

ICSG Insight

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International Flows of Recycled Copper Raw Materials: The Impact of Trade Restrictions and Recent Trends

Introduction

During the ICSG intergovernmental session of October 2019, the Group agreed to a proposal from the delegate of the United States that analysis be undertaken by ICSG secretariat regarding the impact of China's recent ban on imports of metal waste and scrap on the international flow of copper scrap and copper alloy scrap. The objective of this insight is to provide inputs for this purpose and to understand the ongoing changes in the global trade of copper scrap, copper alloy scrap and copper waste defined as trade code 7404 of the UN Harmonized System, and the ongoing and expected impacts on the global copper market. This insight starts with a detailed review of the long term trends of the international trade flows of recycled copper raw materials, including copper and alloy scrap exporters and importers for the period 2009-2018. Then it goes more deeply into recent changes in recycled copper trade and the ongoing reallocation of the global flows of copper, copper alloy and copper waste scrap. Recent data on 2017-2019 trade flow changes between the United States, the European Union and the North East Asian region is discussed, presenting evidence on the emergence of South Asia as a new region for reprocessing low grade scrap but also replacing refined copper use in fabrication. Finally, the insight summarizes global trends in the use of scrap in copper smelters and refineries over 2009-2018 and identifies 2019 production changes in China and the rest of the world related to the scrap trade restrictions. The impact of the new scrap trade flows on the use of refined copper and on fabricated copper and alloy products are discussed and some conclusions are identified.

1. Global Trade of Recycled Copper Raw Materials: 2009-2018 and Preliminary 2019 Data

Imports of Recycled Copper Raw Materials: China and the Rest of the World. Reported global imports of recycled copper raw materials, including copper scrap, copper alloy scrap and copper waste, increased from 6.2 million tonnes in gross weight in 2009 to over 8 million tonnes in 2012 (Mt). Since then, global scrap imports have fallen in line with refined copper prices, from 7.4 Mt in 2013 to 6.3 Mt in 2016, recovering with copper prices to 6.8 Mt in 2017 to fall close to 6.3 Mt again in 2018. World ex-China imports of scrap (HST 7404) remained stagnated in 2010-2016 to volumes very close to 3 million tonnes per year and increased in 2017 and 2018 when they reached an historic record of almost 4 million tonnes. Chinese imports jumped from 4 to almost 5 million tonnes in 2009-2012, but since 2012 have fallen every year, from just over 4 Mt in 2013 to just over 3 Mt in 2017, and contracted to historic lows close to 2.4 million tonnes in gross weight in 2018. In 2019 it was expected that Chinese imports of recycled copper raw materials would fall to an historic

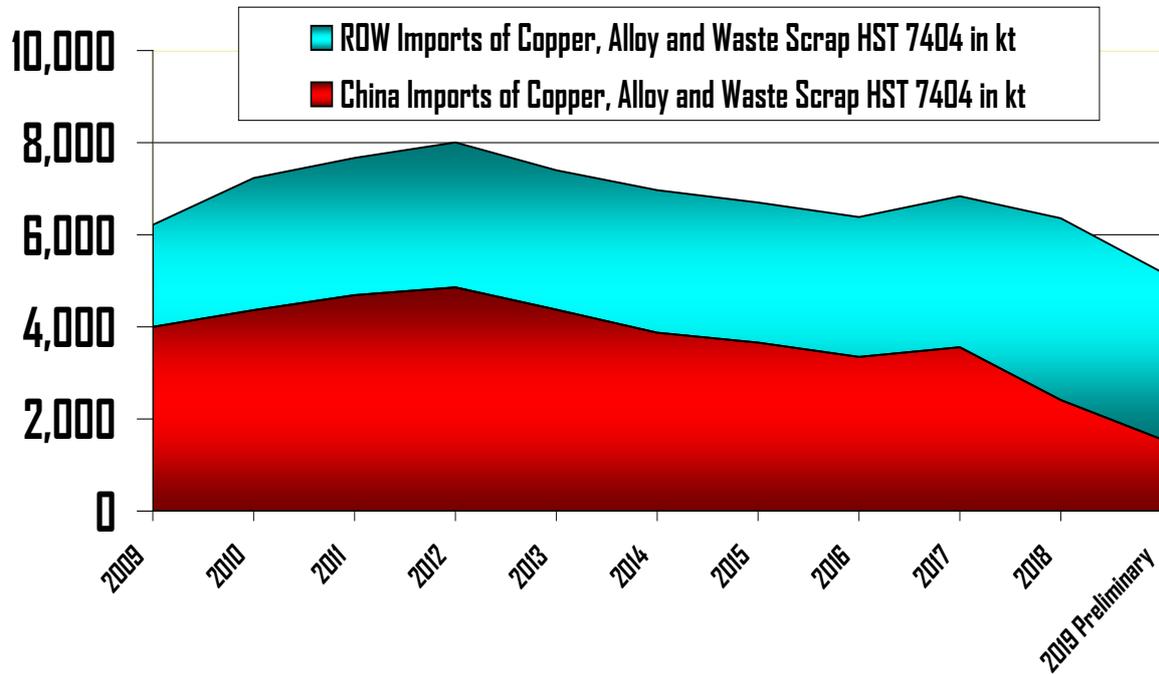
low of around 1.55 million tonnes in gross weight, even when copper content was growing exponentially in 2017-2019 from around 40% to over 80% as a result of import restrictions to low copper content copper and alloy scrap and copper waste.

Exports of Recycled Copper Raw Materials from the United States. From the 5.14 million tonnes of copper related scrap reported and confirmed as exported worldwide in 2018 in gross weight, the United States was the main source of exports by country with exports of 915 thousand tonnes in gross weight in 2018. Exports of recycled copper raw materials from the United States to the world had been falling since 2011, when copper prices achieved record levels. Most of the fall since 2011 in US scrap exports had been in copper alloys and other low copper content. Meanwhile US scrap exports of high copper content material remained well above 400 kt in the last 10 years before 2019 achieving around half million tonnes in some years and growing in recent years (2016 to 2018). In the preliminary US export data available for 2019, we observe that the US exports of copper scrap, alloy scrap and copper waste remained strong even though the destination of the physical flows was changing. So the level of US exports of the recycled copper raw materials described remain normal in 2019 and are expected to achieve similar volumes to those in 2018. The trend 2017-2019 reveals that the US exports to China collapsed from almost 700 kt in 2017 to less than 100 kt in 2019, but were reallocated to Malaysia, to the European Union and North East Asia ex China. In consequence, the US exports of recycled copper raw materials to the World fell only slightly in 2019.

