# Perspectives of the Wood-Based Industry on Chain of Custody Certification in Sabah

# Michelle Boyou<sup>#</sup>, Kang Chiang Liew

Forestry Complex, Faculty of Science and Natural Resources, Universiti Malaysia Sabah, Kota Kinabalu, Sabah. #Corresponding authors. E-Mail: ms1711053t@student.ums.edu.my; Tel: +60107605750.

ABSTRACT Chain of Custody (CoC) Certification is part of the forest certification that ensures the wood products purchased can be tracked accurately back to its source in the forest. This study was done to determine the current status and the implementation of CoC Certification in the wood-based industries in Sabah. Two populations were identified, which are those holding a CoC certificate and those who do not possess a CoC certificate. Questionnaires were developed with respondents' opinion and perception regarding forest certification focusing on COC Certification in Sabah. Distribution of questionnaire forms to the industry players related to wood-based industries and interview sessions was conducted with the person-in-charge of the Chain of Custody system. Results indicated that there are low percentage of the industries that possesses CoC Certification and have low knowledge regarding CoC Certification and its benefits. This is because the industry players are mainly targeting for local consumers and certification is not required. Others stated that the cost to obtain CoC Certification is too high with low to no benefit to the industry, while others stated that certification has no importance in terms of market benefits. Most of the wood-based industries in Sabah has low awareness regarding the importance of CoC Certification, hence the low number of companies that holds the certificate. The absence of government support, lack of training, lack of market benefit and price premium are also the factors that influences the low number of certificate holders.

KEYWORDS: Certification; Chain of Custody; Traceability; Wood-based Industry; Sabah I Received 29 April 2019 II Revised 11 June 2019 II Accepted 6 August 2019 II Online 28 August 2019 II © Transactions on Science and Technology I Full Article

# INTRODUCTION

The foundation of sustainable forest management is based on the concept of sustainable development and is premised on three important aspects which are environment appropriate, socially beneficial and economically viable (Palus *et al.*, 2018). In the last decade, the awareness in environmental context has been rising progressively. Forest certification can be defined as the process of verifying that a forest meets the requirements of a standard (Nussbaum & Simula, 2005). Besides that, forest certification also acts as a market-based response to address public concerns to reforestation especially in the tropical forests (Perera & Vlosky, 2006). Today, there are two large international forest certification schemes which are Forest Stewardship Council (FSC) and Programme for the Endorsement Forest Certification (PEFC). For any certification system to be effective, it must be trusted by stakeholders in the supply chain from the forest to consumers. Chain of Custody (CoC) Certification has had a growing influence on markets for wood products in recent decade (Gilani *et al.*, 2017). CoC Certification is applicable to all organizations that trade, process or manufacture wood based and non-timber forest products (Klaric *et al.*, 2016). According to Upton and Bass (1995), the requirements for a good CoC system are documentation system needs to be in place and all the material being traced must be properly identified and segregated.

To date, few studies have been conducted on this topic, especially related to the wood-based industry in Sabah. Due to the scarce availability of information regarding this topic, the process of adopting the certificate is slow-moving. This study aimed to:

- 1. Assess the level of knowledge of certified companies and non-certified companies have on Chain of Custody Certification.
- 2. Assess the level of perceived benefits of certified companies and non-certified companies have on Chain of Custody Certification.

#### METHODOLOGY

A survey of wood-based industry in Sabah was conducted between the periods of August 2018 to February 2019 to assess the perspectives of the wood-based industries on Chain of Custody Certifications. A questionnaire was design and prior to the distribution of the questionnaires, a pretest was conducted involving students from the Forestry Complex of Faculty of Science and Natural Resources, Universiti Malaysia Sabah to test for viability. After the pre-test, the questionnaire is reevaluated and re-designed accordingly. The questionnaire consisted of a cover letter explaining the content and the purpose of the survey. The first section contained questions regarding the company's background in terms of nature of business, type of products, period of operation and size of company. Section A and Section B were intended to be filled in by certified companies and noncertified companies respectively, where it comprises of three part which includes questions regarding adoption level and level of knowledge, benefits and difficulties and general comments. The questionnaire was distributed by three methods which are personal interview, e-mail and telephone call interview. The questionnaire was directed to all primary and secondary wood producers located in Sabah. The list of all active companies was obtained from the Sabah Forestry Department and Sabah Timber Industry Association. The questionnaires are then gathered and analysed.

