

# Crude Palm Oil Downstreaming Policy Conceptual Model

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**Abstract.** Indonesia is the world's largest producer of Crude Palm Oil (CPO) with the Harmonized System code (HS15111000). CPO can be processed into various derivative products offers the opportunity to increase added value by developing the CPO downstreaming, which is essential to Indonesia's long-term development and industrialization strategy. However, guarantees of non-overlapping regulations are needed as a prerequisite for the development of Indonesian CPO downstreaming through a series of policies that have been implemented. The aim of this research is to develop a conceptual model of Indonesia's CPO downstreaming policy. This research uses secondary data related to Indonesian CPO downstreaming policies obtained from various sources. This research produces three conceptual models of CPO downstreaming policies, with the first conceptual model assuming that imports are carried out at the beginning so that they will increase stocks, which will then be allocated for domestic and export needs. For the second conceptual model, it is assumed that stocks will be allocated for domestic needs, then imports will be carried out to meet export needs. Meanwhile, the third conceptual model assumes that exports are carried out at the beginning so that they will reduce stocks, then imports are carried out to meet domestic needs.

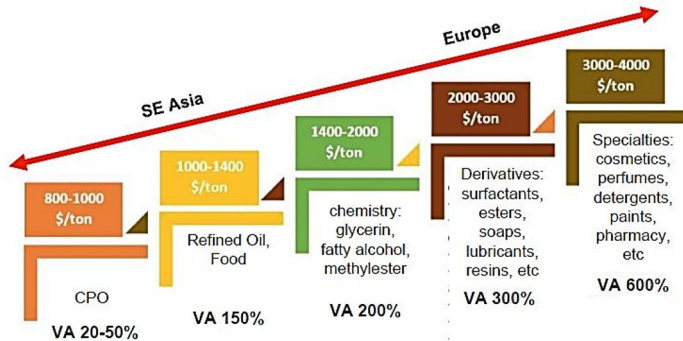
## 1 Introduction

Indonesia is the largest producer of Crude Palm Oil (CPO) in the world, with its production in 2024 amounting to 58.8%, followed by Malaysia at 24.2%, and other countries at 17.0% [1]. CPO is the main product of oil palm plantations with the Harmonized System code (HS15111000) which can be processed into various derivative products, with the opportunity to increase added value through the development of the CPO downstreaming industry [2], with the lowest added value of downstream CPO products obtained from CPO products with added value between 20-50% and the highest added value obtained from specialty products such as: cosmetics, perfumes, detergents, paints, and pharmacy with added value up to 600%. While the added value for refined oil and oleofood is around 150%, for the added value of chemical products such as: glycerin, fatty alcohol, methylester, etc. can reach 200%, and for

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the added value of other CPO derivative products such as: surfactants, esters, soaps, lubricants, resins, etc. can reach 300%, as shown in Figure 1 [3].

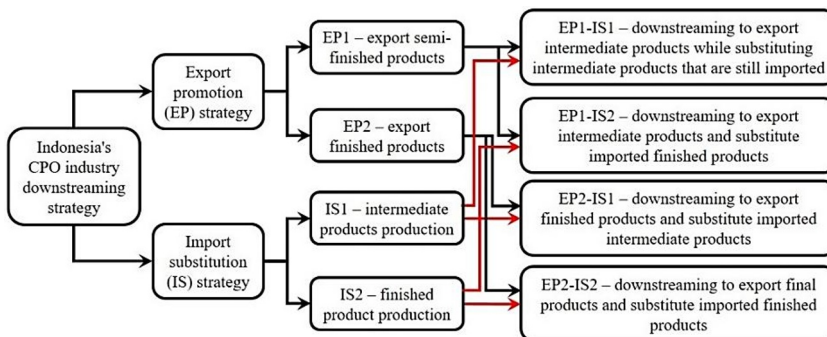


**Fig. 1.** Added value of CPO downstreaming products [3].

The further downstream product diversification is pursued, the greater and more diverse the added value will be. Given this strategic value, the government must commit to prioritizing palm oil downstream policies. The strategic value of the palm oil agro-industry lies in creating added value from upstream palm oil products into various downstream products [4].

CPO downstreaming is a key pillar of Indonesia’s long-term CPO industry development and industrialization strategy. Therefore, Indonesia needs to accelerate domestic CPO downstreaming and international CPO exports as a market penetration strategy. Domestic downstreaming involves processing CPO into higher-value products, both for export and as substitutes for currently imported products such as diesel, aviation fuel, gasoline, plastics, and lubricants [5].

In general, CPO downstreaming in Indonesia is grouped into three pathways, namely the oleofood complex, oleochemical complex and biofuel complex [5], with the number of downstreaming palm oil products recorded at the end of 2011 only around 48 types, but by the end of 2023 it had increased to more than 193 types [6]. The CPO downstreaming strategy implemented by Indonesia is divided into two: combination of export promotion (EP) and import substitution (IS) strategies, as shown in Figure 2 [5, 7].



**Fig. 2.** Indonesia's CPO downstreaming strategy [5, 7].

To accelerate CPO downstreaming, Indonesia has issued several policies/instruments, including: 1. Tax incentive policies (tax allowances, tax holidays, import exemptions for machinery, goods, and materials); 2. Development of industrial zones integrating the downstream palm oil industry with port facilities/services; 3. Export duty and export levy

policies; and 4. Mandatory biodiesel policies to substitute imported diesel fuel [5]. In addition, there needs to be a guarantee or certainty of non-overlapping regulations regarding development, financing and supervision authority [8].

To increase the strategic value of the palm oil processing industry and provide certainty and convenience in determining the technical identification of each palm oil derivative commodity, Permenperin No. 32/2024 was issued, which is a form of recognition by the Indonesian Government of the technical specifications of palm oil derivative commodities and becomes quality assurance for downstream products produced in Indonesia and can be used as a Roadmap for the Downstreaming of the Indonesian Palm Oil Industry [6, 9].

The aim of this research is to develop a conceptual model of Indonesia's CPO downstreaming policy.

