



JOGMEC's CO₂ geological storage activities in ASEAN and the way forward

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Hiroshima , JAPAN

1. About JOGMEC: For energy security and carbon neutrality



Japan Organization For Metals and Energy Security (JOGMEC)

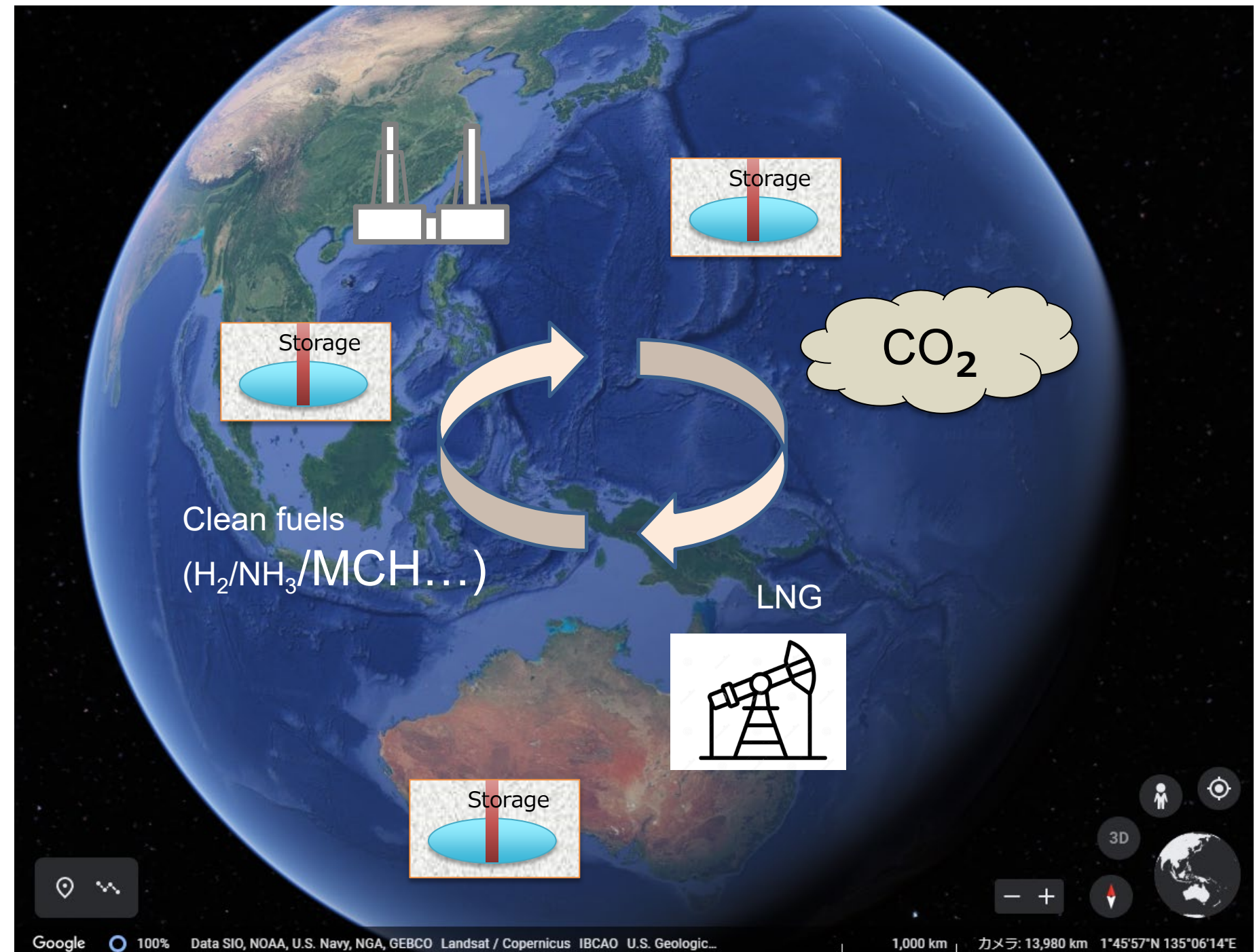
*Formerly Japan Oil, Gas and Metals National Corporation

