



**METI**  
Ministry of Economy,  
Trade and Industry

# **Japan's CCUS Policy:**

Cooperation for CCUS Development in Asia

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# 2050 Carbon-Neutral Declaration (October 26<sup>th</sup>, 2020)

- In October 2020, the former Prime Minister Suga declared that by 2050 Japan will aim to reduce greenhouse gas emissions to net-zero, that is, to realise a carbon-neutral, decarbonised society.
- We believe that proactive global warming countermeasures will bring about changes in industrial structure and economic society, and lead to significant growth.

## Former Prime Minister's Speech

I hereby declare that Japan will aim to reduce its overall greenhouse gas emissions to net zero by 2050, that is, to achieve 2050 carbon neutral, a “decarbonised society”.

(…)

The key to this is innovations such as next-generation solar cells and carbon recycling. We will accelerate research and development with an eye toward practical application.



# Direction of Japan's CCS Policy

## The 6<sup>th</sup> Strategic Energy Plan (currently responding to public comments):

### 4. Challenges and Responses for Achieving Carbon Neutrality in 2050

#### (2) Importance of multiple scenarios

- Ensuring stable and less costly energy supply on the premise of safety assurance is important **for aiming at carbon neutrality by 2050**. On this premise, maximum introduction of renewable energy will be addressed as major power sources based on the top priority policy; **practical use of hydrogen and CCUS in the society will be promoted**; and necessary scale of nuclear power will be continuously used on the basic premise of safety assurance while public trust is being ensured.

### 5. Policy Responses for 2030 with a View to 2050

#### (7) The Future of Thermal Power Generation

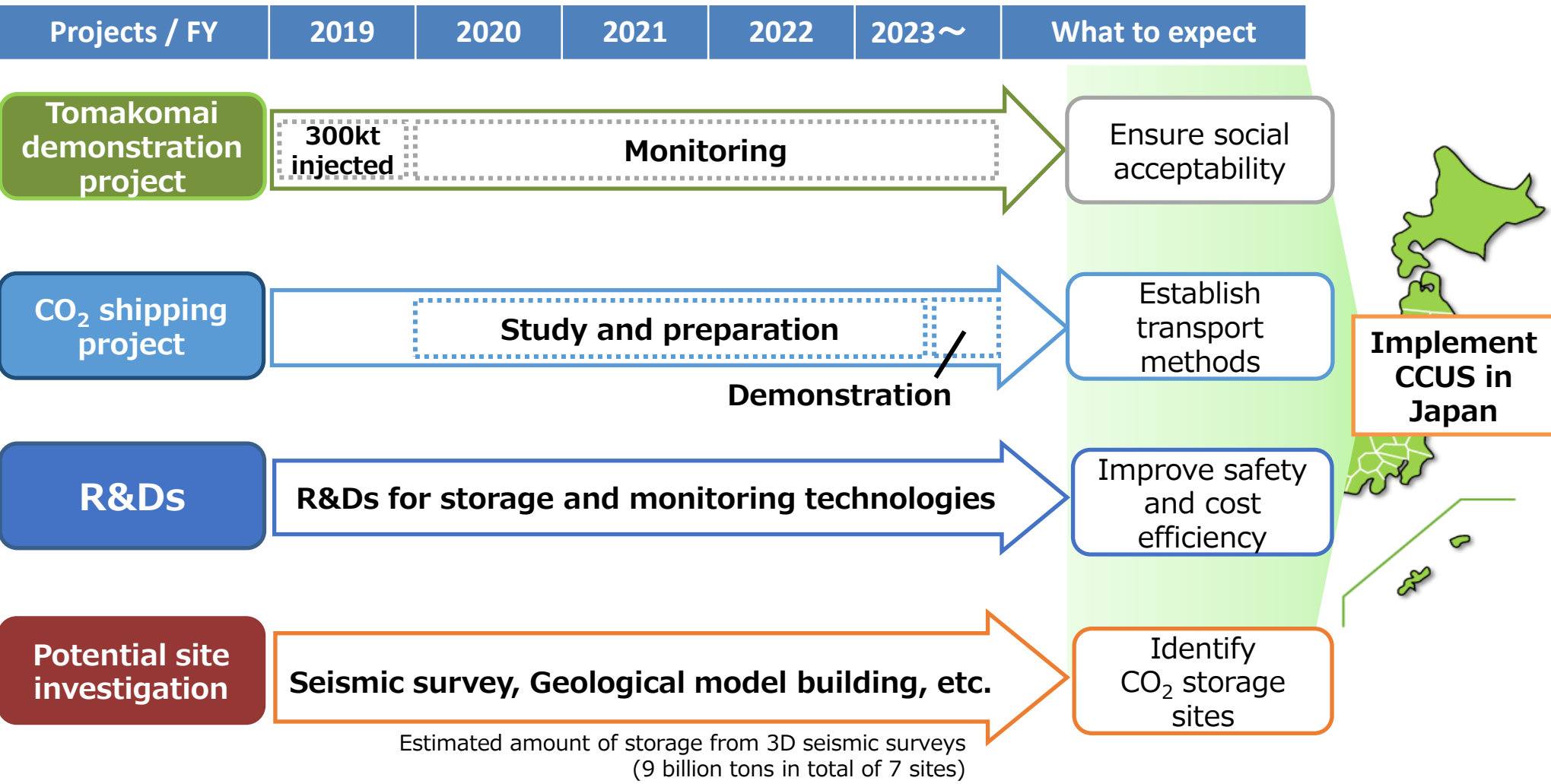
- ...promote the development of an environment for the commercialization of CCS/carbon recycling by working on the development of suitable sites, technology development, transportation demonstration, business environment improvement, and the introduction of CCS Ready as early as possible, which are necessary to consider **the introduction of CCS by 2030 on the premise of CCS commercialization**.

