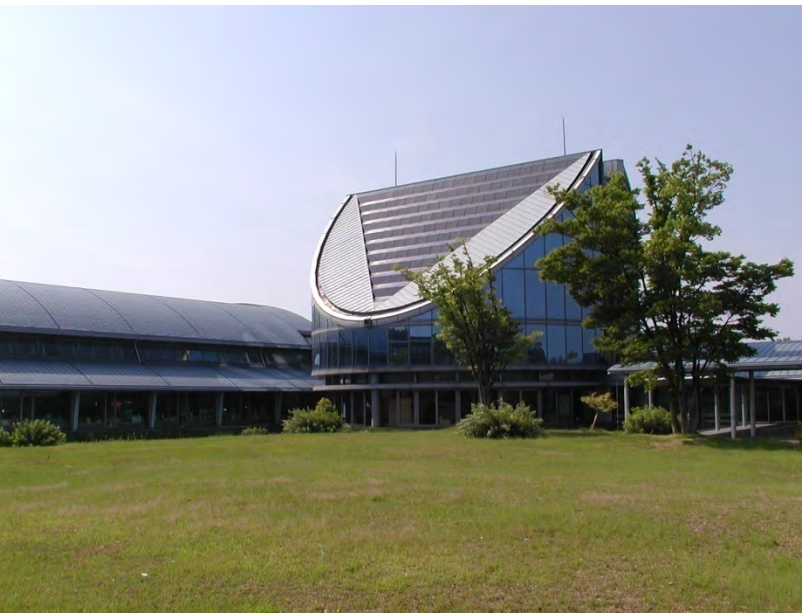


***Update on Activities of ISO/TC265***  
***Report on the 8<sup>th</sup> TC265 Meeting in Sapporo, Japan***

1 May 2017



**Ryozo Tanaka**

Senior Researcher

CO<sub>2</sub> Storage Research Group

Research Institute of Innovative  
Technology for the Earth (RITE)

## Objective

To prepare standards for the design, construction, operation, and environmental planning and management, risk management, quantification, monitoring and verification, and related activities in the field of carbon dioxide capture, transportation, and geological storage (CCS).

- Proposed by Canada and approved by ISO members in 2011
- Chaired by Canada (Sandra Locke)
- Secretariat – Standards Council of Canada (SCC),  
twinned with Standardization Administration of China (SAC)



# ISO/TC265

*Carbon Dioxide Capture, Transportation, and Geological Storage*

## ISO/TC265 the 8th Plenary Meeting and WG Meetings

### DELEGATE INFORMATION PACKAGE

November 28 – December 2, 2016  
Sapporo, Hokkaido, JAPAN

Host by



Organized by



A 10-min presentation on CSLF update in the TC265 Meeting in Sapporo

- CSLF Overview – Mission and objectives
- CSLF Organization
- Mid/ Annual Meetings and Ministerial Meetings
- Recent Taskforces in the Technical Group
- Introduction of “Reviewing Best Practices and Standards for Geologic Monitoring and Storage of CO<sub>2</sub>” – as an example of the Taskforce reports.

# Memberships

- In Sapporo, ➤ Reported that Italy and Qatar had got their membership status changed from a P-member to an O-Member.
- A CSLF representative participated in an ISO/TC265 meeting for the first time and presented a CSLF update report there.

Countries (28)			Liaisons (13)	
P-Members (18)		O-Members (10)		
Australia	Netherlands	Argentina	CO2GeoNet	ISO TC67
Canada	Norway	Czech Republic	<b>CSLF</b>	ISO TC207
China	Saudi Arabia	Egypt	EIGA	ISO TC207/SC1
France	South Africa	Finland	GCCSI	ISO TC207/SC7
Germany	Spain	Islamic Republic of Iran	IEA	ISO TC27/SC5
India	Sweden	<b>Italy</b>	IEAGHG	CEN TC234
Japan	Switzerland	New Zealand	WRI	
Republic of Korea	United Kingdom	<b>Qatar</b>		
Malaysia	United States	Serbia		
		Sri Lanka		

