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

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ABSTRACT

The paper draws on findings from research in South Sulawesi and Jambi Provinces, Indonesia, looking at the role of collective action in helping two local community groups enhance their bargaining power vis a vis other market players (such as collectors, small- and large-scale industries) and promote an increased demand for non-timber forest products. The first group has traditionally collected rattan (*Calamus sp*) from surrounding forests and was struggling to sell their products at a better price amid market uncertainties and the lack of supportive government policies. The second one was involved in the propagation of another high-value rattan species, widely known as Dragon Blood (*Daemonorops sp*), in anticipation of an increased market demand for this product. The paper describes challenges and opportunities for the country's forestry decentralization and marketing of forest products, and the role of collective action in improving groups' access to government resources and markets. It also discusses the research team's part in facilitating the groups and highlights the strengths of participatory action research approach in fostering collective action among local stakeholders.

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

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

Heru Komarudin,¹ Yuliana L. Siagian,² and Ngakan Putu Oka³

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 (non-timber forest products) have continued to become important products, which make a large contribution to the state's revenue and create employment. Surveys indicate that rattan income forms a significant part of total household income in South Sulawesi (Prempeh, 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 policies⁴ banning the export of raw material and half-processed rattan. This caused the price of rattan at the farmer level to 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, 2004). Despite the increased market demand for this product, the current situation shows the average price of rattan at the farmer level in one of the producing areas, South Sulawesi, is only about Rp. 700/kg.⁵

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⁴ 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.

⁵ 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.

The government policies which either ban or allow⁶ the export of raw rattan materials have attracted criticism and protests from large furniture industry associations, NGOs, and rattan farmers. On the 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 argue 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, tend to have a weak bargaining position *vis a 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's Blood (*Daemonorops draco*), locally known as *jernang*. It is the finest red-colored resin obtained from a small palm of the same family of rattan (*Calamus sp*) that grows in the islands of the Eastern Archipelago. The natural resin of Dragon's Blood was much renowned in antiquity and was used for diverse medical and artistic purposes, forming a staple of medieval alchemy. The medicinal properties of several resins from Dragon's Blood, mainly the *Daemonorops* specimens, are ascribed to the presence of benzoic acid, whose antiseptic properties still make for a natural remedy in some modern cultures (Edwards et al., 2004). *Jernang* is obtained in several ways, the most satisfactory being by steaming, rubbing, or shaking the gathered fruits in coarse canvas bags, to sift out impurities; it is melted by exposure to the heat of the sun. While it has been sold in local and international markets (at least *via* the internet) as a highly valued product, has not been widely known in Indonesia and in other countries. A report indicates that the demand for *jernang* has been increasing in many countries such as China, Korea, Japan, the U.S., and several countries in Europe (Anonymous, 2005). In Jambi, *jernang* has long been harvested traditionally and collectively in natural forests by the local people and the indigenous community, *Orang Rimba*. As the *jernang* species has become rare in the forests and people have increasingly encountered difficulty in finding this species, the district government took initiative to promote this species, and local people started to engage in market-led collective action to gather *jernang* from the forests and cultivate it.

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

This paper highlights findings and lessons learned from examining the role of collective action in helping community groups increase their bargaining power and anticipate the increasing demands for these highly-valued forest products. The main questions being addressed here are how collective action works in NTFP production and how the facilitated collective action could help farmers improve their access to government resources and market. Findings presented are drawn from research conducted in two districts in Indonesia.

2. RESEARCH DESIGN

Study sites

The research sites are located in two districts, Luwu Utara in South Sulawesi Province and Bungo in Jambi Province (see Annex 1). This study focused its work in some hamlets in three villages, Panply and Sepakat hamlets of Sepakat village, Kumbari and Pulauo hamlets of Sassa village in Luwu Utara, and Sungai Telang hamlet of Sungai Telang village in Bungo. Intensive facilitation took place in two hamlets, Panply and Sungai Telang, while interviews with key informants were also held in other hamlets.

Luwu Utara District is the largest district in South Sulawesi, constituting almost a quarter of the land mass of the province.⁷ Most of the area is mountainous and covered with forest vegetation and a high diversity of timber species. These unique and bio-diverse ecosystems also provide both ecological and financial services for the local communities, e.g. water source preservation, NTPF collection, timber production, eco-tourism, etc. The occupation of the majority of the indigenous people, who mainly live close to forests, is forest product gathering (e.g. rattan or timber) as a supplement to rice cultivation or work in the plantations (cocoa, oil palm or oranges). 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 near forests. Forest lands and products are financially important for them, as they are the most dependant stakeholders on district forests.