Securing energy supply to Japan and emerging Asia with Zero Emissions

– Establishing a Fuel and Carbon Chain in Asia

- ❑ CCS hub
 - ❑ Survey, development, operation, and monetization
 - ❑ Carbon credit from CCUS
- ❑ Transboundary CO₂ Transport
 - ❑ Technology and regulation
- ❑ Common technical and regulatory background – Standardization
 - ❑ CCS/CO₂EOR/Carbon Intensity guidelines

JOGMEC's effort to create institutional infrastructure



2. Partnership with ASEAN countries



Contribution to Asia Zero Emission Community (AZEC) and Asia Energy Transition Initiative (AETI)



Capacity building



Partnership with ASEAN

- Joined the Asia CCUS Network as an advisory member
- Contributes to Southeast Asia CCUS Accelerator (SEACA), led by Global CCS Institute



Partnership with Malaysia

- Signed MoU with Petronas
- Conducted a joint study on the development of a high CO₂ gas field using CCS with Petronas.

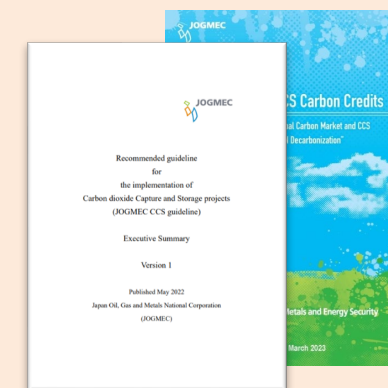
Assessment for CO₂ storage potential in ASEAN region

Partnership with Indonesia

- Signed MOU with Pertamina
- Implemented and launched CO₂ pilot tests at oil fields with Pertamina
- Performing CCS joint study for clean fuel ammonia production with Pertamina.

Initiative towards establishing Institutional infrastructure

- Published CCS guidelines, EOR guidelines, Carbon Intensity guidelines, and CCS Carbon Credits handbook



