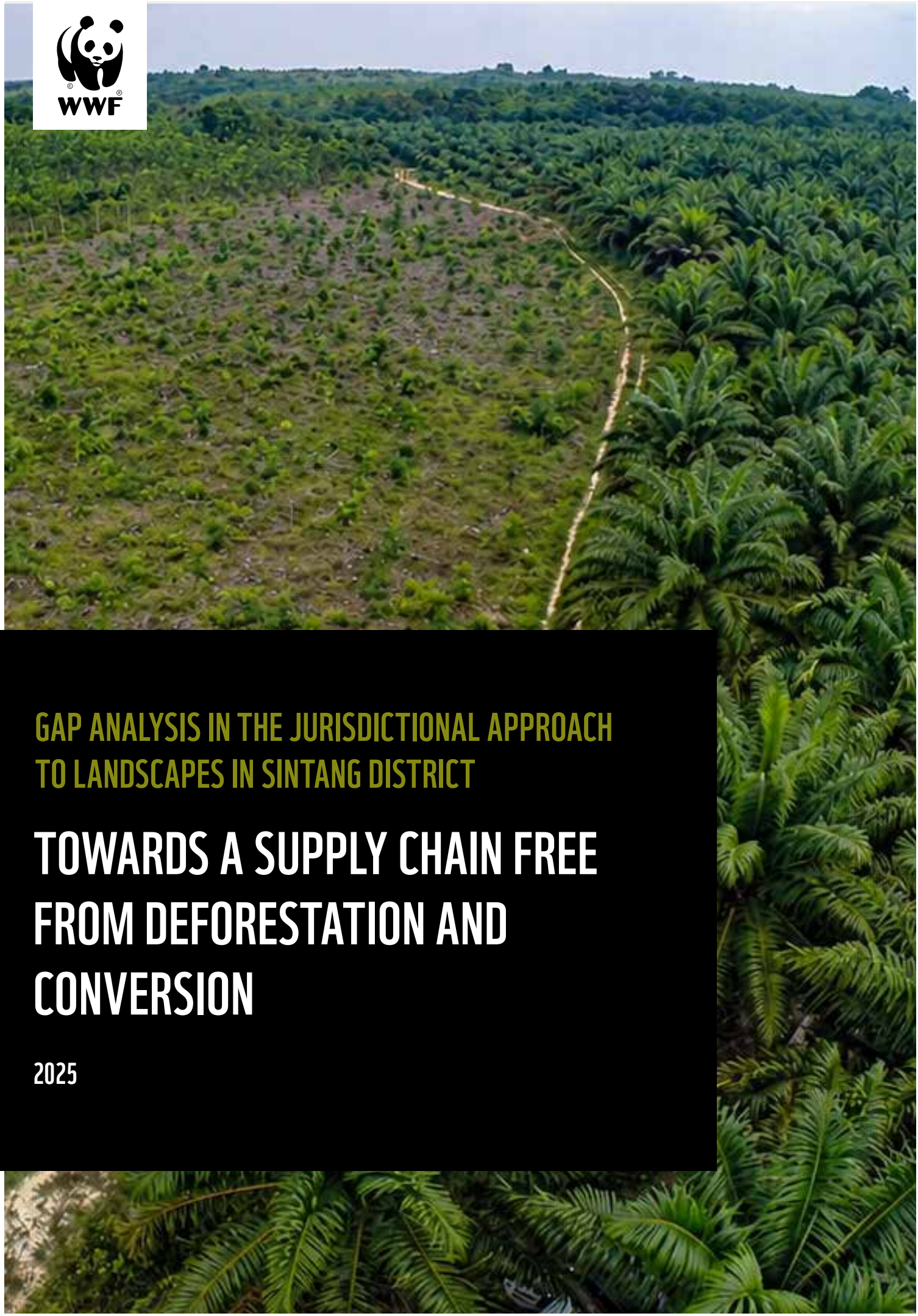

GAP ANALYSIS IN THE JURISDICTIONAL APPROACH TO LANDSCAPES IN SINTANG DISTRICT

TOWARDS A SUPPLY CHAIN FREE FROM DEFORESTATION AND CONVERSION

2025

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EXECUTIVE SUMMARY

Sintang District is a region rich in biodiversity and extensive forest cover, yet it currently faces increasing pressure from the expansion of agricultural commodities, particularly oil palm. The local government has demonstrated a strong commitment to sustainable development through various policies and action plans, including the Sustainable Palm Oil Regional Action Plan (RAD-KSB), the Sintang Lestari Regional Action Plan (RAD-SL), and the protection approach for High Conservation Value (HCV) and High Carbon Stock (HCS) areas.

This study also reviews the supply chains of five key commodities—oil palm, rubber, pepper, coffee, and cocoa—which form the backbone of the local economy. Each commodity faces challenges related to productivity, market access, traceability, and sustainability certification.

The study further presents a gap analysis of the implementation of the Jurisdictional Approach (JA) in Sintang, using standards from ISEAL and WWF's Deforestation and Conversion Free (DCF) principles. Its purpose is to assess the level of alignment between local practices and global standards while formulating strategic recommendations for future improvement. The key findings of the Gap Analysis for the jurisdictional approach in Sintang District are as follows:

1. Governance

Sintang has roadmap and action plan documents such as the RTRW, HCV-HCS assessments, RAD-SL, and RAD-KSB, but the integration among these documents remains limited.

There is no single overarching framework that serves as the main reference, leading to overlapping implementation across government agencies.

Multi-stakeholder forums have been established but lack strong legal standing (e.g., equivalent to a local technical implementation unit), making them vulnerable to political changes and overly reliant on donor support.

Institutional arrangements and role distribution are not documented systematically, resulting in gaps or overlaps in responsibilities among institutions.

2. Stakeholder Engagement

Stakeholder engagement is relatively active but not yet fully inclusive, particularly for indigenous communities and smallholder farmers in strategic decision-making.

Feedback mechanisms and conflict resolution systems are not yet functioning effectively, especially for resolving land disputes between communities and companies.

3. Progress Framework

Targets within RAD-SL and RAD-KSB have been defined, but most are not measurable, not spatially based, and lack baseline and clear performance indicators.

Not all programs have long-term implementation plans or realistic roadmaps toward 2030 or 2045.

4. Finance

JA activities still rely heavily on the regional government budget (APBD) and donor project support.

Incentive schemes for farmers and local enterprises implementing sustainable practices are not yet systematically available.

There is no financing framework that supports blended finance or results-based finance.

5. Monitoring, Reporting, and Verification (MRV)

There is no integrated MRV system across sectors that can be used as a tool for evaluating sustainable development progress.

Data on land cover, GHG emissions, biodiversity, and socio-economic indicators remain fragmented and are not regularly updated.

Public data transparency is limited, and technical capacity for data collection and analysis still needs strengthening.

6. Land Cover Change

Deforestation continues in several areas, mainly due to oil palm expansion and land fires.

Forest cover analysis shows a significant decline from 58% (2000) to around 47% (2019), indicating major challenges in meeting DCF principles.

Land cover monitoring activities are still project-based and dependent on donor funding, rather than institutionalized as a permanent system supported by local government budgets.

As recommended follow-up actions, this study proposes the following:

1. Integration of RAD-SL, RAD-KSB, and RIPBUN documents within a unified jurisdictional framework.

2. Revitalization of the multi-stakeholder forum with cross-commodity scope and stronger legal mandates.

3. Extension and revision of jurisdictional documents with updated sustainability indicators.

4. Development of an integrated MRV system for monitoring land cover, emissions, and socio-economic conditions.

5. Strengthening recognition and capacity of indigenous communities, as well as improving their access to incentives.

6. Development of green incentives, CSR, and carbon finance opportunities for farmers and cooperatives.

These recommendations aim to build a foundation for inclusive, equitable, and data-driven jurisdictional sustainability. Sintang District has strong policy, institutional, and political commitment to become a model for implementing the jurisdictional approach—not only for commodity-focused initiatives but also for comprehensive landscape governance. Through collaborative and multi-stakeholder processes, Sintang has the potential to be a national and global best-practice model in applying jurisdictional approaches to sustainable commodity development and achieving deforestation- and conversion-free supply chains.

INTRODUCTION

SINTANG IS HOME TO THE BORNEAN ORANGUTAN, HORNBILL, BANTENG, AND RAFFLESIA FLOWER.

BACKGROUND

Sintang is a district in West Kalimantan province, covering an area of approximately 2.1 million hectares. It is home to a variety of plant and animal species, including the Bornean orangutan, hornbill, banteng (*Bos javanicus*), and plant species such as the Rafflesia flower. The local government is committed to managing and conserving approximately 162,000 hectares (other land uses - natural forest functions), an area determined based on HCV and HCS studies. Together with other stakeholders, they are implementing Sustainable Palm Oil (SPO) in the production side, including assisting 461 independent smallholder farmers to obtain RSPO certification—at least 1,003 hectares—and producing 20,000 tons per year.

To support the regent's commitment, various stakeholders (e.g., SekBer, FOKSBI) were established to monitor not only planning but also implementation. Currently, Sintang's commitment to be a sustainable district is strengthened through the Regional Action Plan for Sustainable Palm Oil (RAD-KSB) and the Regional Action Plan for Sustainable Sintang (RAD-SL).

Since 2020, various palm oil companies have committed to implementing NDPE (no deforestation, no peatland, and no exploitation). After four years, more than 90% of companies have failed to meet their DCF and NDPE commitments. One of the challenges is related to supply from the landscape—the ideal DCF context requires supply from multiple commodities, not just palm oil. Based on this situation, collaboration among actors to implement a jurisdictional approach in Sintang is one of the best practices for landscape-scale DCF implementation. Further analysis and gap analysis are needed to determine the extent of its achievements and implementation.

OBJECTIVES

a. Map and identify ISEAL jurisdictional approach standards with its practices in Sintang, West Kalimantan.

b. Validate and verify jurisdictional approach implementation in Sintang to support DCF implementation.

c. Develop recommendations and strategic actions.

METHODOLOGY

STUDY LOCATION

Sintang District is a District in West Kalimantan Province. It borders Malaysia, specifically the state of Sarawak. Administratively, Sintang District shares borders with Kapuas Hulu Regency, Melawi Regency, Ketapang Regency, Sanggau Regency, and Sekadau Regency.

Based on the administrative area, Sintang District has the third largest area in West Kalimantan Province, after Kapuas Hulu District and Ketapang Regency. The administrative area of Sintang District covers 22,025.79 km² (BPS data for West Kalimantan Province, 2022). Sintang District is divided into 14 sub-districts. Administratively, Ambalau District has the largest area (5,991.97 km²), while Sintang District has the smallest area (355.65 km²). Sintang District has a population of 426,416 (BPS data for Sintang Regency, 2022).

When viewed by sub-district, Sintang and Sepauk Districts have the highest populations, while Ambalau and Binjai Hulu Districts have the lowest.

The population of Sintang District generally engaged in agriculture and plantation, with five main commodities cultivated: oil palm, rubber, pepper, coffee, and cocoa. Two of the main commodities—oil palm and rubber—are cultivated by large-scale companies, while pepper, coffee, and cocoa are almost entirely dominated by independent smallholder farmers. Profiles for each commodity are outlined in the following chapter.

METHODOLOGY

The research was carried out in several stages. The study assessed current jurisdictional performance and identified related policies, programs, and resources. The analysis produced gaps between the current condition and the ideal situation. The resulting gap analysis serves as a reference for developing action plans (FAO, 2013). The methodological steps include:

1. **Assessment of Current Conditions**.
    a. Conducting a comprehensive assessment of current jurisdictional performance across environmental, social, and economic dimensions.
    b. Identifying existing policies, programs, and initiatives.
    c. Assessing the availability of resources (financial, human, and technological).
    d. Analysing stakeholder engagement and capacity.
2. **Gap Analysis: Comparing current conditions with jurisdictional approach indicators and DCF principles.**
3. **Action Plan Development: Developing an action plan as a follow-up to the gap analysis.**

The gap analysis used indicators (ISEAL Alliance, 2022). The assessment indicators follow the ISEAL approach, as shown in Table 4 below. The gap analysis uses indicators from the ISEAL Alliance (2022). The jurisdictional approach indicators are presented in Table 1 below.

Table 1. ISEAL Indicators for the Jurisdictional Approach (JA)

No	JA ISEAL Principle	Indicator	Assessment Criteria
1	**Governance**	Integrated LED-R Strategy	The existence of a jurisdictional strategy and action plan that outlines the jurisdiction's vision and strategy for all significant drivers, is formally approved and adopted by the government, and involves broad stakeholder participation in its development and implementation.
2		Spatial Plan	The existence of spatial plans across jurisdictions that have an ecological basis, recognize the lands and resources of indigenous peoples and local communities, mitigate the negative social and environmental impacts of planned projects, and broadly involve stakeholders in their development.
3	**Stakeholder Engagement**	Multi-Stakeholder Governance	The presence of representation in multi-stakeholder processes or government bodies focused on or relevant to land use, and other issues related to sustainability, and their formal roles in decision-making and governance.
4	**Progress Framework**	Performance Target	The existence of formal, realistic, time-bound and measurable legality for all jurisdictions, developed with broad stakeholder participation.
5		Sustainable Agriculture and Commerce	The existence, quality and accessibility of measures to improve the sustainability of the broader agricultural sector (including large- and small-scale crop and livestock production) that are being developed or already in place, including traceability systems for all commodity value chains.
6	**Community**	Indigenous Peoples and Local Communities (IP/LC)	The extent to which IP/LC land and resource tenure, management, exclusion, and use rights are clearly defined by law; and IP/LC are included in regional decision-making processes and benefit-sharing structures. This includes workers' rights and local communities' priorities for employment.
7	**Financing**	Policies and Incentives	The comprehensiveness and alignment of policies and incentives under development or already in place for all relevant sectors affecting land use and the extent to which the framework supports a wide range of stakeholders to engage in sustainable practices.
8		LED-R Financial Support	Availability of various financing programs to support and incentivize the development and implementation of LED-R strategies and related programs, initiatives, or activities.
9	**Monitoring and Evaluation**	Monitoring, Reporting & Verification (MRV)	The extent to which the jurisdiction's MRV system provides reliable, accurate, and transparent government-supported reporting on forests, land use GHG emissions, biodiversity, economic, and social indicators, which are used to assess the integrated LED-R strategy and performance targets.

