

Increasing the Added Value of Shorea Javanica Resin from the Pesisir Barat District Through the Geographical Indication Regime

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ABSTRACT

This study describes the increase in added value and development of Shorea javanica as a superior product through a geographical indication regime. The descriptive research collected data on the factual condition of Shorea javanica and the social settings of the people in the West Coast Regency of Lampung Province, Indonesia. The results show that appropriate policies need to be developed and implemented in the strategies dan programs increasing the benefits of shorea javanica price stability through quality improvement, price supervision, and increased resin productivity. The community can enjoy the added value of resin.

Keywords: *added value, shorea javanica, geographical indication*

1. INTRODUCTION

The protection of intellectual property rights is an interesting issue in international economic relations. Several factors like the global market (a result of the development of communication and transportation technology), increased intensity and quality of research, and the development of innovations (to produce and develop a new product) lead to intellectual property rights protection. The currents of globalization contribute to the development of intellectual property rights. The improvement in information technology has made the trade sector activities increase rapidly. It encourages the growth and development of geographical indications in the realm of intellectual property. A geographical indication is one of the intellectual property regimes. It is related to trade names attached to the packaging of a product. It indicates that the product quality is strongly influenced by the place. It also implies that the product is unique in the public mind, especially consumers who know that the place of origin does have special advantages in producing a product [1].

Geographical indications attached to a product have many advantages. It includes the ability to protect consumers from counterfeiting products, improve the reputation of producer associations and product-producing regions economically and politically, and increase economic value. By paying attention to the products' quality and distinctiveness supported by organized product marketing methods, Certification of Geographical Indications can increase selling value both domestically and abroad.

Shorea javanica is one of the rare types of resin worldwide and the only one in Indonesia. Damar (resin) plantations located in the West Coast district are people's plantations cultivated for generations, and some even reach the age of 70 years. Resin plantations by the *Krui* community are also called *repong* (plantations) consisting of various plants, such as pepper, coffee, *petai* (bitter bean), durian, jackfruit, cempedak, duku, as well forest wood plants.

Resin as a superior product has very fluctuating price influenced by the product availability, quality, and commercial chain. When the product is available but not

accompanied by good quality, it causes the selling price to fall. The time of harvest and the way of harvesting affect resin quality. If the cropped is before its time and the method of harvesting is not correct, then the sap obtained will decrease in quality. Proper quality standards and procedures are needed to maintain the high quality of the resin.

Geographical indication protection can be a solution to the problem of the fluctuating level of resin prices. Geographical indications contain documents that provide information about the influence of the geographical environment, natural factors, and human factors that affect the quality or characteristics of the goods. In addition, geographical indications include information about map regions, history, traditions, processing, testing method of the goods, and the labels used.

Some researchers have studied geographical indications. The study conducted by Alcido Elenor Wander and his team entitled Geographic indications: linking history and tradition with competitive business aims to provide an overview of the concept of geographical indications [2]. Research from Elizabeth Ferreira da Silva and Patricia Pepeira Peratta entitled Collection Marks and Geographical Indications-Competitive Strategy of Differentiation and Appropriation of Intangible Heritage evaluated the potential use of collective brands and geographical indications as well as the protection of ownership of craft products as intangible heritage [3]. This research generally focuses on the study of law since geographical indications are part of the intellectual property regime as a sub-field of intellectual property law. The current study conducted by the authors took a different side of the previous research. This research links the protection of geographical indications with economic aspects of Shorea Javanica, focusing on the increase in product added value.

The authors have researched geographical indications several times. It includes the research on geographical indications of black pepper Lampung and protection of rights to geographical indications for indigenous peoples in the renewal of intellectual property rights law. A geographical indication is one of the instruments in the framework of product marketing.

This research is paramount to increase the added value of Lampung resin commodities. It will revitalize the productivity and quality of Lampung resin. Developing the quality and registering it as a geographical indication can achieve added value.

