RESEARCH PAPER

Strategy of development People's Forest (Hutan Rakyat) for industrial raw material fulfillment in Banjar District

Ramdhan Hadi*, Hafizianoor, Zainal Abidin, Badaruddin, Deny Fakhriza

Graduate Program of Forestry Sciences, Faculty of Forestry, University of Lambung Mangkurat, South Kalimantan, Indonesia

Abstract

Available wood raw materials are no longer able to compensate for the existing demand resulting in a deficit in timber stocks from both HPH and HTI. Hutan Rakyat or People's Industrial is one alternative that can be developed for fulfillment of industrial raw materials especially in Banjar Regency. The purpose of this research is to formulate the strategy of developing community forest for fulfillment of industrial raw materials in Banjar Regency. The method used in this research is qualitative and quantitative analysis, overlapping method (overlay) and using SWOT analysis. The results of this study Development of community forests in the District of Banjar is still managed individually and maintenance is still not intensive, the type of plant that is widely developed is rubber, sengon and fruits, the type of plant is also needed wood processing industry as raw materials both in the sawn timber industry plywood industry. Analysis of the availability of land for the development of priority public forests in the form of open land and shrubs/groves is on the 11th District of Banjar Regency covering ± 70,000ha and Karang Intan Subdistrict is the area that has the most areas that can be developed into a community forest with an area of ± 14,511ha, others above which has an area of more than 3,000ha are Mataraman, Pengaron, Sambung Makmur and Simpang Empat sub-districts. While the priority strategy to be developed for future community forest development is designed by facilitating Partnership Partnership between Farmers and Industrial Parties, Creating Fair Market Conditions and Building Good People's Forest Management and Legal Timber Trading.

*****Corresponding Author:** Ramdhan Hadi ✉ mailto:hadi.ramdhan.hadi@gmail.com

Introduction

The decline in the availability of wood raw materials as inputs in the timber industry is the main problem faced by the current forestry world especially for the Forest Product Primary Industry. Available wood raw materials are no longer able to compensate for existing demand resulting in a deficit in timber inventories. In early 2000 Indonesia experienced a large gap between the timber demand for industries with the ability of forest resources to produce sustainable timber. Moreover, with the soft landing policy since 2003 has resulted in smaller timber production, national wood demand in 2011 of 56 million m³ was only met by natural forest production of 5 million m³ or 9% while the rest was from plantation forest of 20 million m³. Under these conditions, there is a deficit of 31 million m³ of timber per annum (Widiarti, 2006).

This fact shows that natural forests and plantations alone can no longer me*et al*l the wood needs. The raw materials of Primary Industry of Forest Products come from natural forests of production and plantations. Before 2000 the largest percentage of suppliers of industrial raw materials came from natural production forests. However, the excessive logging that is usually followed by the encroachment of the forest area has caused the rate of forest destruction of 1.08 million ha per year during the period of 2000 and 2006 and created critical land area of more than 30 million Ha (Dirjen Bina Rehabilitasi Hutan dan Lahan, 2007).

Banjar District is located in the southern part of South Kalimantan Province has an area of 4,668.50 km² or about 12.20% of the total area of South Kalimantan Province. In accordance with the Decree of the Minister of Forestry Number: 435 /Menhut-II / 2009 dated 29 July 2009 on Appointment of Kawasan Kawasan South Kalimantan, Banjar Regency has Forest Area of ± 242 thousand hectares, spread over 8 (eight) subdistricts. Based on the above, Banjar Regency has wide potential inside and outside forest area which can give big contribution to produce wood product if managed properly.

The wide potential of Banjar Regency, the stimulation of financial aid and activities for people inside and outside the forest area in the reforestation and reforestation activities, is able to make Banjar Regency has the potential to produce wood products. The activity is able to increase awareness to the community self-supporting to plant trees in their area with the type of Wood Plants and MPTS Plants that can be used as raw materials for wood processing industry.

Based on data of processed wood production report in 2013 in Kabupaten Banjar, the production of processed wood with volume of veneer production amounted to 7.576,0482m³ with selling value IDR 9,470,060,250, - and the volume of sawn timber production amounted to 2,271,3080m³ with selling value range 2,725,569,600, -. Data for sawn timber excluding timber in circulation without the use of state documents, comes from a sawmill industry entrepreneur who does not have a timber forest product primary timber industry license (Dinas Kehutanan 2013).

