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JAPANGOV
THE GOVERNMENT OF JAPAN

MAFF
Ministry of Agriculture, Forestry and Fisheries

FINAL REPORT ACTIVITY 2.3

DEVELOPMENT OF POLICY INCENTIVES FOR INVESTMENT IN COLLECTIVE WOOD PROCESSING FACILITIES

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Development Of Sustainable Domestic Market
For Wood Products

Jakarta, February 2025

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

JAPANGOV THE GOVERNMENT OF JAPAN

MAFF Ministry of Agriculture, Forestry and Fisheries

MINISTRY OF FORESTRY REPUBLIC OF INDONESIA

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DEVELOPMENT OF POLICY INCENTIVES FOR INVESTMENT IN COLLECTIVE WOOD PROCESSING FACILITIES

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EXECUTIVE SUMMARY

The wood industry is one of the economic drivers of society in various regions of Indonesia. This potential is rationally also higher due to the existence of extensive forests as a source of wood production in Indonesia and the increase in the number of people, both in Indonesia and the world. With these various potentials, the wood industry can support the economy of communities, regions, and countries.

As a result of the various potential impacts of the existence of the timber industry, the government has issued various forms of incentive policies to encourage the development of the timber industry, both for the domestic and export markets. This policy support itself is the role of various parties across sectors, be it the forestry sector, industry, investment, education, to regional government administration. Several forms of policy incentives as intended include:

1. Certification of the legality of wood sources through SVLK;
2. Efforts to simplify the business licensing process through the Online Single Submission (OSS) system;
3. Development of various educational facilities related to the wood industry;
4. Encouragement of wood industry entrepreneurs, and
5. Development of various supporting facilities and infrastructure for the wood processing industry, such as an Integrated Timber Terminal (TPT), a special market for wood products, as well as, collective wood processing facilities that can be used by the community to process wood.

Even though it is going well, optimization of the various policy incentives that have been implemented still needs to be done to improve the performance of the wood industry, especially for the domestic market. These needs were obtained from the results of observations, data collection, and studies of advanced wood industry players in Central Java and East Java. This is proven by the unavailability of maps of raw material sources and domestic wood markets in Indonesia. On this basis, this paper tries to find alternative recommendations for problems that arise in the advanced wood industry. In general, the issues raised in this study are related to three scopes of problems - all of which are related to the need for collective wood processing facilities, namely:

1. Ensure the supply of log/wood raw materials;
2. Efforts to increase the productivity of the wood industry, and
3. Efforts to increase the competitiveness of wood products - especially in the domestic market.

Based on the studies that have been carried out and the scope of the problems as above, this research found various general issues in the domestic market for the advanced wood industry, namely: 1) the need to optimize SVLK implementation at the site level; 2) the challenges of industry mapping in particular the SMEs that has not registered their business; 3) the non-optimality of the role of collective wood processing means in the tertiary industries; 4) the unavailability of facilities and infrastructure (including policy incentives) that directly support the primary wood industry, and 5) the need for policy support for wood industry market players, especially SMEs, regarding giving priority for them to be involved in government agency procurement. All these issues are closely linked to ensuring the timber supply, productivity in the wood processing industry, and the competitiveness of wood production in the domestic market. For example, the issues related to SVLK related to guarantees of raw materials for the wood industry. Meanwhile, issues related to legality and supporting facilities and infrastructure for the

timber industry are related to efforts to increase productivity and competitiveness. The same applies to the need for government support for wood industry operators related to involvement in procurement of government agencies which are also connected to the productivity and competitiveness of wood industry products.

The study finds that solving these issues requires policy at various decision-making levels, including:

1. SVLK optimization efforts, resulting in policy recommendations i.e., to provide additional incentives for SVLK-certified timber entrepreneurs to address issues related to the lack of optimum appeal of such certificates to domestic market operators. This effort could not only be carried out by the authorities responsible for forestry but should be encouraged to be implemented in various other authorities associated with the advanced timber industry.

2. Tightening the incentive-disincentive system to encourage more permission applications from the currently illegal timber ventures. This effort is necessary to support mapping efforts for the timber industry from the upstream (primary) to the downstream (tertiary/advanced) industries which are currently not available.

3. Optimize the role of collective wood processing facilities for the advanced wood industry (downstream/tertiary) by encouraging the transformation of these agencies from previously being Technical Implementation Units (UPT) to Regional Public Service Agencies (BLUD). With the institutional transformation into a BLUD, collective wood processing facilities can be more flexible in budgeting according to their needs, and

4. The need for policy incentives to give priority to small and medium-sized entrepreneurs of the advanced wood industry related to the procurement of wood product-based facilities and infrastructure for government agencies by catalog sectoral. The existence of this policy can be an incentive to increase productivity and, indirectly, the competitiveness of the wood industry.

To ensure that the climate improvement of the timber business continues, the recommendations mentioned above need to be considered by policy and decision-makers. This is important, given that improving the business climate for advanced timber industry entrepreneurs has the potential to increase their contribution to the economy, both at the local and national levels. Moreover, estimates of all potential positive impacts do not include the quantification of multiplier effects that arise from industrial development in a region.

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APBD	:	Anggaran Pendapatan dan Belanja Daerah (Regional Revenue and Expenditure Budget)
ASMINDO	:	Asosiasi Industri Permebelan dan Kerajinan Indonesia (Indonesian Furniture and Crafts Industry Association)
BILK	:	Balai Instalasi Logam dan Kayu (Metal and Wood Installation Body)
BKPM	:	Badan Koordinasi Penanaman Modal (Capital Investment Coordinating Board)
BLU	:	Badan Layanan Umum (Public Service Agency)
BLUD	:	Badan Layanan Umum Daerah (Regional Public Service Agency)
BPOM	:	Badan Pengawas Obat dan Makanan (National Agency of Drug and Food Control)
BPPHH	:	Bina Pengolahan dan Pemasaran Hasil Hutan (Direktorat di bawah Ditjen PHL) (Development of Forest Product Processing and Marketing (Directorate under the Directorate General of PHL)
CDK	:	Cabang Dinas Kehutanan (Forest Agency Branch)
Dishut	:	Dinas Kehutanan (Forestry Agency)
Disperindag	:	Dinas Perindustrian dan Perdagangan (Industry and Commerce Agency)
Ditjen	:	Direktorat Jenderal (Directorate General/DG)
DPMPTPSP	:	Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu (Investment and One Stop Integrated Services Agency)
FGD	:	Focused Group Discussion
FORMER	:	Forum Mebel, Kerajinan dan Seni (Furniture, Crafts and Arts Forum)
GANISPH	:	Tenaga Teknis Pengelolaan Hutan (Forest Management Technical Personnel)
HHBK	:	Hasil hutan bukan kayu (Non-Timber Forest Products)
HIMKI	:	Himpunan Industri Mebel dan Kerajinan Indonesia (Indonesian Furniture and Crafts Industry Association)
IIK	:	Instalasi Industri Kayu (Wood Industry Installation)
K/L	:	Kementerian/Lembaga (Ministries/Institutions)
KAN	:	Komite Akreditasi Nasional (National Accreditation Committee)
KBLI	:	Klasifikasi Baku Lapangan Usaha Indonesia (Indonesian Standard Industrial Classification)
Kemenkop UKM	:	Kementerian Koperasi, Usaha Kecil dan Menengah (Ministry of Cooperatives, Small and Medium Enterprises)
Kemenperin	:	Kementerian Perindustrian (Ministry of Industry)
Kemenperindag	:	Kementerian Perindustrian dan Perdagangan (Ministry of Industry and Trade)
KLHK	:	Kementerian Lingkungan Hidup dan Kehutanan (Ministry of Environment and Forestry)
LKPP	:	Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (Government Goods/Services Procurement Policy Institute)
LPVI	:	Lembaga Penilai dan Verifikasi Independen (Independent Assessment and Verification Agency)
Menristek PT	:	Menteri Riset, Teknologi dan Pendidikan Tinggi (Minister of Research, Technology and Higher Education)

MSME	:	Medium and Small Medium Enterprise
NIB	:	Nomor Induk Berusaha (Business Registration Number)
OSS	:	Online Single Submission
PAD	:	Pendapatan Asli Daerah (Regional Original Income)
PAN-RB	:	Pendayagunaan Aparatur Negara dan Reformasi Birokrasi (Utilization of State Apparatus and Bureaucratic Reform)
PBPH	:	Perizinan Berusaha Pemanfaatan Hutan (Forest Utilization Business Licensing)
PBPHH	:	Perizinan Berusaha Pengolahan Hasil Hutan (Forest Product Management Business Licensing)
PDB	:	Produk Domestik Bruto (Gross Domestic Product)
Permendag	:	Peraturan Menteri Perdagangan (Ministry of Trade Regulation)
Permendagri	:	Peraturan Menteri Dalam Negeri (Minister of Home Affairs Regulation)
Permen LHK	:	Peraturan Menteri Lingkungan Hidup dan Kehutanan (Regulation of the Minister of Environment and Forestry)
Permenperin	:	Peraturan Menteri Perindustrian (Regulation of the Minister of Industry)
PHL	:	Pengelolaan Hutan Lestari (Sustainable Forest Management)
PP	:	Peraturan Pemerintah (Government regulations)
PSDH	:	Provisi Sumberdaya Hutan (Provision of Forest Resources)
Rapimnas	:	Rapat Pimpinan Nasional (National Leadership Meeting)
RPBBI	:	Rencana Pemenuhan Bahan Baku Industri (Industrial Raw Material Fulfillment Plan)
SME	:	Small and Medium Enterprise
SK	:	Surat Keputusan (Decree)
SPPL	:	Surat Pernyataan Pemantauan Lingkungan (Environmental Monitoring Statement Letter)
SVLK	:	Sistem Verifikasi Legalitas Kayu (Timber Legality Verification System)
TKDN	:	Tingkat Komponen Dalam Negeri (Domestic Component Level)
TPT	:	Terminal Kayu Terpadu (Integrated Wood Terminal)
Tupoksi	:	Tugas pokok dan fungsi (Main tasks and functions)
UPT	:	Unit Pelaksana Teknis (Technical implementation Unit)
UPTI	:	Unit Pelaksana Teknis Industri (Industrial Technical Implementation Unit)

I. INTRODUCTION

1.1. Backgrounds

As a tropical country with a land area of 1,904,569 km² (Anur, 2023), Indonesia has a large natural resource potential, including timber products. The high potential of this wood source also arises from the vast forest area, especially Production Forests and Community Forests. Based on data from the 2023 Annual Work Plan document for the Directorate for Forest Utilization Planning, Ministry of Environment and Forestry (Ministry of Environment and Forestry, 2023), the area of Production Forest in Indonesia has reached 67.5 million hectares. This figure does not include the area of Community Forests which reaches 34.8 million hectares (Susetyo, 2021). This means that there is great economic potential from the vast potential wood-producing area. One of the economic potentials that can be utilized from Indonesia's forest areas is as a source of wood raw materials for industrial purposes. Based on rough calculations, with this large forest area, Indonesia has the potential to produce wood with a volume of 79.6 million m³ just from Community Forests. Meanwhile, the area of Community Forests continues to increase (Susetyo, 2021). The same source also stated that community forests supply 46.9% of the national log needs, especially for sengon (Albizia chinensis), mahogany (Swietenia sp), teak (Tectona grandis), jabon (Neolamarckia cadamba), and rosewood (Dalbergia latifolia) logs commonly growing in Java. This data is promising for the wood industry in Indonesia.

On the other hand, Indonesia also has a long history related to the wood industry. This can be seen from the emergence of various regions that have become centers of the timber industry, such as Jepara and Pasuruan. The wooden craft industry in Jepara, for example, has been developing since before Indonesian independence. In fact, according to Purnomo, Irawati dan Melati (2010), the art of carving and the wood industry in Jepara is a hereditary skill that has developed since the Majapahit Kingdom and entrepreneurs have participated in exhibitions since 1853 in Batavia. The expertise and industry of wood and crafts are still expanding today. Meanwhile, the wood industry center in Pasuruan, although not as old as in Jepara, has been going on for decades. The sales center for wood products in Pasuruan is centered on the Bukir Market which has existed since 1973 (Wachadah, Izza dan Yasin, 2023).

Not only related to history, the contribution of the wood industry to the economy is also quite high in Indonesia's Gross Domestic Product (GDP). In 2022, the Director General of Sustainable Forest Management (2023) the industry's contribution will reach USD 14,214 billion just from exports. This data, when combined with forest area, can show the large contribution of the timber industry to the Indonesian economy, although there is no available data regarding the domestic market for the timber industry to GDP. Meanwhile, the value of the timber industry's contribution to the country's economy will logically increase exponentially considering the increase in population, both in Indonesia and the world, which is positively correlated with the increasing need for processed (advanced) wood products.

The potential source of raw materials, market increase, and economic contribution from the wood industry makes it necessary to provide various policy incentives for market players, especially small and medium-sized industries, to increase the value of this industry's contribution to the economy. Therefore, there needs to be a study that can generate recommendations for policymakers to further encourage the growth - as well as sustainability, of the wood industry. The needs described above are the basis for carrying out this study.

This study itself seeks to examine various policy incentives that have been implemented to encourage the wood processing industry from upstream (primary industry) to downstream (tertiary industry) and map policy gaps that require improvement, especially related to the existence and/or need for collective wood processing facilities. This is important considering that, based on regulations, this industry involves several fields that have different decision-making institutions, such as forestry (in the primary industry), industry (in the tertiary industry), as well as cooperatives and small and medium enterprises (in the tertiary industry). Therefore, policy incentives and optimizing the role of responsible agencies in each field - from raw materials to marketing, are important to encourage the growth and sustainability of the wood industry. Meanwhile, the discussion of this study will also focus on increasing the role of collective wood processing facilities considering the potential role of these agencies in supporting wood industry entrepreneurs.

1.2. Problem Formulation

The demand for advanced wood products, especially construction, furniture, and crafts for the domestic market, is believed to continue to increase. Meanwhile, on the other hand, the problems and challenges this industry faces from time to time are also getting worse. Therefore, government support is needed to encourage Indonesia's wood processing industry to continue developing.

However, there were problems in the wood industry that emerged during the preliminary study. Because of their fundamental nature, these problems need to be taken into consideration in this research. These problems are 1) the need for studies to ensure the availability of policy incentives in the primary wood industry that are needed to guarantee the supply of raw materials; 2) Limited competent human resources and outdated production machines, resulting in low productivity; and 3) the emergence of substitute products, a flood of imported products and high logistics/shipping costs, resulting in processed wood products becoming less competitive in the domestic market.

Based on the above formulation of the problem, the question asked in this study in general is what policy incentives should the government provide to encourage the development and sustainability of the domestic wood processing industry in Indonesia? while the questions of this study specifically are as follows:

1. What policy incentives are needed and can provide a guaranteed supply of wood raw materials for the wood processing industry in Indonesia?
2. How to increase the productivity of the wood processing industry in Indonesia?
3. How to increase the competitiveness of Indonesian advanced wood products in the domestic market?

1.3. Study Objectives

The general objective of this study is to provide recommendations for policy incentive concepts to encourage the development and sustainability of the wood processing industry in Indonesia. All these recommendations will also be linked to the need for collective wood processing facilities. To achieve this goal, this study has specific objectives, as follows:

1. Analyze the implemented policy related to the supply of wood raw materials for the wood processing industry, both in terms of quality, quantity, and continuity.
2. Analyze efforts to increase the productivity of the wood processing industry.
3. Analyze efforts to increase the competitiveness of advanced wood products in the domestic market.

1.4. Benefits

Specifically, the output of this research is expected to be a scientific recommendation for the formulation of policy incentives required by decision-makers, both at the regional and central level, related to the development of the timber industry and the currently available collective timber processing facilities. Apart from that, another expected output from the results of this research is the enrichment of knowledge related to policies in the wood industry, both primary and tertiary.

1.5. Scope of Study

Adapted to the background, problem formulation, and purpose of the study; the scope of this research focuses on activities to carry out analysis toward three specific objectives, namely:

1. Analysis to ensure the wood supply:
   To carry out an analysis of the guaranteed supply of wood, observations were made on:
   a. General wood industry business processes where the focus of the study will be on institutions that act as collective wood processing facilities in the sawn wood industry;
   b. Boundary scope of activities between the forestry sector and other sectors (in the context of the sawn timber industry) where the focus of the study will be on institutions located in areas that are centers of the timber industry as sample plots for the study, as well as
   c. Policies that influence the guarantee of wood supply with wood industry centers as study sample plots.

2. Analysis of efforts to increase productivity in the wood processing industry:
   Carrying out analysis of efforts to increase productivity and support the wood processing industry - including those carried out by collective wood processing facilities. This activity is carried out with the limitation that the activity location is in a sawn wood industry center with the logical consideration that this location has more complete supporting instruments and a wood industry ecosystem than locations other than wood industry centers. With these location constraints, the study will be on Java Island.

3. Analysis of efforts to improve the competitiveness of wood products:
   This analysis was carried out as a continuation of the two previous analyses by focusing on the roles of the collective wood processing facilities. The data and information used are the result of an inventory of problems found in the analysis within the same scope and limitations and will be linked to alternative policy recommendations to improve collective timber industry governance in the study location to achieve the main objectives of the study.

II. RESEARCH METHOD

2.1. Research Locus and Timelines

This research took place in two locations: Pasuruan, East Java as the main study locus, and Jepara in Central Java as the comparison locus. The basis for choosing these two locations is because they are both central to the wood processing industry, including sawn wood; where sellers of wood raw materials, producers, and consumers of advanced wood products are met, making it easier to research terms of:

1. Collecting field data based on respondents from various backgrounds, from primary to tertiary sawn timber industry;
2. Observation of the implications of the implementation of policies, regulations, and legislation related to wood processing.