## Assumed scale of CCUS in Japan:

If about 10% of the electricity generated in 2050 is to be supplied by fossil-fired power generation with CCUS, ... **about 100 million tons of CCUS will need to be implemented for fossil-fired power generation every year**.

(Materials from the Basic Policy Subcommittee of the Advisory Committee for Natural Resources and Energy, May 13, 2021)

# Overview of Domestic CCUS Policy in Japan

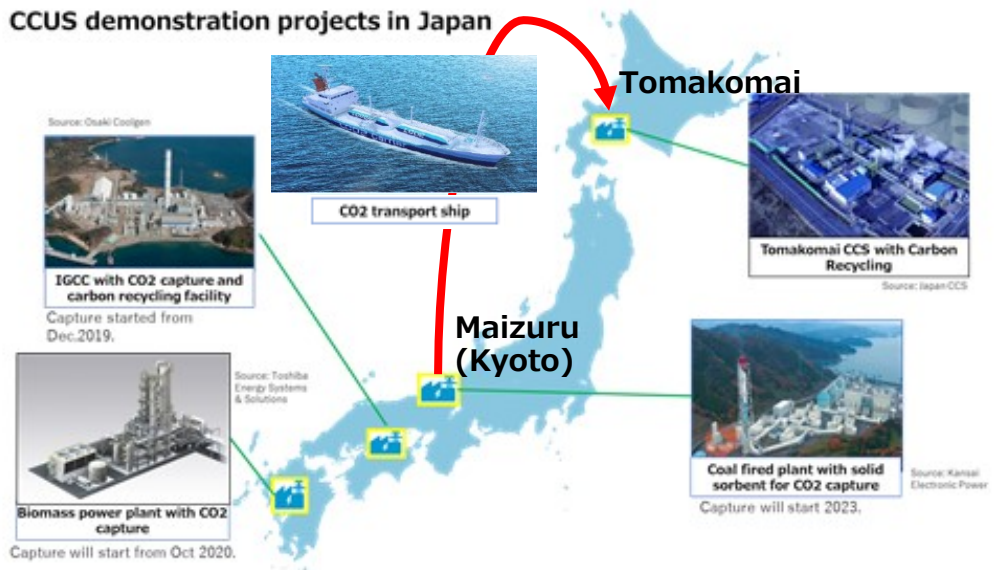


# Tomakomai Demonstration Project

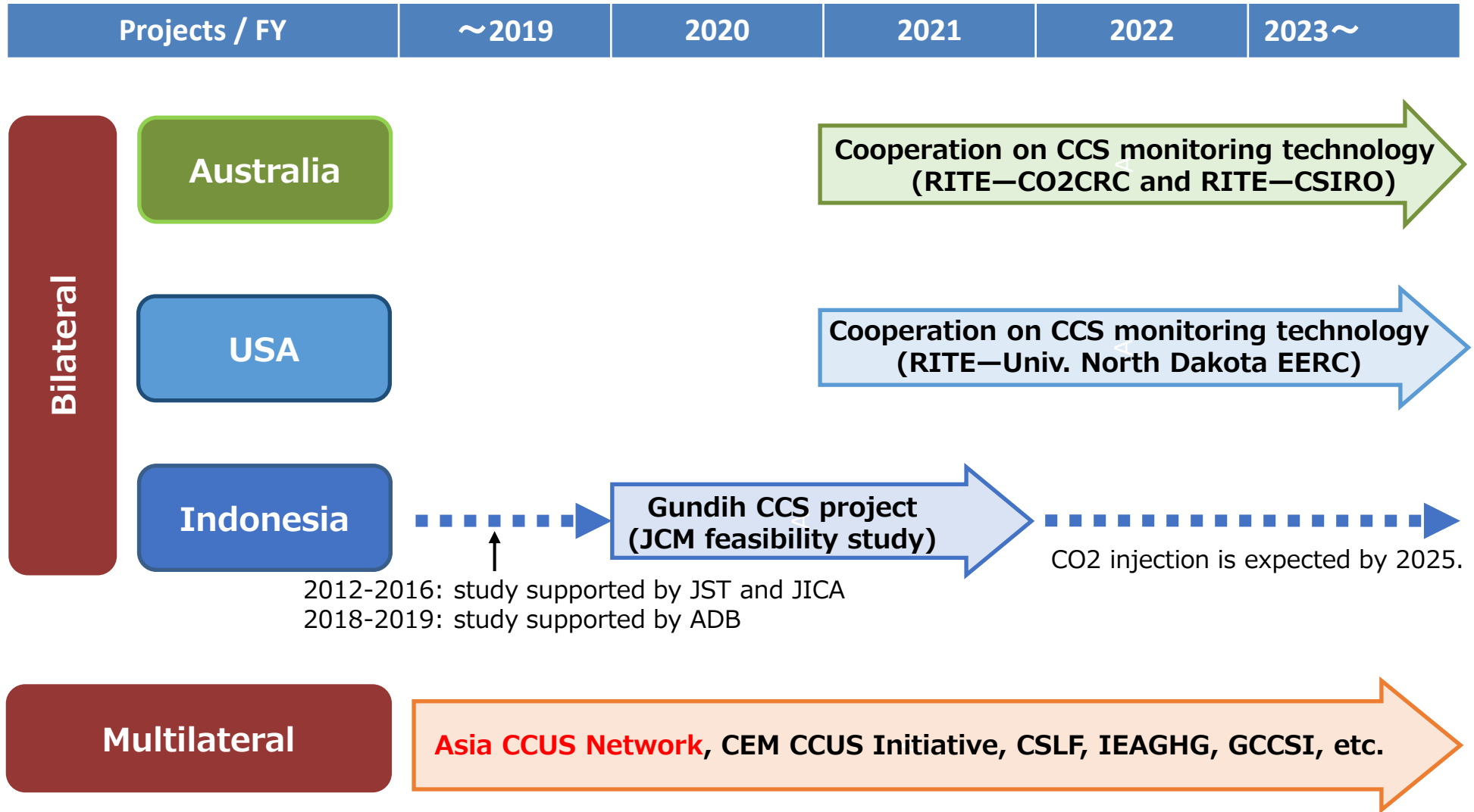
- Achieved initial target of approximately 300,000 tonnes cumulative injection in November 2019.
- Monitor the status of CO<sub>2</sub> storage and also conduct marine environmental surveys.
- Conduct a demonstration project of liquid CO<sub>2</sub> ship transport: 2021 Start the project (study and preparation for the demonstration test); 2024 Start the demonstration test



<Tomakomai demonstration site>



# Selected International Collaborations



# Asia Green Growth Partnership Ministerial Meeting

D a t e October 4<sup>th</sup>, 2021

Participants ministers from **20 countries** and representatives from **3 international organizations**

- <Indo Pacific> Brunei, Cambodia, Indonesia, Laos, Malaysia, Philippines, Singapore, Thailand, India, Bangladesh, Sri Lanka, Uzbekistan, Australia, United States, Japan (Chair)
- <Middle East> Saudi Arabia, United Arab Emirates, Qatar, Iraq, Kuwait
- <International Organizations> ASEAN Secretariat, Economic Research Institute for ASEAN and East Asia (ERIA), International Energy Agency (IEA)

1. METI held the first **"Asia Green Growth Partnership Ministerial Meeting (AGGPM)"** online.
2. The participants discussed **the need to achieve green growth and accelerate various and realistic energy transitions toward global carbon neutrality in the earliest possible timing**. In particular, they affirmed that **there is no single pathway to achieve carbon neutrality, but rather there are diverse pathways for each country, and that promoting innovation and actively engaging Asian countries will be important**.
3. Former Minister Kajiyama delivered a video message in which he **emphasized that Japan will provide a wide range of support based on the "Asia Energy Transition Initiative (AETI)"** to accelerate energy transitions in Asia. **Many participants welcomed Japan's initiative**.
4. The participants **underlined the necessity of international cooperation for enhancing innovation and finance to support energy transitions in each country**.
5. **The Chair's Summary was issued** on the basis of the discussions in the meeting.



