

APPENDIX 3 MULTI-STAKEHOLDER PERCEPTION AND PREMIUM PRICE ON RUBBER ECO-CERTIFICATION IN BUNGO DISTRICT, JAMBI

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INTRODUCTION

Land utilization through forest conversion is no longer seen as the correct option for Bungo District. Land use planning based on District Spatial Planning (*Rencana Tata Ruang Wilayah Kabupaten – RTRWK*), which focuses on sustainable land utilization should be taken into consideration. Thus, landscape cover in Bungo District could become a possible corridor for existing conservation areas.

From a spatial perspective, the remaining forest cover in Bungo District is very low, and it is located in areas which are not supposed to be converted to another non-forest land use. Currently, the forest cover in Bungo District is no greater than for monoculture plantation and is tending to continue to decrease. On the other hand, since 1999, plantation area has exceeded the amount of forest cover and is tending to continue to increase (Ekadinata and Vincent, 2008). The high rate of deforestation has made the conservation aspect of agroforestry even more important and therefore it can make a real contribution to species conservation.

One of the schemes offered is maintaining rubber agroforest, which has been practiced by the community over a long time and from generation to generation. The result of rubber agroforest is a prime commodity in Bungo District which can increase community welfare and provide regional income. In order to stay competitive in the local, national and international markets, a market chance for a rubber commodity is needed. Eco-certification is one of the ways to make the rubber price competitive in the international market. It is a big challenge to implement this scheme, since precise approaches are needed in order to facilitate understanding by various stakeholders.

Rubber Production

There are two categories of rubber products. The first is natural rubber resulting from tapping rubber trees and this has several technical advantages compared to synthetic rubber. The second category is synthetic rubber, a derivative from petroleum or other minerals. The biggest derivative product from rubber is tyres (73%). Percentage of world products derived from rubber is delivered in Figure 16.

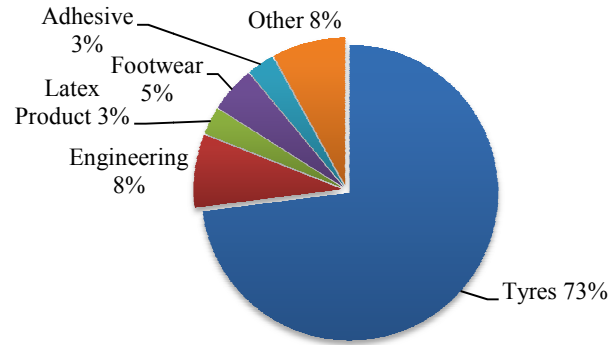


Figure 16 Percentage of world products derived from rubber (Bakrie Sumatera Plantations, 2009)

Indonesia is the second biggest natural rubber producer in the world. Almost 85% of the rubber produced comes from community rubber plantations. Around 73% of world rubber production and 90% of Indonesian production is utilised by tyre factories. Many small farmers have limited knowledge about many aspects, including nursery management, clone certification, market access to rubber, rodtip cloning, high quality planting material, good tapping practice and the methods to increase coagulum quality. Most of this lack is due to minimal technical assistance and training.

Rubber latex is one of the prime commodities of plantations in Bungo District. Average production reaches 725 kg/ha with total production of 32,496 ton/year from 91,470 ha (BPS, 2007). Rubber is a commodity which has the greatest plantation area compared to other plantation commodities, while oil palm has the highest productivity (543,834 ton) compared to other commodities. Rubber community plantations in Bungo District have low productivity (600 kg/ha/year) despite the fact that it is a prime commodity (Akiefnawati *et al.*, 2008). In Lubuk Beringin village, most occupants are involved in rubber farming. On average, production reaches 10-20 kg/ha/day (2.4 ton/year), assuming farmers work a five-day week.

To date, the community is still maintaining the agroforestry system, since it has additional value compared to monoculture systems. In addition to being an hereditary tradition, the agroforestry system protects natural balances and maintains biodiversity. The different fruits and timber it produces diversify the community's income.