Sungai Telang, Bungo District is located on the border between West Sumatra and Jambi Province, in Southern Sumatra. The community groups we worked with live in Sungai Telang, occupying an area

⁷The total area covered by Luwu Utara District is 14,347.66 km², or 23.17% of the province.

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 community groups have long practiced self-initiated collective action in the form of what are locally known as *gotong royong* and *Pelhin*,⁸ and they are also engaged in a government-initiated group, *Sinar Tani*.⁹

Facilitated Groups

Initially, the research team worked with two community groups, a rattan farmer group and a *jernang* farmer group. Table 1 describes the group characteristics which include major activities, establishment, membership and leadership, benefit distribution, and motivation to engage in collective action. As the research progressed, the team engaged in a newly built group, some of whose members came from the previous groups.

⁸ 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 owned 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).

⁹ The first two groups are established by the communities themselves. The formation of the last one was driven by government programs for development support.

Table 1. Group characteristics

Rattan farmers and their inter-group alliance	Jernang farmers: Sinar Tani and Bukit Lestari Makmur groups
<i>What activities do the groups undertake?</i>	
Collect rattan from surrounding forests and sell the products to buyers, often through middlemen.	Regularly cultivate their lands in groups, collect wild <i>jernang</i> seedlings from the forests, and establish a <i>jernang</i> nursery or plantation.
<i>How were the groups formed and who were the catalysts?</i>	
Established informally based on their need to collect the forest products; commonly don't have a permanent membership; business owners through their middlemen encouraged the groups to sustain their action.	<i>Sinar Tani</i> farmer group was initially established in 1998 when the government provided funds to improve water canals for irrigated rice, and the group activities continued even after government funds ended.
<i>Who are the members?</i>	
There were around 15 groups in the village, each comprising 5 to 10 people, usually made up of family members and neighbours.	The group comprises 17 members and all of them are Sungai Telang villagers. In its initial establishment, some village government apparatus (elites) joined the group.
<i>Who are the group leaders?</i>	
Those who have the capacity to access capital and build networks (relations with entrepreneurs and other actors). They are responsible for securing an advance from the business owner. It is common that a leader controls more than one rattan collector group.	The group was initially headed by a village governmental apparatus, and over time it was chaired by those having the largest land ownership and access to networks and government resources.
<i>What is their motivation to engage in collective action?</i>	
Concern with security in the forest and the efficient use of resources (money and other materials); need to meet the minimum amount of products and to collectively stand for a better price.	Initially motivated to help members to till their land and collectively use labour resources; later engaged in developing a nursery of a highly valued <i>jernang</i> commodity.