This study will be carried out for 3 (three) months starting from November 2023 and is completed in February 2024. Details of the research implementation timeline are presented in (Table 1).

Table 1. Research Timeline

No.	Activities	Month 1				Month 2				Month 3			
		W1	W2	W1	W2	W3	W4	W3	W4	W1	W2	W3	W4
1.	Inception Report												
2.	Data collecting												
3.	Writing manu-script												
4.	Report, revision, and ratification												

2.2. Research Data Collection Methods

The problem observation and analysis in this study uses several methods according to its needs. Primary institutional and social data collection uses direct observation which can be in the form of semi-structured interviews or questionnaires. Meanwhile, secondary data collection uses literature studies. All data analysis, both primary and secondary data, uses descriptive qualitative methods.

2.3. Data Analysis Procedures and Research Stages

This research uses qualitative descriptive methods in discussing research data, both primary and secondary. The method used in this research is as follows:

1. Policy analysis:

   The initial stage in this research was to conduct a literature study of various documents, including legislation that correlates with the research topic, including legislation related to wood supply, the productivity of the wood processing industry, and efforts to increase the competitiveness of wood products. This activity aims to find out the guidelines, limitations, various policy incentives related to the wood processing industry that apply, and problems that arise in the wood processing industry, including information regarding the contribution of the sawn wood industry to Regional Original Income (PAD) and other multiplier effects that arise.

   The method used to analyze legal documents in this study is the gap analysis method. This method was chosen because it can explain the objectives of policy implementation and factual results.

2. Stakeholder analysis:

   The primary data collected for this analysis is used to find out the following things:

   a. The role of parties in the wood processing industry for stakeholder analysis needs based on the 4R Framework (Dubois, 1998; Zubayr et al., 2014; Kristanti, 2020) by providing scores on four stakeholder measurement factors (verifiers), namely: 1) responsibility; 2) rights; 3) relationships, and 4) revenue (Figure 2);
   b. Compliance with the policies/regulations implementation, especially regarding the licensing authority for the timber industry between the center and the regions, both factually (rules-in-use) and only legally (rules-in-form) (Ostrom, 2005). This is because it is often found that regulations that are promulgated/legally passed do not necessarily apply in society, and vice versa, non-formal regulations that are often used by society (Putra, 2018), as well as,
   c. Problems faced by stakeholders in the sawn timber industry (with a focus on construction wood, furniture, and wood crafts).

3. Data Validation:

   This research uses several data validation methods, both primary and secondary, as a crosschecking mechanism for data accuracy, namely:

   a. Data triangulation: by cross-checking data through several sources (Putra, 2018);
   b. Discrepant Information: by providing different perspectives on a topic, and
   c. Peer Debriefing: by discussing with fellow researchers to get alternative interpretations regarding a topic (Kristanti, 2020).

4. Formulation of research results and preparation of recommendations:

   At this stage, the researcher combines all the data with analysis carried out based on a combination of analytical methods to obtain results while simultaneously triangulating the data. At this stage, assumption analysis is carried out to identify the role of policy actors from the formal legal aspect and identify the realization or implementation of this role at the study location (Kristanti, 2020), with the following stages: 1) identification of policy actors; 2) identification of important assumptions based on regulations governing the distribution of roles of actors; 3) comparison between the rules written in regulations (rules-in-form) and the implementation of regulations in the field (rules-in-use) at the study location, (4) conducting a gap analysis between assumptions and implementation and (5) problem synthesis.

Figure 1 4R framework of stakeholder analysis (Dubois, 1998)

III. RESULTS AND DISCUSSION

3.1. Policies, Regulations, and Legislation Related to the Processed Wood Industry

The entire institutional social interaction of stakeholders, including those in the timber industry, is carried out based on the rules of the game, both rules-in-use and rules-in-form. In general, the rules of the game can influence situational action in the action arena[1] of the parties, including stakeholders. This observes the rules of the game necessary to determine the impact on each party involved in the action arena of the wood processing and sawn timber industry.

The study of the rules of the game, and adapting the typology of the rules, can be done through several approaches. Formal rules, such as laws, regulations, or other formal legal regulations, can use gap analysis through literature studies. Meanwhile, the rules of the game which are norms and rules-in-use must be collected based on field observations. However, in this part of the article, the discussion will focus on discussions regarding formal legal rules that are attached to stakeholders so that they influence situational actions. Based on the explanation above, this research tries to make observations and conduct a gap analysis of various formal regulations related to wood and wood processing, especially sawn wood, regarding implementation in the field.

3.1.1. Policies Related to Wood Raw Materials and Upstream Wood Industry

Fulfillment of raw materials for the wood industry from natural sources has the potential to cause a loss of sustainability, not only for the wood processing industry due to the depletion of raw material sources but also for environmental sustainability due to over-exploitation. This issue is the basis for formulating policies that can regulate stakeholder activities to ensure that potential positive and negative impacts related to the wood industry and exploitation are at a balance point for the common good. To ensure that the policy objectives are achieved, the policy and its implementation in the field require evaluation. Based on Haryadi (2013), various issues that often arise in policy implementation can include institutional incentives, accountability in implementing a policy, the role of street-level bureaucrats, and autonomy (political and administrative).

Regarding the governance and administration of sources of wood raw materials in Indonesia, existing policies are the domain of two agency sectors according to where the raw materials come from. Policies that regulate domestic sources of wood raw materials will use references based on regulations originating from agencies in the forestry sector, both at the central and provincial levels.

[1] According to Ostrom (2005), the action arena is where participants (stakeholders) position themselves and can make decisions. The action arena itself consists of an action situation that defines the structure, action and results of interactions, as well as who can participate in the action situation.

This is because domestic sources of wood raw materials generally come from forest areas (managed by forestry estates) and community plantations which are the domain of the forestry sector. Meanwhile, policies governing imported wood raw materials will refer to the agency that manages the industrial sector. However, policies in these central-level fields are translated by provincial-level legislative institutions to suit their respective needs.

At the national level, the formal rules that apply regarding policies governing the management mechanism for wood raw materials are regulated in the Minister of Environment and Forestry Regulation (Permen LHK) No. 8 of 2021 concerning Forest Governance and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests. The scope of these activities includes:

1. Forest inventory as one of the sources of wood raw material locations;
2. Forest planning, including the division of blocks in forest areas;
3. Demarcation of boundaries and mapping of forest areas;
4. Preparation and assessment, validation, and changes to forest area management plans;
5. Forest management organizational arrangements;
6. Criteria and directions for forest use;
7. Creation and use of transportation corridors, including for transporting wood within forest areas;
8. Governance of permits for business utilization of wood and non-timber forest products in various types of forest areas;
9. Forest management planning in various types of forest areas including preparation of related documents;
10. Partnership management for each type of forest manager in the forest area;
11. Forest utilization regulations, up to;
12. Arrangements for verification, certification, and audit of wood legality.

In addition to regulating the sustainable management of raw material sources, Minister of Environment and Forestry Regulation No. 8 of 2021 concerning Forest Governance and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests, also generally regulates activities related to processing wood forest products. Some of the scope of activities regulated include:

1. Guaranteeing the legality of forest products, such as the Wood Legality Verification System (SVLK) and declaration of independent forest products;
2. Distribution of authority for timber business licensing based on business scale and type of integration of wood processing activities;
3. Forest product administration related to wood production – starting from planning and realization of production, transportation, and processing, to marketing of forest products, to;
4. Arrangements related to Forest Resource Provision (PSDH) activities.
5. Timber business scale, where licensing of small to medium enterprises[2] with a timber capacity of under 6000 m^3 is under the authority of the Governor so that it does not rule

[2] The classification of wood businesses based on Article 18 paragraph (1) of Minister of Environment and Forestry Regulation 8/2021 is: 1) small businesses with a capacity of 2000m^3 year; 2) medium-sized businesses with a capacity of 2000 – 6000 m^3 which are integrated with the processing of non-timber forest products with a maximum number of workers of 10 people with an investment valuation of under Rp. 5 billion.

out the possibility of derivative regulations regarding the licensing rules for the timber industry at this scale in each province;

6. Form an advanced processed wood, where:
    a. Furniture, pulp, and paper products fall under the authority of institutions that carry out affairs in the industrial sector[3] (at the time this manuscript was written it was the Ministry of Industry (Kemenperind) and provincial agency managing the industry and trade;
    b. The range of forest craft products became the authority of the institutions that organize business in the field of cooperatives, small, and medium-sized enterprises (at the time of writing of this manuscript is the Ministry of Cooperation, Small and Medium Enterprises[4] (Kemenkop UKM) and related UPTs in the region).

Based on the scope of regulation contained in the Minister of Environment and Forestry Regulation No. 8 of 2021, this policy has become a kind of omnibus law[5] for the forestry sector. This regulation regulates the governance of the forest sector ranging from forest management and preparation of forest management plans, licensing efforts, implementation of operations, processing of results, guaranteeing the legality of forest products, forest management, State revenue from forest products, control and supervision of forest yields, to the imposition of sanctions. The impact of this policy is broad enough because the approval of these regulations resulted in 62 regulations of the same level of Ministerial regulations abrogated.

In general, the purpose of the implementation of this regulation is to ensure that the entrepreneurship and management of forest products is carried out with a minimum impact so that there is sustainability, both from the environmental side as well as from the wood processing industry. With this purpose, Minister of Environment and Forestry Regulation No. 8 2021 is expected to provide benefits for both the environment and industry. For the timber industry, Minister of Environment and Forestry Regulation No. 8, 2021 ensures the existence of planning, management, and utilization, up to the mechanism of licensing of wood enterprises based on annual volumetrics by regulating comprehensively the management of wood yields to guarantee the sustainability of the availability of wood raw materials.

One of the attempts to implement the management of timber production regulated in the Minister of Environment and Forestry Regulation No. 8 of 2021 is SVLK. The system seeks to ensure the sustainability of the timber industry by ensuring that the wood is extracted legally and sustainably. Implementing SVLK requires various stages for applicants, starting from requesting verification, planning verification, implementing verification, issuing legality certificates and recertification, and monitoring, to special audits with different validity periods depending on the type of certificate holder, namely:

1. Six years for holders of social forestry management approvals, owners of naturally grown wood from Private Forests, forest product storage areas, holders of Forest Product Management Business Permits (PBPHH), holders of Business Permits for Industrial business activities, or exporters;

[3] Article 179 Paragraph (4) Minister of Environment and Forestry Decree No. 8/2021.
[4] Article 179 Paragraph (5) Minister of Environment and Forestry Decree No. 8/2021.
[5] Based on the Minnesota State Legislature, omnibus is generally made up of numerous smaller bills on the same broad topic (Available at: https://www.leg.mn.gov/leg/faq/faq?id=147).

2. Nine years for owners of Private Forest cultivated wood or non-timber forest products (NTFPs) outside of Business Licensing;
3. One year for holders of Wood Utilization Approval for Non-Forestry Activities.

For exporters, implementing the SVLK ensures that timber entrepreneurs can expand the marketing of their products to regions with strict environmental sustainability regulations, such as Europe and The US. This is evidenced by the threat of a boycott of Indonesian wood products by the European Union following the implementation of Minister of Trade Regulation (Permendag) No. 15 of 2020 concerning Provisions for Export of Forestry Industry Products. This regulation eliminates the implementation of V-Legal obligations before being canceled by Minister of Trade Regulation No. 45 of 2020 concerning the Revocation of Regulation of the Minister of Trade Number 15 of 2020 concerning Export Provisions for Forestry Industry Products.

Although the impact of the legal sustainability of wood raw material sources has proven to be beneficial for exporters, a different perspective was shown by individual SVLK certification assessors for domestic market-oriented entrepreneurs. Based on the results of interviews conducted by several respondents who work as LPVI Assessors, the enthusiasm of domestic market-oriented wood industry business actors to carry out SVLK certification is still minimal. This is a result of the assumption that SVLK has not provided added value to their wood products. Meanwhile, there are not many policy incentives from the government for SVLK certificate holders to accommodate the need for added value.

3.1.2. Policies to Increase the Productivity of the Domestic Wood Processing Industry

Increasing the productivity of the domestic wood industry in Indonesia has been attempted for a long time through various policy incentives. Generally, the resulting policy incentives are a response to the challenges faced by the timber industry. An example is an effort to overcome the problem of scarcity of wood raw materials in the upstream timber industry which was followed up with the construction of an Integrated Timber Terminal (TPT).

One of the currently operating TPTs is the Kendal TPT which was built based on cooperation between the Government, Central Java Provincial Government, and Kendal Regency Government based on Joint Memorandum of Agreement Number: 652.1/1AK/6/2008, Number: 076/07368.a and Number: 180/19/2008 concerning the Development of an Integrated Timber Terminal and then followed up through Kendal Regency Regional Regulation No. 2 of 2009 concerning Kendal Regency Regional Capital Inclusion in Regional Companies with Various Regional Enterprises. This facility was built as an effort to overcome problems related to the scarcity of wood raw materials and function as a buffer location for wood stocks for the wood processing industry (Ciptaningtyas, 2011) and to guarantee a continuous, timely, and transparent supply of raw materials (ISWA and ITTO, 2009).

Other efforts to increase the productivity of the wood industry are also carried out through academic approaches and increasing the capacity of business actors and prospective business actors. One example of the implementation of this policy is the construction of the Furniture and Wood Processing Industry Polytechnic in Kendal in 2018. This vocational campus is under the authority of the Ministry of Industry. This effort involves various stakeholders[6] (multi-stakeholders) is a form of

[6] The establishment of the Furniture and Wood Processing Industry Polytechnic was carried out based on the Minister of Industry Regulation (Permenperin) No. 16 of 2018 concerning the Organization and Work Procedures of the Polytechnic for the Furniture and Wood Processing Industry, Letter from the Minister of State Apparatus Empowerment and Bureaucratic Reform (PAN-RB) No. B/408/M.KT.01/2018 dated 8 June 2018 concerning approval for the establishment of the Furniture and Wood Processing Industry Polytechnic, and Decree of the Minister of Research, Technology and Higher Education (SK Menristek PT) No. 538/KPT/I/ 2018 concerning Permit to Open a Study Program for the Establishment of a Polytechnic for the Furniture and Wood Processing Industry (Politeknik Industri Furnitur dan Pengolahan Kayu)

policy incentive for the wood industry in Indonesia to overcome various challenges related to the wood industry in a long-term and sustainable manner.

Nevertheless, the various policy incentives have not fully addressed the problem of the timber industry. Not only is the policy incentive centralized in one area, the Kendal district, but also due to the extent of the coverage of the problems faced by the timber industry in Indonesia, including the need to revitalize timber processing machinery. According to Susanti (2023), there are still many processing industries that do not have appropriate machinery for the size of the raw materials because most sources of raw wood come from community plantations and tend to be smaller than natural wood. For this reason, the government, through the Industry and Trade Agency at the provincial level, took the initiative to build collective wood processing facilities in the form of a Wood UPT in several wood industrial centers such as Pasuruan and Semarang. In general, the function of the wood UPT is to carry out the duties of the agency in the industrial sector in providing technical assistance services for the wood and wood product industry as well as training for the community. However, specifically, the duties and functions of each agency are slightly different in each region.

By the Regulations of the Governor (Pergub) of East Java No. 60 of 2018 on Nomenclature, Organizational Structure, Description of Duties and Functions, and Working Procedures of the Technical Implementation Unit of the East Java Province Industry and Trade Service, the Wood Industry UPT (UPTI) in Pasuruan is the Technical Unit tasked with carrying out some of the agency's duties in technical assistance services for the wood industry and wood products, technology transfer, provision of industrial business facilities, administration and community services. A similar function is also had by the Jepara Wood Industry Installation (IKJ) as a Supporting Unit at the Metal and Wood Installation Centre (BILK) in Central Java which is based on Central Java Governor Regulation No. 90 of 2021 on the Organization and Work Procedures of the Technical Implementation Unit of the Industry and Trade Agency of Central Java Province, responsible for carrying out technical operations and/or certain supporting technical activities of the service in the field of engineering and implementation and engineering services - in this case wood. The types of activities offered by the two collective wood processing facilities include renting wood processing equipment including its operators, training for the sawn wood industry operators, and facilitating business meetings (exhibitions).

Based on these tasks and functions, the collective wood processing facilities currently available attempt to address two issues in the wood processing industry simultaneously. It is hoped that the facilitation function carried out by this facility can be a solution related to the lack of capacity and knowledge of SMEs in the downstream wood industry. Furthermore, providing technical services for the community at these facilities includes providing wood processing tools and labor for rent at affordable rates. It is hoped that this form of service can be an answer to issues related to wood processing equipment in small and medium industries (SME) which previously became an inhibiting factor in increasing the productivity of the downstream wood industry.

Unfortunately, the role of the existence of collective wood processing facilities in Pasuruan has not been running optimally. As a result of interviews with several Pasuruan Wood UPTI staff, the agency is constrained by budget limitations in optimizing the facilitation function and strengthening the capacity of the SME it fosters. There is a lot of material related to the wood industry which is crucial for increasing the productivity of the advanced wood industry in East Java, such as collaboration between business actors to develop the wood industry, increasing capacity to improve product quality, and facilitating professional certification for business actors. Some of the understanding that is currently happening in the development of the wood industry by SMEs in Pasuruan include:

1. Egocentrism among business actors.

    Field findings show that timber business and wood industry actors in Pasuruan are less able to collaborate with other actors and tend to compete with each other. The impact of these conditions extends to the problem of the high costs of expeditions of wood products there. Based on the accounts of several respondents, both from UPTI Kayu and business actors, egocentrism between business actors causes distrust, lack of mutual trust, and common goals to develop their business.

