

India's International Trade of Four Specific Commodities in the Recent Past

- Some Insights

Preface

The study uses trade indicators to analyse merchandise export and import data in a way that should be useful for the purpose of policy. The indicators provide a glimpse of the trade patterns of the world and the performance of India in comparison to various other countries. They have been used in the case of India's exports of **Refined Copper & Copper Alloys and Cotton, not carded or combed** and imports of **Cocoa Butter, Fat and Oil** and **Unwrought Nickel** to indicate the possible directions policy may take.

The data used in this study has been sourced from the Export Import Data Bank of the DGCI&S, Department of Commerce, and Government of India and from the United Nations Comtrade Database. Introduction notes of each commodities has been sourced from the various sources –viz Wikipedia, Britannica, The Economic Times etc.

Computations are based on data at ITC-HS four-digit level (ITC-HS Code-7403 & 5201 for export and 1804 & 7502 for import) and the latest finalized data available on the UN Comtrade Database up to year 2022 and on the DGCI&S Database up to June'2023. So, trends from 2019 to 2022 have been shown when we extract the data from UN Comtrade and from 2019 to 2022 have been shown when we extract the data from DGCI&S Data base.

In this report, we will see various analysis and aspects of India's Precious as well as International export trade of Refined Copper & Copper Alloys and Cotton, not carded or combed and imports of Cocoa Butter, Fat and Oil and Unwrought Nickel. We will use both the 4 digit Commodity codes, for our analysis, as appropriate.

Trends in India's as well as International Trade i.e. Exports and Imports of above four Commodities are given below in different tables :

- Table 1 : India's top 10 Export destination of Refined Copper & Copper Alloys with their shares in percentage.
- Table 2 : World's top 10 Exporters of Refined Copper & Copper Alloys with their shares in percentage.
- Table 3 : World's top 10 Importers of Refined Copper & Copper Alloys with their shares in percentage.
- Annex- I : Top 3 sources of Refined Copper & Copper Alloys of World's top 3 Importers.
- Table 4 : India's top 10 destination of Cotton with their shares in percentage.
- Table 5 : World's top 10 Exporters of Cotton with their shares in percentage.
- Table 6 : World's top 10 Importers of Cotton with their shares in percentage.
- Annex-II : Top 3 sources of Cotton of World's top 3 Importers.
- Table 7 : India's top10 Sources of Cocoa Butter, Fat and Oil with their shares in percentage.
- Table-8: World's top 10 Importers of Cocoa Butter, Fat and Oil with their shares in percentage.
- Table 9 : India's top 10 Sources of Unwrought Nickel with their shares in percentage.
- Table 10 : World's top 10 Importers of Unwrought Nickel with their shares in percentage

EXPORT

Refined Copper and Copper Alloys

Copper is a chemical element with the symbol **Cu** and atomic number 29. It is a soft, malleable, and ductile metal with very high thermal and electrical conductivity. A freshly exposed surface of pure copper has a pinkish-orange color. Copper is used as a conductor of heat and electricity, as a building material, and as a constituent of various metal alloys, such as sterling silver used in jewelry, cupronickel used to make marine hardware and coins, and constantan used in strain gauges and thermocouples for temperature measurement.

Copper is one of the few metals that can occur in nature in a directly usable metallic form. This led to very early human use in several regions, from c. 8000 BC. Thousands of years later, it was the first metal to be smelted from sulfide ores, c. 5000 BC; the first metal to be cast into a shape in a mold, c. 4000 BC; and the first metal to be purposely alloyed with another metal, tin, to create bronze, c. 3500 BC.

Copper, silver, and gold are in group 11 of the periodic table; these three metals have one s-orbital electron on top of a filled d-electron shell and are characterized by high ductility, and electrical and thermal conductivity. The filled d-shells in these elements contribute little to interatomic interactions, which are dominated by the s-electrons through metallic bonds.

Numerous copper alloys have been formulated, many with important uses. Brass is an alloy of copper and zinc. Bronze usually refers to copper-tin alloys, but can refer to any alloy of copper such as aluminium bronze. Copper is one of the most important constituents of silver and karat gold solders used in the jewelry industry, modifying the color, hardness and melting point of the resulting alloys. Some lead-free solders consist of tin alloyed with a small proportion of copper and other metals. The alloy of copper and nickel, called cupronickel, is used in low-denomination coins, often for the outer cladding. The US five-cent coin consists of 75% copper and 25% nickel in homogeneous composition. Prior to the introduction of cupronickel, which was widely adopted by countries in the latter half of the 20th century.

Copper is produced in massive stars and is present in the Earth's crust in a proportion of about 50 parts per million (ppm). In nature, copper occurs in a variety of minerals, including native copper, copper sulfides such as chalcopyrite, bornite, digenite, covellite, and chalcocite, copper sulfosalts such as tetrahedrite-tennantite, and enargite, copper carbonates such as azurite and malachite, and as copper(I) or copper(II) oxides such as cuprite and tenorite, respectively.

Chile is the top producer of copper with at least one-third of the world share followed by the United States, Indonesia and Peru.

Copper production in India is only about 2 percent of world copper production in view of its potential reserve limited to 60,000 km² (2% of world reserve) of which 20,000 km² area has been subject to exploration, as of 2012. But in production it is still within the first 20 countries of the world and also one of its largest importers in line with China, Japan, South Korea and Germany. Madhya Pradesh is India's leading copper producer. It accounts for 53% of copper production in this country. Rajasthan accounts for 43% of copper production in India, while Jharkhand accounts for 4%.

The major applications of copper are electrical wire (60%), roofing and plumbing (20%), and industrial machinery (15%). Copper is used mostly as a pure metal, but when greater hardness is required, it is put into such alloys as brass and bronze (5% of total use). For more than two centuries, copper paint has been used on boat hulls to control the growth of plants and shellfish. A small part of the copper supply is used for nutritional supplements and fungicides in agriculture. Machining of copper is possible, although alloys are preferred for good machinability in creating intricate parts.

These are broadly classified under **H.S. Code-7403**

Table - 1

India's Top 10 destination of Refined Copper & Copper Alloys (H.S Code-7403)

