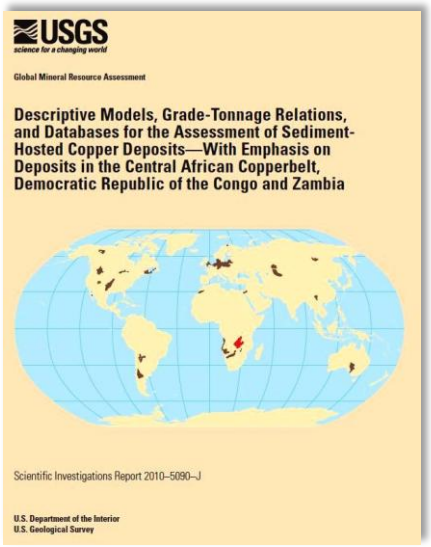
Understanding the Global Distribution of Nonfuel Mineral Resources

In response to the growing demand for information on the global mineral-resource base, the U.S. Geological Survey Mineral Resources Program is completing its Global Mineral Resource Assessment Project (GMRAP), a cooperative international project started in 2002 to assess the world's undiscovered nonfuel mineral resources. The project emphasizes the most important types of mineral deposits for world supply of copper, platinum-group elements (PGE), and potash.



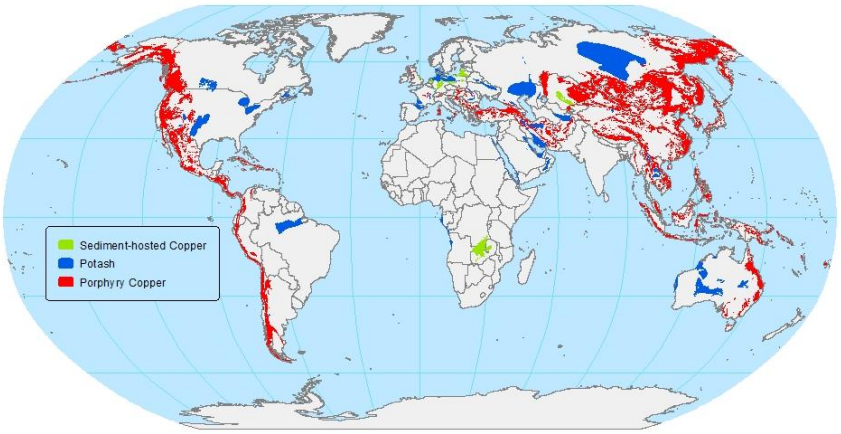
USGS conducts national and global assessments of resources (mineral, energy, water, biologic) to provide science in support of decisionmaking. Mineral resource assessments provide a synthesis of available information about where mineral deposits are known and suspected in the Earth's crust, what commodities may be present, and estimates of amounts of undiscovered resources that may be present.

The primary objectives of this effort are to:

- Outline the regional locations and estimate the probable amounts of the world's undiscovered resources of copper, platinum-group elements (PGE), and potash in selected types of mineral deposits to depths of 1 to 3 kilometers below the Earth's surface.
- Provide the first globally consistent and comprehensive analysis of undiscovered nonfuel mineral resources to provide all nations with a regional and global context for
  - evaluating their mineral resources,
  - planning for new mineral exploration; anticipating the economic, environmental, and social impacts of mineral development; and making land use decisions.

The products of this assessment project can be used for

- economic planning, including potential job creation, poverty reduction, and economic development
- evaluating sustainable mineral supply and development
- environmental planning and evaluating potential impacts of resource development
- land use planning and evaluating potential biodiversity and land-use conflicts.



Published GMRAP Reports

Report title	Available online at
Porphyry copper assessment of Europe, exclusive of the Fennoscandian Shield	http://pubs.usgs.gov/sir/2010/5090/k/
Porphyry copper assessment of Southeast Asia and Melanesia	http://pubs.usgs.gov/sir/2010/5090/d/
Porphyry copper assessment of the Mesozoic of East Asia--China, Vietnam, North Korea, Mongolia, and Russia	http://pubs.usgs.gov/sir/2010/5090/g/
Porphyry copper assessment of the Tibetan Plateau, China	http://pubs.usgs.gov/sir/2010/5090/f/
Porphyry copper assessment of British Columbia and Yukon Territory, Canada	http://pubs.usgs.gov/sir/2010/5090/c/
Porphyry copper assessment of Mexico	http://pubs.usgs.gov/sir/2010/5090/a/
Quantitative mineral resource assessment of copper, molybdenum, gold, and silver in undiscovered porphyry copper deposits in the Andes Mountains of South America	http://pubs.usgs.gov/of/2008/1253/
Descriptive models, grade-tonnage relations, and databases for the assessment of sediment-hosted copper deposits—With emphasis on deposits in the Central Africa Copperbelt, Democratic Republic of the Congo and Zambia	http://pubs.usgs.gov/sir/2010/5090/j/
Sandstone copper assessment of the Chu-Sarysu Basin, Central Kazakhstan,	http://pubs.usgs.gov/sir/2010/5090/e/
Dzhezkazgan and associated sandstone copper deposits of the Chu-Sarysu Basin, central Kazakhstan	Society of Economic Geologists, Inc. Special Publication 16, p. 303-328
Aggregation of estimated numbers of undiscovered deposits—An R-script with an example from the Chu Sarysu Basin, Kazakhstan	http://pubs.usgs.gov/sir/2010/5090/b/
An index to PGE-Ni-Cr deposits and occurrences in selected mineral-occurrence databases	http://pubs.usgs.gov/of/2009/1045/
Economic filters for evaluating porphyry copper deposit resource assessments using grade-tonnage deposit models, with examples from the U.S. Geological Survey Global Mineral Resource Assessment	http://pubs.usgs.gov/sir/2010/5090/h/
Version 3.0 of EMINERS—Economic Mineral Resource Simulator	http://pubs.usgs.gov/of/2004/1344/
Quick-start guide for version 3.0 of EMINERS—Economic Mineral Resource Simulator	http://pubs.usgs.gov/of/2009/1057/

For more information and updates, please visit the GMRAP project web site, http://minerals.usgs.gov/global, or contact Jane Hammarstrom at jhammars@usgs.gov or Michael Zientek at mzientek@usgs.gov.

The National Minerals Information Center provides extensive commodity data at http://minerals.usgs.gov/minerals/pubs/commodity/.