan/DK) works under the District Executive Government and has communications with local staff of the state forest corporation Perum Perhutani (Kesatuan Pemangkuan Hutan/KPH). The DK also coordinates with the Provincial Forest Office under the Provincial Governor.

The Wonosobo Forest Forum (FHW) is an independent body formed out of a series of multi-stakeholder discussions on forest plunder and land use conflict. The Forum functions as a communication and forestry-related multi-stakeholder coordinating group. It is comprised of representatives from the District Forest and Estate Crops Office, District Legislative Assembly (DPRD) and selected representatives from NGOs, forest user groups, sub-district heads, and village heads. Representatives from Perum Perhutani participated in the early period of Forum discussions, but stopped attending after the rest of the group agreed on implementing a logging moratorium in 40 villages within Wonosobo. Facilitation of FHW meetings is rotated among members.

The Directorate General for Land Rehabilitation and Reforestation implemented a program on HK (Hutan Rakyat) following the Ministry Decree on Private Forests (KPTS No. 20/ 1997) to promote self-reliance in private forests and encourage individuals and groups to provide vegetative cover on private lands. This program provided HK participants credit for establishing monoculture plantations, agroforestry farms, and other diversified forest products.

Tree Farming in Bogoran Village, Wonosobo District

Bogoran village of Sapuran Sub-District covers a land area of 664 hectares and is divided into 3 hamlets — Bogoran, Wadas, and Kyuni. Bogoran was established early in the 13th century and is now home to 1,810 people. State forestlands comprise 34% of the village land area or 226 hectares while agricultural lands that include people's forests (hutan rakyat) make up 50% or 332 hectares.

In hutan rakyat areas, villagers practice wono dusun. Species providing the upper layer canopy are fastgrowing or fruit-bearing trees, mainly:

- ❖ sengon (*Paraserianthes falcataria*)
- ❖ suren (*Toona sureni*)
- ❖ mahogany (*Swietenia macrophylla*)
- ❖ jackfruit (*Artocarpus indica*) jengkol (*Pithecellobium jiringa*)
- ❖ kelapa (*Cocus nucifera*)
- ❖ petai (*Parkia speciosa*)
- ❖ aren (*Arenga pinata*), and
- ❖ rambutan (*Nephelium lappaceum*).

Plants that compose the middle layer are coffee, salak (*Salacca edulis*), kaliandra (*Calliandra calothyrsus*), cocoa, pepper, banana, cloves and papaya. The lower layer is composed of cash crops such as ginger, turmeric, and other shade tolerant crops. As long as light permits, annual food crops such as corn, cassava and pepper are also grown.

¹ 1 peso (PhP) = 175 rupiah (Rp)

In one year, sengon can grow to 5 to 10 centimeters in diameter (1.6 to 3.3 inches) and at this rate can be harvested in 6 to 10 years. In 2003, farm gate prices ranged from Rp60,000 to 100,000 (P343 to P572) per tree. Trees are felled as they become ready to harvest and as need for cash arise in the family.

There are eight forest farmer groups in the administrative villages of Bogoran and Wadas. Each group included 20 to 40 families. The group Ngudi Rahayu was formed in March 2000 and meets every 36 days (following the Javanese monthly calendar). Every month, each member family contributes Rp. 500 (PhP3). The group has saved Rp800,000 (PhP4,571) by 2004, for use in establishing a seedling and sapling nursery.

Bogoran has 5 springs and Wadas has 8 springs in Wadas feeding the sawah (paddy) in the valley bottom. Farmers have agreed that around each spring a 500 meter circle of forest garden must be maintained as well as 100 meters on each side of the streams running away from the springs. In these water resource areas, no tree felling or annual crops are permitted, however they can be planted with productive tree species such as nangka, avocado, durien, coconut, and petai. The group holds meetings to discuss protection and management of the water sources on the Perhutani land that was deforested. Younger group members are also finding ways to get more youth interested and involved in natural resource management.