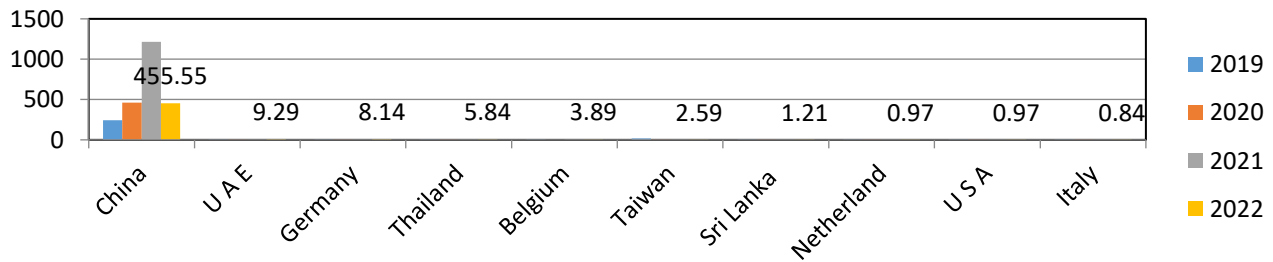
| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------|--------------|-------------------|------------|-------------------|------------|-------------------|------------|-------------------|------------|
| | | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | China | 243.34 | 88.62 | 460.33 | 97.73 | 1215.46 | 91.26 | 455.55 | 92.48 |
| 2. | U A E | 0.32 | 0.12 | 0.79 | 0.17 | 0.13 | 0.01 | 9.29 | 1.89 |
| 3. | Germany | 0.20 | 0.07 | 0.55 | 0.12 | 0.68 | 0.05 | 8.14 | 1.65 |
| 4. | Thailand | 2.51 | 0.92 | 1.56 | 0.33 | 0.79 | 0.06 | 5.84 | 1.19 |
| 5. | Belgium | 0.18 | 0.07 | 0.00 | 0.00 | 0.53 | 0.04 | 3.89 | 0.79 |
| 6. | Taiwan | 15.52 | 5.65 | 0.75 | 0.16 | 2.07 | 0.16 | 2.59 | 0.53 |
| 7. | Sri Lanka | 0.66 | 0.24 | 0.62 | 0.13 | 1.13 | 0.08 | 1.21 | 0.25 |
| 8. | Netherland | 0.02 | 0.01 | 0.10 | 0.02 | 0.49 | 0.04 | 0.97 | 0.20 |
| 9. | U S A | 0.39 | 0.14 | 0.65 | 0.14 | 1.11 | 0.08 | 0.97 | 0.20 |
| 10. | Italy | 0.03 | 0.01 | 0.30 | 0.06 | 0.28 | 0.02 | 0.84 | 0.17 |
| | Others | 11.41 | 4.16 | 5.36 | 1.14 | 109.22 | 8.20 | 3.29 | 0.67 |
| | Total | 274.59 | 100 | 471.01 | 100 | 1331.90 | 100 | 492.59 | 100 |

Source: DGCI&S.

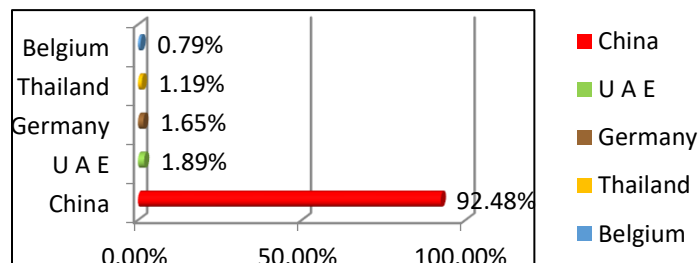
Note : India's Export including re-export

Major destinations of Refined Copper & Copper Alloys from India from 2019-2022 (Values in million USD)

Data label given on the basis of 2022



India's top 5 major destinations of Refined Copper & Copper Alloys by percentage in 2022:



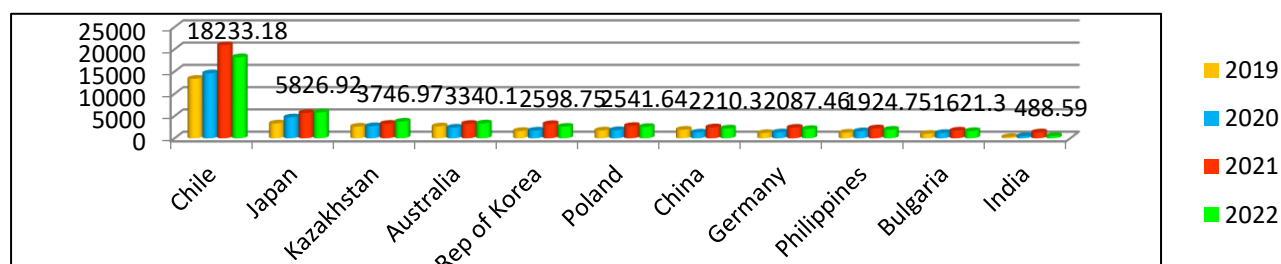
In the year 2022, the export value for Refined Copper and Copper Alloys from India was almost US \$ 492.59 Million. This was a significant decrease from the previous year. As per the data of DGCIS, China is totally dependent country for Refined Copper and Copper Alloys on India. In the year 2022 India has exported US \$ 455.55 Million or 92.48% share of its total export of As per the data of DGCIS, China is totally dependent country for Refined Copper and Copper Alloys on India. In the year 2022 to China. Which was distantly followed by UAE with share of 1.89% and Germany with share of 1.65%.

Table-2

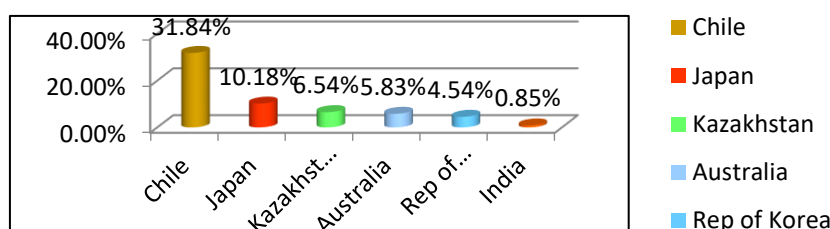
World's Top 10 exporter of Refined Copper & Copper Alloys (H.S Code-7403)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------------|-----------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | Chile | 13367.26 | 22.69 | 14597.56 | 22.62 | 20917.32 | 22.97 | 18233.18 | 31.84 |
| 2. | Japan | 3335.96 | 5.66 | 4694.67 | 7.28 | 5676.61 | 6.23 | 5826.92 | 10.18 |
| 3. | Kazakhstan | 2621.19 | 4.45 | 2720.39 | 4.22 | 3260.87 | 3.58 | 3746.97 | 6.54 |
| 4. | Australia | 2670.57 | 4.53 | 2397.28 | 3.71 | 3246.75 | 3.57 | 3340.10 | 5.83 |
| 5. | Rep of Korea | 1643.64 | 2.79 | 1735.88 | 2.69 | 3198.95 | 3.51 | 2598.75 | 4.54 |
| 6. | Poland | 1758.78 | 2.99 | 1830.95 | 2.84 | 2766.74 | 3.04 | 2541.64 | 4.44 |
| 7. | China | 1932.89 | 3.28 | 1293.21 | 2.00 | 2457.52 | 2.70 | 2210.30 | 3.86 |
| 8. | Germany | 1180.79 | 2.00 | 1326.90 | 2.06 | 2376.77 | 2.61 | 2087.46 | 3.65 |
| 9. | Philippines | 1255.98 | 2.13 | 1573.14 | 2.44 | 2232.26 | 2.45 | 1924.75 | 3.36 |
| 10. | Bulgaria | 996.58 | 1.69 | 1182.65 | 1.83 | 1736.70 | 1.91 | 1621.30 | 2.83 |
| 21. | India | 275.61 | 0.47 | 475.00 | 0.74 | 1330.10 | 1.46 | 488.59 | 0.85 |
| | Others | 27872.83 | 47.31 | 30703.14 | 47.58 | 41871.71 | 45.98 | 12638.11 | 22.07 |
| | Total | 58912.09 | 100 | 64530.78 | 100 | 91072.30 | 100 | 57258.07 | 100 |

Source: UN Comtrade

Major Refined Copper & Copper Alloys up exporters of world from 2019 to 2022 (Values in million USD):
Data label given on the basis of 2022

Country wise export trends in world's leading Refined Copper & Copper Alloys up in 2022