Source: ISEAL JA Principles (ISEAL, 2022), GCF Task Force (Stickler et al., 2018)

DATA COLLECTION

A combination of data collection techniques was applied in this study, consisting of desktop study, in-depth interviews, and field observations. The desktop study was conducted to gather secondary data and information, such as information on commodity profiles and indicators regarding JA ISEAL and its actual conditions. Additional in-depth studies were conducted for clarification through in-depth interviews with key informants, observations, and focus group discussions. An interview format was prepared for field data collection using semi-structured interviews with key informants. In-depth interviews were conducted with several types of key informants: actors along the value chain, village officials, district government officials, and extension workers.

The data collected in this study include data on stakeholders involved, governance, frameworks, financing, monitoring, and evaluation. The data were obtained from both desktop analysis and primary data collection. Each data collection is detailed in Table 2.

Table 2. List of Data with Its Details.

Category	Details
Governance	1. Legal registration documents and agreements (e.g., MoU) 2. Governance structure 3. Terms of Service and membership of the governance body 4. Operational procedures / Code of Ethics 5. Dispute resolution mechanism
Stakeholders Involved	1. Stakeholder map identifying key stakeholders 2. Records of stakeholder participation in activities 3. Signatories or attendance list/minutes for the action plan 4. Statutes
Framework	1. Assessment and Evaluation Materials 2. Progress framework, including goals, targets, and impacts 3. Action plan, including roles, responsibilities, timelines, budgets, and resources
Financing	1. Budget for jurisdictional initiative operations 2. Sources of revenue and a summary of existing funding
Monitoring and evaluation	1. Metrics and data sources for jurisdictional initiatives 2. Data management protocols to ensure effective data collection, storage, analysis, and use 3. Job profiles or responsibilities of staff or consultants managing the monitoring system

COMMODITY PROFILE OF SINTANG REGENCY

INDONESIA IS THE WORLD'S LARGEST PRODUCER OF PALM OIL. WEST KALIMANTAN CONTRIBUTING 12% TO NATIONAL PRODUCTION, WHILE SINTANG DISTRICT CONTRIBUTES 9% TO THE OIL PALM AREA IN WEST KALIMANTAN PROVINCE

A. OIL PALM COMMODITY PROFILE

Indonesia is the world's largest producer of palm oil, accounting for 59% of total global production in 2021, consisting of 45,121,480 tons of crude palm oil (CPO) and 9,942,069 tons of palm kernel oil. According to data from the Plantation Service in 2021, of the total 14,661,416 hectares of Indonesian oil palm plantations, 14% are in West Kalimantan Province (2,015,914 hectares). Total production in West Kalimantan Province in the same year reached 5,332,338 tons, contributing 12% to national production. Of the total 2,015,914 hectares of oil palm plantations in West Kalimantan, 72% (1,453,126 hectares) are private plantations, 27% (534,767 hectares) are smallholder plantations, and one percent (28,021 hectares) are government plantations. Sintang District contributes nine percent to the oil palm area in West Kalimantan province, as shown in Figure 1 below.

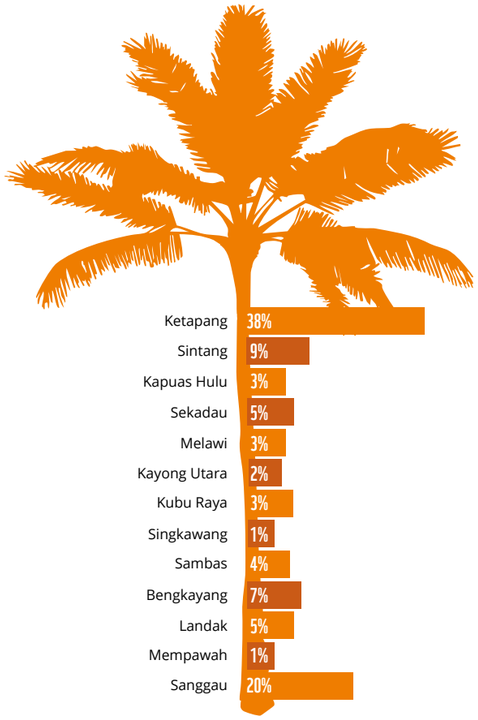


Figure 1. Comparison of Palm Oil Plantation Area by District in West Kalimantan Province

Source: Indonesian Plantation Service, 2022; processed data

At Sintang District, oil palm have an upward trend from 2019 to 2023. BPS noted that the area of oil palm in 2023 reached 221,000ha, with a productivity of 3,877 tons/ha. For production, oil palm reached 858,138 tons in 2023. Oil palm productivity in Sintang District in 2023 was above the provincial and national productivity, which were 3,044 kg/ha and 1,951 kg/ha, respectively, as shown in Figure 2 below.

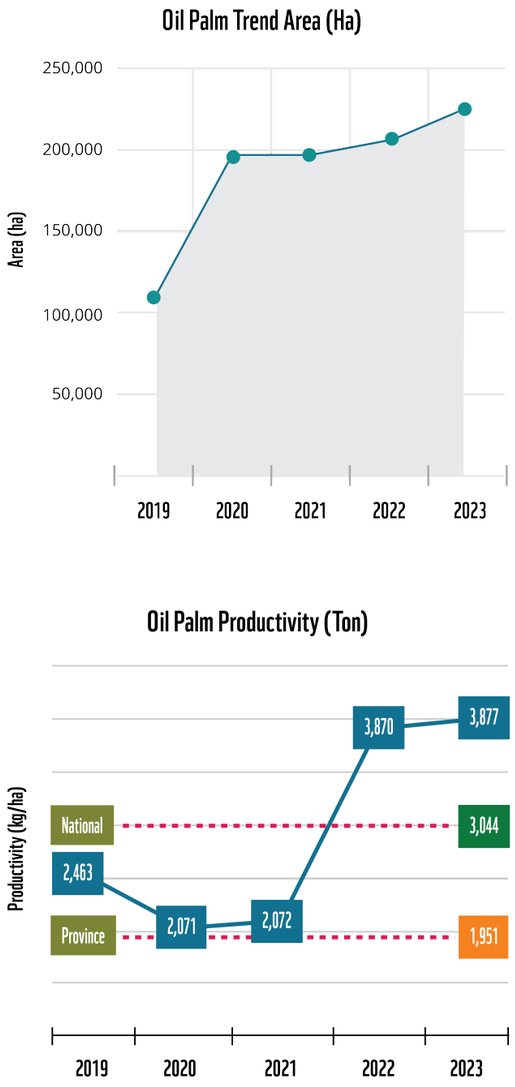


Figure 2. Plantation Area Trend (Ha) and Productivity (Ton/Ha) of Oil Palm Plantations on Smallholder Farms.

Sintang Palm Oil Trade in Sintang District

Palm oil production in Sintang District comes from large-scale plantations with a total area of 137,653 ha and a production of 362,391 tons. Meanwhile, smallholder oil palm plantations cover a total area of 62,480 ha and a production of 101,183 tons (BPS West Kalimantan Province 2022). Based on data from the Sintang District Agriculture and Plantation Service (Distanbun) (2023), 45 plantation business permits and 48 location permits have been issued. Of these permits, covering an area of over 420,000 ha, only 189,035 ha have been planted (Table 3).

In 2020, Sintang District produced 618,093 tons of crude palm oil (CPO) and red palm oil (RPO), representing less than one percent of the total national trade volume. The majority (61%) of palm oil from Sintang District traded domestically. The remaining 39% (239,462 tonnes) was exported to 127 countries, mainly India, China other Asian countries and the European Union (Trase 2020).

Table 3. Business permits and realization of oil palm plantation in Sintang District in 2023.

No	Business permits	Companies amount (unit)	Area
1	Location Permit (PKKPR)	48	498.880
2	IUP	45	425.103
3	HGU	30	134.503
4	Realization/Planted	45	189.035

Source: (CIFOR-ICRAF, 2023).

Palm Oil Supply Chain in Sintang District

The data shows that approximately 73% of palm oil production came from large plantations in 2019, while the remainder (27%) came from smallholder plantations. Fresh Fruit Bunch (FFB) from plantations are supplied to palm oil mills and processed into crude palm oil (CPO). Based on trade data, palm oil from Sintang is mostly traded as CPO (74% of production volume), with 61% for the domestic market, 27% for domestic refineries, and 13% for the export market. Approximately 27% of CPO production volume is processed in domestic refineries into crude palm oil (CPO) for the export market. Figure 3 shows the general supply chain of palm oil produced in Sintang District based on 2019 production data and 2020 trade data (Ministry of Agriculture 2020; TRASE 2020).

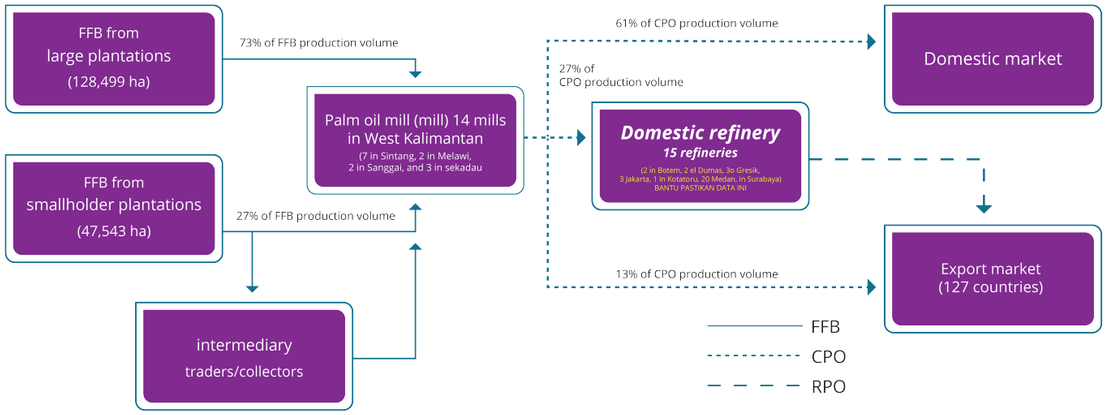


Figure 3. Palm Oil Supply Chain in Sintang District

Source : (CIFOR-ICRAF, 2023)

According to data from the Sintang District Agriculture and Plantation Service (2023), 45 plantation business permits and 48 location permits have been issued. Of these, only two companies and one cooperative have RSPO certification, and 13 have ISPO certification (Table 4).

Table 4. Oil palm business category and related sustainable certification in Sintang Regency

No	Category	Certification Condition	Count
1	Company Plantation	ISPO Certified	14
		ISPO certification ongoing	23
		RSPO Certified	2
2	Independent smallholder plantation	ISPO Certified	None
		ISPO certification ongoing	3 Cooperatives
		RSPO Certified	1 Cooperatives

Source: DISTAMBUN (2023), (CIFOR-ICRAF, 2023)

B. RUBBER COMMODITY PROFILE

Indonesia is one of the world's top three producers of natural rubber, with production reaching three million tonnes (30%) of world production. According to data from the Indonesian Plantation Service in 2021, of the total 3,001,448 hectares of Indonesian rubber plantations, nine percent (272,785 hectares) are in West Kalimantan Province. Total production in West Kalimantan Province in the same year reached 252,026 tons, contributing eight percent to national production. Of the total 272,785 hectares of rubber plantations in West Kalimantan, 98% (272,284 hectares) are smallholder plantations. Sintang District contributes 18% of the rubber commodity area in West Kalimantan Province, as shown in Figure 4 below.