III. Overview of Small-Scale Tree Farming Industry in the Philippines

The Caraga region in southern Philippines is a major source of timber for Mindanao and the rest of the country. In 2003, Caraga accounted for the largest regional share in total log production. The provinces of Agusan del Sur and Surigao del Sur, both located in the Caraga region, are the top two contributors to the country's log production. Like Wonosobo District in Indonesia, Agusan del Sur is a landlocked province. Surigao del Sur meanwhile, is a coastal province like Gunung Kidul District. Both provinces are mountainous with more than half of the provincial areas classified as forestland – 76% of 896,550 hectares in Agusan del Sur and 71% of 455,216 hectares in Surigao del Sur.

In Caraga, tree farming is an established livelihood covering approximately 46,000 hectares of private lands involving 31,000 tree farmers. Small-scale tree farming on private lands was an offshoot of large-scale logging operations that started in the 1950s. These operations drew in migrants who sought employment in logging companies and also triggered people's interest in logging as a primary source of livelihood, second only to farming. When national government started issuing log bans in the 1990s, many workers in logging concessions stayed on and established their own tree farms. Caraga still has around 116,000 hectares of private lands that can develop into private tree plantations.¹¹

The Philippine national government selected the development of agri-business (specifically for Mindanao) as one of its key priorities in its 10-point development agenda. Tree farming on private lands contributes to internal revenue, creates jobs and boosts the local economy, and contributes to domestic wood supply. However, small-scale tree farming on private lands is presently considered as a forestry activity wherein heavy regulatory barriers apply. This contrasts with the more lenient regulations for oil palm and coconut plantations that are considered as agribusiness activities. Small-scale tree farming at present is suffering major setbacks in terms of poor policy support and inconsistent policy implementation, and by the lack of enabling mechanisms, such as financial support and technical assistance for tree farm development.

The current strength of the tree farming industry lies with the farmers who planted fast-growing species on their own lands with limited or no assistance from government. In the 1970s to 80s, the motivation to plant trees came from the promise of a large market for wooden electric poles in 10 years time, the declining relative prices of corn and rice,¹² and the massive reforestation program on public forestlands. Many tree farmers associations were established during this period. In the late 1990s, however, the cement industry came up with a more durable substitute for wooden electric poles, thereby bringing down the price of logs from fast-growing species. In 2003, 14 tree farming organizations in Caraga collaborated to establish the Caraga Federation of Tree Farmers and Developers, Inc (CaragaFed) in response to the adverse market and policy conditions governing the small-scale tree farming industry.

Market

In 2000, timber from private lands represented around 60% of total national log production of 800,000 cu.m. In Caraga, tree farms are planted with softwood and fast-growing tree species such as falcatta (*Paraserianthes falcataria*), bagras (*Eucalyptus deglupta*), mahogany (*Swietenia macrophylla*), yemane (*Gmelina arborea*), mangium (*Acacia mangium*), durian (*Durio zibenthinus*), marang (*Litsea perrottettil*) and rubber tree.

Wood demand in the Philippines primarily comes from wood-based industries such as sawmills, plywood and blockboard, fiberboard, veneer, pulp, moldings and wood carvings, and furniture. There is a decreasing trend in the number of operating sawmills and plywood plants in the last few years, with no plans to expand production capacities in the medium term. The construction sector, meanwhile, is expanding with an exhibited increase in gross revenues. Construction companies in the Top 7000 corporations increased gross income by 44% from 2002 to 2003. The furniture manufacturing sector is also a significant market but growing more slowly as it learns to adapt to scarcity in wood supply (Box 1).¹³

Box 1. The Philippine Furniture Industry

The Philippine furniture industry is composed of 15,000 establishments, mostly small and medium sized firms employing less than 30 workers. Single proprietorships and family corporations are common. Major furniture making areas are in Cebu, Manila and Pampanga. In Mindanao, Zamboanga City is the base of many furniture producers.