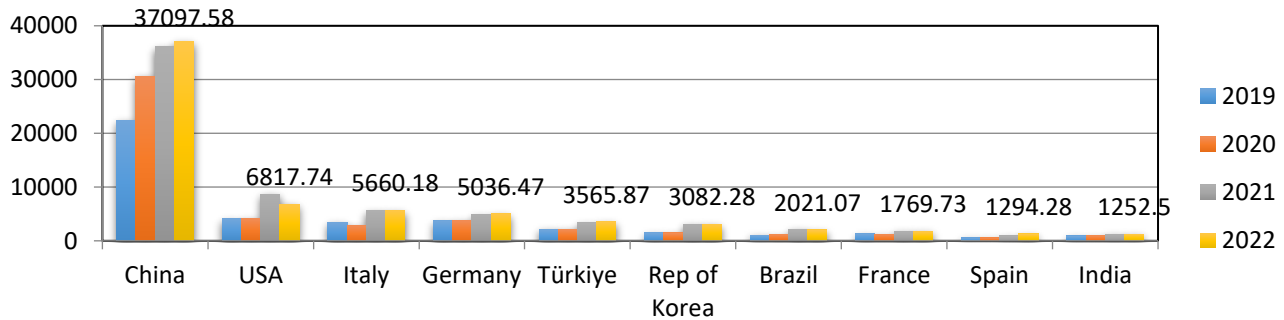
In 2022, global Refined Copper & Copper Alloy export trade was of US \$ 57.26 Billion. In the year 2022 the exports of Refined Copper & Copper decreased by -37.12%, from US \$ 91.07 Billion of 2021 to \$57.26 Billion of 2022. Chile reached an all time top exporter in the world market of Refined Copper & Copper Alloy. In 2022 Chile's share was 31.84% of global export of Refined Copper & Copper Alloy which was followed by Japan (10.18%) and Kzkhstn (6.54%). **India's** share was 0.85% of world export of Refined Copper & Copper Alloy and stood at 21st in ranking in the world.

World's top 10 Importers of Refined Copper & Copper Alloys (H.S Code-7403)

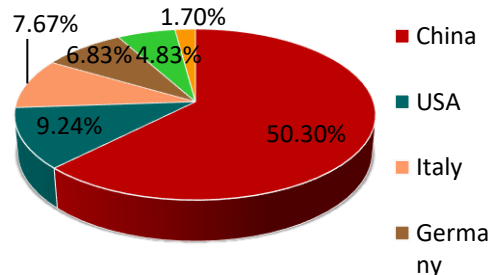
| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------------|-----------------|------------------------|--------------|--------------------------|--------------|--------------------------|--------------|-----------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | China | 22472.77 | 37.88 | 30601.06 | 46.73 | 36073.46 | 38.48 | 37097.58 | 50.30 |
| 2. | USA | 4131.27 | 6.96 | 4213.79 | 6.43 | 8657.68 | 9.24 | 6817.74 | 9.24 |
| 3. | Italy | 3423.09 | 5.77 | 2839.08 | 4.34 | 5650.59 | 6.03 | 5660.18 | 7.67 |
| 4. | Germany | 3699.98 | 6.24 | 3815.95 | 5.83 | 4833.78 | 5.16 | 5036.47 | 6.83 |
| 5. | Türkiye | 2149.25 | 3.62 | 2194.64 | 3.35 | 3391.35 | 3.62 | 3565.87 | 4.83 |
| 6. | Rep of Korea | 1510.34 | 2.55 | 1459.00 | 2.23 | 3052.93 | 3.26 | 3082.28 | 4.18 |
| 7. | Brazil | 1068.07 | 1.80 | 1195.08 | 1.83 | 2197.24 | 2.34 | 2021.07 | 2.74 |
| 8. | France | 1319.44 | 2.22 | 1199.38 | 1.83 | 1766.19 | 1.88 | 1769.73 | 2.40 |
| 9. | Spain | 606.83 | 1.02 | 604.08 | 0.92 | 936.08 | 1.00 | 1294.28 | 1.75 |
| 10. | India | 906.49 | 1.53 | 998.41 | 1.52 | 1223.33 | 1.30 | 1252.50 | 1.70 |
| | Others | 18045.06 | 30.41 | 16363.46 | 24.99 | 25961.86 | 27.69 | 6161.15 | 8.35 |
| | Total | 59332.59 | 100 | 65483.93 | 100 | 93744.48 | 100 | 73758.86 | 100 |

Source : UN Comtrade

Leading Refined Copper & Copper Alloys importers of world from 2019 to 2022 (Values in million USD):
Data label given on the basis of 2022



Country wise import trends in world's Refined Copper & Copper Alloys by percentage in 2022 :

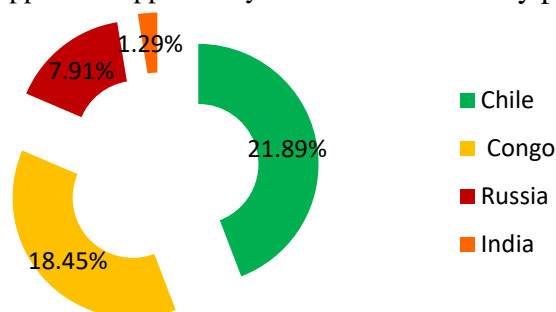


The Refined Copper & Copper Alloy imports amounted to US \$ 73.76 Billion in 2022. The total import value decreased at 21.32% from the year 2021. In 2022, China (US \$37.10 B) constitutes the largest market for imported Refined Copper & Copper Alloy worldwide, making up 50.30% of global imports. The second position in the ranking was occupied by USA with the share of 9.24% of global imports. It was followed by Italy with the share of 7.67%. In that year Refined Copper & Copper Alloy import amounted of US \$ 1.25 Billion to **India** and 10th position in ranking was occupied by India in the world.

Annexure-1

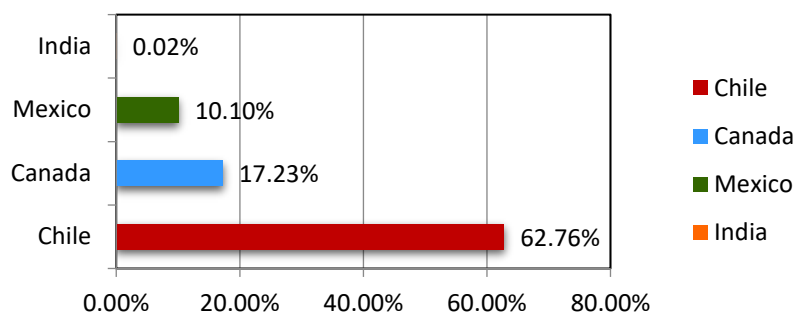
Major sources of world's top three importers of Refined Copper & Copper Alloys (H.S Code-7403)

i) Top 3 Sources of Copper & Copper Alloys to China in 2022 by percentage:



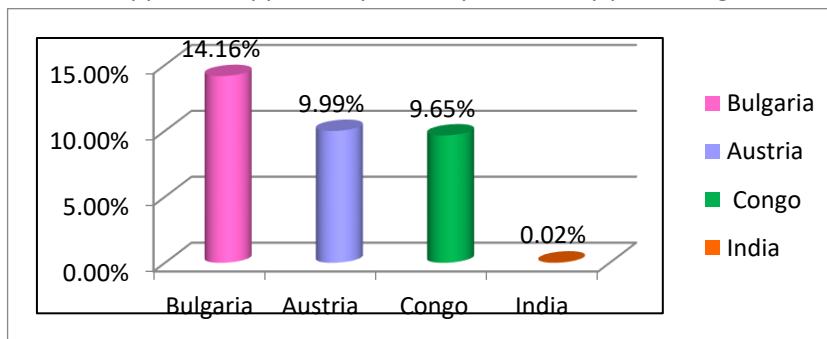
Chile was the largest import market of Copper & Copper Alloys with 21.89% share of Copper & Copper Alloys exported to China in 2022. The 2nd and 3rd largest source of the commodity to China was Congo (18.45%) and Russia (7.91%) in that year. India's share was only 1.29% (Source : UN Comtrade)

ii) Top 3 Sources of Copper & Copper Alloys USA in 2022 by percentage:



