

## **Linking Collective Action to Non-Timber Forest Product Market for Improved Local Livelihoods: Challenges and Opportunities**

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*The paper draws on findings from research in two districts in South Sulawesi and Jambi Provinces, Indonesia, looking at the role of collective action in helping local communities enhance their bargaining power vis a vis other market players (such as collectors, small- and large-scale industries), and anticipate an increased demand for NTFP products. In the first site, local communities have long utilized rattan (*Calamus sp*) as the main source of income and have traditionally collected the products from the surrounding forests in groups. They were struggling to sell their products at a better price amid market uncertainties and the lack of supportive government policies. In the second site, communities were involved in the propagation of another high-value rattan species, widely known as jernang or Dragon Blood (*Daemonorops sp*) in anticipation of increased market demands. They engaged in collective action and struggled to build a highly motivated group. Using the participatory action research approach, the research team worked with community groups and other local stakeholders in the two sites going through the cycle of reflection, planning and actions.*

*The paper describes relevant government and market policies, socio-economic conditions, and other technical or external factors that affect the local market of two commodities and associated institutions of collective action. It discusses how collective action has worked in NTFP production and how it could help collectors improve their access to government resources and markets. The paper also indicates the strengths of action research methods in fostering collective action among local stakeholders. Opportunities and challenges to making collective action effective in linking local producers to a better market are discussed.*

*Keywords: collective action, market access, smallholder, livelihood, NTFP, action research, Indonesia*

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### **1. INTRODUCTION**

Throughout the 1970's and 1980's, Indonesia was the world's largest exporter of raw and semi-finished rattan, with approximately 80 percent of the world market (Dransfield and Manokaran, 1996; FAO, 2001). Within recent years, rattan and other NTFPs have continued to become important products, which make a large contribution to the state's revenues and create employment. Surveys indicate that rattan income forms a significant part of total household income in South Sulawesi (Premph, 1993). The increased market demand should have provided opportunities for those involved in the production and trade of the products to reap maximum benefits. However, the facts indicate that government policies and markets have continued to keep farmers, the collectors of rattan, at a great disadvantage in the marketplace. In 1986 and 1988, for instance, the Ministry of Trade and Industry issued policies<sup>1</sup> banning the export of raw material and half-processed rattan. This turned out to have caused the price of rattan at farmer level remain low. In 1986, the price of rattan per kg reached Rp 780/kg, and continued to decrease to about Rp 670/kg in 1990 and even lower to about only Rp 250/kg in 1997 (WALHI,

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<sup>1</sup> The Ministry of Industry and Trade's Decree No. 274/Kp/XI/1986 and Decree No. 190/Kpts/VI/1988, which ban the export of raw and half-finished rattan products, respectively.

2004). Despite the increased market demand for this product, the current situation shows the average price of rattan at farmer level in one of the producing areas, South Sulawesi, is only about Rp. 700/kg.<sup>2</sup>

The government policies which either ban or allow<sup>3</sup> the export of raw rattan materials have attracted criticism and protests from large furniture industry associations, NGOs and rattan farmers. On one hand, the need to meet the demand for raw materials from domestic industries, which would add value to the processed products has become the argument of those who favor the ban. On the other hand, others argued that the ban has only provided plenty of opportunities for certain market players to reap the lion's share of profits, while limiting rattan farmers opportunities to sell their products at a better price. The latter, as many studies show, tends to have a weak bargaining position *vis-à-vis* rattan collectors and semi-processing enterprises. The market uncertainties and lack of supporting policies have led rattan farmer groups, as in Luwu Utara district, to get involved in collective efforts to confront the inequity.

Collective action is also taking place in another part of Indonesia, in Jambi. Local community groups endeavor to develop another NTFP product, Dragon blood, locally known as *jernang*. While it has been sold in local and international markets as a highly valued product, *jernang* has not been widely known either in Indonesia or other countries. This product has a high economic value and can be used for medicinal, industrial, religious and other purposes. A report indicates that the demand for *jernang* has been increasing in many countries such as China, Korea, Japan, US and several countries in Europe (Anonymous 2005). In Jambi, *jernang* has long been harvested collectively by local people and the indigenous community, *Orang Rimba*. As *jernang* species has become rare in the forests and people have increasingly difficulty finding this species, the district government took the initiative to promote this species and local people started to engage in market-led collective action to gather this species from the forests and cultivate it.

This paper highlights findings and lessons learned while examining the role of collective action in helping community groups increase their bargaining power and anticipate the increasing demands for these highly-valued non-timber forest products. Two research questions being addressed are:

- (1) How does collective action work in NTFP production and how could it help collectors improve their access to government resources and market?
- (2) What is the role of action research in making collective action effective?

Findings presented in this paper are part of ongoing CIFOR research attempting to document the impacts of the country's forestry decentralization on forests and local people, and examining the role of collective action in securing property rights for the poor. The first research project, funded by ACIAR, looks at how current decentralization has shaped the forest decision making processes at district level and seeks equitable sharing of benefits from forest resources among the various stakeholders. The second research project, funded by the CGIAR System-wide program on Property Rights and Collective Action (CAPRI), engages local people to ensure optimal capacity building for collective action over property rights. What the two projects have in common is that they both operate in the context of decentralization, use an action research approach, work at two levels of analysis (village and district),

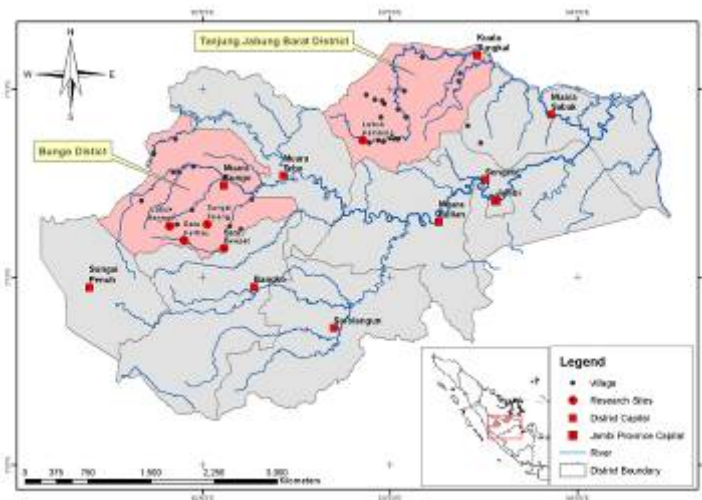
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<sup>2</sup> Prices are not converted to US\$ since there were various conversion rates prevailing before and after the governmental reform (1998). This is only intended to show that the rattan price at the farmer level remain unchanged despite the big changes in the market price.

<sup>3</sup> The Ministry of Industry and Trade's Decree No. 12/M-DAG/PEK/6/2005 concerning rattan export provisions.



Figure 2 – The research site in Bungo District, Jambi Province



The occupation of most indigenous people, who mainly live close to forests, is forest product gathering (e.g. rattan or timber) as a supplement to rice cultivation or plantations (cocoa, oil palm or oranges). Almost all of the indigenous people own plantations of fruit trees such as *durian*, *langsar*, *rambutan*, etc. Mostly the Javanese migrants have more advanced farming techniques; therefore they have better opportunities from the agricultural produce. Many indigenous people also follow newcomers' farming technique, however after that usually they leave the fields after the planting season and go to the forest to collect forest products, which can provide better returns. These differences in choosing livelihood options may lead migrant and local people to have different access and opportunities to benefit from their resources. The fact that more than 31% of the population lives under the poverty line, which is twice as high as the average for districts in this province shows that the poorest people are living in or surrounding forests. Forest lands and products are financially important for them, as they are the most dependant stakeholders on district forests.

Sei Telang, Bungo District is located on the border between West Sumatra and Jambi Province, in Southern Sumatra. The community groups we catalyzed live in Sei Telang, occupying an area of 12,000 ha, 75% of which is overlapping with state-owned lands categorized into production, protection forest and national park areas. The main livelihoods are farming and collecting timber and non-timber forest products. There are three hamlets and two transmigration areas with a total population of 1,500 people. The village is rather isolated, about 53 km from the capital city of Bungo district, Muara Bungo. Most indigenous people are of Minang ethnicity who originally came from West Sumatra and Malay ethnicity from Jambi. Their inheritance system is matrilineal. The migrants came from Java and other provinces bordering Jambi. The community groups have long practiced self-initiated collective action in the form of what are locally known as *gotong royong* and *Pelhin*<sup>5</sup>, they also recognized a government-led group, Sinar Tani.

<sup>5</sup> In the latter, villagers voluntarily work for helping each other cultivating their lands and growing paddy rice.