    Ideally, entrepreneurs can ship products to the same location together to reduce shipping costs instead of carrying out shipping themselves at higher costs. Such deliveries are usually carried out by the entrepreneur who owns the cargo vehicle. However, unfortunately, competition between entrepreneurs often leads to competition between wood product consumers and entrepreneurs who entrust their products to transport owners. Although this egocentrism could be the result of the domestic market's low uptake of wood products, this should be slowly changed through the facilitation role of Pasuruan Wood UPTI e.g. by increasing the capacity of business actors to increase consumer interest in their products or encouraging business meeting activities.

2. High transportation costs.

    As explained above, these high transportation costs arise due to the reluctance of wood product SMEs to collaborate. In fact, under certain conditions, shipping costs from Pasuruan to Surabaya can be more expensive than shipping to West Java. To change this mindset; training, capacity building, and continuous business meetings are needed in particular to build their mutual trust - and this initiative could be coordinated by Pasuruan Wood UPTI with support from related government institutions and forest industries association.

3. Low-quality of domestic market-purpose wood products.

    Field observations found that many wood products for the domestic market were of deficient quality. Not only is the raw material used juvenile, but also the finishing quality of the product is rugged. Several SMEs also admitted that many requests for Pasuruan wood products from other areas were made without finishing by the seller because consumers wanted to do it themselves with better quality. However, several SMEs argue that using cheap raw materials aims to reduce prices so that they can adjust to domestic consumers' budgets and speed up the circulation of money.

Various emerging issues related to the egocentrism of SMEs, high transportation costs, and the low quality of wood products for the domestic market indirectly contribute to the low market uptake of wood products. It was evidenced by the observation during field data collection, where one consumer canceled the purchase of several furniture products due to the product quality not being proportional to the price. This problem shows the need to reduce the price of wood products and transportation costs, as well as improve quality.

In connection with the policy incentive for the revitalization of wood processing machinery needs, The Ministry of Industry (Kemenperind) has also issued Minister of Industry Regulation (Permenperind) No. 42 of 2022 concerning the Machinery and/or Equipment the Revitalization Program for the Wood Processing Industry. This policy becomes an umbrella for the Machinery and/

or Equipment revitalization program scheme carried out by replacing part of the purchase price of the machine and/or equipment which is provided at a maximum of 30 percent of the purchase price of domestically produced machines and/or equipment containing Domestic Component Level content (TKDN) at minimum contain of 25 percent (Marbun, 2020).

As with existing policy incentives, these regulations are deemed not to be in line with the needs of timber business actors. The results of the FGD in Jepara with SME actors who are members of the association (Indonesian Furniture and Crafts Industry Association) or HIMKI, this TKDN obligation is difficult to implement in the field. This is because there are still wood processing equipment products that cannot be produced in Indonesia. Even the various wood processing machines that have been deemed to meet the current TKDN percentage are not entirely correct. Because, if we investigate further, the raw materials for the equipment spare parts are not made in Indonesia.

To increase the productivity of the timber industry, the government has also issued policy incentives to reduce the complexity of business licensing through the Online Single Submission (OSS) system. The implementation of this OSS activity is managed by the Ministry of Investment/BKPM, nationally; and the Investment and One-Stop Integrated Services Service (DPMPTSP) at the provincial level. In the case of Forest Utilization Business Licensing (PBPH), for example, based on Minister of Environment and Forestry Regulation 8 of 2021, the stages that must be passed include:

1. Administrative document requirements:
    a. Environmental Monitoring Statement Letter (SPPL) for small scale business, Commitment Document, and technical requirements (large scale);
    b. Business Identification Number (NIB), and
    c. A declaration containing the type of Forest Products Processing, main production machinery, and production capacity;
2. Completion report of compliance with commitment declaration and technical requirements;
3. Verification and examination of document completion of commitment statement and technical requirement documents;
4. Publication of Standard Certificate;
5. Technical consideration of approval of the issuance of the standard certificate, and
6. Notification of acceptance or refusal of business permits.

However, it turns out that the existence of OSS does not immediately solve the licensing complications. Based on interviews with industry players, many obstacles, both technical and non-technical, could emerge throughout the licensing process, such as limited access to communication at the site.

3.1.3. Policies to Increase the Competitiveness of Wood Products

The government through its various bodies has implemented various policy incentives to improve the competitiveness of timber products. Some of the policies currently in force are: 1) SVLK; 2) OSS (one-door licensing system); 3) facilitation of training and educational facilities related to the timber industry, and 4) facilitating furniture and industrial exhibitions. The various policies have different impact targets for increasing the domestic timber market with their respective advantages and disadvantages (Table 6).

Concerning SVLK, for example, the policy aims to ensure that there is legal certification of wood on the various products produced. The application of certificate requirements to such timber products is per regulations of various regions with strict source sustainability rules, such as the European Union. The hope is that with the implementation of the SVLK, Indonesian timber products can compete and be accepted in particular by the European market. Common problems related to SVLK that are commonly found in observations cover the fact that it is deemed not to increase the selling price of wood for the domestic market. As a result of the SVLK complexity, and lack of an increase in the selling price of the wood products, many business players in particular the SMEs do not process SVLK. This can have an impact on the inaccurate administration of sources of wood raw materials. Moreover, findings in the field show that many industrial business actors do not apply for permits. To ensure the smooth running of their business, these actors usually use 'flags' from other companies and/or supply their wood products to licensed companies.

Table 2. The expected impact of policy incentives to increase the competitiveness of wood products, their advantages and disadvantages

Type of Policy Incentives	Legal Basis	Expected Impacts	Pros	Cons
Timber Legality Verification System (SVLK)	LHK Ministerial Regulation No. 8 of 2021 concerning Forest Governance and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests	Increasing the competitiveness of Indonesian wood products for consumers who are concerned about environmental sustainability so that they can be accepted by the market, especially in regions that have high environmental awareness.	It is needed by exporters of wood products destined for European countries and the United States because of the strict legal provisions regarding sustainable sources of raw materials in these regions. This need for exporters is proven by the threat of boycotting wood products from Indonesia by consumers from these two regions after the implementation of Minister of Trade Regulation 15/2020 which does not require V-Legal as an export condition. Currently, incentives are being developed for industrial SVLK holders where the certificate is a prerequisite for forestry e-catalog holders of the Government Goods/Services Procurement Policy Institute (LKPP) as an effort to increase the market, especially domestic, for wood processing industry products.	Effective merely for exporters, not for entrepreneurs with domestic market share. This is caused by: 1. It is considered not to increase the selling price of wood products (Suryandari *et al.*, 2017); 2. Not correlated with the domestic wood market.

Type of Policy Incentives	Legal Basis	Expected Impacts	Pros	Cons
Online Single Submission (OSS)	1. Government Regulation (PP) no. 24 of 2018 concerning Electronically Integrated Business Licensing Services; 2. Minister of Environment and Forestry Regulation 8 of 2021 concerning Forest Governance and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests (for Forest Utilization Business Licensing (PBPH)).	Climate Improvement seeks to simplify online licensing without intermediaries, thus accelerating and facilitating licenses and reducing the additional costs of intermediary presence (brokers).	OSS implementation reduces unnecessary costs in processing business permits which also has an impact on:: 1. Reducing operational costs, thereby reducing the selling price of wood products; 2. Increasing the number of licensed SMEs thereby creating a competitive market for advanced wood products.	OSS does not necessarily eliminate the complexity of the permit license. The permit applicants must go through various stages, including technical considerations.
Facilitate Wood Processing Training	The implementation of wood processing training activities is carried out by various institutions based on various legal bases. Several agencies responsible for training for timber business actors are: 1. Furniture and Wood Processing Industry Polytechnic which was established based on Regulation of the Minister of Industry 62/2020 which was later replaced by Regulation of the Minister of Industry 22/2022; 2. UPT related to wood which has a facilitation function for the community such as Pasuruan Wood UPTI (East Java Gubernatorial Regulation 60/2018).	More advanced wood business actors are qualified in various fields needed in the industry, so it is hoped that: 1. Improve the quality of wood product design; 2. Improve wood processing capabilities, both in terms of raw material quality and product finishing; 3. Increase the ability of advanced timber business actors to build networks, and 4. Improve the capabilities of wood business actors in regards of marketing.	Facilitation of training related to wood products and industry, especially Pasuruan Wood UPTI, has increased business actors' insight regarding wood products and industry. From the results of the interviews, it was found that the SMEs assisted by UPTI Kayu had been helped a lot through various trainings on markets and market potential that had been carried out. Regarding the existence of the Furniture and Wood Processing Industry Polytechnic, this facility has coordinated and collaborated with more than 150 entities with various types of activities related to wood products in Central Java, including the PIKA Semarang High School (SMA).	Common problems found related to training activities include: 1. In the case of the Furniture and Wood Processing Industry Polytechnic Kendal, the issues that arise are related to the selection of a location that is close only to the product market location, namely Semarang City, Jepara Regency, and the surrounding area.; 2. In the case of UPT Kayu, both Jepara, and Pasuruan, its function as a training center has not run optimally due to the limited budgets of the UPT for conducting training for SMEs.

Type of Policy Incentives	Legal Basis	Expected Impacts	Pros	Cons
Exhibition facilitation for advanced wood and furniture industry players	There is no direct legal basis related to this form of policy incentive because it can be carried out by both government and private agencies (e.g. associations). In government agencies, the existing regulatory base is attached to the facilitation and service functions of each agency to the community. Meanwhile, in associations, the facilitation function usually aims to help its members as per the goals of its formation.	Increased consumer exposure to advanced wood products, furniture, as well as the various SMEs that produce them, has the potential to increase the transaction value of wood products.	Policy incentives to provide facilitation for SMEs in the wood industry can make it easier for those who have limited capital to take part in exhibitions to increase awareness among potential consumers of their existence and products.	With the need for a large enough budget to involve business actors in the exhibition (depending on the location of the exhibition relative to the domicile of the participants), there will be a limited number of SMEs who receive facilitation.

Common problems related to SVLK that are commonly found in observations include a limited number of Independent Assessment and Verification Institutions; and is deemed not to increase the selling price of wood for the domestic market. As a result of the high costs, complexity, and lack of an increase in the selling price of the wood, many people do not process SVLK permits. This can have an impact on the inaccurate administration of sources of wood raw materials. Moreover, findings in the field show that many industrial business actors do not apply for permits. To ensure the smooth running of their business, these actors usually borrow the 'flags' from other companies and/or supply their wood products to licensed companies.

The impact of this practice is quite extensive. These illegal activities not only make it difficult for the government to map sources and needs for wood raw materials, as in the Industrial Raw Material Fulfillment Plan (RPBBI) but also cause complications related to guidance which leads to quality control of wood products. From observations made, this phenomenon was found in both East and Central Java. However, this kind of illegal business usually occurs when the timber industry is first established. This is caused by the lack of knowledge regarding the procedures for starting a business among actors who have just entered the world of the wood industry, or old business actors who only follow the business passed down from their families.

To increase the competitiveness of wood products, the government through the Ministry of Industry has also taken the initiative to build facilities for increasing human resource (HR) capacity. One way is to build a Furniture and Wood Processing Industry Polytechnic in Kendal, Central Java. This campus was built based on Minister of Industry Regulation (Permenperin) 62 of 2020 concerning the Statute of the Polytechnic for the Furniture and Wood Processing Industry, which was later revoked and replaced with Permenperin of 2022 concerning the Statute of the Polytechnic for the Furniture and Wood Processing Industry.

The campus has three fields of study, all of which are vocational, namely: 1) Furniture Industry Business Management; 2) Furniture Production Techniques, and 3) Furniture Design. The existence of this educational facility is expected to increase the capacity and ability of human resources in the wood industry. This increase has the potential to have a positive impact on the quality and competitiveness of wood products. Moreover, to date, this educational institution has collaborated with approximately 150 entities related to the advanced wood industry in Central Java, including Wood Working Vocational High School (SMK) PIKA in Semarang City.

Based on East Java Governor Regulation No. 60 of 2018, the projected role of Pasuruan Wood UPTI is vital for the wood processing industry in East Java. The duties and functions of this agency at the site level are quite broad, from providing wood processing facilities based on rental services to technical assistance in the form of increasing the capacity of wood business actors. Unfortunately, the function of increasing capacity has not run optimally due to the budget constraints faced. However, this function is still felt to be useful by SMEs. The reason is, from interviews conducted with entrepreneurs, especially those in the assisted groups, training carried out by Pasuruan Wood UPTI allowed them to gain new knowledge, such as 1) marketing gaps and consumer preferences; 2) knowledge regarding reimbursement of equipment purchase costs based on Permenperin No. 42 of 2022, up to 3) facilitation of business meetings.

Regarding the facilitation of business meetings through various exhibitions for business actors, it is noted that this has been initiated by the government, both at district, city, provincial, and national levels. Pasuruan Wood UPTI, for example; based on existing data, it is recorded that it has facilitated exhibition participation for 13 SMEs under its guidance since 2015. Even though it is not much, at least there are support efforts that can be made by the government for the wood processing industry there. Moreover, these figures only come from one agency, because this form of facilitation is also carried out by regional governments; both provinces, districts, and cities. This facilitation is also often carried out by wood industry associations for their members. This helps to increase the opportunity for business actors to meet directly with potential consumers.

3.1.4. Summary of Analysis Results of Actual Policy Incentives

The implemented policies in the upstream areas of the timber industry are largely within the authority of the Ministry of Environment and Forestry the responsible party of the forestry sector. Based on various regulations related to wood raw materials, the policy incentive that is very influential on the advanced wood industry is SVLK. Unfortunately, these regulations are not yet effective, especially for domestic market players. The long processing time due to LPVI limitations and the costs that must be incurred to obtain certification are not commensurate with the increase in the selling price of wood. Policies related to raw materials will influence other policies related to the productivity and competitiveness of advanced wood products. Furthermore, policies to increase the productivity of the advanced timber industry that are currently underway are mostly outside the authority of the forestry sector. For the advanced wood industry, this authority lies in the industrial sector.

This industrial sector itself, through the Ministry of Industry and its subordinate agencies, has issued various policy incentives to increase the productivity and competitiveness of the advanced wood industry. Even though these various policy incentives are what business actors need, implementation in the field still has challenges that need attention. The conclusions of the analysis of existing policies to increase the productivity and competitiveness of the wood industry are presented in Table 3.

Table 3. Policies to increase the productivity of the processed wood industry and their impacts

No.	Policy Form	Pros	Cons
1.	Establishment of collective wood processing facilities	• Helping small SMEs who have limited access to adequate wood processing equipment; • Contribute to increasing the capacity of advanced wood industry business actors (case in East Java); • Contribute to Regional Original Income (PAD) in each province by collecting fees for services offered by each collective wood processing facility.	• Collective wood processing facilities currently operating have limited budget and human resources to provide optimal assistance; • In the case of Jepara IIK under Class A BILK Semarang, the agency only has three wood processing machine operators with several machines that have been damaged and/or require revitalization.

No.	Policy Form	Pros	Cons
2.	Construction of the Furniture and Wood Processing Industry Polytechnic Kendal	Supporting the long-term competitiveness and productivity of the wood industry by building educational and training facilities for wood processing with over 150 business partners at the national level.	The existence of this wood processing educational institution is only available in one location, so other areas cannot yet get the same easy access to increase human resource capacity in the advanced wood industry. Other universities or campuses with the Department of Forest Product Technology need to follow this initiative.
3.	Wood Processing Industry Machinery and/ or Equipment Revitalization Program	• Incentives to support the revitalization of wood processing machines for business actors with financial limitations. • Efforts to support local products through Domestic Content Level (TKDN) requirements for wood processing machines as a condition for reimbursement of purchase costs.	• Not yet available to the primary wood industry under the authority of the forestry sector; • (There is an opinion) that TKDN requirements are not effective in encouraging the growth of the advanced wood industry because the level of independence of the manufacturing industry in Indonesia is still low, where the raw materials for making machines also still come from imports.
4.	One stop licensing system (OSS)	• Efforts to reduce complexity in the licensing process seek to increase the number of domestic timber industry businesses; • Increasing administrative capacity and business databases from various fields, including the timber industry.	This does not necessarily eliminate the complexity of the technical process, because permit applicants have to go through various stages among the related government institutions.

3.2. Wood Processing Production Flow

According to the Ministry of Industry (2007), the wood processing mechanism starts with procuring raw materials for various types of wood industry needs. Sources of raw materials can come from imported or domestic logs, where domestic log sources are further divided into two: from within forest areas and from outside forest areas. The round wood (log) then undergoes various forms of processing according to its needs. In the primary wood industry (upstream of the wood industry), this domain is still the responsibility of the forestry sector (KLHK - Ministry of Environment and Forestry) based on Article 179 paragraph (4) of the Minister of Environment and Forestry Regulation (Permen LHK) 8/2021. Types of processing that are still included in the upstream category include: cutting round wood, processing round wood waste, veneer, plywood, and laminated veneer lumber (LVL).

