



British
Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Applied geoscience for our
changing Earth

Workshop on Next Generation Knowledge Management System for geological disposal of radioactive waste

BGS View

Julia West

British Geological Survey



© NERC All rights reserved



British
Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Applied geoscience for our
changing Earth

- BGS has been involved in KMS since 1835 (not as long as the library at Alexandria...)
- Legally obliged to keep geological records for UK onshore and offshore
- A national resource
- Keepers of information from the Nirex Sellafield investigations
- We are facing how to handle increasing amounts of information



© NERC All rights reserved



Generally

- Explosion of information with variable quality
- Internet generation think that nothing exists before 2000. If it's not on the web then it doesn't exist. Potential for past work to be ignored/forgotten/reinvented.
- In many technical professions there is (2) generation gap especially nuclear industry
- How to fill this quickly, efficiently. Brain dumps from experts (airline industry)
- Waste of money if nothing happens...



- KMS is essential if knowledge is to be available and not lost (reinvention of information)
- CoolRep website approach is crucial as outward face of KMS and links with all stakeholders
- No jargon, everyday language at highest levels
- QA of information is essential
- Reactive, interactive, rapid responses
- Must show links between decision making and KM for all users



Thoughts from yesterday

- Philosophy of CoolRep and KMS needs developing
- Map of methodologies and tools in context of Safety Case (**S**ingle **U**nifying and **B**alancing **D**ata System – SINBAD)
- Complex decision making process needs to be included e.g. deciding on research priorities (and interfacing with regulator, implementor...)
- Consider levels of proof required
- Stop developing tools and test/develop what you have...e.g. Cu corrosion issue facing SKB -> will show limitations



- Other industries will find this approach useful
- CCS will also be facing same problems and issues – cross fertilisation would be helpful. JAEA is leading the way here



Popular geology

Carbon capture and storage

- ▶ [Effects on climate change](#)
- ▶ [Carbon capture](#)
- ▶ [CO₂ storage](#)
- ▶ [Types of thermal power plant](#)
- ▶ [Future CCS options](#)

Introduction to carbon capture and storage (CCS)

At BGS we research the ways in which CO₂ can be stored in rocks under the ground.

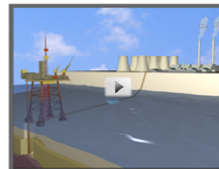
Carbon capture and storage (CCS) is one of the ways that Britain and the world can maintain electricity supplies and economic growth while not changing the atmosphere and the climate.

CCS involves capturing carbon dioxide (CO₂) from large emission sources and then transporting and storing or burying it in a suitable deep geological formation. CCS can also mean the removal or scrubbing of CO₂ from the open atmosphere followed by storage in a deep geological formation.

Why do we need to store carbon dioxide?

Learn about the causes of climate change and the greenhouse effect, and how mankind is accelerating the process as a result of a rapid rise in world population and the need for energy to power our homes, for transport, and industry.

- [What is climate change?](#)
- [How does the greenhouse effect work?](#)
- [Human influence on climate change](#)
- [How do power stations capture CO₂?](#)
- [How can CO₂ be stored?](#)



What is carbon capture and storage (CCS)?
— Animation: capture, transport and storage.



What is carbon capture and storage (CCS)?
— Video: responding to the impact of climate change.

DOUBLE CLICK TO WATCH AT FULL SIZE



What is climate change?

Climate change means a long term change in the

See also

- [Carbon capture and storage \(CCS\) research](#)
- [Advanced seismic techniques](#)
- [CO₂ storage Sleipner](#)
- [UK CO₂](#)
- [Clean coal and renewables](#)
- [Reservoir geoscience in oil and gas](#)

Video

- [OIBC 2007 CCS Interview Dr Sam Holloway \(BGS\)](#)
- [BBC CCS Interview Dr Mike Stephenson \(BGS\)](#)

Magazine articles

- [Clearer skies for China](#)