## **2 Methodology**

This research utilizes secondary data related to Indonesia's CPO downstreaming process, obtained from various sources, including literature reviews, scientific journals, research reports, and publications from the Central Statistics Agency (BPS), ministries, associations, and agro-industries related to palm oil. Furthermore, the study also observed the implementation of the CPO downstreaming policy.

This research was conducted from April 2025 to July 2025 to collect technical data, regulations and policies, information, and insights through discussions with experts and relevant sources. Discussions with experts were conducted through FGDs involving 9 experts from ministries, institutions and associations related to CPO downstreaming, including: Directorate General of Plantations, Ministry of Agriculture; Directorate General of Agro Industry, Ministry of Industry; Directorate General of Foreign Trade, Ministry of Trade; Riau Provincial Government Plantation Service; Indonesian Palm Oil Entrepreneurs Association (GAPKI); Indonesian Palm Oil Farmers Association (APKASINDO); Palm Oil Research Center; Indonesian Biofuel Producers Association (APROBI); and Indonesian Oleochemical Producers Association (APOLIN).

## **3 Result and discussion**

### **3.1 Domestic CPO downstreaming development policy**

There are several policies for downstreaming Indonesian CPO for domestic use, including: 1. Tax incentive policies consisting of tax allowances and tax holidays; 2. Industrial area development policies integrating downstream palm oil industries with port facilities/services; 3. Mandatory biodiesel policies to substitute imported diesel fuel; 4. Domestic Market Obligation (DMO) and Domestic Price Obligation (DPO) policies; and 5. CPO derivative commodity classification policies [5].

Tax incentive policy for tax allowance is a policy that allows the downstream palm oil industry to obtain income tax reductions as stated in PP No. 78/2019, with several impacts on CPO downstreaming: 30% reduction in taxable income from capital expenditures used for investment in companies that make new investments or expand their businesses in the CPO downstream sector; special criteria and requirements that must be met by business actors, which encourage increased production capacity and quality of domestic CPO downstream products; encourage the development of the CPO downstream industry in Special Economic Zones (SEZ) and certain areas that are development priorities; and provide incentives for companies to expand their downstream CPO production capacity, thereby increasing the added value of domestic CPO products and reducing dependence on CPO exports [10].

The tax incentive policy for tax holiday is a policy that allows pioneering downstream CPO industries to obtain tax incentives (tax holidays) as stated in PMK No. 192/PMK.011/2014 with several impacts on CPO downstreaming, including: reduction or exemption from export duties for certain downstream CPO products that are further processed domestically; regulation of conditional export duty rates based on the international market price of CPO; support for the sustainability of downstreaming the CPO industry through the management of export levy funds; encouraging the development of downstream CPO products that provide higher added value than CPO exports. In addition, the tax holiday policy is also contained in PMK No. 130/PMK.010/2020 with several impacts on CPO downstreaming, including: reducing corporate income tax (CIT) by up to 100%; encouraging increased investment in the downstream CPO industry; increasing the competitiveness of the Indonesian CPO industry by reducing the tax burden; supporting job creation and strengthening the regional economy in CPO production centers; complementing other fiscal policies such as tax allowances and CPO export levy regulations.

The policy for developing integrated industrial areas for the downstream palm oil industry with port facilities/services such as Sei Mangkei (North Sumatra), Dumai-Kuala Enok (Riau), Tanjung Api-api (South Sumatra) and Maloy (East Kalimantan) is stated in PP No. 40/2021 concerning the Implementation of Special Economic Zones (SEZ) which covers various aspects related to location, criteria, business activities, to the facilities and conveniences provided, is a policy for developing efficient industrial areas, integrated value chains from upstream to downstream impacting logistics cost efficiency, with several influences on CPO downstreaming, including: provision of fiscal, customs, licensing, and infrastructure facilities and conveniences in the SEZ; development of the SEZ as a downstream CPO industrial cluster in strategic locations; increasing the competitiveness of the downstream CPO industry through easy market access, tax incentives, and reduction of logistical barriers; supporting the sustainability of the CPO industry by encouraging the development of environmentally friendly technologies and sustainable production standards in the SEZ; strengthening the position of palm oil downstreaming in the national development strategy by making SEZ new centers of economic growth oriented towards processing and increasing the added value of downstream CPO products.

The mandatory biodiesel policy for imported diesel substitution currently in effect in Indonesia is B-35 as stated in the Kepdirjen EBTKE No. 3.K/EK.05/DJE/2023 which came into effect on February 21, 2023, with several impacts on CPO downstreaming, including: encouraging the use of CPO downstream products (biodiesel) thereby increasing the absorption of CPO for biodiesel feedstock; stabilizing domestic palm oil prices and supplies; the B35 program increasing biodiesel demand; increasing the contribution of renewable energy and reducing emissions; encouraging increased productivity of oil palm plantations aimed at increasing CPO production to meet the increasing demand for biodiesel until 2045 [11].

The DMO and DPO policies are stated in the Kepmendag No. 170/2022 concerning the determination of the amount for domestic needs distribution (DMO) and domestic sales price (DPO) which aims to guarantee the supply and stability of palm oil prices in the domestic market through regulating the distribution and mandatory prices of palm oil products, as well as supporting the balance between domestic needs and exports, with the amount for domestic needs distribution (DMO) of 30% for CPO and/or Refined, Bleached and Deodorized Palm Olein (RBDPO) of export volume, and the domestic sales price (DPO) for CPO of IDR 9,300/Kg and for RBDPO of IDR 10,300/Kg including value added tax (VAT), with its impact on CPO downstreaming, including: determining the quota or mandatory amount of CPO distribution and its derivative products that must be allocated for domestic needs to ensure the availability of cooking oil and other palm products in the domestic market, setting the domestic sales price as a reference so that the price of cooking oil and other palm products

its derivatives remain affordable, and optimize the availability and price of cooking oil domestically [12].

To increase the strategic value of the palm oil processing industry and provide certainty and convenience in determining the technical identification of each palm oil derivative commodity, Permenperin No. 32/2024 was issued, which is a form of recognition by the Indonesian Government of the technical specifications of palm oil derivative commodities and becomes quality assurance for downstream products produced in Indonesia and can be used as a Roadmap for Downstreaming of the Indonesian Palm Oil Industry, so that CPO downstream groups can be identified based on the HS code as stated in Table 1, and for details, see appendix 1 [6, 9].

