

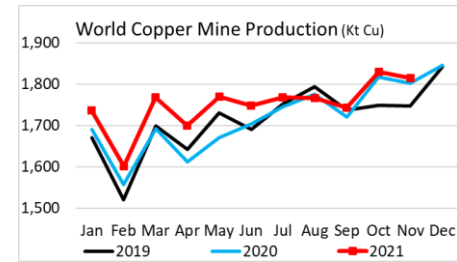


Copper: Preliminary Data for November 2021

The International Copper Study Group (ICSG) released preliminary data for November world copper supply and demand in its February 2022 Copper Bulletin. The Bulletin and ICSG online statistical database provide data, on a country basis, for copper mine, smelter, refined and semis production, copper refined usage, trade, stocks and prices. The bulletin is available for sale (annual subscription €550/€900 for orders originating from/outside institutions based in ICSG member countries).

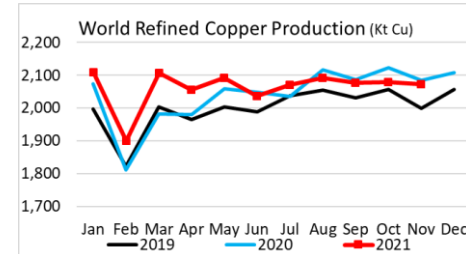
Preliminary data indicates that world copper mine production increased by about 2.5% over the first eleven months of 2021, with concentrate production increasing by around 3.9% and solvent extraction-electrowinning (SX-EW) declining by about 3.6%:

- Mine production grew by around 2.5% in Jan-Nov 2021 but this compares to a low 2020 basis when the copper mining industry was severely impacted by the global lockdown.
- Government imposed restrictions related to COVID-19 and sustained rates of infection have continued to constrain mine output in a number of countries in 2021.
- Production in Chile, the world's largest copper mine producing country, was down by 2% over the period Jan-Nov 2021 with concentrate production falling by 1.3% and SX-EW output declining by 4% mainly at the Escondida mine.
- Output in Peru, the world's second largest copper mine producing country, increased by 8.5% primarily due to the fact that the Peruvian mining industry was one of the most severely impacted by a COVID-19 related lockdown in 2020. Despite the recovery, production over the first eleven months of 2021 was still 6.3% below that of the same period in 2019.
- Indonesian output increased by about 50% principally as a consequence of the continued ramp-up of underground production at the Grasberg mine. Strong increases were also seen in the D.R.Congo (+11%), Panama (+66%) and China (+9%) due to additional output from new/expanded operations or improved operational levels.



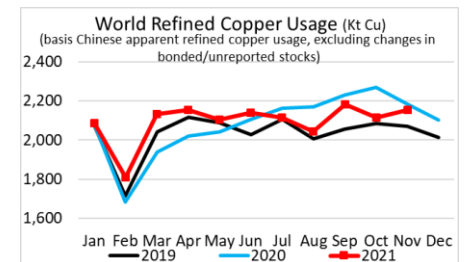
Preliminary data indicates that world refined copper production increased by about 1.3% over the first eleven months of 2021 with primary production (electrolytic and electrowinning) up by 0.7% and secondary production (from scrap) up by 4.7%.

- Preliminary official Chinese refined production data indicates growth of 4% over Jan-Nov 2021, however, y-o-y 3rd quarter production was up by only 0.9%.
- Chilean total refined copper production (electrolytic and electrowinning) declined by 2.4% mostly impacted by a 4% reduction in electrowinning refined production.
- Refined production was up by 8.5% in the D.R. Congo due to the continued ramp-up of new or expanded SX-EW plants.
- Refined output increased by 44% in India, 22% in Belgium and 10% in the United States in Jan-Nov 2021 mainly due to recoveries from 2020 operational issues and lockdown.
- Preliminary data indicates falls in Australia, Brazil, Germany, Japan, Myanmar, Russia, and Spain for various reasons including maintenance work, operational issues and the shutdown of SX-EW plants.
- Globally, secondary refined production (from scrap) grew by 4.7% with China being the most significant contributor to this growth.



Preliminary data indicates that world apparent refined copper usage grew by about 1% over the first eleven months of 2021:

- The COVID-19 related global lockdown has had a notable negative impact on the world economy and subsequently on key copper end-use sectors in all regions ex-China. Although global demand started to recover in the 2nd half of 2020, refined usage in 2021 remained below pre-pandemic levels in most countries.
- World ex-China refined usage is estimated to have increased by about 9% in Jan-Nov 2021 compared to Jan-Nov 2020 but remained 2% below that of the same period of 2019.
- Due to a 29% decline (1.19 Mt) in net refined copper imports, Chinese apparent usage (excluding changes in bonded/unreported stocks) declined by 5.5%, partially offsetting usage growth in other regions of the world.
- The introduction in Aug-21 of a temporary 15% tax on exports of refined copper appears to have influenced an increase in Russia's refined copper usage.