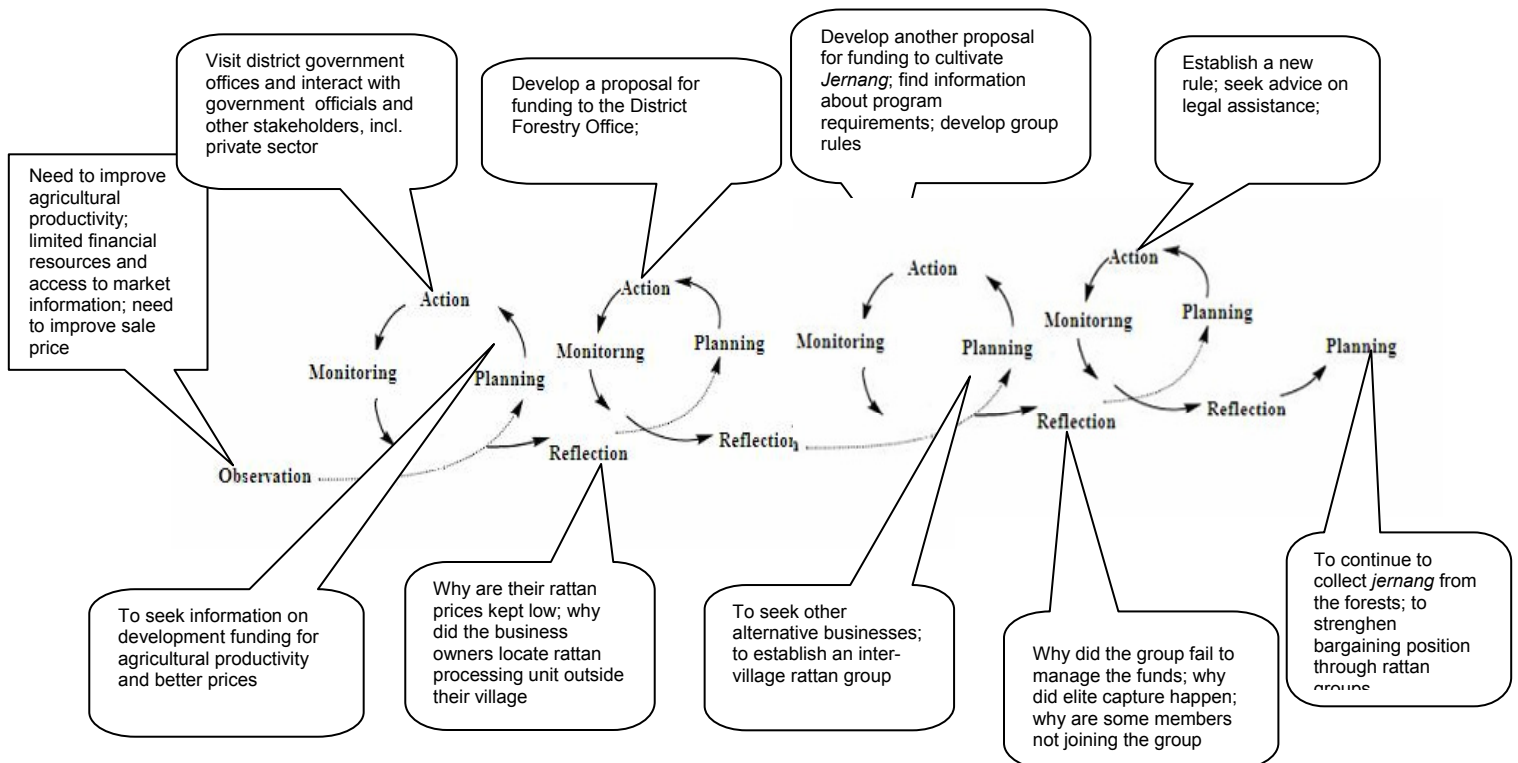
Any woman can call for a *Pelhin* day when there is a need to complete work on someone's field. When a woman takes part in a *Pelhin* work day, she is then owed a day work from the owner of the farm. This can be paid off when the person calls a *Pelhin* day herself (Siagian et al., in prep).

METHODS

The research projects employed the participatory action research approach to working with local communities and engaging government officials, district parliamentary members, non-governmental organizations and private companies in a series of stakeholder interaction. Techniques used included focus group discussions, key informant interviews, participant observation and workshops. Going through a repeated cycle of reflection, planning, monitoring and action, our village facilitators helped targeted community groups to achieve a common objective to seek opportunities for getting a fairer share of profits from the rattan products. They also helped communities to build a highly motivated group attempting to develop a nursery of the *jernang* species. The research team worked collaboratively with government officials (in particular, the District Forestry Service and the District Development Planning Board) and others to ensure the findings and lessons were adopted in policy. As a result of agreed actions at each point of the cycle, other techniques such as analysis of governmental data and forest vegetation (in order to better know the stocks of rattan) were also used.

The researchers in action research are not detached observers but are engaged in intervention designed to foster collective action. Involving communities in the research allows local knowledge and external expertise to be combined to diagnose constraints and solve problems that are of concern to both communities and to researchers. When done in a participatory manner, action research empowers local people and facilitates social learning (Meinzen-Dick, et al. 2004). The following figure describes the way the community groups under study have gone through the various steps of learning.

Figure 3 – Continuous steps of reflection-planning-action-monitoring-observation and examples of activities



### 3. COLLECTIVE ACTION, MARKETS AND NTFPS = A REVIEW

In the research, collective action was understood as what Marshall (1998) defined as an action taken by a group of individuals to achieve common interests. The group might be formed voluntarily or self-formed, or formally at the instigation of external institutions. The group can have a clearly-defined boundary (or membership) as well as the situation where people join a group temporarily for a short-term period. Besides focusing mainly on community-level collective action among rattan and *jernang* farmer groups, this research also used collective action to refer to coordination activities and information sharing among local stakeholders aimed to facilitate policy adoption.

Knox and Meinzen-Dick (1999) and Di Gregorio et al. (2004) have said that collective action can help people improve their welfare and get out of poverty in several ways: where people work together to provide local goods and services they would not be able to provide as single individuals, to substitute for missing markets or to help overcome barriers to participation in markets, and to increase their access to higher level institutions to request services or to increase their bargaining power.

The importance of NTFP and marketing networks have been comprehensively explored by many studies (Neumann and Hirsch, 2000). Belcher (1998) introduced a production-to-consumption system approach that has been useful for better understanding the market and linkage between transformation points and market actors. Many studies indicate that producers (who are mostly the poor and the marginalized) continued to be in weak positions when entering into negotiation with other market players. To improve bargaining power, as Belcher and Kusters (2004) suggested, NTFP producers need access to information about pricing structures, availability of substitutes, quality requirements and consumer preferences. Small-scale producers may also gain strength through collective action. Some common benefits drawn from working together to market a product are taking advantage of size economies, maintaining a steady flow of products, preserving an existing market, creating a new market, gaining access to knowledge and professional expertise and increasing bargaining power.

As product marketing is characterized by economies of scale, collective action among farmers can make them more competitive in an integrated supply chain. However, collective action among farmers is difficult to organize, coordinate and manage (Johnson and Berdegué 2004). Berdegué (2002) found that market-oriented collective action by small farmers has a role to play only when it is directed at overcoming high transaction costs which impose insurmountable constraints on individual farmers acting alone, but fails when small farmers are simply attempting to improve their position in the marketing of undifferentiated commodities in the spot markets. Disposition to engage in collective action depends not only on the quality of the facilitation approaches used by technical agents at the field level, but by the system of incentives as perceived by farmers, i.e. by the positive and negative changes in outcomes that individuals perceive as likely to result from particular actions taken within a set of rules in a particular physical and social context (Berdegué 2002).

Improvements in income opportunities can be made in the way that people or companies (firms) are organized within an industry horizontally or in the way that firms are linked within a production-consumption system vertically. Improved horizontal linkages can give participating firms a better bargaining position through increased buying and selling power. Horizontal linkages (e.g. cooperatives) can also facilitate cost-sharing for expensive equipment, which is especially important for small-scale,

capital-limited enterprises (Belcher, 1998). One of the most common justifications for farmer cooperation is that through collective action farmers are able to counterbalance the market power of their trading partners, leading to more equitable and efficient market outcomes (Galbraith, 1956 as cited in Staatz, 1985).