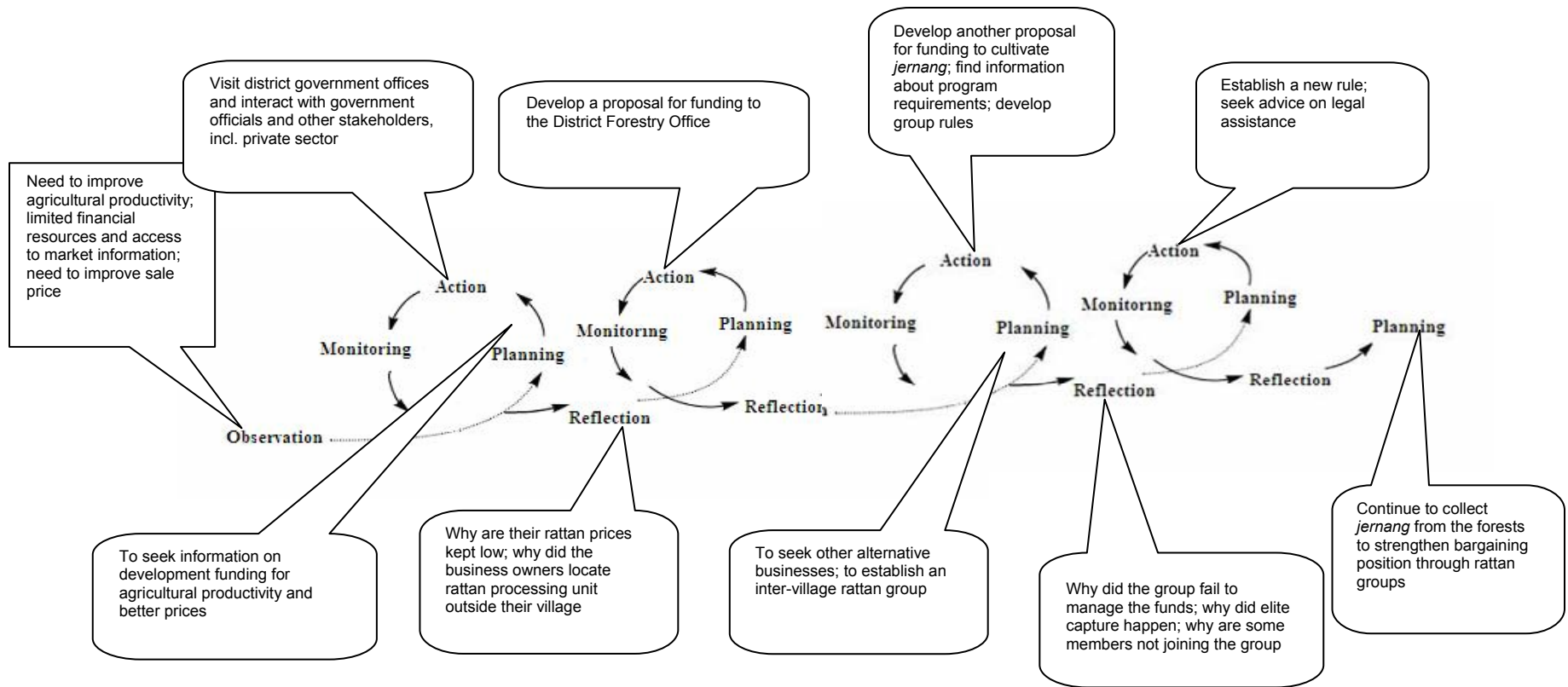
Methods

The research projects employed the participatory action research (PAR) approach to working with the community groups and engaging government officials (in particular, the District Forestry Service and the District Development Planning Board), district parliamentary members, non-governmental organizations, and private companies. Techniques used included focus group discussions, key informant interviews, participant observation, and workshops. Going through a repeated cycle of reflection, planning, monitoring and action, the research team helped targeted community groups to get a fairer share of profits from the rattan products and to develop a nursery of the *jernang* species.

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). Figure 1 describes the way the community groups under study have gone through the various steps of learning.

Action research helps facilitate social learning among the stakeholders involved. Through these processes, the parties involved exchange views, perceptions, and knowledge, and share their experiences, which finally leads them to find new ways of thinking. Berdegué (2001) stated 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. In this research, various interventions were made in response to agreed plans that built shared understanding and trust. Participant observation was used to build rapport among the stakeholders and obtain confidential information on patterns and methods of natural resource utilization. During the reflection, planning, and action, farmer group members reflected on the problems they were facing, and together with other parties learned ways of finding the solution. Ongoing observation helped in assessing the mutual attitudes and behaviors of the farmers and the outsiders, enabling them to appreciate the other group's values and interests.

Figure 1. Continuous steps of reflection-planning-action-monitoring-observation and examples of activities



3. A BRIEF LITERATURE REVIEW: COLLECTIVE ACTION, MARKETS, AND NTFP

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 self-formed or created formally at the instigation of external institutions. The group can have a clearly-defined boundary (or membership) as well as have an arrangement 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) show that collective action can help people improve their welfare and get out of poverty in several ways: 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 of the market and the linkages between transformation points and market actors. Many studies indicate that producers (who are mostly the poor and the marginalized) continue to be in weak positions when entering into negotiations with other market players. To improve bargaining power, as Belcher and Kusters (2004) suggest, 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 scale 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 (2001) 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 on the system of incentives as perceived by farmers, i.e. on 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 (Berdegúe, 2001).

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, 1987).

NTFPs had been traded for centuries when people recognized that deforestation was occurring at rapid rates and there was a call for a 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 (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) are procuring excessive profits is challenged when indebtedness and the costs incurred by marketers are taken into account. NTFP 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. FORESTRY DECENTRALIZATION AND CHALLENGES TO NTFP MARKETING IN INDONESIA

Decentralized Forest Policies

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 regulations¹⁰ came into effect, district heads in many regions 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 2000.¹¹ 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.

