



STUDY ON POLICY AND REGULATION FOR SUSTAINABLE COCOA IN INDONESIA

Mohamad Syaban, Suyanto and Aulia Perdana

World Agroforestry (ICRAF)

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Introduction

In Indonesia, cocoa is one of the most prioritized commodities for trade and supplies the world's demand. The focus on the process of cocoa cultivation generates quality cocoa. The data from the Indonesia Statistics Agency (BPS) in 2019 recorded that cacao production in Indonesia exceeded 785 thousand tonnes and positioned fifth, after palm oil, rubber, coffee, and coconut¹. Internationally, Indonesia is the third-largest cocoa producer after Ivory Coast and Ghana (Effendy et al., 2013; Effendy et al., 2015).

According to the 2020-2024 National Medium-Term Development Plan (RPJMN), the agriculture sector projected to contribute to the acceleration of economic growth in Indonesia and ensuring sustainable food security in the country. Specifically, to support the economic growth acceleration, the Government of Indonesia (Gol) aims to improve farmers' productivity and income by implementing agriculture modernization. However, to achieve the target, it must consider the environment and the application of sustainable agriculture by considering primary forest or zero deforestation, and reduce greenhouse gas emission (Presidential Regulation No. 61/2011 on National Movement for Green House Gases Eradication).

The Ministry of Agriculture translates sustainable agriculture under the national mid-term planning (RPJMN) 2020-2024 to release Strategic Plan 2020-2024. The plan highlights the potential contribution from the agriculture sector to increase export ratio and the effort to improve funding access to farmers and the excellent agriculture practice for a productive farming (Ministry of Agriculture, 2020a). Moreover, the sustainable cocoa principle translated to the Directorate of Plantation, Ministry of Agriculture Strategic Plan 2020-2024. Under this plan, the cocoa commodity is targeted to contribute to the export commodity in Indonesia. From the economic sustainability point of view, the strategic plan aims to improve the farmer's condition and maximise the potential that they have to produce a profitable quality commodity with government help in funding aspect (Ministry of Agriculture, 2020b). However, the literature captures the detailed regulations and lacks the policy reviews as this study found that at least two factors prominently as the fundamental cause of this significant decline of cocoa production in Indonesia, which are from agronomy and government policy.

This report presents the policy needs that will further improve sustainable cocoa. This report reviews existing policies at regional, national, provincial and district levels related to sustainable cocoa and identifies smallholder supply and quality issues at the country level and in the major cocoa production areas, namely Luwu Utara district in South Sulawesi province. The area is selected as a case study.

1 BPS (2020). <https://www.bps.go.id/indicator/54/132/1/produksi-tanaman-perkebunan.html> (accessed on 20 October 2020)

Table 1.2 Timeline of policy frameworks and project safeguarding economic, environmental and social sustainability of Indonesian cocoa

Year	Policies, content, and degree of enforcement	Projects
1970s		Commercial cocoa project
1980s	Rehabilitation and expansion of export crops: primarily in Sulawesi, led to the expansion of cocoa cultivation	Commercial cocoa project
1990s	<ul style="list-style-type: none"> • Plantation development in particular areas: endorsed the expansion of cocoa cultivation, encouraged smallholder production. • PP No. 2 foreign capital investment for export and import: improved market incentives for producers, permitted direct purchase by foreign companies. • Ministry of Industry and Trade Regulation No. 11/MPP/SK/I/1996 on foreign investment on export: support and facilitate PP 2 	Integrated cocoa management project
2000s	National certification standards for cocoa quality 86/KEP/BSN/9/2008: not implemented because (1) huge number of value chain actors; (2) demand exceeds supply; (3) prices fluctuate frequently and market information is not readily available.	<ul style="list-style-type: none"> • Sustainable cocoa extension service for smallholders • The pest reduction and integrated management project • Program for eastern Indonesia small and medium enterprises <ul style="list-style-type: none"> • Cocoa sustainability partnership • Agribusiness market and support activity • Mars Cocoa Development Centre • National program on Cocoa Improvement of Production and Quality: reverse the decline of cocoa productivity and quality by rejuvenation, rehabilitation and intensification.
2010s	<ul style="list-style-type: none"> • Progressive export tax, Financial Ministry Regulation No. 67: strengthen the national cocoa industry and sourcing of raw material from domestic production. • National indicators for sustainable cocoa certification: not yet adopted, received strong support and coordination from private and public sectors to sustain cocoa production, strengthen the cocoa industry and sustain environmental resources. 	<ul style="list-style-type: none"> • Sustainable Cocoa Production Program • Sanitary and phytosanitary capacity building and knowledge sharing program • Green prosperity - Sustainable Cocoa Production Program <ul style="list-style-type: none"> • Cocoa Life

Source: Wau (2015)

Overview of Sustainable Cocoa in Indonesia

Over the last decade, Indonesian cocoa production has continued to decline due to reduced area of yielding crops, increased unproductive crops, decreased productivity, and land conversion to other crops, which positioned Indonesia to the fifth producing country after Ivory Coast, Ghana, Ecuador, and Nigeria (Effendy 2019; Ariningsih, 2020). In addition, Ariningsih (2020) argues that cocoa plantations are dominated by small-scale smallholder plantations, with limited capital, and limited access to technology and market information. The literature review of this studies finds eight problems affected the decreasing cocoa productivity in Indonesia.

Table 1.1 Factors Affecting Reducing Cocoa Productivity in Indonesia

No	Factors	Research
1	Lack of farmer capacity <ul style="list-style-type: none"> • Low knowledge and skills • Lack of management skills • Low competency 	Maharani et al. (2013); Hartartri (2015); Effendy and Antara, 2015; Effendy, 2018a; Managanta et al. (2019)
2	Limited access to funding for farmers	Maharani et al (2013); Hartartri (2015)
3	High price of input production	Maharani et al. (2013)
4	Limited access to pesticide and lack of diseases control	Herman et al (2006); Wahyudi et al (2009); Damanik et al (2010); Indriati et al (2013); Wonda and Tomayahu (2016); Rahim A et al., (2020)
5	Low quality of seeds	Wahyudi et al (2009); Effendy and Antara, 2015; Effendy, 2018a; Wonda and Tomayahu (2016)
6	Old cocoa plants	Wahyudi et al (2009); Effendy et al., 2013; Nurhidaya et al., 2015; Effendy, 2015
7	Limited training support for farmers <ul style="list-style-type: none"> • Lack of agriculture technology/innovation 	Maharani et al. (2013); Hartartri (2015); Managanta et al. (2019)

In addition to technical aspects, the cocoa policy is also affected by the declining of cocoa production. The Ministry of Finance Decree No. 67/2010 on progressive tax for raw cocoa beans has discouraged farmers from continuing growing and, instead, converting their land to other crops, such as palm oil (Sopoy et al., 2018). Furthermore, this study also finds that the Ministry of Agriculture Decree No. 27/Permentan/KB/320/5/2016 on cocoa quality has hampered the local cocoa industries. Since the cocoa bean certification obligated the local farmer to ferment their cocoa beans before selling it to increase the value. As a result, many farmers convert to other crops which have ultimately led to the decline in cocoa production.

Wau (2015) finds that small-scale farmers' participation in the certified value chain is only possible. Thus, participating farmers benefit when the four inter-linked conditions are in place. The proliferation of certification among small-scale farmers unprecedentedly aims to transform farmers from being simply peasant into 'farmer plus'. It thus requires organizational capacity, business skills and external support.

2.1 Sustainable Cocoa in Indonesia

The practice of sustainable cocoa (*Theobroma cacao* L) is in line with a sustainable agriculture concept. The sustainable agriculture concept brought a significant impact on the improvement of the environment. It reduced pressure on natural resources, including soil degradation and the contamination and depletion of freshwater supplies (Pretty, 1995; Strzpek and Boehlert, 2010; Clough et al., 2011). Sustainable standards should contain environmental, economic, and social criteria. Therefore, the generated sustainable cocoa standardization from any organization in the world should be considering the integration of environmental and economic improvement of locals. It is critical to involve multilevel actors in this industry (Mithöfer et al., 2017). According to the 2020 Agenda of Sustainable Development Goals (SDGs), a concept sets out a vision for future, in which sustainable agriculture concerns to the environment occupies as the central role (McNeil, 2019).

Arguments on sustainable agriculture are related to the soil natural resources reservation, crop productivity, greenhouse emissions, and the global supply chain and trade. Sustainable agricultural systems are likely to be associated with a more targeted use of external inputs, a more integrated approach to managing natural resources, and more analysis at the landscape ecosystem-level better management of management services (UN, 2013).

FAO (2017) on their report for SDG Indicator for Sustainable Agriculture emphasized the practice of agriculture should be using a broad concept by considering the four sustainable aspects: (1) of efficient resource use; (2) conserving, enhancing and protecting the environment; (3) protecting and improving rural livelihoods and social-wellbeing; (4) enhancing resilience and improving governance. Those aspects targeted to achieve three dimensions at the primary indicator of sustainable agriculture for SDGs No. 2 Zero Hunger Point 4.1 on Agricultural Sustainability.