**Table 1.** CPO downstreaming groups based on HS codes.

<b>CPO Downstreaming Groups</b>	<b>HS Code</b>	<b>Number of Types</b>	<b>Total</b>
I	15111000	1	1
II	15119041 ; 15119042 ; 15119049 ; 15200090 ; 15220090	5	6
	38231990	1	
III	15119020 ; 15119031 ; 15119032 ; 15119036 ; 15119037 ; 15119039 ; 15162034 ; 15162046	8	9
	38231920	1	
IV	15162021 ; 15162022 ; 15162029 ; 15162054 ; 15180038 ; 15200010 ; 15211000	7	26
	29011000 ; 29157010 ; 29157020 ; 29157030 ; 29159030 ; 29159040 ; 29159090 ; 29161500	8	
	34011190 ; 34012020 ; 34012099	3	
	38231100 ; 38231200 ; 38237010 ; 38237090 ; 38249999 ; 38260021 ; 38260022 ; 38260090	8	
V	15171010 ; 15171090 ; 15179010 ; 15179020 ; 15179043 ; 15179050 ; 15179090	7	63
	21069030 ; 21069099	2	
	27075000 ; 27101211 ; 27101212 ; 27101213 ; 27101221 ; 27101222 ; 27101223 ; 27101224 ; 27101225 ; 27101226 ; 27101227 ; 27101228 ; 27101229 ; 27101231 ; 27101239 ; 27101971 ; 27101972 ; 27101979 ; 27101981 ; 27101982	20	
	29051100 ; 29051200 ; 29051300 ; 29051600 ; 29051900 ; 29052200 ; 29052900 ; 29053100 ; 29053200 ; 29053900 ; 29054100 ; 29054200 ; 29054300 ; 29054400 ; 29054500 ; 29054900 ; 29362100 ; 29362800	18	
	34013000 ; 34011140 ; 34011150 ; 34011170 ; 34011161 ; 34011169 ; 34011910 ; 34011920 ; 34011990 ; 34012091 ; 34023190 ; 34023910 ; 34023990 ; 34024100 ; 34024290 ; 34024990	16	

Source: Directorate General of Agro Industry, 2024 and Permenperin No. 32/2024

### **3.2 Policy for developing Indonesian CPO downstreaming for export**

Export policies related to the downstreaming of Indonesian CPO consist of export duty policies and export levy policies, which are policies that subject CPO exports and their derivative products to export duties and levy rates, the value of which is determined based on the CPO reference price [5].

The export duty tariff policy is stated in PMK No. 123/PMK.010/2022 with several impacts on CPO downstreaming, including: adjustments to the reference price calculation mechanism by lowering the minimum and upper limits of the reference price used as a reference for imposing export duties on CPO and its derivatives; encouraging domestic CPO downstreaming by implementing adjusted and stricter export duties on CPO exports; anticipating international price fluctuations with more accurate reference price adjustments and updated calculation mechanisms to help the government regulate export duties dynamically; increasing exports of CPO and its derivatives and increasing domestic consumption [13].

The export levy policy is stated in PMK No. 30/2025, which is a policy that makes the export of CPO and its derivative products subject to a levy tariff with the amount determined based on the CPO reference price with a minimum value of 4.75% and a maximum of 10% of the ministry's CPO reference price, where the further downstream the product is, the lower the levy tariff. The export levy tariff policy provides an incentive to export CPO derivative products, because the export levy tariff is more expensive for CPO products. Some of the effects of the export levy tariff on CPO downstreaming include: increasing productivity and added value of CPO products and their derivatives through more effective and efficient fund management; supporting the financing of CPO downstreaming programs; strengthening plantation fund governance that contributes to the sustainability and development of the national palm oil industry [14].

### **3.3 Policy for developing Indonesian CPO downstreaming for imports**

Import policies related to the downstreaming of Indonesian CPO consist of import exemption policies for machinery and goods and materials, import duty rates on imported goods (import duty), value added tax (VAT) and corporate income tax (CIT) [5].

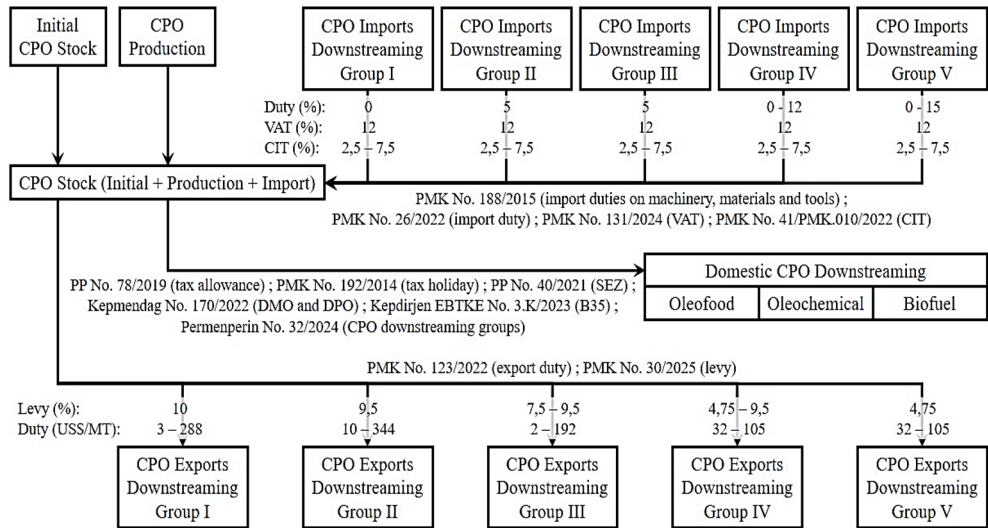
The import exemption policy for machinery and goods and materials is a policy that allows the downstream CPO industry to obtain import duty exemption for the import of machinery and goods and materials for the construction or development of industry within the framework of investment as stated in PMK No. 188/PMK.010/2015 with several impacts on CPO downstreaming, including: providing import duty exemption for the import of machinery and equipment used in CPO processing; accelerating the development of CPO derivative product processing facilities; supporting the increase in added value of domestic CPO products; facilitating technological modernization and improving the quality of downstream CPO products; supporting job creation and strengthening the regional economy in CPO production centers.