NTFPs have been traded for centuries when people recognized that there was rapid rates of deforestation and a call for new appreciation of forest products other than timber. Researchers began assessing both the commercial and subsistence roles of these products. CIFOR's studies carried out in Latin America compared potential income from a variety of forest products (like fruits, medicinal plants and fibers) with the possible income from logging and other land uses. They concluded that over the long term, NTFPs could potentially provide more value. Some aspects of the early studies have since been criticized on economic grounds, however the research has served to create a wave of interest in NTFPs, and this has led to an increased appreciation of their overall importance for people in both forest communities and cities (Neumann and Hirsch 2000; Lopez and Shanley 2004).

The relationship between NTFP producers and the markets they supply may range from direct sales to a complex network. Having reviewed various studies of the structure and function of marketing network, Neumann and Hirsch (2000) reveal a number of key points. The assumption that NTFP marketing 'middlemen' (whom many studies recommend bypassing, see Belcher) are procuring excessive profits is challenged when indebtedness and the costs incurred by marketers are taken into account. NTFM markets are extremely dynamic socially, temporally and spatially, making it difficult to generalize about their functioning. State efforts to reduce exploitation by such brokers have often failed to benefit collectors due to high levels of bureaucratization, inappropriate price setting and rent seeking by state officials.

Citing findings from other studies, Neumann and Hirsch (2000) indicate that some regional manufacturers in the Philippines have attempted to use their collective bargaining power to get more favorable prices for raw material inputs and for sales. Also, gatherers' associations have been formed to apply for rattan cutting permits. Some of these associations have taken on additional functions (storage, semi-processing), but others have merely replaced local traders. In China, the influence of the collective farm tradition has led to much stronger coordination at the level of the raw material producers. Even though the land on which bamboo is grown in Anji County is managed on a private basis, many collective institutions remain in place.

#### **4. DECENTRALIZATION AND COMMUNITY GROUPS' ACCESS TO FOREST RESOURCES**

##### **DECENTRALIZATION IN THE FORESTRY SECTOR**

The implementation of decentralization in the forestry sector in Indonesia has swung like a pendulum between decentralized and highly centralized control (Dermawan et al. 2006). Once Law 22/1999 on Regional Governance and two forestry regulations<sup>6</sup> came into effect, district heads in many regions

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<sup>6</sup> Government Regulation 6/1999 on forest utilization and forest product harvesting in production forest (*pengusahaan hutan dan pemungutan hasil hutan pada hutan produksi*) and The Ministry of Forestry and Estate Crops' Decree No. 310/1999 on the guidelines for granting forest product harvesting rights (*pedoman pemberian hak pemungutan hasil hutan*).

including in our two research sites took advantage of their new authority to issue small-scale timber concessions. District governments were empowered to issue permits for non-timber forest product extraction, to levy a tax or taxes on concession permit holders, and to regulate and implement forest conservation measures and manage the transportation of forest products. Due to concerns over resource degradation and the common failure to provide benefits to local communities, the central government then postponed the implementation of small-scale timber concession by district heads in 2000.<sup>7</sup> The central government then retracted the authority to issue timber permits in 2002, but continued to grant the district heads authority to issue non-timber forest product harvesting permits.

Although the issuance of non-timber forest product permits has actually been part of the district's authority for a long time, decentralization has further strengthened the district heads exercise of extensive power over forest product and their management. In 2001, for example, the district government of Luwu Utara issued a district regulation<sup>8</sup> providing guidance on the issuance of forestry and estate crops business permits. The regulation aims to control the use of natural resources and to create efficient businesses and produce highly competitive products. It covers a variety of forest business types such as timber utilization, community forests, industrial plantation forests, beekeeping, mangrove forests, upstream processing industry, harvesting of forest products (including rattan), etc.

One of the business permits, which enables the holders to collect and harvest non-timber forest products legally, is IHPHH Rotan, or rattan harvesting permit.<sup>9</sup> To date, Luwu Utara district government has issued a number of permits as shown in Table 1.

Table 1 – Number of rattan harvesting license issued from 2001 to 2006 in Luwu Utara district

Year	Number of companies granted a rattan harvesting permit	Volume (ton)	Area covered (ha)
2001	5	800	2,500
2002	7	1,550	3,500
2003	6	1,550	3,000
2004	10	2,750	5,000
2005	11	3,002	5,500
2006	3	800	1,500

Source: District Forestry Service, Luwu Utara (raw data)

The rule stipulates that the permit may be granted to a legal entity (e.g. private companies) and individuals for an area of about 500 ha. The permit is valid for about 6 months and may be extended to another 6 months if the rattan is considered abundant. 200 to 250 tons of rattan per permit can be harvested. Yearly production of rattan from Luwu Utara district can be seen in Table 2 below.

<sup>7</sup> MoFEC (Ministry of Forestry and Estate Crops' Decree No. 084/2000 on postponing the implementation of decree 310/1999 (*penangguhan pemberlakuan Keputusan Menteri Kehutanan dan Perkebunan Nomor 310/1999 tentang pedoman pemberian hak pemungutan hasil hutan*) and MoF Decree No. 541/2002 on abolishing MoF Decree 05.1/2000 on issuance of permits for small-scale concessions (*pencabutan Keputusan Menteri Kehutanan No. 05.1/Kpts-II/2000 tentang kriteria dan standar perizinan usaha pemanfaatan hasil hutan dan perizinan pemungutan hasil hutan pada hutan produksi*).

<sup>8</sup> Peraturan Daerah (Perda) or District Regulation No. 05 issued in 2001 regarding Forestry and Estate Crops Business Licenses in Luwu Utara District.

<sup>9</sup> *Ijin Hak Pemungutan Hasil Hutan Rotan* (IHPHH Rattan) is a permit issued by the District Forestry and Estate Office for rattan harvesting activity in *kawasan hutan* (state owned forest).

Business owners (investors) feel that decentralization has made it much easier to obtain rattan harvesting permits. Instead of having to travel to the provincial capital, they can now submit applications at the district level. The permit holders are also obliged to pay various levies such as reforestation funds, forest resource rent taxes, forest product harvesting permit fees and third-party contributions. They are required to pay a tax of US\$2.17 to the local government and forest resource rent tax or PSDH<sup>10</sup> ranging between US\$76 and US\$152 for every ton of rattan collected. To ensure that permit holders pay their tax, the district government also obligates them to leave US\$4348 with the district office as a deposit. They are also required to establish rattan nursery and to regenerate exploited areas.

Table 2 – Rattan production from Luwu Utara district

	Production (ton)	Number of Business Permit Holders
2006	950	6
2005	1881	11
2004	3,212	10
2003	1,485	9
2002	1,396	6

Source: District Forestry Service, Luwu Utara (raw data)

In Bungo district, permits for small-scale timber harvesting no longer exist. Once the district head's authority to issue timber licenses was retracted by the central government in 2002, the district head decided not to issue any more permits for harvesting timber from forestlands. In 2002, the local government issued a district regulation<sup>11</sup> that provides existing permit holders with the rights to utilize and harvest forest products, in particular non-timber forest products.

#### COMMUNITIES' ACCESS TO FOREST RESOURCES

In the case of Luwu Utara, applicants for rattan harvesting permits are required to cover the entire costs of the resource inventory, boundary establishment and timber cruising before they are granted a permit. It is then business owners with strong capital that can gain benefit from this policy. This condition has limited opportunities for others having less capital. However, the permit holders are obliged to enter into agreement with rattan collector groups in the area where the concession is located, providing opportunities for rattan collectors and other forest-dependent communities to obtain resource benefits.

Field observations indicate that farmer groups or cooperatives set up by business permit holders were mostly fictitious. The areas for exploitation were just drawn on a map, and no licence holders were reported to be rehabilitating rattan collection areas. In reality, these business owners also look for rattan outside their permitted areas. The District Forestry Service confirmed that they lack the resources to monitor and enforce the rehabilitation requirement.

Local communities in the two sites have traditionally collected rattan and *jernang* from the forests. However, no papers or legal permits have been issued to support this. Though, they have thus far found no problem with harvesting the NTFP products from the forest, their long-term property rights over the

<sup>10</sup> Provisi Sumber Daya Hutan or Forest Resource Rent Provision

<sup>11</sup> District Regulation No. 6/2002 concerning forest product utilization and harvesting business permits; and District Regulation No. 7/2002 concerning forest product levies

resources seem to be unclear and insecure. Outsiders can readily utilize resources existing in their village areas.

Communities are generally unaware of the regulations concerning levies on rattan. Villagers never see the business owners face to face, much less take part in the cooperatives they have supposedly set up. Communities gathering rattan are generally unaffected by decentralization, apart from its effects on the price of rattan. The village head of Sepakat, who himself gathers rattan, stated that rattan prices before decentralization had been relatively good and peaked when the monetary crisis struck in 1998. However, they had begun to decline in recent years as the monetary crisis ended. During a 2004 workshop,<sup>12</sup> the representative of the Indonesian Furniture and Handicrafts Association (Asmindo) contended that rattan prices were affected more by changes in central government export policies than by decentralization.