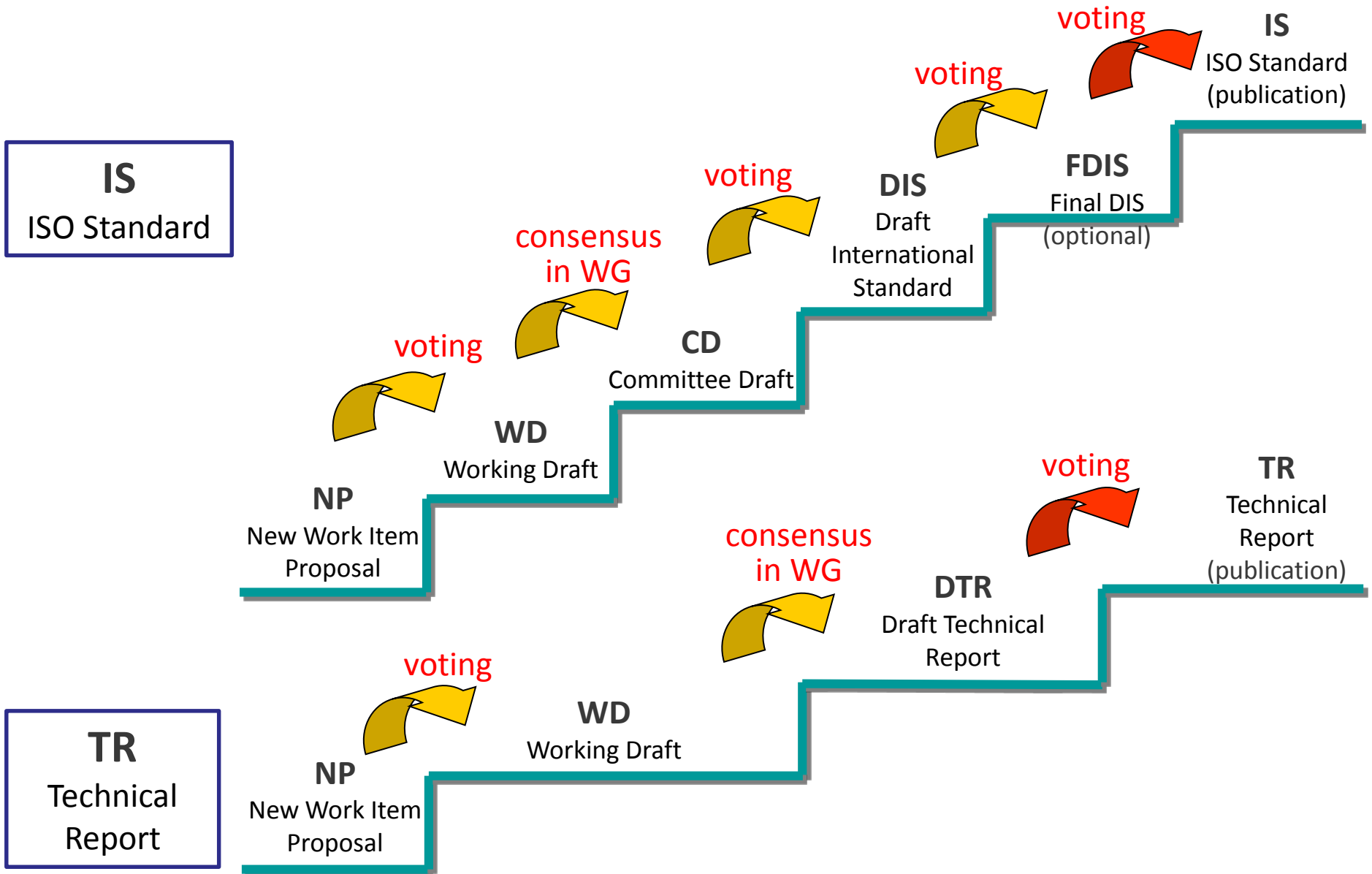
P-Member: Participating Member, O-Member: Observing Member

# Working Groups

- In Sapporo, ➤ Reported that all of the Convenors and Co-Convenors but WG6 Convenor had been approved for another 3-year term by a vote of confidence.
- The interim WG6 Convenor was approved.
  - Agreed that future Convenors and Co-Convenors would be nominated by P-members and appointed by voting.