The import duty policy for imported goods for CPO and CPO derivative products is stated in PMK No. 26/PMK.010/2022 with an import duty rate of 0%-15%. VAT policy for imports of CPO and CPO derivative products is stated in PMK No. 131/2024 with a tax rate of 12%. CIT policy for imports of CPO and CPO derivative products is stated in PMK No. 41/PMK.010/2022 with a tax rate of 2.5%-10% [15].

### 3.4 Conceptual model of Indonesian CPO downstreaming development policy

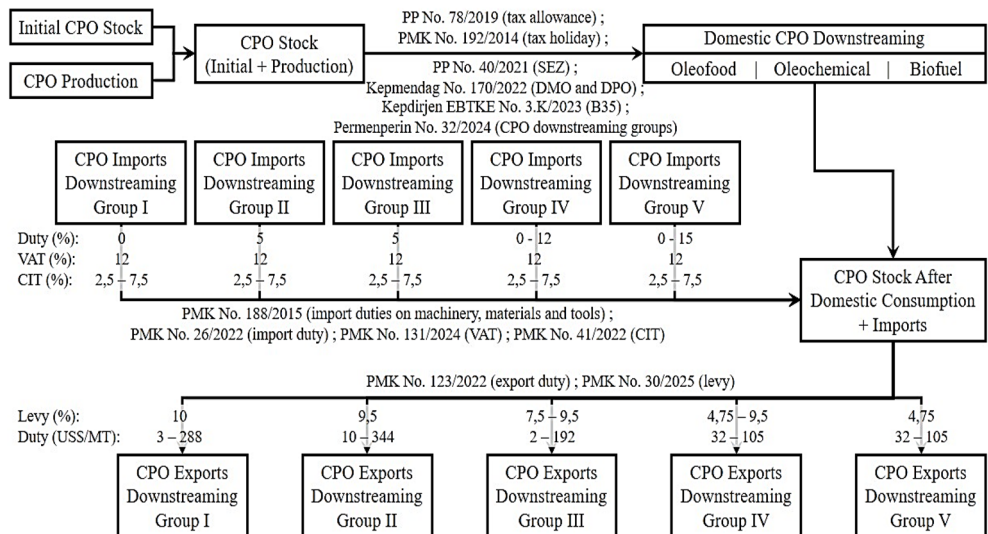
Based on the various CPO downstreaming policies implemented by Indonesia and observations of their implementation, three conceptual models can be developed for Indonesian CPO downstreaming development policies.

The first conceptual model of Indonesia's CPO downstreaming development policy as shown in Figure 3 assumes that imports will be implemented initially, thereby increasing CPO stocks, which will then be allocated for domestic needs and exports.



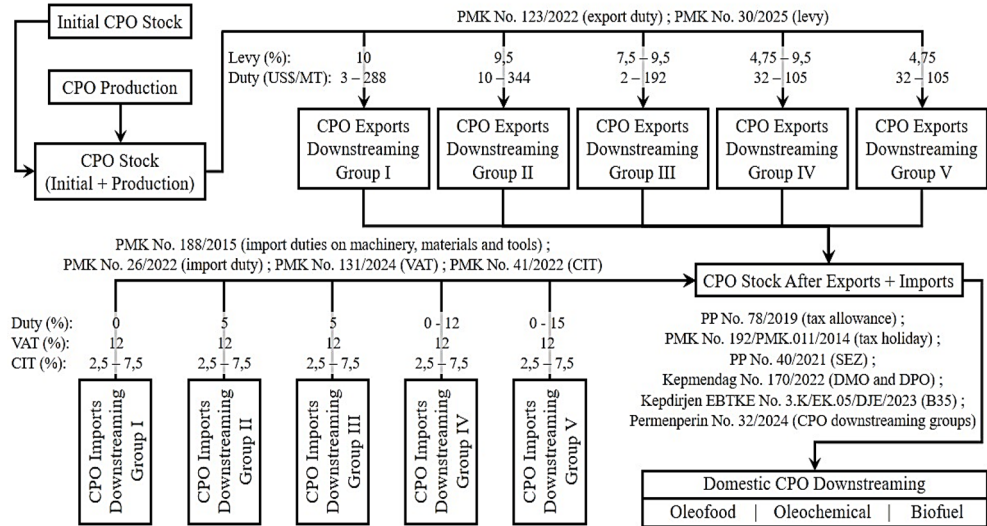
**Fig. 3.** The first conceptual model of Indonesia's CPO downstreaming development policy.

The second conceptual model of Indonesia's CPO downstreaming development policy as shown in Figure 4 assumes that CPO stocks will initially be allocated for domestic needs and then imported to meet export needs.



**Fig. 4.** The second conceptual model of the Indonesian CPO downstreaming development policy.

The third conceptual model of Indonesia's CPO downstreaming development policy as shown in Figure 5 assumes that CPO stocks will initially be allocated for export needs and then imported to meet domestic needs.



**Fig. 5.** The third conceptual model of the Indonesian CPO downstreaming development policy.

The differences between the three conceptual models lie in the position of CPO downstreaming for domestic use, CPO downstreaming for exports, and CPO downstreaming for imports. In the first conceptual model, imports are made first, then allocated for domestic downstreaming and exports. In the second conceptual model, domestic downstreaming is allocated first, followed by imports for export downstreaming. In the third conceptual model, export downstreaming is allocated first, followed by imports for domestic downstreaming.

This research produces three conceptual models of Indonesia's CPO downstreaming development policy: the first model assumes that imports are carried out initially so that they will increase CPO stocks which will then be allocated for domestic needs and exports, the second model assumes that CPO stocks will initially be allocated for domestic needs and then imported to meet export needs, and the third model assumes that CPO stocks will initially be allocated for export needs and then imported to meet domestic needs.