Manufacturers use both domestic and imported species. Lauan and tanguile are the commonly used types of wood that are locally-sourced. Due to log bans, the industry learned to use mixed media in furniture design and manufacturing. Furniture products made of rubberwood and gmelina are now being used. Mindanao is the only source of gmelina in the Philippines.

According to the Philippine Exporters Confederation, a priority concern of the industry is the development of tree plantations. The Chamber of Furniture Industries in the Philippines supports this view. To fill in the supply gap, manufacturers are currently importing lumber from Honduras and Brazilian mahogany, pine, oak, beech, cherry and maple. Malaysia, Brazil, and USA are the largest suppliers of imported lumber in the Philippines.

Wooden furniture manufacturers previously export only sanded items and parts, but now they also export finished products that showcase local skills in carving, marquetry and inlaying. Some firms are venturing into the use of particle boards and medium density fiberboards for panel furniture. Metal furniture manufacturers combine wrought iron with wicker, wood, seagrass and other indigenous materials. Stonecraft pieces such as tabletops are made with wooden carcasses and laminated with pieces of fossilized stones. Skills utilized in the production of furniture include carpentry, carving, dyeing, sanding, varnishing and welding, among others. The Philippine Furniture Training Center has been set up to train and re-tool manpower resources and improve the sector's productivity. Manufacturers are encouraged to come up with new products and designs at least twice a year.

Prices of furniture are determined by their sizes, quality, cost of materials and the areas where they are acquired. US is the biggest buyer and it goes for classic bulky pieces of furniture, while Europe and Japan prefer clean-looking, simple and classic designs in light colors.

Source: PhilExport, 1998

In 2003, log production in the Philippines was around 505,000 cubic meters of which:

- 27.65% was falcata (*Paraserianthes falcataria*)
- 13.38% was gmelina (*Gmelina arborea*)
- 11.96% was mangium (*Acacia mangium*)
- 6.61% was lauan (*Shorea* spp.)
- 3.31% was aayapis
- 37.09% other species

Falcata has a ready market in Caraga and its low wood density favors efficient transport and loading. It also reaches economic maturity in a shorter period. As a result, falcata generates higher profit than other tree crops. Logs are currently sold on a scale dependent on diameter. In the domestic market, falcata logs with small end diameter of 12 cu.m. and above can be sold at the mill door from PhP1200/cu.m. (Rp210,000) to PhP3200/cu.m. (Rp560,000). Logs below 12 cu.m. cannot be sold. In the international market, falcata is sold as sawnwood at an average price in 2003 of \$68/cu.m.

Marketing the wood from private tree farms is a complex process. There are several intermediate stakeholders that the tree farmer must deal with before finally getting his logs to the end market, including:

- ❖ Agents – finds wood sources and earns commission per cubic meter
- ❖ Traders – finds financiers and processes transport documents
- ❖ Financiers – negotiates with wood processing plant for purchase orders and provides operational capital
- ❖ Wood processing plants – buys and processes various species of trees
- ❖ Road checkpoints – inspects products being transported and checks legality of transport documents

The tree farmer's income is partly determined by the distance of his or her tree farm from the highway. Wood can be sold to the trader by bulk/wholesale (per area), or by wood volume (per cubic meter). If sold by area, the price would be determined by the size of the farm as well as the number and size of the hills, and the trader shoulders the cutting and hauling costs. If sold by volume, the price would depend on the volume of logs harvested excluding rejected logs and the tree farmer shoulders the felling, skidding (by carabao) and hauling costs. Farmers are seeking ways to increase diameter growth and correctly grade logs to take advantage of higher prices for large diameter logs.

An average truckload of falcata carries around 30-35 cubic meters consisting of around 200 pieces of large diameter logs and more than 500 pieces of the smaller logs. Average cost of production is around PhP960/cu.m (Rp168,000) including felling and bucking, yarding, loading, transport, local and national taxes, and formal and informal checkpoint tariffs.