¹⁰ 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*).

¹¹ 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*).

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 products and their management. In 2001, for example, the district government of Luwu Utara issued a district regulation¹² 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.¹³ 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.

¹² Peraturan Daerah (Perda) or District Regulation No. 05 issued in 2001 regarding Forestry and Estate Crops Business Licenses in Luwu Utara District.

¹³ *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 PSDH¹⁴ 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 (tons)	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 the 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 regulation¹⁵ 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 and Challenges to NTFP Marketing

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 the business owners with strong capital that can gain benefit from this policy. This condition has limited opportunities for others with less capital. However, the permit

¹⁴ Provisi Sumber Daya Hutan or Forest Resource Rent Provision

¹⁵ District Regulation No. 6/2002 concerning forest product utilization and harvesting business permits; and District Regulation No. 7/2002 concerning forest product levies

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. Even though they have thus far found no problem with harvesting the NTFP products from the forest, their long-term property rights over the 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 or *jernang*. Unlike the *jernang* market where business owners and the collectors tend to negotiate directly, rattan farmers never see the business owners face to face, much less take part in the cooperatives they have supposedly set up. Communities gathering rattan and *jernang* are generally unaffected by decentralization, apart from its effects on the price of these products. 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,¹⁶ 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. The workshop and subsequent discussion groups also found that:

- Local communities have no clear or secure tenure rights over the forest areas from which rattan are collected;
- The entry of rattan collectors from outside village has threatened the sustainability of local rattan resources within the village;
- 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

¹⁶ The workshop on forestry decentralization and its impacts on regional finance and local livelihoods, held in Makassar on 13 May 2004.

- permit holders are often reported to have exploited rattan from other areas, for which they have no permit;
- The business owners' failure to comply with the requirements as put forward in the contract have never been sanctioned;
 - The business owners complained about illicit payments that they have to make at various checkpoints along the way from their processing and drying unit in Masamba to Makassar;
 - Rattan farmers lack access to market information and are unaware of changes in price; they lack the capacity to negotiate the price with the middlemen or intermediaries;
 - Despite the relatively high quality of rattan resources in the area, rattan farmers lack capacity to produce good quality rattan, making the price at the weighting location low. Besides, rattan is a fragile product and should be sold soon after it has been harvested, which may also result in a lower price (*jernang*, on the other hand, can be stored for a long time and sold at a higher price).

5. CATALYZING COLLECTIVE ACTIONS IN RATTAN AND JERNANG GROUPS

Rattan group in Luwu Utara

The research team worked with rattan farmer groups and catalyzed their collective action activities through group discussion, meetings, and interaction with outsiders, in particular the business owners or those who are granted a rattan production permit by the district government. The team also facilitated interaction and discussion among rattan groups, business owners, and government officials who issued the license. From this, we learned about rattan collection activities and discovered some issues facing the rattan groups and business owners. 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. As shown by other studies on NTFPs (Arnold and Ruiz Pérez, 1998; Belcher, 1998), the middlemen then advance money and supplies to the group that 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.

Down payments range from US\$54 to US\$130 per farmer group; this amount would later be deducted from the total received by the farmers. The middlemen commonly offer larger down payments 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\$16.5 on food and provisions to take to the forest. The collector groups normally spend two to three weeks in the forests, and may

move from one location to another. 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. The workers 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.

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 or the business owner 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 the company's 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.