## 4 Conclusion

Indonesian CPO downstreaming development policy consists of the Indonesian CPO downstreaming development policy for domestic needs, for exports and for imports. Indonesian CPO downstreaming development policy for domestic needs consists of PP No. 78/2019 and PMK No. 192/PMK.011/2014 for tax incentive policies (tax allowance and tax holiday), PP No. 40/2021 for SEZ, Kepdirjen EBTKE No. 3.K/EK.05/DJE/2023 for B35, Kepmendag No. 170/2022 for DMO and DPO and Permenperin No. 32/2024 for the CPO downstream group. Indonesian CPO downstreaming development policy for exports consists of PMK No. 123/PMK.010/2022 for export duty, and PMK No. 30/2025 for export levy. Meanwhile, the policy for developing CPO downstreaming for imports consists of PMK No. 188/PMK.010/2015 for import exemption for machinery and goods and materials, PMK No. 26/PMK.010/2022 for import duty, PMK No. 131/2024 for VAT, and PMK No. 41/PMK.010/2022 for CIT.

Some recommendations for further research include: the conceptual model needs to be developed to be more comprehensive by including CPO downstream performance data, conceptual models that provide the most optimal benefits require further research, and simulations with several scenarios are required to determine the feasibility of the conceptual model.

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*Added Tax Treatment on Imports of Taxable Goods, Delivery of Taxable Goods, Delivery of Taxable Services, Utilization of Intangible Taxable Goods from Outside the Customs Area within the Customs Area, and Utilization. (2024)*

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes.

<b>HS Code Description</b>	<b>Total</b>
<b>CPO downstreaming groups I = 1 variety</b>	
Chapter 15: Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	
<ul style="list-style-type: none"> <li>▪ 1511: Palm oil and its fractions, whether or not refined, but not chemically modified               <ul style="list-style-type: none"> <li>– 1511000: Crude oil (Crude Palm Oil)</li> </ul> </li> </ul>	1
<b>CPO downstreaming groups II = 6 variety</b>	
Chapter 15: Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	
<ul style="list-style-type: none"> <li>▪ 1511: Palm oil and its fractions, whether or not refined, but not chemically modified               <ul style="list-style-type: none"> <li>▫ 151190: Other: Fractions of unrefined oil                   <ul style="list-style-type: none"> <li>– 15119041: Solid fractions (Crude Palm Stearin)</li> <li>– 15119042: Other, with packing of a net weight not exceeding 25 kg (Crude Palm Olein)</li> <li>– 15119049: Other (Crude Palm Olein)</li> </ul> </li> </ul> </li> </ul>	3
<ul style="list-style-type: none"> <li>▪ 1520: Glycerol, crude; glycerol waters and glycerol lyes               <ul style="list-style-type: none"> <li>– 1520090: Other (Glycerine Water)</li> </ul> </li> </ul>	1
<ul style="list-style-type: none"> <li>▪ 1522: Degras; residues resulting from the treatment of fatty substances or animal or vegetable waxes               <ul style="list-style-type: none"> <li>– 1522090: Other (Soap Stock)</li> </ul> </li> </ul>	1
Chapter 38: Miscellaneous chemical products	
<ul style="list-style-type: none"> <li>▪ 3823: Industrial monocarboxylic fatty acids; acid oils from refining; industrial fatty alcohols - Industrial monocarboxylic fatty acids; acid oils from refining               <ul style="list-style-type: none"> <li>▫ 382319: Other                   <ul style="list-style-type: none"> <li>– 38231990: Other (Split Crude Palm Oil Based)</li> </ul> </li> </ul> </li> </ul>	1
<b>CPO downstreaming groups III = 9 variety</b>	
Chapter 15: Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	
<ul style="list-style-type: none"> <li>▪ 1511: Palm oil and its fractions, whether or not refined, but not chemically modified               <ul style="list-style-type: none"> <li>▫ 151190: Other                   <ul style="list-style-type: none"> <li>– 15119020: Refined oil (Refine, Bleach and Deodorize Palm Oil)</li> </ul> </li> <li>▫ 151190: Other: Fractions of refined oil: Solid fractions                   <ul style="list-style-type: none"> <li>– 15119031: With iodine value 30 or more, but less than 40 (Refine, Bleach and Deodorize Palm Stearin)</li> <li>– 15119032: Other (Refine, Bleach and Deodorize Palm Stearin)</li> </ul> </li> <li>▫ 151190: Other: Fractions of refined oil: Liquid fractions                   <ul style="list-style-type: none"> <li>– 15119036: In packing of a net weight not exceeding 25 kg (Refine, Bleach and Deodorize Palm Olein)</li> <li>– 15119037: Other, with iodine value 55 or more, but less than 60 (Refine, Bleach and Deodorize Palm Olein)</li> <li>– 15119039: Other (Refine, Bleach and Deodorize Palm Olein)</li> </ul> </li> </ul> </li> </ul>	6

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes (continued).