Most small-scale tree farmers market their wood in Butuan City or Davao City. Some farmers in Agusan del Sur are able to sell to the 6 small- and medium-scale sawmills along the route to Butuan. Surigao del Sur has commercial-scale wood processing plant attached to a timber concessionaire. The plant produces plywood and sources raw materials only from its concession. Surigao del Sur also has areas with Community-based Forest Management Agreements managed by peoples' organizations that have falcata and mahogany plantations and process timber into wood crafts, souvenir items and furniture.

Management

Tree farms in Caraga consist mostly of *falcata* (*Paraserianthes falcataria*). A recent pilot study estimates that 90% of plantings in tree farms of CaragaFed members are planted with this species. With assistance from a project under New Zealand Aid, CaragaFed is undergoing training to improve silvicultural practices that aim to reduce initial planting costs, increase log diameter growth, and allow intercropping to provide early cash flow. CaragaFed members normally source their seeds from other members of the organization.

Tree farmers are also seeking more efficient harvesting techniques. Current practices result in a high rate of wastage (maybe 40% wasted, according to one tree farmer).¹⁴ Mechanisms to develop small-scale processing industries along the road to the main market are also being sought so that value addition and improvement in farm gate prices can occur. There is no wood processing in Agusan del Sur province hence farmers are only able to sell lower-value raw materials for transport to Butuan City.

The timber harvest period means cash for household, medical and educational purposes. The deregulation policy in 2003 for timber from private lands created new jobs for foresters, scalers and tree-markers. For example, a regional federation of tree farmers and developers was able to employ 121 individuals after deregulation, 31 of which are registered foresters.

In contrast to the lack of enabling mechanisms and regulatory barriers in tree farming, other agricultural products particularly oil palm present many attractive opportunities for accessing seed capital and generating profits from land management. Financing is readily available with loans of up to PhP50,000/hectare (Rp8.75million). Farmers are also being offered access to technical assistance in plantation development including seeds procurement. Currently, there are no government regulations on oil palm, therefore farmers would not need to apply for any permits before harvesting, which they must do when planting trees. Malaysian investors are also offering a ready market for oil palm. These incentives are motivating some tree farmers to consider shifting from tree farming to oil palm plantation.

Despite adverse market and policy environments, there is still significant interest from a number of tree farmers in Caraga to stick with tree farming as the preferred use for their land, with support from some local governments and local officials of the Department of Environment and Natural Resources. For instance, the high commitment, volunteerism and resourcefulness among present members of the Caraga Federation of Tree Farmers and Developers, Inc (CaragaFed) show that an organization that believes in broad-based participation and transparency can still survive even in difficult times. Due to the cancellation of the deregulation policy that allowed CaragaFed to generate income from undertaking tree inventories of farmers' woodlots, the federation had to decrease staff from 121 people to less than 30. Even with the decrease in human resources, with volunteerism (working without pay) the federation managed to conduct a preliminary baseline survey needed to develop a proposal to New Zealand Aid so that they can avail of training in technical, marketing, and business development aspects of small-scale tree farming.

Governance

A provincial government is headed by a governor while a municipal government is headed by a mayor. A table showing the Equivalent Terms of Governance between Philippines and Indonesia can be found on the last section of this field guide. The national Department of Environment and Natural Resources has regional-, provincial- and district-level offices around the country that coordinate with local governments in implementing natural resource management policies and programs. Some provincial and municipal governments have established their own environment and natural resources office to implement responsibilities devolved from DENR under the decentralization policy signed in 1991. Other local governments implement these devolved tasks through their planning office. Local governments face a big challenge in supporting small-scale tree farmers because Policies for tree farming on private lands presently overlap, are outdated, and tend to change very fast. Many of these policies act as regulatory barriers to the development of the small-scale tree farming industry in the Philippines.

In Caraga, there are 27 umbrella organizations that bring together 201 small-scale tree farmer associations. This sector has the potential to provide significant contributions to the local economy in terms of revenue. In 2003, a federation comprised of 14 tree farmers associations provided local governments with more than PhP1.2 million (Rp210billion) of revenues from real property taxes on tree farms.