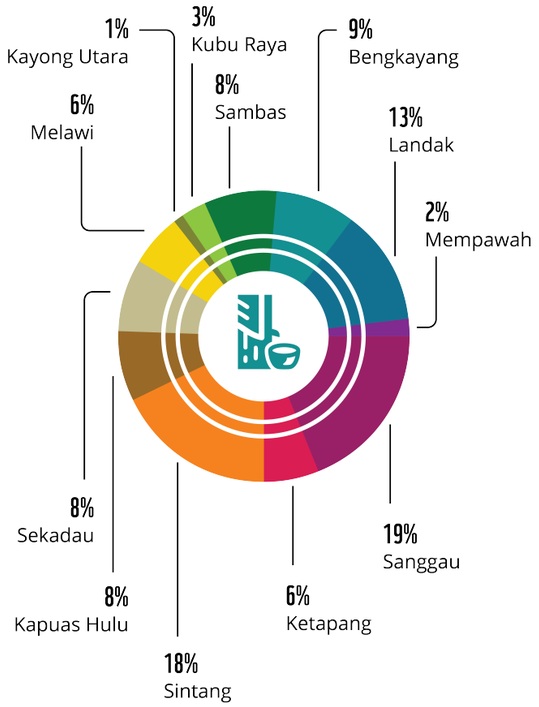
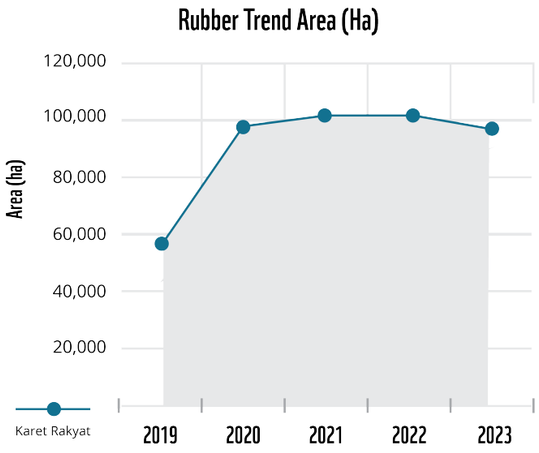


Figure 4. Comparison of Rubber Area in West Kalimantan Province

In Sintang District, rubber commodities showed an upward trend from 2019 to 2023. BPS noted that the area of rubber commodities in 2023 reaches 95,000ha, with a productivity of 416 tons/ha. For production, rubber commodities reached 39,749 tons in 2023. The rubber productivity in Sintang District in 2023 was below the provincial and national productivity, which were 428 kg/ha and 748 kg/ha, respectively, as illustrated in Figure 5 below.



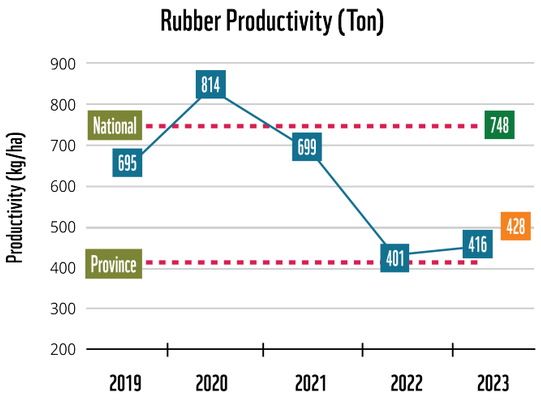


Figure 5. Plantation Area Trend (Ha) and Productivity (Ton/Ha) of Rubber Smallholders

Rubber Trade in Sintang Regency

To this day, many people in Sintang District still rely on cultivating and managing rubber plantations for their livelihood. High rubber production is not accompanied by an efficient marketing channel system. Marketing of rubber from smallholder farmers to rubber processing factories still involves numerous agents. This large number of trading agents contributes to an ineffective marketing system and high price margins. Marketing costs increase with the number of agents involved. To obtain the lowest price compared to other agents, marketing costs are calculated to determine the price paid to smallholders (Khaswarina *et al*., 2019).

Yufita *et al.* (2024) stated that the rubber marketing channel in Kupan Jaya village is also influenced by the strong ties between smallholders and collectors. Collectors often provide capital assistance to smallholders, causing them to feel indebted and committed to them, ultimately selling their rubber to them. Furthermore, smallholders in Kupan Jaya village generally do not own vehicles to transport their rubber if they want to sell directly to wholesalers or factories. This further lengthens the marketing channels. Rubber smallholders, as producers, lack strong bargaining power, so they accept whatever price collectors set.

High marketing price margins are also influenced by road access, as roads leading to rubber plantations in Sintang District are rarely in good condition. Collectors must navigate muddy roads to transport rubber to wholesalers or factories for sale. This transportation process becomes particularly difficult during the rainy season. This results in collectors incurring high transportation and labor costs, resulting in low prices for rubber smallholders.

Rubber Supply Chain in Sintang Regency

According to the 2022-2045 Sintang Regional Development Plan (RIPBUN), the final product produced by farmers is usually wet or dry rubber. The distribution channel consists of four channels: first (channel 1), where farmers sell directly to crumb rubber processing factories. Farmers who can sell directly to processing factories are usually those with access to land transportation and who live close to the processing factory.

For channel 2, farmers sell their rubber through collectors in villages, who then take it to sub-district collectors and forward it to the processing factory. If the distance between the village and the processing factory is not far, the collectors in the village usually send it directly to the crumb rubber processing factory.

Channel 3 is a distribution channel where rubber smallholders gather with their rubber production and invite wholesalers from processing factories to participate in the auction market. In the rubber auction market, several buyers bid on prices, and the price is determined based on the price agreed upon by the farmers and buyers. Finally, channel 4 is where farmers sell their rubber to collectors in the sub-districts, who then pass it on to processing plants.

Of the four channels, channel 3 is the most effective commodity distribution for rubber farmers in Sintang Regency. This is due to the alignment between the price they receive for rubber with their desired and agreed-upon bargaining position. Furthermore, the diverse range of buyers allows smallholders to increase the price and quality of rubber produced, meeting customer demand.

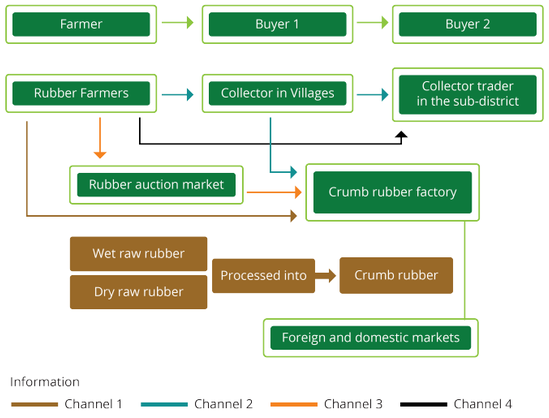


Figure 6. Rubber Commodity Value Chain in Sintang Regency
Source: RIPBUN Sintang 2022–2045

C. PEPPER COMMODITY PROFILE

Indonesia is a major producer and exporter of pepper in the world and is among the top five pepper-producing countries, particularly for black and white pepper. In 2011, Indonesia ranked fourth in global pepper production (David, 2016). According to David (2016), pepper is a significant plantation export commodity, ranking sixth after rubber, palm oil, cocoa, coffee, and coconut. Pepper is often consumed raw or processed into ground pepper. Sintang District one of the regencies with a significant pepper production compared to other regencies in West Kalimantan.

Based on data released by the Central Statistics Agency (BPS) (2023), pepper cultivation decline drastically from 2019 to 2022, then experienced a slight increase from 2022 to 2023. In 2022, the pepper plantation area in Sintang District reached 2,405 hectares, decreasing to 1,815 hectares in 2023. Productivity increased from 425 kg/ha to 517 kg/ha between 2022 and 2023. Pepper productivity in Sintang District in 2023 exceeded the provincial and national levels, which were 440 kg/ha and 417 kg/ha, respectively. These data are shown in Figure 7 below.

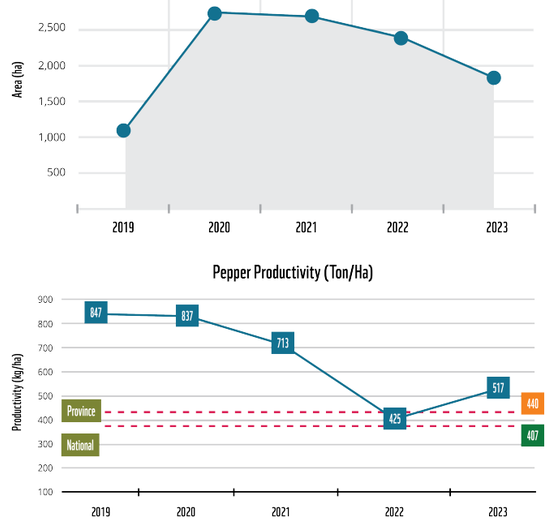


Figure 7. Plantation Area Trend (Ha) And Productivity (Ton/Ha) of Pepper

Pepper Trade in Sintang Regency

The pepper trade in Sintang Regency, as described by Muslim *et al*. (2020) through interviews with relevant agencies and local farmers, is quite unstable. Trading has traditionally been carried out by selling to collectors at low and unstable prices, then transporting the pepper to the city and selling to wholesalers and retailers, with some being sold illegally to neighboring countries. Muslim *et al*. (2020) summarized pepper plantation data in Sintang District based on interviews with the Agriculture and Plantation Agency (2020) in Table 3 below.

Table 5. Pepper Plantations in Sintang Regency

No	Sub-District	Plant Realization (ha)			Amount	Farmer (HH)
		TBM	TM	TTM		
1	Sintang	-	3,00	-	3,00	11,00
2	Sungai Tebe-lian	4,75	4,00	4,00	12,75	6,00
3	Kelam Permai	20,00	36,00	4,00	60,00	61,00
4	Tempunak	25,00	-	-	25,00	8,00
5	Sepauk	12,00	6,00	2,00	20,00	10,00
6	Dedai	50,00	6,00	2,00	58,00	39,00
7	Kayan Hilir	168,00	16,00	2,00	186,00	68,00
8	Kayan Hulu	40,65	-	-	40,65	172,00
9	Binjai Hulu	33,00	16,00	-	49,00	14,00
10	Ketungau Hilir	214,00	64,00	3,00	281,00	337,00
11	Ketungau Tengah	264,00	260,00	3,00	527,00	652,00
12	Ketungau Hulu	308,00	640,00	-	948,00	1.896,00
13	Serawai	1,00	6,00	2,00	9,00	11,00
14	Ambalau	31,00	4,00	-	35,00	141,00
Total July (2020)		1.171,40	1.061,00	22,00	2.254,40	3.426,00

Source: Plantation Service (2020) in Muslim et al. (2020)

The table shows that pepper farmers in Sintang District are quite numerous, particularly in Ketungau Hulu Village, then Ketungau Tengah, and Hilir, as evidenced by the number of households. However, pepper trade from these villages has not yet reached the domestic market.

In the border areas of Sintang Regency, specifically in Ketungau Hulu and Ketungau Tengah Districts, pepper is a major economic pillar. Nearly every village, such as Nanga Bayan, Mungguk Gelombang, Semareh, Selapan, Lubuk Pantak, Sejawak, and Mungguk Lawang, has extensive pepper plantations. Unlike other areas where market mechanism often shifts to other commodities when prices drop, farmers in this region remain committed to pepper cultivation, unaffected by market trends.

In Mungguk Gelombang village, for example, local community prefer pepper cultivation to rubber or sap tapping. They cultivate various varieties of pepper, including red bowl pepper, safe bowl pepper, and Indian pepper, which have long been a mainstay. The farmers' tenacity in maintaining these crops has paid off. In a single month, total pepper transactions in Sintang District are estimated to reach IDR 60-80 billion. Pepper prices are also quite promising, with black pepper ranging from IDR 85,000-90,000/kg and white pepper reaching IDR 185,000-190,000/kg in recent years.

However, despite this significant economic potential, marketing Sintang pepper poses significant challenges. Most of the harvest is sold in bulk through the Balai Karangan (Center for Trade) in Entikong. Unfortunately, prices are still determined by buyers from Malaysia, leaving farmers with little bargaining power. If there were direct export channels to other countries, such as Europe or America, the selling price would likely be higher and more profitable for farmers.

Pepper Supply Chain in Sintang Regency

The pepper supply chain in Sintang District involves several key stages, from cultivation by farmers to distribution to end consumers. The pepper supply chain in Sintang District consists of production, processing, and distribution components.

1. Production: Farmers in Sintang District plant and harvest pepper. According to 2023 data, the pepper plantation area in Sintang reached 801 hectares, with a production of approximately 2,477 tons.
2. Processing: After harvesting, pepper typically undergoes processing processes such as drying and cleaning to improve quality before being sold.
3. Marketing and Distribution: Processed pepper then sold to local markets or exported through intermediaries or wholesalers.

The pepper supply chain in Sintang District faces numerous obstacles. Muslim *et al*. 2022 explains that rural communities, especially in Sintang Regency, generally earn their living as smallholder farmers, earning relatively small and uncertain incomes. Therefore, natural resource management tend to be driven by people's needs, regarding how existing natural resources are managed and utilized to improve the economy and the sovereignty of the owners of these natural resources. As stated and mandated by law, the state's wealth is to be utilized for the prosperity of its people.

However, the desire to better meet needs due to uncertain incomes has become a trigger for a shift in perception among rural communities, who prefer to sell their produce to other countries for better returns, especially for farmers in Sintang Regency, which borders other countries.

The natural resources cultivated by the locals are predominantly enjoyed by neighboring countries because neighboring countries can purchase their products at a better price than their own country. In fact, many factors underlie this problem. While neighboring countries have developed robust infrastructure, transportation, and distribution channels, this contrasts sharply with the rural areas bordering our own country, where we can readily observe underdeveloped rural infrastructure, inadequate transportation, and difficult distribution to areas capable of accommodating plantation commodity sales. Furthermore, rural areas remain excluded from rural development funding allocations.