From the table data above, the requirement of sawn timber industry in Kabupaten Banjar is 22,480M³ / year and the volume of sawn timber production is 2,271,3080m³, it shows that only ± 10% of the industrial needs in Banjar District are met. This is an opportunity that can be utilized by the community to develop timber tananaman for fulfillment of industrial raw materials which every year continues to increase.

Table 1. Production Capacity and Needs of Sawn Timber Industry in Kabupaten Banjar.

No	Industry Name	Location (Village)	Production capacity /years (M³)	Industrial Supplies /years (M³)
1.	Karya	Melayu Timur	1.680	3.360
2.	Bersama	Danau Salak	1.560	3.120
3.	Berkat	Surian	1.440	2.880
4.	Rahimah	Labuan Tabu	1.800	3.600
5.	Pernata	Indra Sari	1.400	2.800
6.	Indah	Surian	1.680	3.360
7.	Karya Baru Mulia Jaya Sabar Menanti Doa ibu	Melayu Timur	1.680	3.360
Total			11.240	22.480

Increasing demand for timber from community forests is not necessarily accompanied by the development of community forests. Slow development of community forests, among others, because he still encountered several problems in the development of community forests. According to Darusman and Hardjanto (2006) The problems of community forest that emerged to date include four aspects: a) production, b) processing, c) marketing and d) institutions.

In order for people's forests to fulfill industrial raw materials can provide economic, social and ecological benefits for all stakeholders, comprehensive guidance is needed to plan the development of community forests in Banjar Regency. Therefore, the purpose of this research is to formulate the strategy of developing community forest for fulfillment of industrial raw materials in Banjar Regency.
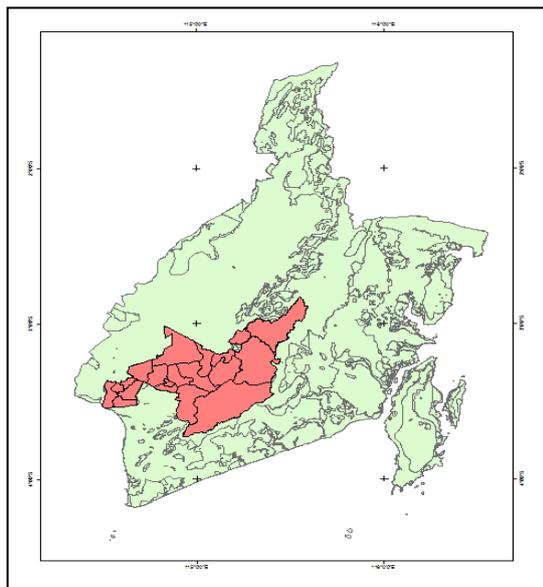

Fig. 1. Banjar Regency Research Area.

Materials and methods
Materials
Equipment used during the study included questionnaires, cameras for documentation, stationery, and computers.

Methods
The research will be conducted in Banjar Regency located at 114 ° 30 '20 "- 115 ° 33' 37" East Longitude and 2 ° 49 '55 "- 3 ° 43' 38" South Latitude as fig. 1.

Fig. 1 shows that the research unit covers 20 sub-districts in Banjar Regency with the time of the research started in September 2015 until December 2015.

Identifying problems in community forest development using SWOT analysis with qualitative descriptive. SWOT analysis is the systematic identification of various factors to formulate a strategy. This analysis is based on logic that can maximize S (Strength) and O (Oppotunties) but can simultaneously maximize W (Weaknesses) and T (Threats) (Rangkuti 2005).

The process of developing a community forest development strategy is done through three stages: the data collection stage, the analysis phase, and the decision-making phase. At the stage of data collection is divided into two namely internal data and external data. Internal data is obtained from inside while external data is obtained from external environment. The models used in data collection are Internal Strategic Factor Analysis Summary (IFAS) and External Strategic Factor Analysis Summary (EFAS).

Table 2. Matrix of External Strategic Factors Analysis Summary/EFAS.

External Factors	Quality Value	Rating	Quality Value x Rating	Comment
Opportunities (O)				
Total Opportunities (O)				
Threat (T)				
Jumlah Threat (T)				
Jumlah Opportunities and Threat (O + T)				

Before making a matrix of external strategy factors, first factor internal strategies are created. The ways of determining external strategy factors are as follows:
1) Compile columns 1 (5 to 10 opportunities and threats)
2) Give the weight of each factor in column 2, ranging from 1.0 (very important) to 0.0 (unimportant)
3) Calculate the rating in column 3 for each factor by providing a scale ranging from 4 (outstanding) to 1 (poor) based on the influence of factors on external conditions. The rating value for opportunity factor is positive. Larger opportunities are rated +4 if the odds are rated +1. The rating value for the threat factor is the opposite, meaning if the big threat is rated 1 if it is a bit rating of 4.