At the 2nd Tree Farmers Congress in 2002, participants proposed for the deregulation of planted trees in private and alienable and disposable lands. In 2004, DENR issued guidelines on the utilization and transport of planted trees in Private Lands (DAO 2004-04) that effectively deregulated timber inventory and transport permit processing to the private forestry sector. The Caraga Federation of Tree Farmers and Developers, Inc (CaragaFed), registered in 2003, took on the deregulated functions. CaragaFed is a federation of 14 tree farmer associations. This federation provides seedlings and assistance in technical, financial, transporting and marketing aspects (Box 2).

Box 2. CaragaFed

The Caraga Federation of Tree Farmers and Developers, Inc (CaragaFed) aims “to make man-made forest a profitable venture for tree farmers and develop market linkages by promoting investments in downstream industries.” It envisions a future wherein “a tree farmer is empowered to engage in sustainable livelihood projects through tree plantation and living in harmony with nature.” The CaragaFed is an umbrella organization for 14 tree farming associations.

In 2003, it employed 116 men and women of which, 31 are registered foresters, 11 under-board BSF graduates and 74 are members of other professions. CaragaFed has put up 11 service stations designed to provide more than 1,000 farmers in the region with services such as:

- provision of the first 500 seedlings for free and 50% discount on additional seedling requirements
- access to zero interest loans
- technical assistance
- assistance during trucking & towing
- assistance in transport documentation

CaragaFed members produced an aggregate volume of 488,139 cubic meters that supplied the demand of local wood-based industries in 2003. The federation is currently undergoing technical and organizational training and also developing an operational inventory database that also captures gender, social and environmental information to eventually come up with a viable and sustainable plan of operations.

At the end of 2004 however, following the disastrous landslides in northern Luzon, DENR issued a total log ban that essentially froze the implementation of the newly issued guidelines. Through dialogue and finally a demonstration that mobilized 5000 farmers, Caraga become one of only two regions (there are 15 regions in the country) to have the log ban on plantation species lifted.

A multi-sectoral forest protection committee was created under the national Forest Protection Program, to implement forest law enforcement activities such as confiscation of illegally cut timber throughout the country. Forest rangers are regularly deployed at specified checkpoints to detect and control transportation of illegally cut timber. While monitoring mechanisms are indeed needed to curb illegal logging of natural forestlands, the checkpoint system established produced adverse effects on the transport operations of small-scale tree farmers. In Agusan del Sur, the Provincial Natural Resources Protection Unit Task Force reported in 2005 that there are at least 50 (and at most 69) checkpoints within the province, many of which are unauthorized people manning the checkpoints are collecting fees without issuing proper receipts.

The Philippine government reported in the ITTO Timber Review 2004 that it provides incentives to encourage establishment of timber plantations. These incentives, likely applying to large-scale operations, include:

- ❖ exemptions on the payment of forest charges on products derived therefrom and free technical assistance from DENR;
- ❖ Income tax holidays, tax and duty free importation of capital equipment;
- ❖ Tax credit on domestic capital;
- ❖ Deduction of labour expenses after the tax holiday;
- ❖ Exemption from wharfage dues and export taxes and duties;
- ❖ Exemption from contractor's tax.

Philippines tariff rates for export of forest products as of 2004 are:

- ❖ Logs Tropical and Non-Tropical: Free
- ❖ Sawn Tropical and Non-Tropical: 7%
- ❖ Veneer Tropical and Non-Tropical: 7%
- ❖ Plywood Tropical and Non-Tropical: 15%

In 2005, the Philippine Working Group on Community-based Natural Resource Management (PWG) visited small tree farms in Agusan del Sur and Agusan del Norte. The visit led them to ask the following questions:

- ❖ Is there a basis for small-scale tree farming to be economically viable and environmentally sustainable as an industry in Caraga?
- ❖ What are the elements and conditions by which viability and sustainability of the tree-farming industry can occur?

