UNCTAD COMMODITY PRICE INDEX

METHODOLOGICAL NOTE

Introduction

This document outlines the methodological background to the UNCTAD commodity price index. The index has been updated in 2025 to only use data sources that are publicly available and in a machine-readable format. For a description of data sources and methods prior to 2025, users are advised to read the previous version of this document

https://unctad.org/system/files/official-document/statcpbmn1_en.pdf.

Definition: Primary commodities

The UNCTAD commodity price index (UCPI) is designed to measure the price movements of primary commodities exported by developing economies. There is no single, universal definition of primary commodities in terms of standard statistical (product) classifications. The current methodology continues to use the same concept of primary commodity adopted by previous series of the UCPI. Thus, the definition of primary commodity adopted by the UCPI takes into account the definition provided by the United Nations Statistics Division's (UNSD) documents on technology intensiveness (UNSD, 2009), as well as in the Broad Economic Categories (BEC) classification (UNSD, 2016). Particular attention has been attributed to the definition used in BEC

> "Primary goods are those which characteristically are products of primary sectors of the economy – i.e., farming, forestry, fishing, and the extractive industries. However, goods which characteristically are products of other sectors, such as manufacturing, where the product underwent only a minor change, are still classified as “primary” in cases where nearly all of the value of the product is contributed by one of the primary sectors of the economy. For example, cotton undergoes physical transformation when ginned, but as most of the value of the ginned cotton derives from the agricultural sector, it is classified, in the BEC, as a primary good. Thus, a good is classified as primary if it is a product of farm, forest and fishing, or of an extractive industry, to whose value transformation has made only a minor contribution. Guidance in classifying goods as primary or processed can further be sought in the description of and explanation associated with the HS sub-headings, which uses wording such as “raw”, “in the rough”, “in primary form” or “combed but not otherwise processed”. Waste and scrap materials are also classified as primary commodities in the BEC."

For the compilation of the UCPI, primary commodities are defined as goods where all, or almost all, of the value-added during production has been generated by the primary sectors of the economy, i.e. primary commodities are largely unprocessed or unrefined. To conceptualize that definition in terms of the Harmonized Commodity Description and Coding System (HS) 2007 (UNSD, 2017), HS headings (as identified by the 4-digit codes of the HS classification) are classified into primary commodities and other types of products. The headings classified as primary commodities are presented in Table 2 in the Annex. They form the universe from which individual commodities were selected for the basket.

The basket

From the universe of primary commodities described in Section 1, a set of representative commodities were selected for the basket. The selection is designed to ensure the best possible representation of primary commodities exported by developing economies and to take into account some specific requirements identified during user consultations. Commodities with unreliable data availability or where no price data were publicly available were excluded from the index. In these cases their weights were also excluded. The selected commodities (referred to as "index commodity items") are detailed in Table 1. The corresponding HS sub-headings (identified by 6-digit codes) from which they have been constructed are shown in Table 2 in the Annex. The basket of primary commodities for the overall price index is subdivided into four groups, with most groups further subdivided into subgroups (see Table 1).

Weights

The weights used in the calculation of the UCPI determine the degree to which the price movements of the different commodities influence the movement of the overall index and sub-indices. By construction, they represent the share of the trade value of exports of each commodity in the basket, originating from developing economies during the base period (see Formula 1 in Section 5). These export weights are derived from export trade data sourced from the UNSD Comtrade database (UNSD, 2018a). The weights were calculated at HS 2007 6-digit level, and then aggregated to index commodity items. As not all economies report their export values in HS 2007, data reported in other versions of HS were converted to HS 2007 using HS classification concordance matrices provided by UNSD (2018b). The base year of the index is 2015. However, to ensure the weights are stable and don't reflect short-term fluctuations in exports, they were calculated using a three-year average, for the years around the base year i.e. 2014 - 2016. The weighting structure of the UCPI and its sub-indices is shown in Table 1.

Table 1. **Weighting structure of the basket, subgroups and groups**

Group	Subgroup	Index commodity item	Weights as a percentage of		
			Subgroup	Group	Total
All food	Food	Wheat	2.92	1.51	0.20
		Maize	13.28	6.87	0.90
		Rice	15.99	8.27	1.08
		Sugar	24.22	12.53	1.64
		Bovine meat	14.47	7.48	0.98
		Bananas	9.68	5.01	0.65
		Soybean meal	0.09	0.05	0.01
		Fish	3.33	1.72	0.22
		Crustaceans	16.02	8.29	1.08

