The next Meetings of the International Copper Study Group will be held in Lisbon, Portugal in the period 9-10 May 2019.

World refined copper production is expected to rise by around 2.7% in 2018 and 2.6% in 2019. Incremental output from major projects/ expansions that started in 2015-2016 has levelled off and less additional output is now expected from the few new projects/expansions coming on stream this year. After a decline of 1.5% in 2017, world mine production, after adjusting for historical disruption factors, is expected to grow by around 2% in 2018 and 1.2% in 2019:

- World mine production decreased by 1.5% in 2017 due to significant supply disruptions and a lack of significant output from new projects or expansions, but is expected to grow by 2% this year.
- Most of the growth expected in 2018 is due to the recovery from constrained output last year, mainly in Chile and Indonesia, and the re-starting of temporarily closed capacity in the DRC and Zambia.
- Incremental output from major projects/expansions that started in 2015-2016 has levelled off and less additional output is now expected from the few new projects/expansions coming on stream this year.
- No major supply disruptions have occurred so far in 2018 and most labour negotiations have been agreed. However, overall growth has been negatively affected by lower output at some mines in Canada and operational problems in China, Peru and the United States. As a consequence the ICSG growth forecast for mine production has been revised down to 2% compared with the previous forecast of 2.9% made in April this year.
- Growth in 2019 world mine production, adjusted for disruptions, is predicted to be around 1.2% and is expected to be impacted by a sharp decline in Indonesian output.

World refined production is expected to increase by around 2.7% in 2018 and 2019 respectively:

- A series of planned and unplanned shutdowns and operational issues at major smelters mainly in Australia, India and the Philippines combined with lower than anticipated output in Canada, Chile, and the United States has resulted in a downward revision in the ICSG forecast for growth in refined production to 2.7% (compared to 4% in April).
- These production problems are partially offsetting strong increases in the countries where plants are recovering from maintenance work undertaken in 2017 and growth in SX-EW output arising from the restart of temporary closed capacity in the DRC.
- China will remain the biggest contributor to world refined production growth in 2018 and 2019, followed by the DRC.
- After a growth of 5% in 2017 world secondary production from scrap is expected to be unchanged this year.
- In 2019, planned electrolytic refined production is likely to be constrained by tightness in the availability of concentrates resulting in a limited increase of 2.7%.

World apparent refined usage is expected to increase by around 2.1% in 2018 and 2.6% in 2019:

- Sustained growth in copper demand is expected to continue because copper is essential to economic activity and even more so to the modern technological society. Infrastructure development in major countries such as China and India and the global trend towards cleaner energy will continue to support growth in copper demand.
- The global economy has performed well this year with growth expected to be similar to that in 2017.
- However, ICSG forecast for world usage growth in 2018 has been slightly reduced as compared to previous forecast mainly due to weaker than expected usage in some Asian countries and in the United States. World growth for 2019 remains essentially unchanged to that foreseen previously at 2.6%.
- China will remain the biggest contributor to world growth in copper usage. Although underlying "real" demand growth in China is estimated by some analysts to be around 4.5% in 2018, Chinese apparent demand is predicted to grow by only 3.2%. Lower growth is expected in 2019 for both apparent and real usage.
- The outlook for the EU and Japan remains positive with higher growth expected this year compared to 2017. Usage in the United States is weaker this year but should recover in 2019. World ex-China usage is expected grow by around 1% in 2018 and a further 2.5% in 2019.

World refined copper balance projections indicate a deficit of about 90,000 t and 65,000 t for 2018 and 2019 respectively:

- ICSG recognizes that global market balances can vary from those projected owing to numerous factors that could alter projections for both production and usage. In this context it can be noted that actual market balance outcomes have on recent occasions deviated from ICSG market balance forecasts due to unforeseen developments.
- 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, merchant/trader, bonded]. Apparent copper demand for China is based only on reported data (production + net trade +/- SHFE stock changes) and does not take into account changes in unreported stocks [State Reserve Bureau (SRB), producer, consumer and merchant/trader], which can be significant during periods of stocking or de-stocking and which can markedly alter global supply-demand balances.
- Current ICSG projections are for a small deficit of about 90,000 metric tonnes (t) in 2018, compared to a surplus of about 40,000 t foreseen at our April meeting. The switch to deficit is mainly due to lower than previously anticipated growth in refined copper production. For 2019, we expect the market to present a deficit of about 65,000 t compared to a deficit of 330,000 t forecast in April, mainly due to upward revisions in refined production.

