

Strategic Materials for a Low-Carbon Future: From Scarcity to Availability
2-3 November 2017 – Session Summary

Breakout 2b: The water - land - resource nexus

As easily accessible mines are depleted, finding and accessing new mines is likely to put pressure on resources, in particular water and land. Overall, the environmental impact of mining may even surpass planetary boundaries. In addition, new mines increasingly compete with local communities for water, energy, land or pressuring human health. How can disputes be settled at the local level? How can the private sector and public sector engage responsibly? Are there better ways of dealing with mining waste in a low-carbon world, and what are the best practices for the reduction of environmental impacts?

Raimund Bleischwitz, BHP Billiton Chair Chair in Sustainable Global Resources, University College London and Deputy Director, UCL Institute for Sustainable Resources (UCL ISR)

Jennifer Broadhurst, Associate Professor & Deputy Director, Minerals to Metals Initiative, University of Cape Town

Franck Galland, Director, Environmental Emergency & Security Services

Ester Van der Voet, Associate Professor, Institute of Environmental Sciences, Leiden University

Moderator: Jan Klawitter, Principal, International Relations, Anglo American

- The water-land-resource nexus consists of critical interlinkages between natural resource extraction, competing land uses (such as conservation of biodiversity), and water needs (mining consumes a high volume of water, and mining water use is currently increasing by 10% a year). Globally, mining is second largest industrial water consumer - equivalent to the annual consumption of the US.
- By 2030, according to a [CDP report](#) cited by Raimund Bleischwitz, 27% of mining assets will be subject to water stress. Today, mining companies are talking about 'zero-water': reclaiming and reusing water for all of their needs.
- Even with greater circularity of materials, the amount of materials such as iron available for secondary production will not be sufficient for some years, so primary extraction will still be necessary.
- One potential solution is analytical tools to assess the linkages between resources, land and water, including the effect of 'urban mining' and regulatory change.

Speakers also shared examples and case studies of best practices for managing mining's impact on water and land. Eg. desalination in Chile, and for rare earth extraction in northern

China, water reuse, aquifer storage and recovery. The private sector and finance need to be involved too: for example, Norway's government pension fund incorporates water efficiency into its investment methodology.