

GLOBAL STATUS OF CCS

2024



GLOBAL CCS
INSTITUTE

THE GLOBAL CCS INSTITUTE

Accelerating the deployment of CCS for a net-zero emissions future.

WHO WE ARE

International CCS think tank with offices around the world.

Over 200 members from national and sub-national governments, global corporations, private companies, research bodies and NGOs, all committed to a net-zero future.

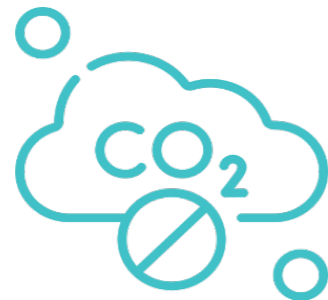
Team of experts across the entire CCS value chain

WHAT WE DO

Fact-based influential advocacy, catalytic thought leadership, authoritative knowledge sharing.



WHY: CCS IS ESSENTIAL TO REACH NET ZERO



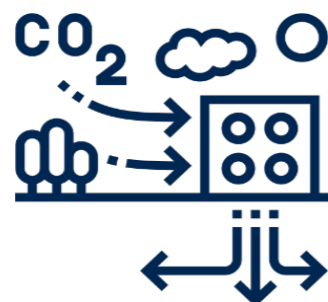
Achieving deep decarbonisation in hard-to-abate industry.



Enabling the production of low-carbon hydrogen at scale.



Providing low carbon dispatchable power.



Delivering negative emissions.

CCS: SCALING UP THROUGH 2030

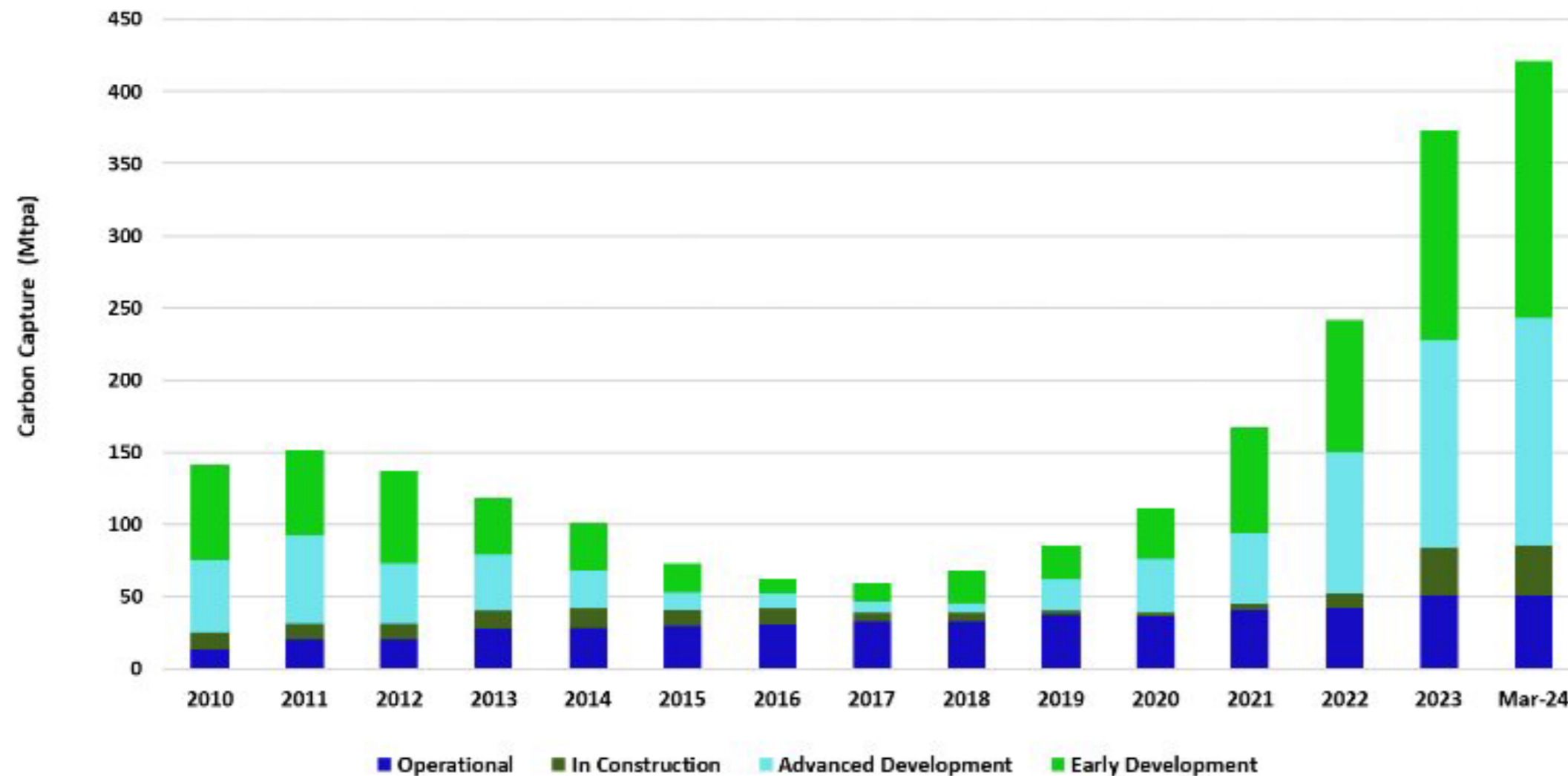
- **POLICY:** Growth has been driven by strong policy and financial incentives, particularly in North America and Europe:
- **PROJECTS:** strong pipeline growth over the last 6 years: compound rate of **35% pa** since 2017.
- **FACILITIES: 564** in total (March 2024)
- **DIVERSITY** of CCS applications; development of networks → new industry category of “CO₂ transport and storage” facilities.