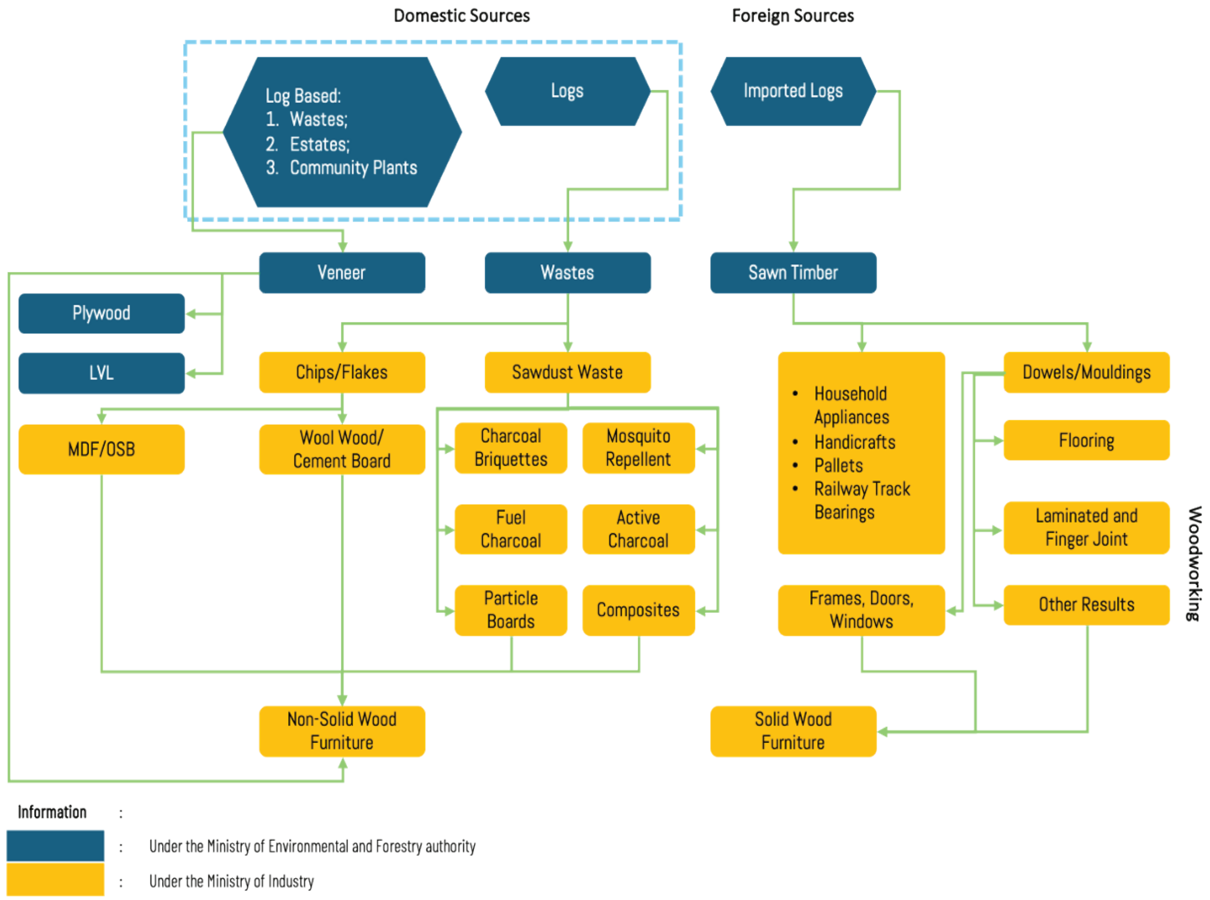


Figure 2 Wood processing industry flow diagram with adjustments

Meanwhile, further processing of the above derivative products is under the responsibility of certain agencies according to their fields. The processing of sawn wood, construction, and furniture industries itself is under the control of the Ministry of Industry (Kemenperind). These types of products include wood-based household equipment, woodcraft industry products, pallets, carriage bearings, frames, doors, window shutters, laminated wood, furniture components, finger joints, and furniture (Figure 2).

Based on the wood processing flow diagram and the focus of the paper study, the need for analysis of the supply of round wood raw materials will use various policies in the forestry sector as a basis. Furthermore, studies related to management policies for raw materials in the downstream wood industry, such as raw materials for construction, wood crafts, and furniture; will use policies originating from the industrial sector as a basis. The diagram also indirectly shows the abundance of stakeholders who influence and/or are affected by the availability of wood raw materials.

3.3. Identification of Needs and Constraints in the Sawn Wood Processing Industry

Based on the production flow in Figure 2 above, the types of timber businesses and various stakeholders can be mapped. This stakeholder map is needed to understand the relationships, needs, and obstacles in implementing policies in the sawn wood processing industry. Therefore, observations of these stakeholders need to be carried out. Not only that, the mapping of the parties in this research also aims to determine the responsibilities, rights, revenue, and relationships between one party and another based on the 4R framework (Dubois, 1998). By knowing the results of the weighting of these four factors (responsibilities, rights, relationships, and revenue), this research can better understand the needs, constraints, and various incompatibilities with each role in a set of institutional rules-in-form.

Institutions in this context do not only refer to organizations. According to (North, 1991), institutions are the boundaries that humans use to form political, social, and economic constructions; and consist of informal restrictions, such as sanctions, taboos, customs, traditions, codes of ethics, etc.; as well as formal boundaries, such as the legal constitution and property rights. Meanwhile, needs and constraints can be in the form of a lack or excess of "property rights" on the part of a party. The term property rights refers to the right to benefit from social relations, including institutions, which are dynamic depending on the role, position, and power of a party (Ribot dan Peluso, 2003).

3.3.1. Relationships between Stakeholders in the Sawn Wood Processing Industry in Pasuruan and Jepara

Based on the results of studies in the field and regulations governing upstream and downstream sawn wood processing processes, the actors with interests in this industry are divided into several typologies, namely:

1. National level:
   a. Ministry/government institutions;
   b. Non-ministry/government institutions;
2. Regional levels:
   a. Ministry/government institutions;
   b. Non-ministry/government institutions;
   c. others.

The relationship between the roles of the stakeholders as above is explained further in Table 2. This relationship explains the role and influence of each stakeholder in the sawn wood processing industry in Pasuruan, both formally and informally, to determine the various aspects observed, including multiplier effects, policy incentives, and disincentives, to optimize the roles required of these parties. The role and influence of stakeholders in Table 2 are measured based on 3 (three) size categories based on the modified 4R framework, namely: rights, responsibilities, and revenue. This weighting is needed to determine anomalies among stakeholders regarding their role in the sawn wood processing industry in Pasuruan (Table 4).

To simplify the assessment of the level of each verifier, the 3Rs in this study are limited as follows:

1. 'Rights' explains the rights that stakeholders have in making decisions as well as formulating and implementing policies (Zubayr et al. 2014), related to efforts to optimize the availability of raw materials, and increase productivity, quality, and competitiveness of wood products. This means that the higher the rights a stakeholder has, the greater the potential for that party to change a condition through the policies they implement. In this context, this means that the higher a party's rights category will be positively correlated with their potential to ensure effective policy implementation, in this context,

namely: sustainability of wood raw materials, increased productivity, quality, and competitiveness of wood products for the domestic market.

2. 'Responsibility' describes the duties and functions (Tupoksi) of a stakeholder, how they are implemented, and links them to optimizing the availability of raw materials, increasing productivity, quality, and competitiveness of wood products. The implementation of a party's responsibilities in this research can be seen from whether or not there are policy incentives issued by that stakeholder to increase the capacity of the advanced timber industry.
3. 'Revenue' explains the benefits these parties obtain from optimizing policy implementation in the advanced timber industry.

The tabulation results in Table 4 show that there are 23 stakeholders related to the sustainability of wood raw materials, productivity of the advanced wood industry, and quality and competitiveness of advanced wood products. Of this number, 16 parties have very high rights, 4 (four) stakeholders with high rights, 3 (three) stakeholders with sufficient rights, and 4 (four) with very low rights.

Stakeholders with very high rights categories are 1) KLHK; 2) Directorate General of PHL; 3) Ministry of Industry; 4) Directorate General of Agro-Industry; 5) Ministry of Investment/BKPM; 6) National level associations; 7) East Java Regional Government; 8) Pasuruan City Government; 9) Pasuruan Regency Government; 10) Jepara Regency Government; 11) Perhutani; 12) Central Java Province Department of Industry and Trade; 13) East Java Province Department of Industry and Trade; 14) East Java Provincial Forestry Service, 15) Pasuruan Wood UPTI, and 16) Semarang Class A BILK. This means that these stakeholders have a high level of property rights as a result of the duties and functions (Tupoksi) attached to each institution. Optimizing the high influence of property rights has the potential to influence the output of policies implemented by these stakeholders. Meanwhile, stakeholders with high rights categories, namely: associations, both at the national and regional levels, the Central Java Province Industry and Trade Service, and the East Java Province Industry and Trade Service. Furthermore, stakeholders with sufficient rights category are East Java Provincial Forestry Service and SMEs, both in primary and tertiary industries. Lastly are stakeholders with very low rights categories, i.e. consumers, brokers, woodworkers, and other parties related to the advanced wood industry.

Table 4. Weighting method for measuring the relationship between parties using the 4R framework

Category	Verifier		
	Rights	**Responsibility**	**Revenue**
Very High (4)	If stakeholders have rights and are very influential in policy implementation.	If stakeholders carry out their responsibilities and greatly influence the performance of policy implementation.	If stakeholders get direct benefits, by the objectives.
High (3)	If stakeholders have rights and have sufficient influence on policy implementation.	If stakeholders carry out their responsibilities and have sufficient influence on the performance of policy implementation.	If stakeholders get indirect benefits, follow the objectives.
Medium (2)	If stakeholders have rights and little influence on policy implementation.	If stakeholders carry out their responsibilities and have little influence on the performance of policy implementation.	If stakeholders get direct benefits, but it is not following the objectives.
Low (1)	If stakeholders have rights, do not influence policy implementation, or do not have rights but are influential.	If stakeholders fail to carry out their responsibilities, it will affect the performance of policy implementation.	If stakeholders get indirect benefits, but it does not meet the objectives.
Very Low (0)	If stakeholders do not have rights but influence policy implementation.	If stakeholders do not have responsibility regarding policy implementation.	If stakeholders do not get direct benefits.

Table 5. Stakeholder relationship structure in implementing domestic sawn timber industry policy in East Java

Avg.	Stakeholder	Verifier		
		Rights	**Responsibility**	**Revenue**
3,33	Ministry of Environment and Forestry	(4) Issue policies that affect the availability of raw materials, such as: licensing large-scale wood processing businesses, and SVLK.	(2) Responsible for raw materials, and large-scale timber business licensing which affects the availability of raw materials for the domestic timber industry. However, there has been no focus on providing policy incentives for the primary wood industry and mapping the domestic primary wood market.	(4) PNBP[7] revenues from forest wood extraction will be higher if market uptake of logs increases.

[7] Non-Tax State Revenue

Avg.	Stakeholder	Verifier		
		Rights	Responsibility	Revenue
3,67	Directorate General PHL[8]	(4) Formulating policies, NSPK[9], and providing technical guidance, especially in the primary wood industry sector (upstream wood industry).	(3) From the results of the interview, the Directorate General only has a limited program to increase the capacity of SMEs through the socialization of regulations.	(4) Benefit from PNBP revenue from collecting and utilizing logs in upstream areas of the timber industry.
4	Ministry of Industry	(4) Has the right to issue regulations in the industrial and trade sectors so that they affect the wood industry other than logs. The policies that have been issued have a broad spectrum that focuses on supporting the business climate.	(3) Responsible for supervision, empowerment, and support of infrastructure in the industrial sector; including the domestic wood industry (one of which is via subsidies for the purchase of wood processing equipment). However, no mapping has been carried out on the domestic wood market.	(4) Get direct benefits from PNBP receipts from services in the industrial sector.
4	Directorate General Agro-Industry	(4) Has the right to formulate various policies in the forest and plantation products industry, including the sawn timber industry.	(3) Responsible for the promotion, standardization, and development of the business climate, but no mapping has been carried out on the domestic wood market.	(4) Get direct benefits from PNBP receipts from services in the industrial sector.
2	Ministry of Investment/ Investment Coordination Agency	(2) Has rights related to investment management and investment, including for the timber industry.	(3) Regarding the wood industry, the existence of the OSS program is an incentive for business actors.	(1) There are no direct financial benefits for the agency.
3,67	National level association	(3) Gain market access from the domestic sawn timber industry with considerable influence to encourage new policies due to the diverse backgrounds of its members.	(4) In the context of this study, the association is responsible for ensuring a conducive wood business climate, both regarding the availability of raw materials and increasing the quality and competitiveness of its members' wood products.	(4) Obtain direct financial benefits from increased economic growth in the timber sector.

[8] Directorate General Sustainable Forest Management

[9] Norms, Standards, Procedures and Criteria (Provisions of laws and regulations stipulated by the central government as guidelines in the implementation of concurrent government affairs which are the authority of the Central Government and which are the authority of the regions)

Avg.	Stakeholder	Verifier		
		Rights	Responsibility	Revenue
4	Provincial Government of Jawa Timur	(4) Has the right to issue regulations that support the advanced timber industry, including updating the determination of the nominal amount of PAD for provincial-level Wood UPTI.	(4) Responsible for developing the wood industry including the formation of Pasuruan Wood UPTI via Gubernatorial Regulation 60/2018 to encourage advanced wood industry services.	(4) Obtain PAD[10] from fulfilling UPTI Kayu Pasuruan's service role.
4	City Government of Pasuruan	(4) Has the right to issue regional regulations and land management for Pasuruan City, including by building the Bukir Furniture Market as a policy incentive for SME entrepreneurs in the timber sector.	(4) Through Pasuruan Mayor Regulation 51/2016 concerning Pasuruan City Regional Service UPT, Pasar Bukir was formed to facilitate community wood businesses as well as facilitate various exhibitions for wood SMEs.	(4) Get direct benefits in the form of PAD from levies for managing the Bukir Furniture Market to taxes for wood entrepreneurs.
1,67	Regency Government of Pasuruan	(4) Has the right to issue regulations to support the timber industry. However, no regulatory incentives for the timber industry have yet been discovered.	(0) There are no incentives from Pasuruan Regency to facilitate timber entrepreneurs. All craftsmen in Pasuruan Regency sell to Bukir Market, Pasuruan City.	(1) The wood processing levy in Pasuruan Regency was revoked through Pasuruan Regency Regional Regulation 7/2013 so there is no direct benefit, but the existence of various furniture SMEs in Pasuruan Regency contributes to PAD via taxes.
3	Regency Government of Jepara	(4) Has the right to issue regional regulations and land management in Jepara.	(4) The results of field observations found that the Jepara Regency Government has contributed a lot to support the local wood industry, including by assisting with wood processing equipment and involvement in exhibition events for SMEs.	(1) Obtain indirect benefits from economic improvements generated by the timber industry.

10 Pendapatan Asli Daerah (Locally-Generated Revenues)

Avg.	Stakeholder	Verifier		
		Rights	Responsibility	Revenue
4	Perhutani	(4) Manage the work area and issue regulations regarding the quantity of wood that can be harvested in the work area so that it influences the abundance of wood raw materials for craftsmen.	(4) Perhutani's role is quite vital for the Pasuruan timber industry and has a broad impact. The quality of Perhutani's wood raw materials is well known, thus supporting the quality and competitiveness of wood products. The existence of the Toko Perhutani website encourages multiplier effects for log retailers.	(4) Obtain direct monetary benefits from the sale of logs.
2,33	Industry and Commerce Agency (Disperindag) of Central Jawa Province	(3) Development and technical consideration of business permits. Implementing optimal roles, and rights based on these main duties and functions plays a role in gradually increasing the ability of SMEs to improve the quality and productivity of wood products.	(3) Has a Jepara Wood Industry Installation (IIK) under the Class A Metal and Wood Installation Center (BILK), a special unit to support the wood industry that functions like the Pasuruan Timber UPTI.	(1) Obtain non-monetary indirect benefits, in the form of institutional performance assessments, from the operation of the domestic timber industry in Pasuruan.
2,33	Industry and Commerce Agency (Disperindag) of East Jawa Province	(3) Development and technical consideration of business permits. Implementing optimal roles, and rights based on these main duties and functions plays a role in gradually increasing the ability of SMEs to improve the quality and productivity of wood products.	(3) Just like in Central Java, this institution has the Pasuruan Timber UPTI to support the timber industry.	(1) Obtain non-monetary indirect benefits, in the form of institutional performance assessments, from the operation of the domestic timber industry in Pasuruan.
0,67	Forestry Agency of Jawa Timur Province	(2) Development and technical consideration of business permits. Implementing optimal roles, and rights based on these main duties and functions participates in gradually increasing the ability of SMEs to improve the quality and productivity of wood products.	(0) Based on East Java Gubernatorial Regulation 84/2016, the East Java Provincial Forestry Service carries out responsibilities that do not affect the climate of the domestic wood processing industry.	(1) Obtain non-monetary indirect benefits, in the form of institutional performance assessments, from PNBP receipts.

Avg.	Stakeholder	Verifier		
		Rights	Responsibility	Revenue
3,67	Pasuruan Wood Industrial Technical Management Unit (UPTI)	(4) Has the right to determine the form and theme of capacity building facilitation for business actors according to their needs, such as 1) exhibition facilitation, and 2) types of training that can contribute to increasing productivity, competitiveness, and quality of wood products.	(3) Carrying out its functions well, but not optimally in increasing the capacity of business actors. Has an impact on the domestic market through the convenience that SMEs receive from the services provided.	(4) Get direct benefits from the PNBP that this agency receives and submits to the East Java Provincial Government.
3,33	Semarang Class A Metal and Wood Industry Agency (BILK)	(4) Has the right to determine the form and theme of capacity building facilitation for business actors according to their needs, such as: 1) exhibition facilitation, as well as 2) types of training that can contribute to increasing productivity, competitiveness and quality of wood products.	(2) It is necessary to improve the implementation of duties and functions, especially to optimize the role of IIK Jepara under its responsibility which has limited human, and financial resources and wood processing equipment.	(4) Receive direct benefits from the PNBP that this agency receives and submits to the Central Java Provincial Government.
2	Upstream small and medium industry (SME) (primary wood industry)	(2) SMEs have the right to receive facilitation from government agencies related to improving the climate in the wood industry. However, without the existence of associations, they have little influence on policy.	(0) Regardless of the existence of associations, individual business actors do not have responsibilities that correlate with increasing raw materials, productivity, quality, and competitiveness of the wood industry.	(4) Get direct monetary benefits from the existence of the domestic wood industry.
2	Downstream small and medium industry (SME) (tertiary industry)	(2) SMEs have the right to receive facilitation from government agencies related to improving the climate in the wood industry. However, without the existence of associations, they have little influence on policy.	(0) Regardless of the existence of associations, individual business actors do not have responsibilities that correlate with increasing raw materials, productivity, quality, and competitiveness of the wood industry.	(4) Get direct monetary benefits from the existence of the domestic wood industry.