Table 2.1 FAO Agriculture Sustainability Criteria

Dimension	No	Theme	Sub-indicator	Proposed sustainability criteria
Economic	1	Land productivity	Farm output value per farm agriculture area	Above one-third of the 90 th percentile
	2	Farm profitability	Net farm income	Zero and above
	3	Financial resilience	Access to financial service	Access to at least one of the financial services
Environmental	4	Soil health	Soil health	At least half of the farm affected by soil degradation
	5	Water health	Water use	No inter-annual trend detected in groundwater level in the last five years
	6	Biodiversity	Water quality Heterogeneity of agricultural landscape	Nitrogen concentration in rivers and aquifers below 50 mg/l Shannon Evenness Index above 0.3, Average patch size lower than 2 ha and Edge density below 0.01



Dimension	No	Theme	Sub-indicator	Proposed sustainability criteria
Social	7	Decent work	Wage rate in agriculture	Equal to or above the international poverty line
	8	Well-being	Agriculture household income	Equal to or above the international poverty line
	9	Access to land	Secure right to land tenure	Positive to at least one of the secure rights condition

Source: FAO (2014)

Sustainable agriculture standardization for cocoa in the international context was marked by the release of the 7th International Cocoa Agreement in 2010 by the United Nations Conference and Development. This International Cocoa government-sponsored mainly aims to create a sustainable cocoa economy by promoting cocoa quality trade to improve cocoa small producers' lives around the worlds. Article 42 and 43 on Sustainable Development Cocoa, the 7th International Cocoa Agreement highlighted the standard living and working conditions for cocoa producers and sustainable cocoa economy. In nature, this agreement mandated the country members to improve the sustainable economy for cocoa, mainly for access funding to farmers and enhancing the living standard of anyone who possibly effected by this business (ICCO, 2010).

In the ASEAN region, to fulfil the worldwide high expectation for food safety, environmental health, and social sustainability requirement in international trading, ASEAN under Technical Working Group on Good Agricultural Practices worked to provide the sustainable cocoa guideline or the ASEAN GAP for Cacao. The implementation of By implying four principles: food safety, environmental management, worker health, safety, and welfare; produce quality; ASEAN GAP in cocoa production will ensure the highest standard for safety and quality of cacao beans for trade. This document is developed by standardizing 12 cocoa plantation management practices under four modules (ASEAN GAP on Cocoa Production, 2016).

Table 2.2. ASEAN GAP for Cocoa Production (Plantation Management)

Contents	Sustainable Dimension			
	Food Safety	Environmental Management	Workers health, safety, welfare	Produce Quality
Site History and Management for New Establishment	V	V	V	V
Planting Materials				V
Soils and Substrates	V	V		V
Fertilizer and Soil Additives	V	V	V	V
Water	V	V	V	V
Pest and Disease Management		V	V	
Pesticides – Synthetics and Bio-Pesticides	V	V	V	V
Harvesting and Handling Procedures	V		V	V
Waste and Energy Efficiency		V	V	
Biodiversity		V		
Transportation	V			
Record Keeping	V			

Source: ASEAN GAP for Cocoa Production (2016)



Non-government agencies generated sustainable cocoa agriculture standard that highlighted to produce good quality of cocoa to fulfil the demanding international trading of cocoa. Several NGO-led sustainable cocoa standards have been developed to increase organic product awareness, appreciate human rights, and protect the global market environment. This study focuses on five non-government sustainable cocoa standards: UTZ, MARS, Rainforest, and Fairtrade.

MARS initiated a program Cocoa for Generation in 2020. This program aims to protect children, preserve the forest, and improve farmers' income. The goal of protecting children, informs suppliers to implement robust child labour monitoring and remediation system for all households at risk for the worst forms of child labour. The forest preservation has the goal to all cocoa sourced by MARS will be traceable and deforestation-free. Lastly, improving farmers income is by increasing for cocoa farming families (MARS, 2020).

Fairtrade governs the ethical business standard on cocoa trading by trade, production, and business and development specific to cocoa producers and traders, both for dried and fermented cocoa seeds (Fairtrade, 2018). Rainforest focuses on generating the certification and auditing for cocoa. Under the Rainforest Alliance, 2020 Certification Program aims to certify the cocoa production process to farming organizations and supply chain organizations in social, management, environmental, supply chain, and farming practices. This sustainable standard certification aims to support sustainable agricultural production and supply chain (Rainforest Alliance, 2020).

UTZ certification targeted producers and supply chain actors to obtain sustainable farming certification. Therefore, passing these sustainable requirements will help farmers, workers, and their family fulfil their ambitions and contributions to safeguarding the earth's natural resources now and in the future. The certification assesses acceptable agricultural practices and manages their farms profitably with respect for people and planet, industry invests in and values sustainable production. Consumers can enjoy and trust the products they buy (UTZ, 2018).

Table 2.3. Non-Government Sustainable Certification

Organization	Sustainable Aspect		
	Economic	Environment	Social
MARS	<ul style="list-style-type: none"> Improve farmer's income 	<ul style="list-style-type: none"> Forest preservation Traceable cocoa Deforestation-free 	<ul style="list-style-type: none"> Children Protection (no children labour)
Fairtrade	<ul style="list-style-type: none"> Price transparency Fair trading 	<ul style="list-style-type: none"> Sustainable farm improvement 	
Rainforest	<ul style="list-style-type: none"> Sustainable supply chain 	<ul style="list-style-type: none"> Sustainable agriculture standard 	<ul style="list-style-type: none"> Farmer health condition
UTZ	<ul style="list-style-type: none"> Transparent supply chain management 	<ul style="list-style-type: none"> Traceable cocoa 	<ul style="list-style-type: none"> Farmer and its family, workers wealth

The government of Indonesia has also concerned on sustainable cocoa agriculture practices that expected to improve the cocoa production in Indonesia and will achieve the government target on cocoa export. The Ministerial Decree No. 48/Permentan/OT.140/4/2014 on the Good Agriculture Practices on Cocoa is an essential document released by Ministry of Agriculture of the Republic of Indonesia which mention the importance of sustainable cacao commodity in Indonesia in which necessary to implement the sustainability production system.



The Good Agriculture Practices on Cocoa (GAP on Cocoa) in Indonesia refer to this guideline as sustainable agriculture's core concept. By definition, the GAP on Cocoa is an effort of resource management for agricultural enterprises to fulfil the dynamics of human needs and improve the environment's quality while conserving natural resources. (Kementan, 2014). The GAP on Sustainable Cocoa under the Ministerial Decree No. 48/Permentan/OT.140/4/2014 emphasizes applying the principle of food security, environment, health, and quality dimensions. Additional, as stated in the decree, this guidance's primary objective is to ensure the quality of cocoa and increase its competitiveness in the global market. This decree emphasizes the implementation of cocoa cultivation system that considers livestock safety, environment conservation, health, and quality aspects are vital indicators to have a sustainable cocoa development. The GAP on cocoa production dimension according to Ministerial Decree No. 48/Permentan/OT.140/4/20 covers:

1. Ecological Dimension

Applying the environmental sustainability principle with the primary goals to reduce environmental degradation and ensure the future generation will still benefit from the resources.

2. Economical Dimension

Sustainable cocoa production shall provide more comprehensive financial and economic benefits to everyone who involves in the industry. There is no considerable gap among farmers, distributors, merchants, or drive or other activities that lead to excessive resource utilization, leading to environmental degradation.

3. Social Dimension

The social dimension discusses the acceptance of each stakeholder regarding all cocoa production activities. This dimension is considered fulfilled if there is no one feel aggrieved when doing the business.

4. Health Dimension

The world becomes more aware of the importance of the health aspect by selecting the food qualification. The cocoa production implementation is supposed to refrain from using excessive pesticides and other toxic materials. Therefore, organic farming is emphasized for this dimension.

Policy and Regulation for Sustainable Cocoa in Indonesia

Indonesia's agricultural policies have recognized the environmental, social and economic imperative of green agriculture. A significant portion of the national strategy of green growth aims to reduce agriculture's environmental footprint (Leimona et al., 2015). The green technology application in Indonesia refers to using a sustainable concept to differentiate agricultural products with premium prices. It is set through a logo or brand seal on the products, meaning that the products are explicitly embedded with environment-friendly images, safe and sustainable (Sumarno, 2010).

In cocoa sustainable agriculture standards, Indonesia has been active in following international agreement for cocoa with the motivation to revitalize the cocoa production and open the international market expansion (Oktriando, 2012). Therefore, Indonesia refers to various documents in implementing sustainable agriculture concept, including UN, ASEAN, and Non-Government Organization standards.

Furthermore, by using the sustainable agriculture framework from FAO (2014), ASEAN GAP on Cocoa (2016) and certification from MARS (2018), Fairtrade (2019), UTZ (2020), and Rainforest Alliance (2020), this study examines the sustainable cocoa standardization of Gol based on five sustainable agriculture dimensions which are (1) Sustainable farming system, (2) Sustainable Social dimension, (3) Sustainable environment, (4) Sustainable Trade and Funding, (5) Sustainable Quality standard. These principles have been widely implemented in Indonesia as the farming strategy, including becoming a fundamental principle for the Ministry of Agriculture to release the Ministerial Decree No. 48/Permentan/OT.140/4/2014 on Technical Guidelines of Good Agriculture Practices on Cocoa. This section will identify the policy and regulation related to those five principles.

3.2 Relevant Provision on Sustainable Cocoa in Indonesia

3.2.1 Sustainable Farming System

3.2.1.1 Land Preparation

The core enforcement regulation applied by the Gol to ensuring sustainable plantation practice is the **Law No. 39/2015** on Plantations. This law regulates Indonesia's plantation governance in the whole aspect, including the introduced the sustainable plantation concept. The sustainable concept according to Law No. 39/2015 is the involvement of economic, socio-cultural, and ecological aspects in any plantation management as an inevitable and integrated development effort in Indonesia (Article 62 on Section 6 the Development of Sustainable Plantation). Furthermore, on Article 67, the sustainable aspect must be included in preserving environmental functions, for instance, the avoiding burning to open new Plantation.

Specific on cocoa sustainability, the **Ministerial Decree No. 48/Permentan/OT.140/4/2014** on Technical Guidelines of Good Agriculture Practices on Cocoa stated that three principles must be followed to prepare the cocoa fields to implement sustainable cocoa in three aspects, which are:

1. Farmers are not allowed to cut down forests and or burn forests to open new plantations.
2. Farmers must establish buffer zones between plantations and protected forests, water resources and human settlements.
3. Farmers should plant native species as the borders or buffer zones.

