

# ***Report from CSLF Regulation Task Force***

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- The regulation task force was proposed by Japan in the annual meeting in Tokyo in October 2016.
  - The motivation of the Japan's proposal is the unnecessary suspension of CO<sub>2</sub> injection in the Tomakomai CCS Project due to a conservative regulation.
  - The proposed task force was aimed at exploring reasonable regulations for CCS projects and making recommendations for regulators.
  - Japan was committed to present a plan of the taskforce in the next mid-year meeting in 2017.
  
- A plan of the task force was presented by Japan in the policy group meeting in Abu Dhabi in May 2017. Then the task force was formally approved by CSLF.

## ➤ Task Force Members

- Ryozo Tanaka (Chair), RITE, Japan
- Tim Dixon, IEAGHG
- Sallie Greenberg, Illinois State Geological Survey, USA
- Ian Havercroft, GCCSI
- Tristan Stanley, IEA

## ➤ Objective

- To explore practical regulations and permitting process for geological CO<sub>2</sub> storage

N.B. CO<sub>2</sub> capture and CO<sub>2</sub> transportation are generally dealt with by conventional regulations for industry without any major problems.

## ➤ Deliverable

- A report of findings and recommendations from case studies of project experiences with the regulatory process for CO<sub>2</sub> storage

## ➤ IEA

- Launched [the International CCS Regulatory Network](#) in 2008 and organized [8 meetings for knowledge sharing](#) since then.
- Published [the Carbon Capture and Storage Model Regulatory Framework](#) as a guidance document for the development of CCS regulations in 2010.
- Published 4 editions of [the Carbon Capture and Storage Legal and Regulatory Review](#) from 2010 to 2014.