	Total subgroup		*100.00*	*51.72*	*6.75*
	Tropical beverages	Coffee	63.69	11.16	1.46
		Cocoa beans	21.28	3.73	0.49
		Tea	15.03	2.63	0.34
	Total subgroup		*100.00*	*17.53*	*2.29*
	Vegetable oilseeds and oils	Soybeans	63.14	19.42	2.54
		Soya bean oil	12.40	3.81	0.50
		Sunflower oil	1.08	0.33	0.04
		Ground-nut oil	0.47	0.14	0.02
		Coconut oil	2.94	0.90	0.12
		Palm kernel oil	2.05	0.63	0.08
		Palm oil	17.93	5.51	0.72
	Total subgroup		*100.00*	*30.75*	*4.02*
	Total group			100.00	13.06
Agricultural raw materials		Fish meal fodder		6.22	0.23
		Tobacco		14.93	0.55
		Cotton		8.61	0.32
		Wool		2.18	0.08
		Jute		0.19	0.01
		Hides and skins		8.26	0.31
		Tropical logs		1.73	0.06
		Tropical sawnwood		2.81	0.10

		Plywood		25.26	0.94
		Rubber		29.81	1.10
	Total group			100.00	3.70
Minerals, ores and metals	Minerals, ores and non-precious metals	Phosphate rock	2.10	0.92	0.19
		Manganese ore	1.71	0.75	0.16
		Iron ore	25.14	11.01	2.33
		Aluminium	11.86	5.19	1.10
		Copper	38.88	17.03	3.60
		Nickel	6.23	2.73	0.58
		Lead	4.64	2.03	0.43
		Zinc	5.70	2.50	0.53
		Tin	3.74	1.64	0.35
	Total subgroup		*100.00*	*43.79*	*9.26*
	Precious metals	Gold	88.03	49.48	10.47
		Silver	7.66	4.31	0.91
		Platinum	4.31	2.42	0.51
	Total subgroup		100.00	56.21	11.89
	Total group			100.00	21.15
Fuels	Gas	Natural gas		19.52	12.12
	Coal	Coal		3.88	2.41
	Petroleum	Crude petroleum		76.61	47.56
	Total group			100.00	62.09
Price index - all groups					100.00

Prices

The average prices for the commodity items used in the index are derived from a representative sample of monthly, weekly or daily spot-market quotations. These prices have previously been collected from a variety of sources, including paid sources and those that require manual input. In order to reduce the chance of errors and improve production efficiency, UNCTAD has decided for this 2025 update to only use prices that are publicly available and that can be downloaded in machine-readable format. In practice this has reduced the number of sources used from eighteen to three, namely the World Bank, FAO and the IMF. Table 3 in the Annex lists old and new sources for each product that the index uses.

All original prices used were in United States dollars and so no currency conversion was required. For one product (pepper), no similar product price nor acceptable proxy could be found from a freely available automated source. This product has therefore been excluded from the new index.

In the case of time gaps in the new prices, the old series' growth rates have been used to extend forward or backward the new source of prices. This is the case for phosphate rock, manganese, jute and palm kernel oil. If prices in the future become unavailable temporarily, the index is designed so that growth rates of the relevant sub-index extend this forward.

Index Calculation

As with the previous index, the new UCPI is calculated using a fixed-base Laspeyres index. The formula for the calculation of the index is:

$$L_{t,0} = \frac{\sum_{i=1}^{n} p_{i,t} q_{i,o}}{\sum_{i=1}^{n} p_{i,0}\, q_{i,0}} = \sum_{i=1}^{n} \frac{p_i^t}{p_i^0} s_i^0$$

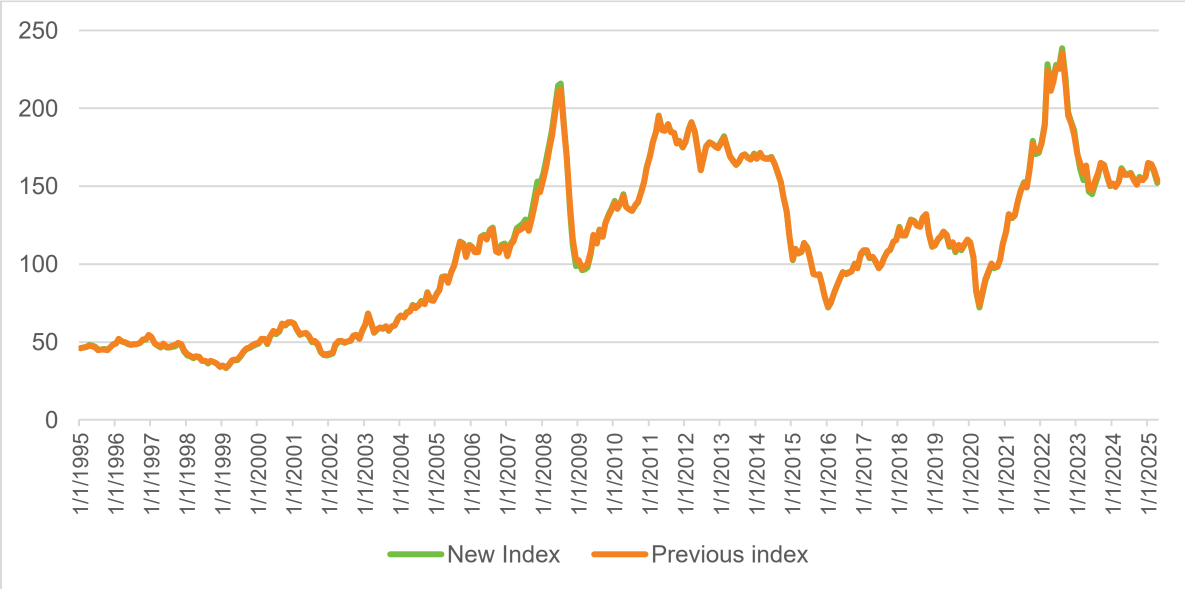
where s_i^0 represents the weight of the commodity index item *i* (see Section 3 above) and p_i^t