Moreover, in expanding and conversing land area for cocoa plantation, the decree on GAP required the farmers to select the land-based on the suitability with cocoa in the context of climate, land topography and soil quality. Based on those suitability aspects, the guideline divided the characteristics of the land into three classifications. The quality classifications are essential for farmers to generate a cultivation strategy involved in the use of fertilizer, irrigation, and pesticide. Below is the classification.

1. Class S1: Highly Suitable

Land with this classification does not have a severe problem for implementing the required soil and cultivation management or only has a minor issue and does not significantly affect land productivity.

2. Class S2: Moderately Suitable

The land has not a severe problem maintaining the level of cultivation management that must be applied. Existing limiting factors will reduce land productivity as well as reduce profitability.

3. Class S3: Marginally Suitable

The land has serious boundaries to maintain the level of cultivation management that must be applied compared to S2 suitability levels, even though it is still within normal requirements limits.

4. Class N: Not Suitable

The land does not match with the cocoa standardized soil quality.

Table 3.1 Land Characteristic Suitability for Cacao

No	Characters	Class Suitability			
		S1	S2	S3	N
1	Climate				
	Yearly rainfall (mm)	1500-2000	1250-1500 2500-3000	1100-1250 3000-4000	<1100 >4000
	Dry season duration (<60 mm/bl)	0-1	1-3	3-5	>5
				1-2	<1
2	t-Elevation (mdpl)				
	Fine cocoa	0-600	600-700	700-800	>800
	Bulk cocoa	0-300	300-450	450-600	>600
3	s-Hillside (%)	0-8	8-15	15-45	>45
4	r-Soil Physical Characteristic				
	Depth effective level (cm)	>150	100-150	60-100	<60
	Texture	Sandy loam	Sandy loam	Clay	Sandy
		Clay	Clay		Heavy clay
		Dusty clay	Dusty clay		
		Dusty clay			
Rock on surface (%)	-	0-3	3-15	>15	
5	d-Puddle	-	-	1-7 days	>7 days
	Drainage Class	Good	Moderately Good	Moderately Bad	Exaggerated
				Bad	Very Bad
				Exaggerated	
6	n-Soil Chemical Characteristics (0-30 cm)				
	PH	6,0-7,00	5,0-6,0	4,0-5,0	>8,0
			7,0-7,5	7,5-8,0	<4,0
	C-Organic	2,5	1-2	0,5-1	>0,5
			5-10	10-15	<15
	KPK (me/100 g)	>15	10-15	5-10	<5
	KB (%)	>35	20-35	<20	-
	N (%)	>0,21	0,1-0,2	<0,1	-
	P ₂ O ₂ (ppm)	>16	10-15	<10	-
	Kdd (me %)	>0,3	0,1-0,3	<0,1	-
7	x-Toxicity				
	Salinity (mm hos/cm)	<1	1-3	3-4	>4
	Saturation A1 (%)	<5	5-20	20-60	>60

Source: Ministry of Agriculture/*Kementan* (2014).



3.2.1.2 Irrigation and Water Management

Irrigation is mentioned as part of plantation infrastructure planning, and it mandated under **Law No. 39/2015 on Plantation** (Article 6). However, this law does not classify irrigation as part of the sustainability plantation concept specifically. Instead, under Article 6, GoI uses this clause to ensure the plantation direction is an integral part of improving production, quality, added values, and competitiveness from the plantation products.

The Ministerial Decree No. 48/Permentan/OT.140/4/2014 on Technical Guidelines of Good Agriculture Practices on Cocoa, include to do water conservation and avoiding erosion by regulating several water-management principles, which are:

1. The plantations are located in areas with a suitable climate, soil, and topography.
2. Farms must conduct erosion prevention, for example, by terracing the location.
3. Fertilization program must be based on soil characteristics.
4. The farm should use cover crops as a shadow for the small cocoa plants to increase soil fertility and reduce erosion.
5. The plantation must implement a program to reduce greenhouse gas emissions.

3.2.1.3 Planting Materials

The Ministerial Decree No. 48/Permentan/OT.140/4/2014 on Technical Guidelines of Good Agriculture Practices on Cocoa provides the new cocoa seeds standardization in Indonesia. Although Indonesia has developed various high cocoa yields from the past two decades, this decree ensures its sustainable cocoa policy implementation. It selects several great varieties that the government has recommended. There are two principles, according to Ministerial Decree No. 48/2014 on the applicability of seeds selections

1. Farmers are prohibited from planting GMO crops, including for buffer crop
2. The seeds or clones the relevant official institutions should recommend varieties, such as the Plantation Municipal Office (*Dinas Perkebunan*), the Centre for Seedings and Plantation Protection (*Balai Besar Perbenihan dan Proteksi Tanaman*), and the Indonesian Coffee and Cocoa Research Centre (*Pusat Penelitian Kopi dan Kakao Indonesia*).

Besides, for a more binding regulation on the high variety seeds, GoI of Indonesia, through the Ministry of Agriculture, released a Ministerial Decree on Production, Certification, and Supervision of the Seeds for Plantation (**No. 50/Permentan/KB/020/9/2015**). This decree manages to impose an excellent variety for a particular commodity to generate a productive plantation. This regulation pushes the farmers to use various seeds and develops specific quality requirements and certification for seed producers in Indonesia to follow.

As a result, in 2017, intending to support sustainable plantation programs, several improvements to production standards, certification, distribution, and cocoa seeds supervision need improvement. Ministry of Agriculture set up new standardization for cocoa seeds by releasing the Ministerial Decision

on Guidelines for Production, Certification, Distribution, and Supervision of Cocoa Seeds (*Theobroma Cacao L*) or **Ministerial Decision No. 25/KPTS/KB020/5/2017**. This regulation's content governs the standardization process from the producer and recommends numerous cacao varieties approved by the government to be used as part of the GAP on Cocoa.

Table 3.2 List of Superior Cocoa Seeds Varieties

No	Clones Variety	Regulation
A Fine Cocoa		
1	DRC 16	SK Mentan No. 735/Kpsts/TP.240/7/97
2	ICCRI 01	SK Mentan No. 212/Kpsts/SR.120/5/2005
3	ICCRI 02	SK Mentan No. 213/Kpsts/SR.120/5/2005
4	ICCRI 05	SK Mentan No. 1985/Kpsts/SR.120/4/2009
B Bulk Cocoa		
1	GC 7	SK Mentan No. 736/Kpsts/TP.240/7/97
2	ICS 13	SK Mentan No. 737Kpsts/TP.240/7/97
3	RCC 70	SK Mentan No. 686/Kpsts-IX/98
4	RCC 71	SK Mentan No. 686.a/Kpsts-IX/98
5	RCC 72	SK Mentan No. 686.b/Kpsts-IX/98
6	RCC 73	SK Mentan No. 686.c/Kpsts-IX/98
7	ICCRI 03	SK Mentan No. 530/Kpsts/SR.120/9/2006
8	ICCRI 04	SK Mentan No. 529/Kpsts/SR.120/9/2006
9	ICCRI 07	SK Mentan No. 2793/Kpsts/SR.120/9/2012
10	Sca 6	SK Mentan No. 1984/Kpsts/SR.120/4/2009
11	Sulawesi 01	SK Mentan No. 694/Kpsts/SR.120/12/2008
12	Sulawesi 02	SK Mentan No. 695/Kpsts/SR.120/12/2008
13	Sulawesi 03	SK Mentan No. 2795/Kpsts/SR.120/8/2012
14	MCC 01	SK Mentan No. 1083/Kpsts/SR.120/10/2014
15	MCC 02	SK Mentan No. 1082/Kpsts/SR.120/10/2014
16	ICCRI 06 H (TSH 858 x Sulawesi 1)	SK Mentan No. 3682/Kpsts/SR.120/11/2010
17	ICCRI 08 H (Sulawesi 1 x KEE 2)	SK Mentan No. 108/Kpsts/KB.010/2/2017
18	BL 50	SK Mentan No. 649/Kpsts/KB.010/10/2017

Source: Ministerial Decision No. 25/KPTS/KB020/5/2017 on Guidelines for Production, Certification, Distribution, and Supervision of Cocoa Seeds (*Theobroma cacao L*)

3.2.1.4 Fertilizer

The regulation on fertilizer for sustainable cocoa in Indonesia governs both farmers and producers. Under the GAP in Cocoa technical guideline, farmers are encouraged to apply an organic fertilizer to cacao plantation by implementing four principles:

1. Farmers must prioritize the use of organic and sustainable techniques to maintain and optimize soil fertility.
2. Apart from inorganic fertilizers, farmers are advised to use organic fertilizers or compost.
3. Increased efficiency, reducing dependence on non-renewable sources.
4. Fertilizer is stored in a safe place, does not endanger human health and the surrounding environment.



In addition to the farmer's regulation, the Ministry of Agriculture released **Ministerial Regulation No. 70/Permentan/SR.140/10/2011** on Organic Fertilizer, Biological Fertilizer, and Soil Improvement. Article 2 states that this protects the sustainability of environmental functions, soil biodiversity, consumers users, and provides business certainty for fertilizer producers. This regulation also imposes the policy for fertilizer producers only use sustainable ingredients from organic-based sources. This regulation set the standard minimum chemical formula for organic and biological fertilizer. As stated in Article 2, this regulation expected to protect the sustainability of environmental functions, soil biodiversity, and protect the fertilizer producers in managing the business.

Also, since the Gol considers the fertilizers are inevitable to sustain cocoa production, under **Ministerial Decree No. 1/2020**, the Ministry of Agriculture regulates the highest subsidized-fertilizers price to cocoa farmers, in which the distribution managed by the local government.

3.2.1.5 Pesticide

Good Agriculture Practice implementation on cocoa is regulated under Agriculture Ministry regulation No. 48/Permentan/OT.140/4/2014. The utilization of prevention and correction defines sustainable pesticide for cocoa approaches in managing the pest. The prevention approach is interpreted by cultivating only pest-free and healthy cocoa plants only; this is essential to ensure a healthy environment for other surrounding plants. The plant rehabilitation will be conducted if there are cases found in the cocoa plantation that need intervention.