But ... global climate targets will need CO₂ storage of approx. 1 Gtpa (2030) and multiple Gtpa (2050)

→ **permitting, infrastructure, business case, public engagement and project management** critical.

PROJECTS PIPELINE: UNPRECEDENTED LEVELS

Capacity of Commercial Facilities Pipeline 2010-March 2024



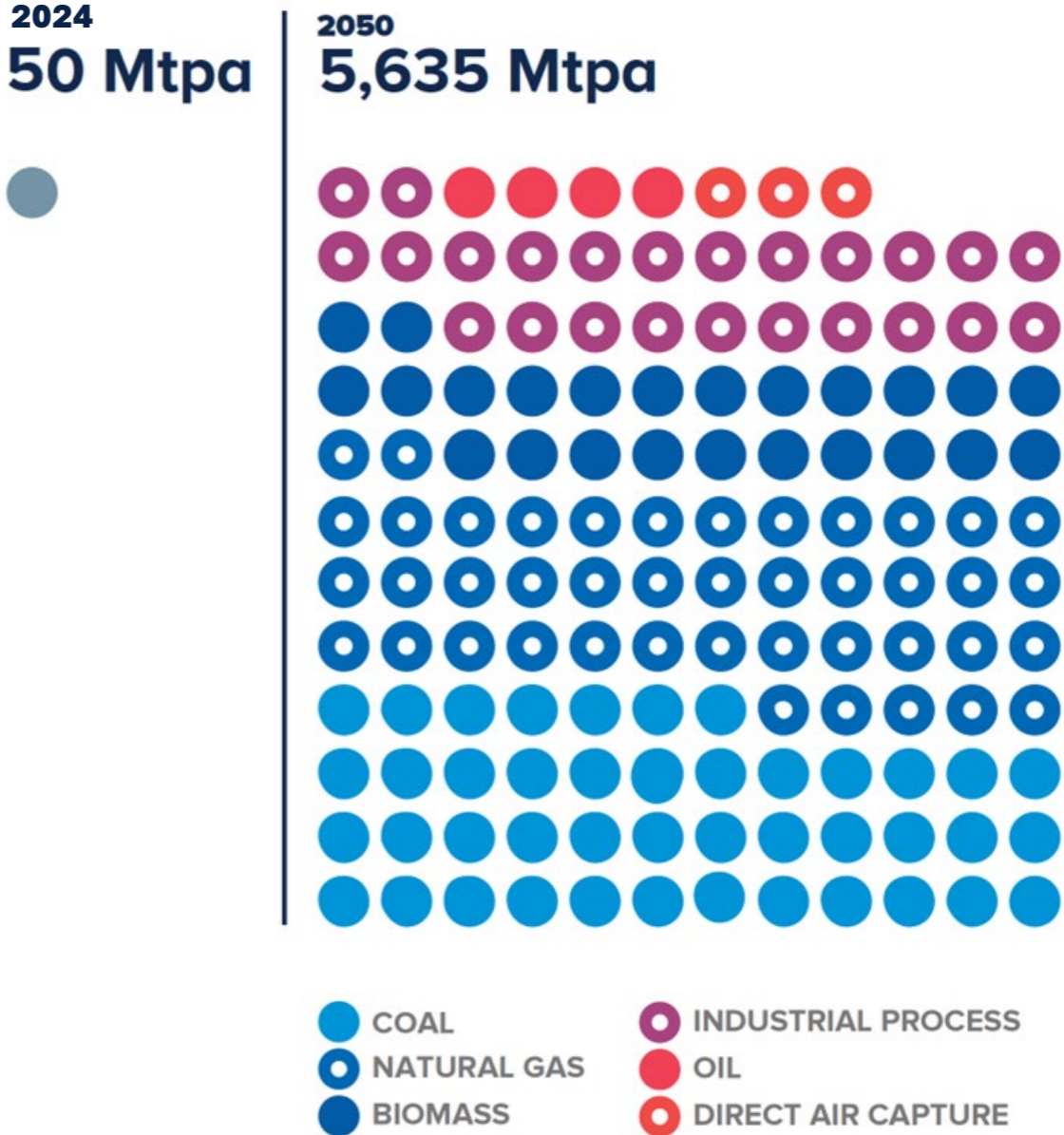
- **564 commercial CCS facilities** in total, with a capacity to capture ≈ 421 Mtpa
 - 43 are in operation, with a capacity to capture ≈ 50 Mtpa
 - 33 in construction
 - 488 in advanced or early development
- +186 facilities (in advanced or early development) in the pipeline since January 2024

