

Reconciling environmental, social and ethical drivers and implications of mining – can we have it all, or do we have to choose?

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The extraction and use of Earth resources is widely perceived as antithetical to sustainable development, and to living in an equitable, peaceful and environmentally acceptable way on our planet. In fact, the reverse is true. We cannot hope to live sustainably or achieve global social and economic justice without securing resources from the Earth. But to achieve these aims, we will have to pay greater attention than ever before to understanding what our future resource needs will be, the environmental and social risks of winning and using these resources, and the management of these risks.

In November 2017, the Geological Society of London (in conjunction with the IUGS Resourcing Future Generations initiative) hosted a two-day conference on 'Mining for the Future'. This interdisciplinary meeting explored how delivery of the UN 2030 Sustainable Development Goals and the COP 21 Paris Agreement to decarbonise the global economy will alter and increase demand for metals and minerals, and how this demand can be met responsibly. It also asked how we might develop a roadmap for addressing these challenges, and an interdisciplinary community of researchers, practitioners and policy-makers to deliver it.

In this presentation, I will outline some of the emerging conclusions of these discussions. I will also set out some of the questions which remained unanswered. One of the most troubling is whether we can (or will, in practice) successfully reconcile the challenging and diverse economic, environmental and social drivers shaping our future mineral needs and the mining activity these will entail. Will something have to give? If we cannot deliver the minerals that will be needed for high-tech solutions to the carbon emissions challenge as well as those for less 'glamorous' development needs (including for infrastructure development to protect the world's poorest from environmental change), in the context of an economically viable and socially and environmentally acceptable global mining industry, which will lose out?