Avg.	Stakeholder	Verifier		
		Rights	Responsibility	Revenue
3	Regional level associations[11]	(3) With certain institutional capacities and relationships, this party has market access from the domestic sawn timber industry with considerable influence to encourage new policies due to the diversity of its members' backgrounds.	(3) In the context of this study, the association is responsible for ensuring a conducive wood business climate, both regarding the availability of raw materials and improving the quality and competitiveness of its members' wood products. However, in the context of the newly established ASMINDO Pasuruan, this responsibility has not yet seen an impact.	(2) Based on the results of field observations, the association, especially ASMINDO[12], was only formed in Pasuruan so members felt they had not received any benefits. Meanwhile, FORMEKERS[13], which has been established for a long time, is still limited to the Pasuruan area and has not been able to overcome obstacles related to policy needs that require Central Government intervention.
1,33	Consumers	(0) Regarding the timber industry, consumers have no rights or have very limited rights. However, their preferences influence policy considerations to increase the uptake of wood products, in this case domestically.	(0) Not responsible for the advanced timber industry.	(4) Based on field observations, the existence of wood centers provides direct benefits for consumers who act as wood product retailers in other areas.
1,67	Middlemen	(0) Middlemen generally do not have special rights regarding the advanced timber industry, especially because their existence is often seen as the cause of high timber prices.	(0) Not responsible for the advanced timber industry.	(4) Receive direct monetary benefits from the existence of an advanced lumber industry. The more purchases, the more logs they can sell.

11 The average score for this party is the result of a combination of the two observed associations
12 Asosiasi Industri Permebelan dan Kerajinan Indonesia - Indonesian Furniture and Crafts Industry Association
13 Forum Mebel Kerajinan dan Seni Pasuruan - Pasuruan Crafts and Arts Furniture Forum

Avg.	Stakeholder	Verifier		
		Rights	**Responsibility**	**Revenue**
1,33	Woodworker	(0) There are no specific rights regarding the advanced timber industry nor are they involved in associations.	(0) Not responsible for the advanced timber industry.	(4) Receive direct monetary benefits from the existence of an advanced lumber industry. The more purchases, the more work for them.
1,33	Other entrepreneurs related to the wood industry	(0) There are no special rights for this party because usually they not only gain profits from one sector but also other sectors, for example: warehouse entrepreneurs who will rent out their warehouses not only to wood SMEs but also to farmers who do not have warehouses, etc.	(0) Not responsible for the advanced timber industry.	(4) Based on field observations, these entrepreneurs can be warehouse entrepreneurs, transportation entrepreneurs, etc. They received direct monetary benefits from the advanced lumber industry.

The assessment results in Table 4 also show that there are 5 (five) stakeholders with a very high assessment of the implementation of their responsibilities and this correlates with efforts to improve the domestic wood processing industry. The parties are national-level associations, East Java Regional Government, Pasuruan City Government, Pasuruan Regency Government, Jepara Regency Government, and Perhutani. Furthermore, 8 (eight) stakeholders are in the high category in carrying out their responsibilities (Directorate General of Sustainable Forest Management, Ministry of Industry, Directorate General of Agro-Industry, Ministry of Investment/BKPM, Central Java Province Industry and Trade Service, East Java Province Industry and Trade Service, UPTI Kayu Pasuruan, and regional level associations), 2 (two) are in the sufficient category (KLHK and Semarang Class A BILK), while the rest are in the very low category (8 entities).

Regarding the assessment of the revenue verifier that stakeholders can obtain from the existence and quality of the domestic wood industry, there are 16 stakeholders in the very high revenue category. These parties are KLHK, Directorate General of PHL, Ministry of Industry, Directorate General of Agro-Industry, Ministry of Investment/BKPM, national level associations, East Java Provincial Government, Pasuruan City Government, Pasuruan Regency Government, Jepara Regency Government, Perhutani, Central Java Province Department of Industry and Trade, East Java Province Disperindag, East Java Provincial Forestry Service, Pasuruan Timber UPTI, Semarang Class A BILK, SMEs (both upstream and downstream of the wood industry), regional level associations, consumers, wood brokers, woodworkers, and other related entrepreneurs wood industry. The forms of benefits received by each of these stakeholders vary, from PNBP to monetary benefits from sales, or other activities related to the timber industry. The weighting results also found that there was one entity with a sufficient revenue assessment (regional level association), and 6 (six) entities with a low revenue assessment, namely: Ministry of Investment/BKPM, Pasuruan Regency Government, Jepara Regency Government, Java Province Industry and Trade Service Central, East Java Province Industry and Trade Service, East Java Province Forestry Service. The low assessment of the revenue verifier of BKAD is due to the lack of direct benefits from the existence of the timber industry for this agency.

The assessment results found that associations at the provincial or district level only received sufficient benefit categories because, based on observations, members of the association or association at the provincial or district level had not been able to maximize the function of the association for the development of their business. Some problems that have not been able to be solved by associations at the provincial or district level, such as FORMEKERS (Furniture Crafts and Arts Forum) and ASMINDO (Indonesian Furniture and Crafts Industry Association) - Pasuruan Branch, include the sluggish domestic wood market and the high costs of shipping wood products to consumers - an issue that should be solved by the existence of the association. The results of interviews with several wood industry players and members of a local association stated that there were similar challenges in the domestic sawn wood market due to the unequal distribution of the domestic wood market amidst the mushrooming number of SMEs.

The results of findings in the field and 3R analysis as in Table 4 also found stakeholder anomalies related to the increase in the domestic advanced wood industry. This anomaly arises due to a mismatch between the rights owned and the implementation of stakeholder responsibilities. This means that there needs to be adjustments in the implementation of responsibilities for these parties so that they can play a more active role in improving the domestic wood industry according to their duties and functions. Some stakeholders who are indicated to require role adjustments due to less-than-optimal implementation of responsibilities are:

1. Ministry of Environment and Forestry;
2. Ministry of Industry;
3. Directorate General of Sustainable Forest Management at the Ministry of Environment and Forestry;
4. Directorate General of Agro-Industry under the Ministry of Industry, and
5. Pasuruan Wood UPTI.

Meanwhile, there is one stakeholder that needs to adjust its role due to the lack of optimal benefits received, namely the timber association at the provincial or district level. In contrast to the implementation of the role of associations at the national level (Central Management Council - DPP) which can encourage various forms of policies needed by timber industry players, associations at the regional level still seem to have difficulty carrying out this function.

3.3.2. Incompatibility of Stakeholder Roles in the Domestic Wood Industry in Pasuruan

To simplify the discussion, this study will explain any discrepancies in the roles of stakeholders based on issues related to the surrounding wood industry. Observations on this issue were carried out based on literature studies, FGDs, direct observations, and interviews with the parties concerned. These issues are:

1. Upstream timber industry:
   a. Lack of capacity-building facilitation for SMEs operating in the primary wood industry as suppliers of raw materials for the wood industry;
   b. There is no integrative timber marketing mapping available to the public;
   c. There are still many timber entrepreneurs who do not have permits for their wood industries in particular the SMEs.
2. Downstream timber industry:
   a. The lack of optimal capacity-building training, including professional certification, for SMEs to increase the productivity, quality, and competitiveness of wood products;
   b. Implementation of policy revitalization of wood processing equipment/machinery which is hampered by TKDN regulations;
   c. Limited human resources in collective wood processing facilities;
   d. There is no marketing mapping for advanced wood products for the domestic market nor the national strategy nor the national council responsible in developing the sustainable domestic market for wood products, as well;
   e. There are still many timber entrepreneurs who do not have permits for their wood industries in particular the SMEs .

3.3.2.1. Upstream Wood Industry

Referring to Minister of Environment and Forestry Regulation No. 8 of 2021 concerning Forest Governance and Preparation of Forest Management Plans, as well as Forest Utilization in Protected Forests and Production Forests, governance of the timber industry in upstream areas is still the authority of forestry agencies. The granting of authority to other sectors, as in Article 179, is only carried out if the raw materials used for industrial purposes are not logs. A similar thing can also be seen on the OSS licensing application page[14] which has divided the timber industry licensing mechanism not only based on annual volume but also the type of raw material. The codification for each Standard Classification of Indonesian Business Fields (KBLI) on this page also divides the licensing forms properly between the forestry and industrial sectors. This shows that the factual role of all agencies in the forestry sector related to the timber industry includes, not only related to forest area management but also the round wood processing industry. Not only the forestry sector, but parts of the upstream timber industry are also the domain of investment through OSS.

The roles of these two institutions in the upstream area of the timber industry are interrelated. The Ministry of Investment/BKPM which is responsible for licensing will have an indirect impact on the climate for managing forest products and the primary wood industry which is handled by the Ministry of Environment and Forestry as well as the management directorate which specializes in the forestry industry, namely the Directorate General of PHL. Based on Article 7 of BKPM Regulation no. 5 of 2021 concerning Guidelines and Procedures for Supervising Risk-Based Business Licensing, the implementation of this supervision is carried out by various agencies, including:

1. Investment Coordinating Board (BKPM) in the OSS system;
2. Provincial DPMPTSP[15] if the licensing authority is in the provincial area;
3. Regency/City DPMPTSP if the licensing authority is at the district/city level;
4. Manager of Exclusive Economic Zones (KEK) if the authority is at that level, or
5. Free Trade Zone and Free Port Supervisory Agency (KPBPB).

One-stop licensing, supervision, and information collaboration by the Ministry of Investment/ BKPM, if implemented properly can be very useful, not only for the Ministry of Environment and Forestry but also for strengthening the climate for the wood industry as a whole. Some data that can be used include:

1. Industrial installed capacity and fulfillment of wood raw materials as in the Wood Industry Raw Material Fulfillment Plan (RPBBI);
2. The type and quality of production equipment that can be the basis for estimating the industry's target market, up to
3. Map of the domestic wood market which is currently not available in Indonesia.

However, facts on the ground show that there are many wood processing industries operating without any legal permits. The rise of this non-legal wood industry, based on the FGD at the Malang Creative Center, is one of the reasons why it is difficult to carry out mapping of the domestic wood industry, both by the Ministry of Environment and Forestry as the upstream sector and the Ministry of Industry as the downstream sector. This shows a weak implementation of coordination among forestry and industry sectors with authorized stakeholders, namely the integrated policy.

If we look at the industrial sector, the Ministry of Industry and its subordinate agencies have developed various forms of policy incentives, both at the central and regional levels, to encourage the growth of the wood processing industry. Several policy incentives to encourage the growth of the advanced wood industry that have been implemented by industrial sector agencies include:

1. Establishment of technical centers and units to facilitate capacity building and low-cost rental of wood equipment to SMEs engaged in the advanced wood industry;
2. Providing subsidy support in the form of reimbursement of part of the costs of purchasing

[14] Website available at OSS.go.id
[15] Dinas Penanaman Modal dan Pelayanan Terpadu Satu Pintu - Investment and One-Stop Integrated Services Agency

wood processing equipment through Minister of Industry Regulation (Permenperind) No. 42 of 2022 concerning the Machinery and/or Equipment Revitalization Program for the Wood Processing Industry;

3. Establishment similar institution like the Furniture and Wood Processing Industry Polytechnic by the Ministry of Industry in Kendal, or optimization of an existing university or vocational school in woodworking to be as advanced as Furniture and Wood Processing Industry Polytechnic by the Ministry of Industry in Kendal or Wood Working Vocational School (SMK PIKA) Semarang, to;
4. Establishment of an Integrated Timber Terminal (TPT) which is also in Kendal.

As a result of interviews with respondents from the Directorate General of PHL, it is known that the Ministry of Environment and Forestry as a whole or the Directorate General of PHL has carried out various training activities for primary industry SMEs, socializing and disseminating current regulations to increase capacity to encourage the primary wood industry. Optimizing the role of forestry agencies in the downstream wood industry also has the potential to increase the contribution of this sector to the processed wood industry.

On the other hand, the problems of the domestic wood market in Pasuruan are not only related to the sluggish market both export and domestic market. Based on the words of one high-ranking furniture association official at the national level who understands this issue, another problem that generally arises in this industry is the need to revitalize wood processing equipment, including in the upstream areas of the wood industry which are currently not the domain of industrial agencies including Pasuruan Wood UPTI. Looking at Article 179 paragraph (4) of Minister of Environment and Forestry Regulation 8/2021, the wood industry is the domain of industrial agencies only for furniture and pulp, while the upstream area is still the domain of agencies in the forestry sector. Resolving this issue certainly requires collaboration with other agencies working in the forestry sector, under the Directorate General of PHL, the Ministry of Environment and Forestry.

Meanwhile, until now, forestry agencies such as the Ministry of Environment and Forestry do not have a policy to solve the need for the revitalization of wood processing machines for primary industry business players, especially SMEs. This is in contrast to the Ministry of Industry which has issued policy incentives in the form of subsidies to support revitalization efforts for SMEs related to the purchase of wood processing equipment as regulated in Minister of Industry Regulation 42/2022 concerning the Revitalization Program for Machinery and/or Equipment for the Wood Processing Industry.

The weighting results for the implementation of the Directorate General of PHL's responsibilities regarding the domestic wood industry are considered moderate with a value of 2. One of the points that reduces the total weighting average is in the aspect of its responsibilities which are only related to the Timber Legality Verification System (SVLK) to ensure that the processed wood is legal. Based on respondents in the regions, many people are reluctant to apply for SVLK unless they act as exporters.

Therefore, increasing the role of this agency to improve the domestic timber industry is a logical alternative. This increased role could take the form of establishing a special unit to handle various activities in the form of facilitation for primary industry players or increasing the involvement of the Ministry of Environment and Forestry in the wood industry, especially primary. To synergize with the needs of Pasuruan Wood UPTI and Class A BILK Semarang in the following/advanced wood industry (explained in the next section of the article), collective wood processing facilities in the upstream (primary) industry can take the form of a Regional Public Service Agency (BLUD) to ensure flexibility in budget use within the institution.

3.3.2.2. Downstream Timber Industry

Issues in the downstream area of the timber industry are not much different from the problems that arise in the upstream area. One of these problems is that there are still many companies that do not have business permits. This issue emerged in an FGD held by Brawijaya University, where representatives of the Forestry Service Branch (CDK), both Nganjuk, Malang, and Trenggalek; complained about the large number of wood industry without any legal license in his working area. Efforts to assist illegal SMEs did not produce results because sanctions/punishments were never implemented. Just like in the upstream area, this issue needs to be of concern to the government, in this case, the Ministry of Investment/BKPM at the national level, and DPMPTSP at the provincial level.

Another problem that is similar to the upstream area of the timber industry is that there is no integrative mapping related to the timber industry, especially for the domestic market. This lack of mapping results in a lack of effective policy incentives that need to be implemented to encourage the growth of the advanced timber industry in Indonesia. This is because mapping of the domestic timber industry and market is very necessary to obtain various information that leads to the preparation of effective policy incentives, such as:

1. The need and origin of specific wood as raw materials related to the domestic market;
2. Industrial capacity required to fulfill the domestic market;
3. Types of products that are preferred by domestic consumers, up to;
4. Work plan based on various information and needs.

However, efforts to support the advanced wood industry for the domestic market have been carried out by various government agencies, especially for downstream industries. One form of policy incentive implemented is the rebuilding of the Bukir Furniture Market after the fire by the Pasuruan City Government in 2017. This market is of important value for SMEs in Pasuruan considering its role in facilitating the marketing of wood and furniture products because before the redevelopment was carried out many wood SMEs held merchandise along Jl. Basuki Rahmat, Gadingrejo District, Pasuruan City which caused traffic jams. This activity generally occurs on Saturdays, the day when wages are paid to woodworkers and laborers.

The revitalization of the Bukir Furniture Market is a form of implementing the Pasuruan City Government's responsibility towards its community and has an impact on the local wood industry. However, the results of observations show that the existence of the Bukir Market has not completely resolved the problem of the sluggish domestic market for the wood industry. This can be seen from the number of SME wood entrepreneurs who go around every wood showroom on Saturdays to sell their wood products cheaply to pay their workers' salaries. The rise of online markets which make it easier for consumers to choose wood products practically, thereby causing changes in consumer buying culture, is thought to have contributed to the sluggish domestic wood market, coupled with the widespread presence of wood substitute products on these platforms. This is evident from the statements of several respondents from the SME business community: most of the wood buyers who come to their shops are their old customers - and usually resell in the consumer's hometown after going through the wood finishing process independently.

The explanation above also indirectly shows the lack of capacity of many wood entrepreneurs in Pasuruan which has an impact on the low preference of domestic consumers for wood products in Pasuruan:

1. Not optimal use of internet-based media as an alternative method for selling wood

products, and
2. The low quality of craftsman wood finishing means that most middlemen from other cities choose to carry out the process independently.

The sluggish timber market is also sensed by SMEs in the wood industry in the Central Java area. According to Jepara IIK staff, the export turnover of advanced wood sales fell by 11%. Meanwhile, the sales turnover of advanced wood products for the domestic market, although there are no exact figures due to the absence of domestic market data, has experienced a drastic decline. Several Jepara wood craftsmen have a share of the domestic market - which is dominated by micro-entrepreneurs, to the point where some have to sell their personal belongings just to meet their daily living needs.