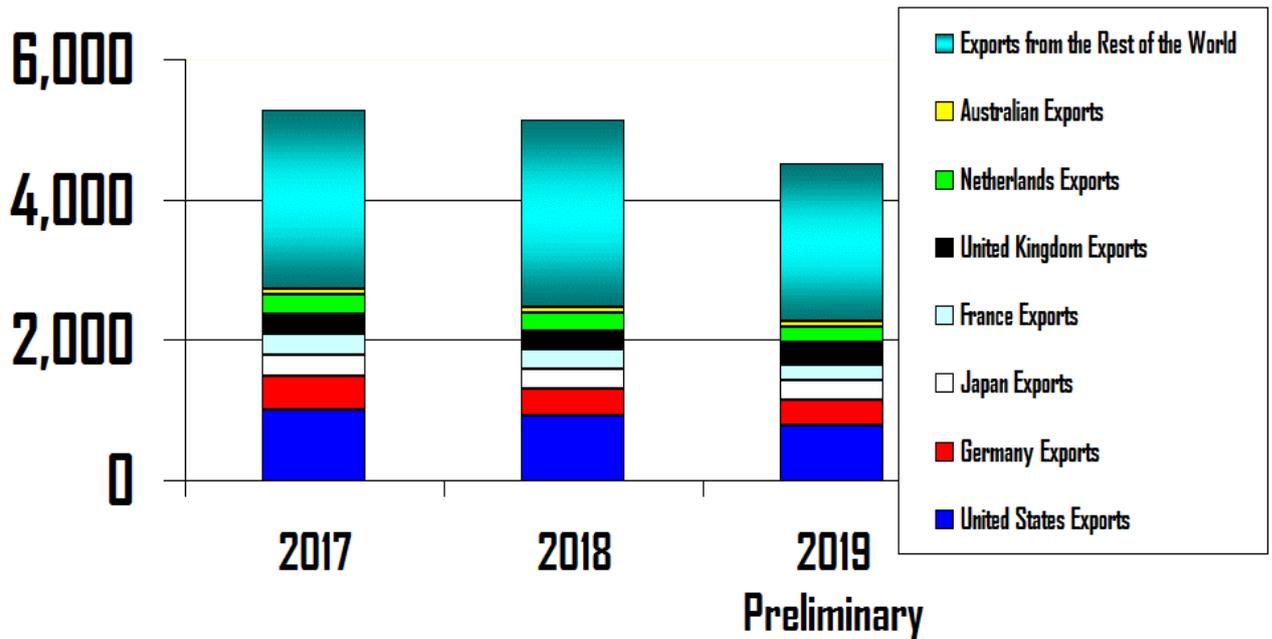
Exports of Recycled Copper Raw Materials from the European Union. The European Union remains the region with the most net exports of copper and alloy scrap. However, the Chinese waste import ban reduced the volume of European exports in gross weight in 2018. In 2016, the European Union was exporting almost 986 million tonnes of copper scrap, alloy scrap and copper waste to the rest of the world and in 2017 the export volumes increased slightly to over one million tonnes in gross weight. In 2018, the European Union reduced its exports of copper scrap, copper alloy scrap and copper waste to only 787 thousand tonnes in gross weight. Preliminary ICSG data for January-October 2019 allow us to expect a recovery in 2019. However, the shipments of low grade recycled copper inputs have been changing to destinations outside of China as in the case of the US scrap exports.

Exports of Recycled Copper Raw Materials from the Rest of the World. As observed in the period 2009-2018, the importance of the exports of copper scrap, copper alloy scrap and copper waste from the main exporters, the European Union and the United States, has been falling in recent years. This happened after an important increase in volumes exported that peaked with high refined copper prices in 2011, resulting in an increase in the exports of recycled copper raw materials to around 6 million tonnes. In the rest of the decade exports decreased influenced by lower refined copper prices to volumes not different than those observed the year 2009. Meanwhile the exports of copper scrap, copper alloy scrap and copper waste from the rest of the world have been in the range between 3 to 3.5 million tonnes per year over 2009-2018.

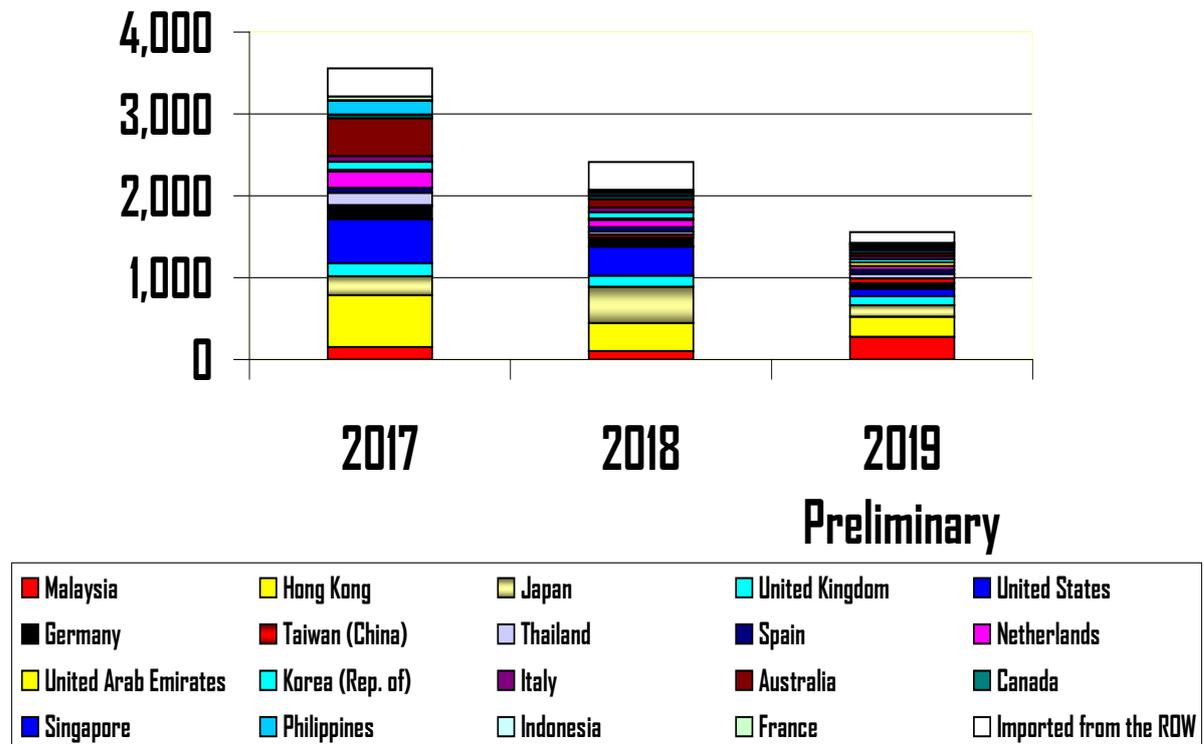
Global Imports of Copper, Alloy Scrap and Copper Waste HST 7404, kt in Gross Weight



Exports of Copper Scrap, Alloy Scrap and Copper Waste: Recent Trends Reported by Country. kt Gross Weight



Reported Chinese Imports of "Copper Scrap" Including High and Low Copper Content by Origin kt



2. Recycled Copper Raw Materials: Import Restrictions and Impacts 2017-2019

China Restricts Imports of Copper Scrap, Copper Alloy Scrap and Copper Waste. Starting in 2017, China Customs intensified efforts to control solid waste imports after years of inspections of solid waste with different copper content. China started to look at bans on imports of waste in July 2017, and from January 2019 it banned mixed metal scrap imports to promote the conversion of local waste and scrap into recycled materials. In 2017, the government started to reduce plastic trash imports: in January 2018, it banned almost all plastic scrap imports and also in 2018 China formally announced its intention to ban the import of all waste raw materials by 2020, under a revision of the country's solid waste management law. The total ban on low grade copper scrap, including most of copper alloys and raw materials for dismantling, known as "Category 7" was fully implemented in January 2019, and in July of 2019 high-grade copper scrap "Category 6" was switched to restricted import status, which requires licenses. In early 2020, China announced that copper scrap with over 94% copper content had been re-classified as "renewable raw material" and classified in five categories including wire, copper processing materials, copper nodules, shredded copper and plated copper with tin, zinc and nickel. Import permissions would be acceptable in the second half of the year. The permissions are including copper scrap over 94% copper for some materials as copper granules and lower copper contents for brass materials registered as copper alloy scrap. In the meantime, a system of approvals for high grade copper scrap was operating in 2019, implemented with volumes approved in the range above 80% copper content per tonne of scrap imported during the third quarter of 2019.