Chile was the primary source of Copper & Copper Alloys of USA. USA imported 62.76% Copper & Copper Alloys from Chile in 2022, followed by Canada (17.23%) and Mexico (10.10%). India contribution was only 0.02%. (Source : UN Comtrade)

iii) Top 3 Sources of Copper & Copper Alloys to Italy in 2022 by percentage:



Italy imports 14.16% share of Copper & Copper Alloys from Bulgaria in 2022. Austria and Congo were 2nd and 3rd major source countries of the Copper & Copper Alloys with 9.99% and 9.65% share respectively to Italy in that year. India exported only 0.02% share of Italy's total import in that year. (Source : UN Comtrade)

Cotton, not carded or combed

Cotton is a soft, fluffy staplefiber that grows in a boll, or protective case, around the seeds of the cotton plants of the genus *Gossypium* in the mallow family Malvaceae. The fiber is almost pure cellulose, and can contain minor percentages of waxes, fats, pectins, and water. Under natural conditions, the cotton bolls will increase the dispersal of the seeds.

The plant is a shrub native to tropical and subtropical regions around the world, including the Americas, Africa, Egypt and India. The greatest diversity of wild cotton species is found in Mexico, followed by Australia and Africa. Cotton was independently domesticated in the Old and New Worlds.

The fiber is most often spun into yarn or thread and used to make a soft, breathable, and durable textile. The use of cotton for fabric is known to date to prehistoric times; fragments of cotton fabric dated to the fifth millennium BC have been found in the Indus Valley Civilization, as well as fabric remnants dated back to 6000 BC in Peru. Although cultivated since antiquity, it was the invention of the cotton gin that lowered the cost of production that led to its widespread use, and it is the most widely used natural fiber cloth in clothing today.

India had been an exporter of fine cotton fabrics to other countries since the ancient times. Sources such as Marco Polo, who traveled India in the 13th century, Chinese travellers, who traveled Buddhist pilgrim centres earlier, Vasco Da Gama, who entered Calicut in 1498, and Tavernier, who visited India in the 17th century, have praised the superiority of Indian fabrics. India had a 25% share of the global textile trade in the early 18th century. Indian cotton textiles were the most important manufactured goods in world trade in the 18th century, consumed across the world from the Americas to Japan.

Bengali cotton textiles were exported in large quantities to Europe, Indonesia, and Japan, and Bengali Cotton textiles were sold in Central Asia, where they were known as "daka" textiles. Indian textiles dominated the Indian Ocean trade for centuries, were sold in the Atlantic Ocean trade, and had a 38% share of the West African trade in the early 18th century, while Indian calicos were a major force in Europe, and Indian textiles accounted for 20% of total English trade with Southern Europe in the early 18th century.

Current estimates for world production are about 25 million tonnes or 110 million bales annually, accounting for 2.5% of the world's arable land. India is the world's largest producer of cotton. The United States has been the largest exporter for many years.

The United States plays a major role in the world cotton market, in terms of production and export of cotton. During 2019-2020, United States produced approximately 20.0 million bales of cotton, contributing to nearly USD 7.0 billion of its total value. The United States is the leading exporter in the world's cotton market, accounting for 41.6% of global cotton exports in 2020. It supports the world's textile industries and provides opportunities for domestic farmers to market their products globally, by participating in global trade. Since 2016, United States export levels raised significantly. This is due to the production of high-quality crops combined with the low production levels from other producers. The United States is also a major player in the exports of cotton goods. As it exports a majority of cotton fiber, it also imports textiles and apparel products from India, China, Bangladesh owing to 50 percent of the country's cotton product imports. The higher premiums sought by India, the world's biggest cotton producer, could force Asian buyers such as Bangladesh, Vietnam and China to increase purchases from other suppliers such as the United States, Brazil, Australia and African nations.

These are broadly classified under **H.S. Code-5201**.

Table - 4

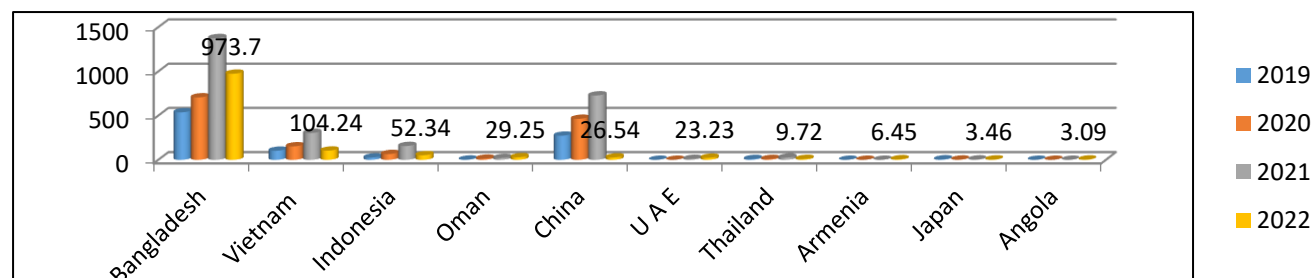
India's Top 10 destination of Cotton, not carded or combed (HS Code -5201)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------|--------------|-------------------|-----------|-------------------|-----------|-------------------|-----------|-------------------|-----------|
| | | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | Bangladesh | 536.88 | 49.80 | 706.14 | 48.34 | 1375.99 | 51.29 | 973.70 | 78.29 |
| 2. | Vietnam | 102.66 | 9.52 | 152.32 | 10.43 | 303.74 | 11.32 | 104.24 | 8.38 |
| 3. | Indonesia | 25.80 | 2.39 | 65.66 | 4.49 | 156.21 | 5.82 | 52.34 | 4.21 |
| 4. | Oman | 2.56 | 0.24 | 13.02 | 0.89 | 20.52 | 0.76 | 29.25 | 2.35 |
| 5. | China | 272.92 | 25.32 | 463.88 | 31.76 | 727.78 | 27.13 | 26.54 | 2.13 |
| 6. | U A E | 0.00 | 0.00 | 0.07 | 0.00 | 10.33 | 0.39 | 23.23 | 1.87 |
| 7. | Thailand | 8.65 | 0.80 | 9.10 | 0.62 | 25.00 | 0.93 | 9.72 | 0.78 |
| 8. | Armenia | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.45 | 0.52 |
| 9. | Japan | 4.96 | 0.46 | 2.48 | 0.17 | 3.63 | 0.14 | 3.46 | 0.28 |
| 10. | Angola | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 3.09 | 0.25 |
| | Others | 123.64 | 11.47 | 48.07 | 3.29 | 59.38 | 2.21 | 11.69 | 0.94 |
| | Total | 1078.06 | 100 | 1460.74 | 100 | 2682.59 | 100 | 1243.71 | 100 |

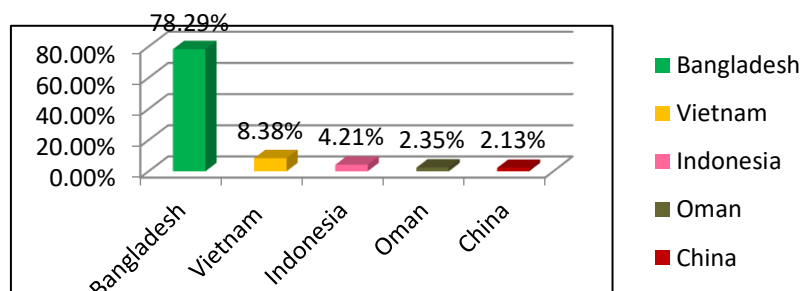
Source: DGCI&S

Note : India's Export including re-export

Leading Cotton, not Carded or Combed importers from India from 2019-2022 (Values in million USD)



India's top 5 major destinations of Cotton, not Carded or Combed by percentage India in 2022:



Total export of Cotton, not Carded or Combed from India was US \$ 1.24 Billion in 2022 which was US \$ 2.68 Billion in 2021. It has decreased by more than 2 times in 2022 compared to that in the year 2021. Bangladesh was the largest export destinations for Indian cotton, who imports US \$ 973.70 Million of Cotton, not Carded or Combed from India in 2022, accounted 78.29 % share of India's total export. Which was distantly followed Viet Nam and Indonesia with share of 8.38% and 4.21% share of India's total export value of cotton in 2022 respectively.