2. RESEARCH METODOLOGY

The method used is qualitative descriptive analysis supported by primary data and secondary data. Descriptive research is conducted by collecting factual data on the condition of the research object, namely Shorea javanica, and the social settings of the community located in the West Coast Regency of

Lampung Province, Indonesia. Primary data in the form of Shorea javanica repong conditions consisted of area, resin price, and economic implications of the community on the sale of amber are analyzed systematically to answer the research objectives, namely the strategy of increasing added value and developing Shorea javanica as a superior product through a geographical indication regime.

3. RESULTS AND DISCUSSION

3.1. Economic Aspect of Geographical Indication Regime

A geographical indication is a system of legal protection that has a close relationship with the marketing system. There are several benefits of protecting geographical indications, namely the economic geographical indication, including a). preventing the ownership right switching to utilize the peculiarities of products from the community as the rights holders to other parties, b) maximizing the added value of products for the community as rights holders, c) providing protection from counterfeiting products, d) increasing the marketing of geographical indication products that have characteristics, e) increasing the provision of employment for the community, f) supporting the development of business centers in the field of agritourism related to products, g) ensuring business sustainability related to geographical indication products, h) strengthening the economy of product producing regions, i) accelerating the development of geographical indication product producing areas, j) improving the community the region welfare.

Protection of the rights made and related to intellectual creation is given because of the inherent economic value. The greater the economic value of intellectual property rights, the stronger the need to obtain protection [4]. The protection of geographical indications has an economic impact on people and regions. It can improve people's welfare and the original opinion of regions, as well as their reputation. The benefits of geographical indications are in line with Sherwood's theory of economic growth stimulus that the protection of intellectual property rights (especially geographical indications) is a tool for economic development [5].

Protection of geographical indications has an economic impact on communities and regions as it improves the community's well-being, the native income of the place, and its reputation. The benefits of geographical indications are in line with Robert M. Sherwood's theory that the protection of geographical indications is a tool for economic development. It illustrates that economic development and economic growth are interrelated. Economic development encourages economic growth that accelerates the process of economic development. Its primary purpose is to enhance the broadest public interest (maximizing overall social utility) by using the approach and use of economic

analysis without eliminating the element of fairness. Therefore, fairness becomes an economic standard based on three basic elements: value, utility, and efficiency. The economic growth stimulus seamlessly recognizes that the protection of intellectual property rights is an economic development tool that focuses on the overall goal of establishing an effective protection system for intellectual property rights. This theory is particularly relevant as a cornerstone of intellectual property protection, especially in the era of free trade.

Protection of geographical indications is carried out based on benefits and sustainability to improve the prosperity and welfare of the people by pursuing environmental sustainability and paying attention to socio-cultural conditions. The principle is following the economic benefits. They are the recognition of ownership of certain products at home and abroad, improvement of product reputation, improvement of marketing strategies, increase in income, increase in employment, business sustainability guarantee, agritourism development, economic development of the region, and acceleration of regional development. The economic benefits greatly affect the national independence through the development of the people's economy. In the implementation, there are producers who have felt obstacles that made the benefits of the protection. Consequently, they need a way or strategy to optimize the benefits [6].

3.2. Geographic Indication over *Shorea Javanica*

Shorea Javanica Protection over geographic indications has essentially been introduced in some international conventions as a universal rule aimed at protecting from fraudulent trading practices. International agreements governing the use of geographical names include the Paris Convention for the Protection of Industrial Property in 1883, the Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods in 1891, the Lisbon Agreement for the Protection of Appellation of Origin, and their International Registration in 1958 and the Agreement on Trade-Related Aspects of Intellectual Property Rights in 1994. In Indonesia, regulations governing geographical indications are contained in Law No. 20 of 2016 on Brands and Geographical Indications.

A geographical indication is one of the intellectual property regimes set out in TRIP's Agreement Article 22-24. The beginning of the protection granting against geographical indications led to a debate between member states on the agenda of the Uruguay Round meeting resulted in the trip's agreement. The issue that sparked debate is that some delegates want the protection of geographical indications as a robust protection effort against misuse of regional names related to products produced than the protection of other intellectual property such as brands. On the other hand, we do not want the protection of geographical indications specifically. Trip's Board Secretary, within the framework of solving the problem, signaled how WTO members find their obligations under TRIP's, although it is unclear whether these arrangements directly stem from

TRIP's or agreement meetings such as bilateral commitments [7].