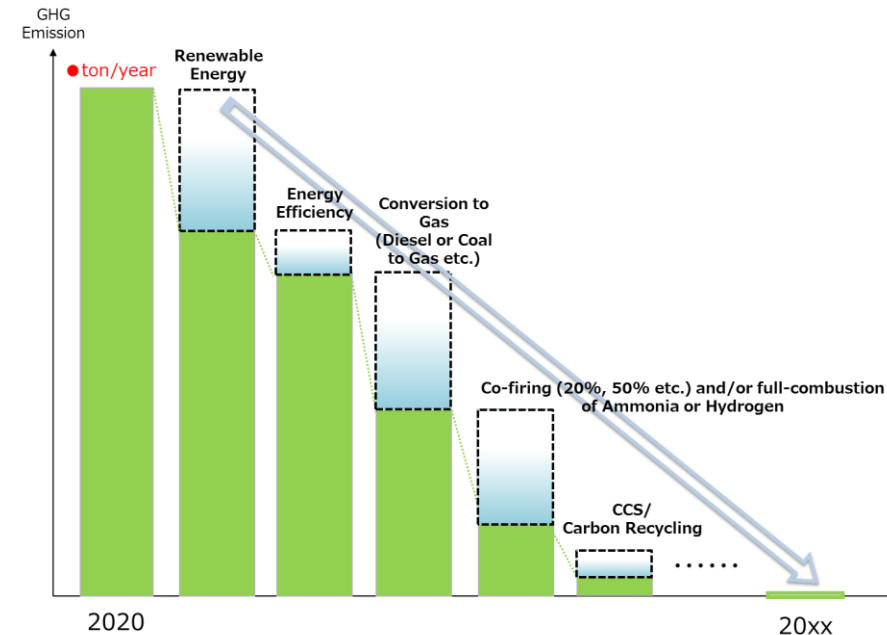
# Asia Energy Transition Initiative (AETI)

- Japan announced “Asia Energy Transition Initiative (AETI)”, which includes a variety of support for the realisation of various and pragmatic energy transitions in Asia this May.

## Asia Energy Transition Initiative (AETI)

1. Support for formulating energy transition roadmaps
2. Presentation and promotion of the concept of Asia Transition Finance
3. US\$10 billion financial support for renewable energy, energy efficiency, LNG, CCUS and other projects
4. Technology development and deployment, utilizing the achievement of Green Innovation fund  
(e.g.) Offshore wind, Fuel-ammonia, Hydrogen etc.
5. Human resource development, knowledge sharing and rule-making on decarbonisation technologies
  - Capacity building of decarbonisation technologies for 1,000 people in Asian countries
  - Workshops and Seminars on energy transitions
  - **Asia CCUS network**

## <Image of achieving net-zero scenarios in Asia>



### [Cost minimisation model]

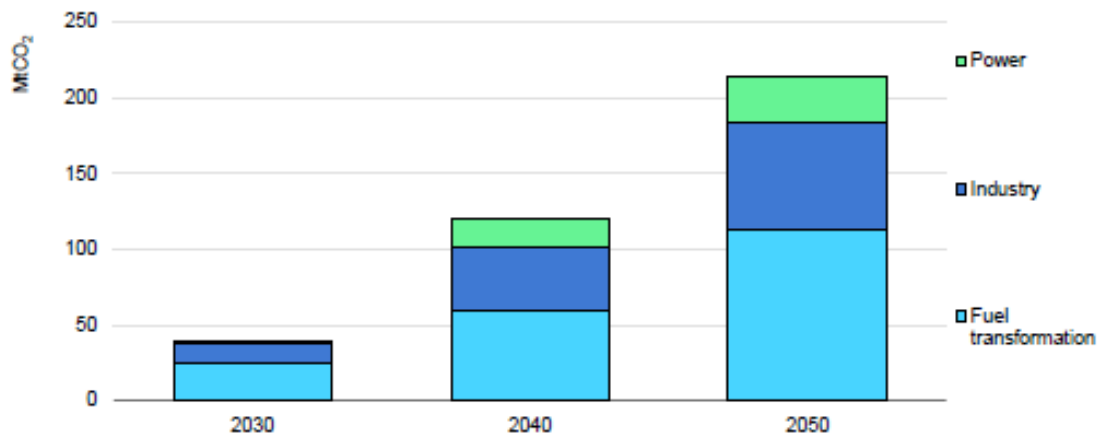
- Drafting each Asian country's roadmaps towards carbon neutrality based on the assumption that the cheapest energy sources and technologies will be introduced first, followed by more expensive ones.