is the price in period t (see Section 4 above). q_i^0 is the quantity of the commodity index item *i* in the base period.

Results and Quality Control

Despite changing several of the product sources, Figure 1 shows very little change in the pattern of the main index. This is partly due to the fact that even when some sources have been different, the new main sources (World Bank and IMF) often use the previously used sources as their own. This is the case for example for coffee, where UNCTAD previously obtained data from the International Coffee Organisation, which the World Bank also uses.

Figure 1. Comparison of previous UNCTAD Commodity Price Index and the New Version



A similar check was done for each of the major sub-indices. These are shown in Figures 2 to 10. While some differences are indeed present, the changes typically do not have a significant impact in the trend of each sub-index.

Figure 2. Comparison of previous UNCTAD All food sub-index with the New Version

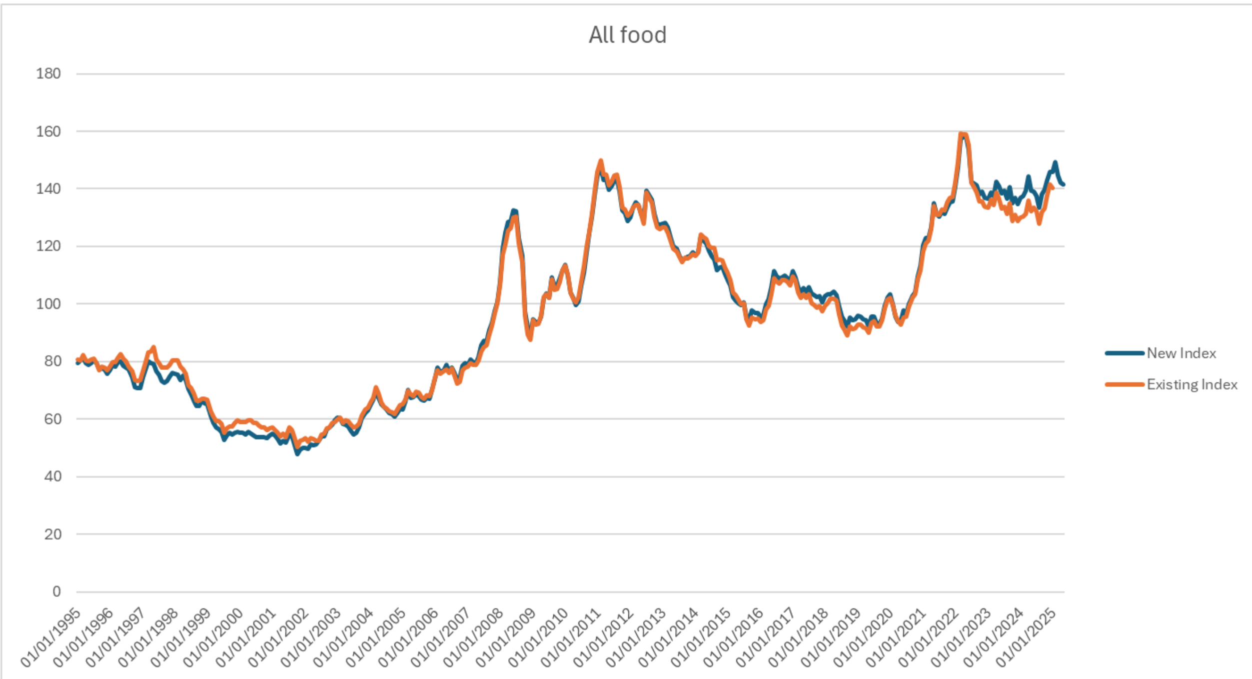


Figure 3. Comparison of previous UNCTAD Food sub-index with the New Version

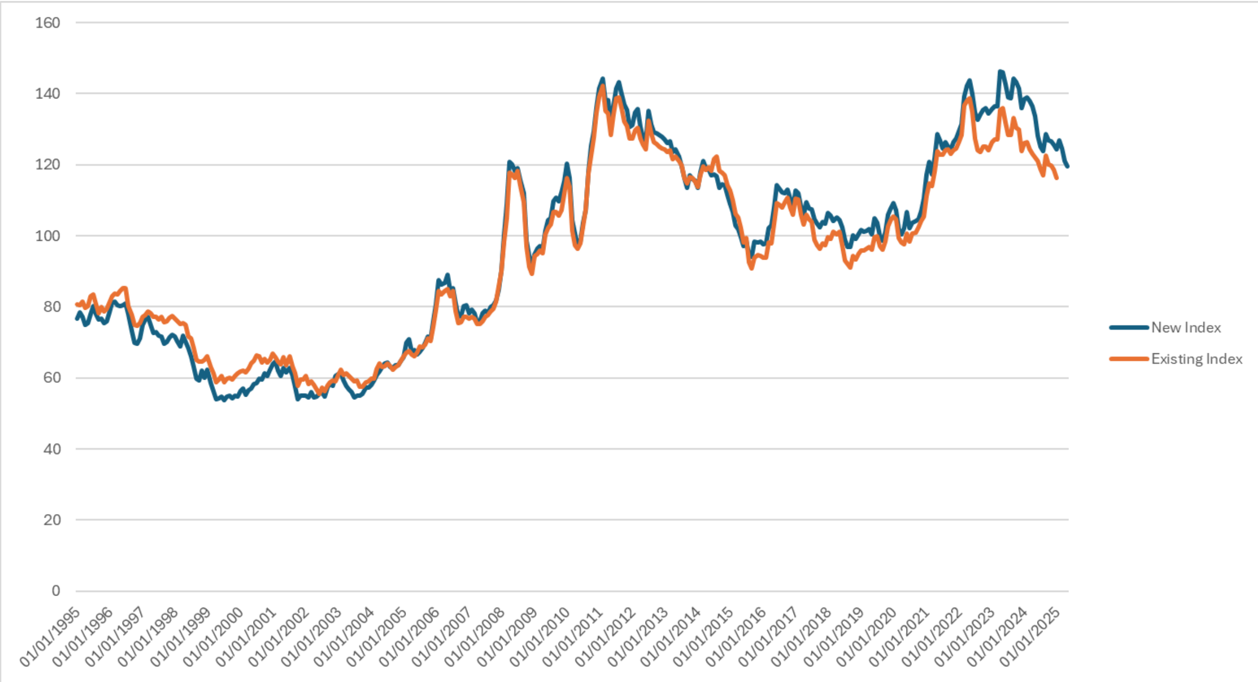


Figure 4. Comparison of previous UNCTAD Tropical beverages sub-index with the new version

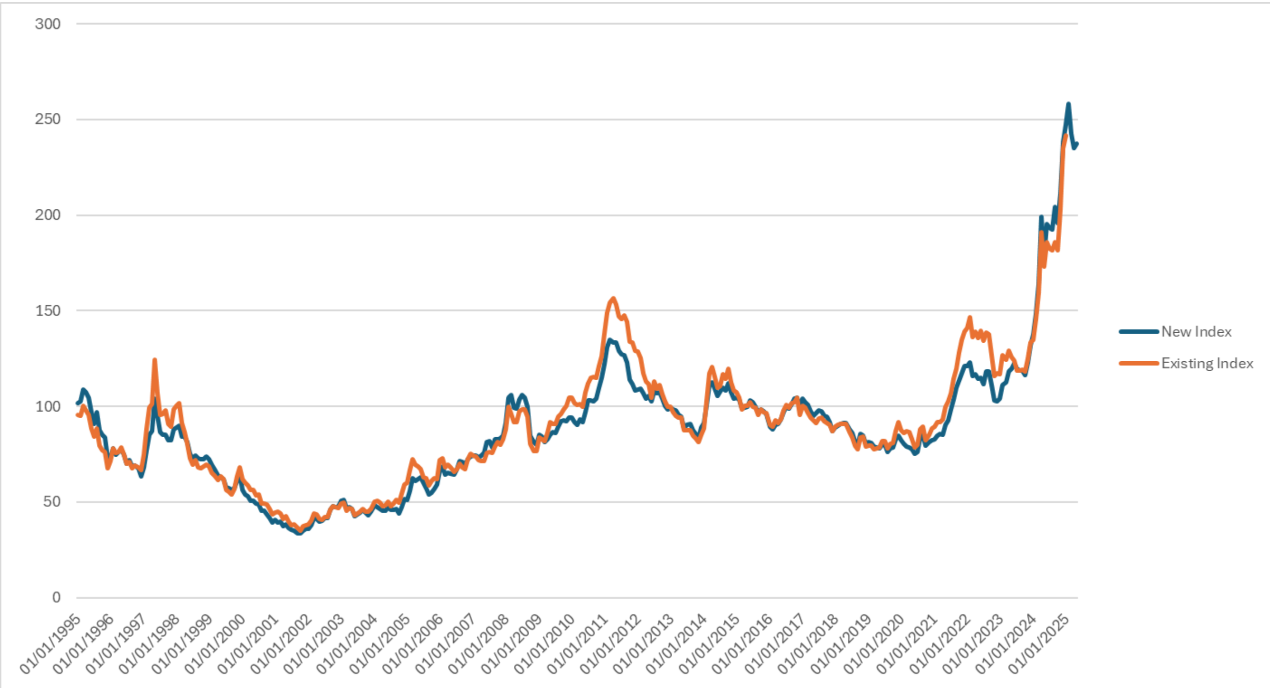


Figure 5. Comparison of previous UNCTAD Vegetable oils and oilseeds sub-index with the new version

