



## STEMM-CCS Open Science Meeting and

## 4<sup>th</sup> International Workshop on Offshore Geologic CO2 Storage

11-2th February 2020 University of Bergen, Norway









### 4th International Workshop

11-12 February 2020 STEMM-CCS and University of Bergen, Norway







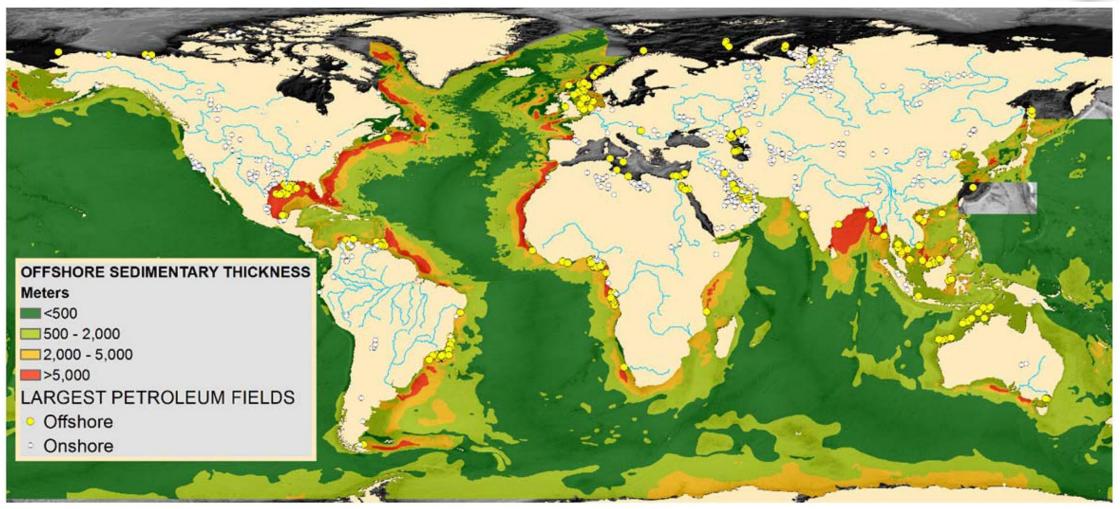






## The global offshore continental shelves represent the largest near-term storage for Gigaton-scale CCS







# CSLF Report on Offshore Geologic CO<sub>2</sub> Storage



"There is a growing wealth of research, development and practical experiences that are relevant to  $CO_2$  storage offshore, but this expertise is familiar only to a few specific countries around the world. However there is also significant global potential for offshore  $CO_2$  storage, and countries who are not yet active but may become interested in offshore storage, would benefit from knowledge sharing from these existing experiences and expertise. Such international knowledge sharing would be facilitated by international workshops and by international collaborative projects."

(CSLF Ministerial Nov 2015: CSLF-T-2015-06)



## **Workshop Series**



- 1<sup>st</sup> Workshop,19-21 April 2016, at the BEG, University of Texas, Austin. 50+ attendees from 13 countries.
  - Organized by the Bureau of Economic Geology (BEG) at the University of Texas at Austin in collaboration with the South African Center for CCS at SANEDI, IEAGHG, and with support from CSLF and UNFCCC's CTCN.
  - To facilitate sharing of knowledge and experiences among those who are doing offshore storage and those who may be interested.
  - IEAGHG Report 2016-TR2
- 2<sup>nd</sup> Workshop 19-20 June 2017, at Lamar University Beaumont, Texas. 50+ attendees from 9 countries
  - To address and build on the recommendations and topics raised at the first workshop to take offshore storage forward. Continuing the theme of 'how to do'
  - IEAGHG Report 2017-TR12

## **3rd Workshop**





#### Hosted by Research Council of Norway, Oslo, 3-4 May 2018

**Aim:** To address and build-on the recommendations and topics raised at the first two workshops to take offshore storage forward. Continuing theme of 'how to do'.

#### Scope:

- How to learn from learnings?
- Value Chains for Offshore
- Infrastructure (re-use)
- Monitoring offshore CO2 storage/EOR
- Offshore CO2 storage resource assessment
- Project updates
- Standards and Regulatory Frameworks
- Brainstorming towards an international collaborative project

IEAGHG Report 2018-TR02



## **Recommendations from 3rd Workshop**



- Explore models for international collaboration project
- Eg An ACT good for R&D (US joining), so an ACT for projects
- Joint funding between countries has started and should continue
- Consider how to build knowledge sharing from hands-on operational projects, including international collaboration project
- Provide a roadmap to existing info sources
- Complimentary monitoring to be build into MVA plans different monitoring methods informing each other, including trigger methods
- To survey which Developing Countries would be attracted to offshore storage
- Getting Developing Countries to these meetings. Identify key persons.
- More advocacy to funders on CCS future NDCs will need CCS, how to make countries aware of their potential. Research community is ready to inform.

## 4th Workshop





#### Hosted by University of Bergen, Norway

**Aim:** To address and build-on the recommendations and topics raised at the first three workshops to take offshore storage forward. Continuing theme of 'how to do'.

#### Scope:

- Infrastructure
- Deep Subsurface Monitoring and modelling offshore CO<sub>2</sub> storage
- Regulatory Frameworks
- Project updates
- Emerging CCS country needs and progress
- Brainstorming towards an international collaborative project and funding
- With alternate sessions from



## **Steering Committee**



- Tim Dixon, IEAGHG (Chair)
- Katherine Romanak, BEG (Co-chair)
- Guttorm Alendal, University of Bergen (Host)
- Susan Hovorka, BEG
- Tip Meckel, BEG
- Noel Kamrajh, SANEDI
- Tony Surridge, SANEDI
- Philip Ringrose, Equinor
- Filip Neele, TNO

- Paulo Negrais Seabra- Independent Consultant (formerly Petrobras)
- Ryozo Tanaka, RITE
- Owain Tucker, Shell
- Mark Ackiewicz, US DOE
- Doug Connelly, NOC
- Alex Bump, BEG
- Carla Sands, NOC
- Qi Li, China Academy of Sciences







### 4th International Workshop

11-12 February 2020 STEMM-CCS and University of Bergen, Norway