PWG is an informal social mechanism for government and civil society professionals and practitioners to explore ways for improving natural resource management with the participation of local stakeholders. At the end of the visit, PWG members identified actions points relating to operational, institutional and legal aspects. The learning visit to Indonesia is an effort to respond to several of the action points identified.

IV. Participants

This learning visit was designed to bring together tree farmers and local government officials so that they can learn from their counterparts in another country about the small-scale tree farming industry. Priority was given to participants coming from SPARK focus areas dealing with tree-farming activities.

Participants who are taking part in this learning opportunity have been selected based on the following criteria:

Farmers

- ❖ experienced in tree-farming on private land and able to describe local conditions, techniques, tenure arrangements and experiences in their area. Size of farm area owned and/or managed should be between 0.25 hectares to 10 hectares.
- ❖ in a position to pursue possible applications of learnings/tree farming techniques as appropriate to their area
- ❖ involved in tree farmers associations or federations and are committed and have the means to create a venue for sharing the visit results and experience to a larger group of people upon return
- ❖ comfortable in interacting with and communicating ideas with a group of people regardless of language and cultural differences

Local Government Representatives

- ❖ committed to developing business and industry in the province, and in a position to recommend or approve policies, develop programs, and initiate projects to this end
- ❖ have the means to create a venue for sharing the visit results and experience within his organization/office
- ❖ capable of sharing the policy context and business environment in the province or region regardless of language and cultural differences

From Philippines

Agusan del Sur Province, Caraga

- | | | | | |
|--------|----------|---------|--|--------------------|
| 1. Mr. | Eladio | Malupa | Prosperidad-San Fransisco-Rosario Tree Farmers Association (PSR) | President |
| 2. Mr. | Ricarido | Teniola | Caraga Federation of Tree Farmers and Developers Inc. | Forester-In-Charge |
| 3. Mr. | Ranulfo | Paler | Provincial Government, Agusan del Sur, ENRO-LGU | EMS II |

Agusan del Norte Province, Caraga

- | | | | | |
|--------|----------|---------|---|-----------|
| 4. Mr. | Gregorio | Mitchao | Caraga Federation of Tree Farmers and Developers Inc. | President |
|--------|----------|---------|---|-----------|

Surigao del Sur Province, Caraga

- | | | | | |
|--------|--------|---------|--|---------------|
| 5. Mr. | Florio | Josafat | Bibahilita Farmers Multi-sectoral Group Association Inc. | President/CEO |
|--------|--------|---------|--|---------------|

From Indonesia

Wonosobo District, Central Java

- | | | | | |
|--------|---------|----------------|---|--------|
| 1. Mr. | Andreas | Setijo Nugroho | Dinas Kehutanan dan Perkebunan-Kabupaten Wonosobo | Staff |
| 2. Mr. | Budi | Waluyo | KTH Ngudi Rahayu | Member |
| 3. Mr. | Herman | Sudiyanto | Bapeda Kabupaten Wonosobo | |
| 4. Mr. | Sabar | Rahayu | KTH Ngudi Rahayu | |
| 5. Mr. | Subihan | | Ngudi Rahayu | |
| 6. Mr. | Sukoco | | Ngudi Rahayu Farmers Group | Leader |

Gunung Kidul District, Central Java

- | | | | | |
|--------|-----------|--|--|-----------|
| 7. Mr. | Supriyadi | | Dinas Kehutanan dan Perkebunan-Kabupaten Gunungkidul | Staff |
| 8. Mr. | Tumino | | Pengurus KTHR Sekar Pijer | Secretary |

The participants and organizers are grateful to the following people who participated in selected sessions. They graciously hosted and exchanged experiences with visiting participants.