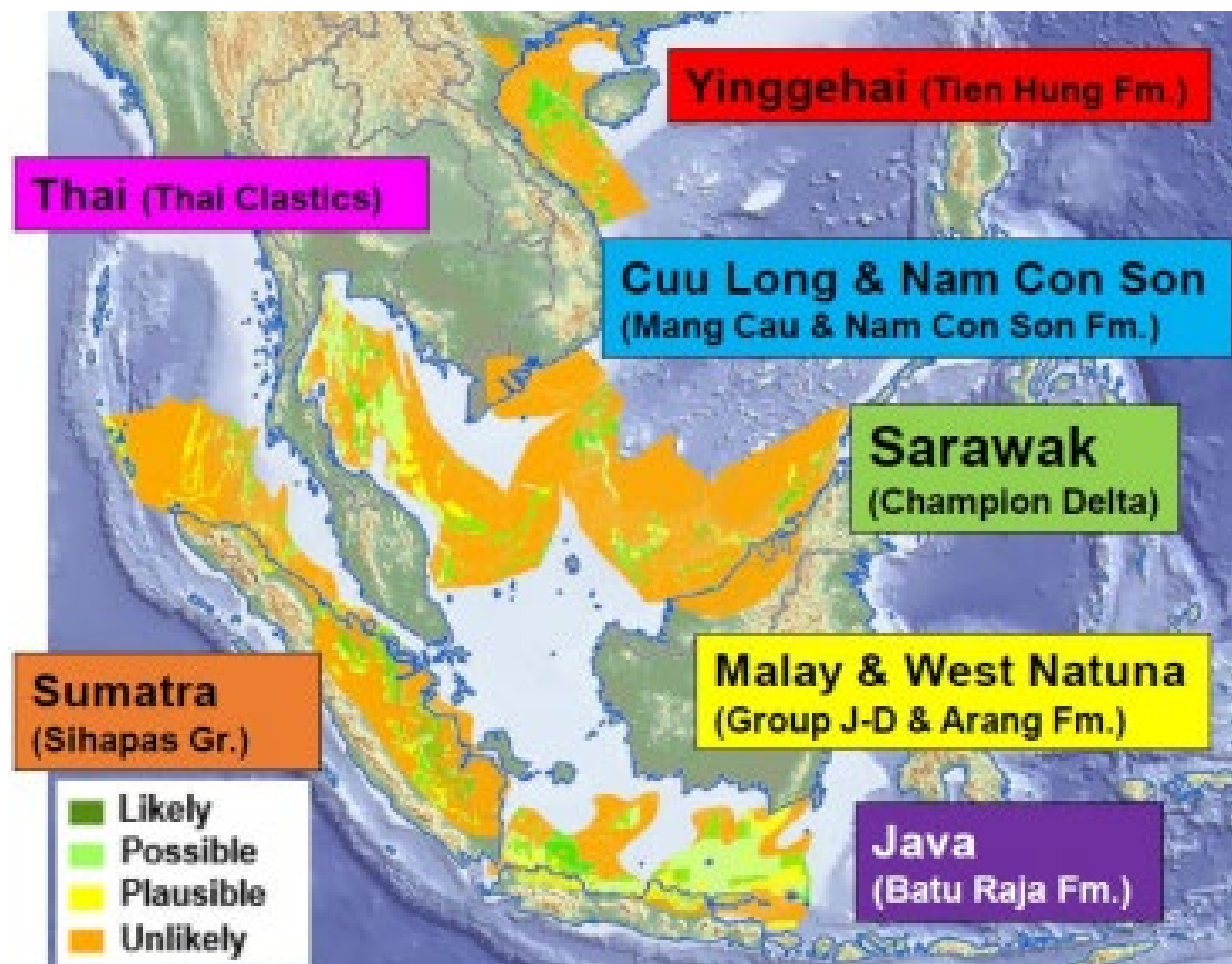
Partnership with Vietnam

- Signed MOU with Petrovietnam



3. Regional CCS screening for suitable CO₂ storage areas

- Screened suitable areas, specifically saline aquifers, for CCS using the regional database, Neflex[®] Predictions by Halliburton as the database from October 2021 until March 2022.
- Mapped and estimated the CCS potential by basin and formation.



CCS Screening in Southeast Asia using Regional Database

16 February 2023 | 1.00 PM - 2.15 PM (UTC+7, Jakarta time)
webinar streamed through Zoom

Opening and Welcoming remarks
Shigeru Kimura, Special Advisor to the President on Energy Affairs, ERIA
Ayato Kato, Director, Overseas Exploration Division, Exploration Department, Energy Business Unit, JOGMEC

Presentation
Ryoko Setoguchi, Overseas Exploration Division, Exploration Department, Energy Business Unit, JOGMEC

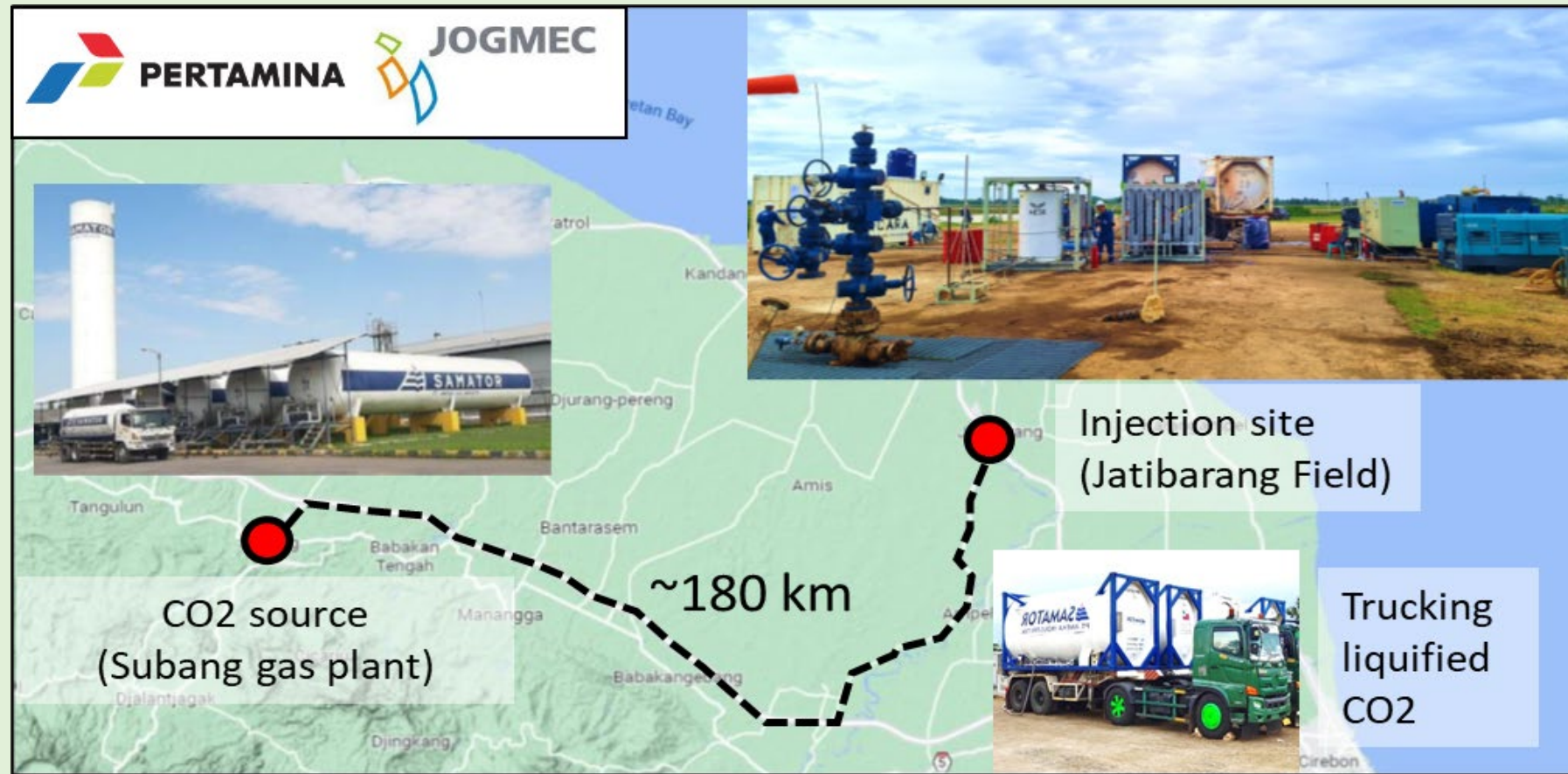
Commentary Session
Mohammad Rachmat Sule, Manager of National Center of Excellence for CCS/CCUS, Institute of Technology, Bandung, Indonesia