Impact of Scrap Trade Restrictions on US Exports to China. The Chinese waste import restrictions impacted most on the exports of copper and alloy scrap from the United States in 2018 that fell from around 50 kt per month in 2016 and 2017 to marginal import volumes in 2018 and remained around 10 kt per year in 2019. The United States reallocated their exports of copper, alloy and copper waste to other markets, in particular to Malaysia, India, Japan and others. The loss of China as the main importer of US recycled copper and copper waste did not reduce significantly the US export volumes in 2019 that remained around 70-80 kt per month in gross weight, slightly below recent years monthly volumes. For the period January-October of 2019 copper and copper alloy scrap exports from the U.S. fell only 2.8% versus similar period in 2018 as the weaker shipments to China were offset by higher exports to Malaysia (+122.5%), India (+33.6%), Germany (+22%), Belgium (+29%), Pakistan (+46.5%), and other markets. China Customs reported imports of copper scrap from the United States as low as 10 kt per month for the first part of the year 2019.

Impact of Chinese Scrap Trade Restrictions on European Exports. The European Union (EU-28) gross exports of copper and copper alloy scrap fell faster than US exports with the implementation of the Chinese import ban, in part because exports of European scrap are mainly copper alloys, directly banned as “Category Six” in 2019. With close to 90% of the European Union exports of recycled raw materials going to China, the region has been slower to react to the import ban, even when no additional import taxes had been enforced by China. So total monthly exports of copper scrap and copper alloy scrap from the EU-28 to the world fell from volumes around 90 kt per month in gross weight in early 2017, all the way down to volumes around 50 kt per month in late 2018, driven by less Chinese imports representing between 80-90% of the European destinations. Between January and July of 2019, European exports to China recovered temporarily before the high-grade copper scrap was switched to restricted import status, however, exports from the EU to China kept falling in the second half of 2019 to historically low volumes close to 20 kt per month. Total European exports of copper scrap and copper alloy scrap to the world ex EU-28 might have fallen to around 800 kt per year in 2018, an annual fall of 220 kt for this year with an even deeper fall to be confirmed for 2019 once all data be available in early 2020. European Union exports to other markets started to increase slowly only in 2019, but are still ranging only 20-40 kt per month if we add new European Union exports of scrap to India, Bangladesh, Pakistan, North East Asia, Malaysia, Hong Kong and other destinations. However, these volumes remain small and as a consequence it is expected that more copper scrap, copper alloy scrap and copper waste will remain in Europe in early 2020.

Global Reallocation of North East Asia and Global Scrap Trade. The ban implemented in 2019 in China, and the direct restrictions via import taxes to imports from copper and alloy scrap from the United States in the second part of 2018, started a global reallocation of exports of low grade copper scrap. This material, broadly classified by ICSG statistics as “copper scrap alloys”, started to appear in imports data related to Malaysia, Japan Cambodia, Thailand and other locations including Pakistan and the Middle East. In these countries it is expected that the material is starting to be melted and re-exported to China as copper alloy ingots, blister copper or other categories known as “black copper” that contains 98% copper or more, close to the limit of impurities proposed by the Chinese authorities as a target in 2018. Exports of copper scrap and copper alloy scrap from Japan, the Korean Republic and Taiwan (China) had been historically sent to China for decades, and this situation did not change significantly in 2016, 2017 and 2018 when China represented around 95% of the joint exports of the mentioned countries. In fact, between 2016-2018 the monthly exports of copper and copper alloy scrap from these 3 countries were volatile but in a range between 20-40 kt and the main destination was still China. However, in preliminary 2019 monthly data, copper and

alloy scrap exports from Japan, the Korean Republic and Taiwan (China) in the order of 40 kt per month, started to be reallocated to Malaysia. In line with this new trend, the exports of copper and copper alloy scrap from the region of North East Asia to China reveal a downtrend from 40 kt to around 20 kt per month along 2019. We can conclude from the evidence discussed above that most of the exports to China from North East Asia and from the United States reallocated to other countries increased in 2018-2019 after a modest increase in 2017. European Union scrap exports are also starting to be reallocated, even though at a much slower pace. A review of the global imports of copper and alloy scrap outside China for 2009-2018 reveals that after 2016, almost one million tonnes more of mainly copper alloys and copper waste, but also some high grade scrap was traded between countries outside of China in 2018. This is a large increase, mainly in 2018 when compared to annual scrap trade out of China in 2011-2017. The volumes of scrap traded between countries outside China was expected to continue growing in 2019 as Chinese gross weight imports keep falling. It is possible that an important share of this material might need some dismantling and other pre-treatment processing before going to copper smelters, fire refineries and fabricators. The prices paid for most of these materials are reported by merchants to be much lower in Europe and North America than used to be paid by Chinese importers, in particular in oversupply times, so scrap recycler margins are expected to remain small for this new flow of recycled copper raw materials.

Taxes on Imports from the United States and Scrap Shortage in China. Monthly Chinese imports of copper and alloy scrap and copper waste that averaged about 300 kt per month in gross weight in 2016 and 2017, fell quickly in 2018 to annual volumes not much above 200 kt per month and continued falling to volumes close to 100 kt per month in the last months of 2019. Chinese copper scrap and copper alloy scrap and copper waste imports at Q3 2019 were as low as 450 kt in gross weight, down from 650 kt in gross weight in Q3 2018, but with increasing copper content. It is estimated that the annualized copper content of the scrap imported by China fell to only 1.3 million tonnes copper per year in 2019, with only 11 approved groups of copper scrap in the first three quarters of 2019. The impact of this system of approvals resulted in an increasingly tight copper market in China in 2018 and 2019, with high copper content scrap spreads approaching to zero in 2019, in relation to refined copper prices. A recent development, in response to the tight scrap market was the release in late 2019 of a new version of China's solid waste management plan. A particular case was the Chinese levy in 2018 of a 25% tariff on copper scrap from the United States, one of its biggest suppliers, and the announcement to impose an extra 5% tariff on imports of copper scrap from the United States from December 2019, as part of a list of retaliatory tariffs that finally was not implemented. The 2018 trade tariffs saw China's copper scrap imports from the United States contract by 80% year-on-year in the first half of 2019 to around 52 thousand tonnes. At the end of 2019 both data on US exports to China and Chinese imports from the US reported around 93 thousand tonnes for the year, a historically low volume of trade of this raw material.