# CCUS Potential in the Southeast Asian Region

- “Carbon Capture, Utilisation and Storage: The Opportunity in Southeast Asia”, a special report newly released by the IEA on June 21, states that **CCUS will play a significant role in the Southeast Asian region**, where demand for fossil fuels will remain high.
- **To achieve the 2°C target in the Paris Agreement, CO<sub>2</sub> capture in Southeast Asia will have to reach at least 35 million tons CO<sub>2</sub> in 2030, and will need to exceed 200 million tons by 2050.** In order to achieve this level of CCUS deployment, it is estimated that by 2030, **investment of more than US\$1.0 billion per year is required.**
- According to GCCSI, ASEAN as a whole has **a storage capacity of over 190 billion tons.**

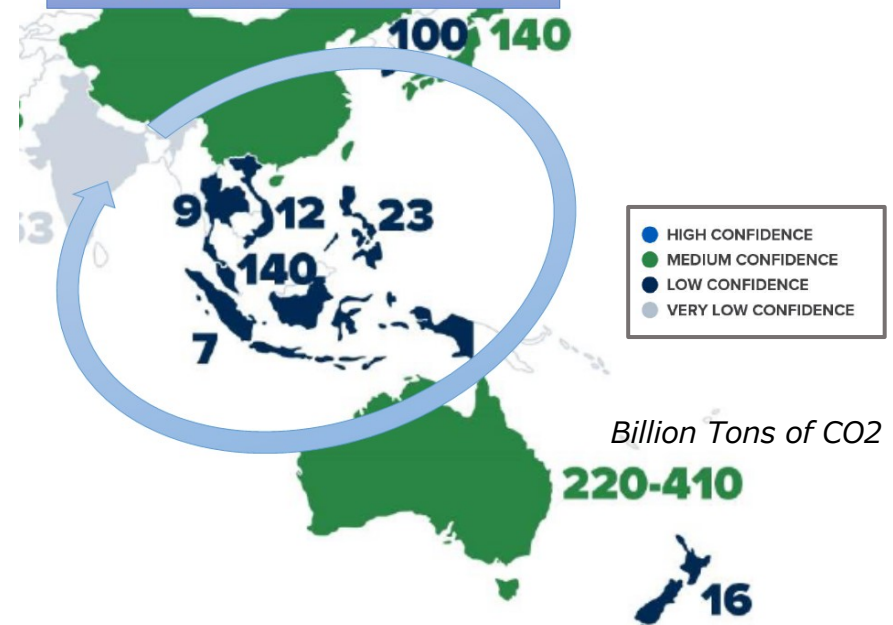
CCUS deployment in Southeast Asia in the Sustainable Development Scenario



IEA. All rights reserved.

Note: Values shown are from the IEA Sustainable Development Scenario; corresponding CCUS deployment levels are generally higher in the Net Zero 2050 Roadmap.

## Asia CCUS Network



<Estimated storage capacity in Asia (GCCSI)>

(IEA, “Carbon Capture, Utilisation and Storage: The Opportunity in Southeast Asia”)

# Asia CCUS Network (ACN)

- “Asia CCUS Network” is composed of Members from Governments of ASEAN and EAS region countries and Supporting Members from companies, academia and financial institutions, which share the vision and support the mission of the Asia CCUS Network.

## Vision

Through collaboration and cooperation on development and deployment of CCUS in the Asia region, the Network will contribute to the decarbonization of the region

## Mission

Facilitate deployment of CCUS in the EAS region through the following activities:

- 1) Promote knowledge sharing through holding an annual forum, conferences, workshops, and meetings.
- 2) Conduct research studies on technical, economical, and legal standards of CCUS in the EAS region.
- 3) Hold capacity building training workshops.

## Member countries