Figure 6: Comparison of previous UNCTAD Agricultural raw materials sub-index with the new version

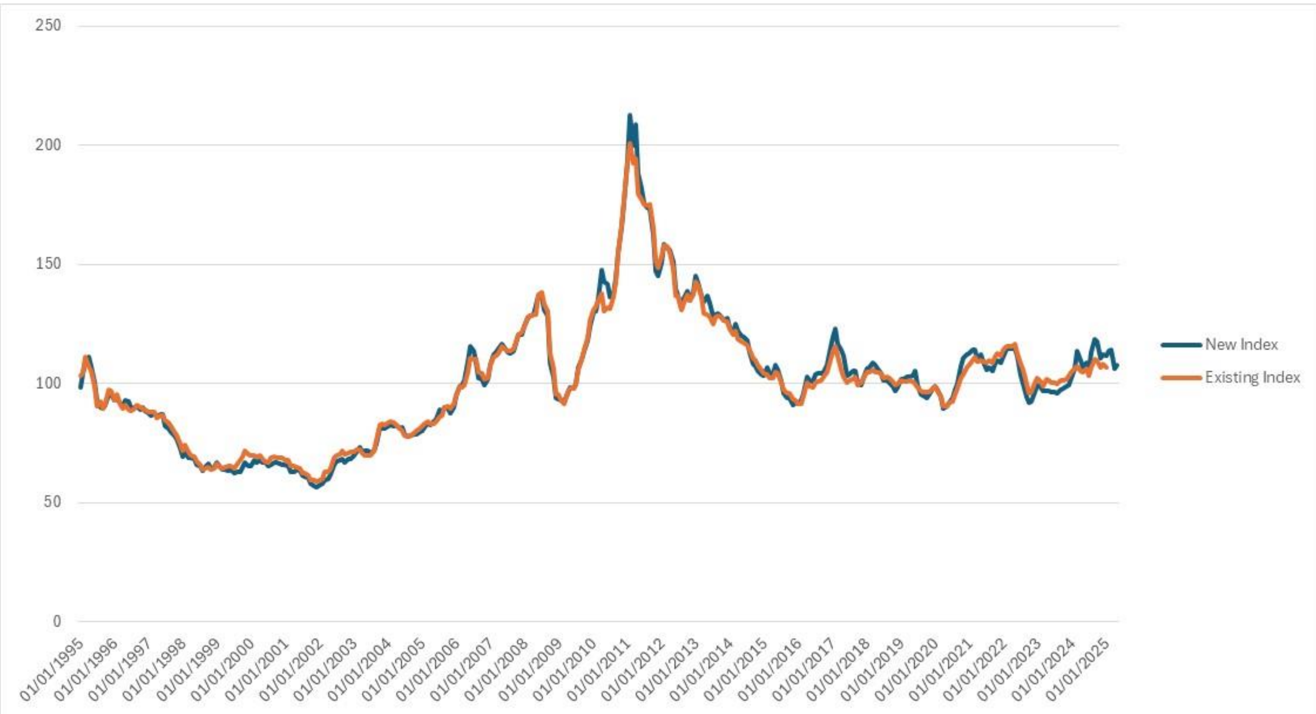


Figure 7. Comparison of previous UNCTAD Minerals, ores and metals sub-index with the new version