The decline in export sales can be understood as a result of the geopolitical turmoil currently occurring in Europe one of the largest markets for wood product exports. Many export destination countries may reduce their wood product spending budget and divert it to other urgent needs. However, these challenges should not occur in the domestic market. Unfortunately, the unavailability of domestic market mapping for the advanced wood industry makes it difficult to determine the cause of the decline in domestic uptake of advanced wood products. Until now, the government, both in the forestry and industrial sectors, can only suspect that wood substitute products are the cause of the decline in consumer interest in wood products which has led to shrinking sales.

To solve this problem, business actors need to find alternatives, related to product design, product type, sales methods, and new targets for marketing advanced wood products. All knowledge for advanced timber business actors regarding these alternatives can be disseminated through various capacity-building forums. In the downstream area of the wood industry, this domain is the authority of the industrial sector through the Timber UPT under the Provincial Agency of Industry and Trade (Disperindag) as a means of collective wood processing at the site level. However, it turns out that various collective wood processing facilities in Pasuruan and Semarang also have limited budgets to carry out their duties and functions.

For the Pasuruan Wood UPTI, one of the service functions provided to the community is wood processing work services. This function is carried out well through the rental of various equipment and wood processing facilities at very affordable prices so it is useful for helping SMEs that have limited wood processing equipment so that they can support their business. However, it turns out there is pressure on Pasuruan Wood UPTI to gain profits from rental and service services rather than just contributing to the PAD of East Java Province. This isn’t easy to implement because based on data, the operational costs of Wood UPTI per year are much greater than the income obtained from work services which are charged to SMEs as consumers of UPTI Timber services.

Looking at data for 2021 - 2023, the contribution of Pasuruan Wood UPTI to East Java’s PAD often exceeds the annual target set by the Regional Finance and Assets Agency (BKAD) through the East Java Governor’s Regulation. For example, Pasuruan Wood UPTI’s contribution to PAD in 2019 was IDR. 229,931,100 (91.97%) (East Java Industry and Trade Service, 2019), amounting to IDR 241,383,600 in 2020 (121%) (East Java Industry and Trade Service, 2020), and IDR 224,187,000 in 2022 (105%) (East Java Industry and Trade Service, 2022). This data shows that Pasuruan Wood UPTI has a very good performance if the assessment is carried out based on the achievement of its contribution targets to East Java’s PAD.

Therefore, the pressure to increase the PAD contribution for Pasuruan Wood UPTI has no reason, because the agency is not in the form of a Regional Public Service Agency (BLUD) which can more flexibly manage finances. Moreover, the nominal service fees for using equipment and renting land and buildings are standard values determined based on Governor Regulation. This nominal cannot be changed even if the rental fee set is smaller than operational needs (such as electricity use, machine maintenance, etc.). Because the nominal amount for using equipment and renting land and small buildings is aimed at helping and providing services for SMEs.

The role of UPT in helping the community was recognized by several respondents with backgrounds in wood product SMEs who were customers of Pasuruan Wood UPTI's services. Most said that Pasuruan Wood UPTI had helped the community, especially with the wood processing services. Not only because Pasuruan Wood UPTI has complete wood processing equipment, but the existence of this kind of service is essential at any time when SMEs receive orders beyond the capacity of the number of wood processing machines they own. Moreover, the service costs offered by Pasuruan Wood UPTI are much lower than those applied by the private sector[16].

Table 6. Cost of work services at Pasuruan Wood UPTI

Employment Services	Unit	Price (IDR)	Employment Services	Unit	Price (IDR)
Planner/ Drawstring			Window		
A. Thickness > 2cm			○ l> 70cm	Item	70.000
○ 1 side	m^3	60.000	○ l<70cm	Item	50.000
○ 2 sides	m^3	120.000	Sharpen Planner blade		
○ 3 sides	m^3	180.000	○ ≤ 30cm	Item	17.500
○ 4 sides	m^3	240.000	○ ≤ 40cm	Item	20.000
A. Thickness < 2cm			○ ≥ 51/60cm	Item	25.000
○ 1 side	m^3	85.000	Sharpen Profiling Blade	Item	5.000
○ 2 sides	m^3	170.000	Tenon oval	m	10.000
○ 3 sides	m^3	255.000	Mortiser	m	10.000
○ 4 sides	m^3	340.000	Double planner	m^3	220.000
Circle	m^3	130.000	Moulding 4 Spindle	m^3	300.000
Radial cut	m^3	130.000	Hydraulic Lamination Press	m^3	750.000
Profiling	m^3	1.000	Manual Lamination Press	m^3	200.000
Drill	m^3	5.000	Jointer	m^3	150.000
Sempono	m^3	1.000	Compressor	Day	50.000
Moulding Panel	m^3	1.000	Sanding master	m^3	400.000
Circle Panel	m^3	900	Vertical Sanding	m^3	100.000
Connecting Rods	m^3	5.000	Band saw	m^3	200.000
Dowel	m^3	1.000	Hand tools	m^3	150.000
Jig saw	Hole	1.000	Open land rental	m^3/month	15.000
Jamb	Hole	50.000	Closed land rental	m^3/month	20.000
Doors	Item	160.000	Classroom	Day	750.000
Vent	Item	30.000	Laptop	Day	450.000
Sharpen TCT saw	Blade	300	LCD	Day	350.000
Electric Screen	Day	100.000	Manual Screen	Day	50.000

16 One respondent gave an example of the cost of dowel-making services per meter at Pasuruan Wood UPTI being Rp. 400,- compared to processing similar components in private wood processing businesses.

However, on the other hand, Pasuruan Wood UPTI is also hampered in carrying out technical assistance functions, especially those related to capacity building and training. Even though it has an annual budget of IDR 2,015,000,000, the budget item for carrying out technical assistance and training is only IDR 59 million. These budget limitations cause a lack of implementation of the coaching function. This function is needed for SMEs assisted by Pasuruan Wood UPTI to be able to slowly change the various mindsets of SMEs there which are currently a limiting factor in the growth of the advanced timber industry.

The same thing also happened with UPT in Central Java, namely Semarang Class A BILK with Jepara IIK as its extension. According to the Head of Semarang Class A BILK and the Sub Coordinator of Jepara IIK under Semarang Class A BILK; Jepara IIK also has a limited budget to carry out the duties and functions of its agency optimally. These budget limitations not only result in the absence of training activities for SMEs but also the absence of professional certification facilities - both for Jepara IIK staff and advanced wood industry SMEs.

The duties and functions of assisting SMEs in the wood industry in Central Java Province are only the responsibility of the Department of Industry and Trade at the provincial level. This has also been confirmed by one of the Semarang Class A BILK staff who stated that the agency does not have a budget post to carry out training or mentoring because it is entirely located in the Central Java Department of Industry and Trade. This is reinforced by Article 5 of East Java Governor Regulation No. 90 of 2021 concerning the Organization and Work Procedures of the Technical Implementation Unit of the Department of Industry and Trade of Central Java Province, where the duties and functions of Semarang Class A BILK which oversees Jepara IIK are only related to preparation of technical plans, technical coordination and implementation, evaluation and reporting, and implementation of business administration.

On the other hand, Jepara IIK's role as a collective wood processing facility is also not running optimally. Even though it is located in an established advanced wood industry center, Jepara IIK only has a total of 8 (eight) staff, consisting of a Coordinator, a Customer Service, three workshop workers, and three security guards. Various processing equipment at Jepara IIK is old. Some of them are no longer functioning due to limited maintenance budgets.

The processing machine maintenance budget available to Jepara IIK each year is only IDR 39 - 89 million (Table 7). This nominal value includes the cost of oil changes and periodic machinery maintenance. Based on data from Semarang Class A BILK, the nominal budget for engine maintenance varies depending on the availability of the remaining budget because the existing budget is divided among seven other installations. Therefore, if machine damage occurs when the current year's budget has been exhausted, repairs will only be able to be carried out in the following year, thereby hampering service rental activities.

These limited conditions can also be seen from observations of the wood processing equipment available there. Based on the equipment inventory in the Road Map document for the Development of Metal and Wood Industry Centers in Central Java[17], Jepara IIK has a total of 11 wood processing equipment (Table 9). Of these, we found three tools that needed repair, namely: 1) planner, 2) heavy-duty planner, and 3) dust collector. Under these conditions, it is difficult for Jepara IIK to carry out its duties and functions optimally.

[17] Semarang Class A BILK internal documents, not public. Available at: https://drive.google.com/file/d/1adJhol5OuclStCFR-HVyNPf-NDiq6ZDd1/view?usp=share_link

Table 7. Annual budget for maintenance of wood processing machines at Jepara IIK

Year of Allocation	Date/Work Order Number	Nominal (IDR)
2021	027/124.1/2021	39.350.000
2022	027.2/125.1/2022 dan 027.2/215/2022	89.430.000
2023	N/A	57.860.000

Table 8. Cost of employment services at Jepara IIK

No.	Retribution Type	Unit	Fee (IDR)
1.	Rip saw	Per Day	550.000
2.	Planner	m^3	330.000
3.	Tenon Mortiser	m^3	440.000
4.	Crosscut	Set	1.350
5.	Spindle	Piece	300
6.	Dowel	m	2.000
7.	Boring	m	2.000
8.	Finger joint	Hole	250
9.	Molding	m^3	500.000
10.	Laminating	m^3	700.000
11.	Sanding master	m^3	25.000

These various limitations mean that not many SMEs feel helped by the existence of Jepara IIK. This was acknowledged by several timber entrepreneurs in Jepara who agreed to be interviewed. According to one local wood entrepreneur, not all wood processing work can be carried out at this agency due to limited equipment. Not only related to the limited processing equipment but it was also found that several items of wood processing service costs at IIK Jepara were more expensive when compared to the costs for the same items by the private sector. Meanwhile, the progress of the wood industry climate in Jepara has meant that many business actors can access wood processing equipment according to their needs and rent it out to other business actors. Jepara's position as a center for the wood industry has also fostered strong wood and furniture industry associations, where business people can join and use equipment. One of the wood and furniture industry associations operating in Jepara is HIMKI. Currently, the association is trying to encourage good political will from the government to increase market opportunities for wood processing SMEs.

Table 9. Types of wood processing equipment at Jepara IIK based on the Road Map document for the Development of Metal and Wood Industry Centers in Central Java

Equipment Name	Year of Acquisition	Condition	Product Function/Results
Tenorer	2004	Good	Function: Make holes in the wood using a drill bit that has a guard blade Product: Flanagan
Feeder	2006	Good	Function: Filling a product to maximize production (tools)
Spindle moulder	2014	Good	Function: Create a profile on the side of the wood Product: skonengan, jamb, profiles.
Table circular saw	2014	Good	Function: Cutting and splitting wooden surfaces Product: furniture components
Planner	2010	Lightly damaged	Function: Equalize the thickness of the wood. Product: furniture components
Heavy duty planner	2014	Lightly damaged	Function: Equalize the thickness of the wood. Product: furniture components
Horizontal Boring	2006	Good	Function: Hollow out the workpiece. Product: furniture components
Radial arm saw	2006	Good	Function: Cutting the edge of a wooden surface. Product: furniture components
Jointer planner	2006	Good	Function: Evens the surface of the wood, and overcomes the curvature of the wood surface. Product: furniture components

This effort arose from internal information in HIMKI regarding the very large nominal budget for providing school seats throughout Indonesia. According to one HIMKI member, the nominal amount needed to provide school seats in Indonesia reaches IDR 20 trillion and this budget does not include other components of school facilities. Meanwhile, on the other hand, the domestic market for advanced wood is currently receding. In fact, according to the Jepara IIK Coordinator, several small and medium enterprises under their guidance specifically sell their wood products for the domestic market and have had to sell their valuables due to sluggish demand.

Based on the results of interviews with HIMKI administrators, the good political will desired from the government is the existence of policy incentives that require the procurement of wood-based facilities and infrastructure for all government agencies to use local products with certain specifications that support SMEs. Furthermore, this policy is also strengthened through regulations that regulate technical mechanisms to ensure that such procurement activities can be enjoyed by SMEs through consortia with certain requirements. The existence of such a policy is expected to encourage the growth of the wood processing industry in Indonesia, especially for the domestic market.

The need for policy incentives from the government to encourage the provision of facilities and infrastructure from government agencies to such SMEs is not only expressed by HIMKI. The reason is that based on the results of an interview with the Secretary of ASMINDO, currently, the association is also pushing for the implementation of a similar policy. According to him, due to the absence of a policy that technically regulates the requirements for such pro-SME procurement, the implementation of school bench procurement is controlled by a handful of large advanced timber entrepreneurs.

Efforts to legalize these policy incentives by associations are carried out through various methods, both formal and non-formal. Formal efforts include providing presentations regarding policy incentives needed by SMEs at various formal events attended by government representatives. One example of these efforts was made in delivering a presentation entitled "SME Strategy for Suppliers of IKN[18] Furniture and Crafts[19]" at the ASMINDO National Leadership Meeting (Rapimnas) in Semarang on January 19, 2023. The various efforts made by the association to encourage improvements in the wood industry climate show their high role. This is the result of an assessment of the role of high-level national associations in the wood processing industry in Indonesia.

Ideally, the efforts made by various national-level associations to grow the domestic market for the processed wood industry will have more impact if there is a collaboration between the associations and related government agencies. This is because the association's efforts to encourage the involvement of SMEs in the procurement of infrastructure for government agencies will have various side impacts so that they can run. The involvement of SMEs in the procurement of facilities and infrastructure will require various specific mechanisms to ensure quality assurance and conformity to product specifications. Not only that, the procurement of facilities and infrastructure for government agencies can have large volumes, so aggregator organizations such as consortia or cooperatives are important for small business actors to be involved. With the existence of various new mechanisms such as this, socialization for SMEs has become important, and is the responsibility of site-level agencies such as Pasuruan Wood UPTI or Semarang Class A BILK and/or Jepara IIK. The function of capacity building and training at various site-level agencies should be regulated, budgeted, and run optimally; regardless of whether or not the policies pushed by the association are promulgated. This is important because agencies at the site level are generally parties who are in direct, close contact and know the culture of the local community.

Unfortunately, as previously explained, both Wood UPTI and Class A BILK have not been optimal in carrying out this role. Wood UPTI is constrained by a minimal training budget for the community, while Class A BILK does not even have that role. This means that to increase the role of the two collective wood processing facilities, it is necessary to establish special budgets and functions so that the two site-level agencies can play an optimal role in increasing the capacity of SMEs around them.

It doesn't stop there, increasing the role and optimizing the function of the existence of collective wood processing facilities at the site level also needs to be carried out to ensure flexibility for these parties in managing the budget. This flexibility can ensure that wood processing facilities at the site level can meet their various internal needs, such as human resources and wood processing machines, to support the growth of the wood processing industry around them. The reason is that currently both Pasuruan Wood UPTI and Semarang Class A BILK are also having problems carrying out their duties and functions due to limited human resources. In fact, for Semarang Class A BILK, the issue also arises from the urgent need for the revitalization of wood processing machines.

To achieve budget flexibility as intended, the transformation of the institutional form of the two agencies into a Provincial Public Service Agency is important. In this way, the role of these two wood processing facilities at the site level will increase because they will not only be related to technical

[18] (New) State Capital (of Indonesia)
[19] Presentation by representatives of the Ministry of Cooperatives and SMEs at the ASMINDO National Meeting, Semarang 19 - 21 January 2024. Available at: https://drive.google.com/file/d/1rb9a5diCnX266sQsSb91rl4HbKrMdD1d/view?usp=share_link

matters. Apart from that, the transformation of these two agencies into BLUDs will also increase their flexibility to build various business units as specifically needed in their work areas, such as the need for a transportation business unit in Pasuruan.

However, the need for transformation into a BLUD for the two collective wood processing facilities also requires several adjustments to the policies currently in effect, especially those related to the unit costs of services for the two parties. This is due to the current service unit costs being low, cost-sharing in nature, and limiting their income. The current low unit rates for these services can be understood because the duties and functions of the two collective wood processing facilities are services to the community. In this way, both Pasuruan Wood UPTI and Semarang Class A BILK (through Jepara IIK) can help provide affordable wood processing services for SMEs. However, this means that the operational costs of these two agencies are always higher than their contribution to PAD each year. Therefore, revision of the regulations which are the basis for implementing cost sharing at UPTI Kayu Pasuruan and Semarang Class A BILK is necessary.

3.3.3. Summary of Analysis of the Role of Stakeholders in the Domestic Wood Industry

Based on discussions related to the role of stakeholders in the wood processing industry, it was found that several stakeholders needed to adjust their roles to be more optimal. Optimizing the role of these stakeholders is necessary to increase their contribution to the domestic wood processing industry by adjusting the roles and responsibilities of these parties with their rights. A summary of the results of the analysis of the roles of these parties is presented in Table 10. The conclusion from the results of the analysis, as in Table 10, shows that optimizing these roles is needed by stakeholders in both the primary wood industry (forestry sector) and the advanced/following wood industry (industry sector) including various collective wood processing facilities.

Furthermore, various policy recommendations needed to support the domestic processed wood market and collective wood processing facilities will be explained in the next section of this article. The discussion regarding the policy recommendations as intended will be a combination of the results of an analysis of policy gaps related to the sustainability of raw materials, policies to increase the productivity and competitiveness of wood products, as well as the need to optimize the role of stakeholders involved in the processed wood industry.