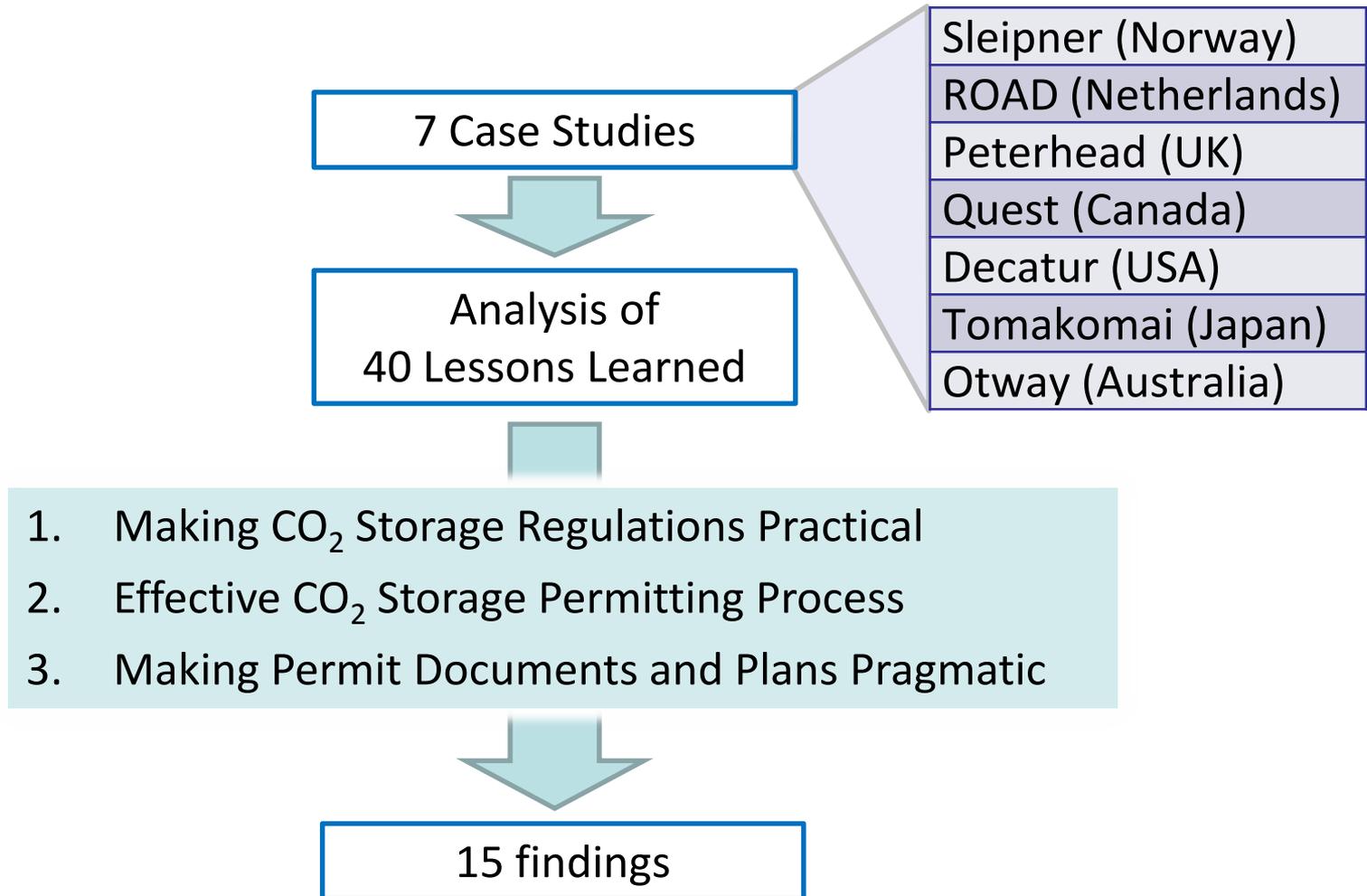
## ➤ GCCSI

- Launched [the CCS Legal and Regulatory Indicator](#) in 2015 and will release a second edition in 2017.

## ➤ CSLF Regulation Task Force

- Aimed at compiling [findings from experiences of several actual CCS projects as a report.](#)

# Task Force Workflow



# An Example of Findings in the Report

## A finding

### Principle of and Industry Role in the Establishment of Regulations

**Finding 1:** CO<sub>2</sub> storage regulations should be established under the principle of promotion of safe CCS. In the establishment of the regulations, the timely involvement of industry is important.

The creation of practical CO<sub>2</sub> regulations is essential to promote the development and deployment of CCS projects since it can provide a measure of certainty to potential CCS investors and project developers. Tomakomai insists that CO<sub>2</sub> storage regulations should be established under the principle of promotion of safe CCS and that regulations without such a principle may increase the cost of CCS projects by creating unnecessary interruptions in operations or by adding unnecessary monitoring and/or research to satisfy a conservative regulatory approach. Quest experience indicates that to create such regulations, the timely involvement of industry is critically important.

## A brief summary of analysis of lessons learned from case studies

## Findings for Making CO<sub>2</sub> Storage Regulations Practical

### ***Finding 1: Principle of and Industry Role in the Establishment of Regulations***

CO<sub>2</sub> storage regulations should be established under the principle of promotion of safe CCS. In the establishment of the regulations, the timely involvement of industry is important.

### ***Finding 2: Review of Existing Regulations***

Existing CO<sub>2</sub> storage regulations can be improved through a review by diversified stakeholders.

### ***Finding 3: Flexibility in Regulations***

CO<sub>2</sub> storage regulations should be flexible enough for various CCS projects with different characteristics to move forward.

### ***Finding 4: Transitional Provisions in New or Amended Regulations***

New or amended CO<sub>2</sub> storage regulations should be flexible with transitional provisions where necessary for continuation of existing valid projects if any.

### ***Finding 5: Validity of and Consistency in the Definitions of Key Terms***

The definitions of key terms should be made with consideration of technical constraints and should have consistency with those in other related laws and regulations.

## Findings for Effective CO<sub>2</sub> Storage Permitting Process (1/2)

### ***Finding 6: Regulations to be in Place***

CO<sub>2</sub> storage regulations should ideally be in place before a planning of the first CO<sub>2</sub> storage project starts in order to promote the deployment of CCS in a country.