#### **RESULTS AND DISCUSSION**

#### Company Background

The total number of responding companies was 25 out of 104 companies with valid active status. A majority of 80% of the respondents are found to be non-certified companies where these companies do not possess any certification scheme, while 20% of the respondents are adopting Chain of Custody Certification (Figure 1). Two companies no longer maintain the CoC Certificate since the year 2018. Hence, these companies are categorized as non-certified. In terms of types of production, the respondents are mainly producing sawn timber (38%), followed by moulding (21%), finger jointing (18%), kiln dried timber (9%), plywood (6%) and the lowest percentage are producing furniture, wood pellets and wood chips with 3% respectively (Figure 2).



Figure 1. Certification status wood-based industry in Sabah.

Boyou & Liew, 2019. Transactions on Science and Technology. 6(2-2), 184 - 190





From Figure 3, majority of the respondents with 57% have been operating for more than 15 years, followed by 10 to 15 years with 19%, 5 to 10 years with 14%. Only about 10% of the respondents are quite new to the industry where they have been operating for 1 to 5 years. The number of employees was used as an indicator of company size (Figure 4). Companies with 11 to 50 employees which was in the medium sized category were dominant, representing 48% of the respondents, while 33% of the companies are in the large category with more than 50 employees. About 19% of the companies are in the small category with 1 to 10 employees.



Figure 3. Years of operation.



Figure 4. Size of company.

Science and Natural Resources 2019

### Adoption level and level of knowledge

For the adoption level, in the first group, Certified Companies, three companies that adopted the Chain of Custody (CoC) Certification from FSC, while one company adopted the CoC Certification from both FSC and PEFC (Figure 5). Meanwhile, in the second group, Non-certified Companies, 21% is willing to adopt FSC, 11% are willing to choose PEFC, while the remaining 69% answered others where 32% chose Sabah Timber Legality Assurance System (TLAS) while the remaining 37% are not expected to adopt any CoC Certification in the near future.



Figure 5. Adoption level for certified companies.



Figure 6. Expected adoption level for non-certified companies.

As expected, all respondents from the certified company category answered that they are knowledgeable on CoC Certification especially its processes to obtain the certificate which includes, segregation of raw materials, implementation of tracking methods, CoC assessments, annual audit and certification renewal. CoC Certified companies demonstrated a high level of understanding of the CoC concept, nevertheless they reported also considerable awareness with the concept related to the sustainable management of forest resources (Paulus et al., 2018). Meanwhile, for the non-certified companies, 53% of the respondents stated that they are familiar with CoC Certification, while the remaining 47% are not familiar. The respondents were also asked whether they are knowledgeable regarding the benefits or advantages of CoC Certification and 65% stated they are knowledgeable while 35% are not knowledgeable. From Figure 7, we can also observe that in terms of certification scheme most familiar with, 32% of the non-certified companies answered FSC, 11% answered PEFC, while 58% answered others where 37% answered TLAS, 5% answered Verified Legal (VL) and 16% answered none. It can be observed that a most of the non-certified companies recognizes and choses

TLAS as the most familiar certification scheme. 47% of the non-certified companies plan on becoming certified soon while 53% of the non-certified companies do not plan on becoming certified.



Figure 7. Level of knowledge of non-certified companies on CoC Certification.

#### Perceived benefits

From Figure 8, 75% of the certified companies answered that there is an increase in market share. Market access was improved after certification was implemented. 75% of the certified companies also agree that there is an increased sales income. All the certified companies agreed that in terms of material segregation, they were able to control the production floor and material segregation after the implementation of CoC. Paulus et al. (2018) also stated that other expectations following from certification linked to business performance factors such as penetrating new markets, increase of sales volume, expanded market share and the increase of profit margin.