Table 10. Summary of the need to improve the role of parties in the wood processing industry

No.	Stakeholder Name	Findings	Required Role Adjustments
1.	Ministry of Environment and Forestry	Has a very high score on the rights verifier. This shows the great potential of policy settings to support the timber industry. However, these stakeholders are still limited in providing incentives for SMEs, both related to providing training and supporting the revitalization of wood processing equipment. Mapping of the timber industry is also not yet available.	1. Increasing training and capacity-building activities for SMEs; 2. Develop incentive policies to support accessibility and efforts to revitalize wood processing equipment for SMEs; 3. Encouraging the availability of the wood industry, to help SMEs and policymakers in developing new incentives and regulations related to the wood industry.
2.	Directorate General of Sustainable Forest Management, MoEF		
3.	Ministry of Industry	Has a very high assessment of rights, responsibility, and revenue verifiers. The role of these stakeholders is vital for the timber industry. However, these stakeholders have not been proactive in encouraging the availability of timber industry maps.	Encourage the availability of wood industry mapping, to help SMEs and policy makers in developing new incentives and regulations related to the wood industry.
4.	Directorate General of Agro-Industry, Ministry of Industry		
5.	Pasuruan Wood Industry Technical Services Unit (UPTI)	Has a very high rights verifier score but requires an increase in the responsibility score due to the agency's limited budget to carry out IKM capacity-building activities.	1. Increase budget allocation for training and capacity-building activities; 2. A gradual change to a Regional Public Service Agency (BLUD) to ensure budget flexibility could be considered.
6.	Semarang Class A Metal and Wood Installation Center (BILK)	Has a high rights verifier score, but needs improvement for the responsibility verifier due to the lack of optimal role in carrying out training and the limited operational budget for wood processing equipment at IIK Jepara.	1. Carrying out training/capacity-building activities would optimize the role of BILK in the timber industry, where this requires revision of Governor Regulation 90/2021; 2. A gradual change to a Regional Public Service Agency (BLUD) to ensure budget flexibility could be considered.
	Jepara Wood Industry Installation (IIK)[20]	This research found that this institution has vital weaknesses related to limited human resources and processing equipment. It was recorded that there were only 3 (three) machine operators, some wood processing equipment was damaged, and several service costs were higher than private service providers.	Appropriate adjustments for this institution to be able to improve the current budget and human resource limitations would be successful if the institutional arrangements for BILK Class A Semarang were optimal.

[20] Although this institution was not included in the stakeholder mapping (as being under the BILK), a particular discussion is provided to underline crucial, institutional findings.

3.4. Recommendations for Policy Incentives on the Needs of the Domestic Wood Industry

This section of the article will specifically discuss policy recommendations related to various issues that arise in the domestic wood industry market, both primary and advanced. As a disclaimer, the discussion in this section of the article will only focus on various efforts to increase the sustainability of the availability of wood raw materials, the productivity of the wood industry, and the competitiveness of wood products - which will be connected to the issues faced and the existence of collective wood processing facilities. This is important to prevent the recommendations given from going too far.

Based on the discussion in the previous section of the article, there are several issues related to the wood processing industry and collective wood processing facilities, in both East Java and Central Java. The scope of this issue includes policies, both upstream/primary wood industry, and downstream/tertiary wood industry, as well as the suboptimal role of several stakeholders involved due to the lack of policies to support their role. To simplify the focus of the discussion and recommendations needed, this section of the article will divide the discourse into two parts: upstream and downstream.

3.4.1. Recommendations for Policy Incentives for the Primary Wood Industry

Problems in the primary wood industry, as previously explained, are caused by: 1) SVLK implementation has not been optimal in the field, especially for the domestic market, and 2) the lack of facilities and infrastructure to support the primary wood industry, both in terms of policy and infrastructure. This shortage has the potential to disturb the sustainability of raw materials for the wood industry. The threat to the sustainability of the availability of raw materials is also exacerbated by pressure on land as a place to grow wood as a source of raw materials due to the exponential increase in population. Therefore, the policy recommendations issued must still consider environmental sustainability.

3.4.1.1. SVLK Problems and Alternative Policy Recommendations

Regarding SVLK, the main emerging issue is that the high costs that certificate applicants must incur are not commensurate with the added value of SVLK-certified wood in the domestic market. Even though it looks simple, the level of complexity of the issues that arise requires cross-sector efforts to handle them.

The lack of policy incentives for SVLK certification holders is hampering the interest of timber industry players, especially in the domestic market. Based on the results of interviews with several assessors, the obstacles felt in implementing SVLK optimally are not the result of the limited number of LPVI in Indonesia because the implementation of SVLK certification activities is not as busy as in other industries, such as ISPO for example. Obstacles to SVLK implementation arise due to a lack of interest from business actors in the timber industry which does not carry out export activities. This phenomenon arises as a result of a lack of appreciation for SVLK certificate holders in the form of policy incentives that produce added value for their wood products.

Many things can be done to give appreciation to domestic business actors who hold SVLK, such as giving priority to 1) providing reimbursement for the cost of purchasing wood processing equipment; 2) facilitating involvement in exhibition activities, 3) various incentives for providing other facilitation including training and coaching, or 4) ease of credit facilitation. With the existence of these various facilities and the simplification of processing SVLK certification for domestic timber business actors, a certain attraction will emerge for SVLK itself.

Incentives in the form of such facilities do not directly answer the hopes of various domestic processed wood business actors for the selling value of certified wood. However, this kind of scheme could be a viable alternative considering that increasing the selling price of certified logs also has the potential to have a negative impact due to increasing raw material prices which could increase the selling price of processed wood products or even a decrease in market uptake.

In the long term, optimization of SVLK implementation has the potential to encourage the sustainability of raw materials for the wood industry. Therefore, optimizing the implementation of this policy by providing incentives to SVLK permit holders can also increase the competitiveness of wood products, especially for environmentally oriented consumers. Then, this policy also has the potential to be integrated with various other policies, such as 1) incentives for reimbursement of costs for purchasing wood processing equipment, and/or 2) incentives that give priority to involvement in the procurement of government agency facilities made from wood.

3.4.1.2. The Issue of the Rampant Non-Legal Wood Industry and Recommendations for Eradication

This issue related to the non-legal wood industry was discovered based on the results of an FGD between the Forestry Study Program, Faculty of Agriculture, Brawijaya University Malang, and representatives of regional agencies, both forestry and industrial. Of the total of four Forestry Service Branches (CDK) who were invited, all of them expressed the same issue regarding the rise of illegal timber businesses in East Java. According to a representative from the East Java Provincial Forestry Agency, the number of non-legal wood industries that have been recorded has reached more than 600 units. According to this source, the difficulty experienced by each CDK in overcoming this is that there has been no punishment for the perpetrators, especially since these non-legal businesses are carried out using the ‘flag’ of other companies.

This information is by the statement by the Spokesperson for the Ministry of Investment/BKPM, Tina Talisa, who stated that “The government is not yet at the punishment and reward approach stage, so when MSMEs don’t have a Business Identification Number (NIB) the business actors suffer losses. Especially if they want to take care of BPOM[21] or other files, one of the requirements is that you must have a NIB” (Catriana dan Sukmana, 2023). This means that business units in the small to medium category that do not yet have a Business Identification Number (NIB) will only receive a written warning as stated in Article 363 letter a PP No. 5 of 2021 concerning the Implementation of Risk-Based Business Licensing.

The implementation of such a non-punishment policy has the potential to increase people’s interest in building businesses. However, on the other hand, for the wood industry, the large number of unlicensed businesses in the primary industry causes difficulties in monitoring the performance of the upstream wood industry and the RPBBI wood inventory. This can lead to a lack of accuracy in the RPBBI and difficulty in mapping raw materials for the wood industry, especially for the domestic market in Indonesia and those originating from community wood. The reason is, that without legal permits, reporting and inventory of production capacity and installed capacity in businesses without NIB cannot

[21] National Agency of Drug and Food Control

be carried out. Meanwhile, efforts to provide written warnings or government coercion against business actors without permits will also not be optimal without sanctions. Therefore, to increase public interest in obtaining business permits, it is necessary to expand incentives for legal businesses.

Currently, there are many benefits for business actors who already have an NIB. In the wood industry, for example, one of the requirements for wood SMEs to join the association is NIB. This permit is also needed in connection with their participation in various exhibitions and training facilitation organized by government agencies. However, the various incentives that are already in place are considered less attractive for some people to legalize their business permits. Thus, the recommendation that can be made to increase interest in obtaining business permits for the community is through law enforcement.

3.4.1.3. Efforts to Increase the Role of the Forestry Sector in the Wood Industry

What differentiates the forestry and industrial sectors related to support for the timber industry is the efforts that have been made by both sectors to support the productivity of the timber industry. In the forestry sector, there are not many activities to support the timber industry. Until now, policy incentives to support the wood industry from this sector have not been as massive as the efforts made by the industrial sector. Comparative details of each sector's support efforts for the wood processing industry are presented in Table 11.

Table 11. Comparison of the availability of policy incentives for the timber industry between the forestry and industrial sectors

No.	Policies	Forestry	Industry
1.	The existence of collective wood processing facilities		The industrial sector has a specialized unit to support the advanced wood industry, such as: 1. Pasuruan Wood UPTI 2. Class A Jepara BILK
2.	Education facility	Forestry Science/forest product technology in faculties or study programs on various campuses or woodworking vocational school	Kendal Furniture and Wood Processing Industry Polytechnic
3.	Training/capacity building activities for SMEs	Most of it takes the form of socialization of regulations (results of interviews with Forest Product Processing and Marketing Development (BPPHH) staff)	• Various kinds of wood processing training; • Increasing the capacity and professional certification of wood processing workshop staff at UPT; • Socialization of regulations
4.	Types of Non-Tax State Revenue	Based on PP 12/2014, no Non-Tax State Revenue is supporting primary wood industry SMEs such as equipment rental services.	The industrial sector already has a type of Non-Tax State Revenue (PNBP) from the costs charged to the public for the rental of wood processing equipment owned by the UPT
5.	Support for the revitalization of processing machines for the wood industry		Minister of Industry Regulation No. 42 of 2022 concerning the Machinery and/or Equipment Revitalization Program for the Wood Processing Industry

The table above shows that the forestry sector still has inadequate facilities and infrastructure to support the wood processing industry. The limited support for facilities and infrastructure for the wood processing industry in the forestry sector shows that the role of this sector is not yet optimal for the wood industry, including the Ministry of Environment and Forestry as the responsible party. In fact, from the duties and functions carried out, the Ministry of Environment and Forestry has a broad scope of rights and has the potential to have a positive impact on the development of the wood industry, especially primary.

Increasing the role and responsibility of policymakers in the forestry sector, namely the Ministry of Environment and Forestry, can be done through the preparation of policy incentives that can support primary wood industry SMEs, such as:

1. Construction of collective wood processing facilities for primary industry.

   Looking at what has been done in the industrial sector, the existence of this wood processing facility has helped SMEs a lot in their business. The existence of this kind of facility can be used by small businesses with limited capital and equipment to process wood. Thus, the existence of these facilities can be a policy incentive to increase productivity for the primary wood industry.

2. Determination of the type of PNBP to support the existence of wood processing facilities for the primary wood industry.

   Current regulations relating to the types of PNBP that can be accepted by the government from the forestry sector, as stated in Appendix PP 12/2014 concerning Types and Tariffs for Types of PNBP Applicable to the Ministry of Forestry, do not include the costs of wood processing equipment rental services. The unavailability of regulations regarding PNBP for this type is one of the reasons why collective wood processing facilities and infrastructure have not been developed for the primary wood industry because it is considered unable to contribute to state income. Together with efforts to build collective wood processing facilities for the primary wood industry, the addition of PNBP-type items can increase income for the state and support various other efforts to encourage improvements in the climate for the wood industry.

3. Preparation of policy incentives to support efforts to revitalize wood processing equipment for primary industry.

   One of the issues faced by the wood industry in Indonesia is wood processing equipment that does not comply with raw material specifications, where most of the equipment available is intended for large-sized natural wood, not the small-sized community wood that is currently available. Another problem related to wood processing equipment is that the machines are old (Susanti, 2023) so they require high operational costs. To overcome this issue, revitalization is urgent. However, until now the forestry sector does not have the right policy incentives related to this problem. Meanwhile, the industrial sector has been more responsive to this issue by issuing Permenperin No. 42 of 2022 concerning the Revitalization Program for Machinery and/or Equipment for the Wood Processing Industry which allows SMEs to receive a purchase reimbursement fee of a certain percentage depending on the TKDN content of the machine. Based on this explanation, the forestry sector needs a similar policy, in the primary wood industry, to increase its role in the wood industry. Support for the revitalization of wood processing machines has the potential to make a positive contribution to the quality and productivity of the wood industry.

Furthermore, this policy incentive also needs to be in synergy with government efforts to increase the number of legal businesses and with SVLK-certified raw materials. This mechanism can be implemented by ensuring that support for the revitalization of wooden equipment only applies to business actors who have NIB and SVLK certificates.

4. Expand the focus on the topic of coaching and capacity building for SMEs

Various issues faced by the wood processing industry require various capacity-building efforts, including for SMEs. The form of capacity building and training required is not only related to the socialization of regulations. These activities should also include processing methods, sales methods, finishing methods, etc., which are needed by business actors. Therefore, it is important for the Ministry of Environment and Forestry through the Directorate General of PHL to expand the scope of training materials as required by SMEs so that they can have a wider positive impact on the advanced wood industry.

About these training and capacity-building activities, policy synergy is also needed to encourage optimal implementation of SVLK certification and business licensing policies. Implementation of this mechanism can take the form of giving priority to training, coaching, and capacity building only for wood industry business actors who are legal and have SVLK certification. That way, the community will experience more benefits from the legality of their business and the certification of their wood raw materials.

Furthermore, for there to be synchronization between policies at the upstream level (primary industry) and downstream level (advanced wood industry), all collective wood processing facilities built as facilitation for primary industry players must be BLUDs. By taking the form of a BLUD, an institution can have more flexibility in managing the budget and human resources as stated in the Minister of Home Affairs Regulation (Permendagri) No. 79 of 2018 concerning Regional Public Service Agencies.

3.4.2. Policy Recommendations for Advanced Wood Industry

In the downstream area of the timber industry, the issues that arise have a wide range of topics, so it is necessary to emphasize only a few topics of discussion so that discussions regarding recommendations do not broaden. The results of the analysis show that the issues that arise in the advanced wood industry in the downstream area include things, namely:

1. The rise of illegal timber business permits;
2. Budget limitations in agencies that function as collective wood processing facilities such as Pasuruan. Wood UPTI and Surabaya Class A BILK. This has an impact on operational training/capacity building and machine maintenance;
3. Lack of flexibility in financial management so that UPT depends only on the Regional Revenue and Expenditure Budget (APBD);
4. Agency duties and functions that do not include training/capacity building activities (conditions at UPT Semarang Class A BILK);
5. The limited cost of wood processing machine rental services means that UPT's contribution to Regional Original Income is always smaller than the annual budget, and;
6. Government procurement projects that require advanced wood products are not yet

available to the majority of SMEs.

Based on the results of the analysis in the previous section of the article, there is another issue related to the need to increase the role of provincial-district-level wood industry associations. However, to prevent widening the discussion in this study, an analysis of the need for policy incentive recommendations related to this issue was not carried out. Furthermore, to simplify the discussion topic, discussions regarding recommendations for the required policy incentives will be discussed separately in the below part of the manuscript.

3.4.2.1. Overcoming Issues Related to Illegal Timber Businesses

As in the primary wood industry, the secondary wood industry also has similar problems related to the rise of illegal wood businesses. The issues that arise also have similarities related to the absence of regulations regarding sanctions for illegal businesses in the wood processing industry, while incentives for licensed businesses have been widely implemented. Therefore, the recommendation that can be given regarding this issue is to tighten the incentive-disincentive system to encourage more permission applications from currently illegal timber ventures.

3.4.2.2. Budget and Financial Limitations on Collective Wood Processing Facilities

The previous discussion is related to issues that arise in various collective wood processing facilities, as in Sub-chapter 3.1. and 3.3., mostly related to budget and human resource limitations which limit them from carrying out their duties and functions. In the case of Pasuruan Wood UPTI, this limited budget has resulted in their role being less than optimal in carrying out activities to increase the capacity of local business actors. Based on the results of field observations, many SMEs there need various training and capacity building. Similar conditions were also experienced by UPT Semarang Class A BILK and its supporting unit Jepara IIK.

Conditions at collective wood processing agencies in Central Java are even more unfavorable, where limitations in carrying out their role in the field are also hampered by wood processing equipment that does not meet needs and is outdated. These limitations are increasingly complicated due to limited human resources. This condition can be seen at Jepara IIK, which only has three machine operators out of the many machines there. Moreover, the unit only has one Customer Service and one Coordinator. UPT Semarang Class A BILK was also not given the task of carrying out training/capacity building for SMEs around them. This task in Central Java is the responsibility of the Central Java Province Department of Industry and Trade. This is by the duties and functions of Semarang Class A BILK and Jepara IIK as supporting units in East Java Gubernatorial Regulation No. 90 of 2021.

Budget limitations and financial management of these agencies can be solved by changing their institutional form to BLUD. Based on Law No. 23 of 2005 concerning the Management of Public Service Agencies, BLU is a government agency that was formed to provide services to the community without prioritizing profit-making and carrying out its activities based on the principles of efficiency and productivity. By taking the form of a BLUD, an institution can have more flexibility in managing the budget and human resources as stated in the Minister of Home Affairs Regulation (Permendagri) No. 79 of 2018 concerning Regional Public Service Agencies. Therefore, by making the collective wood processing facility agency a BLUD, the institutional capacity of UPTI Kayu and BILK Class A will also increase.

With a BLUD orientation, both Pasuruan Wood UPTI and Semarang Class A BILK can independently manage their finances from profits obtained through renting services and wood processing machines. Similar flexibility is also related to the procurement of human resources according to needs so that they can overcome current limitations. Even though it is not purely profit-oriented, by using the BLUD scheme, collective wood processing facilities can independently set profit targets that currently cannot be achieved.