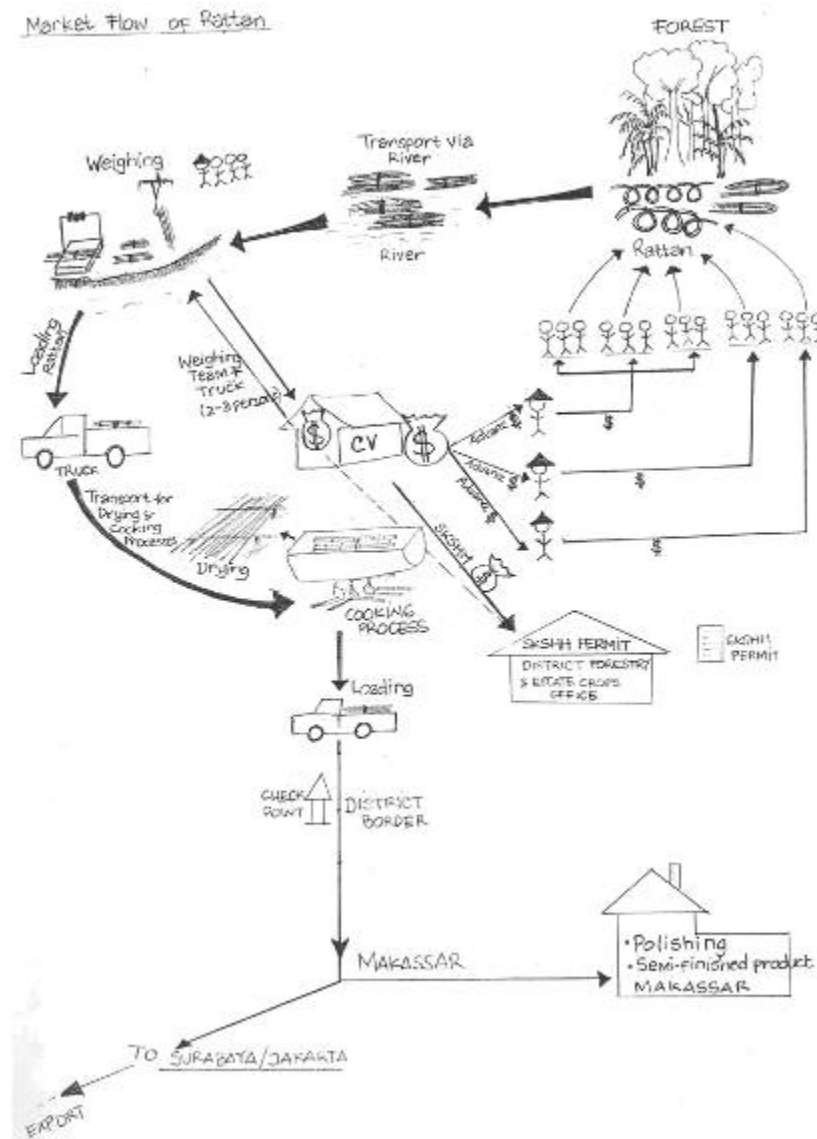
There are generally two types of rattan market flow in Panply and other hamlets under study in Luwu Utara. In the first, there are working relations between business owners and rattan collectors along the chain of rattan production and marketing. In the second, a middleman takes part in mediating the two parties, rattan collectors and business owners (see Figure 2).

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, 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 who 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.

A group leader usually gets 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).