## 5. COLLECTIVE ACTION PROCESSES

### RATTAN GATHERING AND MARKETING IN LUWU UTARA

#### *Group structure and processes*

Villagers in the hamlets under study usually gather rattan in groups. Each group consists of 5 to 10 people and is usually made up of family members and neighbours. Each group is headed by a person responsible for coordinating the group members and asking an advance from the middleman or business owner. This person is also responsible for preparing the needs of the members. The group leader may either join the group to go into the forests or stay in the village. It is common that a leader controls more than one rattan collector group (see Figure 4a and 4b below).

The reasons for engaging in collective action include the fact that collecting rattan in the forest is risky; and there is a need to collect a minimum amount of rattan before the middleman starts to weigh the products. One villager said that the collectors often have accidents when they climb into the trees, pull the rattan and raft the rattan down the river to the village. They go into the forest together as they feel safe and can help each other in case of emergency. They also find it efficient to pool their money to buy rice, sugar, coffee and other necessary materials and construct a joint camp in the forest.

As shown by many studies on NTFPs (Arnold and Ruiz Pérez, 1998; Belcher, 1998), the middlemen commonly advance money and supplies to the collectors who go to the forest, with an implicit or explicit obligation on the part of the collectors to sell to that trader, and only that trader. The case in Luwu Utara is no exception. Activities begin with an order from a business owner with a rattan production permit. Business owners contact villager groups through a local merchant or middleman in the village, telling them that the market value of rattan is currently high. Rattan gatherers are only prepared to enter the forests if these middlemen are willing to pay US\$ 0.08/kg for wet rattan (Table 3).

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<sup>12</sup> The workshop was held in Makassar on 13 May 2004.

Table 3 – Prices at farmer level for different types and qualities of rattan

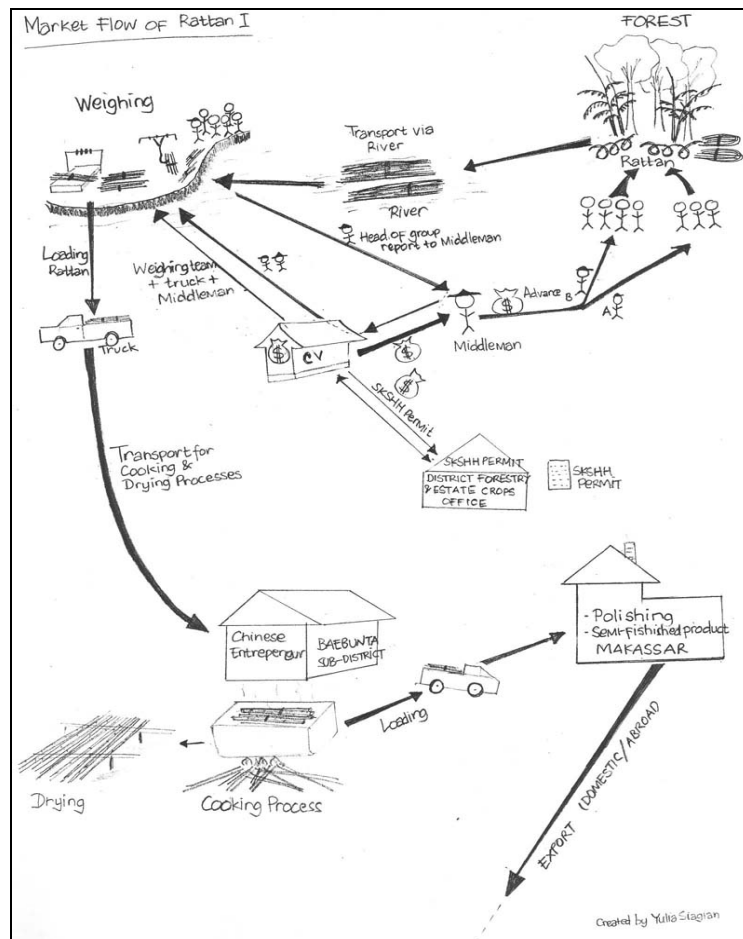
Local	Rattan name Latin	Quality	Local Price (US\$/kg)*
Rotan Batang	<i>Daemonorops robustus</i>	Special	0.12
		Class 1	0.10
Rotan Lambang	<i>Calamus koordersianus</i>	Class 2	0.08
Tohiti	<i>Calamus inops</i>	All classes	0.08
Other types (mixed)	<i>Calamus spp.</i>	All classes	0.07

There are generally two types of rattan market flow in Panply and other hamlets under study in Luwu Utara. First, as shown in Figure 4a, there are working relations between business owners and rattan collectors along the chain of rattan production and marketing. Second, as shown in Figure 4b, a middleman takes part in mediating the two parties, rattan collectors and business owners.

A middleman is usually hired by an investor to buy rattan in each village. He approaches farmers in the village, offering them down-payments for collecting rattan in the forest. Down-payments range from US\$54 to US\$130 per farmer group. This will later be deducted from the total received by the farmers. The middlemen offer larger downpayments to strong, young, healthy farmers, on the assumption that they will bring in more rattan. From the down-payments, rattan collectors will spend an average of US\$16.70 on food and provisions to take to the forest. Those with families leave the rest of the money with their wives to cover basic needs while they are away. In a number of hamlets in the district, some groups bring all family members together, including children, into the forests.

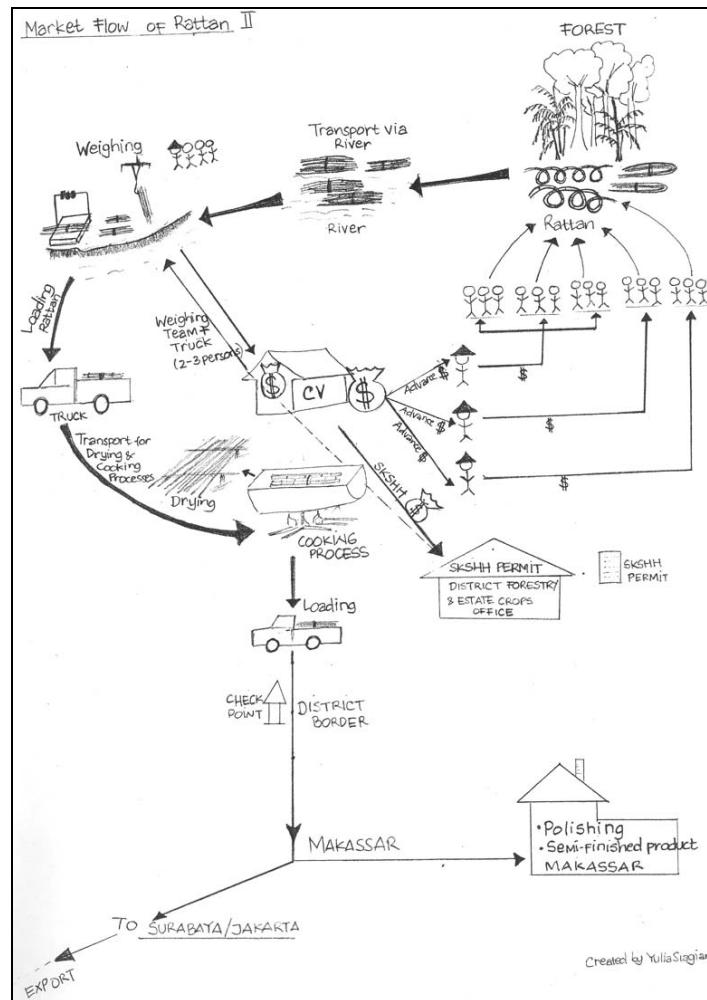
The collector groups normally spend two to three weeks in the forests, and may move from one location to another. In selecting a location where they will collect rattan, they look over the forests from a distance. They select the location based on the number of rattan sprouts that come out of the tree canopy. Sometimes, they are able to decide the types of rattan and, as acknowledged by some villagers, they can also estimate the money they will obtain. Once the location has been selected, they will go together to that place. Some groups tend to collect rattan from the same location, though they are divided into different groups. Being in a group, they feel that they can help each other. Once a camp, usually close to the river, has been set up, in the following day the groups will look for any site considered to have plenty of rattan. Rattan, except *tohiti* and *tokoi*, usually grow in clusters and make the collectors concentrate their work only in one site during their stay in the forest. The workers then harvest the rattan and pull it to the camp. The collectors soak the rattan and leave it in the river for many days until they are about to go back to the village.