		Convenor	Co-Convenor	Secretariat
<b>WG1</b>	Capture	Takayuki Higashii (Japan)	-	JISC/RITE (Japan)
<b>WG2</b>	Transportation	Achim Hilgenstock (Germany)	-	DIN (Germany)
<b>WG3</b>	Storage	Steve Whittaker (Canada)	Kinichiro Kusunose (Japan)	SCC (Canada)
<b>WG4</b>	Quantification & Verification (Q&V)	Bo Peng (China)	Régis Farret (France)	CNIS (China)
<b>WG5</b>	Cross Cutting Issues	Hubert Fabriol (France)	Xiaochun Li (China)	AFNOR (France)
<b>WG6</b>	CO <sub>2</sub> -EOR	<b>Steve Carpenter</b> <b>(US)</b> Note: Interim	Niels Pieter Christensen (Norway)	CSA (US)

# ISO Standards/ Technical Reports Process



# WG1 on Capture

		2013	2014	2015	2016	2017	2018	
WG1	TR on CO <sub>2</sub> capture technology: TR27912	NP	WD	DTR	Publication			
	IS on Post combustion: IS27919-1			NP	WD	CD	DIS	Publication
	IS on Capture (Step2)					Prepare	NP	Development

Sapporo Meeting

NP: New work item Proposal, WD: Working Draft, CD: Committee Draft, DIS: Draft International Standard, FDIS: Final DIS, IS: ISO Standard, DTR: Draft Technical Report, TR: Technical Report

- In Sapporo, ➤ Supported that WG1 would submit DIS on “Performance evaluation methods for Post-Combustion CO<sub>2</sub> capture integrated with power plant” for voting.
- Reported that WG1 would propose NP for the 2<sup>nd</sup> IS on capture for power or capture for industry.



# WG2 on Transport and WG3 on Storage

		2013		2014	2015	2016		2017	2018
WG2	IS on transportation by pipeline: IS27913		NP	WD	CD	DIS	FDIS	Publication	

Sapporo Meeting

In Sapporo, ➤ Reported that WG2 had publicized IS on “Pipeline transportation systems” in November 2016.

		2013		2014	2015	2016		2017	2018
WG3	IS on storage: IS27914		NP	WD	CD	DIS	FDIS	Publication	

Sapporo Meeting

In Sapporo, ➤ Supported that WG3 would submit FDIS on “Geological Storage” for voting.

# WG4 on Quantification and Verification (Q&V)

		2013	2014	2015	2016	2017	2018
WG4	TR on Q&V: TR27915		NP	WD	DTR	Publication	
	IS on Q&V: IS27920					NP WD	Development

NP: New work item Proposal, WD: Working Draft, CD: Committee Draft,  
 DIS: Draft International Standard, FDIS: Final DIS, IS: ISO Standard,  
 DTR: Draft Technical Report, TR: Technical Report

Sapporo Meeting

- In Sapporo,
- Reported that WG4 were finalizing DTR on “Quantification and Verification” toward publication.
  - Reported that NP for IS on “Quantification and Verification” had been approved by voting and IS to be developed was on the WD stage. Reported that IS would look at not only CO<sub>2</sub> but also other GHGs and agreed that WG4 would present how to deal with GHGs in IS to be developed in the next TC265 meeting.