Impact of Chinese Scrap Trade Restrictions on Global Scrap Trade and Chinese Imports. One of the most important developments affecting the global physical copper market in 2018 and 2019 was the implementation of Chinese bans and import taxes on copper containing scrap imports. These actions contributed to reduce the global imports of recycled copper raw materials in gross weight by about 477 thousand tonnes in 2018, deepening the contraction in global imports by over 1.3 million tonnes in gross weight in 2019. The accumulated impact was a contraction in global imports of recycled copper raw materials of around 1.8 million tonnes in gross weight in 2018-2019. The impact on the reported Chinese imports of "copper scrap" was massive, with a fall in imports of over 1.1 million tonnes in 2018 and a new contraction of 2.4 million tonnes in 2019 including less copper scrap, less copper alloy scrap and copper waste imported into China. The accumulated

impact in 2018-2019 was an accumulated contraction in Chinese scrap imports of over 3.5 million tonnes in the 2 years versus 2017 volumes, mainly copper alloys and copper waste, that are currently being reallocated to third countries or are remaining in the exporting countries looking for treatment and domestic processing.

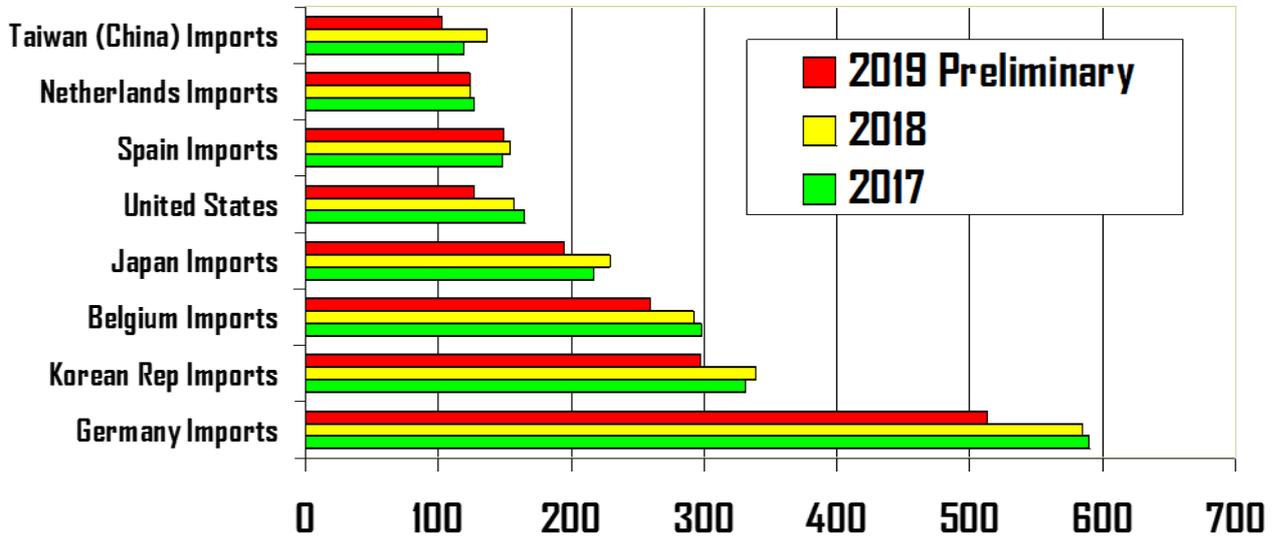
Impact of Chinese Scrap Trade Restrictions on the Chinese Copper Industry. Additionally to the impact on global and Chinese imports, there are two ongoing impacts on the Chinese copper industry from the related shortage of imported scrap: one is the contraction in the production of smelter and refined copper from recycled sources in China in 2018-2019. The second is the impact of the shortage of scrap on Chinese fabricators of copper and copper alloy products such as brass mills, copper alloy tubes and copper alloy wire producers. With less imported scrap available, these fabricators had no option but to increase their use of domestic scrap and refined copper in China in 2018-2019 or reduce fabrication output, as already seen in the case of some brass mills in Northern China in 2019. There is an additional impact on the copper wire rod mills using scrap in China, with some confirmed cases of reduced production as high as 50% and other plants temporarily closing in the second half of 2019. Another important impact was the change in the composition of copper raw materials imported by China from scrap to more concentrates, blister and refined copper that changed dramatically in 2018 and 2019 in part as a consequence of the implementation of the trade ban. An additional impact was a change of the composition of the main exporters of now much higher grade copper scrap to China.

Impacts on Refined Copper Producers in Developed and Developing Economies. The restrictions to the Chinese imports of copper alloy and copper waste are creating an increasing oversupply of copper scrap, copper alloy scrap, and a copper waste outside China. This situation was revealed in Q4 2019 and January 2020 when increasingly high spreads appeared between the price of the different scrap types and the prices of the refined copper both in the United States and in the European Union. In the European Union the bidding spread offered by copper smelters for Nr 2 copper scrap was as high as USD 450 per tonne in early 2020. With scrap recyclers and traders seeking new customers outside China, fabricators from Europe, the US, India, Malaysia and other countries are replacing refined copper by high grade copper scrap. This is because of the attractive price of the recycled material to fabricators compared to the price of refined copper in India as well as many other destinations where producers or importers of refined copper are being forced to confront the diversion of large volumes of US scrap exports. It is not clear yet if traders in India are re-exporting part of these materials. The European Union has more stringent export standards of waste as part of recycled raw materials compared to the United States and this situation might explain why European exports to India are growing more slowly than in the case of the US exports.