Other research results on tree species and vegetation structure analysis of rubber agroforestry systems in Sumatra's lowland (de Foresta and Michon, 1994) and several other studies show that biodiversity in rubber agroforests is higher compared to intensive cropping and monoculture plantations. As reported by Michon and de Foresta (1995), vegetation diversity in a rubber agroforest could protect around 50% more species compared to 0.5% in a monoculture plantation. This supports the implementation of a certification scheme for agroforestry production.

PERCEPTION ON ECO-CERTIFICATION

Farmer Level

The term eco-certification is not yet a familiar one among rubber farmers. Farmers only know that rubber is tapped and sold to collectors and then delivered to the factory. However, they were very enthusiastic after the eco-certification scheme had been explained to them. They did not realize that most of their rubber plantations were young rubber plantations (simple agroforest) and old rubber plantations (complex agroforest). Indirectly, their production comes from the land that still is maintained by local wisdom.

Basically, the farmers agree with having an eco-certification scheme. Moreover, their rubber products could penetrate the international market. This is their ticket to be able to compete with other products. The main aspect is to be able to compete on price with the *toke* or other collectors in the local market. The farmers think that if the result of certified rubber production is a lower price in the local market, then the scheme will be hard to implement. They are used to selling latex to collectors with a relatively competitive price and low transportation cost.

If the scheme is run well, the farmers will be willing to commit and participate in the long term in rubber eco-certification. The commitment will be built, if there is trust between the certification institution, the buyer and the farmer. The establishment of a Co-operative (*Koperasi*) institution to facilitate this scheme will help the farmers, since it will facilitate their need for capital.

Other than that, there is a proposal to build a temporary factory or shelter close to their gardens. This could reduce the transportation cost and thus, the farmers' profits will be higher. The distance from their garden to the main road on average is about 1-3 km, so they need appropriate means of transportation. Alternatively, at the very least, the existing infrastructure should be developed, so that the transport of rubber latex is smooth and economical.

Local Government Level

The perception of eco-certification among local government agencies (Forestry and Plantation Agency, Regional Planning and Development Agency, Agriculture Agency) is positive. Moreover, this is related to the increase in the quality and price of rubber from the agroforestry system. The increase in the rubber price may increase rubber productivity, which is one of the prime commodities of Bungo District. With eco-certification, the production of agroforest rubber has higher value than that from monoculture production, which tends to have lower ecological value. Rubber certification is one of the ways to maintain an agroforestry system that covers half of the Bungo District area.

Forestry development needs to take into consideration several principles that enable forest function and benefits to be achieved sustainably, by calculating the production capability and present and future interest. The forest is expected to provide timber for which the demand is increasing, along with the annual increase in population growth. However, the capability of the forest to provide wood cannot keep up with population growth. Therefore, it is hoped that the community will be willing to take part in providing material for timber by planting trees for wood production on their land.

Forests, in addition to providing timber products, are also expected to be able to increase the welfare of the community inside and outside the forest area. The low economic level of the community in the vicinity of forest areas is believed to be the reason for forest destruction. However, if forest is capable

of giving a benefit to the surrounding community, then the community will support efforts to conserve it. Therefore, the community's welfare becomes the focus of all efforts to conserve forest.

The plantation sector provides a significant contribution to the economy of Bungo District. Through its primary commodities (rubber and oil palm), the plantation sector in Bungo District is expected to be able to increase the community's welfare. Although in 2007, the area of rubber plantations increased by 3.16%. Most of the existing plantations is old rubber plantations, totalling around 22,902 ha and therefore have low productivity.

Consequently, the Forestry and Plantations Agency of Bungo District will continue its efforts to increase and optimize the production and productivity of community rubber plantations by providing superior seedlings, eco-certification, enhancing production facilities and fertilizer needed by the community, through activities financed by the District or Province or from the National Revenue and Expenditure Budget.

