



# Correction: The dynamics and long-term availability of the total resources from the geosphere and technosphere—re-examined

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## Correction: Mineral Economics

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The original version of this article unfortunately contained mistakes in Table 4.

In Table 4 the position of the figures for “URR” and “Copper still available” for Singer (2017) and Hammarstrom et al. (2019) were interchanged. Singer (2017) figure is without past production, Hammarstrom et al. (2019) is with past production.

In addition, the USGS for their Global Copper Mineral Resource Assessment did not use the Delphi method, but the Three-part mineral resource assessment method (Singer and Menzie 2010, Singer 2018).

The Original article was updated.

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The online version of the original article can be found at <https://doi.org/10.1007/s13563-023-00413-y>.

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**Table 4** (corrected): Estimates of the still available copper (not exploited so far) by various authors (URR = ultimate recoverable resources)

Authors	Approach	URR	Copper still available
Singer (2017)	Global probabilistic estimate of undiscovered deposits and Cu distribution in deposit types		6.4 GT
Hammarstrom et al. (2019), USGS	Expert knowledge of USGS' Global Copper Mineral Resource Assessment Team (Three-part mineral resource assessment method, Singer and Menzie, 2010, Singer 2018), only considering porphyry copper and sedimentary copper deposits, presently 84% of known resources.	5.6 GT	
Henckens (2021)	Approach of UNEP's International Resource Panel: extractable global resources 0.01% of content of upper 3 km of crust	6.0 GT	
Wellmer et al. (2023)	Extrapolation of Lasky's relationship	7.5	6.7

## Reference

- Singer DA (2018) Comparison of expert estimates of number of undiscovered mineral deposits with mineral deposit densities. *Ore Geol Rev* 99:235–243. <https://doi.org/10.1016/j.oregeorev.2018.06.019>
- Singer DA, Menzie WD (2010) Quantitative mineral resource assessments—an integrated approach. Oxford University Press, New York

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