4) Multiplying the weights in column 2 with ratings in column 3 results in a weighted score for each factor whose value varies from 4.0 (Outstanding) to 1.0 (Poor).

5) Use column 5 to comment or note why a particular factor is selected and how the weighting score is calculated.

6) Add the weighted score to column 4 to obtain the total weighted score. This total value represents a reaction to its external strategic factors.

Furthermore, the preparation of internal strategy factor. Internal strategy matrix as in Table 2. Methods of determining internal strategy factors as follows:

1) Determine the existing factors into strengths and weaknesses in column 1.

2) Give the weight of each factor in column 2, ranging from 1.0 (very important) to 0,0 (not important), all weights should not exceed the total score of 1.00.

3) Calculate the rating in column 3 for each factor by providing a scale ranging from 4 (outstanding) to 1 (poor) based on the influence of factors on internal conditions. Rating rating starts from +1 to +4 (very good). Negative factor is the opposite, if the weakness is very big then the rating 1, if a little rating 4.

4) Multiplying the weights in column 2 with ratings in column 3 results in a weighted score for each factor whose value varies from 4.0 (Outstanding) to 1.0 (Poor).

5) Use column 5 to comment or note why a particular factor is selected and how the weighting score is calculated.

6) Add the weighted score to column 4 to obtain the total weighted score. This total value represents a reaction to its internal strategic factors.

Table 3. Matrix of Internal Strategi Factor Analysis Summary/IFAS.

Internal Factors	Quality Value	Quality Rating	Value x Rating	Comment
Strength (S)				
Total Strength (S)				
Weakness (W)				
Total Weakness (W)				
Total Strength and Weakness (S + W)				

The tool used to develop the strategic factors of development is the SWOT matrix. This matrix can clearly illustrate how external

opportunities and threats can be tailored to the strengths and weaknesses they have (Rangkuti, 2005).

Matrix of SWOT in table 4 yields four alternative strategies, namely:

1) SO Strategy: Strategy utilizes all power to exploit the greatest opportunity.

2) Strategy ST: Strategy in using the power it has to deal with threats.

3) WO Strategy: This strategy is applied based on the utilization of existing opportunities by minimizing weaknesses.

4) WT Strategy: This strategy is based on defensive activities trying to minimize existing weaknesses and avoid threats.

Any potential object can be developed and assessed by assessing related factors and grouped into Strengths,Weaknesses, Opportunities and Threats or challenges/threats. By thoroughly review the four things will be determined gaharu development strategy potential and feasible to be developed.

The position of the development strategy is described in the SWOT analysis diagram as shown below. In the diagram can be seen selected strategy of four alternative development strategy as described in SWOT matrix.

Table 4. Matrix SWOT.

Internal / External	(Strengths) Determine 5-10 internal strength factors	(Weakness) Determine 5-10 internal strength factors
(Opportunities) Determine 5-10 external power factors	STRATEGIY (S – O) Creating strategies that use force to take advantage of opportunities	STRATEGY (W – O) Creating strategies that minimize weaknesses to take advantage of opportunities
(Threats) Determine 5-10 external power factors	STRATEGIY (S – T) Creating strategies that use force to overcome threats	STRATEGY (W – T) Creating strategies that minimize weaknesses to avoid threats

Fig. 2. SWOT diagram

Source: Rangkuti (2008)

Information

Quadrant I: a situation that is very profitable, has the opportunity and power so that it can take advantage of opportunities. The strategy to be applied under these conditions is to support an aggressive growth policy.

Quadrant II: Despite facing various threats, it still has internal strength. The strategy applied is to use force to exploit long-term opportunities by means of a diversified strategy (product/service).

Quadrant III: a very big opportunity but on the other hand facing some internal constraints/weaknesses. The focus is to minimize internal problems so as to seize good opportunities.

Quadrant IV: is a very unfavorable situation, facing various internal threats and weaknesses.