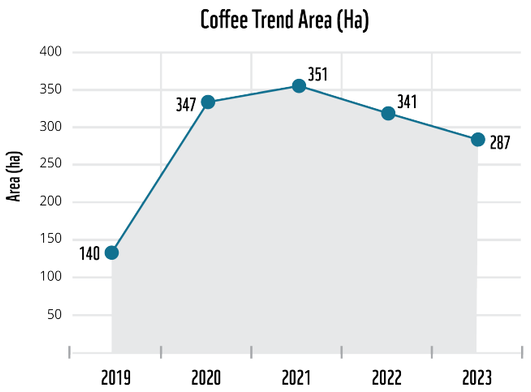
The limited sales of commodities within our own region are due to the presence of importers who manipulate prices, preventing government-set prices from being applied in rural areas. Exporters exploit the lack of government oversight to purchase agricultural and plantation products from rural communities at the lowest possible prices and sell them as high as possible, without adhering to government regulations.

However, after careful observation, it has been discovered that selling rural products in border areas to the demand urban areas requires significant costs. Exporters must incur substantial costs for gasoline and diesel fuel due to the remoteness of border villages, the inherently dangerous terrain, potholes, and inadequate and poorly developed infrastructure. This incurs additional operational costs for exporters.

D. COFFEE COMMODITY PROFILE

Coffee (*Coffea sp*.) is one of West Kalimantan's agricultural products. Coffee plantations are common in almost all districts, and farmers cultivate coffee plants. Among the most widely processed coffee products is ground coffee. Research by Utomo (2014) found that coffee is a key plantation product in West Kalimantan, with nearly all districts producing coffee as a mainstay. Previous research indicated that Sintang is among the top 10 coffee-producing districts in West Kalimantan.

Based on data released by the Central Statistics Agency (BPS) in 2023, the area of coffee plantations in Sintang District increased from 140 hectares to 287 hectares from 2019 to 2023. Coffee productivity increased from 2019 to 2021, then declined from 2021 to 2023. In 2019, coffee productivity in Sintang District reached 650 kg/ha and decreased to 258 kg/ha in 2022 and then increased again to 265 kg/ha in 2023. Coffee productivity produced in Sintang District in 2023 was below the provincial and national productivity, which were 419 kg/ha and 599 kg/ha, respectively. Coffee productivity referred to in the discussion is for all types of wet coffee harvests harvested in red and green conditions. The magnitude of the area and productivity is shown in Figure 8 below.



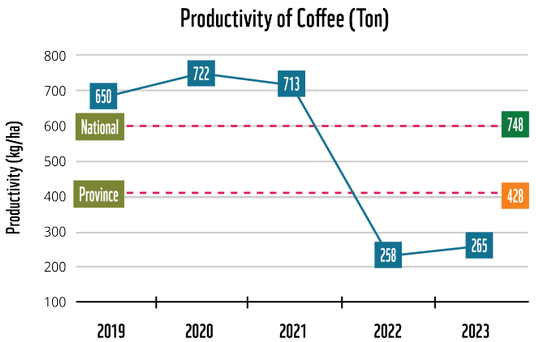


Figure 8. Plantation Area Trend (Ha) and Productivity (Ton/Ha) of Coffee

Coffee Trade in Sintang Regency

Coffee trading in Sintang District still dominated by local and national markets, with some attempts to penetrate the export market. Coffee farmers in Sintang generally sell their harvest in the form of green beans or roasted beans to cooperatives, local collectors, and small processing industries. Some cooperatives, such as the Sintang Coffee Cooperative, play a role in collecting and distributing coffee to various regions and providing education to farmers to improve the quality of their harvest.

In addition to traditional channels, coffee marketing in Sintang also involves various MSMEs and local roasteries that process coffee into ready-to-consume products, such as ground coffee and packaged coffee. These products are then marketed through local shops, cafes, traditional markets, and digital platforms such as online marketplaces and social media. Several local brands are gaining national recognition and participating in coffee exhibitions to expand their marketing network.

Coffee Supply Chain in Sintang Regency

The coffee supply chain in Sintang District involves various stages, from production to trade including farmers, cooperatives, collectors, processing industries, and the domestic and export markets. Coffee farmers in Sintang cultivate Robusta and Arabica varieties in agroforestry systems, often combined with other crops such as rubber and pepper. The main production centres are spread across the Sepauk, Kayan Hulu, and Serawai Districts, with total production reaching approximately 76,100 tons per year.

After harvesting, the red coffee cherries (cherries) are processed using various methods, including natural (dry), semi-washed, or fully washed, to improve quality. Fermentation and drying processes are carried out before the coffee beans are sold as green beans (raw beans) or roasted beans. Farmers generally sell their harvest to cooperatives, local collectors, or directly to roasteries. Some cooperatives, such as the Sintang Coffee Cooperative, play a role in assisting with marketing and providing education to farmers to improve the quality of their harvests. In addition, several local coffee processing MSMEs also contribute to the production of ground coffee and ready-to-brew packaged coffee, which is then marketed to major cities such as Pontianak, Jakarta, and Surabaya.

In recent years, Sintang's specialty coffee has begun to be developed as a specialty coffee product and marketed through local shops, cafes, online marketplaces, and national exhibitions. However, challenges remain in the supply chain, such as price fluctuations, varying crop quality, and limited export market access due to a lack of certification and branding. The general supply chain for coffee commodities is depicted in Figure 9 below.

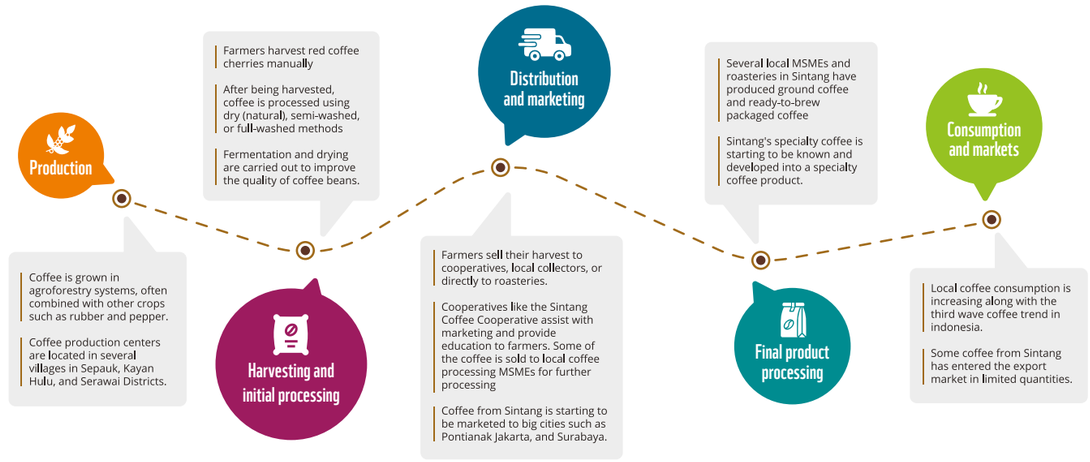


Figure 9. Coffee Supply Chain in Sintang

E. COCOA COMMODITY PROFILE

Cocoa productivity in Sintang Regency, West Kalimantan, shows significant potential but still faces several challenges. Data from the Sintang District Agriculture and Plantation Office in 2020 recorded cocoa production of nine tons across 100 hectares (BPS, 2020). In general, the topography of Sintang District considered suitable for cocoa cultivation. The plantation office has identified this area as having significant potential for cocoa development, given high demand and low local production. One initiative to increase cocoa production is through crop diversification within rubber plantations. Kalara Borneo, a local company, is collaborating with farmers in Sintang District to develop cocoa cultivation on 13 hectares of land within rubber plantations. However, current production only reaches 100 kg of cocoa per month, far below the capacity of existing production machinery.

Based on BPS data from 2019 to 2023, cocoa productivity trended significantly downward from 2019 to 2020. Between 2020 and 2023, the increase and decrease tended to be insignificant. For cocoa plantations, the highest year was 2021, with 35,000 hectares. However, in the previous year and the year before, it did not even reach 20,000 hectares, reaching only 10,000 hectares. The area and productivity of this commodity can be seen in Figure 10 below.

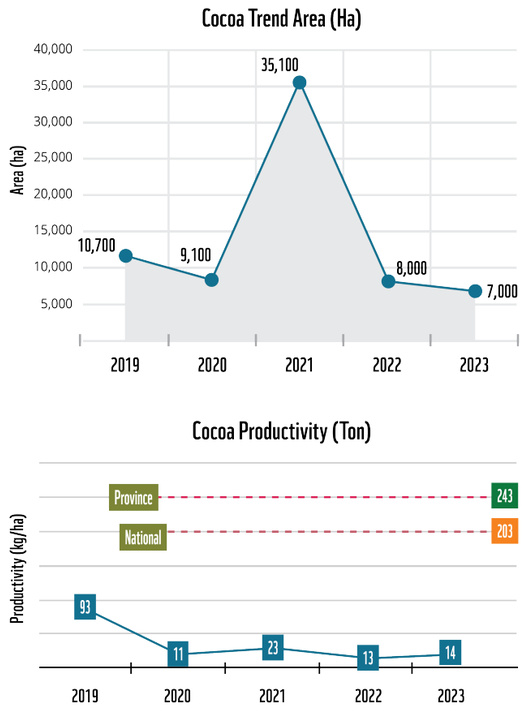


Figure 10. Plantation Area Trend (Ha) and Productivity (Ton/Ha) of Cocoa

Cocoa Trade in Sintang Regency

The cocoa market in Sintang Regency, West Kalimantan, has shown significant growth in recent years. Although cocoa production in the region remains relatively small compared to other plantation commodities, various initiatives have been undertaken to increase local cocoa production and marketing.

According to data from the Sintang District Central Statistics Agency (BPS) in 2023, smallholder cocoa production reached 3.5,000 tons. While this figure is lower than other commodities such as coffee, which reached 76.1,000 tons, efforts to increase cocoa production continue. One approach is planting cocoa between rubber trees, as has been practiced by farmers in Benua Baru Village since 2018. This method allows farmers to maximize land use without needing to clear new areas, thus increasing income without harming the environment.

To increase added value, several cooperatives and micro-enterprises in Sintang District have developed cocoa bean processing facilities. For example, Keling Kumang Agro purchases cocoa beans from farmers, either processed traditionally or through fermentation, which commands a higher selling price. Additionally, Kalara Borneo, a local micro, small, and medium enterprise (MSME), produces artisan chocolate from local cocoa beans. They collaborate directly with farmers who develop cocoa plantations using agroforestry methods. Their chocolate products are marketed in various varieties, such as exotic Maram milk chocolate and dark chocolate with varying cocoa content (Sintang Agriculture Service, 2022).

Cocoa Supply Chain in Sintang Regency

The cocoa supply chain in Sintang District encompasses various stages, from production at the farm level to distribution to domestic and international markets. Cocoa is grown by smallholder farmers in agroforestry systems, often combined with other crops such as rubber. Some areas, such as Benua Baru, are major cocoa production centres, with yields reaching 3.5 thousand tons per year.

After harvest, the cocoa pods are fermented and dried to improve the quality of the beans. This process is generally carried out manually by farmers before being sold to cooperatives or local collectors. Most Sintang cocoa is still marketed as dried beans, without further processing, thus under-recognizing its added value. Within the supply chains, cooperatives and collectors play a crucial role in channelling the harvest to processing industries or wider markets. This is illustrated in Figure 10 below.

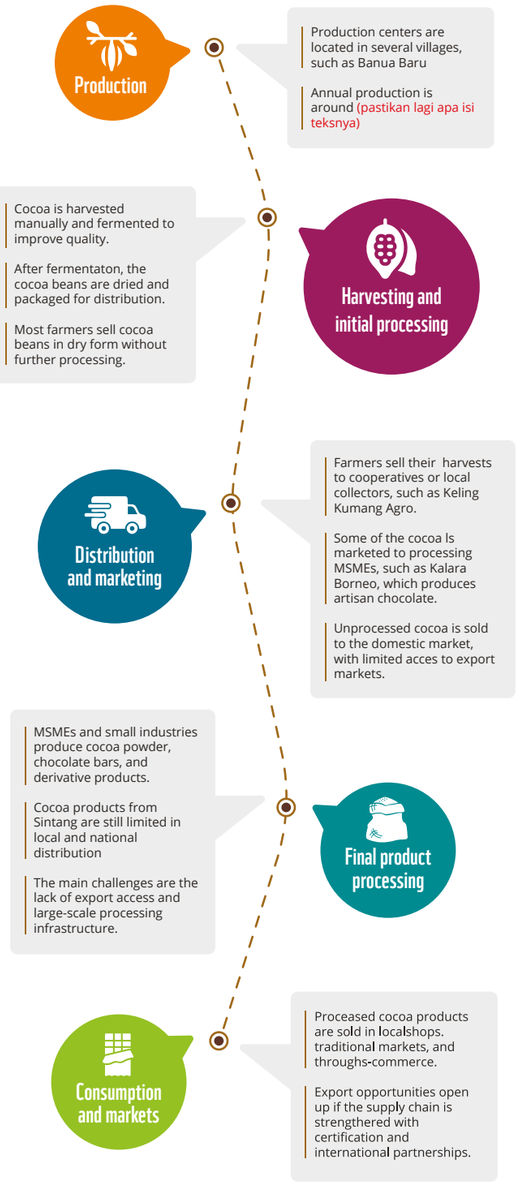


Figure 11. Cocoa Supply Chain in Sintang Regency.