However, this regulation imposes that pesticide use must combine the mechanical, biological, chemical, and physical approaches to implement integrated pest management. By saying this, the decision to use a pesticide must be put under serious consideration and fulfil two conditions: (1) pesticides used have been registered or obtained distribution permit from the Minister of Agriculture, (2) Training outreach to farmers on how to use these pesticides. This document also refers to ILO pesticide classification for the farmers

Table 3.3 List of ILO Banned Pesticide Ingredients

Very Hazardous (Class IA)

No	Active Ingredients	No	Active Ingredients	No	Active Ingredients
1	Aldicarb	11	Difethialone	21	Parathion-methyl
2	Brodifacoum	12	Dipachinone	22	Phenylmercury acetate
3	Bromadiolone	13	Disulfoton	23	Phorate
4	Bromethalin	14	EPN	24	Phosphamidon
5	Calcium cyanida	15	Ethoprophos	25	Sodium fluoroacetate
6	Captafol	16	Flocoumafen	26	Sulfotep
7	Chlorethoxyfos	17	Hexachlorobenzene	27	Tebupirimfos
8	Chlormephos	18	Mercuric chloride	28	Terbufos
9	Chlorophacinone	19	Mevinphos		
10	Difennacoum	20	Parathion		

Very Hazardous (Class IB)

No	Active Ingredients	No	Active Ingredients	No	Active Ingredients
1	Acrolein	12	DNOC	23	Nicotine
2	Allyl alcohol	13	Edifenphos	24	Omethoate
3	Azinphos-ethyl	14	Ethiofencarb	25	Oxamyl
4	Azinpos-methyl	15	Famphur	26	Oxydemeton-methyl
5	Blasticidin-S	16	Fenamiphos	27	Paris green (Copper-arsenic complex)
6	Butorcarboxim	17	Flucythrinate	28	Pentachlorophenol
7	Butoxycarboxim	18	Fluoroacetamide	29	Propetamphos
8	Cadusafos	19	Formentanate	30	Sodium arsenite
9	Calcium arsenate	20	Furathiocarb	31	Sodium cyanide
10	Carbofuran	21	Heptenophos	32	Strychnine
11	Chlrofenvinphos	22	Isoxathion		

3.2.1.6 Harvesting and Post-Harvesting

A successful sustainable cocoa policy in Indonesia is measured by the final product generated from these whole planting and cultivating efforts. Therefore, for harvest and post-harvesting processes, the GoI has released three documents to ensure farmers' advanced knowledge of how to harvest, store, and process cacao beans. The first document is **Ministerial Regulation No. 51/Permentan/OT.140/9/2012** on the Guideline for Cocoa Post-Harvesting Conduct. This guideline provides a systematic and technical approach to harvest the cocoa without decreasing its value significantly while increasing the market's competitiveness.

Second, the Ministerial Decree No. 48/Permentan/OT.140/4/2014 on GAP on Cocoa becomes the improvement of the Ministerial Regulation No. 51/Permentan/OT.140/9/2012. This regulation covers the detailed and specific cocoa harvesting process, beans selection, fermentation, and storing. This document refers to the Indonesian Cocoa National Standard or SNI Cocoa as the standardized quality for cocoa beans in making the cocoa beans standard. Lastly, working with Cocoa Sustainability Partnership and Indonesia Coffee and Cacao Research Institute, in 2017, the Ministry of Agriculture collaboratively developed the national curriculum and module for GAP and Post-Harvesting on Cacao. This initiative, despite essentially similar to the previous guideline in principle, the objective of this document put NGO and private sector perspectives to cultivate a fair and competitive cocoa standard, particularly on knowledge of the post-harvesting process.

3.2.2 Sustainable Social Dimension

3.2.2.1 Child Labour

The child labour in agriculture sectors is governed by the Ministry of Labour and Ministry of Women Empowerment and Child Protection. **The Roadmap for Indonesia Free from Child Labour 2022** noticed that the agriculture sector had been the most significant contribution to employ child labour in the rural area. Therefore, this document consisted of programs and policy frameworks for Indonesia to eradicate this practice by generating task force team at the local level, managed by local governments. The strategy to achieve the goals by imposing law harmonization and enforcement, education and training, social protection, and labour market policy.



Under **Law No. 13/2003 on Labour**, under Article 68, there is a clause to prohibit child labours under 18 years old that will harm their health, safety, and moral. In detail, this law regulates child labour practices from article 68-75 and ensure children protection. Moreover, **Law No. 35/2014 on Children Protection**, a clause of economic exploitation on child highlights that the child labour employment for economic activities is considered a violation of children's rights. The government will protect the children from these threats.

Additionally, since the enforcement mechanism to free the child from forced employment will be from the local level, Home Ministerial Decree No. 5/2011 on Eradication of Child Labour regulates local governments' role in combating this practice. Lastly, Ministry of Women Empowerment and Child Protection under the Regulation No. 3/200 on Guideline of Child Protection provides the enforcement mechanism to eradicate child forced employment practice by providing coordination SOP in the local level and policy relations and municipal social office.

3.2.2.2 Land Conflict Resolution

Environment and Forest Ministerial Regulation No. P.84/Menlhk-Setjen/2015 on Tenurial Conflict Management in Forest regulates the conflict resolution management among the customary community and the landowner. This regulation aims to provide the sustainable forest for plantation purposed by acknowledging the role of customary community. Under this centralized mechanism, the Ministry of Environment and Forest will establish a secretariat as the mediator for the conflict.

In 2016, under the enactment of **Ministerial Decree No. P83/MENHLK/SETJEN/KUM.1/10/2016** on Social Forestry, the Gol launched a social forestry program that aims to open complete access for the community surrounding forest to take advantage of the land to improve their wealth and economics condition (Article 1). Under this regulation, Indonesia's land-use conversion policy is significantly changed. It is considered more manageable for the local community to convert the protected forest to a productive plantation. In this case, cacao is one of the targeted communities to be cultivated under this reforming regulation. The regulation divided the forest status into five categories for ownership purposes (Article 4):

- village forest (*hutan desa*)
- community forest (*hutan kemasyarakatan*)
- community plant forest (*hutan tanaman rakyat*)
- partnership forestry (*kemitraan kehutanan*)
- customary forest (*hutan adat*)

Under the central government permission with a faster duration, the community around the forest could ask the government to convert the forest for productive plantations legally. In which before 2016, the protected forest could not be converted into any activities. President Joko Widodo targeted to open new lands under social forestry policy up to 12,7 million hectares for Indonesian citizens until 2021.

Table 3.4 Development of Social Forestry Policy

	Before 2016	After 2016
Scheme	Community Forest, Village Forest, Partnership Forest, Community Plant Forest	Community Forest, Village Forest, Partnership Forest, Community Plant Forest, Customary Forest
Location	Production Forest, Protected Forest	Production Forest, Protected Forest, Conservation Forest
Authority Arrangement	Minister, Governor, and Regent (combination of centralized and localized)	Minister, special condition can be assigned to governor (centralized)
Legal Foundation	Different schemes/regulation	Only one regulation with additional customary forest
Application Procedure	Complicated and time consuming	More simple and faster

Source: Firdaus (2018)

Aside from forests, the peatland ecosystem is also affected by the agricultural reforming policy of social forestry. In 2019, the Ministry of Environment and Forestry enacted a decree **No. P.37/Menlhk/Setjen/Kum.1/7/2019** on social forestry for peatland ecosystems. With the spirit to maximize land utilization to reduce poverty, unemployment, and the gap in forest land utilization, the community can obtain a legal permit to convert peatland ecosystems for productive plantation. Article 25 allows the farmer to develop farms to supply livestock, although this regulation does not mention specific commodities like cocoa.

3.2.3 Sustainable Environment

3.2.3.1 Protected Forest

The planning of forest management in Indonesia follows **Law No.44/2004 on Forest Planning**, in which this regulation includes the proportion of protected forest aspect. This regulation aims to ensure forest planning management's effectiveness and efficiency to achieve the maximum sustainable forest. Article 24 states the forest allocation for reserved and conservation functions with the primary function to balance the ecosystem. Moreover, this protected forest could not be converted into commercial activities. In forest governance, **Presidential Regulation No. 6/2007 on Forest Governance and the Forest Management Plan** highlights the forest utilization can be approved for certain activities, such as logging extraction, tourism, and cultivation for herbal plants under the approval from the provincial government. However, the forest with the protected status is not still allowed to expand for plantation field.

The Environment and Forest Ministerial Decree No. P.47/Menhut-II/2013 on Guidelines, Criteria and Standard for Forest Utilization for Protected Forest provides a loose regulation regarding the productive activity in a protected forest. Despite the limitations on using the reserved forest for plantation and agriculture activities, there is a sense for other than tourism activities allowed to be conducted in a protected forest.



3.2.3.2 Zero Burning

Under the **Agriculture Ministerial Decree No. 05/PERMENTAN/KB.410/1/2018** on Opening and Processing of Plantation Land without Burning, it stated that for the new plantation opening, it must refrain from doing the burning bush. Instead, this decree only allows to open new field through a manual and mechanical methodology (Article 8). Additionally, this regulation emphasizes the cross-sectoral collaboration from municipal, provincial, and national government with the private sectors.

3.2.3.3 Land Conversion

Presidential Regulation No. 59/2019 on Paddy Field Conversion regulates that for the active and irrigated paddy fields are prohibiting to be converted in any kind of function, including for plantation purpose. Controlling the conversion of paddy fields is one of the strategies to increase rice production in Indonesia. In protecting the forest from environmental degradation including caused by agriculture activities, the Government Regulation No. 45/2014 on Protecting Forest mandated that to conserve the forest from degradation, agriculture activities should distance the forest to for pest enter the forest from forest ecosystem degradation.