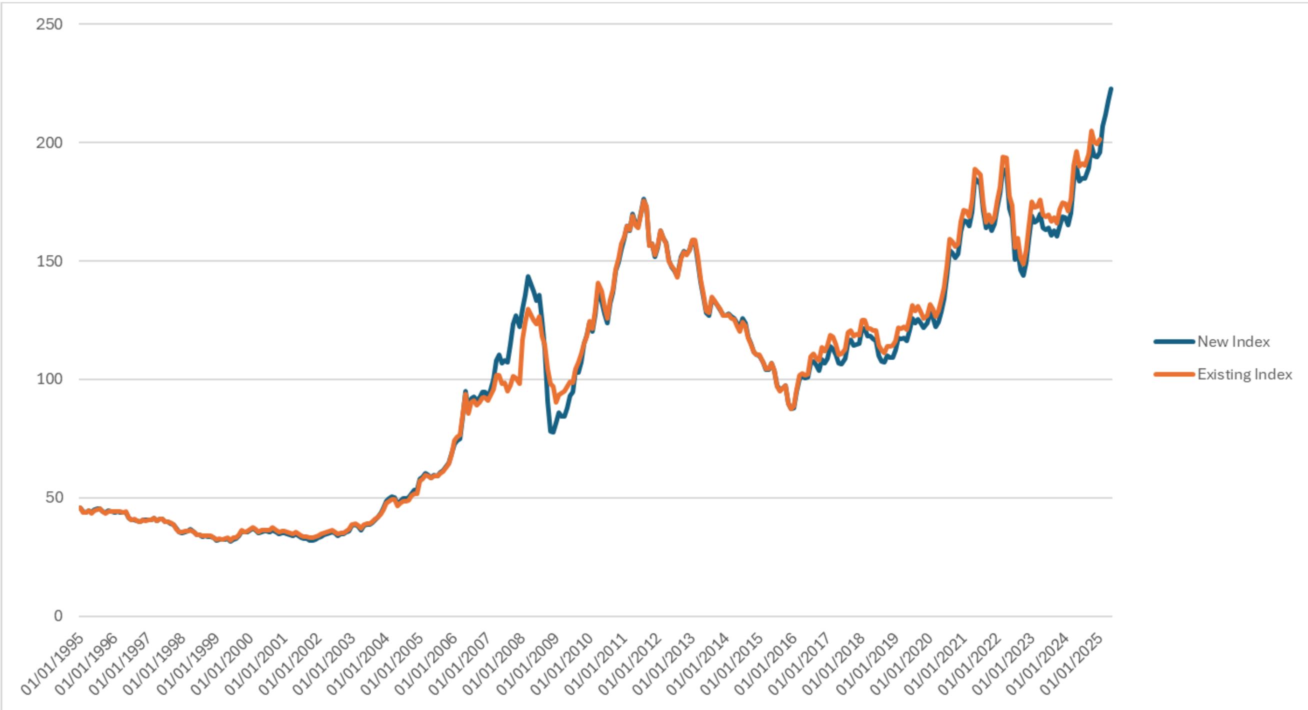


Figure 8. Comparison of previous UNCTAD Minerals, ores and non-precious metals sub-index with the New Version

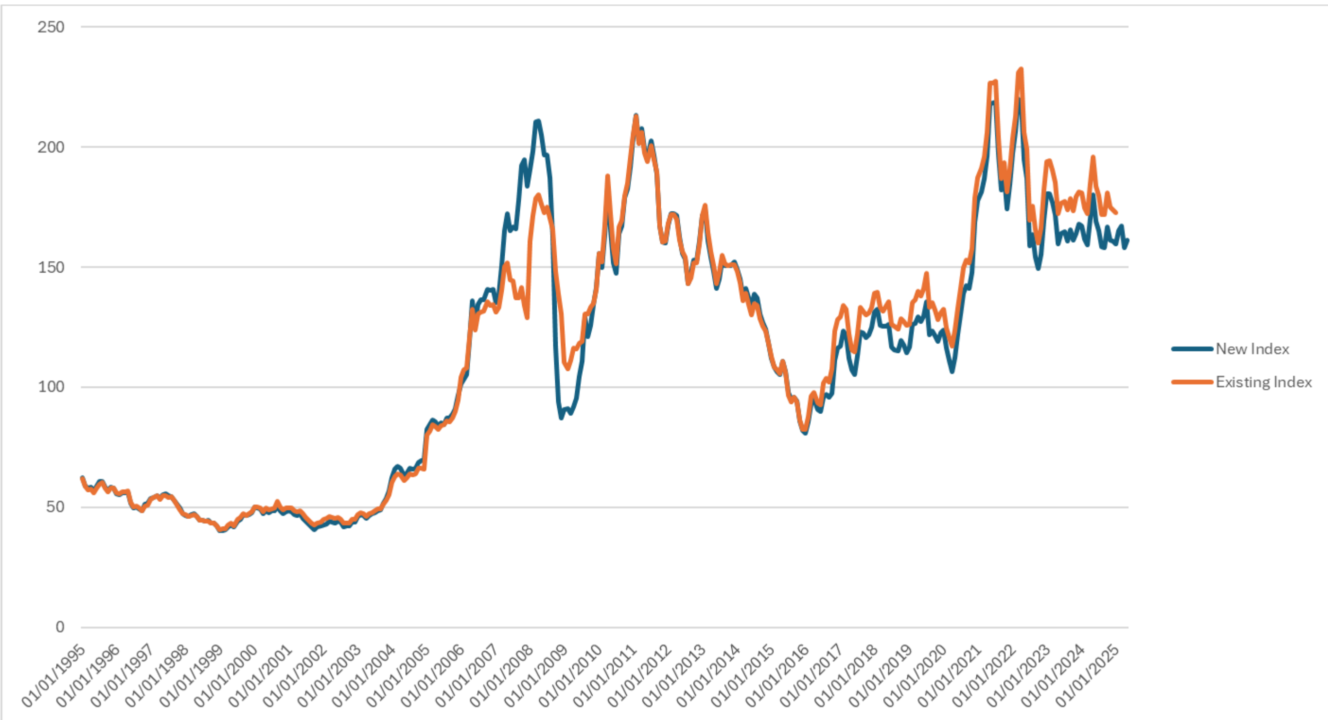


Figure 9. **Comparison of previous UNCTAD Precious metals sub-index with the New Version**