Session in Bogor Village, Wonosobo, 21 March 2006

1. Sumantoro, Camat, Kecamatan Sapuran
2. Slamet Robiyanto, Ngudi Rahayu
3. Musodik, Ngudi Rahayu
4. Sitifadhilah, PKK-POKJO III
5. Suparman, Ngudi Rahayu
6. Suropto, Ngudi Rahayu
7. Pak Ginar, Ngudi Rahayu
8. P. Kaswito, Ngudi Rahayu
9. Muhsinin, Ngudi Rahayu
10. Abdul Arif, DPRD
11. W. Prayitno, Kaup-Umum
12. Kuswanto, Perangkat Desa
13. Naryanto, Kadus Kyuni

Foster Families in Bogor, 21-22 March 2006

1. Tikno Diharjo (for Ladio and Subihan)
2. Slamet R. (for Greg and Supriyadi)
3. Triyogi (for Ric and Tumino)
4. Ibu Muhyanto (for Jun and Andreas)
5. Mushodik (for Popong and Sabar)
6. Priyo (for Herman and Budi)
7. Sukoco (for the organizing team)

Session in Wonosobo District Hall, 22 March 2006

1. Hon. Koliq Arif, Bupati, Kabupaten Wonosobo
2. C. Krustanto, Representative, DPRD
3. Abdul Munir, Head, Dinas Kehutanan dan Perkebunan (Dishutbun) di Wonosobo
4. M. Soleh, Bagian Perekonomian
5. Agus Purnomo, Bagian Tata Pemerintahan
6. Agus P, Bagian Perekonomian
7. Joko Walyono, Dishutbun
8. Heru, Dishutbun
9. Warih Suryokoco, KLH
10. Supriyono, Dinas Pertanian
11. Eko Yogo, Perhutani, Wonosobo
12. Nurhayadi, Perhutani, Wonosobo
13. Soeprapto, Perhutani
14. Sudarman, Suara Mendeka
15. Bagyo H, Kedaulatan Rakyat (KR)
16. Sri Fatonal, Humas Setda
17. Iwan, Staf Bupati
18. M. Rasyid, Humas
19. A. Fajar Wibowo
20. Agus Wibowo, Protokol
21. Saeful Toha, Humas

Session with Gunungkidul District Officials, 23 May 2006

1. Samsudin, DPRD Representative and Head of Wood Producers' Association
2. Drs. Syamsudin, Head, Dinas Kehutanan dan Perkebunan

Sessions with Wood Processing Industries, 22-23 March 2006

1. Parjono, Ud. Prima Kencana Sawmill, Purworejo, Wonosobo
2. Hariyadi, Mekar Abadi, Purworejo, Wonosobo
3. Klaten Depot staff, Yogyakarta
4. Mr. Radite, furniture shop, Klaten, Yogyakarta

Session in Girisekar Village, Gunungkidul, 23 March 2006

1. Budi Utama, Asosiasi Pedagag Kayu
2. Pardi Wiyono, Blimbing
3. Idi Sentano, Blimbing
4. Mugijono, Girisekar
5. Tubijo, Girisekar
6. Sumedi, Girisekar
7. Siswo Sukardi, Girisekar
8. Anwar Samidi, Giri Sekar
9. Medi Suminarmo, Girisekar
10. Muji Sumarto, Girisekar
11. Warno Utomo, Girisekar
12. Widisukisma, Girisekar
13. Suyatno, Girisekar
14. Prpto Winarno, Girisekar
15. Wahyu D., Panggang
16. Andreas Sihono, Sekar Eko Jati
17. Surono, Lembaga ARuPA
18. Teguh Pambudi, Lembaga ARuPA
19. Suryanto Sadiyo, Lembaga ARuPA
20. Izur, Lembaga ARuPA

Organizing Team

| Name | Organizational Affiliation | Address |
|--|--|--|
| 1. Mariel de Jesus 2. Dallay Annawi | Environmental Science for Social Change (ESSC) | 1/F Manila Observatory Bldg. Ateneo de Manila Campus Loyola Heights, Quezon City |
| 3. Juni Adi 4. Leily Marciana 5. Chehafudin 6. Ronald Ferdaus | Aliansi Relawan untuk Penyelamatan Alam (ARuPA) | Dusun Karanganyar RT 10 RW 29 No 200 Sinduadi Mlati Sleman, Yogyakarta |
| 7. Rowena Soriaga | Asia Forest Network (AFN) | Rizal St., Sacred Heart Village, Cogon District, Tagbilaran City, Bohol |

