



# International Union of Geological Sciences' "Minerals" Initiative

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**on behalf of the IUGS Bureau**

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# International Union of Geological Sciences

- Largest scientific Union in ICSU formed in 1961
- non-political, non-governmental & non-for-profit organisation
- Supports 121 member countries
- Represents approximately 1 million earth scientists around the world
- Formal body representing all geosciences
- Has 54 international “Affiliated Organizations”



# International Union of Geological Sciences

- Started the International Geoscience Program (IGCP) in collaboration with UNESCO in 1972
- Current IUGS priorities:
  - Keep core mission of IUGS standards
  - Develop new activities in geological education
  - Improve outreach & visibility of geology
  - Increase cooperation & funding



# International Union of Geological Sciences

- Evolution of focus and outreach of IUGS
  - Keep core mission of IUGS standards
  - Develop new activities in geological education
  - Improve outreach & visibility of geology
  - Increase cooperation & funding



- “Resourcing Future Generations” – RGF initiative addressing RMS, H2O & EN



# IUGS' RFG RATIONALE



- Numerous activities in the RMS sector (*in 2<sup>nd</sup> phase addressed also water and energy issues*)
- but missing: what needs to be done now to address future RMS challenges?
- aimed at guiding RM exploration in the long term (beyond 2030)
- IUGS' huge international network used as the catalyser/galvaniser of different forms of RMS activities for the enhanced CaBu & KnTr...



# IUGS' RFG RATIONALE



- ...current problems: lowering of ore grades, land-use conflicts (agriculture, nature protection...), negative perception of mining...
- deep-seated resources → subsurface studies
- opportunities in technology, geological understanding/research & training needs
- focus on Africa and C&E Asia
- launch at the end of October 2013 (< 1 month)



# IUGS' RFG ISSUES ADDRESSED



- detailed evaluation of potentials in underexploited regions (metalogenesis similar.)
- evaluation of future RM demand & supply
- better data integration and utilisation for advanced modelling (in 3, 4, 5D)
- applications of novel sensors (not only satellite)
- RS technology integrated with in-situ data & monitoring (relation to GEO)



- new RM frontiers (sea-floor, asteroids...)



# IUGS' RFG ISSUES ADDRESSED



- ...urban mining, minerals' life cycles
- addressing negative perception of mining in general public
- good practices → setting international standards
- research the substitution of current RM with novel ones





# IUGS' RFG IN A LARGER PICTURE



- RFG as a part of ICSU's *FUTRUE EARTH*.

*FE* focuses on:

- Solution-oriented sustainability
- Effective interdisciplinary collaboration
- Timely information for policy-makers
- Participation of stakeholders
- Increased capacity building



# RFG CHALLENGES



- Demand for most minerals will continue to rise.
- Needs of society in the long-term will be challenging to meet.
- Inclusion of wide range of stakeholders.
- Strong collaboration and knowledge integration.
- IUGS → a catalyst & coordinator (a demanding task with limited resources).





**THANK YOU!**

**Any questions?**