3.2.3.4 Carbon Emission

Presidential Regulation No. 61/2011 on National Movement for Green House Gases Eradication impose the importance to implement sustainable agriculture practices in Indonesia to reduce the greenhouse gases emission refer to national development program (Article 2). This regulation mandated the local government in Indonesia to work collaboratively with the national government in generating local plan and implement this activity. The Gol targeted to reduce the CO2 emission up to 41% or 0,011 gigatons by optimizing irrigation and water resource management.

3.2.4 Sustainable Trade and Funding

3.2.4.1 Funding Access to Farmer

The Ministry of Agriculture Strategic Plan 2020-2025 states that the funding for development in agriculture sourced from the national state budget, local budget and expenditure, national and foreign investment, private sectors and a state-owned company, and financial institution under credit scheme. Other than that, **Coordinating Economic Ministry Decision No. KEP-07/M.EKON/01/2020 on Decision of Financial Institution for Microcredit Programs (KUR)** launched a program to touch farmers union in the most rural area to access financial assistance. Lastly, since 2017, Village Funds also becomes an alternative for farmers' funding source in developing their business (**Presidential Regulation No. 60/2014**).

The allocation of the national state budget for agriculture development is distributed into two ministries: the Ministry of Agriculture and Ministry of Public Works and Housing. Aside from the allocation for food security and livestock price stability, the budget structure also tends to support the plantation development, such as allocating irrigation and fertilizer subsidy programs.

Table 3.5 Estimation of Required Funding for Agriculture Development (in Trillion Rupiah/IDR)

	2020	2021	2022	2023	2024
I MINISTRY					
1. Ministry of Agriculture	19,5	22,1	23,5	25,1	26,8
2. Ministry of Public Works and Housing	11,3	11,4	12,3	12,8	13,3
II NON-MINISTRY					
1. Subsidy					
a. Fertilizer Subsidy	26,6	23,1	20,6	18,0	15,4
2. Miscellaneous Expense					
a. Government Rice Reserve	2,8	2,8	2,8	2,8	4,8
b. Reserve for livestock price and food security	2,6	3,1	3,6	4,1	4,6
3. Transfer to local government					
a. Special Allocation Budget for Irrigation	2,1	3,0	3,1	3,2	4,1
b. Special Allocation Budget for Agriculture	1,5	2,5	3,0	3,5	4,0
TOTAL	66,9	67,9	68,9	69,9	71,1

Source: Funding Framework for Agriculture Development, The Ministry of Agriculture Strategic Plan 2020-2025 (Kementan, 2020)

Under the credit scheme, GoI relied on the Microcredit Program (Kredit Usaha Rakyat/KUR) to touch farmers union in the most rural area to access financial assistance. This program first launched in 2013 and aimed to improve the quality of credit to farmers union and support the plans to reduce the poverty rate (**Coordinating Economic Ministry Decision No. KEP-07/M.EKON/01/2020 on Decision of Financial Institution for Microcredit Programs**). Furthermore, the enactment of Technical Guideline of Microcredit Programs in 2013 from the Ministry of Agriculture provided a complicated relationship among banks and farmers on lending accessibility management. The KUR prioritized the programs related to accelerate the agriculture productivity and improve the farmer's wealth.

In 2018, the Coordinating Economics Ministry released a revised Technical Guidelines for Special Microcredit Programs (*Pedoman Pelaksanaan Teknis KUR Khusus*). This guideline targets community plantation as it mandated from Article 28 of the **Coordinating Economics Ministry Regulation No. 11/2017 on Technical Guidelines for Special Microcredit Programs**. Therefore, it concluded that KUR is an opener for farmers to access financial assistance from banks. According to Ministry of Agriculture Strategic Plan 2020-2025, KUR program will support at least IDR 50 Trillion/year.

3.2.4.2 Tax

The dynamics from traditional trade on cocoa have affected cocoa's tax and customs duty fee in Indonesia before export. At least the enforcement of ASEAN Harmonized System and ASEAN Harmonised Tariff Nomenclature 2017 compels the Ministry of Finance to release a **Ministerial Regulation No. 13/PMK.010/2017** on the Decision for Export Goods Charged with Exit Custom Rate. This regulation is also affected the cocoa beans for export from USD2,000 to USD3,500 (Article 4).

3.2.4.3 Custom

Ministry of Trade **under the Ministerial Regulation No. 103/2018** on Agriculture and Forestry Products Reference Price states that cocoa beans are USD 2.120.90/MT.



3.2.4.4 Trade

Agriculture Ministerial Regulation No. 67/Permentan/OT.140/5/2014 on Basic Requirement of Cocoa Bean and Marketing sets up the requirement for domestic cocoa trading must be approved by an ad-hoc committee that has the mandate to certify the cocoa quality bean and release a letter for that. The traded cocoa must be fermented and approved this committee named Fermentation and Cacao Beans Distribution Unit (UFP-BK). The team consists of the Trade Association (Gapoktan). The consequence of this regulation, the exporter does not allow to buy the cocoa without this certification.

3.2.5 Sustainable Quality Standard

In numerous documents, cocoa is mentioned as one of Indonesia's prioritized commodities, with intersectoral ministries involving in regulating the business and setting the quality standard. The study on government regulation on cocoa finds that the Ministry of Agriculture, Ministry of Industry, and The Indonesia National Standardization Agency (BSN) contributed to Indonesia's standardization governance.

BSN is the only agency mandated by Gol to make cocoa beans quality standardizations and make a fair measurement. This institution has also obtained accreditation from ASEAN, WTO, and ISO to conduct international trade international command. Specific for cocoa beans, BSN released **SNI 2323:2008**, a document referring to ISO standard for cocoa's quality. The SNI 2323:2008 was first developed in 2006, only for cocoa beans products. This standardization document set up several essential requirements, including physical, chemical, nutritional, and pesticide residue from cocoa beans.

3.2.5.1 Cocoa Beans

Ministry of Agriculture enacted **the Ministerial Decree No. 67/Permentan/OT.140/5/2014** on Quality and Marketing for Cocoa Beans set the minimum standard for cocoa quality in the market for a more competitive rate. Under this regulation, Gol emphasized that before distributing this commodity to the market, the cocoa bean shall fulfil the SNI standard released by BSN. Therefore, as the enforcement effort, this decree mandated establishing a farmer's union named the Cocoa Fermentation and Distribution Unit (UFP-BK), which needs to be registered first to the Agriculture Municipalities Office, the respective local government (Article 1). According to Article 9, the UFP-BK trained officer will take the sample of cocoa beans and test the beans standards referring to SNI 2323:2008 before distributing to both domestic and international markets.

3.2.5.2 Cocoa Powder

However, aside from standardizing cocoa bean, the recent regulation from Ministry of Industry No. 22/2018 on Conformity Assessment Agency in the Context of Compulsory Enforcement and Supervision of Indonesian National Cocoa Powder Standards pushes the local industry in Indonesia to processed cacao bean into cacao powder. This policy aims to increase the selling value and support the cacao industry in Indonesia. This regulation Ministry of Trade assigned numerous, both government and private, laboratories in all over Indonesia as the legitimate centres to undertake the quality assessment cocoa powder based on **SNI 3747:2009**.

Table 3.6 Government Regulation on Sustainable Cocoa in Indonesia

Sustainable Principle	Issue	Indonesian Standard	Private & NGO	Relevant Regulation	Note
1. Sustainable Farming System					
1.1 Land Preparation	1.1.1 Land preparation			Agriculture Ministerial Decree No. 48/Permentan/OT.140/4/2014	Land preparation and selection
1.2 Irrigation and Water Management	1.2.1 Irrigation			Law on Plantation No. 39/2014	Land management
	1.2.2 Water management			Agriculture Ministerial Decree No. 48/Permentan/OT.140/4/2014	Irrigation quality standard
1.3 Planting materials	1.3.1 Seed quality standardization			Law No. 39/2014	Water management for plantation
	1.3.2 Seeds certification			Agriculture Ministerial Decree No. 48/Permentan/OT.140/4/2014	Seeds quality standard
				Agriculture Ministerial Regulation No. 50/Permentan/KB.020/9/2015	Seed certification
1.4 Fertilizer	1.4.1 Organic fertilizer			Agriculture Ministerial Decree No. 25/KPTS/KB020/5/2017	Seed certification
	1.4.2 Subsidized fertilizers for cocoa			Agriculture Ministerial Regulation No. 70/Permentan/SR.0140/10/2011	Organic sustainable fertilizer
1.5 Pesticide	1.5.1 Government approved chemical fertilizer			Agriculture Ministerial Regulation No. 01/2020	Fertilizer subsidy program for cocoa
	1.6 Harvesting & Post-Harvesting			Agriculture Ministerial Decree No. 48/Permentan/OT.140/4/2014	Chemical fertilizers regulation
2. Sustainable Social Relations					
2.1 Child Labour	2.1 Child Labour			Agriculture Ministerial Decree No. 48/Permentan/OT.140/4/2014	Technical guideline for cocoa harvesting and post-harvesting
				Labour Ministry Roadmap for Indonesia Child Labour Free 2022	Policy and program roadmaps for future without child labor
				Law No. 13/2003 on Labour	Protecting children from slavery
				Home Minister Decree No. 5/2001	Children Labour Eradication program