Figure 4a – Diagram showing the chain of rattan harvesting and marketing in Sepakat village, and working relations between rattan collectors, middleman and business owner



They then transport the rattan down the river and bring it to an agreed location within the village. The group’s leader will let the middlemen (the first type of market flow) or the business owner (the second type) know of the arrival of the harvest. The middleman will then inform the business owner that the rattan is ready to be collected. Before sending people out to the village, the business owner who is based in Masamba - the district capital city – will then request the District Forestry Services to issue a forest product transport permit, locally known as SKSHH. With this permit, the business owner will be able to transport the harvest from the weighing place to their drying and pre-processing unit in the city. Once the rattan has been dried, the owner will transport and sell it to the buyers or finished or semi-finished product manufactures based in Makassar.

Figure 4b – Diagram showing the chain of rattan harvesting and marketing in Sepakat village, and working relations between rattan collectors and business owner (without middleman)



### *Income derived from gathering rattan*

During a 2–3 week trip farmers can collect at least a ton of wet rattan. If the price of wet rattan is US\$ 0.08/kg (it can reach US\$ 0.12 for *Rotan batang*), the average net earnings of one group member (after deducting expenses) are at least US\$ 61.10. Interviews revealed that younger men (aged 27–40) can earn between US\$ 72.20 and US\$ 111.10, minus down payment deductions (around US\$ 33.30) for one trip. More family members in the group (father and children) means more money for a single household. What is interesting to note here is that although they work in groups in the forest, earnings for each member are calculated on an individual basis. The members help each other set up the camp, pool the resources and are responsible for all rattan being rafted in the river to the village, regardless of whom the rattan belong to. However, their earnings differ. This is different from another group working on timber harvesting where earnings are equally distributed among group members, except for the leader.

Tables 4 and 5 below illustrate the group members' earnings from rattan collection plus the group's attributes. It is not our intention to correlate the group's earnings and the number of members, age and

marital status, as the research was not designed for that. Participant observation shows that the amount of earnings depends on the diligence of the members.

Table 4 – Earnings from a Sepakat village group who spent 48 days collecting rattan in the forests (from 1 September to 17 October 2005)

No.	Group member names	Age (year)	Marital status	Earnings * (US\$)
1.	Collector 1	16	not married	41
2.	Collector 2	27	married	114
3.	Collector 3	16	not married	36
4.	Collector 4	14	not married	27.5
5.	Collector 5	32	married	92
The value of rattan given to the cook assistant as her salary				54.6
Total				311.34 /five people /48 days

Remarks: \* The price combines all types and qualities of rattan

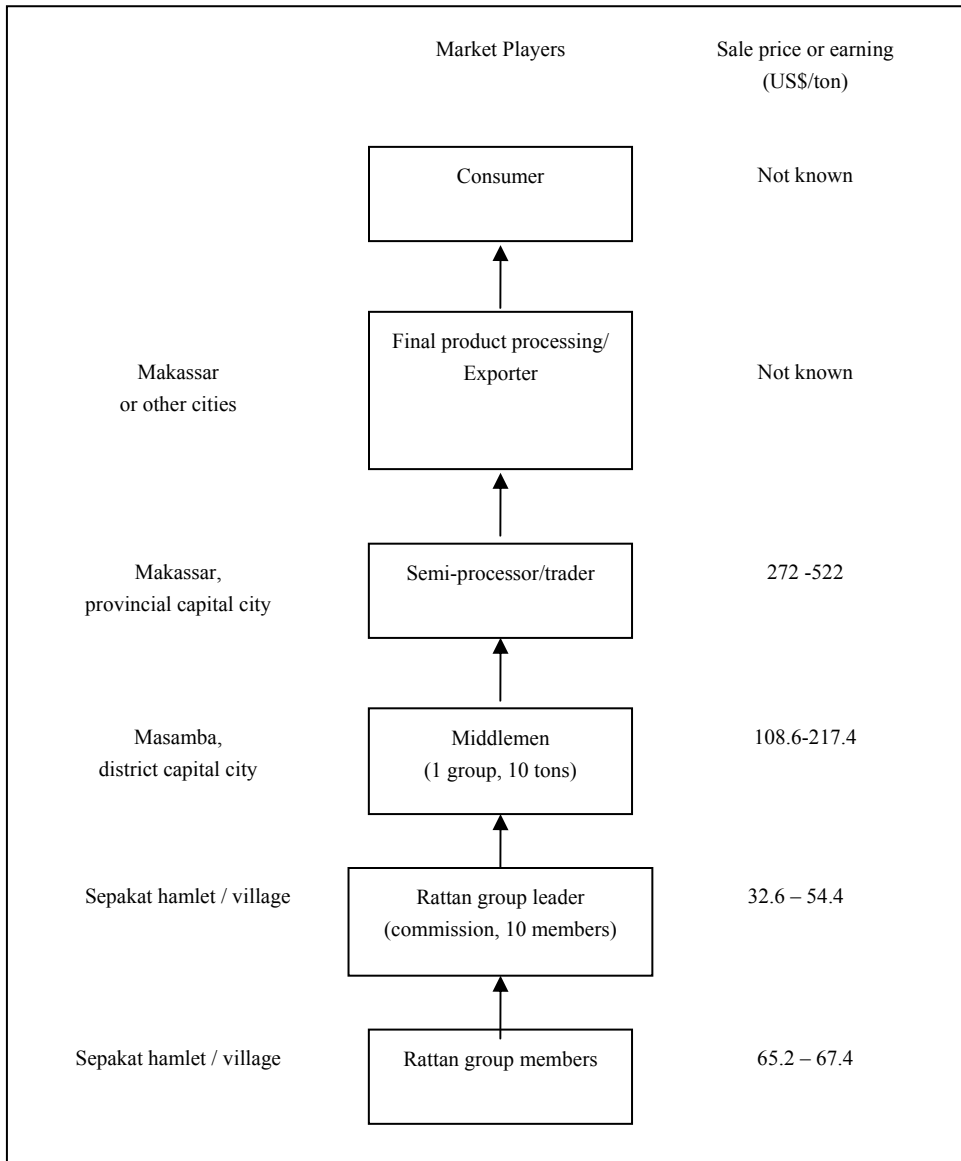
Table 5 – Earnings from a Lantan Tallang group who spent 16 days collecting rattan in the forests (from 9 to 24 September 2005)

No.	Group member names	Age (year)	Marital status	Earnings * (US\$)
1.	Collector 1	20	not married	86.3
2.	Collector 2	17	not married	56.2
3.	Collector 3	28	married	94.2
4.	Collector 4	23	not married	109.1
5.	Collector 5	40	married	93.8
6.	Collector 6	17	not married	37
7.	Collector 7	36	married	110.4
8.	Collector 8	20	married	50.6
9.	Collector 9	25	married	36.6
10.	Collector 10	unknown	unknown	97.9
11.	Collector 11	unknown	unknown	93.7
Total				865.8 /11 people /15 days

Remarks: \* The price combines all types and qualities of rattan

A group leader usually get US\$0.003-US\$0.005 (depending on business owners) in commission from each kg of rattan collected by the members. Assuming that the price of rattan per kg is US\$0.07 and one group member can take back an average of 1 ton of rattan, the leader will obtain US\$32.6-54.4, while each member will get US\$65.2-US\$67.4. One middleman told us that he sells raw rattan to the business owner or rattan permit holders. He earns US\$0.01–0.02 (or around 30% of the rattan price) per kg in commission. If a group can produce 10 tons of rattan in an average trip, the middleman can earn US\$108.6-217.4 from each group. There are 15 groups in Sepakat village selling to one middleman. The following chart shows the rattan market chain, as adopted from Belcher (1998).

Figure 5 – Rattan market chain



FORMATION OF A HIGHLY MOTIVATED NTFP GROUP IN BUNGO

*Catalyzing the groups*

At the beginning of 2005, our research team started to catalyze local community groups in Sei Telang and helped them go through various steps of reflection on issues they were facing, planning actions and engaging in interaction with outsiders. Two self-formed groups, one women’s group, *Gotong Royong* and one men’s group, *Sinar Tani*, were involved in the facilitation process. The group members were interested in achieving their shared goals in the area of agricultural productivity and management.

One of the agreed plans at a certain point of reflection was to look for alternative activities that would increase the productivity of their agricultural produce and generate income. While the women's group was more interested in products for subsistence, the men's group was more interested in developing a non-timber forest product, *jernang*, that is marketable. What follows are the learning processes that finally led to the formation of a group whose members were highly motivated to develop *jernang* products and prepare for tapping into market network.