<b>HS Code Description</b>	<b>Total</b>
<ul style="list-style-type: none"> <li>▪ 1516: Animal, vegetable or microbial fats and oils and their fractions, partly or wholly hydrogenated, inter-esterified, re-esterified or elaidinised, whether or not refined, but not further prepared               <ul style="list-style-type: none"> <li>▫ 151620: Vegetable fats and oils and their fractions: Hydrogenated, in flakes                   <ul style="list-style-type: none"> <li>– 15162034: Of fruit of the oil palm (Hydrogenated Palm Fatty Acid Distillate)</li> </ul> </li> <li>▫ 151620: Vegetable fats and oils and their fractions: Hydrogenated, in other forms                   <ul style="list-style-type: none"> <li>– 15162046: Of fruit of the oil palm (Hydrogenated Palm Fatty Acid Distillate)</li> </ul> </li> </ul> </li> </ul>	2
Chapter 38: Miscellaneous chemical products	
<ul style="list-style-type: none"> <li>▪ 3823: Industrial monocarboxylic fatty acids; acid oils from refining; industrial fatty alcohols - Industrial monocarboxylic fatty acids; acid oils from refining               <ul style="list-style-type: none"> <li>▫ 382319: Other                   <ul style="list-style-type: none"> <li>– 38231920: Palm fatty acid distillate</li> </ul> </li> </ul> </li> </ul>	1
CPO downstreaming groups IV = 26 variety	
Chapter 15: Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	
<ul style="list-style-type: none"> <li>▪ 1516: Animal, vegetable or microbial fats and oils and their fractions, partly or wholly hydrogenated, inter-esterified, re-esterified or elaidinised, whether or not refined, but not further prepared               <ul style="list-style-type: none"> <li>▫ 151620: Vegetable fats and oils and their fractions: Re-esterified, of oil palm                   <ul style="list-style-type: none"> <li>– 15162021: Of the fruit of the oil palm, crude (Re-esterified Palm Oil Based)</li> <li>– 15162022: Of the fruit of the oil palm, other than crude (Re-esterified Palm Oil Based)</li> <li>– 15162029: Other (Re-esterified Palm Oil Based)</li> </ul> </li> <li>▫ 151620: Vegetable fats and oils and their fractions: Inter-esterified                   <ul style="list-style-type: none"> <li>– 15162054: Of ground-nuts, of oil palm or coconuts (Inter-esterified Oil and Fats ; Medium Chain Triglycerides)</li> </ul> </li> </ul> </li> </ul>	4
<ul style="list-style-type: none"> <li>▪ 1518: Animal, vegetable or microbial fats and oils and their fractions, boiled, oxidised, dehydrated, sulphurised, blown, polymerised by heat in vacuum or in inert gas or otherwise chemically modified, excluding those of heading 15.16; inedible mixtures or preparations of animal, vegetable or microbial fats or oils or of fractions of different fats or oils of this Chapter, not elsewhere specified or included - Inedible mixtures or preparations of vegetable fats or oils or of fractions of different vegetable fats or oils               <ul style="list-style-type: none"> <li>– 15180038: Of the fruit of the oil palm or of palm kernels, other (Recovered Oil/Spent Bleaching Earth Oil)</li> </ul> </li> </ul>	1
<ul style="list-style-type: none"> <li>▪ 1520: Glycerol, crude; glycerol waters and glycerol lyes               <ul style="list-style-type: none"> <li>– 15200010: Crude glycerol (Crude Glycerine)</li> </ul> </li> </ul>	1
<ul style="list-style-type: none"> <li>▪ 1521: Vegetable waxes (other than triglycerides), beeswax, other insect waxes and spermaceti, whether or not refined or coloured               <ul style="list-style-type: none"> <li>– 15211000: Vegetable waxes (Palm Wax)</li> </ul> </li> </ul>	1
Chapter 29: Organic chemicals	
<ul style="list-style-type: none"> <li>▪ 2901: Acyclic hydrocarbons               <ul style="list-style-type: none"> <li>– 29011000: Saturated (Bio Olefin)</li> </ul> </li> </ul>	1

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes (continued).

HS Code Description	Total
<ul style="list-style-type: none"> <li>▪ 2915: Saturated acyclic monocarboxylic acids and their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives               <ul style="list-style-type: none"> <li>▫ 291570: Palmitic acid, stearic acid, their salts and ester                   <ul style="list-style-type: none"> <li>– 29157010: Palmitic acid, its salts and esters (Palmitic-based Fatty Acid ; Methyl Ester)</li> <li>– 29157020: Stearic acid</li> <li>– 29157030: Salts and esters of stearic acid (Glyceride Mono Stearate ; Methyl Ester)</li> </ul> </li> <li>▫ 291590: Other                   <ul style="list-style-type: none"> <li>– 29159030: Caprylic acid, its salts and esters (Methyl Ester)</li> <li>– 29159040: Capric acid, its salts and esters (Methyl Ester)</li> <li>– 29159090: Other (Oleic Acid)</li> </ul> </li> </ul> </li> </ul>	6
<ul style="list-style-type: none"> <li>▪ 2916: Unsaturated acyclic monocarboxylic acids, cyclic monocarboxylic acids, their anhydrides, halides, peroxides and peroxyacids; their halogenated, sulphonated, nitrated or nitrosated derivatives - Unsaturated acyclic monocarboxylic acids, their anhydrides, halides, peroxides, peroxyacids and their derivatives               <ul style="list-style-type: none"> <li>– 29161500: Oleic, linoleic or linolenic acids, their salts and esters (Glyceride Mono Oleat)</li> </ul> </li> </ul>	1
Chapter 34: Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing and scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster	
<ul style="list-style-type: none"> <li>▪ 3401: Soap; organic surface-active products and preparations for use as soap, in the form of bars, cakes, moulded pieces or shapes, whether or not containing soap; organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap; paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent - Soap and organic surface-active products and preparations, paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent               <ul style="list-style-type: none"> <li>▫ 340111: For toilet use (including medicated products)                   <ul style="list-style-type: none"> <li>– 34011190: Other (Soap Noodle)</li> </ul> </li> <li>▫ 340120: Soap in other forms                   <ul style="list-style-type: none"> <li>– 34012020: Soap chips (Soap Noodle)</li> <li>– 34012099: Other (Soap Noodle)</li> </ul> </li> </ul> </li> </ul>	3
Chapter 38: Miscellaneous chemical products	
<ul style="list-style-type: none"> <li>▪ 3823: Industrial monocarboxylic fatty acids; acid oils from refining; industrial fatty alcohols - Industrial monocarboxylic fatty acids; acid oils from refining               <ul style="list-style-type: none"> <li>– 38231100: Stearic acid</li> <li>– 38231200: Oleic acid</li> <li>▫ 382370: Industrial fatty alcohol                   <ul style="list-style-type: none"> <li>– 38237010: In the form of wax (Fatty Alcohol)</li> <li>– 38237090: Other (Fatty Alcohol)</li> </ul> </li> </ul> </li> </ul>	4
<ul style="list-style-type: none"> <li>▪ 3824: Prepared binders for foundry moulds or cores; chemical products and preparations of the chemical or allied industries (including those consisting of mixtures of natural products), not elsewhere specified or included - Other               <ul style="list-style-type: none"> <li>▫ 382499: Other: Other                   <ul style="list-style-type: none"> <li>– 38249999: Other (Methyl Ester)</li> </ul> </li> </ul> </li> </ul>	1

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes (continued).