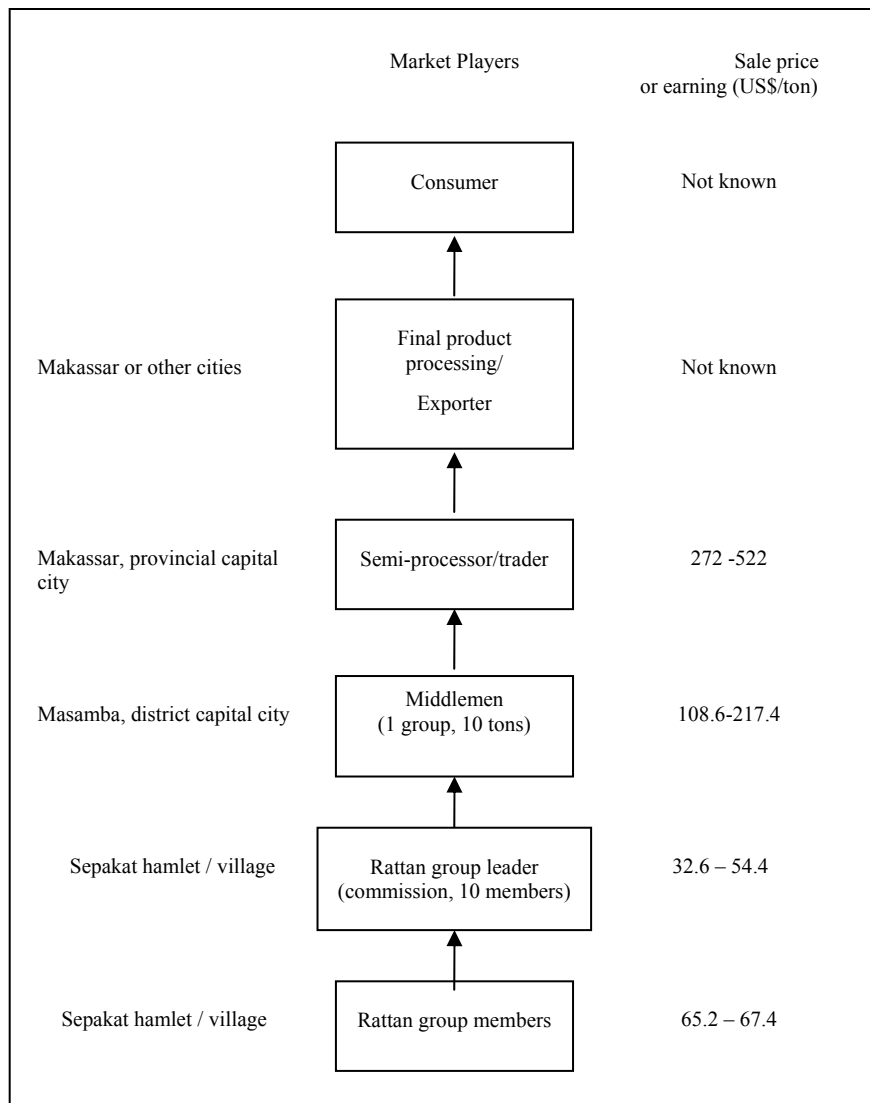
Figure 2. The chain of rattan harvesting and marketing in Sepakat village, and working relations between rattan collectors and business owner or CV (sometimes a middleman takes part in mediating them)



One of the obstacles to rattan farmers is unstable local prices for wet rattan. The farmers cannot profit when the price of wet rattan is less than US\$0.08/kg. They 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.

Figure 3. Rattan market chain



In responding to this issue, the research team facilitated the group efforts to reflect on those issues and helped them to seek possible solutions. At the village level, the research team engaged farmer groups in sharing their experiences with selling their products to middlemen and encouraged them to think of the importance of being in a group. At the district level, the team engaged government officials and business owners in a series of interviews and discussions to tackle those issues, hoping that there will be a change in government policies that favor farmer groups.

Some farmers were pessimistic about getting a better price through joining forces in a village group or cooperative. They thought that the price has been set by the middlemen and there were no other choices than agreeing to the price. Others were optimistic about improving their conditions. They thought that district government would be on their side and supportive of any actions they take since, in their opinion, the government had a mandate to empower local people and to put a priority on rattan production and development. The farmers also heard about the recent effort to improve the rattan permit policy in which the permit holders are required to enter into partnerships with rattan farmer groups in the villages where rattan is collected. This would help the farmers to strengthen their bargaining position.

Rattan groups existing in Sepakat village, including other two neighboring villages, Lantang Tallang and Pincara, finally established an inter-group alliance called *Kelompok Masyarakat Pemanfaat Hasil Hutan (KMPHH)*, or Forest Product Utilization Community Group. This 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 business owners. A set of rules regarding membership, obligations, sanctions and ways to deal with business owners, middlemen, and external buyers were then developed. Now, rattan collectors should first 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 going to the forests.

Some farmers are motivated to join the group as they expect to get a higher return from their improved capacity to bargain with the middlemen. They also wish to find easier to access government resources such as planting material, capacity building, and funding through the group. Once the group has been legally established, they will also be able to obtain their own permit and sell their rattan directly to buyers, bypassing the intermediaries.

Jernang group in Bungo

At the beginning of 2005, our research team started to catalyze a local community group, Sinar Tani, in Sungai Telang village and took them through various steps of reflection on issues they were facing as well as planning actions and engaging in interaction with outsiders. The group members were interested in achieving their shared goals in the area of agricultural productivity and management. One of the agreed plans was to look for alternative approaches that would increase the productivity of their agricultural activities and generate income.

