

How can Earth scientists help to address the challenges of the 21st Century?



The
Geological
Society

The changing face of Earth science

Understanding British geology has been a vital driver of our nation's economic development and prosperity, from the central role of coal, ironstone and limestone in the industrial revolution to the late 20th century era of North Sea oil and gas. But our attitude towards society's use of natural resources is undergoing enormous change – and with it, so is the role of Earth science. Our future is one in which resources are limited, with the impacts of extracting and using these resources more keenly felt, and an increasing global population which rightly expects greater prosperity and more equitable access to resources. Earth scientists are increasingly using their knowledge and skills not only to extract what is under the ground, but also to put waste materials – from landfill to carbon dioxide and radioactive waste – safely back into the geosphere, as we move from exploitation of natural resources to sustainable management of the entire resource cycle.

What are the challenges?

Sustaining energy supplies and moving to a low-carbon economy is an unprecedented global challenge. With effective policy frameworks in place, Earth scientists can ensure that the UK is a world leader in making the use of fossil fuels less polluting, for example through CCS (Carbon Capture and Storage), and help develop alternative energy sources. Earth science is also essential to meeting the challenges of managing water and mineral resources, and of land use and associated risks (e.g. flooding) under competing natural and social pressures.

How can the Geological Society help?

The Geological Society is both a learned society and a professional body, in which Earth scientists from a wide range of academic disciplines, industrial sectors and other institutional settings, and with a variety of personal and professional perspectives, expect to find a forum where they can share knowledge and views, and expose and debate disagreements. The Society's efforts to provide a transparent and fair setting for such debate are policed by its diverse membership. This ensures that the Society is particularly well placed to provide plural expert inputs to government from a wide range of sources in a way which is likely to engender the confidence of the geoscientific community – from scientific advice when policy is formulated, through to identifying the skills and training provision required to implement programmes, helping to ensure effective dialogue with Earth scientists and other stakeholders, and building and maintaining public confidence.

Working with others

While the Geological Society's focus is on 'science for policy', and helping to address societal problems, this is only possible while the UK's science base is sustained and nurtured. The Society will continue to work closely with other bodies to ensure that 'policy for science' is a priority for UK government, and that funding and policies are in place to develop our research base, educate the next generation of professional and citizen scientists, and enable innovation.