Preliminary world refined copper balance in the first eleven months of 2021 indicates an apparent deficit of about 340,000 t:

- In developing its global market balance, ICSG uses an apparent demand calculation for China that does not consider changes in unreported stocks [State Reserve Bureau (SRB), producer, consumer, merchant/trader, bonded]. To facilitate global market analysis, however, an additional line item - Refined World Balance Adjusted for Chinese Bonded Stock Changes - is included in the attached table that adjusts the world refined copper balance based on an average estimate of changes in bonded inventories provided by two consultants with expertise in China's copper market.
- Over the first eleven months of 2021, the world refined copper balance, based on Chinese apparent usage (excluding changes in bonded/unreported stocks), indicated a deficit of about 340,000 t. The world refined copper balance adjusted for changes in Chinese bonded stocks indicated a market deficit of about 517,000 t.

Copper Prices and Stocks:

- Based on the average of estimates provided by two independent consultants, China's bonded stocks are thought to have declined by about 178,000 t in the first eleven months of 2021 compared to the year-end 2020 level.
- As of the end of January 2022, copper stocks held at the major metal exchanges (LME, COMEX, SHFE) totalled 200,143 t, an increase of 9,213 t (+5%) from stocks held at the end of December 2021. Stocks were down at the LME (-3%) and up at COMEX (+15%) and SHFE (+6%).
- The average LME cash price for January was US\$ 9,775.93 /t, up 2.4% from the December average of US\$ 9,550.31 /t. The 2022 high and low copper prices through the end of January were US\$ 9,972 /t (on 13th Jan) and US\$ 9,565 /t (on 6th Jan), respectively, and the year average was US\$ 9,775.93 /t (4.9% above the 2021 annual average).

(World Refined Copper Usage and Supply Trends table on next page)

Please visit the ICSG website www.icsg.org for further copper market related information.

World Refined Copper Usage and Supply Trends

Thousand metric tonnes, copper

	2018	2019	2020	2020	2021	2021			
				Jan-Nov	Aug	Sep	Oct	Nov	
World Copper Mine Production (Concentrates & SX-EW)	20,579	20,571	20,634	18,788	19,243	1,767	1,744	1,830	1,814
World Copper Mine Capacity	24,161	24,260	24,821	22,769	23,754	2,222	2,160	2,242	2,180
Mine Capacity Utilization Rate(%)	85.2	84.8	83.1	82.5	81.0	79.5	80.7	81.6	83.2
Primary Refined Copper Production	20,028	19,987	20,630	18,845	18,971	1,757	1,746	1,752	1,745
Secondary Refined Copper Production	4,035	4,028	3,875	3,553	3,721	335	331	328	328
World Refined Copper Production (Primary & Secondary)	24,063	24,016	24,505	22,398	22,692	2,092	2,077	2,080	2,073
World Copper Refinery Capacity	28,106	29,095	29,853	27,263	27,571	2,564	2,486	2,574	2,496
Refinery Capacity Utilization Rate (%)	85.6	82.5	82.1	82.2	82.3	81.6	83.5	80.8	83.1
World Refined Copper Usage 1/	24,480	24,405	24,989	22,885	23,031	2,044	2,183	2,114	2,152
World Refined Copper Stocks End of Period	1,227	1,215	1,234	1,279	1,230	1,402	1,320	1,276	1,230
Period Stock Change	-148	-12	19	64	-4	6	-82	-44	-46
Refined Copper Balance 2/	-417	-389	-484	-487	-339	48	-106	-34	-79
Seasonally Adjusted Refined Balance 3/				-406	-276	6	-48	-11	-20
Refined Balance Adjusted for Chinese bonded stock change 4/	-477	-567	-374	-374	-517	-7	-191	-79	-114

Due to the nature of statistical reporting, the published data should be considered as preliminary as some figures are currently based on estimates and could change.

1/ Based on Chinese and EU apparent usage.

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

3/ Surplus/deficit is calculated using seasonally adjusted refined production minus seasonally adjusted refined usage.

4/ For details of this adjustment see the paragraph of the press release on "World refined copper balance".