Table - 5

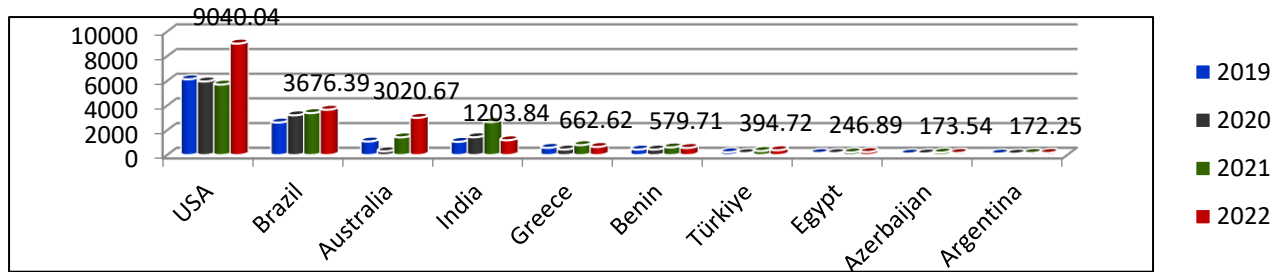
World's Top 10 exporter of Cotton, not carded or combed (HS Code –5201)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------|--------------|---------------------------|--------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | USA | 6147.10 | 41.59 | 5969.43 | 42.75 | 5713.05 | 33.17 | 9040.04 | 45.61 |
| 2. | Brazil | 2640.38 | 17.86 | 3226.92 | 23.11 | 3405.90 | 19.77 | 3676.39 | 18.55 |
| 3. | Australia | 1102.36 | 7.46 | 306.49 | 2.19 | 1437.87 | 8.35 | 3020.67 | 15.24 |
| 4. | India | 1075.03 | 7.27 | 1448.52 | 10.37 | 2682.05 | 15.57 | 1203.84 | 6.07 |
| 5. | Greece | 588.74 | 3.98 | 450.72 | 3.23 | 806.80 | 4.68 | 662.62 | 3.34 |
| 6. | Benin | 450.40 | 3.05 | 451.29 | 3.23 | 624.82 | 3.63 | 579.71 | 2.92 |
| 7. | Türkiye | 229.21 | 1.55 | 159.81 | 1.14 | 332.51 | 1.93 | 394.72 | 1.99 |
| 8. | Egypt | 168.30 | 1.14 | 161.60 | 1.16 | 219.47 | 1.27 | 246.89 | 1.25 |
| 9. | Azerbaijan | 122.37 | 0.83 | 131.93 | 0.94 | 207.98 | 1.21 | 173.54 | 0.88 |
| 10. | Argentina | 121.13 | 0.82 | 113.67 | 0.81 | 169.57 | 0.98 | 172.25 | 0.87 |
| | Others | 2135.37 | 14.45 | 1543.29 | 11.05 | 1624.02 | 9.43 | 650.47 | 3.28 |
| | Total | 14780.37 | 100 | 13963.69 | 100 | 17224.05 | 100 | 19821.13 | 100 |

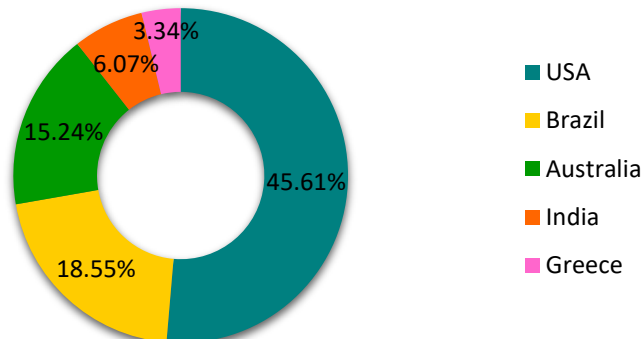
Source: UN Comtrade

Leading Cotton, not carded or combed exporters of world from 2019 to 2022 (Values in million USD)

Data label given on the basis of 2022



World's leading Cotton, not carded or combed exporters by percentage in 2022:



Global sales from Cotton, not carded or combed exports by all countries totalled US \$ 19.82 billion in 2022. Overall, the value of cotton, not carded or combed exports increased by 15.08% for all exporting countries from 2021 when cotton shipments were \$17.22 billion. In 2022 the top exporters of Cotton, not carded or combed were USA(US \$ 9.04B), Brazil (US \$ 3.68 B), Australia (US \$3.02 B). In that year India was the 4 the largest exporter of it with US \$ 1.20 Billion of Cotton, not carded or combed export to the world. which represented 6.07% share of world export.

Table - 6

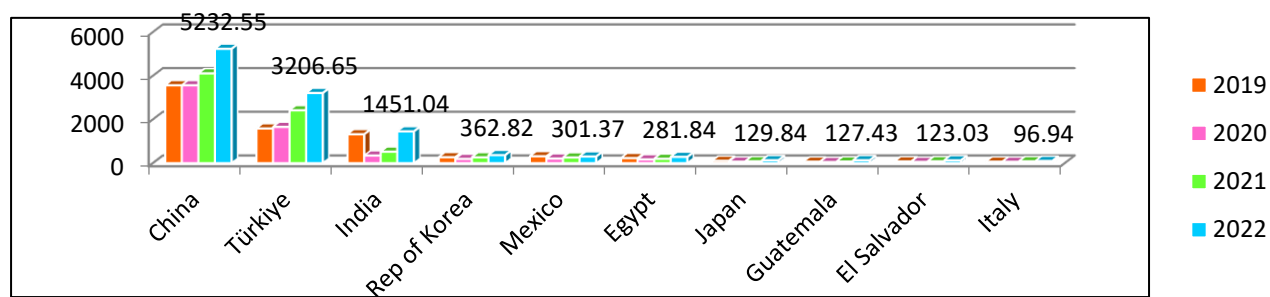
World's Top 10 Importer of Cotton, not carded or combed (HS Code –5201)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|-----------|-----------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | China | 3563.30 | 26.90 | 3562.74 | 30.64 | 4104.93 | 26.82 | 5232.55 | 43.97 |
| 2. | Türkiye | 1585.81 | 11.97 | 1652.64 | 14.21 | 2413.49 | 15.77 | 3206.65 | 26.95 |
| 3. | India | 1320.90 | 9.97 | 344.65 | 2.96 | 519.61 | 3.39 | 1451.04 | 12.19 |
| 4. | Rep of Korea | 268.05 | 2.02 | 187.11 | 1.61 | 262.34 | 1.71 | 362.82 | 3.05 |
| 5. | Mexico | 309.70 | 2.34 | 207.67 | 1.79 | 256.56 | 1.68 | 301.37 | 2.53 |
| 6. | Egypt | 226.11 | 1.71 | 168.79 | 1.45 | 196.79 | 1.29 | 281.84 | 2.37 |
| 7. | Japan | 101.22 | 0.76 | 62.53 | 0.54 | 81.45 | 0.53 | 129.84 | 1.09 |
| 8. | Guatemala | 61.09 | 0.46 | 45.85 | 0.39 | 67.64 | 0.44 | 127.43 | 1.07 |
| 9. | El Salvador | 71.35 | 0.54 | 51.15 | 0.44 | 77.29 | 0.51 | 123.03 | 1.03 |
| 10 | Italy | 61.86 | 0.47 | 55.35 | 0.48 | 80.69 | 0.53 | 96.94 | 0.81 |
| | Others | 5677.32 | 42.86 | 5289.73 | 45.49 | 7244.86 | 47.33 | 586.51 | 4.93 |
| | Total | 13246.71 | 100 | 11628.21 | 100 | 15305.65 | 100 | 11900.03 | 100 |