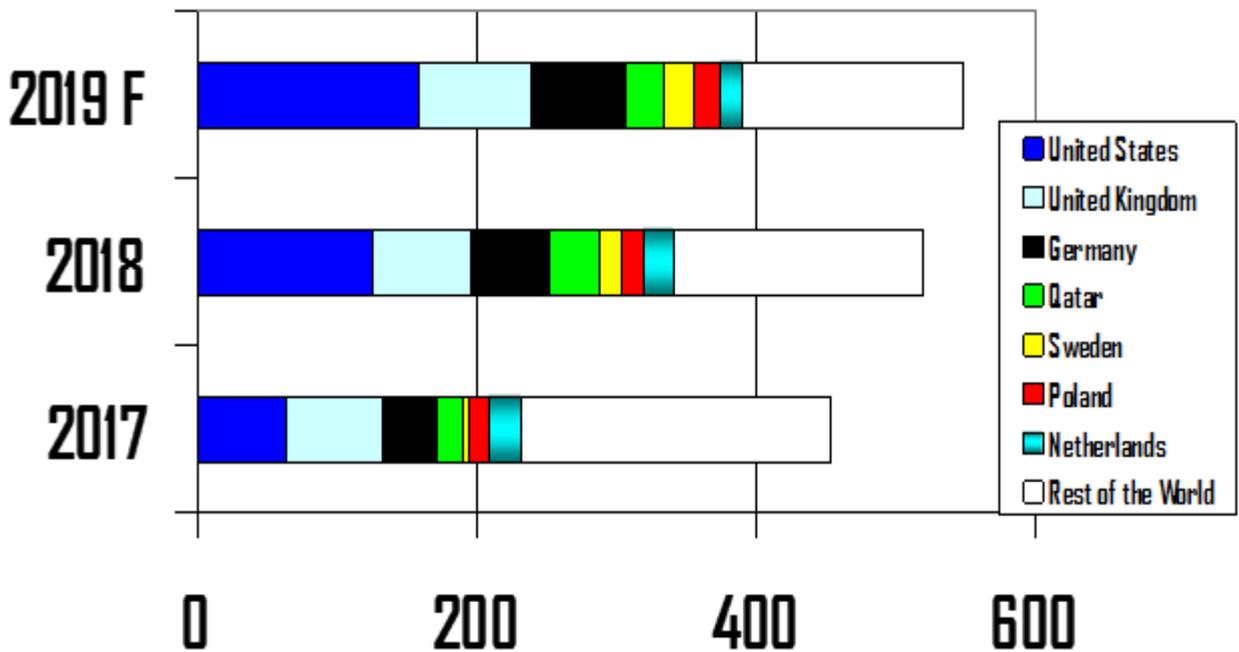
Impact on Imports of Recycled Copper in the Rest of the World ex China. With the oversupply of scrap in 2019 in the developed economies, the main importers of copper, alloy and copper waste became less interested. We confirmed a small contraction in imports classified as 7404 in 2019 in all main developed scrap importers including Germany, the Korean Republic, Belgium, Japan, the United States., the Netherlands and Taiwan (China). The aggregated contraction in scrap imports in this group of countries was -8% in 2019 in relation to 2018. A different situation was observed in developing economies, starting with the case of India, where imports of developed economies kept increasing and the volumes increased for imported 7404 scrap by India from the United States, the United Kingdom, Germany and Sweden. In 2019, India kept importing scrap from Qatar, Poland and the Netherlands. Other developing countries reported important increases in their imports of

scrap as they absorbed part of the oversupply caused by the end of Chinese imports of low grade copper, copper alloy scrap and the end of imports of copper waste to China.

Imports of Copper Scrap, Alloy Scrap and Copper Waste 7404 in Main Importer Countries, kt.



India: Imports by Origin of Copper Scrap, Alloy Scrap and Copper Waste HFT 7404 in kt, gross weight.



3. Impacts of Scrap Trade Restrictions on Copper Smelters, Refineries and Fabricators

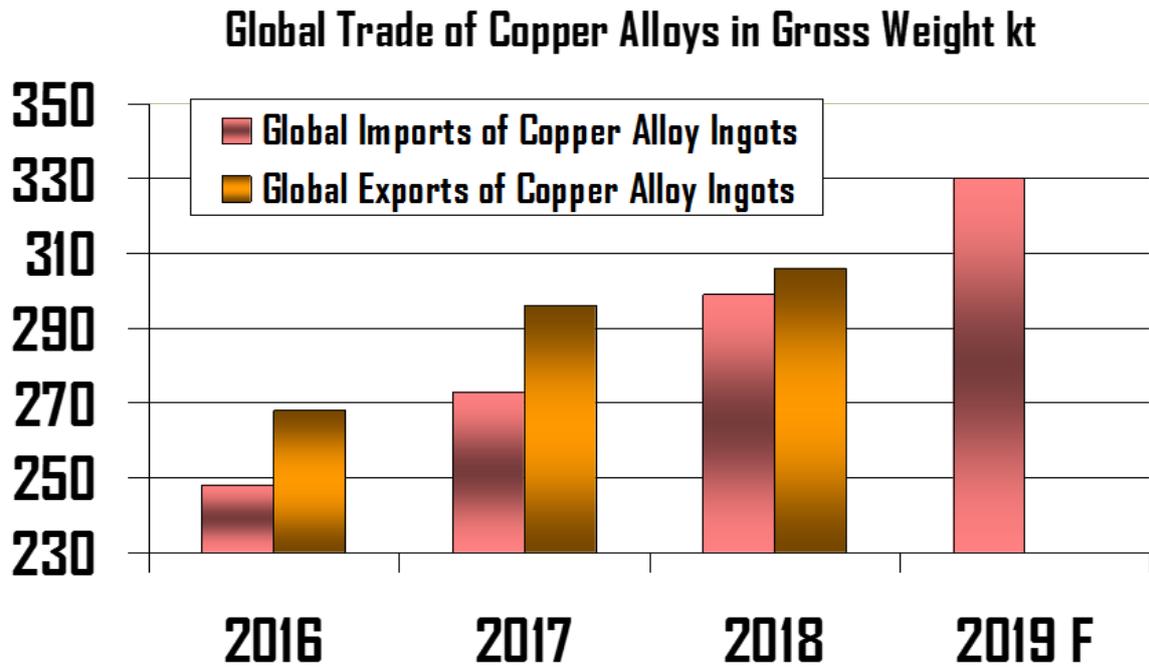
Impact of Scrap Trade Restrictions on Copper Smelters and Refineries in China. The slowdown in the annual growth of the Chinese production of smelted and refined copper from recycled sources reported by ICSG statistics for the period 2009-2019 is evident. In the period 2009-2013 the use of copper scrap in Chinese copper smelters increased significantly on higher availability of recycled copper, however in 2014-2016 scrap in copper smelter production in China increased more slowly. In 2018 and 2019 scrap use in Chinese copper smelters achieved volumes over 1.5 million tonnes of copper anodes production from recycled sources. This preliminary data for scrap smelter output in two years of reduced imported recycled copper raw materials in China deserves a careful review. It is evident that in the case of secondary refined copper production from scrap, China reported an historic peak in 2017 when the scrap refined reported to ICSG was as high as 2,300 kt-Cu per year. Confirmed data reported for 2018 reveals lower volumes of scrap refined in China with preliminary figures for 2019 revealing a slowdown in the growth of Chinese secondary refined production, related to the shortage of imported recycled copper raw materials. Scrap refined into copper in China was falling to lower volumes of secondary refined copper in 2019 versus 2018: the preliminary data for January-August 2019 revealed a new contraction in scrap refined in China. Large volumes of copper scrap and low copper content scrap not imported now by China were replaced by increased Chinese imports of copper concentrates and anodes when available. In 2018 and 2019, the collapse in Chinese copper and alloy scrap imports was accompanied by more imports of copper concentrates in gross weight. In 2019, the imports of refined copper reported by China were around 7% lower than in 2018.