Results and discussion

The analysis of this strategy begins with the preparation of the SWOT matrix, to combine internal and external factors in order to get future community development strategies in Kabupaten Banjar. This matrix can clearly illustrate the opportunities and external threats that can be adapted to the strengths and weaknesses.
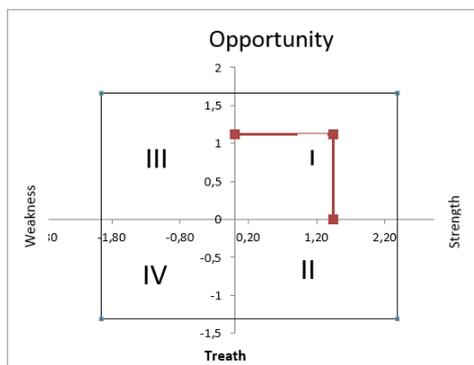

Fig. 3. SWOT Diagram of the Strategy for the Development of People's Forests in Kabupaten Banjar.

Based on the results of the analysis shows that the total score of internal factor - strength is (2.45), internal factor - weakness (1.01). Furthermore the total score of external factors - opportunities are (2.14), external factors - threats (1.02). In accordance with the result of the combination of internal and external score values above, the position of strategy for developing the community forest in quadrant 1, which is a growth strategy with coordinate value of (1.44, 1.12). More as in Fig. 3.

The SWOT diagram in Fig. 3 shows that the result of the combination between internal and external variables is in the quadrant position 1. This means that people's timber has the power and the opportunity to be developed. Therefore, according Rangkuti (2005), that if the point of integration between the two variables are in quadrant 1, then applied SO strategy (Strength - Opportunities). Thus the development of community forests should continue to pursue the strengths that farmers have in exploiting the opportunities that exist. Use of the power to exploit the opportunities that are more complete as in Table 5.

The result of the combination of the SWOT matrix as in Fig. 3 yields strategies that must be applied. Furthermore, these strategies are sorted according to the number of scores of the constituent elements.

Table 5. Matrix SWOT.

No	Strategy	Factors of SWOT	Score	Rangking
1.	Facilitating Partnership	S1,S3,S4, S5,O1,O3,	2,89	1
2.	Partnership between	O4	1,32	2
3.	Farmers and Industrial Parties	S1,O1,O3, O4	1,21	3
	Creating fair market conditions	S1,O1,O2		
	Building community forest governance and legal timber trade			

The compilation of SWOT analysis strategies yields a priority strategy as presented in Table 6.

Table 6. Priority Strategy Based on SWOT Matrix Analysis.

Internal Factors / External Factors	Strengths, , (S) 1. The existence of farmers who develop timber plants (HR) 2. Increase Farmers Income 3. Available manpower 4. Land Availability 5. Benefits to the environment	Weaknesses (W) 1. There is no strong institution at Farmer level 2. Lack of knowledge of farmers in HR cultivation activities 3. Dependence on collectors / brokers Limited information on Marketing
Opportunities (O) 1. The existence of industries that accommodate the forest products of the people 2. Government Policy Support 3. Wood need is still high enough Increased wood prices	Strategy (SO) 1. Facilitating Partnership Partnership between Farmers and Industrial Parties (S1, S3, S4, S5, O1, O3, O4) 2. Creating fair market conditions (S1, O1, O3, O4) Building community forest governance and legal timber trade (S1, O1, O2)	Strategy (WO) 1. Strengthening the Institution of Farmer's Farmer Group (W1, W2, O1, O2) 2. Socialization of ease of timber administration from HR (W3, W4, O2)
Threats (T) 1. The maintenance of community forests is less intensive 2. There is No Local Regulation Governing People's Forests 3. Lack of Young Generation's Interest in Developing People's Forests Increased Demand for People's Wood	Strategy (ST) 1. Encouraging the growth of community forest with intensive silviculture system (S1, S4, O1) 2. Creating a wood processing business in a village that develops HR (S3, T3)	Strategy (WT) 1. Counseling and Counseling on HR cultivation up to marketing (W3, 4, T1, T3, T4) 2. Encourage local governments to issue policies on HR (W1, W2, T1, T2,)

Based on the results of ranking in Table 6, there are three strategies that need to be undertaken for the development of community forests to support the supply of industrial raw materials. The ranking becomes a priority sequence in strategy execution.