# WG5 on Cross-Cutting Issues

		2013		2014		2015		2016		2017		2018	
WG5	IS on vocabulary: IS27917		NP	WD		CD		DIS		FD	IS	Publication	
	TR on risk management: TR27918				NP	WD		DTR		Publication			
	TR on CO <sub>2</sub> Stream composition							Prepare		NP	Development		

Sapporo Meeting

NP: New work item Proposal, WD: Working Draft, CD: Committee Draft,  
DIS: Draft International Standard, FDIS: Final DIS, IS: ISO Standard,  
DTR: Draft Technical Report, TR: Technical Report

In Sapporo,

- Supported that WG5 would submit FDIS on cross-cutting “Vocabulary” for voting. Agreed that their initial plan to develop ISs on vocabulary specific for WG1, 2, 3, 4, and 6 was cancelled.
- Reported that TR on “Lifecycle risk management for integrated CCS projects” was on the final stage of DTR. Agreed that WG5 would organize a workshop for IS development in the next TC265 meeting.
- Reported that WG5 would make NP on “CO<sub>2</sub> Stream Composition”. 11

# WG6 on CO<sub>2</sub>-EOR

		2013	2014	2015	2016	2017	2018		
WG6	IS on CO <sub>2</sub> -EOR: IS27916		NP	WD	CD	CD2	DIS	FDIS	Publication

Sapporo Meeting

**NP:** New work item Proposal, **WD:** Working Draft, **CD:** Committee Draft,  
**DIS:** Draft International Standard, **FDIS:** Final DIS, **IS:** ISO Standard,  
**DTR:** Draft Technical Report, **TR:** Technical Report

In Sapporo, ➤ Reported that CD had not been approved by voting. Reported that WG6 would submit 2<sup>nd</sup> CD for voting after incorporating comments raised in the workshop held just before the TC265 meeting in Sapporo and discussing with those who had voted against 1<sup>st</sup> CD.

## WG3 on Storage

### **2.7 closure period**

period between the cessation of CO<sub>2</sub> injection and the demonstration of compliance with the criteria for site closure

### **2.8 post-closure period**

period that begins with the demonstration of compliance with the criteria for site closure

## WG6 on CO<sub>2</sub>-EOR

**9.4.2** CO<sub>2</sub>-EOR project termination is completed when CO<sub>2</sub> injection has ceased, hydrocarbon production from the project reservoir has ceased, and wells are plugged and abandoned unless otherwise required by the authority.

### **9.6 Post termination**

Assurance of safe, long-term containment shall consider fluid movement to ensure that leakage out of the EOR complex is unlikely; some jurisdictions may require post-termination monitoring or follow up activities.

# Summary of WGs' Activities

		2013		2014		2015		2016		2017		2018	
WG1	TR on CO <sub>2</sub> capture technology: TR27912		N P	WD		DTR	Publication						
	IS on Post combustion: IS27919-1					N P	WD		CD	DIS		Publication	
	IS on Capture (Step2)								Prepare	N P	Development		
WG2	IS on transportation by pipeline: IS27913		N P	WD		CD	DIS		FD IS	Publication			
WG3	IS on storage: IS27914		N P	WD		CD		DIS	FD IS	Publication			
WG4	TR on Q&V: TR27915		N P	WD		DTR	Publication						
	IS on Q&V: IS27920							NP	WD	Development			
WG5	IS on vocabulary: IS27917		N P	WD		CD		DIS		FD IS	Publication		
	TR on risk management: TR27918				N P	WD		DTR	Publication				
	TR on CO <sub>2</sub> Stream composition							Prepare	N P	Development			
WG6	IS on CO <sub>2</sub> -EOR: IS27916		N P	WD		CD	CD2	DIS	FDIS	Publication			

# Future TC265 Meetings

- 9<sup>th</sup> TC265 Meeting: 11-12 May 2017, Karamay, China  
(WG meetings and CCS symposium on 8-10 May)
- 10<sup>th</sup> TC265 Meeting: Mid November 2017, Sydney, Australia

**Will CSLF have someone, representing CSLF,  
in the ISO/ TC265 meetings in Karamay and/ or Sydney?**



Thank you for your attention.