



A TICKET TO GREATER ENVIRONMENTAL PROSPERITY

JAPAN SIDE EVENT: WEDNESDAY 12 DECEMBER 2018

COP24: KATOWICE, POLAND

JOHN SCOWCROFT

HIGHLIGHTS

- International recognition that we need CCS to meet the global climate ambitions of Paris
- IPCC reinforcement in 1.5°C report of the importance of CCS is in reaching net-zero emissions by 2050 (CCS identified in three of four pathways)
- Forty-three (43) large-scale facilities – 18 commercially, five under construction and 20 in various stages of development
- Wider appreciation that CCS is vital in decarbonising the industrial sector



GLOBAL CCS FACILITIES



CCS AS “CATALYST”

- Acknowledgement of CCS as “catalyst” to new energy economies - particularly CCS with hydrogen
- Advancement of CCS/hydrogen facilities in Australia, UK, USA, the Netherlands, Sweden Canada and Japan
- Confirmation that CCS can generate:
 - new employment
 - new product streams (including CCS componentry, BECCS, DAC and CO₂ re-use)
 - new economic revenues



POLICY CONFIDENCE

- A growth in CCS policy confidence across multiple jurisdictions:
 - **USA:** enactment of 45Q (tax credit) legislation
 - **UK:** creation of the UK CCUS Council, and CCUS Cost Challenge Taskforce
 - **China:** promotion of low carbon technologies (CCUS), grant funding on CCS research, and indexation of CCUS in amended Environmental Impact Guidance
 - **Japan:** Government commitment to establish a hydrogen society by 2030, and creation of a Hydrogen Energy Supply Chain (HESC) in Australia