Closing Remarks
Han Phoumin, Senior Energy Economist, ERIA
Moderated by Han Phoumin, Senior Energy Economist, ERIA

REGISTRATION
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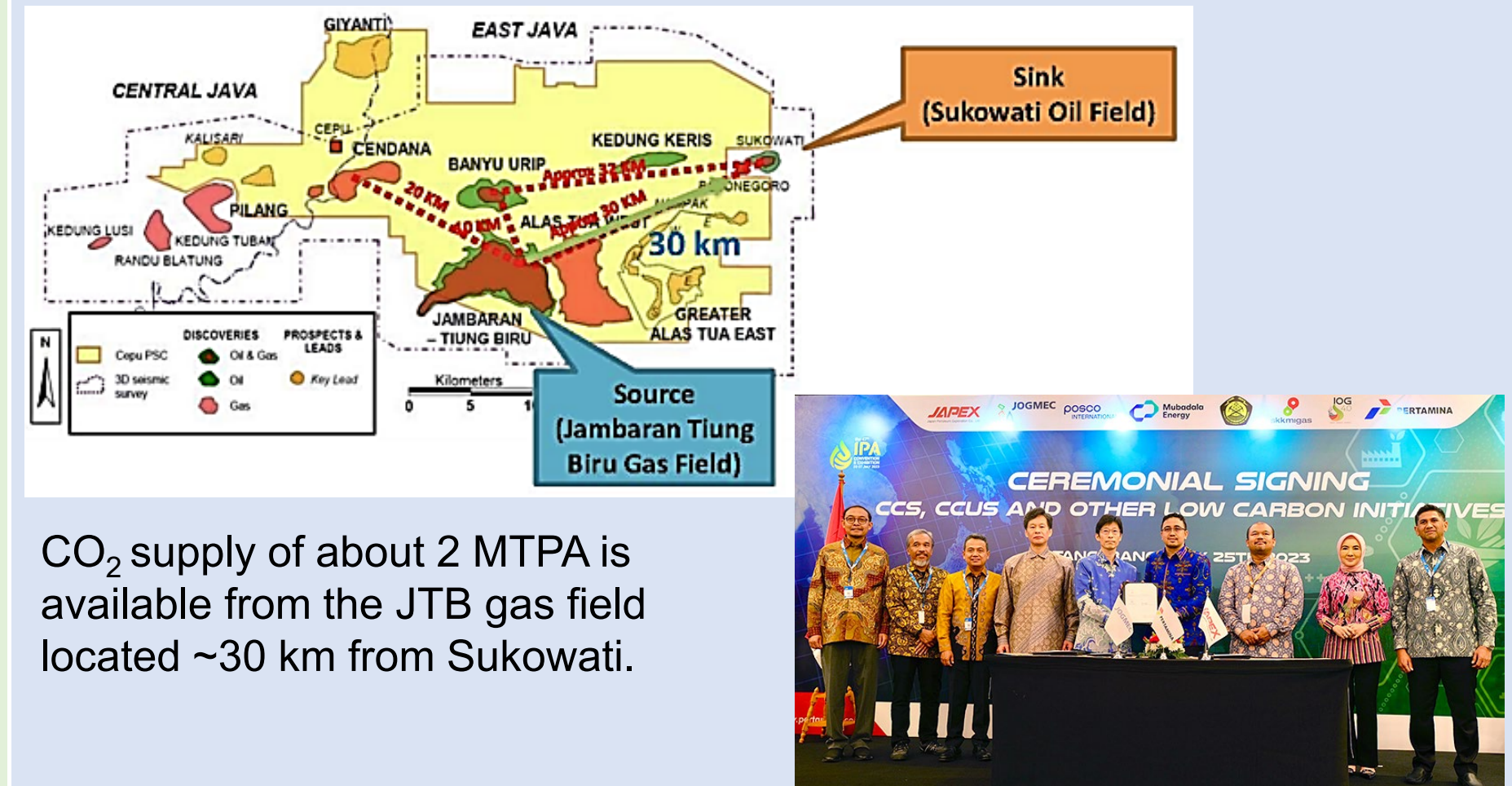
*The results of the study was presented at the Asia CCUS Network's 7th Knowledge Sharing Virtual Conference, February 16, 2023