JURISDICTIONAL APPROACH OF SINTANG DISTRICT

A. ISEAL AND DCF JURISDICTIONAL APPROACH

The jurisdictional approach emerged from global issues related to deforestation and climate change. Governments and local stakeholders have the power to drastically reduce deforestation through policies and actions. Companies committed to reducing deforestation can incentivize the creation and enforcement of such policies and actions through their resource allocation. Combining corporate commitments to reduce deforestation in supply chains with national and subnational programs ("jurisdictions") that reduce deforestation and greenhouse gas emissions leverages the combined strengths and resources of the public and private sectors[1].

A jurisdictional approach is a type of integrated landscape management that combines relevant policies and strategies designed to engage governments or stakeholders (Stickler *et al*., 2018). Simply put, a jurisdictional approach is a multi-stakeholder initiative with sustainability goals within a single jurisdiction (Hovani *et al*., 2018). A jurisdictional approach can also be defined as a type of landscape approach that operates within subnational or national administrative boundaries with the active involvement of governments. Some approaches involve multiple jurisdictions within a single biome or physiographic region. Each approach seeks to achieve sustainability at scale through an inclusive process involving multiple stakeholders, and these guidelines describe interventions relevant to both (TFA, 2020).

In recent years, a jurisdictional approach framework has been developed to drive large-scale improvements to address environmental challenges in terrestrial commodities such as soy, palm oil, and timber (WWF, 2023). A jurisdictional approach for terrestrial commodities has been defined as

1 https://commoditiesjurisdictions.wordpress.com/

an integrated landscape approach that aims to reconcile competing social, economic, and environmental objectives through participation across stakeholders and sectors, implemented within government administrative boundaries, and with some form of government involvement (CI, 2018). These initiatives, spanning national and regional political jurisdictions, have added value to credible certification efforts by addressing not only environmental but also social and economic barriers to sustainability at the jurisdictional level or within the boundaries of the management system.

The two jurisdictional approaches mentioned above, land use jurisdictional and commodity jurisdictional approaches, represent initiatives by stakeholders, both government and private companies, to reduce deforestation and greenhouse gas emissions. Over time, several institutions and initiatives have developed structured jurisdictional frameworks. Among the institutions assessing JA using multiple approaches are the World Wide Fund for Nature (WWF) and the International Sustainability and Environmental Accreditation (ISEAL).

"Deforestation and Conversion Free" (DCF) refers to the initiative led by the World Wide Fund for Nature (WWF, 2021). This approach aims to eliminate deforestation and the conversion of natural land for various human activities, such as agriculture, infrastructure development, or resource exploitation. DCF emphasizes the need to transition to a global supply chain free from deforestation and conversion, while still supporting sustainable development and biodiversity protection.

The DCF principles uphold deforestation-free and environmentally responsible supply chain processes. DCF has translated these principles into standards. In general, the standards for the DCF supply chain are as follows:

1. Principles related to carbon emissions generated by a project. The DCF supply chain is a critical step towards meet global climate, biodiversity, health, and development targets.
2. Principles related to free, prior, and informed consent, which emphasizes respect for people and nature.
3. Principles demonstrating that DCF commitments must have impacts where they matter.
4. Respect for human rights is a fundamental principle of the DCF supply chain, including land rights, access rights, free, prior, and informed consent (FPIC), workers' rights, gender equality, and equitable governance.
5. DCF commitments must encompass all natural ecosystems, including landscapes and natural ecosystems.
6. DCF commitments must cover all regions.
7. Deforestation and conversion must be stopped, regardless of whether they are legal or not.
8. DCF supply chains must be a core requirement.
9. DCF supply chains need to include producers in high-risk regions.
10. All supply chain actors have a role to play.
11. DCF policies must include economic and technical incentives.
12. All DCF efforts must be aligned with an accountability framework.
13. DCF supply chains can be achieved now.
14. Responsible production and consumption involve many other elements.

ISEAL is a global organization focused on developing and strengthening sustainability standards and certification systems across various sectors, including social, environmental, and economic sectors. It provides best practice guidelines to ensure sustainability standards are transparent, credible, and impactful.

ISEAL developed the principles of a jurisdictional approach as part of its efforts to support collective and integrated sustainability at the regional or jurisdictional level. This approach aims to ensure that sustainability initiatives are not only carried out at the individual or company level but also involve stakeholders within an administrative area to achieve broader impact. These principles include:

1. Governance: Clear and transparent operating procedures define the legal standing of the initiative and the governance roles, responsibilities, and decision-making of various stakeholders within the initiative.
2. Engaged stakeholders: Key stakeholders within the jurisdiction, including local governments and producing companies, are actively involved in the initiative and committed to the stated action plan and outcomes.
3. Progress framework: Sustainability impact objectives or outcomes, targets, and milestones are established for the jurisdiction, and the action plan outlines the steps to be taken to meet the milestones and outcomes.
4. Financing: The jurisdictional initiative has established a budget and secured or identified sufficient resources for ongoing initiative operations, including progress monitoring.
5. Monitoring system: A framework is in place to monitor performance improvements across the landscape, along with the capacity to manage and analyze data and accurately communicate results.

B. JURISDICTIONAL APPROACH IN SINTANG REGENCY

The jurisdictional approach in Sintang District was initiated in 2015 through the district spatial plan. This policy was strengthened by the Sintang Regency's commitment to several subsequent approaches.

Milestones toward sustainable jurisdiction in Sintang District include the Regional Regulation (Perda) on the District Spatial Plan (RTRWK), the Sustainable Sintang Regional Action Plan (RAD SL), the Regional Regulation on Environmental Protection and Management, the Regional Action Plan for Sustainable Palm Oil (RAD KSB), the Regent's Regulation (Perbup) on Sustainable Lake Management, the Regulation on the Management of Areas with High Conservation Value (HCV) and High Carbon Stock (SKT) in Areas for Other Uses (APL), and the Sustainable Plantation Master Plan (RIPBUN). A general timeline of all jurisdictional approaches can be seen in the following figure.

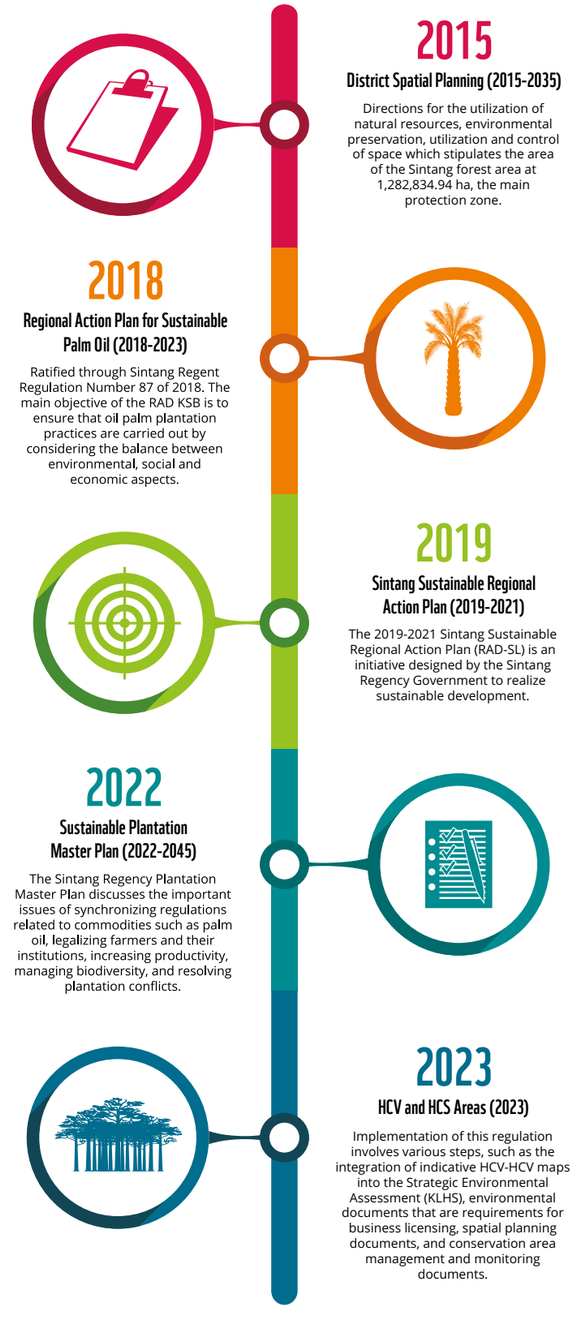


Figure 12. Timeline of Jurisdictional Approach in Sintang Regency

Judging from the timeline and types of jurisdictional approach initiatives, Sintang District a committed and relatively advanced District with various jurisdictional approaches. The jurisdictional approaches regarding spatial planning and land use consist of the RTRW (2015), RAD-SL (2019), and NKT/SKT (2023), while the jurisdictional approaches for commodities consist of RAD-KSB (2018) and RIPBUN (2022).

C. DISTRICT SPATIAL PLANNING (2015-2035)

The issuance of Sintang District Regulation No. 20 of 2015 concerning the 2016-2036 RTRWK is a key modality in encouraging changes in perspective and implementation of sustainable development. This regulation provides guidance in the utilization of natural resources, environmental conservation, utilization and control of space2. Through the RTRWK Regulation, the Sintang District Government determines the area of Sintang forest area at 1,282,834.94 ha, the main protection zone (Ambalau District, Serawai District and Muller Ecosystem Area), strategic environmental areas (Serawai-Ambalau District), strategic economic areas, and strategic tourism areas, so that there is legal certainty in spatial development.

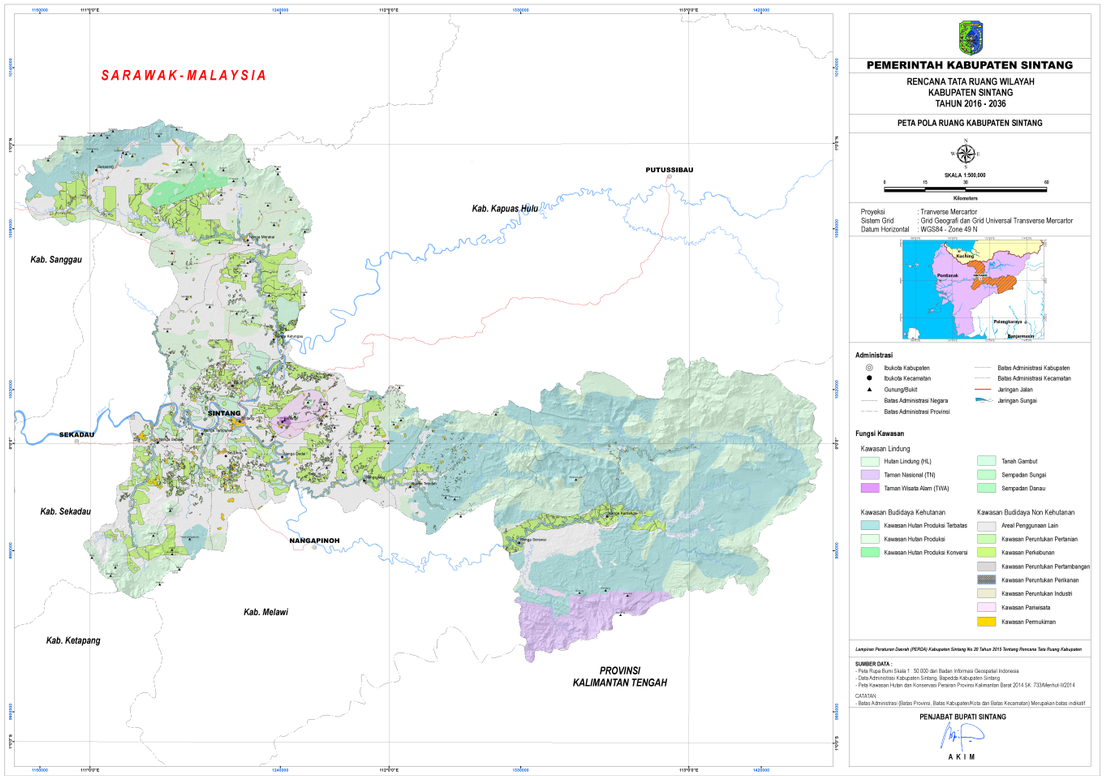


Figure 13. Spatial Planning Map of Sintang District Based on Regional Regulation No 20 of 2015

Source: Sintang District Government (2015)

D. REGIONAL ACTION PLAN FOR SUSTAINABLE PALM OIL (2018-2023)

The Sintang District Sustainable Palm Oil Regional Action Plan (RAD KSB) is a strategic initiative aimed at sustainably managing and developing the palm oil sector. This document is valid for five years (2018-2023) and was ratified through Sintang Regent Regulation No. 87 of 2018. The primary objective of the RAD KSB is to ensure that oil palm plantation practices are carried out with a balance between environmental, social, and economic aspects. This includes efforts to reduce deforestation, conserve biodiversity, improve the welfare of local communities, and increase the productivity and quality of palm oil production.

To achieve this goal, the Sintang District RAD KSB has established various strategies. One of these is synchronizing regulations related to palm oil to ensure policies that support sustainability. Furthermore, the program emphasizes the importance of business licensing and legal compliance for plantation operators. Land legality and independent smallholder institutions are also a key focus, with assistance provided to obtain valid certification. Furthermore, environmentally friendly and efficient plantation practices are continuously promoted, including through increased productivity and optimized processing of fresh fruit bunches (FFB).

In addition to production aspects, the RAD KSB also focuses on improving human resource capacity through training for farmers and workers, resolving land conflicts, and rejuvenating unproductive oil palm plantations. To support economic diversification, this initiative encourages the development of businesses other than oil palm and the establishment of Regional-Owned Enterprises (BUMD). Biodiversity and the utilization of oil palm by-products also receive special attention in this policy.