PROJECTS GROWTH REQUIREMENTS

Global emissions = 40 Gtpa

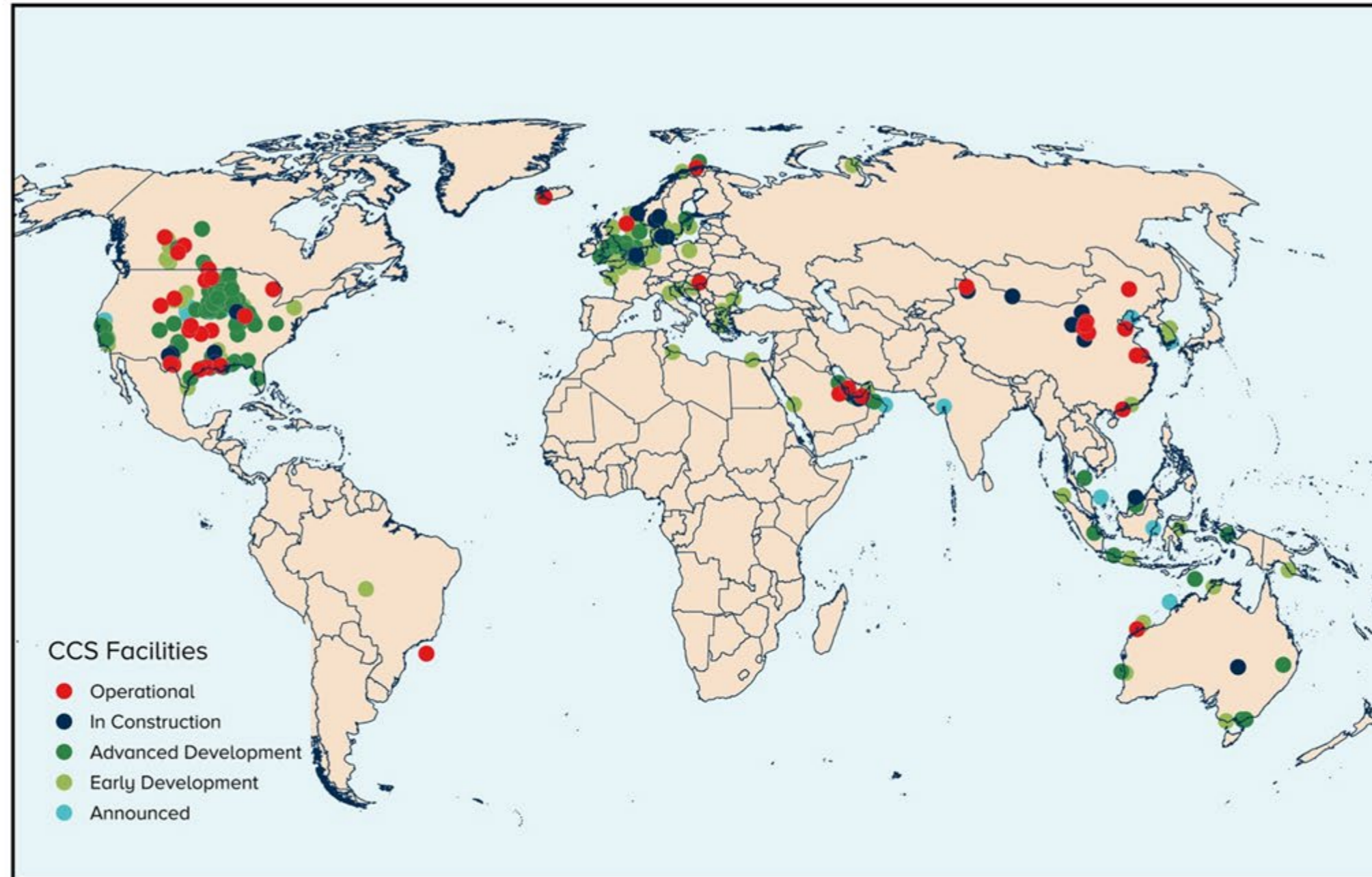
2024 capture capacity = 50 Mtpa

Estimated CCS need: approx. 14% = 5,600 Mtpa



UPDATED FROM IEA SDS REPORT 2019

PROJECTS: WHERE?