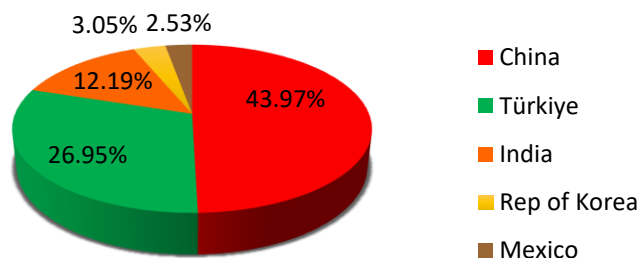
Source :UNComtrade

Leading importers Cotton not carded or combed of world from 2019 to 2022 (Values in million USD)

Data label given on the basis of 2022



Country wise import trends in world's Cotton, not carded or combed importers by percentage in 2022 :

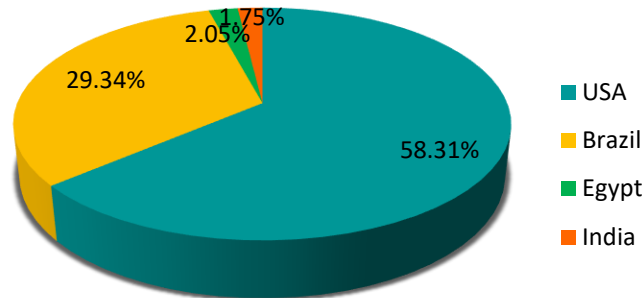


In 2022, China was the top importer of Cotton, not carded or combed in the world and its share in the world import of Cotton, not carded or combed was almost 43.97% in 2022. Turkey and **India** were also major importers of Cotton, not carded or combed in the world. Turkey and **India** imports the Cotton, not carded or combed with valued at US \$ 3.21 billion and US \$ 1.45 billion, accounted for 26.95 % and 12.19% of world import value of Cotton, not carded or combed respectively in that year.

Annexure-II

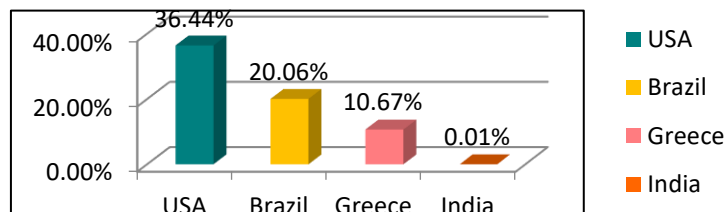
Major sources of world's top three importers of Cotton not carded or combed H.S Code -5201)

- (i) Top 3 Sources of Cotton, not carded or combed to China in 2022 by percentage:



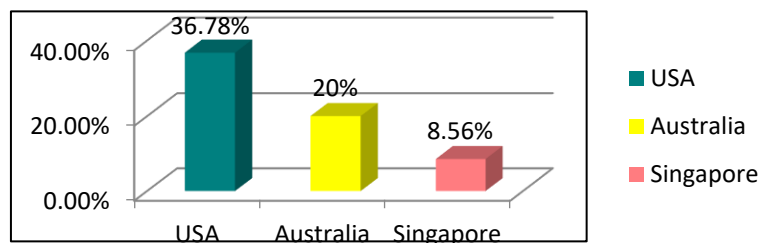
More than 58.31% of Cotton, not carded or combed imports of China comes from USA in 2022 followed by Brazil (29.34%) and Egypt (2.05%). In that year China imported 1.75% share of its Cotton, not carded or combed from India. (Source : UN Comtrade)

- (ii) Top 3 Sources of Cotton not carded or combed to Turkey in 2022 by percentage:



Turkey imported 36.44 % of Cotton not carded or combed from USA in 2022. Brazil stood at 2nd major sources of it to Turkey with 20.06% share followed by Greece with 10.67%. India exports 0.01% share of Cotton, not carded or combed to Turkey in that year.(Source : UN Comtrade).

- (iii) Top 3 Sources of Cotton not carded or combed to India in 2022 by percentage:



India imports 36.78% share of Cotton not carded or combed from USA in 2022. Australia (20%) and Singapore (8.56%) were 2nd and 3rd major source countries of the Cotton not carded or combed to India in that year.(Source : UN Comtrade)

IMPORT

Cocoa Butter, Fat and Oil (H. S. Code- 1804)

Cocoa butter, also called **theobroma oil**, is a pale-yellow, edible fat extracted from the cocoa bean . It is used to make chocolate, as well as some ointments, toiletries, and pharmaceuticals. Cocoa butter has a cocoa flavor and aroma. Its melting point is slightly below human body temperature. It is an essential major ingredient of chocolate and related confectionary products.

For use in chocolate manufacture, the cocoa beans are first fermented and then dried. The beans are then roasted and separated from their hulls to produce cocoa nibs. About 54–58% of the cocoa nibs is cocoa butter. The cocoa nibs are ground to form cocoa mass, also known as cocoa liquor or chocolate liquor. Chocolate liquor is pressed to separate the cocoa butter from the non-fat cocoa solids. Cocoa butter is sometimes deodorized to remove strong or undesirable tastes.

Cocoa butter contains a high proportion of saturated fats also with the monounsaturated oleic acid in each triglyceride. The predominant triglycerides are POS, SOS, POP, where P = palmitic, O = oleic, and S = stearic acid residues. Cocoa butter, unlike non-fat cocoa solids, contains only traces of caffeine and theobromine.

Some food manufacturers substitute less expensive materials in place of cocoa butter. Several analytical methods exist for testing for diluted cocoa butter. Adulterated cocoa butter is indicated by its lighter color and its diminished fluorescence upon ultraviolet illumination. Unlike cocoa butter, adulterated fat tends to smear and have a higher non-saponifiable content.

Owing to the high cost of cocoa butter, substitutes have been designed to use as alternatives. In the United States, 100% cocoa butter must be used for the product to be called chocolate. The EU requires that alternative fats not exceed 5% of the total fat content.

Substitutes include: coconut, palm, soybean, rapeseed, cottonseed and illipe oils; and shea butter, mango kernel fat and a mixture of mango kernel fat and palm oil, and PGPR.

Cocoa butter is a major ingredient in practically all types of chocolates (white chocolate, milk chocolate, and dark chocolate). This application continues to dominate consumption of cocoa butter.

Pharmaceutical companies use cocoa butter extensively. As a nontoxic solid at room temperature that melts at body temperature, it is considered an ideal base for medicinal suppositories.