The role of companies in supporting sustainability is also emphasized through the implementation of corporate social responsibility (CSR), while cooperatives are strengthened as a means of managing and marketing plantation products. Partnerships between independent smallholders, cooperatives, and plantation companies are continuously developed to create mutually beneficial relationships. Furthermore, areas with high conservation value (HCV) are inventoried and protected to ensure ecosystem sustainability.

The RAD KSB Sintang District involves various stakeholders, including the local government, plantation companies, farmers, cooperatives, and civil society organizations. Through strong collaboration, this initiative is expected to achieve sustainable oil palm management, providing optimal economic benefits without sacrificing environmental sustainability and social welfare.

E. SINTANG LESTARI REGIONAL ACTION PLAN (2019-2021)

The 2019-2021 Sintang Sustainable Regional Action Plan (RAD-SL) is an initiative designed by the Sintang District Government to realize sustainable development in the region. This plan was prepared based on Sintang Regent Regulation Number 66 of 2019 and aims to serve as a guideline for Regional Apparatus Organizations (OPD) in implementing a balanced development strategy between economic growth and environmental preservation. With the vision of creating a prosperous, innovative, religious, harmonious, and dignified Sintang community, RAD-SL focuses on sustainable natural resource management, security stability, and equitable infrastructure distribution. In its implementation, RAD-SL adopts a participatory approach by involving various stakeholders, including local governments, non-governmental organizations, the private sector, and indigenous communities. This program includes several key components, such as the preparation of success indicators, a development roadmap, and priority policies and programs to achieve the Sintang Sustainable 2030 vision. One of the main challenges in the implementation of RAD-SL is the dominance of land-based economic sectors, such as agriculture and forestry, which are experiencing a downward trend in productivity due to reduced land area. Therefore, the government is trying to balance economic and ecological aspects so that development in Sintang District can proceed sustainably and provide long-term benefits for the community.

F. SUSTAINABLE PLANTATION MASTER PLAN (2022-2045)

The Sintang District Sustainable Plantation Master Plan for 2022-2045 is a strategic planning document prepared by the Sintang District Government to guide the management and development of the plantation sector sustainably during this period. This document aims to establish a vision, mission, and programs for plantation management, ensure land allocation aligns with commodity potential and suitability, and improve community welfare through environmentally friendly and sustainable plantation practices.

The development of this master plan involved various processes, including focused discussions to identify and verify challenges and opportunities in the plantation sector in Sintang Regency. Furthermore, the plan

also encompasses efforts to synchronize regulations related to palm oil, legalize smallholders and their institutions, increase productivity, manage biodiversity, and resolve plantation conflicts. This Master Plan is expected to serve as a guideline for all stakeholders in managing the plantation sector in Sintang District in an integrated and sustainable manner, in line with national and regional policies regarding natural resource and environmental management.

The Sintang District Plantation Master Plan addresses plantation issues based on spatial policies in Sintang Regency. This plan is part of the effort to develop the Sustainable Plantation Master Plan for the 2022-2045 period. The main objective of this Sustainable Plantation Master Plan is to identify challenges and opportunities in the plantation sector and align plantation policies with regional spatial planning. Furthermore, the plan discusses the importance of synchronizing regulations related to commodities such as palm oil, legalizing farmers and their institutions, increasing productivity, managing biodiversity, and resolving plantation conflicts.

G. PROTECTION OF HCV AND HCS AREAS (2023)

The protection of High Conservation Value (HCV) and High Carbon Stock (HCS) areas in Sintang District in 2023 is a strategic step taken by the local government to maintain ecosystem sustainability and mitigate the negative impacts of plantation expansion and other land-based industrial activities. HCV refers to areas with high biodiversity, rare ecosystems, and play a vital role in the ecological and sociocultural functions of local communities. Meanwhile, HCS refers to areas that store significant carbon stocks, such as primary forests and peatlands, which play a role in climate change mitigation.

The Sintang District Government, through Sintang Regent Regulation Number 70 of 2023, established a policy for the protection of HCV and HCS areas, which includes mapping of indicative areas, restrictions on land conversion, and integration of these areas into regional spatial plans. This regulation also serves as a guideline for the private sector, particularly palm oil and forestry companies, in managing their land to avoid environmental damage. Furthermore, this policy emphasizes the importance of community participation in conservation efforts, by involving local and indigenous communities in sustainable forest management.

The implementation of HCV and HCS protection policies focuses not only on environmental aspects but also considers the social and economic impacts on surrounding communities. By maintaining a balance between conservation and land use, the government hopes to create a sustainable development model that provides long-term benefits to the ecosystem and improves the well-being of the Sintang community.

GAP ANALYSIS OF JURISDICTIONAL APPROACHES IN SINTANG REGENCY

The GAP assessment of jurisdictional conditions in Sintang District was conducted using indicators from both the DCF and ISEAL. These indicators include land cover change dynamics, stakeholder involvement, governance, progress framework, financing, and monitoring systems.

Table 6. Assessment of the Current Condition of the Jurisdictional Approach in Sintang Regency.

No	JA Indicator Elements	Types of Jurisdictional Approaches	
		Land Use (RTRW, RAD-SL, NKT/SKT)	Commodities (RAD-KSB, RIPBUN)
1	Governance (Integrated emission reduction strategy, Spatial Planning)	The RTRWK is an integrated document that provides guidance to regional government agencies (OPD) in developing sustainable regional development strategies. Emission reduction strategies are outlined in the RAD-SL. The RAD-SL regional regulation expires in 2023.	Focus on sustainable palm oil commodities (RAD-KSB) and other key plantation commodities (RIPBUN). RIPBUN serves as a cross-commodity guide for sustainable plantation development. The RAD-KSB regional regulation period ended in 2021.
2	Stakeholder engagement (Multi-Stakeholder Governance)	A multi-stakeholder forum has been formed, namely the Joint Secretariat (SekBer) led & coordinated by the regional government, involving government agencies, the private sector, independent farmers & NGOs to support and oversee the implementation of RAD SL.	A multi-stakeholder forum has been formed, namely FOKSBI and the Regional Device Team (TPD Sintang led & coordinated by the regional government, involving government agencies, the private sector, independent farmers & NGOs to support and supervise the implementation of RAD-KSB.
3	Framework (performance targets, Sustainable Agriculture and Commerce, and Indigenous Peoples and Local Communities)	Sustainable targets listed in the RAD-SL PPMHA includes the district government's responsibility towards indigenous communities and financing/facility support for indigenous community institutions.	Sustainable targets listed in the RAD-KSB The District Plantation Development Coordination Task Force (TPK3K) is tasked with resolving boundary and land ownership conflicts between companies and indigenous/local communities. However, resolution methods and coordination with community/government organizations need to be strengthened.
4	Financing (Incentive Policy, Financial Support)	Sintang District has several policies and regulations that provide incentives for sustainable landscape management (KEE, RAD-KSB); a planning/budgeting system to ensure alignment of the incentives developed.	The implementation of RAD-KSB and RAD-SL is largely funded by the APBD; funding from national government incentive schemes is allocated to specific programs (e.g., forest fire prevention).
5	Monitoring, Reporting & Verification (MRV) System	Sintang District made a report on progress towards the Sustainable Development Goals (SDGs), RAD-SL,	Sintang District has several policies and regulations that provide incentives for sustainable landscape management (KEE, RAD-KSB); a planning/budgeting system to ensure alignment of the incentives developed

Source: Primary and secondary data processed, Sukri et al (2020).

A. CHANGE OF LAND COVER DYNAMICS

Land cover change analysis in Sintang District was conducted to determine the extent of deforestation. To meet the DCF (Developmental Cost Analysis), this analysis is crucial for determining which land cover changes or deforestation is still occurring. The forest cover analysis shows a decline in the percentage of natural forest and peatland in the Sintang region from 2000 to 2019, from approximately 58% forest cover to approximately 47% in recent years (CIFOR-ICRAF, 2023). The expansion of oil palm plantations and increased scrubland are the primary drivers of the loss of most land cover in Sintang Regency. The analysis shows that deforestation is still occurring, although the rate of decline varies across regions. The remaining natural forest areas are primarily located in the eastern part of Sintang Regency, where access and land pressure are relatively lower. Land cover data analysis also indicates a relatively rapid rate of decline in several areas, particularly in border areas and areas with high land use intensity.

Several factors are driving or contributing to the ongoing deforestation in Sintang Regency. Forest fires remain a major cause of forest cover loss (Stickler et al., 2018). Land conversion for large- and small-scale plantation development activities also continues to lead to the conversion of forestland into agricultural and plantation land (WWF, 2020; GFW, 2023). The increase in settlements and informal settlements in border areas also contributes to the decline in forest cover. The construction of roads and supporting infrastructure in several regions also opens wider access to forest areas, which has the potential to accelerate the rate of deforestation (CIFOR-ICRAF, 2022).

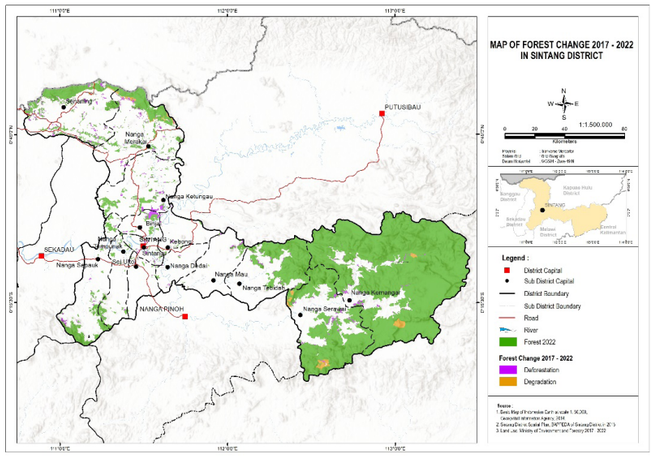


Figure 14. Deforestation and degradation in Sintang District 2017-2022
Source: WWF (2022), Ministry of Environment and Forestry (2017-2022)

The analysis shows that despite monitoring efforts, deforestation and land conversion remain challenges that require strengthening the monitoring system and cross-stakeholder engagement as strategic steps to achieve sustainability and meet the DCF Principles.

B. GOVERNANCE

The assessment of governance in the jurisdictional approach in Sintang District based on two indicators, namely an integrated emission reduction strategy and the existence of a spatial plan. The Sintang District Government's commitment to sustainable development in its jurisdictional area began in 2015. The District Spatial Plan (RTRWK) has been ratified through Sintang District Regional Regulation No. 20 of 2015 concerning the 2016-2036 RTRWK. This regulation should serve as a reference for all jurisdictional approaches in Sintang Regency. In 2019, the integrated emission reduction strategy was ratified through Sintang Regent Regulation No. 66 of 2019 concerning the Sustainable Sintang Regional Action Plan (RAD-SL) as a guideline for Regional Apparatus Organizations (OPD) in implementing a development strategy that balances economic growth and environmental preservation. With the issuance of this regional regulation, two governance indicators in the jurisdictional approach in Sintang District have been met.

The RAD-KSB commodity jurisdictional approach focuses solely on sustainable palm oil commodity management. Unlike the RAD-KSB, the RIPBUN (Commodity and Spatial Planning) approach encompasses a broader range of commodities, encompassing five key commodities in Sintang Regency. The RIPBUN document references various other jurisdictional documents, including the RTRW (Regional Spatial Plan), RAD-SL (Regional Spatial Planning), and NKT-SKT (Natural Forest Management System), with a long regulatory period extending to 2045.

The existence of these various jurisdictional approaches in Sintang District presents a challenge in terms of synchronizing governance. The jurisdictional documents used as

references have not been clearly defined. Another challenge concerns the division of roles and responsibilities among stakeholders, including regional government agencies (OPD), civil society, companies, and other non-governmental organizations (NGOs), which ultimately overlap and overlap. Furthermore, the sustainability of the jurisdictional approach governance in Sintang District highly dependent on the role of the regional leader, in this case the Regent. Although these regulations have been ratified, they are ultimately only valid for a specific leadership period. As an example of what happened, the RAD-SL jurisdictional approach was legally completed in 2021 and the RAD KSB ended in 2023.

Table 7. Assessment of Gap in Governance Aspects of the Jurisdictional Approach in Sintang Regency

Governance Aspects	GAP
Policy Coherence	Jurisdictional documents are not yet fully integrated, with frequent overlap between the RTRW, RAD-SL, and RAD-KSB. The RTRW has not yet been fully utilized as a primary reference.
Distribution of Roles and Responsibilities	There is no clear matrix for the division of roles between OPDs, the private sector, and indigenous communities, resulting in duplication or a lack of function in policy implementation.
Institutional Sustainability	The sustainability of multistakeholder forums is highly dependent on donor support; there is no sustainable institutional scheme based on regional regulations or regular funding.
Dependence on Regional Leadership	The implementation of the jurisdictional approach is highly dependent on the support of the incumbent regional head. After a regent's term ends, policies can change, and many programs may become deprioritized.
Legal Legitimacy of Multi-Party Forums	Multi-stakeholder forums do not yet have permanent legal status like formal regional institutions (e.g., UPTD or Regional Agencies), so their role is vulnerable and it is difficult to access public funding.