Impact of Scrap Trade Restrictions on Copper Smelters and Refineries ex-China. The production of smelted and refined copper from recycled sources in the world outside China has been increasing significantly in recent years, and was expected to achieve a new record in 2019 due to the increased availability of scrap. After a volatile cycle in 2009-2015, driven by changes in the price of refined copper, between 2016 and 2018 a clear expansion in the production of scrap refined into copper cathodes outside China, was accompanied by a more modest recovery in the scrap smelted into anodes and blister. Globally, copper scrap and copper alloy scrap refined outside China in 2017 and 2018 increased by more than 151 kt, when compared to the production ex China of 2016, and increased to over 1.8 million tonnes copper for the first time in 2018. The expansion in scrap refined into copper in Germany was expected to grow only 2 kt. in 2019 versus 2016, but in the Benelux group of countries the growth was expected to be 11 kt, and in Japan the increase was 16 kt. In Iran, the expansion in scrap refined in 2016-2019 was expected to achieve 22 kt, meanwhile in the Russian Federation 34 kt of additional scrap refined was added and in the Korean Republic it increased an important 56 kt. In the countries of the Rest of the World except China the increase was the most important, achieving 69 kt of growth expected in 2019 versus 2016. The expansion of scrap refined outside China in 2016-2019 was in part explained by higher prices for refined copper and in part by less scrap exported to China due to the trade restrictions.

Impact on Fabricators of Copper and Alloy Products in China and Elsewhere. Imported copper scrap, copper alloy scrap and copper waste is not going only to copper smelters and copper fire refineries, but also to fabricators of brass mill products, copper alloy tubes, bars and shapes. And the high grade scrap very often goes to copper wire rod and other copper-only fabricated products, even when these fabricators are less dependent on scrap than before and rely more on refined copper inputs, in particular for high grade, oxygen free electric applications. The production of many fabricated copper alloy products such as copper alloy tubes, flat rolled copper alloys,

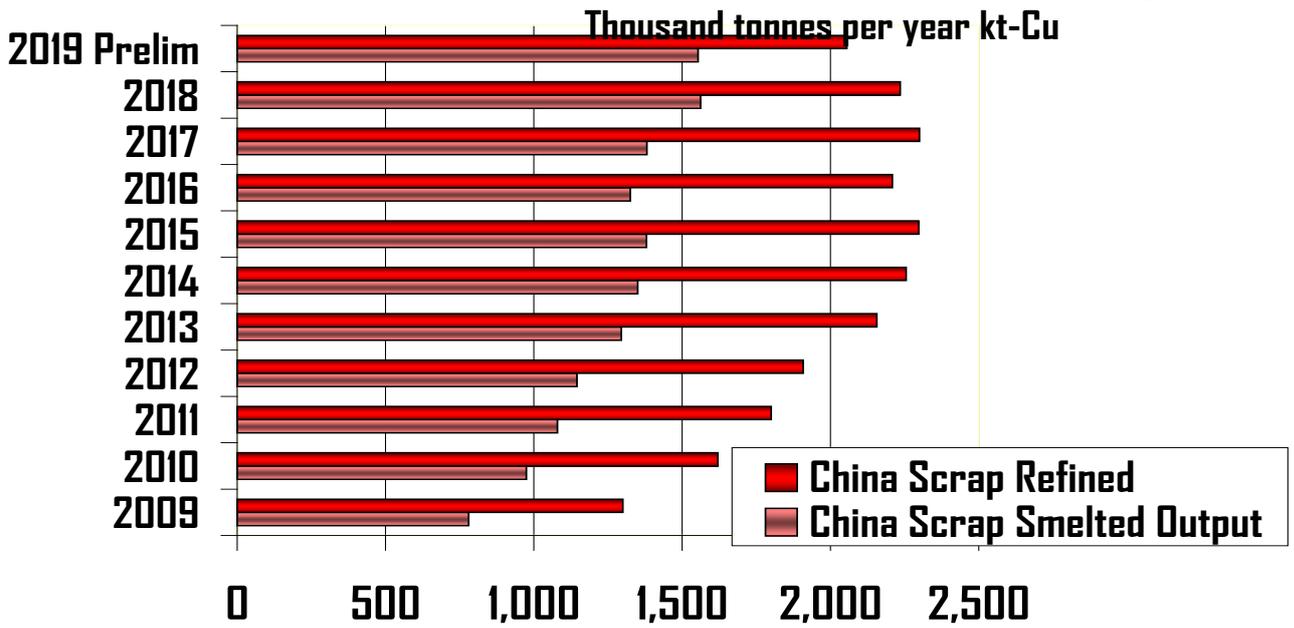
copper alloy bars and foundry castings from copper alloy ingots remain highly dependent on copper alloy scrap imports in many countries. Less recycled copper use in Chinese copper wire rod plants was observed in recent years, after tighter quality controls on “Made in China” copper wire and cable products. The gross weight use of scrap in Chinese brass mills and some semis is higher than in wire rod, and averages over 2.2 Mt in gross weight per year, but with a low copper content. More production in Chinese brass mills and semis ex-wire rod was observed over 2013-2018 with a growing share of refined copper inputs over copper scrap inputs, a trend that might have increased in China and decreased outside China in 2019 due to the scrap shortage in China and oversupply in the rest of the world. Increasingly scarce copper alloy scrap in China, and now increasingly abundant out of China in 2019, is affecting the output volumes of some of the fabricated products, and therefore the real industrial use of refined copper is changing in China and elsewhere, probably in different directions. A consequence of the shortage of scrap related to the import restrictions was the 9% contraction in the use of copper scrap and copper alloy scrap directly melted reported recently by Chinese fabricators in 2018-2019 versus the 2017 volumes. This contraction was accompanied by an increase close to 8% in the use of refined copper in the Chinese fabrication industry for the mentioned period. With more scrap available outside China, as confirmed for example in Europe and in the United States in 2017 after higher copper prices, fabricators demand for refined copper was negatively affected as observed in 2018-2019. In 2019, after a contraction in the end use demand and on fabricated production in the European Union, higher availability of scrap was making conditions more difficult for refined copper producers and importers of refined copper in the region.

New Copper Alloy Ingots and Black Copper Plants, Output and Trade. Not all the low grade copper scrap and the copper alloy scrap being exported to destinations out of China because of the trade restrictions is transformed into refined copper. Important volumes of scrap are being converted into copper alloy scrap ingots, and blister copper or “black copper” in new small and middle scale processing facilities in South Asia and in the Middle East. Then this intermedia material is increasingly imported into China as reported in ICSG alloy ingots trade statistics. Pakistan, the United Arab Emirates and South Africa are some of the new sources of copper alloy ingots imported by China. A 130% increase in imports of copper alloy ingots to China was observed in 2019 compared to 50 kt. imported in 2016. The visible presence of new Chinese copper alloy ingot makers in ASEAN is not evident yet in the 2018-2019 statistics. However in places like Sihanouk Ville in Cambodia, new plants are starting operations offering 96.5% copper alloy ingots containing gold, silver, platinum and palladium. ICSG is working to identify similar new plants using imported scrap in Malaysia, Thailand, Indonesia, Myanmar, Pakistan, the United Arab Emirates and South Africa.