Cocoa butter typically has a melting point of around 34–38 °C (93–100 °F), so chocolate is solid at room temperature but readily melts once inside the mouth. Cocoa butter displays polymorphism, having different crystalline forms with different melting points. Conventionally the assignment of cocoa butter crystalline forms uses the nomenclature of Wille and Lutton. The production of chocolate aims to crystallise the chocolate so that the cocoa butter is predominantly in form V, which is the most stable form that can be obtained from melted cocoa butter. (Form VI either develops in solid cocoa butter after long storage, or is obtained by crystallisation from solvents). A uniform form V crystal structure will result in smooth texture, sheen, and snap. This structure is obtained by chocolate tempering. Melting the cocoa butter in chocolate and then allowing it to solidify without tempering leads to the formation of unstable polymorphic forms of cocoa butter. This can easily happen when chocolate bars are allowed to melt in a hot room and leads to the formation of white patches on the surface of the chocolate called fat bloom or chocolate bloom.

These are broadly classified under **H. S. Code 1804**

Table - 7

India's Top 10 Sources of Cocoa Butter, Fat and Oil (H. S. Code- 1804)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------|--------------|---------------------------|--------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | Indonesia | 51.04 | 94.88 | 54.96 | 99.14 | 82.19 | 96.20 | 94.77 | 97.19 |
| 2. | Singapore | 1.58 | 2.94 | 0.06 | 0.11 | 2.68 | 3.13 | 2.45 | 2.52 |
| 3. | U S A | 0.19 | 0.36 | 0.14 | 0.25 | 0.25 | 0.30 | 0.17 | 0.17 |
| 4. | Belgium | 0.06 | 0.11 | 0.01 | 0.03 | 0.05 | 0.05 | 0.06 | 0.06 |
| 5. | France | 0.04 | 0.07 | 0.01 | 0.01 | 0.03 | 0.04 | 0.03 | 0.03 |
| 6. | Germany | 0.02 | 0.03 | 0.02 | 0.04 | 0.02 | 0.02 | 0.02 | 0.02 |
| 7. | Netherland | 0.08 | 0.15 | 0.00 | 0.00 | 0.04 | 0.05 | 0.01 | 0.01 |
| 8. | U A E | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9. | Poland | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10. | Peru | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Others | 0.78 | 1.45 | 0.23 | 0.41 | 0.17 | 0.20 | 0.00 | 0.00 |
| | Total | 53.80 | 100 | 55.44 | 100 | 85.43 | 100 | 97.52 | 100 |

Source: DGCI&S

Note : India's Import including re-import

India's import of Cocoa Butter, Fat and Oil in 2022 stood at US \$ 97.52 Million and US \$ 85.43 Million in 2021, which shows the India's dependency of Cocoa Butter, Fat and Oil upon other countries has increased almost 14.15%. Major three source countries of Cocoa Butter, Fat and Oil to India in 2022 were Indonesia (US \$ 94.77 Million), Singapore (US \$ 2.45 Million) and USA (US \$ 0.17 Million). These 3 countries in total sold US \$ 97.39 Million value of Cocoa Butter, Fat and Oil to India which rounds up to almost 99.88% of the total Cocoa Butter, Fat and Oil import into India.

Table – 8

World Top 10 Importer of Cocoa Butter, Fat and Oil (H. S. Code- 1804)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|-----------|--------------|---------------------------|--------------|------------------------------|--------------|--------------------------|------------------|--------------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Shar e (%) | Value (million\$) | Share (%) |
| 1. | Germany | 922.66 | 16.45 | 883.61 | 15.77 | 858.17 | 15.15 | 751.16 | 15.18 |
| 2. | USA | 673.58 | 12.01 | 573.88 | 10.24 | 545.70 | 9.64 | 605.74 | 12.24 |
| 3. | Belgium | 578.85 | 10.32 | 602.37 | 10.75 | 618.32 | 10.92 | 505.59 | 10.22 |
| 4. | Netherlands | 519.64 | 9.26 | 464.48 | 8.29 | 482.91 | 8.53 | 454.72 | 9.19 |
| 5. | France | 372.38 | 6.64 | 436.81 | 7.80 | 450.59 | 7.96 | 395.54 | 8.00 |
| 6. | Poland | 231.36 | 4.12 | 272.51 | 4.86 | 304.10 | 5.37 | 277.82 | 5.62 |
| 7. | U K | 309.88 | 5.52 | 321.37 | 5.74 | 237.87 | 4.20 | 267.07 | 5.40 |
| 8. | Italy | 194.01 | 3.46 | 235.76 | 4.21 | 257.45 | 4.55 | 256.28 | 5.18 |
| 9. | Canada | 169.81 | 3.03 | 175.91 | 3.14 | 169.00 | 2.98 | 174.64 | 3.53 |
| 10. | Switzerland | 172.48 | 3.08 | 157.12 | 2.80 | 171.79 | 3.03 | 149.25 | 3.02 |
| 13 | India | 53.89 | 0.96 | 55.78 | 1.00 | 85.40 | 1.51 | 97.36 | 1.97 |
| | Others | 1410.21 | 25.14 | 1423.40 | 25.40 | 1481.68 | 26.16 | 1011.72 | 20.45 |
| | Total | 5608.73 | 100 | 5603.00 | 100 | 5662.96 | 100 | 4946.89 | 100 |

Source :UNComtrade

According to the United Nation's COMTRADE database, global imports of Cocoa Butter, Fat and Oil stood at amounting to US \$ 4.95 Billion in 2022. In that year the global import of it has decreased by 12.65% from the previous year's import. Germany was the world's top importer of of Cocoa Butter, Fat and Oil, with total value of US \$751.16 million in 2022, which represented 15.18% of global import of of Cocoa Butter, Fat and Oil. Other major importers of of Cocoa Butter, Fat and Oil in 2022 include USA (US \$ 605.74 million) & Belgium (US \$ 505.59 million). **India**, in contrast, imported a comparable US \$ 97.36 million of of Cocoa Butter, Fat and Oil in 2022, ranked in 13th position in the world with 1.97% share of world import value of of Cocoa Butter, Fat and Oil in 2022.

Unwrought Nickel

Nickel is a chemical element with the symbol Ni and atomic number 28. It is a silvery-white lustrous metal with a slight golden tinge. Nickel belongs to the transition metals and is hard and ductile. Pure nickel, powdered to maximize the reactive surface area, shows a significant chemical activity, but larger pieces are slow to react with air under standard conditions because an oxide layer forms on the surface and prevents further corrosion. Even so, pure native nickel is found in Earth's crust only in tiny amounts, usually in ultramafic rocks, and in the interiors of larger nickel–iron meteorites that were not exposed to oxygen when outside Earth's atmosphere.

Use of nickel has been traced as far back as 3500 BCE. Nickel was first isolated and classified as a chemical element in 1751 by Axel Fredrik Cronstedt, who initially mistook the ore for a copper mineral, in the cobalt mines of Los, Hälsingland, Sweden. The element's name comes from a mischievous sprite of German miner mythology, Nickel, who personified the fact that copper-nickel ores resisted refinement into copper. An economically important source of nickel is the iron ore limonite, which often contains 1–2% nickel. Nickel's other important ore minerals include pentlandite and a mixture of Ni-rich natural silicates known as garnierite. Major production sites include the Sudbury region in Canada, New Caledonia in the Pacific, and Norilsk in Russia.

Nickel is slowly oxidized by air at room temperature and is considered corrosion-resistant. Historically, it has been used for plating iron and brass, coating chemistry equipment, and manufacturing certain alloys that retain a high silvery polish, such as German silver. About 9% of world nickel production is still used for corrosion-resistant nickel plating. Nickel-plated objects sometimes provoke nickel allergy. Nickel has been widely used in coins, though its rising price has led to some replacement with cheaper metals in recent years.