Initially, the group members were inclined to further develop rubber plantation as most of the villagers earned income from small-scale rubber plantations and paddy rice cultivation. During the reflection exercises, they discussed the need to regenerate their rubber, prepare their own rubber nursery, and develop a rubber plantation collectively. Having learned about financial difficulties, the members made a visit to the Agriculture and Forestry Offices. The interaction with government officials provided the farmers with a great opportunity to share their views and aspirations and to look into the funding possibilities and accessing information. They became interested in pursuing a district government aid program called *Bantuan Usaha Produktif* (BUP) that donates US\$1000 to each selected community groups throughout the district area to help them develop small-scale businesses.¹⁷

Once agreed in a meeting, the group members finally submitted a proposal on raising poultry 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 remained motivated to submit another proposal on *jernang* development, which was then accepted by the office. The group members learned about the prospective species of *jernang* not only from the government officials whom they met, but also from a buyer from France visiting their village. They heard from the latter that *jernang* from the village and its surrounding had a high degree of purity and quality, and that its price continued 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. Though uncommon, the farmers could also get income from the sale of seedlings, the price of which ranges from US\$2.7 to US\$3.2. A government program to promote wide dissemination of this species has made this possible.

¹⁷ The program was called “*Bantuan*” or aid which means that it is not necessary for the local groups to return the money. However, in order to ensure accountability and sustainability of the efforts, the Forestry Services officials instructed that all money distributed should be revolved in time to other groups.

The high market value of the product and great interest towards cultivating jernang have made the district government propose to the central government to designate Bungo as the center of jernang, along with the plan to provide funding to the groups. All these developments have motivated the group members to select jernang. The group was granted US\$1000 to cultivate jernang seedlings. They were advised by the officials that the fund might be used to purchase polybags and seedlings or to build capacity of their members, but not for paying for labor or buying standard farming tools. The fund was disbursed in two stages. Once the first advance of US\$750 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 allocated for building the nursery in their own interest. A forestry extension agent was also reported to be involved.

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 and report the incident to the Forestry Service. However, nothing seemed to work. The three people refused to return the money and made every effort to avoid accusation. This led the Forestry Office to postpone the disbursement of the second payment. Having learned from this incident, the members then reflected on what factors caused the group to fail to meet the initial agreement. The reasons for failure mentioned during the discussions included the absence of transparency in the way funds were spent, the lack of guidance and monitoring from the district forestry office, the ambiguity of rules regarding the type of activities and materials that can be purchased with the funds, and the absence of strict rules contributing to this failure.

At the end, they finally agreed to form a new group of ten people, with only one member coming from the previous group. None of them were from the elites. They called their group "*Bukit Lestari Makmur*" and agreed to form a set of rules¹⁸ 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 collect *jernang* seedlings from the forests. They have now more than 200 seedlings, which they collected in six to seven trips 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 these funds to buy nails, polybags,

18 The rules developed include members' requirements and rights to: actively join the group activities; be responsible for taking a collective effort to maintain the nursery; be subject to sanctions if they break the rules; apply transparent and accountable uses of money; and vote and express opinions.

and a lock for a small nursery. Their collective action seems to have been successful in raising *jernang* seedlings, even without the government's assistance.

6. SUMMARY OF FINDINGS AND COMPARISON BETWEEN THE GROUPS

The research team worked in two communities with groups pursuing a goal of better livelihoods by means of collecting and marketing non-timber forest products. The first community, comprising small farmer groups in Luwu Utara, has traditionally collected rattan and had a relatively long experience with NTFP trading and marketing. Various financial, efficiency, and security reasons were found to have motivated the community members to engage in collective action. The groups were genuinely formed by the villagers without being facilitated by outsiders. While having a long experience with traditional collective action, the second community in Bungo has just recently formed a group to produce *jernang* seedlings in anticipation of increased market opportunities for this highly marketable product. Financial motivation seemed to have encouraged the members to join the group, though expected earnings from their endeavor are still unclear and unpredictable. Though the initial funding is due to government intervention, the group seems to sustain their activities.

Collective action in this research was found to occur at different levels and to have some role in helping farmer groups harvest, market, and develop their NTFPs. Collective action at the level of the farmer groups 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 played a role in district policy adoption that is conducive to pro-farmer rattan trade. Shared interests and strong motivation among the group members to improve their livelihoods have led to the creation of groups based on “stronger” collective action.

The two groups, however, face almost similar problems. Some members were found to free ride on the groups' benefits. Though collecting rattan from the forests is group work, the amount of gathered rattan is calculated on an individual basis, and the earnings among the members may be 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 for their own enjoyment. They do not go into the forests at all but spend the money in the village instead. The group is also subject to elite capture.