Sustainable Principle	Issue	Indonesian Standard	Private & NGO	Relevant Regulation	Note
				Women Empowerment and Children Protection Ministry Decree on Children Protection Guideline No. 3/2008	Authority distribution for children protection management
				Law No. 35/2014	Protecting children from slavery
	2.2 Land conflict resolution			Environment and Forestry Ministerial Decree No. P.84/Menikh-Setjen/2015	Conflict resolution tenurial with customary community
				Environment and Forestry Ministerial Decree No. P.83/Menikh/Setjen/KUM.1/10/2016	Social forestry
				Environment and Forestry Ministerial Decree No. P.37/Menikh/Setjen/KUM.1/7/2019	Social forestry on peatlands
3. Sustainable Environment					
	3.1 Reserved forest			Government Regulation No. 44/2004	Function of protected forest
				Presidential Decree No. 88/2017	Forest ownership
				Environment and Forestry Ministerial Regulation No. P.47/Menhut-II/2013	Limitation activities in protected forest
	3.2 Zero burning			Agriculture Ministerial Decree No. 05/Permentan/KB.410/1/2018	Land sustainability
	3.3 Land conversion			Presidential Regulation No. 59/2019	Paddy field conversion prohibition
				Government Regulation No. 45/2016 on Protected Forest	Protected forest area from environmental degradation threats
	3.4 Carbon emission			Presidential Regulation No. 61/2011	National Action for Greenhouse Gases Reduction
4. Sustainable Trade & Funding					
	4.1 Funding access to Farmers			Agriculture Ministerial Decree No. 259/Kpts/RC.020/M/05/2020	Options for funding
				Coordinating Economic Ministry Decision No. KEP-07/M.EKON/01/2020	Microcredit program for farmers

Sustainable Principle	Issue	Indonesian Standard	Private & NGO	Relevant Regulation	Note
	4.2 Tax			Finance Ministerial Regulation No. 13/PMK.010/2017	Exit clearance tax for exported cacao
	4.3 Custom			Trade Ministerial Regulation No. 103/2018	Custom fee for cocoa export
	4.4 Trade			Agriculture Ministerial Regulation No. 67/Permentan/OT.140/5/trade	National trade and Export
5. Sustainable Quality Standard					
	5.1 Cocoa Bean			SNI 2323:2006	Cocoa beans standardization from BSN
				Agriculture Ministerial Decree No. 67/Permentan/OT.140/5/2014	Cocoa beans standardization from Ministry of Agriculture
	5.2 Cocoa Powder			SNI 3747:2009	Cocoa powder standardization from BSN
				Industry Ministerial Regulation No. 22/2018	Impose cocoa powder for export by Ministry of Industry
				Industry Ministerial Regulation No. 6/2019	Assigned laboratory for cocoa standardization assessment for cocoa powder



Governance and the Intersectoral Involvement for Sustainable Cocoa

Sustainable cocoa has attracted considerable attention. However, the governance from stakeholders in cocoa may differ in their understanding of sustainable cocoa standardizations, their interest, and actions taken in advancing sustainable cocoa (Mithöfer et al., 2017). For instance, in Indonesia, at least three ministerial-level institutions in creating sustainable cocoa commodity standardization rules and regulation started from the Ministry of Agriculture, Ministry of Industry, and National Standard Agency.

Despite there being no implicit international cocoa standardization documents referred, this study finds the tendency to use BSN's standard from ISO as the primary reference for the government to be followed. The justification for this is to make Indonesian cocoa approved by the international market or even local demand from MNCs.

Moreover, this study finds that a mutual effort has gained the effort of generating quality cocoa both from government and private sectors. Since they are trapped on a mutualism symbiosis; the government want to ensure the farmers obtain high profit from cocoa and private sectors need quality cocoa. The partnership is usually taken to improve the cocoa farmers performance in cultivating cocoa beans to be competitive in the international market. Besides, as a knowledge sharing and policy synergy for Indonesia's sustainable cocoa, Cocoa Sustainable Partnership (CSP) established in Indonesia. The CSP establishment aims to increase communication, coordination, and collaboration between public and private stakeholders engaged in cocoa sustainability activities in Indonesia for the mutual benefit of all cocoas sector players².

Currently, CSP has facilitated improving the sustainable cocoa improvement in Indonesia and developing 150,184 farmers, 177,972 farmers' land area, and 136,840,000 tress population. This organization is the only platform that providing room for discussion among national and local government, farmers, private sectors, cocoa producers association, and think tank community from the university.

2 Cocoa Sustainable Partnership (2020). <https://csp.or.id/en/pages/about-us>. (accessed on 20 October 2020)

Table 4.1 CSP Member

National Government	Local Government	Cocoa Forum
<ul style="list-style-type: none"> • Coordination Ministry of Economic • National Development Agency • Ministry of Agriculture • Indonesia Coffee and Cocoa Research Institute 	<ul style="list-style-type: none"> • West Sulawesi • South Sulawesi • Central Sulawesi • Southeast Sulawesi 	<ul style="list-style-type: none"> • Indonesian Cocoa Board • ASKINDO (Indonesian Cacao Association) • Aceh Cocoa Forum • Kolaka Cocoa Forum • West Sumatera Cocoa Forum • Central Cocoa Forum • Luwu Raya Cocoa Forum
Private Sectors	University/Think Tank	INGO/NGO
<ul style="list-style-type: none"> • Barry Callebaut • Cargill • ECOM • JB Cocoa • Mondelez International • Olam Cocoa • Pupuk Kaltim 	<ul style="list-style-type: none"> • Bogor Agricultural University • University of Hasanuddin 	<ul style="list-style-type: none"> • Kalimajari • Keling Kumang • Rainforest Alliance • Rikolto • Save the Children • Swisscontact • World Cocoa Foundation • MARS



Case Studies Local Government Regulation of Sustainable Cocoa Implementation

5.1 Sustainable Cocoa Program in South Sulawesi

Ministry of Agriculture in 2014-2018 recorded that South Sulawesi as the second-largest cocoa producer by contributing 17,22% of cocoa supply in Indonesia (Kementan, 2019). As one of the major cocoa producers in Indonesia, South Sulawesi has been actively involved with national cocoa programs that aim to improve cocoa quality and plantation development in developing this commodity. Limbongan (2012) recorded that the two national cocoa development programs as part of national government intervention to ensure the sustainability of cocoa production in Indonesia. The programs are Acceleration of Agriculture Innovation for Farmers (*Prima Tani*) in 2011 and National Movement of Cocoa Production and Quality 2009-2011.

However, despite these two programs were to ensure the cocoa sustainability production in the region and provide economic benefits by rejuvenating, rehabilitating, and intensification of cocoa plantation in South Sulawesi, including several local governments, the results were still dissatisfying for its sustainable productions aspect. In 2016, South Sulawesi produced 114,276 tonnes cacao but declining to 100,391 tonnes in 2017. Despite in 2018, there was an increment to reach 124,952 tonnes. In 2019 118,775 tonnes, those numbers are not significant.³ According to Nurjanani et al. (2013), cacao productivity in South Sulawesi is considered still low, only reaching 801,67 kg/ha. Funding access, land ownership, age of plant, and uncontrolled pest are the primary problems the cocoa farmer faces in South Sulawesi hinder their sustainability aspect.

Limited access to credit from financial institutions and the producer's level are quite low, resulting in decreased productivity of cacao in South Sulawesi (Aikpokpodion and Adeogun, 2011; Dormon et al., 2004). The cocoa farmers in South Sulawesi obtained a financial credit mostly not from official financial institutions. Instead the "cash money" lend by cocoa wholesaler with the interest rate up to 10% per month or the farmers must trade the cocoa to the wholesale if they want to get interest rate waiver (Asrul, 2019).

Farmers land ownership in Sulawesi average of less than 1 hectare per farmer's household; therefore, with limited land and does not meet the household economies scale (Wardoyo, 1980; Nurjana, 2013). Farmer typology in South Sulawesi has an average of 1,8 acre with cocoa trees. In contrast, the average size of farmer-owned land is 3 hectares, with an average of 900 trees per hectare (Fahmid, 2013).

3 LPP Agro Nusantara. Retrieved from <https://www.lpp.co.id/news/komoditas-ekspor-memulihkan-pamor-kakao-sulsel>. (Accessed on 20 November 2020)

Access to fertilizer also contributed to the declining cocoa productivity in South Sulawesi as the cocoa farmers face difficulties accessing the quality fertilizer. Farmers are unwilling to fully maintain and give production inputs like fertilizer and pest-extermination (Wardoyo, 1980; Nurjana, 2013). Consequently, in the last decade from 2010, the production of cocoa in South Sulawesi only reached 400-600 kg/hectares (Chandra, 2018). Most cocoa farmers in South Sulawesi only used three basic recommended fertilizer, i.e. Urea, SP-36, and KCL (Asrul, 2019).

Pest control policy in South Sulawesi is also low, and has contributed to decreasing the cocoa productivity in the region up to 82.2% (Wardoyo, 1980; Nurjana, 2013). The type of pesticides used by farmers varies, including brand name *cristalon*, *Nurel*, *Sevin*, *matador*, and *505* (Fahmid, 2013). Instead of implementing a measured and controlled pesticide, the farmers in South Sulawesi used extensive pesticide amount, due to the lack of knowledge, and led to the declining soil quality and became a significant contribution to the unproductive cocoa plantation (Chandra, 2018). Lastly, the low productivity of cocoa in South Sulawesi is the age of the old or too young plant. Most of the province's cocoa crop is still under five years, while the old one is over 20 years (Onumah et al., 2013; Morales, et al., 2012).

The child exploitation for plantation workers aspect also becomes a significant part of the sustainable cocoa production in South Sulawesi as the number of children worked has reached 105,6 thousand (ANTARA, 2010). The statistics show that most of the children labour practices are concentrated in rural areas and employed by their own families to run agriculture activities⁴. Therefore, a program named "Village-Free from Child Labour" aims to protect children's right from modern slavery, mainly in the agriculture sectors.

In the aspect of deforestation, Ramadhan (2017) assessed that the decentralization policy contributed to the acceleration of deforestation in South Sulawesi. As a consequence of this policy, the provincial government has the autonomy to manage the forest. Furthermore, this research concluded that the deforestation rate in South Sulawesi is on Small-Lately-Low. The expansion of agriculture and plantation activities has significantly contributed to the increasing deforestation rate, such as palm oil, cocoa, and corn⁵.