Figure 10. **Comparison of previous UNCTAD Fuels sub-index with the New Version**

Annex

Table 2. Showing which HS codes should agree with each Index group and sub-group

Group	Subgroup	HS 2007 headings
All food	Food	0101, 0102, 0103, 0104, 0105, 0106, 0201, 0202, 0203, 0204, 0205, 0206, 0207, 0208, 0210, 0301, 0302, 0303, 0304, 0305, 0306, 0307, 0401, 0402, 0403, 0404, 0405, 0406, 0407, 0408, 0409, 0410, 0701, 0702, 0703, 0704, 0705, 0706, 0707, 0708, 0709, 0710, 0711, 0712, 0713, 0714, 0801,0802, 0803, 0804, 0805, 0806, 0807, 0808, 0809, 0810, 0811, 0812, 0813, 0814, 0903, 0904, 0905, 0906, 0907, 0908, 0909, 0910, 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1101, 1102, 1103, 1104, 1105, 1106, 1107, 1108, 1109, 1210, 1212, 1213, 1214, 1517, 1601, 1602, 1603, 1604, 1605, 1701, 1702, 1703, 1704, 1806, 1901, 1902, 1903, 1904, 1905, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2101, 2102, 2103, 2104, 2105, 2106, 2201, 2202, 2203, 2204, 2205, 2206, 2208, 2209
	Tropical beverages	0901, 0902, 1801, 1802, 1803, 1804, 1805
	Vegetable oilseeds and oils	0209, 1201, 1202, 1203, 1204, 1205, 1206, 1207, 1208, 1501, 1502, 1503, 1504, 1505, 1506, 1507, 1508, 1509, 1510, 1511, 1512, 1513, 1514, 1515, 1516, 1518, 1521, 1522
Agricultural raw materials		0501, 0502, 0504, 0505, 0506, 0507, 0508, 0510, 0511, 0601, 0602, 0603, 0604, 1209, 1211, 1301, 1302, 1401, 1404, 2401, 2402, 2403, 4001, 4002, 4003, 4004, 4101, 4102, 4103, 4115, 4301, 4401, 4402, 4403, 4406, 4407, 4409, 4412, 4501, 4502, 4701, 4702, 4703, 4704, 705, 4706, 4707, 5001, 5002, 5003, 5101, 5102, 5103, 5104, 5105, 5201, 5202, 5203, 5301, 5302, 5303, 5305
Minerals, ores and metals	Minerals, ores and non-precious metals	2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2524, 2525, 2526, 2528, 2529, 2530, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2617, 2618, 2619, 2620, 2621, 2714, 2818, 3101, 3102, 3103, 3104, 3105, 7204*, 7401, 7402, 7403, 7404, 7405, 7406, 7407, 7408, 7409, 7410, 7411, 7412, 7501, 7502, 7503, 7504, 7505, 7506, 7507, 7601, 7602, 7603, 7604, 7605, 7606, 7607, 7608, 7609, 7801, 7802, 7804, 7901, 7902, 7903, 7904, 7905, 8001, 8002, 8003, 8101, 8102, 8103, 8104, 8105, 8106, 8107, 8108, 8109, 8110, 8111, 8112, 8113

	Precious metals	2616, 7102, 7103, 7105, 7106, 7107, 7108, 7109, 7110, 7111, 7112
Fuels	Gas	2711
	Coal	2701,2702
	Petroleum	2709,2710
	Other fuels	2703, 2704, 2705, 2706, 2707, 2708, 2712, 2713, 2715

Table 3. Showing products, and their old and new sources

Group	Subgroup	Index commodity item	Previous Source	New Source	New Source description
All food	Food	Wheat	International Grains Council (IGC)	World Bank	Wheat, United States, n° 2 Hard Red Winter (ordinary), FOB Gulf ($/t)
		Maize	International Grains Council (IGC)	World Bank	Maize, United States, n° 3 yellow, FOB Gulf ($/t)
		Rice	World Bank	World Bank	Rice, Thailand, white milled, 5% broken, export price, FOB ($/t)
		Sugar	International Sugar Organization	World Bank	Sugar, average of I.S.A. daily prices, FOB & Stowed, in bulk, Caribbean ports ($/kg)
		Bovine meat	World Bank	World Bank	Beef, Australia/New Zealand, frozen, CIF US ports ($/kg)
		Bananas	Thomson Reuters Eikon Database	World Bank	Bananas, average price of US Northeast, Midwest, South and West ($/kg)