In addition, the Forestry and Plantations Agency of Bungo District is trying to change the thinking pattern of the community, who always think of extending the size of their garden rather than increasing its quality. A high quality garden with superior seedlings, fertilizer and recommended medication treatment is far more productive and saves more energy. Increasing the productivity becomes the priority, not expansion.

The Forestry and Plantations Agency of Bungo District will also continue to build production roads in community plantation areas, so that the community can transport production facilities to build their gardens and to market the products from their gardens more easily.

In building a high quality garden, the assistance of field extension officers is needed. As the spearhead of the Forestry and Plantations Agency of Bungo District, extension staff should have the information and knowledge needed by the farmers. The information and knowledge could be obtained from reference books, mass and electronic media and from education and training provided by the Training Office or conducted by the Agency.

To achieve its vision and mission, the Forestry and Plantations Agency of Bungo District requires supporting facilities and infrastructure, which can support their work in the field. To conserve the forest, technical facilities and infrastructure, such as measuring tools and fire extinguishers, are needed, with the latter being critical to extinguish and prevent the spread of and consequent increased damage from forest fires.

Human resources should also be taken into consideration. Technical work in the field requires staffs who understand their jobs. Therefore, additional technical personnel are needed who can work in accord with the main tasks and functions. In addition to technical personnel, additional administrative staffs are needed, so that an orderly-administrated working environment can support work in the field.

In the relation to eco-certification, local government has an important role as a policy maker. On this particular issue, local government has established a policy on "Village Forest" to maintain the condition of Bungo forest through agroforestry utilization. Implementation of eco-certification with policy support will result in real contributions. Certified rubber will open local, national and international markets, and thus, will increase community welfare and regional income. Apart from the village forest policy, there is not yet any other regulation or policy established by the local government; everything else refers to Law Number 41 on Forestry, Law Number 5 Year 1990 and the Plantations Law.

Based on existing perceptions, many challenges might occur. The increasing population in Bungo will cause an increase in the demand for land. This will trigger new land encroachment in the existing production forest area. The challenge ahead is how to make the community maintain the existing agroforestry system. With an eco-certification scheme, rubber production from agroforestry can compete in the international market.

Non-Government Organization (Facilitator) Level

Non-Government Organizations (NGOs) have a very important role in eco-certification. NGOs facilitate the implementation of this scheme by assisting the farmers. It requires time and a precise approach to build the right perception among the farmers, although they already have the hereditary local wisdom to mix plants in a plantation system with other plants, which is appropriate for certification.

Increasing the rubber quality, while maintaining the favourable conservation conditions of rubber plantations is required using an agroforestry system. Besides obtaining maximum quality, there are also other values that can protect the natural balance. An agroforest should conserve biodiversity and provide other positive results, such as penetrating international markets, competing with big companies and becoming a permanent source of income for farmers.

With rubber eco-certification, the steps in the process of rubber production from upstream to downstream could be identified. This would provide an initiative for management from farmer gardens to the factory (market). This certified product would be in harmony with the agroforestry system and sustainable production.

In Bungo District, the important role of facilitation is being carried out by KKI-WARSI. Promotion is required of the initiative to push rubber plantation management using an agroforestry system to increase the rewards for the farmers. Not only the management, but also the management plan, capital, facilitation, commitment, knowledge exchange, networking and mediation with various stakeholders are required.

Market and Certification Institution Opportunity

To date, there is not any market for eco-certified rubber, which can be contrasted with timber products, where there are more market opportunities for eco-labelled wood. This market segment can play an important role for the farmers in the end production chain. In reality, rubber agroforest farmers have the reputation of “high dirt”. This has had a negative impact on the market and the buyers. There is a difficulty to build up the image of the agroforest product compared to that from monoculture plantations that have low biodiversity.

The need for natural rubber in tyre production is projected to increase. Figure 17 shows the level of car ownership in several countries in the world. In addition, the increase in the crude oil price will affect the synthetic rubber price. This should be a driver for consumers to use natural rubber. Thus, the natural rubber price has a strong correlation with the oil price. Nowadays, the natural rubber price is at its highest level for the last 30 years, being USD 3,240/ton (June 2008) and USD 2,372/ton (October 2009).