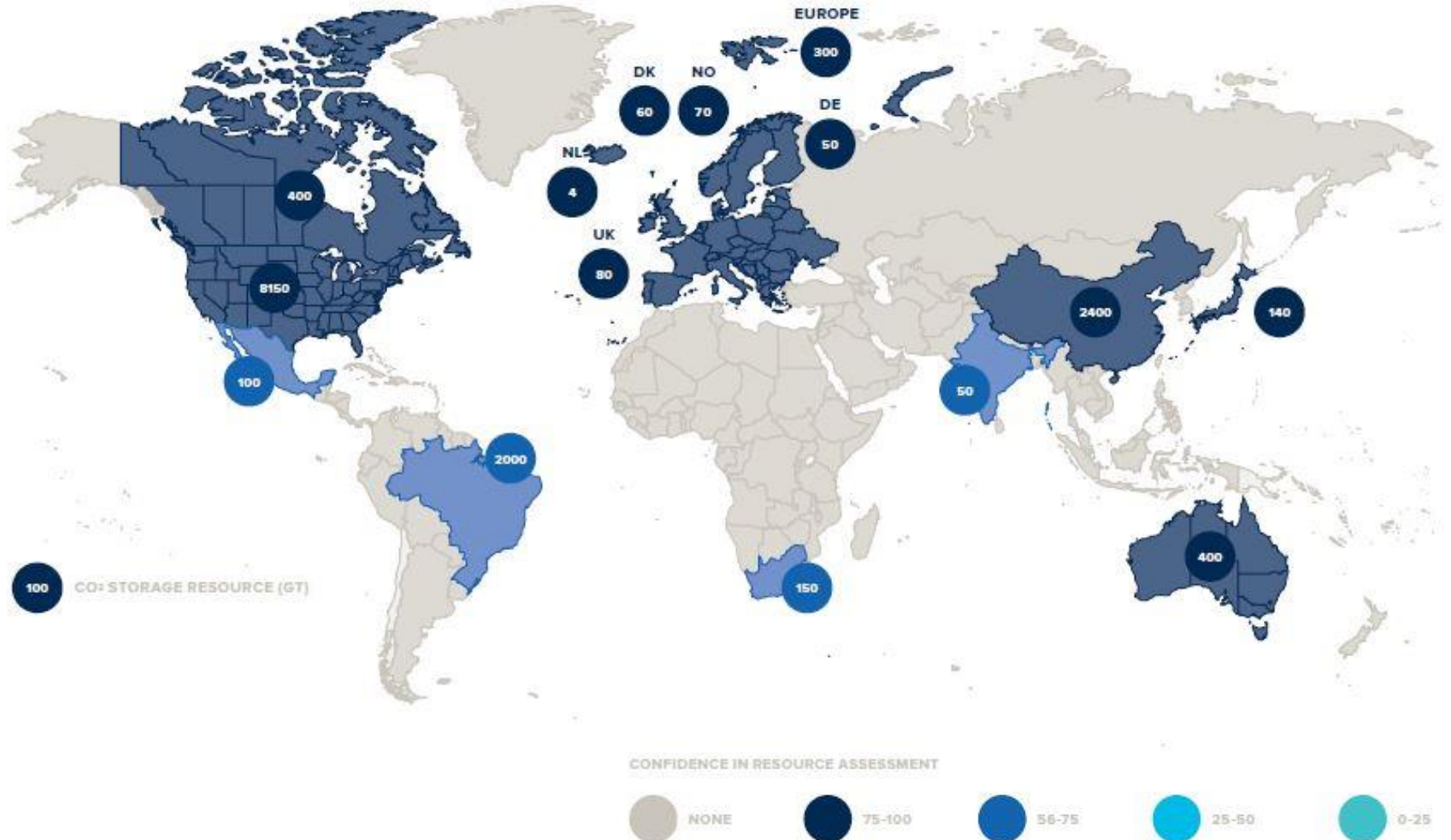


STORAGE

- One of earliest storage resource assessments was published in Japan in 1995 (by Tanaka)
- Acceptance that “at least a thousand years” of global CO₂ storage resource exists with no technical barriers to secure and permanent storage
- More than 1,000 Gt of CCS storage potential around the world (140 Gt in Japan)
- No incidence of significant CO₂ loss over four decades of storage and dozens of pilot, demonstration and commercial facilities
- “The rocks are there, all we have to do is fill them up.”

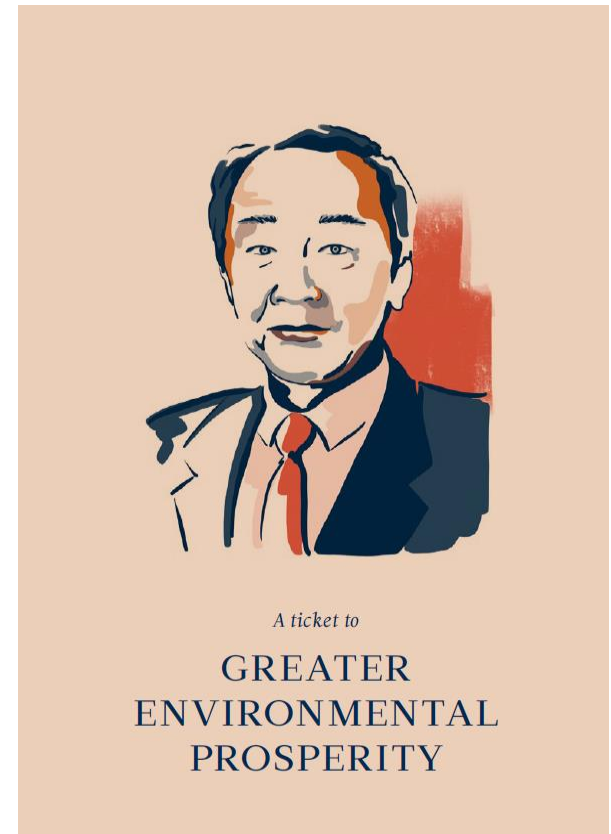


GLOBAL STORAGE CAPACITY



JAPAN

- Leadership CCS position
 - honing its capability/breaking new ground
- Tomakomai CCS pushing past 200,000 tonnes of CO2 safely stored
- Steady progress by three other facilities
 - Mikawa
 - Osaki Coolgen
 - Saga City Waste Incineration Plant
- Japan's commitment to a fully-fledged hydrogen economy – notably HESC
- A collaborative approach between industry, government, academia and advocates (like Mayor, Hirofumi Iwakura)



A DIVERSE CHORUS OF NEW SUPPORT

- Endorsement by new actors from all walks of life:
 - polar explorers
 - politicians
 - economists
 - academics
 - religious leaders
 - unionionists
 - eNGOs
 - mayors
 - the media
 - movie-makers
 - the military



17-YEAR OLD POLAR EXPLORER: JADE HAMEISTER



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**“WE MUST PURSUE
CARBON CAPTURE
& STORAGE LIKE OUR
LIVES DEPEND ON IT...
BECAUSE THEY DO.”**

Jade Hameister, Polar Explorer


COP24 KATOWICE 2018
UNITED NATIONS CLIMATE CHANGE CONFERENCE



SUMMARY

- A year of climate-related disaster (fires, floods, storms and drought) which leaves no doubt about the fight we face
- CCS has proven itself as “real, happening and here to stay”
- Current resurgence will create a new wave of CCS facilities in 2020s

But...

- Deployment is still too slow
- First-of-a-kind commercial facilities have already been in operation for years (low hanging fruit)
- Time to jump-start the next wave of facilities



THANK YOU

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