*Are they self-formed, government-led or market-driven groups?*

When the project started the facilitation processes, the commodity the group wanted to develop was rubber. During the initial reflection and action, the *Sinar Tani* group thought about the need to regenerate their rubber, prepare their own rubber nursery and develop a rubber plantation collectively. Most of the villagers at Sei Telang earned income from small-scale rubber plantations and paddy rice cultivation. However, their intention to develop a nursery was hampered by limited financial resources.

The group then took actions agreed in the earlier step to visit district government offices such as the Agriculture Services and Forestry Office. Some group members we catalyzed were then brought into interaction with government officials, providing farmers with a great opportunity to share their views and aspirations and look into the funding possibilities and accessing information. Once they returned to the village, the group members shared with other members what they learned from their visit and expected to use the lessons for further plans. One interesting thing was a program called *Bantuan Usaha Produktif (BUP)* currently being developed by the Forestry Services.

BUP is a district government program intended to help local people to develop their small-scale businesses. Through this program, the office allocated US\$1080 to each selected community groups throughout the district area. To apply for this fund, local groups first had to submit a proposal outlining their activities, budget plan and expected output. The program was called "*Bantuan*" or aid which means that it is not necessary for the local people to return the money they received. It was also originally developed to help those having necessary skills and capacity to develop small enterprises, but with financial limitations. However, in order to ensure accountability and sustainability of the efforts, the Forestry Services instructed that all money distributed should be revolved in time to other groups and that various types of activities could be proposed. The farmers might choose which types of businesses that suit them.

In responding to this offer, the group members developed a proposal on raising poultry. This was completely based on the group's interest and knowledge that their village would be suitable for poultry. They submitted the proposal to the district office. Unfortunately, the latter rejected the proposal on the grounds that raising poultry may not be feasible given the failure of this type of business in other areas. The group members were disappointed with this but were motivated enough to try to submit another proposal. During a meeting, one member expressed disappointment and asked the district official if they could propose another one. The official then agreed.

Through a village meeting, the group learned from an official about the prospective species of *jernang* and the Forestry Service's support if the group were to develop this species. This was actually not the first time that people heard about *jernang*, a highly valued commodity in the market. A buyer from France once visited their village as she heard about small-scale *jernang* collection in the village in the past. She had taken some samples from the community and tested the quality of *jernang*. She found that

*jernang* from this area has a high degree of purity. The quality of the product was excellent. Despite the limited access to market information, the group members knew the market price. Every year, the price of *jernang* continues to increase. The price is US\$65- US\$76 per kg if the collectors sell the product to village traders (*tauke*). If they sell it directly to the district market, they will get from US\$97.8 to US\$130.4 per kg. Income is also possible from sale of seedlings. Though uncommon, the farmers had also heard of the price of *jernang* seedlings ranging from US\$2.7 to US\$3.2.

At the same time, the Forestry Service Office had proposed that Sei Telang be declared as the center for *jernang* seedlings based on the consideration that there was a large quantity of *jernang* and *jelutung* (*Dyera costulata*) plant species grown in forest areas surrounding the village. Officials from the Forestry Office have submitted this proposal to the Ministry of Forestry's Directorate General of Land Rehabilitation and Social Forestry (RLPS).

Funding opportunities provided by the government institutions and the high market value of *jernang* stimulated the group members to agree on selecting this commodity. They then prepared another proposal and sent it to the Forestry Services. Luckily their proposal was accepted. The group was granted US\$1087 to cultivate *jernang* seedlings and was advised that the fund might be used to purchase polybags and seedlings or to capacity-build their members. However, the fund might not be used to pay for the labor or buy standard farming tools.

The fund was disbursed in two stages. Once the first advance of US\$760 was paid and used, an incident took place that challenged the group member's cohesion. Three members of the group, who turned out to be the head and secretary of the village and a member of the village consultative board (BPD), were found to have misused the money. A forestry extension agent was also reported to be involved. They did not use the fund for building the nursery; they used the money for their own interests, instead.

#### *Learning is essential for group cohesion*

Other members felt cheated by the incident and were discouraged from making any group efforts. Attempts had been made to persuade the three members to pay back the loan. Several meetings were called. Some group members questioned the persons involved directly and reported the incident to the Forestry Service. However, nothing seemed to work. The three people refused to attend the meeting. They made every effort to avoid accusation. This led the Forestry Office to postpone the disbursement of the second payment.

Having learned from this incident, one of the members then called others to reflect on what factors caused the group to fail to meet the initial agreement. During the reflection, one member thought that this had been caused by the absence of transparency in the way funds were spent. Some members thought that the lack of guidance and monitoring from the district forestry office had contributed to the failure of their collective action. They said that "the rules are not clear to us, making it difficult to determine what kind of activities and materials might be purchased." Others mentioned the lack of strict rules contributing to this failure. At the end, they finally agreed to form a new group of ten people, all men with only one member coming from the previous group. None of them were elite.

They called their group "*Bukit Lestari Makmur*" and agreed to form a set of rules (see Box 1) that reflect their commitment not to repeat the past mistakes. While the Forestry Service has not decided whether the rest of the funds will be allocated to this new group, the members of the new group have started to

show full commitment to the group's shared goals. They have now more than 200 seedlings, which they collected in six to seven visits to the forests. They have also developed a schedule for collecting wild seedlings from the forest and agreed to go into the forest once a week in a small group of 5-6 people. Each member has also started to pay the group US\$0.3 each month and they have thus far used it to buy nails, polybags and a lock for a small nursery. Though without the government's assistance, their collective action seems to have been successful in raising *Jernang* seedlings.

Box 1: Ten rules developed by “*Bukit Lestari Makmur*”:

1. If the members and the board fail to join the group activities three successive times, they will be considered excluded from the group
2. If the members and the board are found to break the rules, a warning will be issued
3. The board is not allowed to use the funds without consultation with the group's members.
4. A commonly agreed decision cannot be contested
5. Members should be responsible for the nursery
6. Those wishing to join the group should obey the group rules
7. All members have rights to express their opinion for the interest of the group
8. The group's cash funds are not for loan
9. The chair, secretary and treasurer should be fully committed to fulfilling their duties
10. Each group member is obliged to adhere to the agreed rules

One of the members and another villager joined a training on *jernang* cultivation and management, and had the opportunity to learn from other villagers who have earlier developed this commodity. They learned about how best to cultivate *jernang* plants and how the product is processed and marketed. They gained knowledge about the market chain of *jernang* ranging from collectors at the community level or village traders to the district traders or processors within and outside the province and then to the manufacturers. Various products of *jernang* in the form of clods or plaques have been collected by village traders before being sold to the local market or exported. It is common that village communities sell to village traders.

## JOINING FORCES TO IMPROVE BARGAINING POSITION

### *Lessons to learn*

One of the greatest obstacles to rattan collectors, revealed through community meetings and interviews during the initial phase of the research, is unstable local prices for wet rattan. They cannot profit when the price of wet rattan is less than US\$0.08/kg. Villagers do not have the equipment or skills to aerate rattan and this puts them in a weak position when dealing with middlemen. Before collectors go into the forest, the middleman usually tell them that rattan prices are high, US\$0.11/kg, which makes them keen to go collecting for him. However, once they bring the rattan back, they have to settle for any price fixed by the middlemen (e.g. US\$0.08/kg or less). The collectors cannot do anything except agree to the price. Otherwise, the rattan will rot if it is not disposed of quickly. Besides, the down-payment system may well make rattan collectors less likely to complain when they return to find that middlemen have unilaterally lowered the price agreed at the beginning. The down-payments make it financially easier for

the gatherers to leave their families and collect rattan, but they also weaken the collectors' bargaining power.

Rattan farmers have limited access to market information. Despite the close distance from the village to the capital city of the district, Masamba, rattan farmers are rarely aware of the rattan price and what types of rattans are available in the market. They sometimes hear about the price from other villagers who travelled to the city and from others who visited their village. When the price of rattan stood at the level of US\$0.076/kg, the price in the capital city of the province, Makassar, was recorded at US\$0.27/kg to US\$0.32/kg. This difference in figures provides us with estimates of the profits that each actor obtain from the rattan trade, while that there are some processes before the rattans are finally purchased by semi-finished, end-product manufactures and exporting companies in Makassar. The farmers increasingly put questions about the constant rattan price despite the increasing price in the marketplace.

Rattan gatherers also complained that if they cannot agree on a price, or if the demand is very high, middlemen or business owners often bring rattan gatherers from outside to collect rattan from the forests around their villages. Outside gatherers reduce rattan stocks in the forest surrounding Panpaly. One villager said that rattan supplies are decreasing. In the past they could gather what they needed in just one day; now it takes many days and nights in the forest to gather the same amount. Here, there is a problem of property rights over the forests around their area from which rattan are collected. Outsiders with permits access the bulk of profits from local rattan. Middlemen also make a hefty profit by squeezing the local farmers, whose bargaining position is weakened because they lack the necessary knowledge and capital and do not have the tenure rights that could give them leverage with the middlemen.