	Soybean meal	World Bank	World Bank	Soybean oil, in bulk, Netherlands, FOB ex-mill ($/t)
	Fish	Statistics Norway	IMF	Salmon, fresh, fish-farm bred, export price, Norway ($/kg)
	Crustaceans	World Bank	IMF	Shrimps, EU import price of warmwater shrimp from Extra EU countries (trade weighted average ($/kg)
Tropical beverages	Coffee	International Coffee Organization	World Bank	Weighted average of Coffee, other mild Arabicas, ex-dock US/Europe ($/kg) and Coffee, Robustas, ex-dock US/Europe ($/kg)
	Cocoa beans	International Cocoa Organization	World Bank	Cocoa beans, average daily prices New York/London ($/kg)
	Tea	World Bank	World Bank	Tea, Kenya Mombasa/Nairobi, auction price ($/kg)
Vegetable oilseeds and oils	Soybeans	World Bank	World Bank	Soybeans, in bulk, United States, n° 2 yellow, CIF Rotterdam ($/t)
	Soya bean oil	World Bank	World Bank	Soybean oil, in bulk, 45/46% protein, Hamburg, FOB ex-mill ($/t)
	Sunflower oil	World Bank	IMF	Sunflower Oil, crude, US export price from Gulf of Mexico ($/t)
	Ground-nut oil	World Bank	World Bank	Groundnut oil, in bulk, any origin, CIF Rotterdam ($/t)
	Coconut oil	World Bank	World Bank	Coconut oil, in bulk, Philippines/Indonesia, CIF Rotterdam ($/t)

	Palm kernel oil	World Bank	World Bank	Palm kernel oil, in bulk, Malaysia/Indonesia, CIF Rotterdam ($/t)
	Palm oil	World Bank	World Bank	Palm oil, in bulk, Malaysia/Indonesia, 5% FFA, CIF ($/t)
Agricultural raw materials	Fish meal fodder	World Bank	World Bank	Fish meal, in bulk, 64/65% protein, FCA, Bremen ($/t)
	Tobacco	United States Department of Agriculture (USDA)	World Bank	Tobacco, unmanufactured, US import unit value ($/t)
	Cotton	World Bank	World Bank	Cotton, Cotlook A Index, Middling 1-3/32", CFR Far Eastern ($/kg)
	Wool	Australian Wool Innovation	IMF	Fine wool, 19 Micron, AWEX auction price, Australia (¢/kg)
	Jute	FAO	FAO	Jute, Bangladesh, BWD, FOB Mongla ($/t)
	Hides and skins	IMF	IMF	Cattle hides, US Chicago packer's heavy native steers, FOB shipping point (¢/lb.)
	Tropical logs	World Bank	World Bank	Tropical logs, Sapele, high quality (loyal and marchand), FOB, Cameroon ($/m3)
	Tropical sawnwood	World Bank	World Bank	Sawnwood, Dark Red Meranti, Malaysia, CFR plus commission, UK ($/m3)
	Plywood	World Bank	World Bank	Plywood, Africa & SE Asia, Lauan, 3-ply, 91cmx182cmx4mm, wholesale Tokyo (¢/sheet)
	Rubber	World Bank	World Bank	Rubber, RSS n°3, Singapore Commodity

					Exchange, 1st contract ($/kg)
Minerals, ores and metals	Minerals, ores and non-precious metals	Phosphate rock	World Bank	World Bank	Phosphate rock, Khouribga, 70% BPL, contract, FAS Casablanca ($/t)
		Manganese ore	Metal Bulletin	IMF	Manganese 9Electro CIF NWE ($/t)
		Iron ore	Thomson Reuters Eikon Database	World Bank	Iron ore, Australia to China, fines, 62% Fe, offshore export price, CIF ($/dry ton)
		Aluminium	Metal Bulletin	World Bank	Aluminium, primary, high grade, LME, cash ($/t)
		Copper	Metal Bulletin	World Bank	Copper, grade A, electrolytic wire bars/cathodes, LME, cash (£/t)
		Nickel	Metal Bulletin	World Bank	Nickel, LME, cash ($/t)
		Lead	Metal Bulletin	World Bank	Lead, LME, cash settlement ($/t)
		Zinc	Metal Bulletin	World Bank	Zinc, special high grade, LME, cash settlement ($/t)
		Tin	Metal Bulletin	World Bank	Tin, LME, cash ($/t)
	Precious metals	Gold	Metal Bulletin	World Bank	Gold, 99.5% fine, afternoon fixing London ($/troy ounce)
		Silver	Metal Bulletin	World Bank	Silver, 99.9%, Handy & Harman, New York (¢/troy ounce)
		Platinum	Metal Bulletin	World Bank	Platinum, 99.9% refined, London afternoon fixing ($/troy ounce)

Fuels	Gas	Natural gas	World Bank	World Bank	Natural gas, index, Europe, United States and Japan (2010=100)
	Coal	Coal	Thomson Reuters Eikon Database	World Bank	Coal, steam coal, Australia, average FOB Newcastle ($/t)
	Petroleum	Crude petroleum	World Bank	World Bank	Crude oil, UK Brent, light blend API 38°, spot price, FOB UK ports ($/barrel)