A monitoring selection tool

Ceri Vincent, Shwetha Raveendran, Helen Taylor

British Geological Survey

BACKGROUND

The IEAGHG monitoring selection tool was first developed in 2005. The aim was to identify and prioritise techniques that could form part of a CO_2 storage site measurement, monitoring and verification (MMV) programme.

The approach taken was to enable the user the set out a monitoring scenario (e.g. depth, injection rate, location) and the scenario would then be run by the user and offer a prioritised list of 'core' and 'optional' tools.

The selection tool also contains an extensive monitoring tool catalogue, case studies where different monitoring tools have been used, and a list of sites where CO_2 has been injected or leakage has been studied.

The monitoring selection tool has been updated every few years to keep the content current.

The content is currently being updated to add new references and case studies in the tool catalogue.

FIND THE MONITORING SELECTION TOOL HERE:

https://ieaghg.org/ccs-resources/monitoring-selection-tool

FUTURE DEVELOPMENT

As the number of CO_2 storage projects is rapidly expanding, over the next few years new storage licences will be issued. This will bring a wealth of new case studies and new examples of regulation-complaint MMV programmes for industrial CO_2 storage sites.

A more extensive update to the monitoring selection tool is therefore proposed. This would incorporate information on new CO_2 storage project MMV programmes as well as an update to the functionality and interface of the tool.

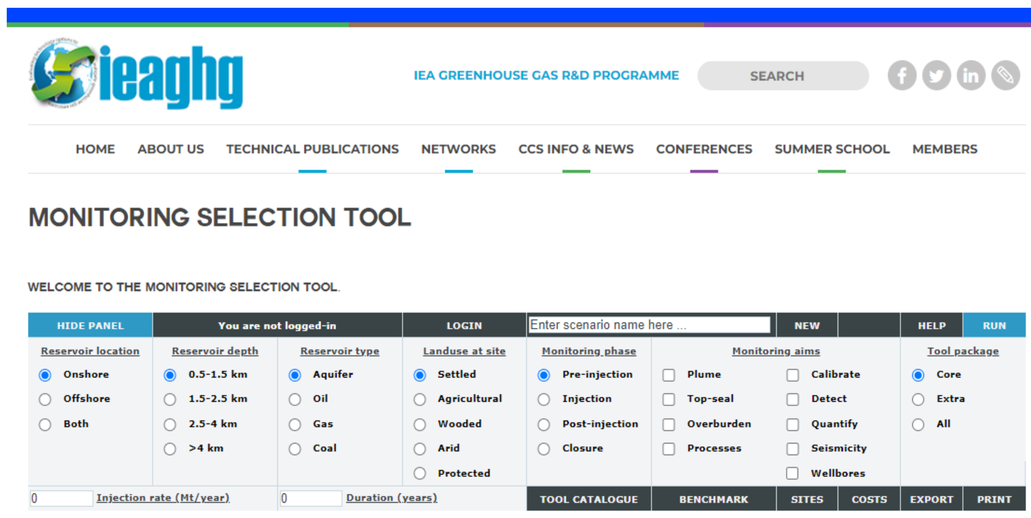
As part of the current study, we are seeking views from the CO_2 storage monitoring community on what improvements they would like to see.

YOUR HELP NEEDED!

A survey will shortly be released (summer 2024) seeking your views on how to improve the monitoring selection tool. If you'd be willing to contribute, please drop your business card or an email address in the folder below and we'll be in touch. Meanwhile, please use a post-it to tell us one thing you would improve around the following aspects:

- Approach of the tool
- User interface
- Benchmarking
- Tool prioritisation
- Tool catalogue
- Case studies & sites
- Technical content you would add/remove?

Approach & user interface



Tool prioritisation for user-provided scenario

Scenario name	Enter scenario name here ... [2024-05-14 07:39:13]
Location	Onshore
Depth	1500 to 2500 m
Type	Gas
Quantity	30.000 Mt (3.000 Mt/yr for 10.0 yrs)
Package	Populated+Syn-injection+All

Tool	Rating %	Overburden
3D surface seismic	100	4.0
Multicomponent surface seismic	75	3.0
Above-zone pulse testing	75	3.0
2D surface seismic	50	2.0
Surface gravimetry	50	2.0
Geophysical logs	50	2.0
Deep fluid chemistry	50	2.0
Shallow subsurface geochemistry	50	2.0
Borehole seismic	25	1.0
Seismic interferometry	25	1.0
Microseismic monitoring	25	1.0
Satellite interferometry / GPS	25	1.0
Borehole gravimetry	25	1.0
Surface EM	25	1.0
Borehole EM	25	1.0

Ceri Vincent cvi@bgs.ac.uk & Helen Taylor htaylor@bgs.ac.uk

www.bgs.ac.uk