



**British
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

Applied geoscience for our
changing Earth

celebrating
175
years

CO2Stored: a GIS and database of CO₂ storage potential in the UK

Energy Technologies Institute,
The Crown Estate, British Geological Survey

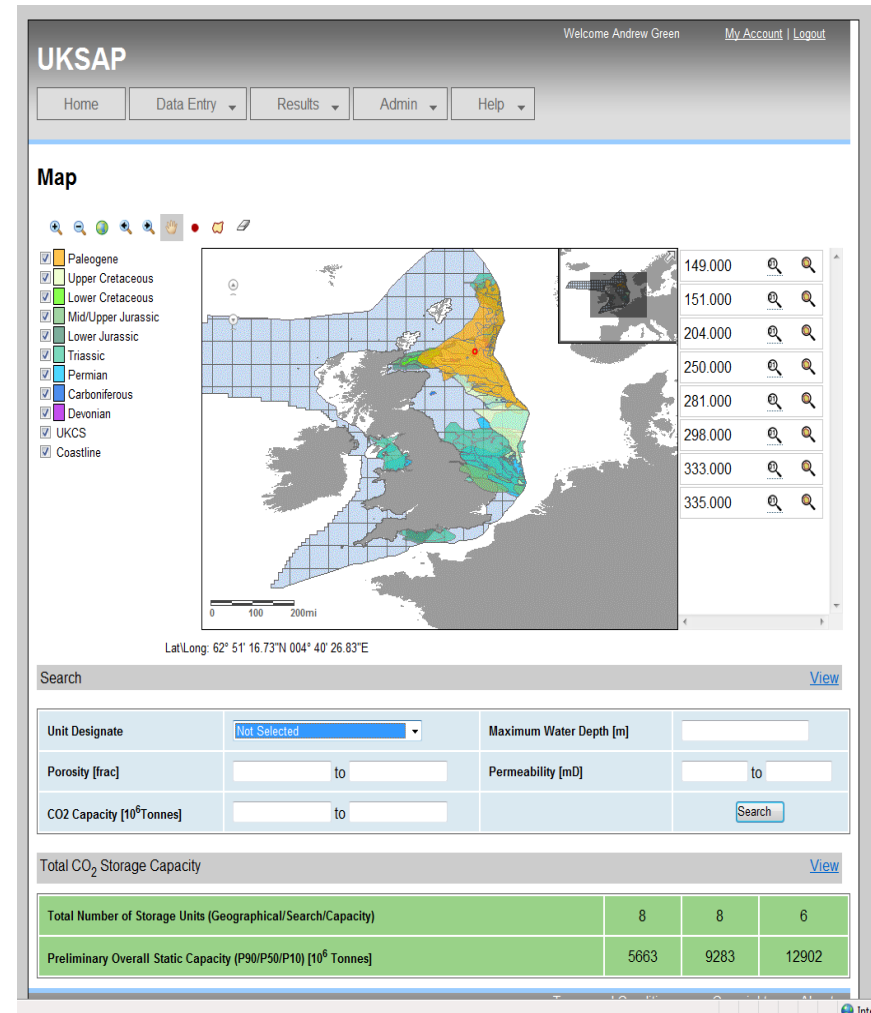


Origins, content

- In 2009, the ETI commissioned and funded a comprehensive, fully auditable assessment of the CO₂ storage potential of the UK Continental Shelf (the UKSAP project) to determine the potential for CO₂ storage in the UK
- Initial version completed 2011
- Now to be jointly developed and hosted by The Crown Estate and BGS
- Consists of a GIS and database
 - identifies all potential storage formations
 - breaks them down into
 - storage units (individual geology-based units of assessment – parts of a geological formation with reservoir properties) and
 - daughter units (mapped individual water-bearing or hydrocarbon-bearing traps), the latter being the UK oil and gas fields
- It provides:
 - Probabilistic assessment of storage capacity,
 - Assessment of geological uncertainty associated with each storage unit
 - Analysis of transport and storage costs

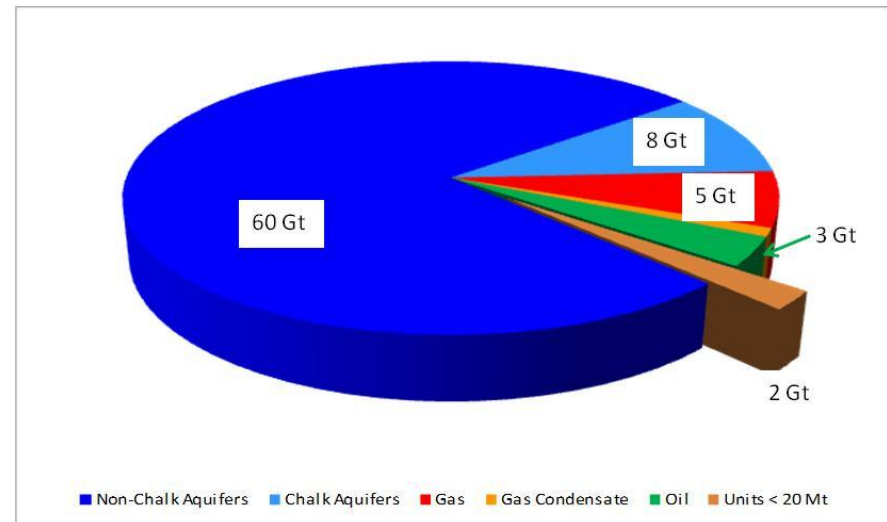
How does it work?

- GIS front end
 - allows user to query an area, e.g. of the North Sea
 - database interface allows user to see the data entered for any formation, storage unit or daughter unit
- Storage unit approach
 - Allows breakdown of very large potential reservoir formations such as the Bunter Sandstone into manageable chunks
 - Very updateable: Assessment reports can be written for any storage unit, providing greater assurance about their data
 - Method allows comparison with other major probabilistic assessments e.g. USGS



Results of assessment

- P90 storage capacity of UKCS
70 Gt CO₂
 - 61 Gt in saline aquifers
 - 9 Gt in hydrocarbon fields



The future

- The Crown Estate and BGS will jointly develop and host the GIS and database for the next five years
- It will be known as **CO2 STORED**
- We will spend £1 million on development and maintenance
 - Make GIS more user-friendly
 - Storage unit reports linked to GIS and database
 - Create search scenario wizard
- It will be accessible over the web
- Version 2 will have a primary release in May then a secondary release, with improved user interface, in September 2013

Engagement with the CCS Community

- Via feedback from users
 - will lead to development down routes useful to the CCS community
- Via an advisory panel
 - Membership will focus on technical experts
- Through the website
 - There will be excerpts available to see and e-contact mechanisms for feedback
- Directly
 - Anyone should feel free to contact either BGS or TCE with suggestions

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