Nickel is one of four elements that are ferromagnetic at approximately room temperature. Alnico permanent magnets based partly on nickel are of intermediate strength between iron-based permanent magnets and rare-earth magnets. The metal is valuable in modern times chiefly in alloys; about 68% of world production is used in stainless steel. A further 10% is used for nickel-based and copper-based alloys, 7% for alloy steels, 3% in foundries, 9% in plating and 4% in other applications, including the fast-growing battery sector, including those in electric vehicles. As a compound, nickel has a number of niche chemical manufacturing uses, such as a catalyst for hydrogenation, cathodes for rechargeable batteries, pigments and metal surface treatments. Nickel is an essential nutrient for some microorganisms and plants that have enzymes with nickel as an active site.

On Earth, nickel occurs most often in combination with sulfur and iron in pentlandite, with sulfur in millerite, with arsenic in the mineral nickeline, and with arsenic and sulfur in nickel galena. Nickel is commonly found in iron meteorites as the alloys kamacite and taenite. The bulk of the nickel is mined from two types of ore deposits. The first is laterite, where the principal ore mineral mixtures are nickeliferous limonite, and garnierite.

Indonesia and Australia have the biggest estimated reserves, at 43.6% of world's total.

The global production of nickel is presently used as follows: 68% in stainless steel; 10% in nonferrous alloys; 9% in electroplating; 7% in alloy steel; 3% in foundries; and 4% other uses (including batteries).

Nickel is used in many specific and recognizable industrial and consumer products, including stainless steel, alnico magnets, coinage, rechargeable batteries, electric guitar strings, microphone capsules, plating on plumbing fixtures, and special alloys such as permalloy, elinvar, and invar. It is used for plating and as a green tint in glass. Nickel is preeminently an alloy metal, and its chief use is in nickel steels and nickel cast irons, in which it typically increases the tensile strength, toughness, and elastic limit. It is widely used in many other alloys, including nickel brasses and bronzes and alloys with copper, chromium, aluminium, lead, cobalt, silver, and gold.

These are broadly classified under **H. S. Code 7502**.

Table - 9

India's Top 10 Sources of Unwrought Nickel (HS Code :7502)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------|-----------------|---------------------------|--------------|--------------------------|--------------|--------------------------|--------------|--------------------------|--------------|
| | | Value (million \$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | Netherland | 45.56 | 10.04 | 24.87 | 5.94 | 75.77 | 10.82 | 159.26 | 20.02 |
| 2. | Norway | 85.55 | 18.86 | 76.60 | 18.30 | 118.70 | 16.96 | 129.03 | 16.22 |
| 3. | South Africa | 52.46 | 11.56 | 43.93 | 10.50 | 65.10 | 9.30 | 95.41 | 11.99 |
| 4. | U A E | 6.34 | 1.40 | 8.00 | 1.91 | 66.41 | 9.49 | 60.87 | 7.65 |
| 5. | Russia | 14.19 | 3.13 | 22.77 | 5.44 | 55.62 | 7.95 | 60.26 | 7.57 |
| 6. | Japan | 41.85 | 9.22 | 47.52 | 11.36 | 74.90 | 10.70 | 56.00 | 7.04 |
| 7. | China | 41.37 | 9.12 | 30.27 | 7.23 | 12.70 | 1.81 | 55.78 | 7.01 |
| 8. | U K | 15.55 | 3.43 | 14.59 | 3.49 | 31.70 | 4.53 | 33.17 | 4.17 |
| 9. | Canada | 19.13 | 4.22 | 34.34 | 8.21 | 49.04 | 7.01 | 29.76 | 3.74 |
| 10. | Malaysia | 34.10 | 7.52 | 6.91 | 1.65 | 5.79 | 0.83 | 27.40 | 3.44 |
| | Others | 97.55 | 21.50 | 108.68 | 25.97 | 144.22 | 20.60 | 88.65 | 11.14 |
| | Total | 453.63 | 100 | 418.49 | 100 | 699.94 | 100 | 795.59 | 100 |

Source: DGCI&S

Note : India's Import including Re-import

In 2022, most of the Unwrought Nickel imported to India originated from Netherland with an import value of US \$ 159.26 million, whereas Norway was the primary source of Unwrought Nickel to India up to 2021 over the review period .In 2022 the import of Unwrought Nickel has increased by 13.66 from the year 2021. On the other hand, other countries such as Norway and South Africa were becoming 2nd and 3rd largest source countries with of Unwrought Nickel for India in 2022. In that year Norway and South Africa sold US \$ 129.03 Million and US \$ 95.41 Million of Unwrought Nickel to India respectively or accounted 16.22% and 11.99% share of India's total import of Unwrought Nickel respectively in 2022.

Table - 10

World Top 10 Importer of Unwrought Nickel (HS Code :7502)

| Rank | Countries | 2019 | | 2020 | | 2021 | | 2022 | |
|------|------------------|--------------------------|--------------|--------------------------|--------------|------------------------------|--------------|--------------------------|--------------|
| | | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) | Value (million\$) | Share (%) |
| 1. | China | 2689.09 | 23.59 | 1845.15 | 20.32 | 4937.07 | 34.53 | 4015.18 | 23.76 |
| 2. | USA | 1379.46 | 12.10 | 1245.99 | 13.72 | 1449.82 | 10.14 | 2418.34 | 14.31 |
| 3. | Germany | 947.28 | 8.31 | 769.28 | 8.47 | 1116.88 | 7.81 | 1545.25 | 9.14 |
| 4. | Netherlands | 471.32 | 4.13 | 482.19 | 5.31 | 643.94 | 4.50 | 1336.19 | 7.91 |
| 5. | Japan | 654.93 | 5.74 | 468.33 | 5.16 | 787.51 | 5.51 | 1290.34 | 7.64 |
| 6. | Rep. of Korea | 471.34 | 4.13 | 388.41 | 4.28 | 651.19 | 4.55 | 894.74 | 5.29 |
| 7. | Italy | 462.66 | 4.06 | 428.14 | 4.72 | 631.19 | 4.41 | 829.57 | 4.91 |
| 8. | India | 453.68 | 3.98 | 418.82 | 4.61 | 703.11 | 4.92 | 797.22 | 4.72 |
| 9. | France | 451.70 | 3.96 | 358.87 | 3.95 | 502.88 | 3.52 | 755.68 | 4.47 |
| 10. | Sweden | 342.42 | 3.00 | 259.88 | 2.86 | 329.79 | 2.31 | 482.45 | 2.85 |
| | Others | 3076.08 | 26.98 | 2414.95 | 26.60 | 2545.23 | 17.80 | 2533.37 | 14.99 |
| | Total | 11399.95 | 100 | 9080.02 | 100 | 14298.6 1 | 100 | 16898.34 | 100 |

Source :UNComtrade

The China imported around US \$ 4.01 billion worth of Unwrought Nickel in 2022, making it the leading importer of Unwrought Nickel worldwide that year. USA followed in second place, importing around US \$ 2.42 billion worth of the commodity and Germany in 3rd place importing around US \$ 1.54 billion. The import value of Unwrought Nickel into India amounted to US \$ 797.22 million in the year 2022 and ranked in 8th position in the world with the share of 4.72% of total Global import value of Unwrought Nickel. In the year 2022 the global import value of Unwrought Nickel was US \$ 16.90 Billion which was negative growth by more than 18.18% from the previous year.