

## Earth Sciences in the 21<sup>st</sup> century: *A forward look*



18<sup>th</sup> January 2010,  
Geological Society, Burlington House, London  
DAY 1: AGENDA

c.100 participants, by application.

- 1) Welcome and Introduction
  - I. Why are we undertaking the forward look?
  - II. How can we influence the future?
  - III. Who will be talking to and how do we ensure they listen?

*Introductions by John Ludden on behalf of the meeting's convenors and Alan Thorpe on behalf of NERC.*

- 2) Geoscience and the NERC perspective
  - I. Geoscience in the NERC strategy – the future
  - II. Geoscience infrastructure and National Capacity – what can we do, and what capacity must we maintain
  - III. What are the main drivers of change and how should the UK scientific community respond?

*Presentations by John Rees on behalf of NERC's Theme leaders and Denis Peach on behalf of NERC's National Capability Advisory Group.*

- 3) Breakout sessions

Breakout groups to which participants have already been assigned by preference and expertise as far as possible) will discuss the four broad questions outlined on page 1 above, but with a focus on theme areas. We do realise that there will be overlaps and these will be smoothed in the writing session (day 2, 19<sup>th</sup> January) and as the results of the discussions are iterated.

## Breakout group discussion topics:

1. Applied Geoscience to Serve Society  
*Encompassing Engineering Geology, Hydrology and Hydrogeology, Carbon Capture and Storage, Radioactive Waste Disposal, Contaminated Land, and Environmental Pollution and Health.*
  2. Natural Resources and Energy  
*Encompassing Minerals, Post Peak Oil and Consequences for Resource Development, Dwindling Mineral Resources and Security of Supply.*
  3. Natural Hazards  
*Encompassing the challenges for Earth Science in Understanding, Prediction and Mitigation of the effects of Earthquakes, Volcanic Activity, Tsunamis and Landslides.*
  4. Putting the Earth into Earth System Science  
*Encompassing Earth History and Palaeontology, Structural Geology and Tectonics/Geodynamics.*
  5. Earth Surface - Critical Zone and Shallow Marine Processes  
*Encompassing the Earth as a driver for Climate Change (is the past the key to the future), Soft-rock Geology and, and Implications for Biodiversity.*
  6. Deep Earth  
*Encompassing the crust to the core; Igneous and Metamorphic Petrology and Deep Earth Geophysics: Seismology, and Geomagnetism.*
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- 4) Wrap up and discussion sessions  
*Each group summarised the results of theirs discussions and took questions from the floor*
  - 5) An view of the day from was given by the two external observer(s)  
*Mike Bickle and Alan Green who, as part of the process had been listening in on group discussions and providing feedback, such are to summarise common themes.*
  - 6) Conclusions and reporting agreed.
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19<sup>th</sup> January 2010,  
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DAY 2: AGENDA

More limited participation, by invitation

- 1) Discussion of process, aims and objectives of this exercise and review of previous day's achievements lead by John Ludden.
- 2) Working groups for cross-cutting themes – or initiatives - arising from Day 1 discussions
- 3) Discussion in a plenary of next steps  
*What have we achieved in the past two days, what are the gaps and how will we lead the Forward look to the next stage?*

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The whole forward look exercise is entirely bottom up and there is no mandate for this process. Funding was provided by the GSL, NERC and the BGS.

It is felt that the Earth Science community needs to assert itself in the rapidly changing scientific landscape of the UK. The output of the exercise of which this workshop was a component part, workshop will not feed into any particular science review process, but we feel it will provide an important baseline for future planning.