Members who turned out to be linked to village government structure were found to misuse the funds in their own interest.

The groups in the first case-study attempted to improve their bargaining position through the creation of an inter-group alliance. In order to avoid the group being captured by the elites, the second group opted to establish a new group, without involving village elites. Both groups established strict rules regarding sanctions, which members should adhere to in order to make their effort effective. However, as shown in the two case-studies, it is necessary for the groups to secure external support (government policy and market) to achieve their collective action goals confirming the findings of Ostrom (2000) that individuals cannot overcome collective action problems and need to have externally enforced rules to achieve their own long-term self-interests. As the two groups have just started to engage in collective action, it is too early to see if their strategy for forming stronger groups has resulted in improved prices of rattan and increased potential for *jernang* marketing. However, recent observation of these groups indicated that a condition that is conducive to improving such prices at farmer level has emerged. One of the middlemen, for example, recognized that he would have difficulty keeping the price low if there were no groups in the village selling rattan at such a price. This became more obvious because the permit restricts their partnership to only the groups in the village. He also expected to 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, provided that the government gets rid of illegal payments¹⁹ made by *oknum* (a person in an official capacity who charges the users illegally) along the way from Masamba, the capital city of Luwu Utara district to Makassar, capital city of the South Sulawesi province.²⁰

7. POLICY RECOMMENDATIONS

The results presented in the previous sections have important 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 made along the way to the product markets allow the business

¹⁹ The business owners usually have 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 places in Makassar.

²⁰ There are at least eight districts: Luwu, Wajo, Sidrap, Pare Pare, Barru, Pangkep, Maros and Makassar.

owners and middlemen to keep the price at the farmer level low. In order to improve the local livelihoods, especially of those whose lives depend on forests, the government needs to improve coordination and enforce rules that would not only prevail in Luwu Utara, but also outside the district. National as well as provincial level initiatives are needed.

In the case of *jernang*, the district government of Bungo should reflect on their policies and programs, and take a closer look at the ways they have or have not contributed to effective collective action in the local communities. There is a tendency among government institutions to spend development funds on groups that are established instantly without paying sufficient attention to how the group has evolved and what motivates the members 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. Furthermore, the government should provide clear guidelines for policy implementation and evaluation, and apply the mechanism for rewarding and sanctioning. It is also essential to encourage participatory monitoring that would involve the group members.

To ensure the flow of benefits going to the villagers and to improve the bargaining position of both groups described here, government and other actors (e.g. Asmino, in the case of rattan groups) should develop the capacity of these groups in the area of group strengthening and organization, financial management, plant propagation, and NTFP marketing. Accordingly, they should openly provide the groups with information updates on the market prices and standards of the product quality along the market chain to ensure equitable terms of trade for NTFP farmers/collectors. In the case of rattan groups, opportunities should also be provided for them to get their own permits to utilize rattan and engage with rattan processing units. As lack of capital is one obstacle to enhancing community capacity and people's bargaining power, government should also encourage financial agencies or banks to provide soft loans to both groups. The export ban on rattan may be necessary to support local industries and create value-addition opportunities; however, the government should also ensure that the ban favors the smallholders by making complementary efforts to keep the price of rattan at the farmer level desirable, for example, by setting up a standard price.

8. GENERAL CONCLUSIONS

This study shows that collective action can help farmer groups harvest, market, and develop their NTFP products. To make the groups' collective action more effective and avoid such problems as elite capture and free riders, the groups devised strategies for the establishment of a higher level organization (inter-group alliance in the case of rattan producers) and a new group (*jernang*

producers), and for setting up strict rules. Action research is critical in fostering collective action and learning that lead the group members to be more organized and cohesive, and other stakeholders to be more receptive to farmers' needs.

What can be done to scale up? Engaging in collective efforts has the potential to enhance the bargaining position of smallholders and provide them with a greater access to government resources and influence policies. However, collective action among the rattan and *jernang* farmer groups will be effective if it is supported by a higher level of concerted efforts among local government institutions, private companies, and other actors. 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. Therefore, different parties should join forces to enhance coordination, share information, and ensure the development of sound policies that support pro-poor market development.

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ANNEX 1

Annex 1a. The research site in Luwu Utara District, South Sulawesi Province



Annex 1b. The research site in Bungo District, Jambi Province