Resource Management Terms (Indonesian-English)

Pekarangan – home garden

Kebun – part of dry fields; mixed garden mainly planted with perennial crops

Péréng – mixed garden on the slope

Tegalan – upland field mainly planted with annual crops

Tanah yang ditanami kayu-kayuan – tree gardens

Hutan rakyat – individual forest on private land

Hutan milik – owned forest

Hutan rakyat campuran – mixed individual forest; trees mixed-planted with field crops

Hutan rakyat murni – pure individual forest; tree species planted in monoculture or polyculture

Kelompok tani – farmers' group

Gotong royong (Javanese) – cooperation among neighbors. Maintenance of roadsides or irrigation, rice transplanting or harvest, house construction are usually carried out in this form of cooperation.

Wono – forest (in Javanese)

Wono dusun – hamlet forest or community forest management (in Javanese)

Tumpang sari – a system where peasant planters could grow rice, corn, tobacco and other field crops for one or two years in between rows of state-owned teak seedlings

Philippines-Indonesia Equivalences

| | Philippines | Indonesia |
|--|--|---|
| Levels of Local Governance | <p>Purok/sitio: 20-50 households</p> <p>Barangay: 7-10 purok/sitio</p> <p>Munisipyo: 10+ barangay</p> <p>Probinsiya: 10+ munisipyo</p> | <p>Dusun: 50+ households</p> <p>Desa: 7-10 dusun</p> <p>Kecamatan: 10-15 desa (sub-district)</p> <p>Kabupaten: 10+ kecamatan</p> <p>Propinsi: 5-40 kabupaten</p> |
| Related Government Line Agency Departments | <p>Department of Environment and Natural Resources (DENR)</p> <p>Community Environment and Natural Resources Office (CENRO)</p> <p>Municipal/Provincial Environment and Natural Resources Office</p> | <p>Ministry of Forestry and Estate Crops (Departement Kehutanan dan Perkebunan)</p> <p>Dinas Kehutanan dan Perkebunan (District Forest and Estate Crops Office)</p> |
| National Government | 79 provinces | 33 provinces |
| Population | 81 million | 207 million |
| Typical Tree Farm Species | <p>falcata (<i>Paraserianthes falcataria</i>)</p> <p>mahogany (<i>Swietenia macrophylla</i>)</p> <p>bagras (<i>Eucalyptus deglupta</i>)</p> <p>yemane (<i>Gmelina arborea</i>)</p> <p>mangium (<i>Acacia mangium</i>)</p> <p>durian (<i>Durio zibenthinus</i>)</p> <p>marang (<i>Litsea perrottettil</i>)</p> <p>lubi (<i>cocus nucifera</i>)</p> <p>oil palm</p> <p>rubber tree</p> <p>bamboo</p> <p>banana</p> <p>corn</p> | <p>sengon (<i>Paraserianthes falcataria</i>)</p> <p>mahoni (<i>Swietenia macrophylla</i>)</p> <p>suren (<i>Toona sureni</i>)</p> <p>petai (<i>Parkia speciosa</i>)</p> <p>rambutan (<i>Nephelium lappaceum</i>)</p> <p>durian (<i>Durio zibenthinus</i>)</p> <p>nangka (<i>Arthocarpus indica</i>)</p> <p>kelapa (<i>cocus nucifera</i>)</p> <p>salak (<i>Salacca edulis</i>)</p> <p>lamtoro (<i>Leucaena glaucas</i>)</p> <p>kapulogo (<i>Amomum compactum</i>)</p> <p>jenu (<i>Derris caudatilimba</i>)</p> <p>corn (local variety)</p> <p>vanilla (<i>Vanilla planifolia</i>)</p> <p>kemukus (<i>Piper cubeba</i>)</p> <p>cassava</p> <p>cloves</p> <p>chili</p> |

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