



## Release of ICSG 2019 Statistical Yearbook

The International Copper Study Group released its 2019 Statistical Yearbook covering world copper supply and demand data for the 10-year period 2009-2018. The Yearbook is an excellent tool that provides an assessment of how the market has evolved over the last 10 years, including trends in global copper production, usage, stocks and trade. **The Statistical Yearbook is included in the ICSG Monthly Bulletin annual subscription package and is also available for sale as a separate report in PDF/Excel (€200 for orders originating from ICSG member countries and €400 for other orders).**

**World copper mine production rose from 15.9 million metric tonnes (Mt) in 2009 to 20.6 Mt in 2018**, with concentrate production rising by around 31.5% (4 MT) and solvent extraction-electrowinning (SX-EW) by 19.5% (0.7 Mt):

- The compound annual growth rate (CAGR) for world copper mine production averaged 2.9%/y over the 10-year period. However, this includes the period 2009-2011 when production grew by only 0.1% due to temporary shutdowns/production cuts related to the world financial crisis. Excluding 2009-2011, average growth was around 3.7%/y.
- There was a small decrease in the SX-EW share of total mine production, from 20.5% in 2009 to 19% in 2018.
- Notable changes in annual mine production levels over 2009-2018 included increases of 1.2 Mt in Peru (CAGR 8%), 550,000 t in China (CAGR 5%), 900,000 t in the D.R. Congo (CAGR 17%), and 510,000 t in Mexico (CAGR 15%). However, annual production in Chile, by far the largest world copper mine producer, increased by only 440,000 t (CAGR 0.9%). Consequently, the country's share of world production declined from 34% to 28% with Peru (the second largest copper mine producer) increasing its share from 8% to 12%. The revival of the African copper belt led to an increase in African annual copper mine output of around 1.1 Mt.
- Annual output from countries that were minor producers in 2009 or where copper mine production was non-existent increased by around 440,000 t.

**World refined copper production rose from 18.2 Mt in 2009 to 24.1 Mt in 2018, with a CAGR of 3.2%.**

- Primary (electrolytic and SX-EW) and secondary (from scrap) refined production increased by 3%/y and 4%/y, respectively.
- The share of secondary production in total refined production increased gradually from 15.5% in 2009 to 18% over 2010-2013 before stabilizing at around 17%.
- Over the 10-year period, China's annual refined production more than doubled from 4 Mt to 9.3 Mt (CAGR 9.7%), while production in Chile (the second ranked refined copper producer) declined by 25% from 3.3 Mt to 2.5 Mt (CAGR -3%).
- In the United States, Japan and the EU compound annual growth rates averaged -0.3%, 1.5% and 0.9%, respectively.
- Expansion of electrolytic refinery capacity in Iran, Russia, South Korea and Turkey and electrowinning capacity in Mexico, Myanmar and Spain led to increases in annual refined production capacity in these countries.
- With the start-up of several SX-EW plants, annual refined production in the DRC grew from around 170,000 t in 2009 to 890,000 t in 2018 (CAGR 22%).

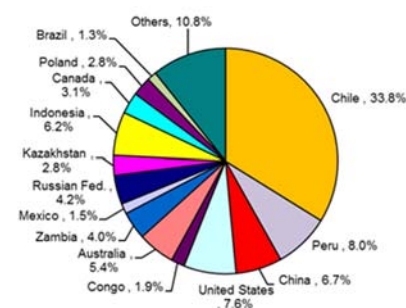
**World apparent refined usage increased by 37% over the 10-year period, with a CAGR of 3.7%.**

- Growth was driven by China<sup>1</sup> where apparent usage over the 10-year period grew by about 5.4 Mt (CAGR 6.5%). China's share of world usage grew to 51% in 2018 compared to 40% in 2009.
- World usage excluding China increased by a CAGR 1.2% over the same period, but only by 0.6%/y in 2017-2018.
- Usage increased by a CAGR of 0.8% in the EU, 1.9% in Japan, and 1% in the United States over the 10-year period.
- With the expansion of semis production capacity, refined copper usage increased significantly in the United Arab Emirates (CAGR 23%) and in Vietnam (CAGR 14%) and to a lesser extent in some South-East Asian countries (Indonesia 4%/y, Malaysia 4%/y and Thailand 6%/y). In contrast, closures of semis plants led to significant declines in usage in Egypt and Australia.

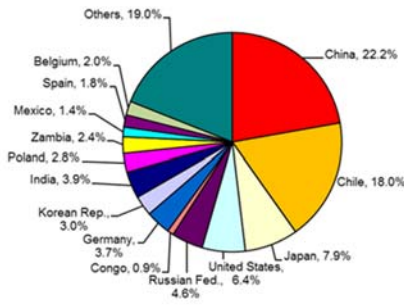
<sup>1</sup> ICSG uses an apparent refined usage calculation for China that does not take into account changes in unreported stocks [State Reserve Bureau (SRB), producer, consumer, traders, bonded].