Some villagers also complained about the fact that the business owners place their drying processing units outside the village. They are not able to take full benefit from rattan collection. Though a district policy has required business owners or license holders to have a processing unit before they are granted a permit, the policy fails to ensure benefits for the villagers. Due to weak infrastructure within the village, permit holders tend to place their processing units in the district city. Farmers think if the processing units had been located in their village, it would not only add value to the products and produce a relatively higher price, but also would generate employment.

#### *Establishment of a Rattan Group*

A series of group meetings and focus group discussions held as part of the action research prompted concerned parties to reflect on issues confronting the rattan collectors, middlemen and the companies. The parties also agreed to follow on actions in an attempt to seek possible solutions to their problems. At the village level, the research facilitates the interaction among the rattan collecting groups and encourages concerned parties to share their experiences working in groups and making transactions with middlemen and other buyers. Some farmers are pessimistic about getting a better price for their rattan through joining forces in a village group or cooperative. They think that the price has been set by the middlemen and there are no other choices than agreeing to the price. The fact that they also fall into debt further reduces their bargaining power.

Others are optimistic about improving their conditions. They think that district government would be on their side and supportive of any actions they take. What they have in mind is that the government has a

mandate to empower local people and to put a priority on rattan production and development. The farmers also heard about the recent change in the rattan permit policy in which the permit holders are now required to enter into partnerships with rattan farmer groups in the villages where rattan is collected. This helps the farmers to strengthen their bargaining position.

They finally got the idea of establishing a village rattan group, bringing small collector groups existing in Sepakat village, including other two neighboring villages, Lantang Tallang and Pincara villages. The group, *Kelompok Masyarakat Pemanfaat Hasil Hutan (KMPHH)* or Forest Product Utilization Community Group, is expected to function as a means of channeling rattan farmers' aspirations to the district government and of representing farmers in bargaining for a good price with the permit holders.

To further strengthen the group, the would-be members then developed and agreed on a set of rules regarding membership, obligations, sanctions and ways to deal with permit holders, middlemen and external buyers. The important rules, which they put together in an agreement document, are as follows: First, rattan collectors should register their group members and report to the village head or the group head whenever they go into the forest. Second, the members should adhere to an agreed price and make every effort to keep middlemen or buyers from paying a lower price. Third, rattan business owners or middlemen should not bring with them rattan collectors from outside the village. They should enter into agreements with local rattan gatherers. Fourth, the members should make a contribution to the group, which will later be used by the members as cash before they go collecting rattan.

Some farmers are motivated to join the group. They think that joining forces in the group will offer them a great opportunity for obtaining a higher return from their improved capacity to bargain with the middlemen and other buyers. The latter would have no choices other than accepting the price agreed by the group if they could not find any group in the village selling products at the price they wanted. Farmers also talked about their wish to access government resources such as planting material, capacity building and funding through the group. Some of them also expect that once the group has been legally established they will obtain their own permit and sell their rattan directly to buyers, bypassing the intermediary.

Lessons from successes of earlier and other groups seemed to have convinced the people that engaging in collective action was a good idea. The villagers learned from the success stories of another group in their village – though it is smaller in scale – working with paddy rice. It is about the rules and leadership. They called it “*turun sawah*” or working at paddy fields and “*pengarung*” or a respected leader (see box).

People help each other preparing paddy fields and harvesting the paddy once it has reached the harvest age. A rule said that it is *pengarung* – the respected leader - who instructs to start working and who checks if their land is ready for planting, if the seedling material is appropriate and if the plants are in good condition (when they have grown earlier). Plants attacked by pests indicate that bad behavior has happened. People are not allowed to collect bees while their paddy has yellowed. The villagers would willingly gather in meetings in case there were things to discuss.

Villagers also think that through grouping they will be able to put together their assets so that they will no longer need to get advance cash from the middlemen before they go into the forests. During the meetings, people also learned about rattan groups from the neighboring village, Lantan Tallang who

have never gotten an advance loan from the middlemen. The groups would only go into the forest when they had collected enough money themselves. A middlemen who is based in Masamba, the district capital city, whom we interviewed also confirmed this. He saluted rattan groups from this village, saying “*They are hard workers and often sell a large quantity of products. They are selective in harvesting the rattan types. Only the high value ones they collected*”.

### *Prospects for Improved Prices*

As the research is ongoing and the groups’ members have just started to engage in collective action, it is too early to see if their joining forces has resulted in improved prices at the farmer level. However, the recent intensive interaction between the group members and middlemen has created a condition that is conducive to improving such prices at farmer level. One of the middlemen who turns out to live in Sepakat village and is involved in the formation of the group recognizes that he would have difficulty keeping the price low if there were no groups in the village selling rattan at such a price. This is obvious because the permit restricts their partnership to only groups in the village.

He also said that the business owner may be able to increase the rattan price to about US\$0.13 per kg, from the current level of US\$0.07, an increase of US\$0.054. However, this would only happen if the government could help him get rid of illegal payments made by *oknum* (a person in an official capacity who charges the users illegally) along the way from Masamba to Makassar. Once the rattan has been processed and dried in Masamba, the business owners transport it through at least seven other districts<sup>13</sup>. The middleman admits that there is only one legal checkpoint in Luwu Utara district, and the situation is now much better than in the past.<sup>14</sup> No significant illegal payments were found in the district. However, the transporter usually has to spend US\$50 to US\$100 for illegal charges in about 20 to 30 checkpoints in other districts before they finally arrive in the buyer’s place in Makassar or Ujung Pandang, the provincial capital city (see Figure 1).

Another factor that increases the price according to middlemen is the quality of rattan produced. Collectors often come with lots of very poor quality rattan. They often do not carefully cut the rattan, peeling off part of the product. Their usual habit of soaking rattan in the river for many days before returning to the village also results in low quality. One collector argued during a meeting with the middleman that the reason they soak the rattan is because their harvest is calculated based on weight. He proposed that middlemen use another method such as measuring the length and diameter of rattan, instead. Through researcher facilitation, the middleman and collectors agreed to conduct a test to see how much increases in price the collector would get if the rattan were not soaked so long.

One middleman also complained about his difficulty to get a transport permit or SHKSSH for rattan products. Once he is informed by the group leader that the rattan is ready to be weighed and transported, he then visits the Forestry Service Office to request the permit. However, the officer can only provide those who need permits for transporting timber, and not NTFPs. One analysis indicates that the former produces more revenues than the latter. Despite the government’s high commitment to promoting non-timber forest products, there is a still tendency among certain parties to prioritize business activities that generate the most revenues for local development.

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<sup>13</sup> Luwu, Wajo, Sidrap, Pare Pare, Barru, Pangkep, Maros and Makassar.

<sup>14</sup> This is also acknowledged by another middlemen and one District Forestry Services official whom we interviewed, August 2006.

### *Challenges to Group Cohesion*

Building commitment is a challenging task. Though most of the members are committed to rattan group and have agreed to the group rules, the challenges remain. At the level of rattan collectors, some members free-ride. Though collecting rattan from the forests is group work, the amount of produced rattan is calculated on an individual basis; the earnings among the members are unequally distributed. The stronger the farmer, the more rattan he can harvest. Some members have used the advance given by the middlemen to the group only for their own enjoyment. They do not go into the forests at all but spend the money in the village, instead. Others are found to spend much time in the forests playing card game but collecting little rattan.

Some members of the KMPHH group pursue their own interest. They join the group meetings but are actually not rattan collectors. They are allegedly looking for government resources as they believe that once the group has been legally established, there will be more government resources for them to access. During a village meeting, another member argued that their group will not function well or help them benefit from the current rattan policy so long as the permit holders do not locate their processing and drying unit within the village. He also felt that there is no way to bargain about the price as most collectors have been trapped in debt and the middlemen have full control over the price. He said “*they need an income to feed their families and there is no way they can wait for other buyers while their rattan is rotting*”.