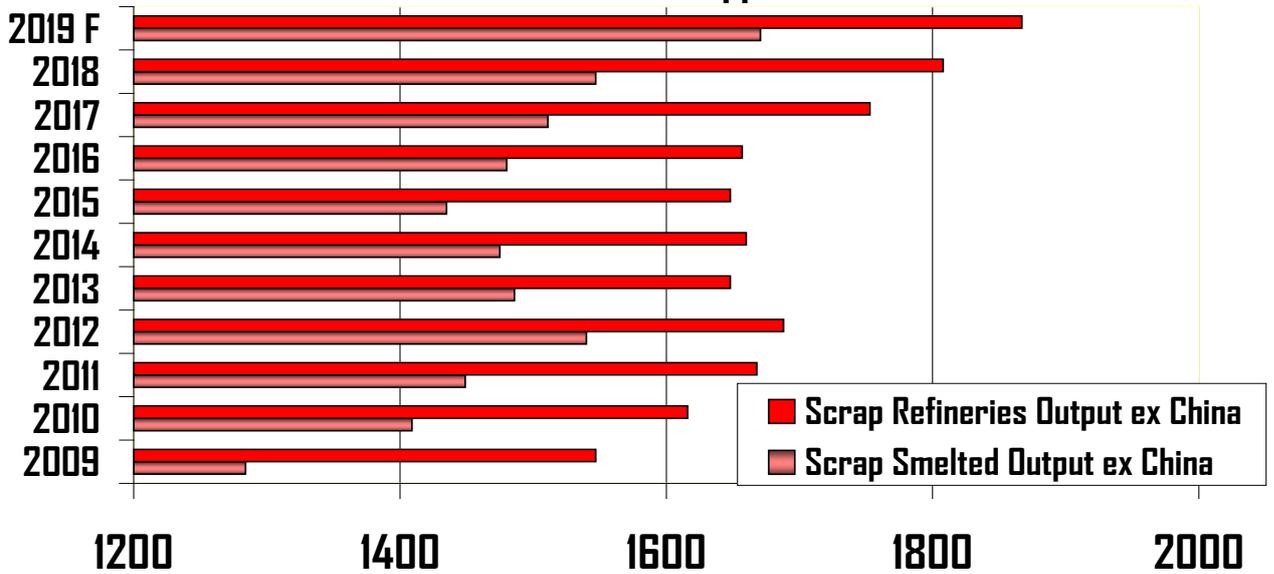


Copper End User Plants Reallocating from North East Asia on Trade Restrictions. Some copper end users reallocated production plants out of China in 2018-2019. This is not because of a lack of recycled copper, but in part because of trade restrictions imposed by the United States on the exports of Chinese products, and in part due to higher production costs in China. They then import copper wire rod, copper tubes and other semi-fabricated products from plants located in China. This situation explains the increasing volume of Chinese exports of fabricated copper and copper alloy products that jumped by 39% in 2018 versus 2017. In 2018, Chinese exports of fabricated products achieved a record volume of over 500 kt per year that remained similar in 2019. Important copper fabricators are also moving from the Korean Republic to Vietnam as their end use customers emigrate. It is possible that more Chinese and other fabricators in the North East Asia region might relocate to Vietnam, Malaysia, Thailand, Taiwan (China) and other countries in South Asia. Even though energy costs might be a challenge this will allow them to serve their copper end users with an easier access to sources of copper scrap and copper alloys to feed their operations.

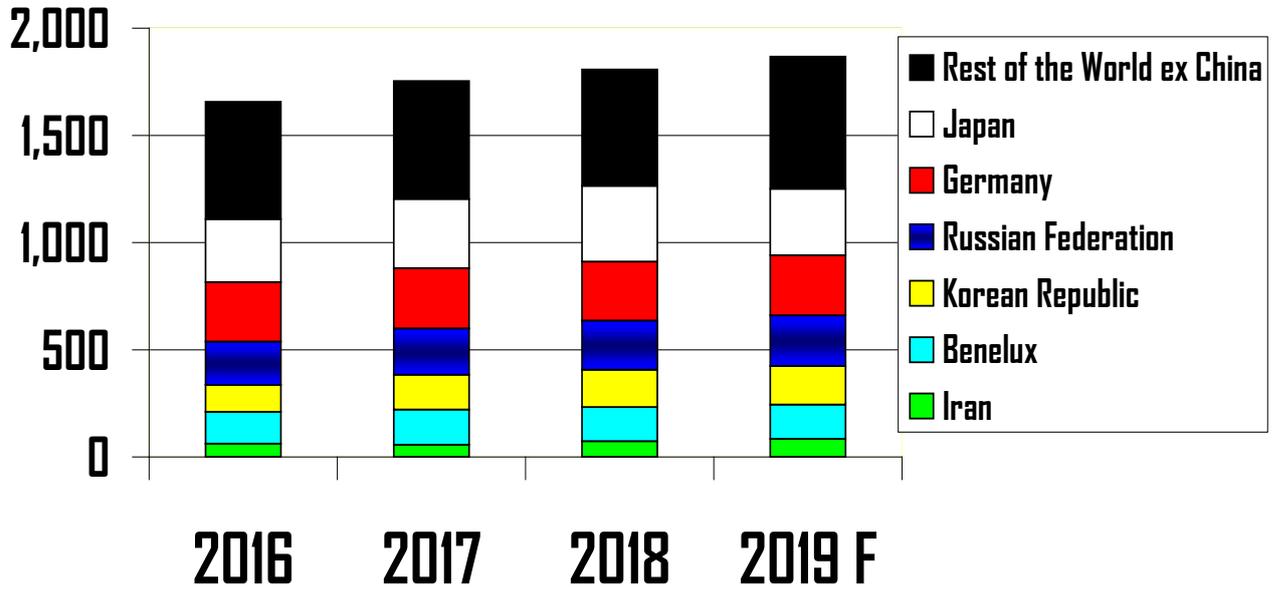
Scrap Smelted and Refined in China: Levelling Off.



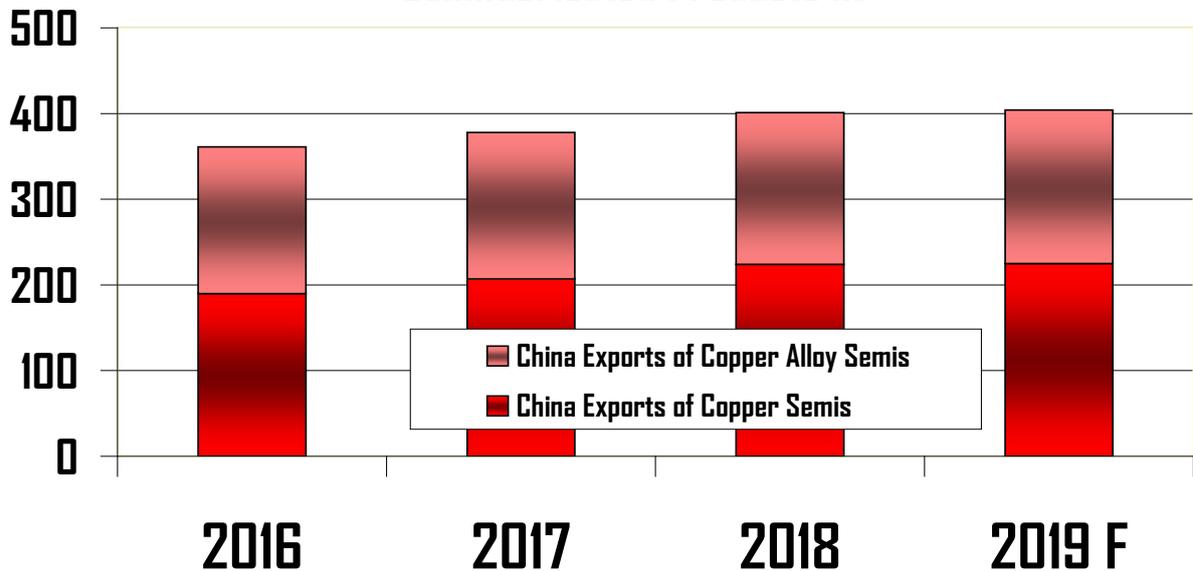
Scrap Smelted and Refined Outside China thousand tonnes of copper kt-Cu



Scrap Refined Into Copper Outside China Main Countries Refining Recycled Copper, kt-Cu.