However, results indicate that 50% of non-certified companies perceived that there is no benefit in terms of markets or selling price if they were to adopt the CoC Certification. This can be supported by a study conducted by Owari et al (2006) where they found that certified wood products companies in Finland were not able to charge any price premium and certification did not help them to improve their financial performance. A study conducted by Gilani et al. in 2017 also suggested that certified value-added wood products do no command a price premium, which is an indication that buyers are unwilling to pay more certified products. Meanwhile, 31% stated that the selling price will be pricy and 13% are uncertain. In terms of production, 30% of the non-certified companies perceived that there will be an increase in work-load if they were to adopt CoC Certification. 20% of the non-certified companies perceived that better traceability will be achieved, 15% perceived better material segregation, 15% perceived that there will be an increase in cost in the production line. In 2011, Suryani et al., examined costs associated with implementation of CoC Certification requirements in sawmills in Malaysia and found that there were three kinds of costs which includes standard implementation, initial audit and surveillance audit cost. A majority of 53% perceived that by adopting the certificate, it will not help them to obtain more market access and it will not help to increase their companies' sales.



**Figure 8.** Benefits perceived by certified companies.



Figure 9. Benefits perceived by non-certified companies.

## CONCLUSION

From this study, we can conclude that all certified companies have high knowledge regarding the CoC Certification. Among the perceived benefits by the certified companies includes better material segregation, sales increase and higher market share. Besides that, sales increases due to companies were able to sell certified materials at a higher price compared to non-certified materials. The relatively low number of companies that adopted the Chain of Custody (CoC) Certification could be explained by the low demand of certified materials or products. Due to the low demand of certified products, companies choose not to adopt the CoC Certification. Moreover, most of the companies are selling their products to local market, therefore, CoC Certificate is not required. This study also shows that most of the non-certified companies are familiar with CoC Certification, however, these companies choose not to be certified. Most of the non-certified companies perceived that there will be an increase of work-load in the production line, higher cost, pricy raw materials and no benefits from adopting the CoC Certification.

#### REFERENCES

- [1] Gilani, H. R., Kozak, R. A. & Innes, J. L. (2017). Chain of custody certification involvement by the British Columbia value-added wood products sector. *European Journal of Wood and Wood Products*, **76**(3), 1061-1069.
- [2] Klaric, K., Hitka, M. and Kropivsek, K. (2016). An exploratory assessment of FSC Chain of Custody Certification benefits in Croatian Wood Industry. DRVNA INDUSTRIJA 67(3), 241-248.
- [3] Nussbaum, R. & Simula, M. (2005). *The Forest Certification Handbook* (Second Edition). London. Earthscan Publications.
- [4] Owari, T., Juslin, H., Rummukainen, A. & Yoshimura, T. (2006). Strategies, functions and benefits of forest certifications in wood products marketing: perspectives of Finnish Suppliers. *Forest Policy and Economics*, 9(4), 380-391.
- [5] Palus, H., Parobek, J., Vlosky, R. P., Motik, D., Oblak, L., Jost M., Glavonjiv, B., Dudik, R. & Wanat, L. (2018). The status of chain-of-custody certification in the countries of Central and South Europe. *European Journal of Wood Product*, **76**(2), 699-710.
- [6] Perera, P. & Vlosky, R. P. (2006). A History of Forest Certification. (https://www.researchgate.net/publication/228396698), Last accessed on the 5th of November 2018.
- [7] Suryani, A. G., Shahwahid, M. H. O., Fauzi, A. P. & Vlosky, R. P. (2011). Assessment of Chain of Custody Certification costs for sawnwood manufacturers in Peninsular Malaysia. *Journal of Tropical Forest Science*, 23(2), 159-165.
- [8] Upton C. & Bass S. (1995). The forest certification handbook. London. Earthscan Publications.