## **6. COLLECTIVE ACTION AT A HIGHER LEVEL IS NEEDED**

To strengthen collective action among the rattan groups, the researchers facilitate stakeholder interactions at district level. Representatives from the Forestry Services, members of parliament, the district Revenue Services and Trade and Industry Services, district-based rattan companies (the permit holder), the police officer, academia, members of the farmer groups (KMPHH) and of FKKSS (South Sulawesi Forestry Communication Forum), NGOs and ASMINDO (the Indonesian Association of Furniture Industry) have engaged in a series of meetings and focus group discussions. Besides focusing on forestry decentralization, they collectively reflect on issues facing the rattan farmers, middlemen and business owners or permit holders. During the initial period, some of issues identified include:

- Market information and knowledge of prices. The rattan collectors lack access to market information and are unaware of changes in price;
- Bargaining power. Rattan farmers lack the capacity to negotiate the price with the middlemen or intermediary. There is tendency among the middlemen and buyers to keep the price low, while the rattan market price is steadily increasing;
- Open access: The entry of rattan collectors from outside village has threatened the sustainability of local rattan resources within the village;
- Tenure rights: Local communities have no clear rights over the forest areas from which rattan are collected. They are only traditionally allowed to harvest rattans without any clear rights and responsibilities on paper. Forest product utilization rights owned by the company or intermediary are only valid for six months and this provides no incentive for the permit holder to develop rattan plantation;

- Product quality and quality requirements: Despite the relatively high quality of rattan resources in the area, the collectors often fail to bring the good ones out of the forests, making the price at the weighting location low;
- Capacity building: The District Forestry Service lacks capacity to conduct periodic monitoring and evaluation of company operations and community empowerment. Due to the lack of supervision, the permit holders are often reported to have exploited rattan from other areas, for which they have no permit;
- Law enforcement: The holder's failure to comply with the requirements as put forward in the contract have never been sanctioned. When transporting their rattan products, the companies complained about illicit payments that they have to pay at various checkpoints along the way from their processing and drying unit in Masamba to Makassar.

At the end of each meeting, concerned parties are encouraged to agree and implement action plans with regard to each role and responsibility. The parties discuss indicators of achievement at each step and are committed to meeting on a regular basis. In responding to the above issues, the District Forestry Service for example adopted a recommended option to include a provision in the permit or contractual agreement between the district government and permit holders. The latter are now required to enter into partnership with rattan collection groups existing in the village as specified in the permit.

Other interventions made by the District Forestry Service are to move the place where forest fees are collected, and to undertake a program aimed to encourage rattan development. Formerly, the district government collected the fees from checkpoints located along the street. They then moved the location to the office. Before they can transport their rattan, the permit holders should now first apply for an SKSHH, a transport permit, to the District Forestry Service and pay a fee in the office. As part of rattan development, the office embarked on GNRHL - a national movement on forest and land rehabilitation. Through this program, the capacity of farmer groups in targeted villages in rattan planting are improved and they are provided with seedlings.

Other recommended options that would ensure the flow of benefit going to the villagers and strengthen the bargaining position of rattan collector groups are as follows:

- Rattan gatherers who want to become local businessmen or middlemen must be empowered, encouraged and supported so they can mobilize rattan gatherers and help get a better bargaining position with middlemen (rattan permit holders) and larger rattan manufacturers in Makassar.
- A standard for sustainable rattan management should be introduced; it should include standards for planting, harvesting and processing up to distribution.
- Artificial regeneration efforts should be prioritized, especially for tokoi, a unique and valuable species of rattan; it grows as a single plant and is very difficult to regenerate.
- Asmindo should also contribute to capacity building for rattan gatherers in the villages. As an association of rattan business owners, who profit from the hard work of rattan gatherers, this institution should provide support and guidance to improve rattan farmers' livelihoods.
- Cooperation should be promoted between local cooperatives or farmer groups and banks that could provide capital through soft loans. Lack of capital is one obstacle to developing community capacity and improving the poorest people's bargaining power. However, it is not easy for banks to provide credit, as they require collateral. Recognized tenure agreements over forest land may help farmers here.

- A collectively managed forest area should be established so that communities can implement a sustainable rattan management system, perhaps by applying agro-forestry or community-based forest management principles.

As shown in the research, engaging in collective efforts to enhance the bargaining position of rattan collectors seems desirable, and the business owners' willingness to increase the rattan price is also of assistance. However, collective action among the rattan farmer groups will be effective if it is supported by a higher level of concerted efforts among the stakeholders including local government institutions and private companies. Different parties should join forces to enhance coordination, share information and ensure the development of sound policies that support pro-poor markets. Meinzen-Dick et al. (2001) indicate that collective action at the local level often remains limited in its impact if it is not backed by external support.

#### *The Role of Action Research in Fostering Collective Action*

This research provides some insights into the usefulness of action research in empowering rattan and *jernang* farmers to engage in collective action towards accessing government resources and markets. The approach helps facilitate social learning among the stakeholders involved. Various interventions made in responding to agreed plans combined with continuous interactions throughout the process contribute to building shared understanding and trust.

Participant observation has proven useful to building rapport among the stakeholders, which is quite critical in helping reveal such confidential information as income, the amount of illegal charges paid in different checkpoints and the dynamic constellations among different groups. It has also been useful in gaining truthful information about the patterns and methods of natural resource uses such as in the case of rattan harvesting. The researcher's involvement in many days of rattan harvesting in the forests has disclosed the ways farmers harvest rattan and treat them before they are transported down river. Rattan farmers are careless in cutting the rattan; and they may soak the harvest in the water for a long time before finally transporting it via river to the village.

During the meetings, farmers reflect on why their products are valued at a lower price. As a follow on action, farmers were brought to meet the middlemen and discuss the problems. They found that soaked rattan has lower quality and farmers learn why the middlemen pay a lower price. Another action was bringing in an extension worker to tell farmers about the best method to harvest rattan and produce a good harvest. A middleman who was adamantly unwilling to change the price then agreed to pay a higher price provided that the farmers reduce soaking times. Here, ongoing observation helped in assessing the mutual attitudes and behaviours of the farmers and the buyers.

The inclusion of pro-rattan farmer policies in the forest product utilization permit in Luwu Utara and the disbursement of funds allocated to a *jernang* group in Bungo, by the respective Forestry Services, are also other examples. They are the results from interventions not only made through repeated focus group discussions that bring together district policy makers and other parties, but also through individual and personal relations. The champions existing in governmental institutions are found to play a major role in action research processes to ensure policy adoption. Despite the power relations involved, the current action research seems to have brought district policy makers closer to the rattan and *jernang* community groups in the two district sites, lessening the gap between the powerful and powerless.

Action research here facilitates social learning, which is a continuous interaction, dialogue and deliberation among government officials, researchers, rattan collectors and middlemen to identify problems and explore possible solutions. Through the learning processes, the parties involved mutually exchange views, perceptions and knowledge and share their experiences, which finally leads them to find new ways of thinking. The research findings seem to be consistent with Berdegué (2004) who said that once collective action is initiated in response to a system of policy and market incentives, it is the quality of the social learning and adaptive management processes at the local level that largely determine the fate of the concerted action. The middlemen's sympathy for the rattan collectors, their willingness to increase the price and to speed up the payment to the collectors as shown in the research, for example, are the result of social learning. Each party learns to appreciate the other's values and interests.

## 7. CONCLUSION

Collective action in this research was found to occur at different levels and to have some role in helping communities harvest, market and develop their NTFP products. In the first site, findings show that collective action at the level of the harvester group has naturally played a role in helping farmers pull together attempts to obtain cash advances that allow them to collect rattan from the forests. The development of an inter-group village cooperative offers a great opportunity for rattan farmers to improve their capacity to negotiate a better price and gain access to government permits. Collective action in terms of coordinated activities and information sharing among the stakeholders has also played a role in district policy adoption that create a situation conducive to pro-farmer rattan trade. In the second site, having learned from the success and failure of previous groups and other types of collective action, communities have now formed a highly motivated group that can lead them to advance the development of *jernang* products. Action research is critical in fostering collective action and learning that lead the group's members to be more organized and cohesive, and other stakeholders (district government, rattan companies, law enforcers etc) to be more receptive to rattan farmers' needs. Despite the opportunities, some factors remain to challenge the effective role of collective action in accessing markets. These include free-riding members and the tendency of government policies to prioritize timber over NTFPs.

These results have policy implications. While collective action has the potential for helping rattan farmers in the study sites to get a better price for their rattan products, illegal payments paid along the way towards the product markets contribute to the business owners and middlemen keeping the price at the farmer level low. If we want to improve the local livelihoods, especially those whose lives depend on forests, government needs to improve coordination and enforce rules that not only prevail in Luwu Utara, but also outside the district. National as well as provincial level initiatives are needed.

The district governments should also reflect on their policies and programs and take a closer look at the ways they have contributed to effective collective action among the local communities. There is a tendency among government institutions to spend development funds on groups that are established instantly without sufficient attention paid to how the group has evolved and how members are motivated to get involved in the process. Opportunities should be made available for those who are genuinely keen on working in groups to achieve the shared goals.

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