<b>HS Code Description</b>	<b>Total</b>
<ul style="list-style-type: none"> <li>▪ 3826: Biodiesel and mixtures thereof, not containing or containing less than 70 % by weight of petroleum oils or oils obtained from bituminous minerals - Palm methyl ester (including palm kernel methyl ester)               <ul style="list-style-type: none"> <li>– 38260021: With methyl ester content 96.5 % or more but not exceeding 98% (Biodiesel Fatty Acid Methyl Ester)</li> <li>– 38260022: With methyl ester content exceeding 98% (Biodiesel Fatty Acid Methyl Ester)</li> <li>– 38260090: Other (Biodiesel Fatty Acid Methyl Ester)</li> </ul> </li> </ul>	3
CPO downstreaming groups V = 63 variety	
Chapter 15: Animal, vegetable or microbial fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	
<ul style="list-style-type: none"> <li>▪ 1517: Margarine; edible mixtures or preparations of animal, vegetable or microbial fats or oils or of fractions of different fats or oils of this Chapter, other than edible fats and oils or their fractions of heading 15.16.               <ul style="list-style-type: none"> <li>▫ 151710: Margarine, excluding liquid margarine                   <ul style="list-style-type: none"> <li>– 15171010: In airtight container for retail sale (Margarine)</li> <li>– 15171090: Other (Margarine)</li> </ul> </li> <li>▫ 151790: Other                   <ul style="list-style-type: none"> <li>– 15179010: Imitation ghee (Vegetable Ghee)</li> <li>– 15179020: Liquid margarine (Margarine)</li> <li>– 15179043: Shortening</li> <li>– 15179050: Other solid mixtures or preparations of vegetable fats or oils or of their fractions (Cocoa Butter Alternatives)</li> <li>– 15179090: Other (Palm Oil Based-Functional Fats)</li> </ul> </li> </ul> </li> </ul>	7
Chapter 21: Miscellaneous edible preparations	
<ul style="list-style-type: none"> <li>▪ 2106: Food preparations not elsewhere specified or included               <ul style="list-style-type: none"> <li>▫ 210690: Other                   <ul style="list-style-type: none"> <li>– 21069030: Non-dairy creamer (Palm Based Non-dairy Creamer)</li> <li>– 21069099: Other (Emulsifier)</li> </ul> </li> </ul> </li> </ul>	2
Chapter 27: Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes	
<ul style="list-style-type: none"> <li>▪ 2707: Oils and other products of the distillation of high temperature coal tar; similar products in which the weight of the aromatic constituents exceeds that of the non-aromatic constituents               <ul style="list-style-type: none"> <li>– 27075000: Other aromatic hydrocarbon mixtures of which 65% or more by volume (including losses) distils at 250°C by the ISO 3405 method (equivalent to the ASTM D 86 method) (Drop-in Biofuel)</li> </ul> </li> </ul>	1
<ul style="list-style-type: none"> <li>▪ 2710: Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70 % or more of petroleum oils or of oils obtained from bituminous minerals, these oils being the basic constituents of the preparations; waste oils; other than those containing biodiesel and other than waste oils               <ul style="list-style-type: none"> <li>▫ 271012: Light oils and preparations: Motor spirit, leaded                   <ul style="list-style-type: none"> <li>– 27101211: Of RON 97 and above (Drop-in Biofuel)</li> <li>– 27101212: Of RON 90 and above but below RON 97 (Drop-in Biofuel)</li> <li>– 27101213: Of other RON (Drop-in Biofuel)</li> </ul> </li> </ul> </li> </ul>	3

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes (continued).

HS Code Description	Total
<ul style="list-style-type: none"> <li>▫ 271012: Light oils and preparations: Motor spirit, unleaded               <ul style="list-style-type: none"> <li>– 27101221: Unblended (Drop-in Biofuel)</li> <li>– 27101222: Blended with ethanol (Drop-in Biofuel)</li> <li>– 27101223: Other (Drop-in Biofuel)</li> <li>– 27101224: Unblended (Drop-in Biofuel)</li> <li>– 27101225: Blended with ethanol (Drop-in Biofuel)</li> <li>– 27101226: Other (Drop-in Biofuel)</li> <li>– 27101227: Unblended (Drop-in Biofuel)</li> <li>– 27101228: Blended with ethanol (Drop-in Biofuel)</li> <li>– 27101229: Other (Drop-in Biofuel)</li> </ul> </li> <li>▫ 271012: Light oils and preparations: Aviation spirit, of a kind used in aviation piston-engines               <ul style="list-style-type: none"> <li>– 27101231: 100 octane and above (Drop-in Biofuel)</li> <li>– 27101239: Other (Drop-in Biofuel)</li> </ul> </li> <li>▫ 271019: Other: Diesel fuel; fuel oils               <ul style="list-style-type: none"> <li>– 27101971: Automotive diesel fuel (Drop-in Biofuel)</li> <li>– 27101972: Other diesel fuels (Drop-in Biofuel)</li> <li>– 27101979: Fuel oils (Drop-in Biofuel)</li> </ul> </li> <li>▫ 271019: Other               <ul style="list-style-type: none"> <li>– 27101981: Aviation turbine fuel (jet fuel) having a flash point of 23°C or more (Drop-in Biofuel)</li> <li>– 27101982: Aviation turbine fuel (jet fuel) having a flash point of less than 23°C (Drop-in Biofuel)</li> </ul> </li> </ul>	16
Chapter 29: Organic chemicals	
<ul style="list-style-type: none"> <li>▪ 2905: Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives - Saturated monohydric alcohols               <ul style="list-style-type: none"> <li>– 29051100: Methanol (methyl alcohol) (Refined Fatty Alcohol)</li> <li>– 29051200: Propan-1-ol (propyl alcohol) and propan-2-ol (isopropyl alcohol) (Refined Fatty Alcohol)</li> <li>– 29051300: Butan-1-ol (n-butyl alcohol) (Refined Fatty Alcohol)</li> <li>– 29051600: Octanol (octyl alcohol) and isomers thereof (Pure Cut Fatty Alcohol)</li> <li>– 29051900: Other (Pure Cut Fatty Alcohol)</li> </ul> </li> <li>▪ 2905: Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives - Unsaturated monohydric alcohols               <ul style="list-style-type: none"> <li>– 29052200: Acyclic terpene alcohols (n-butyl alcohol) (Refined Fatty Alcohol)</li> <li>– 29052900: Other (Refined Fatty Alcohol)</li> </ul> </li> <li>▪ 2905: Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives - Diols               <ul style="list-style-type: none"> <li>– 29053100: Ethylene glycol (ethanediol) (Refined Fatty Alcohol)</li> <li>– 29053200: Propylene glycol (propane-1,2-diol) (Refined Fatty Alcohol)</li> <li>– 29053900: Other (Refined Fatty Alcohol)</li> </ul> </li> <li>▪ 2905: Acyclic alcohols and their halogenated, sulphonated, nitrated or nitrosated derivatives - Other polyhydric alcohols               <ul style="list-style-type: none"> <li>– 29054100: 2-Ethyl-2-(hydroxymethyl)propane-1,3-diol (trimethylolpropane) (Refined Fatty Alcohol)</li> <li>– 29054200: Pentaerythritol (Refined Fatty Alcohol)</li> <li>– 29054300: Mannitol (Refined Fatty Alcohol)</li> <li>– 29054400: D-glucitol (sorbitol) (Refined Fatty Alcohol)</li> <li>– 29054500: Glycerol (Refined Glycerine)</li> <li>– 29054900: Other (Refined Fatty Alcohol)</li> </ul> </li> </ul>	16

