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Geoscience in a rapidly changing world – what could go wrong?

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The application of geoscience to global development is starting to become more recognised. In particular, the role of geoscience in delivering the UN's Sustainable Development Goals is discussed by some workers (e.g. Gill and Bullough, 2017). We are living through a time of rapid socio-political and economic change with the rise of globalisation, and it is an important time to ask what the role of geoscience will be in facilitating this change.

Geoscience is increasingly supplying information about our environment on a global scale and applications are becoming more powerful. Deep ocean mining will respond to the rising demand for rare earth elements, geoengineering will play a large role in building the world's largest infrastructural projects like China's One Belt One Road initiative, and remote sensing capabilities have made the surveying of natural resources including farming soil to be possible on a global scale. Spatial analysis, big data and multidisciplinary will increasingly drive the biggest economies. Geologists are

especially well placed to lead these initiatives, but with it comes responsibility.

I will take you through my experience researching and writing editorial stories for *Geology for Global Development (GfGD)*, as well as personal perspectives and experiences from being a young Dutch geoscientist in London and Australia. I argue the discussion of geoscience applications is in its infancy, and is not yet critical enough. Decision makers are jumping onto geoscience. The sustainability agenda, while in essence commendable, has ethical challenges that are not widely recognised. The majority of the geoscience community has not yet realised

the increased demand and power of their knowledge, is illiterate in its relation to society and so is vulnerable to abuse of its knowledge. I aim to fill this gap by highlighting the developments of geoscience applications, their potential powers and a possible darker side to their use, especially in the rapidly changing world we find ourselves in today. This will enable geoscientists to have a more productive and critical conversation about their science and its relation to society.



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