### ***Finding 7: Practical Permitting Process***

A permitting process should have adequate time and resources allocated and be appropriate to the scale and the likely impact from the project.

### ***Finding 8: Communications between a Permit Applicant and a Regulatory Authority***

For efficient permit award, close communication is essential between a permit applicant and a regulatory authority and should be initiated at an early stage. Such communications can be expedited by diversified members and fixed contact points.

## Findings for Effective CO<sub>2</sub> Storage Permitting Process (2/2)

### ***Finding 9: Communications with other Regulatory Authorities***

A regulatory authority and a permit applicant should identify other regulatory authorities who should be involved in a permitting process and commence communicate with them early.

### ***Finding 10: Re-appraisal of Permit Application Documents***

It would be helpful if a regulatory authority can recognize that key permit application documents and plans will mature and should be resubmitted when appropriate.

### ***Finding 11: Compliance with the 1996 London Protocol***

A regulatory authority and a permit applicant in a national jurisdiction that is a contacting party to the 1996 London Protocol should make sure that permit application documents for offshore CO<sub>2</sub> storage are in compliance with the Protocol Requirements.

## Findings for Making Permit Documents and Plans Pragmatic

### ***Finding 12: Independent External Review***

An independent external review may be useful to make permit application documents better and streamlined.

### ***Finding 13: Earlier Commencement of Critical Negotiation***

Negotiations between a permit applicant and a regulatory authority to address critical issues in permitting should be initiated as early as possible. These issues may include financial responsibilities of an operator and monitoring plans.

### ***Finding 14: Potential Arguable Financial Responsibilities***

Financial responsibilities of an operator should be reasonable and pragmatic. Issues to be addressed may include the length of the closure period; financial contribution from an operator for a regulatory authority's responsibility during the post-closure period; and responsibility to compensate unintended CO<sub>2</sub> leakage by purchasing emission credits.

### ***Finding 15: Principles in Monitoring Plans***

Monitoring plans for CO<sub>2</sub> storage should be risk-based and adaptive; be pragmatic when responding to an irregularity or a potential irregularity; and use monitoring parameters that are well understood and have sufficient baseline data for critical judgements.

# Conclusions (1/2)

- The findings should provide useful information in many situations including:
- **Regulatory authorities** develop regulations for geological CO<sub>2</sub> storage, or review existing regulations for geological CO<sub>2</sub> storage and amend them if necessary.
  - **CCS project proponents** apply for, or consider applying for a geological CO<sub>2</sub> storage permit.

## APPENDIX: Check List for Regulatory Authority & Project Proponent

This is a check list of the findings from the case studies for regulatory authorities who will develop regulations for geological CO<sub>2</sub> storage or review existing regulations for geological CO<sub>2</sub> storage and amend them if necessary, and CCS project proponents who will apply for a CO<sub>2</sub> storage permit.

Findings for Making CO <sub>2</sub> Storage Regulations Practical	Regulatory Authority	Project Proponent
<b>Finding 1:</b> CO <sub>2</sub> storage regulations should be established under the principle of promotion of safe CCS. In the establishment of the regulations, the timely involvement of industry is important.		
<b>Finding 2:</b> Existing CO <sub>2</sub> storage regulations can be improved through a review by diversified stakeholders.		
<b>Finding 3:</b> CO <sub>2</sub> storage regulations should be flexible enough for various CCS projects with different characteristics to move forward.		
<b>Findina 4:</b> New or amended CO <sub>2</sub> storage regulations should be flexible		

# Conclusions (2/2)

In the future, experiences for the next generation of CCS projects should be examined to look into how the issues to be addressed that have been identified in the findings in this report will have been resolved in various jurisdictions. Many of the issues, including operator's finance responsibilities, may be specific to a first wave of CCS projects which has no or limited precedent experiences in permitting for geological CO<sub>2</sub> storage.

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**Thank you for your attention.**