Luwu Utara Regency as one of the major cocoa producers in South Sulawesi also faced similar sustainability problems. Despite 2008 – 2012, there was significant cocoa plantation expansion of total 56,187.69 hectares. From 2011 to 2012, the cacao plantation area decreased to only 46,184.932 hectares (Sapareng et al. 2017). Also, in 2016 Luwu Utara only could produce 26,120.85 tonnes with the total area was 38,127.60 hectares (Lestari, 2019). This fact was even lower than the expected target and the last decade cocoa plantation area performance.

Hariyadi and Winasa (2012) argue that farmers' affected factors in Luwu Utara Regency on the cocoa sustainability productions caused by three aspects: old cocoa plant, limited access to pesticide, and lack

4 Kota/Kab Layak Anak, (2019). Retrieved from <https://www.kla.id/pengembangan-model-desa-bebas-pekerja-anak-merupakan-kepentingan-terbaik-bagi-anak/> (accessed on 21 November 2020).

5 Supriatna. Retrieved from <https://theconversation.com/riset-penebangan-hutan-di-sulawesi-merusak-habitat-monyet-dan-kera-lokal-148625> (accessed on 21 November 2020).



of pest and diseases control. Although the cocoa farmers in Luwu Utara Regency found the strategy to tackle those issues, it is still difficult for them to access the funding institutions.

Limbongan (2012) identifies a lack of farmers knowledge, old cocoa plant, and lack of pest and disease control are the significant contribution for the unsustainable cocoa production in Luwu Utara Regency. Farmers have long been cultivating plants from beans and even found some cocoa farmers in South Sulawesi who often bring beans from other areas, allowing the transmission of pests and diseases from one area to another. Additionally, this research finds that cocoa farmers' education level in Luwu Utara Regency only 5-7 years with a lack of presence from agriculture promoter. Therefore, those aspects have contributed to the declining level of cocoa production in Luwu Utara.

Lastly, Kasmad (2013) sees that Indonesia's decentralization policy is supposed to improve the rural farmers as the local government can do more profound policy intervention for this subject. However, in cocoa farmers' welfare, this objective has not achieved yet as the cocoa produced by the farmers in Luwu Utara regency does not provide significant income. This happened because farmers cannot produce quality cacao due to old coco plants, lack of pests and diseases control, and lack of farmers knowledge.

Table 5.1 Factors Affecting Reducing Cocoa Productivity in South Sulawesi Province and Luwu Utara Regency

No	Factors	Research in South Sulawesi	Research in Luwu Utara
1	Limited access to funding for farmers	Aikpokpodion and Adeogun, 2011; Dormon et al., 2004; Asrul, 2019	Hariyadi and Winasa, 2012
2	Limited access to pesticide	Wardoyo, 1980; Nurjana, 2013; Fahmid, 2013; Asrul, 2019	Hariyadi and Winasa, 2012
3	Old cocoa plant	Onumah et al., 2013; Morales, et al., 2012	Hariyadi and Winasa, 2012; Limbongan, 2012; Kasmad, 2013
4	Lack of pests and diseases control	Wardoyo, 1980; Nurjana, 2013; Fahmid, 2013; Chandra, 2018; Asrul, 2019	Hariyadi and Winasa, 2012; Limbongan, 2012; Kasmad, 2013
5	Land ownership	Wardoyo, 1980; Nurjana, 2013; Chandra, 2018	
6	Lack of farmers knowledge		Limbongan, 2012; Kasmad, 2013;
7	Deforestation	Ramadhan (2017)	

5.2 Relevant Provision on Sustainable Cocoa in South Sulawesi

5.2.1 Sustainable Farming System

5.2.1.1 Land Preparation

In preparing the plantation land, **the South Sulawesi Regional Regulation No. 3/2014 on Protection and Management of the Environment** mandated to overview the soil quality prior to land opening for any kind purposes and report the result to the local government level (Article 51). The rehabilitation of soil contamination maximum should be taken 30 days after the finding of the contamination by undertaking three measurements, i.e. stopping the contamination sources (remediation), cleaning the

contamination materials from the soil (rehabilitation), and applying the current technology for soil rehabilitation (Article 52).

5.2.1.2 Irrigation and Water Management

Irrigation

The irrigation management for plantation in South Sulawesi is regulated under **the South Sulawesi Regional Regulation No. 2/2009 on Irrigation** to provide a maximum benefit for the agriculture sector (Article 2). This regulation governs the holistic aspects of irrigation, starting from function, management, administrative, public involvement, water conservation and contamination rehabilitation, and legal matters.

Article 18 mentions that in managing the irrigation, the provincial government encourages farmers to take part in the irrigation system development to ensure the sense of ownership and sustainability of the system. In the aspect of sustainable water resources for irrigation, Article 24 acknowledges the role of customary right as long as it does not contradict with the law and provincial interest to provide welfare to the public.

Water Management

The South Sulawesi Regional Regulation No. 7/2010 on Ground Water Management mandated that groundwater be only allowed for simple agriculture practices and prohibited for plantation purposes. The groundwater conditions in South Sulawesi becomes one of the significant signs of environmental degradation. Therefore, this regulation enforced groundwater conservation instead of using it for massive industrial purposes. **The South Sulawesi Regional Regulation No. 4/2019 on Ground Water Management and Utilization** says that the groundwater can only be used for simple agriculture purposes if only the surface water (from river or lake) is not sufficient term of the availability (Article 25).

5.2.2 Sustainable Social Relations

5.2.2.1 Child Labour

To eradicate the child exploitation practices, the **South Sulawesi Regional Regulation No. 4/2013 on Child Protection System** regulated the government's intervention to help and provide protection for the children in the region. This document mentioned plantation as part of child exploitation aspects that need to be overviewed. Under this regulation, South Sulawesi Province regulates several intervention mechanisms from primary, secondary, and tertiary interventions. This regulation also works as the legal basis to ensure the child rights protection in South Sulawesi.

5.2.2.1 Land Conflict Resolution

The South Sulawesi Regional Regulation No. 4/2015 on Community Forest provides the opportunity for the public in South Sulawesi to legally expand their plantation as the part to improve the economic condition and ensure the legality aspect of farmers on the land ownership right. Through this regulation, by giving farmers the opportunity for famers to convert this forest, it is expected to increase the farmers' income and welfare.



To get the permit to open a community forest for plantation, it is required to obtain the governor's recommendation. The South Sulawesi Gubernatorial Regulation No. 61/2019 on the Procedure for Issuing the Governor's Recommendation on Spatial Planning mandated that the city or district convert spatial planning should obtain an assessment from the provincial level. This document mandated the sustainable requirements for any land conversation for the agricultural aspect as part of the structural process.

5.2.3 Sustainable Environment

5.2.3.1 Reserved Forest

The South Sulawesi Gubernatorial Regulation No. 4/2019 on the Acceleration for Prevention and Management of Environmental Degradation to Forest, Land, and River Basin in South Sulawesi Province regulates the forest degradation prevention by enacting the acceleration program to conserve the forest. The aim of this regulation is as the legal basis for South Sulawesi to enforce various programs in accelerating the prevention efforts from forest degradation. Specifically for forest management, the government has set the mitigation procedure to assess the damaged forest by creating a special task force report to the governor. This regulation also appeals to the public to prevent deforestation and active to preserve the forest in South Sulawesi.

5.2.3.2 Carbon Emission

Under the **South Sulawesi Gubernatorial Regulation No. 61/2019 on the Provincial Action to Reduce Green House Gases (GHGs) in South Sulawesi this province** commits to reduce the GHGs until 2030. Agriculture and Plantation aspect is included as this program. The GHGs eradication strategies mandated by the **South Sulawesi Regional Regulation No. 1/2019 on Provincial Middle Development Plan 2018-2023** in which this document emphasized the government commitment for the carbon management to reduce up to 22,5% compared to the national target, which is 26%. However, this regulation does not specifically explain the agriculture strategy aspect.

5.2.4 Sustainable Trade and Funding

3.2.4.1 Funding Access

The South Sulawesi Regional Regulation No. 9/2019 on Facilitation to the Village Development acceleration opens the funding opportunity for village people to improve their economic conditions. Despite this program, the agriculture aspect does not include the funding for plantation to the farmers directly; however, the allocated budget can be used to revamp the communal agriculture infrastructure, such as irrigation (Article 5).

Table 5.1 Sustainable Cocoa in South Sulawesi and Luwu Utara

Sustainable Principle	Issue	Relevant Regulation in South Sulawesi	Note
1. Sustainable Farming System			
1.1 Land Preparation	1.1.1 Land preparation	Sulsel Regional Regulation No. 3/2014	Soil protection
1.2 Irrigation and Water Management	1.2.1 Irrigation	Sulsel Regional Regulation No. 3/2009	Irrigation for productive agriculture activities
	1.2.2 Water management	Sulsel Regional Regulation No. 7/2010	Groundwater is only for simple agriculture practice
		Sulsel Regional Regulation No. 4/2019	Conserve groundwater
2. Sustainable Social Issues			
	2.1 Child labour	Sulsel Regional Regulation No. 4/2013	Child protection from modern slavery based on gubernatorial regulation
	2.2 Land Conflict Resolution	Sulsel Regional Regulation No. 4/2015	Conversion from community forest for expansion plantation purposes
		Sulsel Regional Regulation No. 61/2019	Administrative guideline to obtain governor permission for land conversion based on provincial landscape planning
3. Sustainable Environment			
	3.1 Reserved forest	Sulsel Gubernatorial Regulation No. 4/2019	Acceleration strategy for conserving forest
	3.2 Carbon emission	Sulsel Regional Regulation No. 11/2020	Reducing the greenhouses emission strategy for plantation
		Sulsel Regional Regulation No. 1/2019	Reducing the greenhouses emission strategy for plantation
4. Sustainable Trade & Funding			
	4.1 Funding access to Farmers	Sulsel Regional Regulation No. 9/2019	Funding facilitation for productive commodity to improve village economically



5.3 Relevant Provision on Sustainable Cocoa in Luwu Utara Regency South Sulawesi

5.3.1 Sustainable Farming System

5.3.1.1 Irrigation

To improve services in the agricultural sector aimed at preserving food security, increasing farmers' income and increasing employment opportunities in rural areas, it is deemed necessary to regulate irrigation system management. **The Luwu Utara Regional Regulation No. 3/2017 on Irrigation** provides the irrigation legal foundation for the agriculture stakeholders in Luwu Utara to take part in the sustainable agriculture practice. Specifically, on community plantation, this regulation guarantees that small-scale farmers get free access for irrigation (Article 21).