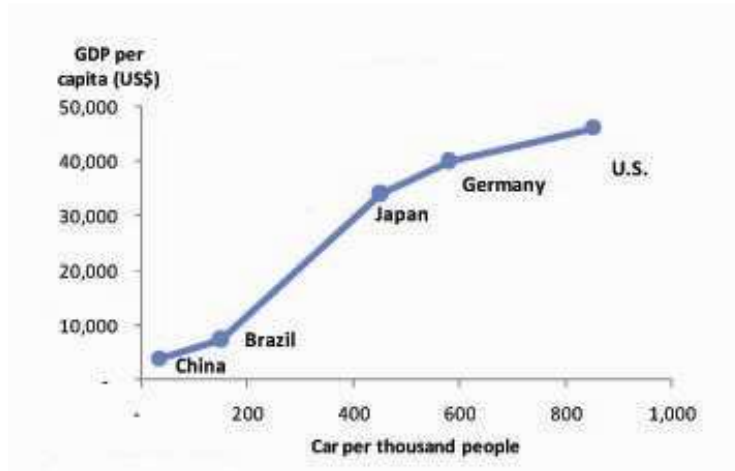


Figure 17 Car ownership level in several countries

Certification implementation refers to a system with standards, a procedure, minimum requirements and guidelines. The certification system must contain comprehensive criteria and indicators as guidelines for forest management unit performance evaluation (Gunawan and Bayunanda, 2010). These components make up the procedure for the implementation of a certain certification system. Moreover, there should be minimum requirements for certification executors and a responsible academic method for certification decision making.

In Indonesia, Lembaga Ekolabel Indonesia (LEI) – the Indonesian Ecolabel Institution is a non-profit organization that is responsible for accreditation and is the certification system developer and prepares infrastructure needed for certification. A certificate of community-based forest management is a leap in the recognition process and assists publicity of the management unit. Publicity derived from certification can even attract other national or international institutions to study other related aspects. In short, eco-certification can reach a broad audience at the national or international level.

CONSTRAINTS AND CHALLENGES

Rubber agroforest eco-certification is a complex scheme. Rubber agroforests produce low quality latex compared to monocultures. It should also be realized that the farmer uses very simple (minimum) technology and depends on a broker to sell the rubber. Thus the farmer is not aware of the rubber price for different qualities, such as the dry rubber level. The factory does not make the price public, because of confidentiality reasons.

In general, there are two constraints to rubber certification. The first is an internal constraint and the second is an external constraint.

1. Internal constraint

The internal constraint is related directly to the characteristics and management of the farmers, such as:

a. Farmers have low awareness of rubber certification

Rubber certification is a new concept for rubber farmer in Bungo District. Their knowledge is limited to tapping and selling to the broker, they do not know what is needed or how to implement a certification scheme. Farmers need to improve their understanding to increase the quality of the product.

Farmers do not have a business orientation to managing their fields. Most of them are traditional farmers with a small area, limited knowledge and a lack of technological adaptation. The weakness of agricultural producers, especially farmers is that they are unaware of the quality of their product, and thus, its agribusiness product value, which currently is not at its best export level.

b. Cost and capital for rubber certification

Financial aspects are a common major problem in the national or international certification process. The eco-certification process requires capital to increase rubber farmer management performance. Rationally, rubber business actors (including farmers) will think twice if they believe that the certification process will reduce their financial performance. Field research shows that most Indonesian business actors are still reluctant to adopt the system, because they see no incentive in doing so.

Eco-certification costs will vary, but are greater for a small-sized area. It has been claimed that a certification program is not economically feasible for adoption by small-scale and family-based forest areas that are less than 1.0 ha (Lindstrom *et al.*, 1999; Rickenbach, 2002). This is a major challenge considering that most farmers manage land less than 1 ha.