This map does not include the following:

- Pilot and Demonstration Facilities
- Announced Facilities
- Facilities where precise location is yet to be confirmed

Source: GCCSI CO2RE Database CCS Facilities through March 2024.

PROJECTS: DIVERSITY



Source: [Global CCS Institute \(2023\)](#)

WHAT WE DO

Annual [Global Status of CCS Report](#)

Convenings

- COP, climate negotiations, Carbon Management Challenge
- Regional/Country Meetings
- Regular Multi-Government Working Groups
- Member Meetings/Annual Forums

Insights, Perspectives, Thought Leadership

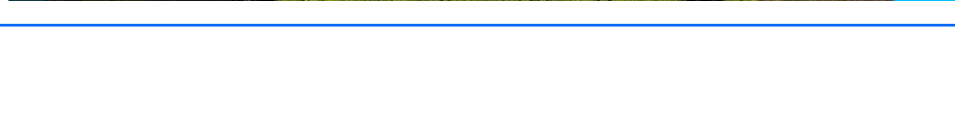
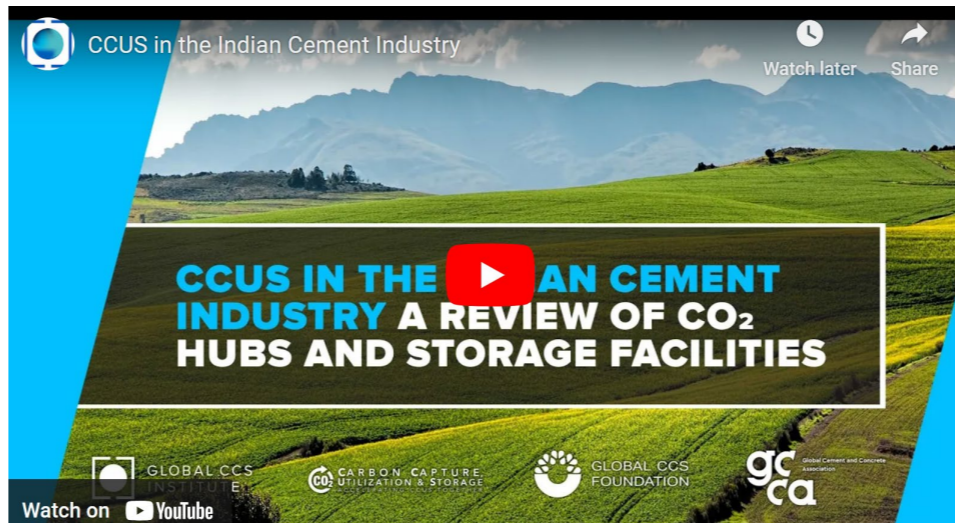
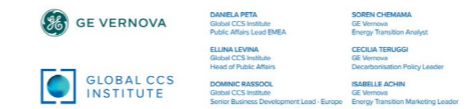
Official submissions to governments' requests for information/comment

Policy tracking and analysis

Webinars

Newsletters

Factsheets and Educational Materials



GLOBAL ENGAGEMENT

European Multi-Gov Working Group on CCS



Purpose:

- Support government stakeholders in examining issues surrounding development and implementation of law and regulation for CCS in Europe
- Share experiences around policy, legal and regulatory issues, address emerging questions, build a network

Format:

- Virtual and in-person small group discussions (10-30 people)

Early wins:

- Shared knowledge from countries rich with CCS experience (CCfDs, storage licensing and permitting processes, transboundary movement of CO₂, etc.)

Frequency:

- 3-4 times per year

South East Asia CCS Accelerator (SEACA)



- Accelerate investment in CCS as an essential component of the region's broader climate change mitigation efforts
- SEACA Pillars: CCS Regulation, Enabling Policy, Geological Storage Resource Development

- Large gatherings (80-100 participants)

- Direct government impact/influence; Identification of policy and knowledge gaps; New support from government ministers

- 3 meetings in two years; 4th possible

THANK YOU