Current conditions, nominal costs for work services, and tool rental, both at UPTI Kayu Pasuruan and Semarang Class A BILK, are determined based on Governor Regulations in each province each year. The current nominal amount is far below the operational and maintenance costs of the machine. The disparity between income and operational costs can be seen from the comparison of the annual budget value with the Regional Original Income contribution of each UPT. At Pasuruan Wood UPTI, for example, with an annual budget of two billion, the agency's annual contribution value is only around Rp. 200 million. This means that with the current institution in the form of a UPT, the agency's income is only approximately one-tenth of the budget with the contribution value to Regional Original Income being artificial and unsustainable. Even though Pasuruan Wood UPTI's contribution target to Regional Original Income is met every year, what happens is that there is no "gross" profit for the region received from the existence of this agency. This is because, subsequently, the East Java Province must provide a budget for the East Java Wood UPTI which is much greater than the contribution generated by that agency.

Therefore, to support the BLUD target, it is necessary to revise regulations that limit the nominal value of work services and equipment rental. These changes to the regulations ensure that the BLUD targets for Pasuruan Wood UPTI and Semarang Class A BILK run well. However, there will be a potential negative impact if there is a revision that limits the nominal value of work services and equipment rental. This increase in costs can logically also affect the production costs of consumers - which are SMEs, and have an impact on increasing the price of the final product.

To reduce the potential impact, regulations with certain mechanisms could be implemented so that price increases are not implemented simultaneously. One feasible mechanism, for example, is to apply costs that currently apply with certain limits on the number of items worked on. Meanwhile, for large quantities of work, normal prices will be used which are by the profit and loss calculations for the wood processing facility. This kind of mechanism arrangement makes the role of the wood processing facility not only socially oriented but also aims to make limited profits. Through this BLUD mechanism, both Pasuruan Wood UPTI and Semarang Class A BILK can still support industrial productivity and competitiveness of wood products, but can also meet budget needs to carry out things such as 1) revitalizing wood processing equipment; 2) training/capacity building for legal SMEs and with SVLK certified raw materials, and 3) opening other business units to encourage the wood industry and increase income for the agency.

3.4.2.3. Alternative Government Support for the Domestic Market for the Wood Industry

As discussed in the previous article, there is sluggishness in the wood industry market, both for the domestic and export markets. As a result, according to one of the staff of the Directorate General of PHL, KLHK, currently many Forest Utilization Business Licenses (PBPH) are delaying wood harvesting due to the low uptake of logs on the market. For advanced timber industry SMEs, the market downturn has caused many of them to have to sell their valuables to make ends meet.

Meanwhile, on the other hand, there are many government agencies and schools that require a lot of wood products to meet their furniture needs. The results of interviews with HIMKI noted that the nominal budget required just to provide school seats reached IDR 20 trillion. This figure should be able to be absorbed by small and medium-sized wood producers in Indonesia to ensure the sustainability of their businesses. However, until now policies to encourage mechanisms for providing work to procure wood products are not yet available in Indonesia. However, if implemented, such a policy would be very beneficial for the continued development of the wood industry.

To ensure that the implementation of regulations to involve local wood producers in procuring wood products for government agencies goes optimally, there needs to be a supporting mechanism that is worth considering. The reason is that small and medium enterprises will have great difficulty, both in terms of financial readiness and production capacity, with large orders and large order volumes. This is because the nominal amount required will be directly proportional to the volume of orders, and to fulfill this, SMEs must consider the financial capacity to provide raw materials, as well as production capacity to ensure furniture products can be delivered on time with appropriate quality. Without a supporting mechanism, only large companies that have the production and financial capacity can get involved.

Therefore, the formation of an aggregator can be a necessary supporting mechanism so that SMEs can be involved in procuring wood products for government agencies. The formation of this aggregator aims to bring together various SME wood industry entities so that they can jointly bid for procurement activities through the government's Electronic Procurement Service (LPSE). With the role of the aggregator, small business actors can collaborate to meet financial needs and production capacity according to the size of the procurement volume. This aggregator can be formed either by the government (in the form of cooperatives) or the private sector (in the form of cooperatives or consortiums).

Furthermore, the policy to use domestic advanced wood products itself also needs to be integrated with various existing needs in the wood industry, such as requiring SVLK, Domestic Content Level (TKDN), and NIB for business actors who wish to be involved. In this way, there is synchronization of policies from upstream to downstream that are intertwined and coordinated.

3.4.3. Summary of Proposed Recommendations for Policy Incentives

Activities in the wood processing industry have a very broad scope and are connected to various stakeholders across sectors. The upstream sector of the wood industry (primary wood industry) which is under the authority of the Ministry of Environment and Forestry has different problems from the downstream sector of the wood industry (tertiary/advanced wood industry). Therefore, categorization and limiting the scope of recommendations is necessary so that the focus of the study does not widen. In this paper, the study focuses on the need for various policy incentives related to collective wood processing facilities and their optimization efforts. Furthermore, the results of the analysis of the focus of the problem are also adjusted to the scope of the problem studied, namely: 1) sustainability of raw materials; 2) productivity of the wood industry, and 3) competitiveness of wood products.

By the limitations above, this study found at least three main problems that need to be solved in each sector: primary industry and tertiary (advanced). A summary of problems in the timber industry and the recommendations needed are presented in the tabulation below (Table 12).

Table 12. Summary of issues in the timber industry and recommendations

No.	Issues	Proposed Recommendations
Upstream (Primary Wood Industry)		
1.	Ineffective implementation of SVLK due to no added value for SVLK-certified wood in the domestic market	Increase added value for SMEs holding SVLK certificates, such as: 1. Give priority to obtaining capacity-building facilitation. 2. Makes it easier to disburse credit. 3. Get compensation incentives for purchasing wood processing equipment. 4. Priority involvement in exhibitions. 5. Another added value is to increase the interest of small business actors in the wood industry so that they consider ownership of an SVLK certificate as an incentive.
2.	The existence of the non-legal wood industry makes it difficult to map sources of wood raw materials, especially community wood	Tightening the incentive-disincentive system to encourage more permission applications from the currently illegal timber ventures.
3.	The role of forestry institutions (KLHK and its regional agencies) is not yet optimal in efforts to increase the processed wood industry	1. Expand the scope of activities to increase the capacity of SMEs in the primary wood industry so that it does not only take the form of outreach but also various forms of training, professional certification, etc. Implementation of these activities can be carried out by UPT. 2. Diversification of PNBP for the forestry sector by adding items from various services provided by facilitation institutions as in point 1 above. 3. Support for the revitalization of wood processing machines for primary industry. Can adopt mechanisms as in Permenperind 42 of 2022, but with the addition of certain requirements so that there is policy synchronization, such as: 1) SVLK requirements, and 2) NIB ownership.

No.	Issues	Proposed Recommendations
Downstream (Tertiary/Advanced Wood Industry)		
1.	The rise of the illegal advanced timber industry (without NIB). This issue makes it difficult to further map the timber industry.	Tightening the incentive-disincentive system to encourage more permission applications from the currently illegal timber ventures.
2.	The role and implementation of duties and functions of collective wood processing facilities such as Pasuruan Wood UPTI and Semarang Class A BILK are not optimal.	1. Changing the institutional form of the existing collective wood management facility from previously being in the form of a UPT to a BLUD. This is important so that the agency can independently manage its finances and be more effective in carrying out service and technical assistance functions. This BLUD institutional form can also guarantee an increase in the agency's contribution to the Regional Revenue and Expenditure Budget (APBD). 2. Revise the Gubernatorial Regulation which regulates and limits the nominal rental fees for existing wood processing services and equipment. This is to ensure that the rental costs for wood processing services and equipment are commensurate with the agency's operational costs.
3.	There is no government eagerness to formulate policies that can provide incentives for small businesses in the processed wood industry related to the procurement of wood products in various government agencies.	1. The government needs to develop a policy that ensures that all procurement of wood products in its various agencies uses local products, especially SMEs. Not only by increasing the percentage of TKDN, but the policy must also regulate the involvement of aggregators consisting of small and medium enterprises (MSMEs/SMEs). This kind of policy can ensure the sustainability of SME businesses and encourage the improvement of the wood industry, especially for the domestic market. 2. The aggregator as referred to can be initiated by a government agency (in the form of a cooperative) or the private sector (in the form of a cooperative and/or consortia). Aggregators must demonstrate the involvement of several SMEs to ensure that policy incentives are right on target.

3.5. Conclusion

To date, the government has provided many policies that can function as incentives for SMEs and support the development of the domestic market for the wood industry, both primary and tertiary. The forms of these policies vary, from building various training and capacity-building facilities, sales facilities, and wood processing; as well as creating various kinds of supporting policies for the timber industry. However, there are still many improvements needed to optimize the various efforts that have been made, including:

1. The need for optimizing SVLK implementation for the domestic market;
2. The rise of the non-legal wood industry in the primary and advanced wood industry;
3. The roles and responsibilities of various government agencies and collective wood processing facilities are not yet optimal, both in the forestry and industrial sectors; until
4. The need for political will to ensure the sustainability of SME businesses in the domestic market.

The various issues that arise have the potential to cause a slowdown in the growth of the timber industry, including in the domestic market. For example, the unavailability of collective wood processing facilities for primary industries has resulted in limited business development support for small and medium-sized businesses. Meanwhile, the existence of such collective processing facilities in the tertiary wood industry has been observed to be quite helpful for SMEs, especially those who are assisted. Therefore, various problems and potential problems that arise, both in the primary and tertiary wood industry - and related to the existence of collective wood processing facilities need to be resolved.

Based on the results of the analysis, the policy incentives needed by the timber industry, both primary and tertiary, include:

1. Expanding incentives for SVLK holders to make them more attractive and profitable, especially for SMEs with a domestic market share;
2. Tightening the incentive-disincentive system for unlicensed businesses to reduce errors in the management of raw materials and wood product markets and difficulties in mapping;
3. Encouragement to change the form of collective wood processing facilities in the industrial sector to BLUD to ensure flexibility in financial management, as well as
4. Formulating policies that can give priority to small and medium-sized wood product entrepreneurs to be involved in procuring furniture for government agencies.

REFERENCES

Anur, C.M. (2023) Luas Wilayah Negara-negara di Kawasan Asean, Katadata.Co.Id. Available at: https://databoks.katadata.co.id/datapublish/2023/03/24/indonesia-negara-terluas-di-asean-berapa-luas-daratannya (Accessed: 10 February 2024).

Catriana, E. and Sukmana, Y. (2023) UMKM Enggak Punya NIB , Ada Sanksinya ?, Kompas.com. Available at: https://money.kompas.com/read/2023/03/06/172000126/umkm-enggak-punya-nib-ada-sanksinya- (Accessed: 29 January 2024).

Ciptaningtyas, A.L. (2011) 'Proyek kawasan terpadu industri kayu terkatung-katung', Kabar24, 28 September. Available at: https://kabar24.bisnis.com/read/20110928/78/47995/proyek-kawasan-terpadu-industri-kayu-terkatung-katung.

Dubois, O. (1998) 'Capacities to Manage Role Changes in Forestry: Introducing the "4Rs" Framework', Forest Participation Series - Forestry and Land Use Programme, International Institute for Environment and Development (IIED). International Institute for Environment and Development, p. iv + 22-iv + 22. Available at: http://search.ebscohost.com/login.aspx?direct=true&db=lah&AN=19990600180&site=ehost-live.

Haryadi, K. (2013) 'Memahami Politik Adopsi Hasil Penelitian sebagai Strategi Pengembangan KPH : Studi Literatur dan Pengalaman Empiris', in 30 Tahun BPK Banjarbaru dalam Pembangunan Kehutanan. Bogor: Pusat Penelitian dan Pengembangan Kehutanan, pp. 1–8. Available at: blob:https://adoc.pub/7eb6ea91-a1f6-4f69-b010-10ff958585ba.

ISWA and ITTO (2009) Laporan Teknis No.7 Proyek PD 286/04 REV.1 (I) Pelaksanaan In-House Training Pemasaran dan Seminar Nasional Tentang Peningkatan Ekspor Produk-produk Kayu. Jakarta. Available at: http://www.itto.int/files/itto_project_db_input/2537/Technical/TR-7.pdf.

Kementerian Lingkungan Hidup dan Kehutanan (2023) Rencana Kerja Direktorat Bina Rencana Pemanfaatan Hutan 2023, Direktorat Bina Rencana Pemanfaatan Hutan Kementerian Lingkungan Hidup dan Kehutanan. Jakarta. Available at: https://disbudpar.acehprov.go.id/ppid/.

Kementerian Perindustrian (2007) Pohon Industri Pengolahan Kayu. Available at: https://kemenperin.go.id/download/219/Pohon-Industri-Hasil-Hutan-dan-Perkebunan---Pengolahan-Kayu (Accessed: 28 December 2023).

Kristanti, R. (2020) Pengaruh Pengalihan Hak dan Batas Yurisdiksi Izin Pinjam Pakai Kawasan Hutan Terhadap Kinerja Reklamasi di Kalimantan Timur. Disertasi. Institut Pertanian Bogor.

Marbun, F. (2020) Program Restrukturisasi Mesin/Peralatan untuk Mendukung Daya Saing Industri Furnitur Indonesia, Direktorat Jenderal Industri Agro. Available at: https://agro.kemenperin.go.id/artikel/6497-program-restrukturisasi-mesin-peralatan-untuk-mendukung-daya-saing-industri-furnitur-indonesia (Accessed: 17 January 2024).

North, D.C. (1991) 'Institutions', The Journal of Economic Perspective, 5(1), pp. 97–112. Available at: https://doi.org/10.1017/S0570608400000867.

Obidzinski, K. et al. (2015) 'Verifikasi legalitas kayu di Indonesia dan usaha kehutanan skala kecil: Pelajaran dan opsi kebijakan', CIFOR Infobrief, pp. 1–8. Available at: http://www.cifor.org/nc/online-library/browse/view-publication/publication/4558.html%3Cbr /%3E (Accessed: 27 November 2023).

Ostrom, E. (2005) 'Understanding the Diversity of Structured Human Interactions', in Understanding Institutional Diversity. New Jersey (US): Princeton University Press, pp. 3–31. Available at: https://doi.org/10.1007/s11127-007-9157-x.

Purnomo, H., Irawati, R.H. and Melati (2010) Menunggang Badai: Untaian Kehidupan, Tradisi dan Kreasi Aktor Mebel Jepara. Bogor: CIFOR. Available at: https://www.cifor.org/knowledge/publication/3311/.

Putra, I. (2018) Kelembagaan Pengendalian Kebakaran Hutan dan Lahan. Bogor Agricultural University. Available at: https://repository.ipb.ac.id/bitstream/handle/123456789/95083/2018ikp.pdf.

Ribot, J.C. and Peluso, N.L. (2003) 'A Theory of Access', Rural Sociology, 68(2), pp. 153–181. Available at: https://doi.org/10.1111/j.1549-0831.2003.tb00133.x.

Susanti, A.R. (2023) Masa Depan Industri Kayu, Kabar Baru. Available at: https://www.forestdigest.com/detail/2156/industri-kayu (Accessed: 8 November 2023).

Susetyo, P.D. (2021) Potensi Ekonomi Hutan Rakyat, Forest Digest. Available at: https://www.forestdigest.com/detail/1181/beda-hutan-rakyat-dan-hutan-tanaman-rakyat (Accessed: 10 February 2024).

Wachadah, F.L., Izza, M.A.S. and Yasin, M. (2023) 'Analisis Strategi Industrialisasi Pada Industri Mebel di Kelurahan Bukir, Kecamatan Gadingrejo, Kota Pasuruan, Jawa Timur', Trending: Jurnal Manajemen dan Ekonomi, 1(3), pp. 82–93. Available at: https://doi.org/10.30640/trending.v1i3.1127.

Zubayr, M. et al. (2014) 'Peranan Para Pihak Dalam Implementasi Kebijakan Penggunaan Kawasan Hutan Untuk Pertambangan', Jurnal Analisis Kebijakan Kehutanan, 11(3), pp. 239–259. Available at: https://doi.org/10.20886/jakk.2014.11.3.239-259.

APPENDICES

Appendix 1 Implementation of FGD related to the advanced wood industry at Malang Creative Center, Malang 13 December 2023

Appendix 2 Field observations of the Pasuruan wood processing industry







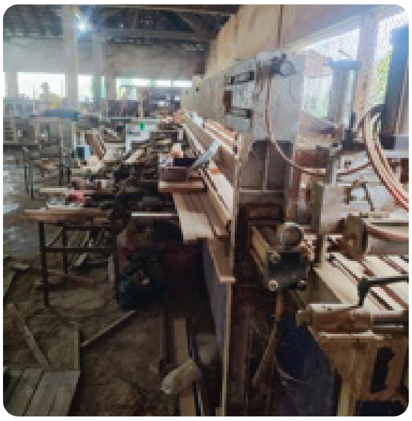
Appendix 3 Field observations of the Jepara wood processing industry








Appendix 4 Condition and types of various wood processing equipment at Jepara IIK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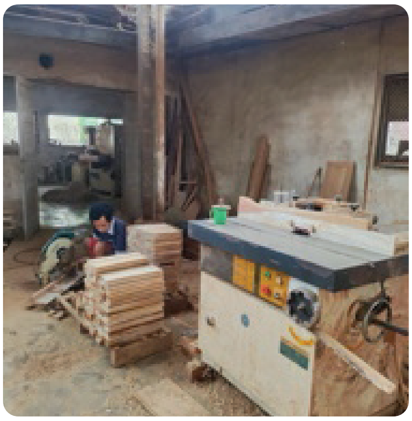







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