A geographical indication is a form of protection due to geographical environmental factors (natural and human elements) that give unique characteristics to goods produced by a region. In this context, geographical indications protect an object that is part of a common property rather than private property. The existence of common property cannot be waived in group ownership rights that can prohibit others from utilizing the "property". The other party must respect the rights of the group. The concept of common property has a broad and varied spectrum, which can be affected by natural structures, or internal structures that are a social unit with clear membership and territorial boundaries with common interests.

Protection of geographical indications focuses on reputation, the identity that will add value to the product and protect consumers from misleading actions related to the origin and quality of goods. *Shorea javanica* is a local commodity of Lampung classified as Non-Timber Forest Products (NTFPs) - Hasil Hutan Bukan Kayu (HHBK). Lampung Province, especially in the Pesisir Barat Regency, is the most potential location for resin development. Almost 80% of Indonesian cat's eye resin comes from West Lampung because it is the best resin worldwide and used as a stabilizer in the paint, ink, pharmaceutical, cosmetic industries. Resin has an economic function.

Lampung Province, precisely in the Pesisir Barat Regency, has great potential as a producer of resin commodities, especially *Shorea javanica*. The district is divided into 11 sub-districts, 116 pekon (villages), and two sub-districts. Each village/village has approximately 800 hectares of repong (garden) damar. These commodities are non-timber forest products (NTFPs) which are well known in the international market because of their quality and become the mainstay of the region's commodities. Damar Lampung, a local commodity that is rare and the best in the world. *Shorea javanica* is a resin-producing species, known as sap resin, which has high value as a raw material for the paint, ink, beverage mix, as an anti-termite, anti-fungal, and food additive. The economic potential of gum resin has been known for a long time.

Historically, *Shorea javanica* comes from the Provinces of West Sumatra and South Sumatra Provinces. The people of the Krui area are descendants of ancestors who came from the Martapura area of South Sumatra. During the Dutch colonial era, the Krui people traded forest products, including *Shorea javanica* [8]. This tree has been around since 1829 and has been an export commodity since 1933. The countries in Europe, Asia, Africa, and the Middle East imported resin.

Resin cultivation has two benefits at once, namely forest conservation and economy. Today's technological developments, such as the creation of synthetic resin substitutes from resin materials, have resulted in a decline in the bargaining position of resin commodities in the global market. The productivity decline of the

resin is due to the interval of harvesting the resin sap too early than it should be. The farmers' daily needs cannot wait for the perfect time for the harvest, as a result, the quality of the sap produced is lower, and the price per kilo is much cheaper. Besides the problem of productivity and quality of resin, the main problem that is very important is the legal protection of the commodity of resin. So far, the resin produced from the West Coast region has not received legal protection in the form of geographical indications. There are many advantages of a commodity that has been certified by geographical indications, namely increasing the selling price of the product, thus spurring farmers and resin managers to increase product quality and avoid product abuse by other countries.

Geographical indication is an instrument that can be used to differentiate products, it is anticipated that producers can gain improved access to specialty markets, effectively limit supply and increase sales at higher prices, thereby capturing and retaining more value [9]. Geographical indication objects are protected because the goods or products produced are affected by natural factors based on the common property. The geographical environmental factors as a substantial element to effect products originating from certain regions have influenced the concept of ownership of geographical indications as part of intellectual property rights. The unique characteristics of geographical indications with communal concepts provide a different nuance in the intellectual property rights principles application. The principle generally recognizes individual concepts. The communal concept stems from the existence of community units with a sense of togetherness in having something with common interests.

Shorea Javanica's geographical indication protection is expected to maintain price stability and become a product of added value in line with good quality. Processing value added is the difference between the value of the product and the cost of raw materials and other inputs, while the margin is the difference between the value of the product and the price of raw materials. Changes in the value of raw materials that have undergone large processing treatments can be estimated. Thus, on the basis of the added value obtained, the margin can be calculated and then the compensation for the factors of production can be determined. The greater added value of agricultural products, especially oil palm and rubber, of course, can play a role in increasing economic growth. Great economic growth, of course, has an impact on increasing business fields and people's income, which in the end is improving people's welfare [10].