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes (continued).

HS Code Description	Total
<ul style="list-style-type: none"> <li>▪ 2936: Provitamins and vitamins, natural or reproduced by synthesis (including natural concentrates), derivatives thereof used primarily as vitamins, and intermixtures of the foregoing, whether or not in any solvent Vitamins and their derivatives, unmixed               <ul style="list-style-type: none"> <li>– 29362100: Vitamin A and their derivatives (Carotene)</li> <li>– 29362800: Vitamin E and its derivatives (Vitamin E : Tocopherol ; Tocotrienol ; Squalene)</li> </ul> </li> </ul>	2
Chapter 34: Soap, organic surface-active agents, washing preparations, lubricating preparations, artificial waxes, prepared waxes, polishing and scouring preparations, candles and similar articles, modelling pastes, "dental waxes" and dental preparations with a basis of plaster	
<ul style="list-style-type: none"> <li>▪ 3401: Soap; organic surface-active products and preparations for use as soap, in the form of bars, cakes, moulded pieces or shapes, whether or not containing soap; organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap; paper, wadding, felt and nonwovens, impregnated, coated or covered with soap or detergent               <ul style="list-style-type: none"> <li>– 34013000: Organic surface-active products and preparations for washing the skin, in the form of liquid or cream and put up for retail sale, whether or not containing soap (Soap Bar)</li> <li>▫ 340111: For toilet use (including medicated products)                   <ul style="list-style-type: none"> <li>– 34011140: Medicated soap including disinfectant soap (Soap Bar)</li> <li>– 34011150: Other soap including bath soap (Soap Bar)</li> <li>– 34011170: Other, of paper, impregnated, coated or covered with soap or detergent (Soap Bar)</li> </ul> </li> <li>▫ 340111: For toilet use (including medicated products): Other, of felt or nonwovens, impregnated, coated or covered with soap or detergent                   <ul style="list-style-type: none"> <li>– 34011161: Of nonwovens in packings for retail sale (Soap Bar)</li> <li>– 34011169: Other (Soap Bar)</li> </ul> </li> <li>▫ 340119: Other                   <ul style="list-style-type: none"> <li>– 34011910: Of felt or nonwovens, impregnated, coated or covered with soap or detergent (Soap Bar)</li> <li>– 34011920: Of paper, impregnated, coated or covered with soap or detergent (Soap Bar)</li> <li>– 34011990: Other (Soap Bar)</li> </ul> </li> <li>▫ 340120: Soap in other forms: Other                   <ul style="list-style-type: none"> <li>– 34012091: Of a kind used for flotation de-inking of recycled paper (Soap Bar)</li> </ul> </li> </ul> </li> </ul>	10
<ul style="list-style-type: none"> <li>▪ 3402: Organic surface-active agents (other than soap); surface-active preparations, washing preparations (including auxiliary washing preparations) and cleaning preparations, whether or not containing soap, other than those of heading 34.01 - Anionic organic surface-active agents, whether or not put up for retail sale               <ul style="list-style-type: none"> <li>▫ 340231: Linear alkylbenzene sulphonic acids and their salts                   <ul style="list-style-type: none"> <li>– 34023190: Other (Functional Chemical Methyl Ester Based)</li> </ul> </li> <li>▫ 340239: Other                   <ul style="list-style-type: none"> <li>– 34023910: Sulphated fatty alcohols (Biosurfactant)</li> <li>– 34023990: Other (Amide Surfactant)</li> </ul> </li> </ul> </li> </ul>	3

**Appendix 1.** Detail of CPO downstreaming groups based on HS codes (continued).

HS Code Description	Total
<ul style="list-style-type: none"> <li>▪ 3402: Organic surface-active agents (other than soap); surface-active preparations, washing preparations (including auxiliary washing preparations) and cleaning preparations, whether or not containing soap, other than those of heading 34.01 - Other organic surface-active agents, whether or not put up for retail sale               <ul style="list-style-type: none"> <li>– 34024100: Cationic (Amide Surfactant)</li> <li>▫ 340242: Non-ionic                   <ul style="list-style-type: none"> <li>– 34024290: Other (Amide Surfactant)</li> </ul> </li> <li>▫ 340249: Other                   <ul style="list-style-type: none"> <li>– 34024990: Other (Amide Surfactant)</li> </ul> </li> </ul> </li> </ul>	3

Source: Directorate General of Agro Industry, 2024 and Permenperin No. 32/2024

Note:

- Digits 1–2 (Chapter): Indicates a very broad product category, such as “agricultural products” or “textiles”.
- Digits 3–4 (Heading): Provides more specific information about the type of product in that chapter category.
- Digits 5–6 (Sub-heading): Further detail the product based on characteristics such as form, function, or composition.
- Digits 7–8 (Additional digits): Varies depending on the country used for local adjustments such as tariff details and local regulations.