C. STAKEHOLDER INVOLVEMENT

The initiation of a jurisdictional approach to land use and commodities in Sintang District was followed by the establishment of a multi-stakeholder forum involving regional government agencies (OPD), the private sector/companies, independent farmers, and other non-governmental organizations. Sustainable development initiatives in Sintang District were initiated by non-governmental organizations (NGOs) and civil society organizations (CSOs), whose activities focused on community empowerment, sustainable regional development, and the environment. One initiative for the multi-stakeholder forum, initiated by WWF, fostered intensive collaboration and communication between NGOs and CSOs in Sintang, leading to the formation of the Sintang District Civil Society Communication Forum (FKMS) coalition in 2016, which was ratified in 2019 (Nasrullah, 2024). This forum paved the way for the establishment of other multi-stakeholder forums for various jurisdictional approaches in Sintang Regency. The role of non-governmental organizations such as WWF Indonesia, which has long been active in Sintang Regency, one of whose main focuses is promoting sustainable palm oil development. They initiated the establishment of the Indonesian Sustainable Palm Oil Communication Forum (FOKSBI) in 2018. This forum actively conducts studies and planning to promote sustainable palm oil development in Sintang Regency. In 2018, these studies and intensive meetings resulted in the RAD-KSB (Development Plan for Sustainable Palm Oil), which was ratified through a Sintang District regulation. This forum was ultimately accelerated by the local government by establishing a Regional Implementation Team (TPD) for the RAD-KSB through Sintang Regent Decree No. 525/753/KEP-DISTANBUN/2022, the latest for the 2022-2024 period. The forum is chaired by the regional secretary, with members from plantation OPDs, palm oil companies, farmer groups, community groups, farmers, and non-governmental organizations (NGOs).

Furthermore, with the ratification of the RAD-SL in 2019, the Joint Secretariat (SEKBER) was established, a multi-stakeholder forum established through Sintang Regent Decree No. 050/280/Kep-Bappeda/2020 to support and oversee the implementation of the RAD SL. This forum is chaired by the Regional Secretary, with the Regent of Sintang District serving as its advisor, with members representing Sintang District Regional Apparatus Organizations (OPD), private companies, farmer groups, farmers, and non-governmental organizations (NGOs).

The establishment and continuity of these multi-stakeholder forums in Sintang District have received strong support from non-governmental organizations (NGOs) through their sustainable development programs. NGOs provide intensive mentoring and knowledge transfer to OPDs to strengthen regional capacity in implementing sustainable development. These programs have a specific duration/ period, and the activity of the multi-stakeholder forums has declined as the program period has ended. The jurisdictional approach also results in limited stakeholder involvement in forums, such as FOKSBI and TPD RAD-KSB, which only involve stakeholders in the palm oil sector. Furthermore, not all palm oil companies participate in these forums. Furthermore, companies operating in other key commodities have not yet participated in the established stakeholder forums. Another challenge, as previously explained, is the division of roles and responsibilities among stakeholders, including regional government agencies (OPD), civil society, companies, and other non-governmental organizations, which ultimately overlap and overlap due to the various jurisdictional approaches.

Table 8. Assessment of Gap in Stakeholder Involvement Aspects of the Jurisdictional Approach in Sintang Regency.

Stakeholder Engagement Aspects	Gap
Representation of stakeholder involvement is uneven	Participation of independent smallholders, cooperatives, indigenous communities, and non-palm commodity actors (coffee, rubber, cocoa) remains limited in major forums. Large private companies are also not significantly involved
Forums are not consistently inclusive	Engagement is still dominated by local government agencies (OPD) and project partners. Forum activities tend to be reactive (project-based) rather than proactive and sustainable.
Lack of capacity among local participants	Indigenous communities, farmers, and local actors are still insufficiently supported in terms of technical capacity and understanding of the jurisdictional approach.
Forums formally limited to certain time periods	The sustainability of multi-stakeholder forums is restricted to formal timeframes and still depends on the commitment of regional leaders (Regent).
Absence of feedback or grievance mechanism	There is no formal complaint or feedback mechanism available for local communities to evaluate policy planning and implementation processes.

D. PROGRESS FRAMEWORK

There are three indicators in assessing the progress framework: performance targets, a sound implementation plan for agricultural cultivation and trade management, and an implementation plan that respects the rights of indigenous and local communities. All jurisdictional approach documents in Sintang District clearly define planning and performance targets for each jurisdiction. The framework details the vision, mission, objectives, and success

measures, along with the responsible parties in each regional government agency (OPD). The framework also clearly defines how funding and support will be provided by stakeholders for each action plan. Performance indicators relevant to the goals and objectives of the jurisdictional approach are included in the RAD-SL. These indicators include environmental indicators: reduced emissions, increased forest cover, and improved water quality. Social indicators: increased community welfare and increased community participation. Economic indicators: increased community income and increased investment. These performance targets have even been aligned with sustainable development targets at both the provincial and national levels (Sukri, 2020).

Targets for implementing sustainable agriculture, including agricultural cultivation, trade management, and increased land productivity, are included in the RAD-SL, RAD-KSB, and RIPBUN documents. The productivity of primary commodities in Sintang District currently still below the provincial and national average (Directorate General of Plantation, 2023), especially for commodities that are still not widely cultivated such as coffee and cocoa. Non-governmental organizations (NGOs) have a significant role in meeting targets for the implementation of good agricultural cultivation and trade, especially in the palm oil commodity sector. WWF Indonesia initiated a program to improve palm oil governance by assisting independent oil palm farmers and plasma farmers in implementing sustainable oil palm cultivation for 500 farmers and also strengthening the institutions of two independent farmer groups and two cooperatives, in fact the program had been initiated since 2014 before the RAD-KSB was ratified in 2019 (Nasrullah, 2024). In addition, WWF Indonesia together with Sintang Freshwater Care (SFC) also helps meet the RAD-SL target in sustainable Natural Resource management through the community's Lake Dasaris conservation program. Other institutions, such as the Rainforest Alliance (RA), have also initiated a program to strengthen the supply chains of independent smallholder oil palm and rubber farmers in 2022-2024[2]. The UNDP-GEF also supports programs for sustainable plantation management and local community empowerment[3].

The challenge in implementing the action plans and performance targets for each jurisdictional approach in Sintang District how to synchronize them with the performance targets of each regional government agency (OPD). The question is whether the performance targets within the jurisdictional approach increase the workload of the OPD, and the extent to which each OPD understands how to adapt and incorporate the performance targets of the jurisdictional approach into its work plan. The implementation of these programs and performance targets has not been fully realized due to various limitations. For example, the average annual achievement of the RAD-KSB program from 2019 to 2022 was only 37% to 52% (CIFOR-ICRAF, 2023).

Challenges in implementing sustainable agriculture, including agricultural cultivation, trade management, and increasing land productivity, include the limited scale of implementation. The scope of implementation is limited to the capabilities of non-governmental organizations, such as the independent smallholder farmer mentoring program, which has only reached five percent of the 11,555 oil palm farmers. Traceability analysis results indicate that only 8% of the 172 trade chains in TRASE can be traced. Only 14 trade chains can be traced back to the plantation, while 92% cannot be identified. The 14 recorded trade data come from seven plantation locations with an average area of 1,738 hectares, which totals approximately 170,000 hectares of oil palm plantations (CIFOR-ICRAF, 2023).

2 https://www.rainforest-alliance.org/in-the-field/stopping-deforestation-and-advancing-sustainability-in-west-kalimantan-project-profile/

3 https://www.undp.org/indonesia/news/ikat-face-resilience-and-sustainability-sintang

Table 9. Assessment of Gaps in the Framework Aspects of the Progress of the Jurisdictional Approach in Sintang Regency.

Progress Framework Aspects	GAP
Synchronization with OPD Work Programs	The framework in the jurisdictional approach is still partial and has not been integrated with the OPD work program.
Not yet integrated in planning and budgeting	Sustainability indicator achievements have not been systematically linked to budgeting systems such as SIPD, e-Planning, and e-Budgeting.
Unstandardized Indicators	A single set of indicators adopted across documents and agencies (RAD, RIPBUN, RPJMD) is not yet available. The indicators used do not fully adhere to the DCF and ISEAL principles.
Lack of Periodic Reporting System	There is no clear matrix for the division of roles between OPDs, the private sector, and indigenous communities, resulting in duplication or a lack of function in policy implementation.
Weak Stakeholder Engagement	The reporting and measurement process is still dominated by regional government agencies (OPDs); the involvement of farmers, indigenous communities, and the private sector in developing and assessing indicators is still limited.
The performance-based evaluation mechanism is not yet optimal.	There are no incentives or financing based on indicator achievement; this means that indicator achievement has not been linked to resource allocation (fiscal or CSR).

E. FINANCING

There are two indicators for assessing the jurisdictional approach in Sintang District in terms of financing, namely the existence of incentive policies and financial support. The current condition regarding jurisdictional approach funding in Sintang District still heavily dependent on traditional funding, both from the State Budget (APBN), Regional Budget (APBD), and international donor assistance (e.g., WWF, RA, CIFOR-ICRAF) to fund sustainable development initiatives. The APBD is one of the main sources of funding for conservation programs and activities at the regional level, the Sintang District government has allocated an average of 4% of the budget to realize a sustainable district in 2021-2022. The still limited green budget is likely influenced by the pandemic and budget refocusing during that period[4]. Meanwhile, Sintang District received funding from the State Budget (APBN) for forestry from the central government through the Ministry of Forestry. This APBN allocation is one of the central government's funding instruments to support conservation activities in the region[5].

Other funding sources include grants and assistance from non-governmental organizations (NGOs) and international organizations. Organizations such as WWF-Indonesia, Rainforest Alliance, CIFOR-ICRAF, and the Conservation Strategy Fund (CSF Indonesia) provide technical support and funding for various conservation initiatives in Sintang (CIFOR-ICRAF, 2023). Currently, sustainable development financing in Sintang District has not optimally utilized innovative financing instruments such as green bonds, blended finance, or carbon markets (Martin, 2022).

In terms of incentive policies, there are not many results-based financing schemes available

4 https://www.conservation-strategy.org/news/green-budget-tagging-future-sintang

5 https://ppid.menlhk.go.id

that provide financial rewards to local governments, farmers, cooperatives, or corporations that implement deforestation-free practices (DCF) or other sustainable practices (Seymour, 2020). In practice, there are also no regional incentive policies, such as tax reductions, levies, or green credits, to encourage businesses to support the jurisdictional approach (Reviani, 2022). This hampers the motivation and adoption of local actors to actively participate in sustainability programs. Program budgeting remains sectoral and has not been integrated into a single landscape financing framework that supports cross-commodity and cross-regional action plans (UNDP, 2024). National fiscal incentives, such as the Special Allocation Fund (DAK), or funding for programs such as forest and land fire mitigation, have been utilized by Sintang Regency, but are still limited to specific sectors and issues (Sukri et al., 2020).

The challenge in financing the jurisdictional approach in Sintang District lies in diversifying funding sources. Sintang District has also not utilized green financing instruments such as green bonds or green sukuk to fund sustainable projects (James, 2019). Other types of financing, such as carbon finance and jurisdictional REDD+, could be strong long-term financing options if supported by a credible MRV system, such as the financing and global initiatives of the GCF Task Force and the Jurisdictional Approach, which focus on countries like Brazil and Indonesia.

Jurisdictional financing in Sintang District also still sectoral and not yet integrated into a single landscape finance framework, even though the DCF principles (WWF, 2021) emphasize the importance of economic incentives as a key pillar of a deforestation-free supply chain. Meanwhile, ISEAL (2022) states that jurisdictional financing should include: long-term budgeting, sustainable multi-stakeholder forums, and financial support based on environmental and social performance indicators.

Table 10. Gap Assessment of Jurisdictional Financing Aspects in Sintang Regency.

Finance Aspect	GAP
Diversification of Funding Sources	High dependence on regional budgets and donor aid; no creative financing schemes such as blended finance, green bonds, or carbon markets.
Budget coordination between OPDs is not yet optimal	The budget is still sectoral in nature for each OPD and not yet cross-sectoral and commodity.
Local Economic Incentive Scheme is not yet available	There are no regional incentive policies (e.g., tax reductions, levies, green credits) to encourage business actors to support the jurisdictional approach.
Performance-Based Financing is not yet available	There are no direct incentives for farmers/ cooperatives that implement deforestation-free practices, and no payments for ecosystem services (PES) scheme is available.
Multi-stakeholder Forum Financing Fund Support	Forums like FOKSBI and SekBer are heavily dependent on donor projects; their activities decline after the projects end. There is no regular allocation from the regional budget (APBD) to maintain their continuity.
Landscape-Based Financing	Not yet integrated into an integrated financing framework for cross-commodity & land cover approaches.

F. MONITORING SYSTEM

Monitoring, reporting, and evaluation (MRE) is a crucial component of the jurisdictional approach in Sintang District to ensure the sustainability and effectiveness of conservation and sustainable development programs. Organizations such as the Sustainable District Meeting Circle (LTKL), CIFOR-ICRAF, WWF-Indonesia, and others collaborating with Sintang District to implement the jurisdictional approach have published activity reports and publications that cover progress and impacts. NGO mentoring has adopted and developed a structured M&E framework to monitor the progress and impact of the jurisdictional approach. The Regional Competitiveness Framework (KDSD) has been developed as a monitoring and reporting system, developed jointly by the Secretariat of the Sustainable District Meeting Circle (LTKL) and CIFOR, to measure the district's progress towards achieving the Sustainable Development Goals (SDGs). CIFOR has also developed training and implementation guidelines for KDSD (Nofyanza, 2021). Information on the progress of programs and activities related to sustainability and conservation (which are at the heart of the jurisdictional approach) is contained in regional planning documents (RPJMD, RKPD), local government agency performance reports (LKIP), the Government Agency Performance Accountability System (SAKIP), or other reports published by the Sintang District Government. The implementation of e-planning, e-budgeting, and e-procurement systems is also publicly accessible (Sukri *et al*., 2020).