In a context of increased competition on commodity market, decreasing market prices and changing consumer preferences, it has become necessary to find and alternative approach to the production and marketing products. The economies of product differentiation rests on market segmentation and the creation of monopolistic

competition. GI limits the production market for the entry of producers outside the specified area [11].

The price of resin is relatively high and stable depending on the quality of the sap. Ironically, the price of resin is very volatile. The price of *Shorea Javanica* is influenced by the physical form of the resin which indicates its quality. In 2015 based on the results of interviews with farmers in Pahlungan Village, for class A the price is Rp. 25,000/kilogram, class B the price is Rp. 24,000/kilogram, and class C the price is Rp. 23,000/kilogram. Based on data from the Department of Cooperatives, Industry and Trade of Pesisir Barat Regency that the price of resin in 2021 has increased, namely class A, the price is Rp. 40,000/kilogram, class B price Rp. 30,000/kilogram and class C the price is Rp. 25,000/kilogram. The price increase is due to the limited product stock. Many damar farmers sell wood or land conversion because the income from the sale of damar cannot be relied on to meet their daily needs. In order to prevent limited product stocks, a policy is needed to prohibit land conversion and the felling of resin trees.

3.3. Strategy for Increasing Added Value and Developing *Shorea Javanica* as a Leading Product

The increase in the added value of *Shorea Javanica* products is generally directed at special policies related to the presence of damar trees and regulation of resin prices so that farmers do not experience losses due to highly volatile resin prices. Policies as a form of government intervention in the forestry sector are very necessary, namely, those policies can be derived in the form of strategies, plans, regulations, agreements, programs, and projects that involve reflection on the structure and functions of the government that regulates them. The policy-making process must pay attention to participation and involve all stakeholders, especially farmer groups, cat's eye resin traders, the Plantation and Forestry Office, and academics. The steps that need to be taken by the Pesisir Barat Regency Government to formulate policies in the forestry sector, especially dealing with the problem of the existence of repong damar are as follows.

- a) In the agenda-setting stage, public officials (regents) place and choose the problem of handling repong damar in the policy agenda, paying attention to the urgency of the problem, then proceed to the next stage;
- b) In the policy formulation stage, the problem of handling *repong damar* (resin plantation) that has entered the policy agenda is then discussed by policymakers. Problems are defined to then find the best solution to the problem. The solution to this problem comes from various alternatives or policy options (policy alternatives/policy options), including the preparation of Regional Regulations regarding the prohibition of felling of resin trees to maintain the existence and preservation of *repong damar*, resin sap has potential geographical

indications but has not yet received legal protection, therefore it can be proposed to form a team for registration of geographical indications as an effort to provide standardization of prices and product qualifications to strengthen the regional economy and community welfare.

- c) In the previous stage, many policymakers formulated and proposed policies. In the policy adoption stage, the majority adopted one of the policies.
- d) In The policy implementation stage, the adopted policies are implemented by the relevant agencies together with the appointed stage holders who mobilize financial and human resources in the context of realizing the formulated policies.
- e) In the policy evaluation stage, the implemented policies about repong damar will be assessed or evaluated. The evaluation aims to see to what extent the policies achieve the desired impact, namely solving problems faced by the community, namely the existence of repong damar and the price of resin that has been volatile.

Developing *repong* damar by rejuvenating, maintaining price stability through improving quality and controlling prices, and increasing productivity of resin sap increased the benefits of Protection of geographical indications against *Shorea Javanica* is also an alternative way to maintain product quality.

Government should attempting to wean its shorea javanica'farmer to create incentives for farmess to invest in higher-quality, value-added products by bestowing greater property rights over the names of regional products. The aim is to create a more diversified, profit-oriented product forestry [12].

Great economic growth impacts business development and people's income. It, in turn, affects increasing people's welfare. The current condition of *Shorea Javanica* is without further processing in the country. In the end, only foreign parties enjoyed the added value of the product. It is necessary to develop technology to process resin to increase the added value, especially for export purposes.