Next Meetings of ICSG

The next Meetings of the International Copper Study Group will be held in Lisbon, Portugal in the period 9-10 May 2019.

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

## Thousand metric tonnes, copper

1/ Based on a formula for the difference between the projected copper availability in concentrates and the projected use in primary electrolytic refined production.

2/ Allowance for supply disruptions based on average ICSG forecast deviations for previous 5 years.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1,957</td>
<td>2,155</td>
<td>2,434</td>
<td></td>
<td>1,278</td>
<td>1,437</td>
<td>1,654</td>
<td>208</td>
<td>208</td>
<td>210</td>
</tr>
<tr>
<td>N.America</td>
<td>2,638</td>
<td>2,568</td>
<td>2,700</td>
<td></td>
<td>1,847</td>
<td>1,799</td>
<td>1,855</td>
<td>2,304</td>
<td>2,249</td>
<td>2,297</td>
</tr>
<tr>
<td>Latin America</td>
<td>8,394</td>
<td>8,556</td>
<td>9,004</td>
<td></td>
<td>2,937</td>
<td>2,986</td>
<td>3,126</td>
<td>442</td>
<td>451</td>
<td>476</td>
</tr>
<tr>
<td>Asean-10 / Oceania</td>
<td>1,938</td>
<td>2,138</td>
<td>1,875</td>
<td></td>
<td>1,045</td>
<td>1,071</td>
<td>1,243</td>
<td>1,155</td>
<td>1,156</td>
<td>1,212</td>
</tr>
<tr>
<td>Asia ex Asean/CIS</td>
<td>2,433</td>
<td>2,387</td>
<td>2,546</td>
<td></td>
<td>12,066</td>
<td>12,495</td>
<td>13,280</td>
<td>15,385</td>
<td>15,795</td>
<td>16,286</td>
</tr>
<tr>
<td>Asia-CIS</td>
<td>861</td>
<td>851</td>
<td>851</td>
<td></td>
<td>439</td>
<td>428</td>
<td>447</td>
<td>103</td>
<td>106</td>
<td>106</td>
</tr>
<tr>
<td>EU</td>
<td>963</td>
<td>918</td>
<td>899</td>
<td></td>
<td>2,728</td>
<td>2,727</td>
<td>2,806</td>
<td>3,238</td>
<td>3,339</td>
<td>3,342</td>
</tr>
<tr>
<td>Europe Others</td>
<td>858</td>
<td>897</td>
<td>926</td>
<td></td>
<td>1,156</td>
<td>1,226</td>
<td>1,236</td>
<td>925</td>
<td>950</td>
<td>960</td>
</tr>
<tr>
<td>TOTAL</td>
<td>20,041</td>
<td>20,471</td>
<td>21,233</td>
<td></td>
<td>23,498</td>
<td>24,169</td>
<td>25,646</td>
<td>23,759</td>
<td>24,253</td>
<td>24,890</td>
</tr>
<tr>
<td>World adjusted 1/ 2/</td>
<td>20,041</td>
<td>20,429</td>
<td>20,677</td>
<td></td>
<td>23,498</td>
<td>24,161</td>
<td>24,825</td>
<td>23,759</td>
<td>24,253</td>
<td>24,890</td>
</tr>
<tr>
<td>% change</td>
<td>-1.6%</td>
<td>1.9%</td>
<td>1.2%</td>
<td></td>
<td>0.7%</td>
<td>2.8%</td>
<td>2.7%</td>
<td>0.7%</td>
<td>2.1%</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

**World Refined Balance (China apparent usage basis)**

-261 -92 -66

1/ Based on a formula for the difference between the projected copper availability in concentrates and the projected use in primary electrolytic refined production.

2/ Allowance for supply disruptions based on average ICSG forecast deviations for previous 5 years.