Based on the analysis contained in the SWOT and SWOT matrix, it can be seen that the timber business activities of the people in quadrant 1. According to Hardjanto (2003) that the position in the quadrant shows people's wood processing in the process of growth. In accordance with the results of the strategy ranking, namely: 1) Facilitating Partnership Partnership between Farmers and Industrial Parties, 2) Creating fair market conditions, and 3) Building community forest governance and legal timber trade. In this paper only the three strategies will be discussed. Therefore, it is expected that there will be attention on these three strategies which become the main priority in the development of timber business in the future.

These strategies are expected to be a decision that is designed and mutually agreed between the community and the government. The decision needs to be translated into legal technical decisions to realize these strategies in the medium to long term.

Facilitating Partnership Partnership between Farmers and Industrial Parties.

The timber industry located in Kabupaten Banjar actually obtains wood raw materials from community forests. In fact, the majority of the existing timber industry only relies on raw materials derived from forests/people's rights. The large degree of dependence of the timber industry on community forests can serve as an entry point for building a partnership pattern in sustainable timber business.

The potential of the community in the form of forest area, manpower, and the existence of community forest development effort is a good strength utilized for the development of wood business of people, involving wood industry side as consumer of wood receiver from community forest. Cooperation established between the farmers and timber industry is expected to trigger the growth of timber business people. The pattern of cooperation in question will involve the timber industry as a provider of input in the form of seeds and fertilizers.

Cooperation partnership between farmers and industrial parties should be incorporated into a contract of cooperation in which regulate the rights

and obligations of each party including the certainty of the purchase of timber when it comes to harvest time, it will give its own spirit for farmers to develop community forests.

The role of local government in both the district and provincial governments is absolutely necessary as a facilitator/gap between the interests of both parties, so that a mutually beneficial agreement is reached.

Timber industry expected in the future is an efficient, competitive industry, and guaranteed the sustainability of its raw materials originating from community forests/rights. Therefore, Winarno (2006) argues that it is necessary to develop community forests that lead to self-sustainable self-help community forests, capable of securing competing markets and prices by stimulating cooperation with partner companies for subsequent maintenance. In the long run it is expected that the timber industry in cooperation with smallholder forest farmers will be supported by a dynamic balance between supply and demand of wood raw materials sourced from community forests to meet local and export-oriented interests.

2. Creating Fair Market Conditions

Increased income at the local community level through community timber business activities, has a positive impact on community forest development efforts in Banjar Regency. One of the factors that determine the occurrence of increased income at the farm level is the demand for timber. Thus this has implications for the marketing of people's wood, which in turn will increase the income of farmers. Based on the SWOT analysis there are a number of variables that affect the distribution of wood from the peasants to the industry. These variables can inhibit the occurrence of a healthy timber marketing process. This has an impact on the weak bargaining position of farmers, therefore a strategy is needed. Creating fair market conditions to overcome these obstacles or threats.

Creating fair market conditions here means, establishing an efficient and optional peasant timber market mechanism (option to the poor). In this sense farmers not only as price takers in the process of timber transactions, so that farmers can get a share of the profits that should be obtained. This does not mean any difference in treatment to buyers or other consumers.

Limitations of information at the farm level are one of the reasons for the inhibition of trade distribu- tion, as well as the deregulation that is also not fully socialized to the community, so they do not know that there are many easiness in timber forest product stewardship which is guaranteed certainty the law. On the other hand, the lack of information that farmers have dipat utilized by intermediary traders to take advantage of the gap of buying and selling from farmers to the timber industry. based on the trade principles of farmers are not harmed only the benefits obtained to be less, especially for the rubber plants that are not productive they are very happy rubber wood sold and appreciated because previously unproductive rubber just felled for rejuvenation activities.

According Hardjanto (2003), that to create marketing efficiency at least two conditions are required, namely: 1) the establishment of group (farmers) business; and 2) realization of market information. Furthermore, with the formation of farmer groups, it is expected to increase bargaining position of farmers (bargaining position) in the process of marketing of people's wood.

A group with shared vision and need will be easy to cooperate in order to achieve the desired collective goals, that is efficient, fair and equitable (Nikijuluw 1999). Therefore the group must be formed by the wishes of its members through a reasonable process, not the government's engineering because of hidden interests, such as meeting the requirements of a project.

At this level the government can act as a mediator or facilitator, who has previously enlightened the community about the benefits of a farmer group as a unifying container. In this case the role of the government in the efforts of the community forest development becomes real. Especially for the realization of a market information system, it is necessary role of government to actively in disseminating information.