Resin plantation in Pesisir Barat Regency has been degraded from year to year due to illegal logging, natural factors, and land conversion. The very fluctuating price also affects the community's reluctance to care for and maintain their Resin plantation. To overcome this, appropriate policies are needed in the form of strategies, plans, regulations, agreements, programs, and projects that involve reflections on the structure and functions of the government that govern them.

4. CONCLUSION

The increase in product added value is a vital asset for agricultural commodities. Geographical indications become an effective alternative to achieve these goals. They can also be the primary means of marketing activities. Strategies, plans, regulations, agreements, programs, and projects support the added value of

Shorea Javanica products. The community can enjoy the resin's added value reprocessed into higher-value goods.

AUTHORS' CONTRIBUTIONS

All the authors in this article have contributed equally in research and language improvements.

ACKNOWLEDGMENTS

This paper is a research report funded by the Directorate of Research and Community Service of the Ministry of Research and Technology/National Research and Innovation Agency (Ristekbrin) for the 2014-2015 and 2015-2016 fiscal years. The first version of the results was published in the Journal of Ius Quia Iustum in volume 22 no. October 4, 2015.

REFERENCES

- [1] M. R. Ayu, *Memperbincangkan hak kekayaan intelektual: indikasi geografis*, Alumni, 2006.
- [2] A. E. Wander, C. N. Godoi, B. A. da Costa Filho, and M. Ladvoat, "Geographic indications (GI): linking history and tradition with competitive business," *Brazilian J. Dev.*, vol. 6, no. 5, 2020, pp. 24601–24618 DOI: <https://doi.org/10.34117/bjdv6n5-059>
- [3] E. F. da Silva and P. P. Peralta, *Collective marks and geographical indications-competitive strategy of differentiation and appropriation of intangible heritage*, 2011.
- [4] H. Soelistyo, *Hak kekayaan intelektual: konsepsi, opini, dan aktualisasi*. Penaku, 2014.
- [5] R. M. Sherwood, *Intellectual Property and Economic Development: Westview Special Studies in Science Technology and Public Policy*. Westview Press Inc, San Fransisco, 1990.
- [6] M. Y. Sari, N. Kumalasari, S. Nugroho, and Y. Yatini, *The Optimization of Geographical Indication Protection in The Realization of National Self-Sufficiency*, *Padjadjaran J. Law*, vol. 7, no. 1, 2020, pp. 85–101, DOI: <https://doi.org/10.22304/pjih.v7n1.a5>
- [7] Djulaeka, *Konsep perlindungan hak kekayaan intelektual: perspektif kajian filosofis haki kolektif-komunal*. Setara Press, 2014.
- [8] A. M. Anasis and M. Y. A. R. Sari, *Perlindungan indikasi geografis terhadap damar mata kucing (Shorea javanica) sebagai upaya pelestarian hutan (studi di Kabupaten Pesisir Barat Propinsi Lampung)*, *J. Huk. IUS Quia Iustum*, vol. 22, no.

4, 2015, pp. 566–593, DOI:
<https://doi.org/10.20885/iustum.vol22.iss4.art3>

- [9] J. Neilson, J. Wright, and L. Aklimawati, Geographical indications and value capture in the Indonesia coffee sector, *J. Rural Stud.*, vol. 59, 2018, pp. 35–48, DOI: doi.org/10.1016/j.jrurstud.2018.01.003
- [10] K. K. R. Indonesia, “Kajian nilai tambah produk pertanian.” Pusat Kebijakan Ekonomi Makro. Badan Kebijakan Fiskal. Jakarta (ID). Kemenkeu, 2012.
- [11] C. Bramley, A review of the socio-economic impact of geographical indications: considerations for the developing world, in *WIPO Worldwide Symposium on Geographical Indications*, 2011, vol. 22, pp. 1–22.
- [12] B. A. Babcock, Geographical indications, property rights, and value-added agriculture, *Iowa Ag Rev.*, vol. 9, no. 4, p. 1, 2015.