4. CCS/CCUS projects in Indonesia



Jatibarang CCUS (CO₂-EOR) pilot project in West Java, Indonesia

- Successfully implemented small-scale CO₂ injection (CO₂ Huff 'n' Puff) into a depleted oil reservoir to demonstrate and verify the effect of CO₂-EOR & CCS.



JSA signing ceremony at the 47th IPA in July 2023

Sukowati CCUS (CO₂-EOR) project in East Java, Indonesia

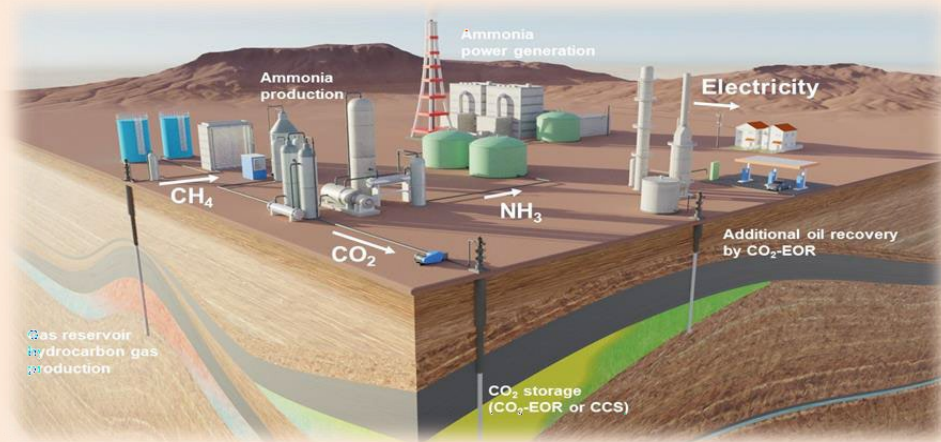
- Signed a Joint Study Agreement with Pertamina and JAPEX in July 2023 for CO₂ injection field trial (i.e., CO₂ Huff 'n' Puff) at Sukowati field.

(Source: Pertamina EP)

5. Towards establishing institutional infrastructure

Technological Standards

CO₂ Geological Storage Capacity



Carbon Intensity (CI)



JOGMEC's CCS Guideline

JOGMEC's CO₂-EOR Guideline

JOGMEC's CI Guideline

Transboundary CO₂ Transport



JOGMEC will support in establishing a framework for transboundary CO₂ transport and storage between Japan and ASEAN countries, in cooperation with METI.

Visit our website “Clean Future Energy”
<https://mirai.jogmec.go.jp/en/>