In the Indonesian context, agroforestry can contribute partially or wholly to covering the cost of certification of a community forest. While it is true that it is difficult for a community to afford the certification costs, it seems such costs are more affordable for a government institution. Through government support, it seems that problems related to a certification fund could be solved, so that community forest certification can be implemented in the field.

c. Rubber farmer management and institutions

Institutional and rubber agroforest management aspects could be huge obstacles in eco-certification. There is great variation in the way that agroforest farmers manage their land. Technically there is little difference in the way to manage a rubber agroforest and a monoculture, but the production results can be significantly different.

In addition, a structured administrative work plan is not available, yet this aspect is one of assessment points that most certification institutions use. Possible steps to be taken would be to empower the rubber farmer group, for instance, by establishing a credit union that could give soft loans to farmers. This, however, would need intensive facilitation from the government, NGOs and academics to enable a solid institution to materialise.

2. External constraint

a. Market for rubber certification

The market where a product is sold is the end of the custody chain. Rubber consumers play an important role in rubber eco-certification promotion. Their willingness to pay a premium price for an eco-certified product will attract farmers to adopt an eco-certification scheme. Most buyers will purchase a product if it does not cost more than a similar uncertified product (Ruddell and Stevens, 1998; Tiesl *et al.*, 2002; Jensen *et al.*, 2003; Anderson and Hansen, 2004). The consumer still acts as a profit maximiser, preferring a good quality product at a less expensive price.

b. Programs offered by certification institution

Interest to commit to a certification scheme depends very much on the certification program developed by the certification institution. If the standard places a greater burden on farmers, they will most likely withdraw their participation. Farmers will choose a more flexible standard, because they realize even if they apply sustainable management practices, there might be shortcomings in land management, especially in the production aspect. Farmers that show an interest in certification surely need facilitation to choose a certification program that will benefit them. This is important, because each farmer has limited information on the advantages and disadvantages of each program. The decision to choose a program is influenced not only by the standards being developed by existing certification institutions, but also by the need to adopt a program that is acknowledged by the market, especially the international market. A combination of these two factors - the certification standard and market recognition - will influence forest farmers in choosing a certification institution that is suitable for them.

c. Government regulation related to rubber certification

Government policy plays a major influence in certification implementation. The certification scheme must be in line with existing regulations. The Indonesian National Standard (SNI) implementation regarding product quality can be viewed from two sides.

The first viewpoint is the standard related to the appearance of the product. The implementation is voluntary and not legally binding. Generally it is an agreement between the buyer and seller. The second is the technical regulation. In relation to rubber eco-certification, Bungo District policy will have an impact on the on-ground implementation. At present, local government has already established a permit system for plantation or oil palm companies. This is in conflict with an eco-certification scheme, because in contrast, the government do not have a policy of enabling agroforestry.

In the meantime, there are no factories that are yet willing to receive eco-certified rubber near the plantation areas. There are four rubber factories that service farmers in the Bungo District and surrounding areas. Therefore, if Bungo District wants to implement eco-certification, there should be at least one factory willing to accept rubber from the farmers. If the rubber is sold to other places, such as outside Jambi province, there is a high transportation cost, with the assumption that the factory will pay a higher price.

The establishment of Ministry of Trade regulation Number: 10/M-Dag/Per/4/2008 on the Indonesian Technical Specification for Natural Rubber (SIR) to be exported brings fresh air into the discussion on the implementation of an eco-certification scheme. To maintain quality and competition, keeping the image of the Indonesian product and business certainty for the natural rubber producer (SIR), the existing regulation needs to be improved. The existing SNI is a standard established by the National Standardization Body and is applied nationally. Technically Specified Rubber (TSR) Indonesia or Standard Indonesian Rubber (SIR) is natural rubber from a mechanical latex treatment and rubber material derived from *Hevea brasiliensis* tree, with or without chemical compounds and meets the SNI quality requirement.