### (World Refined Copper Usage and Supply Trend – by country)

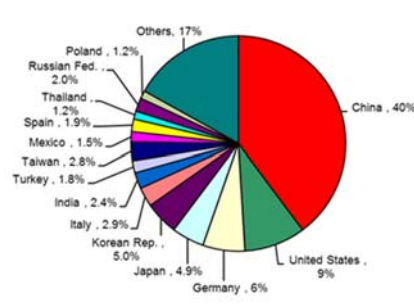
Share in World Mine Production (2009)



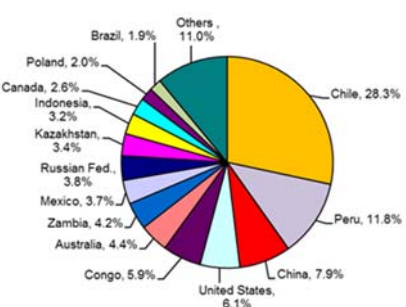
Share in World Refined Production (2009)



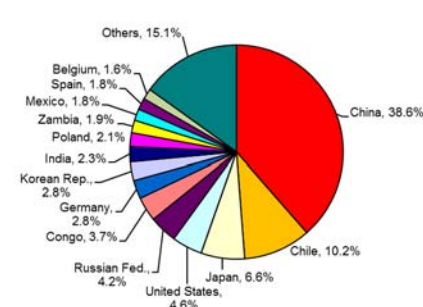
Share in World Refined Usage (2009)



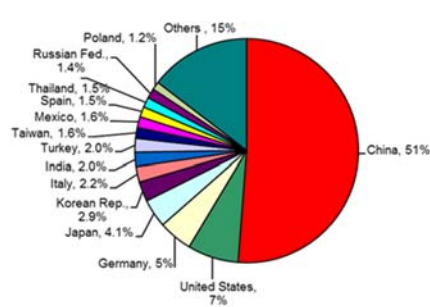
Share in World Mine Production (2018)



Share in World Refined Production (2018)



Share in World Refined Usage (2018)



## World Refined Copper Usage and Supply Trends, 2009-2018

Thousand metric tonnes, copper

|  | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   | 2018   |
|--|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| World Mine Production  | 15,946 | 15,992 | 15,965 | 16,692 | 18,190 | 18,429 | 19,160 | 20,402 | 20,082 | 20,575 |
| World Mine Capacity  | 19,149 | 19,258 | 19,476 | 20,020 | 20,800 | 21,587 | 22,367 | 23,481 | 23,993 | 24,077 |
| Mine Capacity Utilization (%)                                  | 83     | 83     | 82     | 83     | 87     | 85     | 86     | 87     | 84     | 85     |
| Primary Refined Production                                     | 15,386 | 15,744 | 16,133 | 16,598 | 17,255 | 18,575 | 18,892 | 19,490 | 19,485 | 20,055 |
| Secondary Refined Production                                   | 2,847  | 3,236  | 3,468  | 3,596  | 3,803  | 3,915  | 3,945  | 3,866  | 4,053  | 4,043  |
| World Refined Production<br>(Secondary+Primary)                | 18,234 | 18,981 | 19,601 | 20,194 | 21,058 | 22,490 | 22,838 | 23,357 | 23,538 | 24,098 |
| World Refinery Capacity  | 22,865 | 23,092 | 23,588 | 24,374 | 25,563 | 26,469 | 26,602 | 26,913 | 27,435 | 27,770 |
| Refineries Capacity Utilization<br>(%)                         | 80     | 82     | 83     | 83     | 82     | 85     | 86     | 87     | 86     | 87     |
| Secondary Refined as % in Total<br>Refined Prod.               | 15.6   | 17.1   | 17.7   | 17.8   | 18.1   | 17.4   | 17.3   | 16.6   | 17.2   | 16.8   |
| World Refined Usage 1/   | 17,889 | 19,130 | 19,704 | 20,468 | 21,401 | 22,908 | 23,062 | 23,492 | 23,710 | 24,489 |
| World Refined Stocks<br>End of Period 4/                       | 1,376  | 1,198  | 1,205  | 1,376  | 1,325  | 1,334  | 1,505  | 1,365  | 1,375  | 1,227  |
| Period Stock Change  | 275    | -178   | 7      | 171    | -52    | 10     | 171    | -140   | 10     | -148   |
| Refined Balance 2/   | 344    | -149   | -103   | -274   | -343   | -417   | -224   | -136   | -171   | -391   |
| Refined Balance Adjusted for<br>Chinese bonded stock change 3/ | 453    | 28     | -165   | 293    | -590   | -441   | -327   | -123   | -169   | -450   |

1/ Based on EU apparent usage and Chinese apparent usage.

2/ Surplus/deficit is calculated using refined production minus refined usage.

3/ In developing its global market balance, ICSG uses an apparent demand calculation for China that does not take into account changes in unreported stocks [State Reserve Bureau (SRB), producer, consumer, bonded]. To facilitate global market analysis, however, an additional line item—Refined World Balance Adjusted for Chinese Bonded Stock Changes—is included in the table that adjusts the world refined copper balance based on an average estimate of changes in bonded inventories provided by three consultants with expertise in China's copper market.

4/ Excludes unreported stocks