In the dissemination of market information systems, LGs can take on the role of services and facilitation roles. The role of service is meant here, ie the government takes the initiative to deliver market information periodically to farmers. This service should pay attention to the accuracy of information and the speed of time so that the activities of farmers related to marketing of people's wood can run well. Furthermore, the role of facilitation is meant here is the effort of data collection and mapping related to timber price in the field periodically. The aim is to prevent the distortion of wood prices that harm the farmers. Both of these roles are the role of local government as servus commune in order to increase the income of smallholder forest farmers.

Establishing Good Forest Governance and Legal Timber Trade

A legal timber principle must meet four aspects: legally harvested timber, legally transported or transferred timber, legally produced timber and legally marketed timber. All such activities must have official documents, to prevent timber from becoming illegal.

The Government has established a regulation on timber legality through timber legality information system (SVLK), a system established by the government to regulate legal and legal timber trade and traceability from upstream to downstream mandatory for mandatory IUPHHK-HA/HT, HR, IUIPHHK and TPT.

The policy has an impact to be accompanied by assistance to business actors related to timber trade from upstream to downstream so that the expected objectives can be achieved, but also need to be granted financial assistance for the certification of timber legality (SLK) because in the management requires a lot of money and burdensome farmers and small-scale wood processing industries.

Along with the implementation of timber legality is expected to increase the selling price of wood, one of the efforts of local governments to support the program is by simply buying legal timber for each procurement of goods as an example to the community but it also needs to have firm action against the circulation of illegal timber is still rife.

Conclusion

Priority strategies to be developed for future community forest development are designed using SO (Strength - Opportunities) strategies, which are: Facilitating Partnership Partnership between Farmers and Industrial Parties, Creating Fair Market Conditions and Building People's Forest Management and Timber Trading legal.

Recommendation

The development of community forests in Banjar Regency should continue to be accompanied by relevant agencies of intensive community forest management ranging from planting to harvesting and market price information on a regular basis.

The local government can play a role in developing a partnership pattern between farmers and industrial parties in the development of community forests, which is set forth in the contract of cooperation which contains a guarantee of certainty in the process of marketing the people's timber in order not to experience any obstacles. In addition, controlling the distribution of community timber through the simplification of bureaucracy. To make it happen it required a written policy that can be used either by the Dishutbun Kabupaten Banjar or for the stakeholders.

References

[Dirjen RHL]. Direktorat Jenderal Rehabilitasi Hutan dan Lahan. 2007. Resume Data Informasi Rehabilitasi Hutan dan Lahan Tahun. Jakarta: Kementerian Kehutanan RI.

Darusman dan Hardjanto. 2006. Tinjauan Ekonomi Hutan Rakyat. Prosiding Seminar Hasil Penelitian Hasil Hutan 2006: 4-13. Fakultas Kehutanan, IPB. Bogor. [Dinas Kehutanan] Dinas Kehutanan Kabupaten Banjar. 2013. Laporan Hasil Produksi Kayu Olahan. Martapura : Pemkab Banjar.

Hardjanto B. 2003. Keragaan dan Pengembangan Usaha Kayu Rakyat di Pulau Jawa [disertasi]. Program Pascasarjana, Institut Pertanian Bogor.

Nikijuluw VPH. 1999. Estabilishment of a Local Foshery Co-Managament. Lesson Gained from Bali Island. Pusat Penelitian Sosial Ekonomi. Badan Litbang Pertanian. Bogor.

Rangkuti F. 2005. Analisis SWOT: Teknik Membedah Kasus Bisnis Abad 21. Jakarta: PT. Gramedia Pustaka Utama.

Rangkuti F. 2008. Analisis SWOT: Teknik Membedah Kasus Bisnis. Jakarta : PT. Gramedia Pustaka Utama.

Widiarti. 2006. Strategi Pengembangan Hutan Rakyat. Makalah Penunjang pada Ekspose Hasil-Hasil Penelitian. Padang: Balai Konservasi dan Rehabilitasi Sumberdaya Hutan.

Winarno D. 2006. Ketersediaan Pasokan Bahan Baku Saat Ini dan Upaya Peningkatan Pasokan dari Hutan Rakyat. Di dalam: Pasokan Bahan Baku Kayu untuk Mendukung Industri Perkayuan Indonesia. Inhouse Experts Working Group Revitalisasi Industri Kehutanan. Departemen Kehutanan. Jakarta.