China: Exports of Copper and Alloy Semifabricated Products kt



4. Conclusions

- The ongoing implementation of different measures to reduce the imports of plastic and metal waste into China and the use of import taxes and other trade barriers is changing the global flow of recycled copper raw materials.
- The downtrend of the global trade of recycled copper raw materials observed over 2012-2017 accelerated in 2018 due to increasing import controls, before imports to China collapsed in 2019 mainly as a result of the Chinese ban and trade restrictions effective from January 2019. Scrap exports to developing countries ex China increased in 2019.
- The impact of oversupplied scrap markets is affecting the sales of refined copper outside China as fabricators replace refined copper by high grade copper scrap when available at large price discounts. The response is an increasing pressure to increase import taxes on scrap classified as 7404 by the HST Codes.
- The analysis confirmed that exports and imports of recycled copper raw materials reported as “7404” in the HST codes fell in 2019 in most developed economies that are the main scrap traders. However, more scrap is being exported to new ASEAN ingot makers and fabricators, with India, Malaysia and Pakistan reporting most of the scrap imports in South East Asia.
- Part of the low copper content scrap and some high grade scrap volumes are being exported from North America and North East Asian countries to new dismantling and melting destinations in South Asia. Meanwhile imports of HST coded 7404 scrap to developed economies are falling due to the existing oversupply of copper alloy scrap in these countries after the implementation of Chinese waste imports restrictions.
- As a short term consequence of the trade restrictions imposed by China, an oversupply of low grade copper raw materials has been observed in most of the developed economies markets of recycled copper raw materials and now is appearing as imports in developing economies.
- The United States exporters reallocated most of their copper and copper alloy scrap exports to new markets, but the surplus created by the collapse of most of the US exports to China will take some time to be processed by plants using recycled copper in the US or elsewhere.
- Mainly due to the existence and enforcement of regulations that limit the trade of waste out of Europe, EU scrap exports are not growing as fast as in the case of the US scrap exports to the developing economies, despite increases in exports from European countries to India and Malaysia.
- In the European Union, the global reallocation of EU scrap exports out of the Chinese market has been slower than in the US and North East Asia ex China, to the benefit of local fabricators and smelters.

- The oversupply of high grade copper scrap is making it more difficult for copper refineries to sell their cathodes to fabricators in some markets. As a consequence new pressures to increase import taxes or control or ban the import of scrap and to protect copper refineries is emerging in different countries and in particular, but not only in India.
- The impact on the global secondary refined copper production from scrap has resulted in reduced production at Chinese smelters and refineries and higher production outside China. However, the annual changes in refined copper production in China and elsewhere are small and balance each other between China and the rest of the world.
- The reallocation of copper scrap, copper alloy scrap and low grade copper waste is driving new investments, mainly from Chinese companies, to produce copper alloy ingots and low grade blister copper, and a fast growth in the global trade of copper alloy ingots. These plants are emerging in South East Asia and other new destinations for recycled copper raw materials that are transformed into products that are then imported to China as high grade intermediate copper products with an important content of other metals.
- In the developed economies the investment response to the scrap oversupply has been slower than in South East Asia, but there are a few new projects that are looking to capitalize on the oversupply of lower copper content scrap.
- A comparison of the available imports of copper and alloy scrap and copper waste in China versus reported exports from developed economies to China confirmed that China Custom imports data for 2017-2019 are matching with exports to China reported by most of North America and Europe.
- Any differences between China Customs scrap import volumes and 7404 exports to China from Rest of the World are explained by different definitions of scrap, with China including more low copper content waste as “copper scrap”. Correcting export data from Malaysia and Australia confirms that Chinese copper alloy and waste scrap imports fell to less than 1.1 million tonnes in 2019 from around 1.5 million tonnes in 2018 and 2.5 million tonnes in 2017. Most of the difference is low grade scrap and copper waste rejected by China in 2018 and 2019.
- The January 2020 decision of Chinese authorities to classify category 6 scrap as a “renewable raw material” is expected to be implemented in July 2020. As a result global trade of recycled copper raw materials to China could start to recover in the second half of 2020.

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Exports to China of Copper Waste and Scrap - HST 7404			
reported by exporting country: thousand tonnes gross weight kt			
	2017	2018	2019 Preliminary
Hong Kong	30.2	109.6	186.7
Japan	293.8	225.6	126.2
United States	688.0	271.5	93.9
United Kingdom	141.5	109.6	88.9
Spain	90.2	61.9	75.4
Germany	182.6	98.5	63.8
Netherlands	95.7	49.7	48.6
Taiwan (China)	39.0	42.3	48.4
Thailand	21.5	31.6	36.9
Malaysia	0.7	5.3	36.9
Italy	95.6	53.6	34.7
Korea (Rep. of)	86.6	52.8	31.8
Australia	53.1	34.7	30.3
Canada	70.6	37.9	28.1
Belgium	49.8	22.1	18.4
France	47.8	22.9	15.3
Exported from the ROW	512.4	265.0	103.7
Exports to China	2,499.06	1,494.64	1,068.05
Chinese Imports of Copper Waste and Scrap			
reported by China Customs: thousand tonnes gross weight kt			
	2017	2018	2019 Preliminary
Malaysia	154.3	105.0	279.4
Hong Kong	632.9	342.6	243.7
Japan	232.2	443.4	140.0
United Kingdom	158.5	133.8	111.0
United States	537.7	354.6	92.8
Germany	158.2	109.1	64.9
Taiwan (China)	12.9	38.6	61.4
Thailand	150.3	35.6	52.8
Spain	61.2	56.1	51.5
Netherlands	198.0	86.8	46.6
United Arab Emirates	21.5	20.6	41.6
Korea (Rep. of)	99.4	74.5	39.9
Italy	69.9	55.3	39.3
Australia	459.5	103.4	37.3
Canada	41.3	37.9	35.2
Singapore	6.7	13.0	25.6
Philippines	171.7	25.5	25.2
Indonesia	3.3	11.6	20.9
France	45.3	25.4	15.4
Imported from the ROW	342.6	340.6	132.1
Chinese Imports	3,557.6	2,413.5	1,556.7