



**New Edition of ‘ICSG Directory of Copper Mines and Plants’**

The International Copper Study Group (ICSG) released a new Edition of its biannual Directory of Copper Mines and Plants that provides global facility-by-facility production capacity and summary country capacity through to 2024. It also presents the main projects and expansions expected to be developed in the near/medium future.

The Directory, which incorporates the latest updates to capacity, project development and ownership for more than 1,330 individual copper mines, smelters and refineries, also includes charts/tables on the current and long-term global distribution of capacity by country, size, operational/development status and process type. In addition to the thorough research undertaken by the ICSG secretariat, updated and detailed information regarding capacity trends at operating/projected mines/plants is received from ICSG member countries.

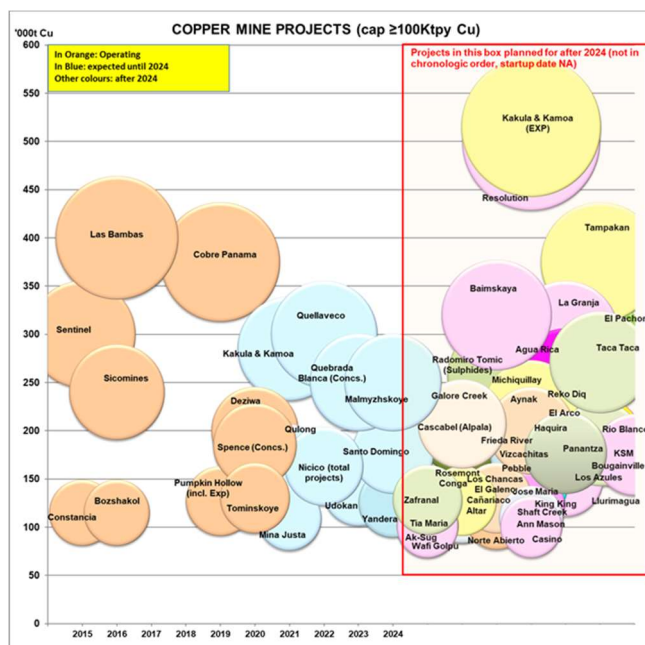
The biannual Directory is available for sale to ICSG member country/non-member country clients at the single-issue rate of €400/€700 and annual subscription rate of €550/€850. At an additional cost of €200/€250 capacity data for copper mines, smelters and refineries may be accessed through the ICSG online statistical database allowing users to extract data suited to their analytical requirements. Please see the attached Directory table of contents or contact ICSG for additional information or purchasing details (mail@icsg.org).

Trends in copper mine, smelter and refinery production capacity reflect production capability and not necessarily production forecasts. Several factors can constrain actual production rates such as strikes, accidents, adverse weather, among others. In 2020, operational constraints related to the Covid-19 pandemic and global lockdown are estimated to have led to a decline in capacity utilization rates to around 82.3% of the capacity reported in the ICSG Directory. The average capacity utilization rates of the previous 5 years had been around 85.5%.

The current Directory highlights the following trends:

• **After a period (2017-2019) with practically no commissioning of major new copper mines, several major projects starting in the period 2020-2024:**

- Low growth of around 1%/year was seen over 2017-2019 as no major copper mine projects were commissioned with the exception of Cobre de Panama (see chart).
- The postponement of projects and expansions over the last few years due to unfavourable trends in capital expenditure and delays in project development, mainly as a result of the time required for project permitting, shifted new capacity forward.
- In part, this led to an agglomeration of new projects/expansions starting in the period 2020-2024 (chart on the right only lists projects with capacity above 100,000t copper; several smaller projects are also starting and listed in ICSG Directory of Copper Mines and Plants).
- The Covid-19 related lockdown and travel constraints impacted some project developments delaying scheduled start-up date.
- Over the period 2021 to 2024, world mine capacity is expected to increase by an average of 4% per year, with concentrates representing around 95% of the total growth in world mine capacity.
- Capacity development linked to Chinese overseas investments, mainly in Africa, continues.
- Interest in seabed copper exploration continues with projects currently being evaluated. However, development is slow.



• **Beyond 2024, a significant number of copper mine projects are currently being evaluated supporting the long-term availability of copper (see chart above and detailed information by project in ICSG Directory of Copper Mines and Plants)**

• **From 2021 to 2024, annual copper smelter capacity is expected to grow at an average rate of around 2% per year**

- China is continuing to expand its copper smelting capacity but at a slower pace than before. Currently, Chinese annual capacity is seven times higher than in 2000 and is expected to increase by a further 20% by 2024, accounting for 75% of expected world copper smelting capacity growth.
- The proportion of smelters using Chinese technology has increased from 2.5% to around 15% in the last 10 years.
- On an ex-China basis, over the period 2021 to 2024, new copper smelters or expansions are planned in Indonesia, Iran, Russia and Uzbekistan. A few projects have been announced in other countries beyond 2024 but are still pending approval. In Indonesia, due to the Covid-19 pandemic, the two companies currently developing smelters have notified the Government of delays and are discussing deferrals.

• **Over the period 2021 to 2024, annual copper refinery capacity is likely to grow at an average rate of around 1% per year**

- Growth in electrolytic refinery capacity and in Electrowinning (SX-EW) capacity is projected to average 1%.
- About 82% of the growth in global refined capacity from 2021 to 2024 is expected to come from electrolytic refineries.
- China (in the form of electrolytic capacity) will be by far the biggest contributor to world growth in refined capacity.
- By the end of 2024, electrowinning capacity is expected to have declined by 12% in Chile but to have increased by an aggregated 18% in both the D.R. Congo and the United States.

**Background notes:**

The biannual ICSG Directory of Mines and Plants provides basic data for all copper mining, smelting and refining operations on a worldwide basis and projects the development of future capacities for these operations. These projections can serve as a basis for forecasts of the supply side development for copper. Each edition is complemented by a list of web addresses of companies, enabling quick and easy access to company details. The ICSG database is continually updated to reflect recent announcements and operational/ownership changes. Salient details for each mine, smelter and refinery are included and the Directory separates operations between ‘Operating’, ‘Developing’, ‘Exploration’ and ‘Feasibility’ stages. The Directory also includes information on production processes, concentrate grades and by-products.

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