5.3.2 Sustainable Social Relations

5.3.2.1 Child Labour

The Luwu Utara Regional Regulation No. 3/2017 on Children Protection guarantees the children right not to get employed for a risky job and ensure the child's right is protected. Article 11 mentioned that the regency administration would regularly oversee the child labour practice in the household scale to reduce the possibility of child employment in any industries. The strategy implemented based on this regulation is through prevention, risk reduction, and intervention.

5.3.3 Sustainable Environment

5.3.3.1 Reserved Forest

The Luwu Utara **Regional Regulation No. 7/2009 on Forest Protection in Luwu Utara** mandated that the prohibition to conducting encroachment or land conversion, nomadic cultivation, and illegally using forest areas for plantation purposes (Article 17).

5.3.3.2 Zero Burning

The Luwu Utara Regional Regulation No. 7/2009 on Forest Protection in Luwu Utara governs forest protection prevention both from human intervention and natural cause. The regency governments protect forests from fire by controlling the forest, extinguishing and post-fire handling activities in the form of rehabilitation (Article 9).

5.3.4 Sustainable Trade and Funding

5.3.4.1 Investment and Funding Access

The Luwu Utara Regent Regulation No. 7/2015 on Investment mandated that the potential investor must hand over at least 5% from the investment value as a proof of commitment to invest in Luwu Utara. This regulation mentions cocoa plantation as part of the focus investment and funding to do the business.

5.3.5 Sustainable Quality Standard

5.3.5.1 Cocoa Bean

The Luwu Utara Regent Regulation No. 47/2015 on the Prohibition of Wet Cocoa Bean Trade bans the farmers or wholesale to bring wet cocoa bean out of Luwu Utara (Article 2). This regulation mandated that every person or organization that doing cacao bean business in Luwu Utara must follow these rules (Article 4):

1. Developed a MoU with the North Luwu Regency Government on the purchase of cocoa beans.
2. Worked with local farmers group and proof it by the official letter from the related institution in Luwu Utara regency.
3. Willing to not trade wet cocoa bean outside of Luwu Utara and instead only proceed the dry or fermented bean.

Table 5.2 Sustainable Cocoa in Luwu Utara Regency

Sustainable Principle	Issue	Relevant Regulation	Note
1. Sustainable Farming System			
1.1 Irrigation and Water Management	1.1.1 Irrigation	Luwu Utara Regent Regulation No. 3/2010	Irrigation for sustainable plantation
2. Sustainable Social Relations			
	2.1 Child Labour	Luwu Utara Regional Regulation No. 3/2017	Child protection from modern slavery based on regency regulation
3. Sustainable Environment			
	3.1 Reserved forest	Luwu Utara Regional Regulation No. 7/2009	Forest protection and limitation for plantation expansion
	3.2 Zero Burning	Luwu Utara Regional Regulation No. 7/2009	Forest fire prevention
4. Sustainable Trade & Funding			
	4.1 Investment & Funding Access	Luwu Utara Regent Regulation No. 7/2015	Investment for plantation
		Luwu Utara Regent Regulation No. 10/2016	Investment easiness
5. Sustainable Quality Standard			
	5.1 Cocoa Bean	Luwu Utara Regent Regulation No. 47/2015	Prohibition to sell wet bean cacao from Luwu Utara



Conclusion



This study indicates that Indonesia's significant law structures and policies for the enforcement of sustainable agriculture practices have existed in supporting these practices with the primary objective to generate high-quality cacao. Moreover, based on the local governments' study, in the provincial and regent, law structures are also found that several regulations to compel and support farmers to implement the Good Agriculture Practices (GAP). The existing rules support the sustainable cocoa practices from the whole cocoa cultivation aspect, but with the limitation in the international standardized cocoa trade aspects. It is important to note that the government recognizes the importance of sustainable agriculture practices and that regulation lie throughout ministries to accommodate the international sustainability standards.

Furthermore, this study also concludes the existing regulations has covered several accomplishments in accommodating the international sustainability cocoa standards: (1) the law for GAP is the significant contribution for Gol to implement the international measures for sustainable agriculture and cocoa plantation, this commitment contained in Agriculture Ministerial Decree No. 48/Permentan/OT.140/4/2014; (2) The regulation also explicitly acknowledge the role and contribution of various international sustainability standards, in which Indonesia owns their standardization while still voluntarily reliant with non-government certification; (3) The commitment to implement GAP and ensuring the enforcement mechanism to the local level, for case in South Sulawesi Province and Luwu Utara Regency, those local governments have been equipped with supportive, sustainable regulation as the different translation from national rules; (4) The existing law on sustainable cocoa still focus on producing high-quality quality cocoa for trade purposes. At the same time, it is still lack for international trade regulations and principle for cocoa.



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- Keputusan Menteri Pertanian RI No. 46/Kpts/PD.300/1/2015 tentang Penetapan Kawasan Perkebunan Nasional.
- Peraturan Badan Standarisasi Nasional RI No. 6 Tahun 2019 tentang Skema Penilaian Kesesuaian Terhadap Standar Nasional Indonesia Sektor Pangan (Petunjuk Teknis Skema Sertifikasi Produk Olahan Kakao).
- Peraturan Menteri Kehutanan RI No. P.47/Menhu-II/2013 tentang Pedoman, Kriteria, dan Standar Pemanfaatan Hutan di Wilayah Tertentu pada Kesatuan Pengelolaan Hutan Lindung dan Kesatuan Pengelolaan Hutan Produksi
- Peraturan Menteri Keuangan RI No. 13/PMK.010/2017 tentang Penetapan Barang Ekspor Yang Dikenakan Bea Keluar dan Tarif Bea Keluar.



Peraturan Menteri Lingkungan Hidup dan Kehutanan RI No. P.37/MENLHK/SETJEN/KUM.1/7/2019 tentang Perhutanan Sosial Pada Ekosistem Gambut.

Peraturan Menteri Lingkungan Hidup dan Kehutanan RI No. P.83/MENLHK/SETJEN/KUM.1/10/2016 tentang Perhutanan Sosial

Peraturan Menteri Lingkungan Hidup dan Kehutanan RI No. P.84/Menhk-Setjen/2015 tentang Penanganan Konflik Tenurial Kawasan Hutan

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Peraturan Menteri Perdagangan RI No. 103 Tahun 2018 Tentang Penetapan Harga Patokan Ekspor atas Barang Ekspor Yang Dikenakan Bea Keluar

Peraturan Menteri Perindustrian No. 22 Tahun 2018 tentang Lembaga Penilaian Kesuaian Dalam Rangka Pemberlakuan Dan Pengawasan Standar Nasional Indonesia Kakao Bubuk Secara Wajib.

Peraturan Menteri Pertanian RI No. 01 Tahun 2020 tentang Alokasi Harga Pupuk Bersubsidi Sektor Pertanian Tahun Anggaran 2020.

Peraturan Menteri Pertanian RI No. 70/Permentan/SR.140/10/2011 tentang Pupuk Organik, Pupuk Hayati, dan Pembenah Tanah.

Peraturan Menteri Pertanian RI No. 51/Permentan/OT.140/9/2012 tentang Pedoman Penangan Pasca Panen Kakao.

Peraturan Menteri Pertanian RI No. 05/Permentan/Kb.410/1/2018 tentang Pembukaan dan/atau Pengolahan Lahan Perkebunan Tanpa Membakar

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Peraturan Menteri Pertanian RI No. 127/Permentan/SR.120/11/2014 tentang Pemasukan dan Pengeluaran Benih Tanaman.

Peraturan Menteri Pertanian RI No. 21/PERMENTAN/KB.410/6/2017 tentang Perubahan Kedua atas Peraturan Menteri Pertanian No. 98/PERMENTAN/OT.140/9/2013 tentang Pedoman Perizinan Usaha Perkebunan.

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Local Government Regulation

Peraturan Daerah Kabupaten Luwu Utara No. 3 Tahun 2017 tentang Penyelenggaraan Perlindungan Anak

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Peraturan Bupati Luwu Utara No. 47 Tahun 2015 tentang Pengaturan Keberadaan Lembaga Pemerhati Kakap dan Pelarangan Biji Kakao Basah Keluar dari Kabupaten Luwu Utara

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Peraturan Gubernur Sulawesi Selatan No. 4 Tahun 2019 tentang Percepatan Penanggulangan dan Pencegahan Kerusakan Lingkungan pada Hutan, Lahan, dan Daerah Aliran Sungai di Wilayah Provinsi Sulawesi Selatan

Peraturan Daerah Provinsi Sulawesi Selatan No. 3 Tahun 2014 Tentang Perlindungan dan Pengelolaan Lingkungan Hidup

Peraturan Daerah Provinsi Sulawesi Selatan No. 1 Tahun 2017 tentang Penedalihan Lahan Kritis

Peraturan Daerah Provinsi Sulawesi Selatan No. 8 Tahun 2012 tentang Pembentukan Perusahaan Penjaminan Kredit Daerah Sulawesi Selatan

Peraturan Daerah Provinsi Sulawesi Selatan No. 4 Tahun 2013 tentang Sistem Perlindungan Anak



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