A Green Budget Tagging system has been developed to align regional budgets with green and sustainable development and track how public funds support these goals. This effort involves collaboration between the Sintang Development Planning Agency (BAPPEDA), the Conservation Strategy Fund (CSF), government and academic institutions, NGOs, and other civil society organizations[6]. Sintang District collaborates with non-governmental organizations and companies to monitor forest cover and deforestation through a technology-based monitoring system, the Sintang Sustainable Spatial Planning Information System. However, current forest area monitoring still needs to be integrated into the Regional Spatial Plan (RTRW) (Sukri *et al*., 2020).

Despite initiatives to develop an MRE system, several gaps remain in the monitoring system, such as the suboptimal integration between various existing monitoring systems, such as e-planning, e-budgeting, and forest monitoring, which hinders holistic analysis of sustainable development progress (Stickler et al., 2018). In terms of stakeholder engagement, the participation of indigenous peoples and local communities in the monitoring process still needs to be improved to ensure inclusive representation and accurate data. Limited technical and human resource capacity to manage and analyze data from the monitoring system hinders the effectiveness of monitoring and reporting. Although an electronic system has been implemented, data accessibility and transparency for the public still need to be improved to encourage accountability and community participation.

Table 11. Gap Assessment of Jurisdictional Approaches to Monitoring Systems in Sintang Regency

Monitoring Aspect	GAP
Limited Data Integration	Integration between various monitoring systems—such as e-planning, e-budgeting, and forest monitoring—has not been optimized, making it difficult to conduct a holistic analysis of sustainable development progress.
Technical Capacity and Resources	Limited technical capacity and human resources for managing and analyzing data from monitoring systems hinder the effectiveness of monitoring and reporting.
Data Transparency and Accessibility	Although electronic systems have been implemented, data accessibility and transparency for the public still need to be improved to encourage accountability and public participation.
Keterlibatan Pemangku Kepentingan	The participation of indigenous peoples and local communities in the monitoring process still needs to be improved to ensure inclusive representation and accurate data.

6 https://www.conservation-strategy.org/news/green-budget-tagging-future-sintang

G. LANDFORM MATURITY INDICATORS IN SINTANG REGENCY

The Landscape Maturity Indicator (LMI) is a framework for assessing the maturity level of a landscape or jurisdictional approach in implementing a sustainability approach. The LMI was developed by referring to the State of Jurisdictional Sustainability framework (Stickler et al., 2018; 2021) and the ISEAL jurisdictional approach indicators (2022). Through the LMI, Sintang District can be assessed for its position on the journey towards sustainability, so that it can determine the condition of the jurisdictional approach based on its assessment indicators. In addition, it can also see the condition of areas that are already strong and areas that still need to be strengthened. The LMI assessment of Sintang District focused on six main indicators: 1. Governance 2. Stakeholder Engagement 3. Progress Framework 4. Landscape Financing 5. Monitoring, Reporting & Verification (MRV) System 6. Land Cover Change.

Table 12. Landscape Maturity Indicator of Sintang Regency

Dimension	Key Indicator	Current Condition (Sintang)	Indicator Level	Improvement Notes
Governance	Integrated strategy & spatial planning (RAD-SL, RAD-KSB, RIPBUN, HCV/HCS)	Policy documents and multi-stakeholder forums exist, but forums are not permanent and legal basis is weak	Level 3	Integrate documents across commodities, extend regulations, establish multi-stakeholder forums with legal mandate
Stakeholders Involvement	Multi-stakeholder forum & inclusivity	Forums (SekBer, FOKSBI) are active, but dominated by OPD/NGOs; independent farmers & indigenous communities underrepresented	Level 2	Formal inclusive forum, grievance mechanism, strengthen capacity of local & indigenous communities
Progress Framework	Environmental, social, economic targets	Targets exist in RAD-SL & RAD-KSB, but baseline & indicators are weak, not spatially based	Level 3	Establish baseline, spatial & social indicators, align with SDGs & DCF principles
Financing Landscape	Diversified funding & economic incentives	Still dependent on local budget (APBD) & donors; no blended finance, PES, or carbon finance yet	Level 1–2	Design jurisdictional finance strategy: integrate APBD, donors, CSR, green credit, carbon markets
Monitoring & MRV System	Data, transparency, MRV system	Monitoring exists (WWF, CIFOR, LTKL), but sporadic & project-based; not permanent & not integrated with OPD	Level 2	Build digital MRV system across OPD & private sector, ensure public data transparency, community participation
Change Land Cover	Deforestation & degradation	Deforestation still occurs (2000: 58% 2019: 47% forest cover); HCV/HCS protection just started	Level 1–2	Enforce land-use law, restoration, deforestation-free incentives

The LMI framework uses a 0–5 scale as follows:

1. Level 0 – Initial: No initiatives or instruments.
2. Level 1 – Commitment: Initial political commitment, informal forums, and donor initiatives exist.
3. Level 2 – Planning: Multistakeholder forums and strategy documents exist, but baselines/indicators are limited.
4. Level 3 – Implementation: Partial implementation is underway, data and coordination are beginning to be used, and MRV is partial.
5. Level 4 – Consolidation: Formal funding, MRV, and governance systems are in place, measurable and data-driven targets are in place, and achievements are consistent.
6. Level 5 – Global Model: The landscape/jurisdiction is globally recognized as a model of sustainability (deforestation neutral, stable green finance, and full inclusivity).

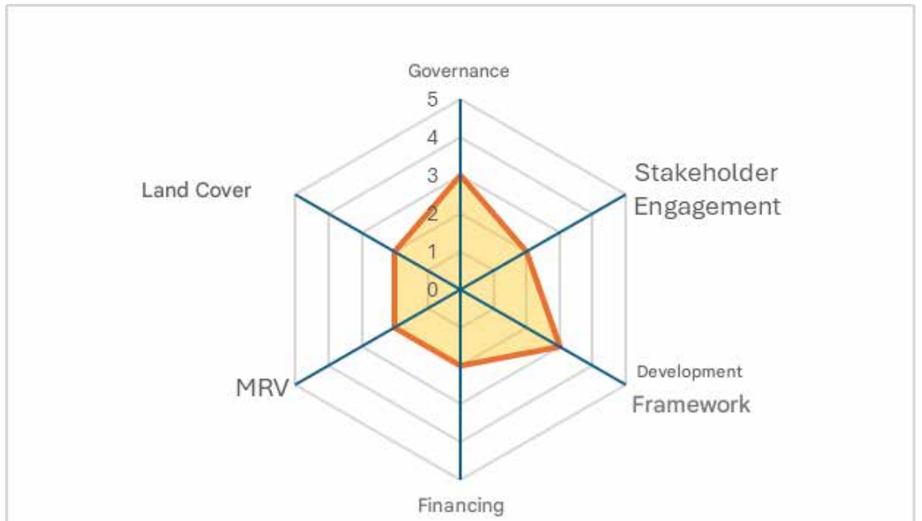


Figure 15. Landscape Maturity Indicator Visualization in Sintang District

The LMI assessment results indicate that Sintang District in the Planning–Implementation phase (Level 2–3). Its main strengths lie in the existence of policy documents (RAD-SL, RAD-KSB, RIPBUN) and multi-stakeholder forums. However, significant weaknesses remain in the financing, MRV, and forest protection aspects. By strengthening document integration, developing an innovative financing system, and developing an integrated MRV, Sintang District has the potential to move towards a consolidation level (Level 4) in the next few years.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RECOMMENDATIONS AND ACTION STRATEGIES

Sintang District demonstrates its commitment to sustainability and conservation through various policies and planning initiatives. Learning from the jurisdictional approach in Sintang District demonstrates significant progress in the jurisdictional approach in Indonesia. Various program initiatives.

A. STRATEGIC RECOMMENDATIONS FOR A JURISDICTIONAL APPROACH IN SINTANG REGENCY

1. Synchronization and Integration of Jurisdictional Documents.

> Synchronize all jurisdictional approaches of RAD-SL, RAD-KSB, and RIPBUN into a single, comprehensive and sustainable cross-sectoral jurisdictional framework to avoid duplication or overlap in implementation (Anggraini et al., 2022).

> Make the 2016–2036 RTRW and HCV-HCV jurisdictional approaches the primary, legally binding reference for cross-commodity landscape management.

> Consistency and enforcement of regulations in land use allocation, with consistency in establishing green development scenarios known to prevent deforestation by more than 5% or an area of 117,136 ha (Salim, 2019).

> Make RIPBUN the gateway for implementing integrated cross-sectoral and commodity jurisdictional approaches.

2. Extension, Revision of RAD-SL, RAD-KSB, and integration into multi-commodity jurisdiction documents.

> Extend the validity of the RAD-SL and RAD-KSB or develop revised versions with clearer integration of DCF and ISEAL indicators (Daemeter & Proforest, 2021).

> Focus on multi-commodities: not only palm oil, but also rubber, coffee, pepper, and cocoa (CSF Indonesia & Rainforest Alliance, 2023).

> Integrate these documents into broader jurisdictional approaches such as the RIPBUN.

3. Strengthening Cross-Stakeholder Governance.

> Revitalize multi-stakeholder forums (SekBer & FOKSBI) to be more representative by involving all actors in the commodity value chain (coffee, rubber, cocoa, pepper), as well as the private sector and indigenous communities (ISEAL Alliance, 2021).

> Establish a formal legal mechanism for sustainable joint decision-making (e.g., a regent's regulation to strengthen the forum's mandate) (Rainforest Alliance, 2022). à Monitoring is important (already mentioned in point 4).

> Provide training and mentoring for government officials and local communities to strengthen cross-stakeholder governance.

4. Strengthening MRV (Monitoring, Reporting, Verification)

> Establish an integrated digital-based MRV system across all regional government agencies (OPD) and the private sector, involving independent smallholder farmers, indigenous communities, and companies/the private sector (CIFOR-ICRAF, 2021).

> Establish an integrated monitoring platform that integrates various existing systems, facilitating data-driven analysis and decision-making (WRI, 2022).

> Ensure data transparency and community participation in land cover monitoring and sustainable development programs to enhance transparency and accountability.

5. Mobilization of Green Finance and Economic Incentives.

> Establish a collaborative funding platform in the form of a jurisdictional finance strategy: regional budgets (APBD), international donors, the private sector (CSR), carbon incentives, and sustainable commodity trade proceeds (CSF Indonesia, 2022).

> Provide incentives and disincentives based on sustainability performance to companies, cooperatives, and farmers.

> Establish collaborative incentive mechanisms across commodities (coffee, rubber, pepper, etc.), not just for palm oil.

> Establish a local trust fund to fund multi-stakeholder forum activities, training, and MRV.

6. Strengthening the Capacity and Institutions of Indigenous and Local Communities.

> Legitimize and support indigenous community institutions through PPMHA and facilitate the recognition of land rights (AMAN & HuMa, 2020).

> Protocols for Free, Prior, and Informed Consent (FPIC) and the distribution of benefits from HCV/HCSA protection and ecosystem services are needed (UNDP Indonesia, 2021).

B. ACTION PLAN

The action plan is derived from the strategic recommendations, detailing the responsible parties, outputs, and timelines. The action plan for the sustainability of the jurisdictional approach in Sintang District can be divided into short-term and medium-term action plans. A simplified overview of the short-term action plan that can be implemented in Sintang District shown in Table 13

Table 13. Short-Term Action Plan for the Sustainability of the Jurisdictional Approach in Sintang Regency.

No.	Action Plan	Person responsible	Output	Time Line
1	Consolidation of RAD-SL, RAD-KSB, RIPBUN documents	Bappeda, Dinas Perkebunan, DLH	Draft unified jurisdiction document	Q2 2025
2	Establishment of a multi-stakeholder forum for cross-sector sustainable commodities	Pemda Kab. Sintang, NGO, LSM, petani, kelompok tani, Swasta	SK Bupati Forum Multipihak	Q2-Q3 2025
3	Mapping and integration of cross-commodity MRV systems	DLH, Bappeda, NGO	Integrated MRV Dashboard	Q4 2025
4	Multi-commodity farmer & cooperative training for DCF practices	Dinas Perkebunan, UMKM, NGO	Training and strengthening modules for multi-commodity farmer groups	Q3-Q4 2025
5	Mobilizing carbon and CSR incentives for sustainable farmers	Dewan Ada (DAD), Dinas PMD, PPMHA, Forum CSR	Incentive Scheme and Financing Synchronization (green budget tagging)	Q3-Q4 2025
6	Advocacy & legalization of indigenous community institutions	Bappeda, DLH, Forum multipihak,	Letter of Recognition	Q4 2025

The medium-term action plans (3–5 years) that can be developed include:

1. Integration of a satellite-based land cover monitoring system (in collaboration with ministries, relevant agencies (DLH), NGOs, and donor agencies).
2. Implementation of a pilot project for the DCF export market for coffee, rubber, and cocoa.
3. Establishment of a "Jurisdictional Brand" for deforestation-free Sintang plantation products.

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