



## **CCS Pilot Projects in the EU**

### **Achievements on CO<sub>2</sub> storage & Opportunities for Developing Country Involvement**

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# The CO<sub>2</sub>GeoNet Association:

An independent and unbiased European scientific voice on CO<sub>2</sub> geological storage



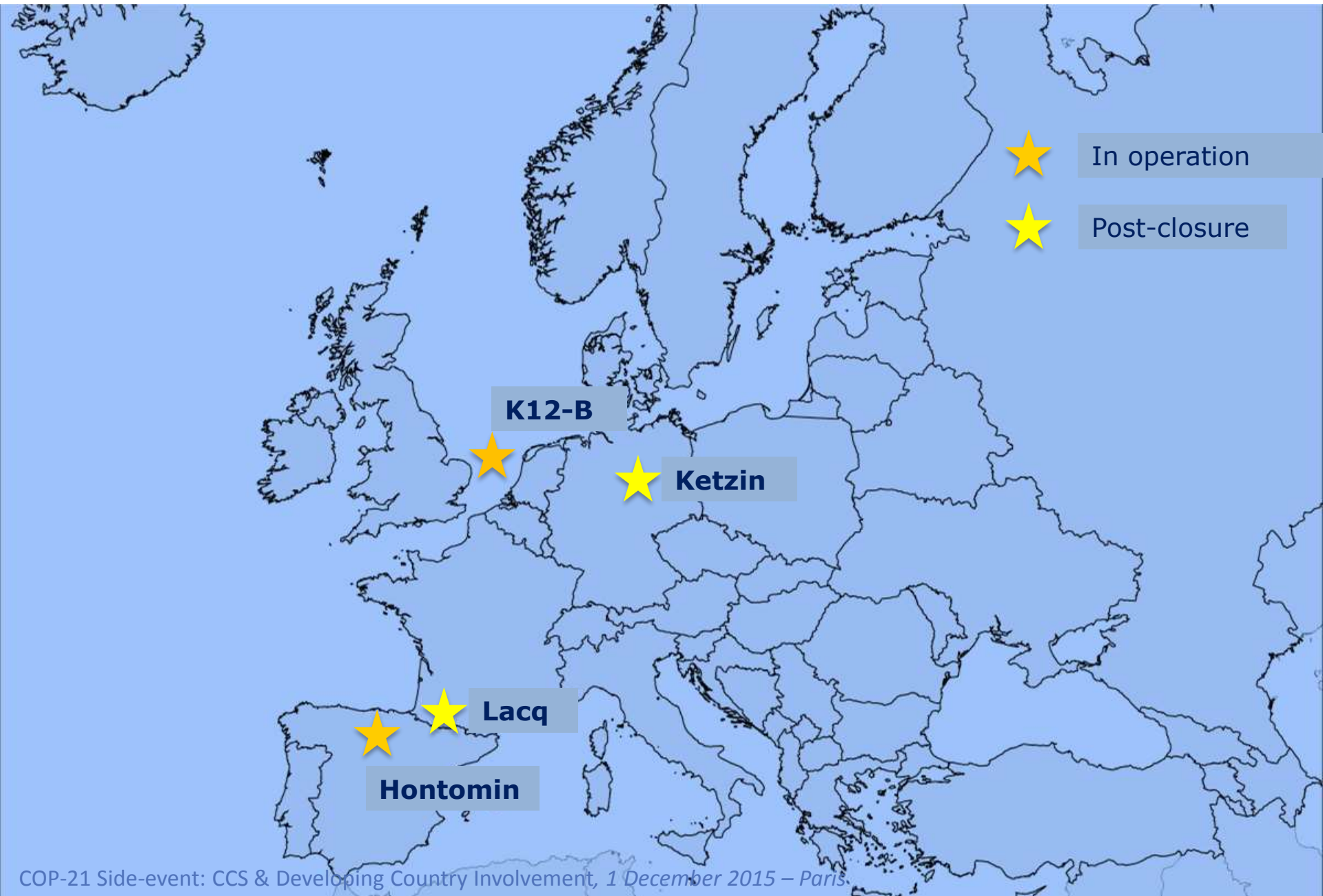
26 members in  
19 countries

# Topics, I will talk about

- CCS pilots in Europe, e.g. achievements from CO<sub>2</sub> storage
  - Safety
  - Effectiveness
  - Societal engagement
  - Collaborative research
  
- Potential for collaboration with developing countries



# CO<sub>2</sub> storage pilots in Europe



In operation

Post-closure

K12-B

Ketzin

Lacq

Hontomin

# Ketzin infrastructure (Germany)



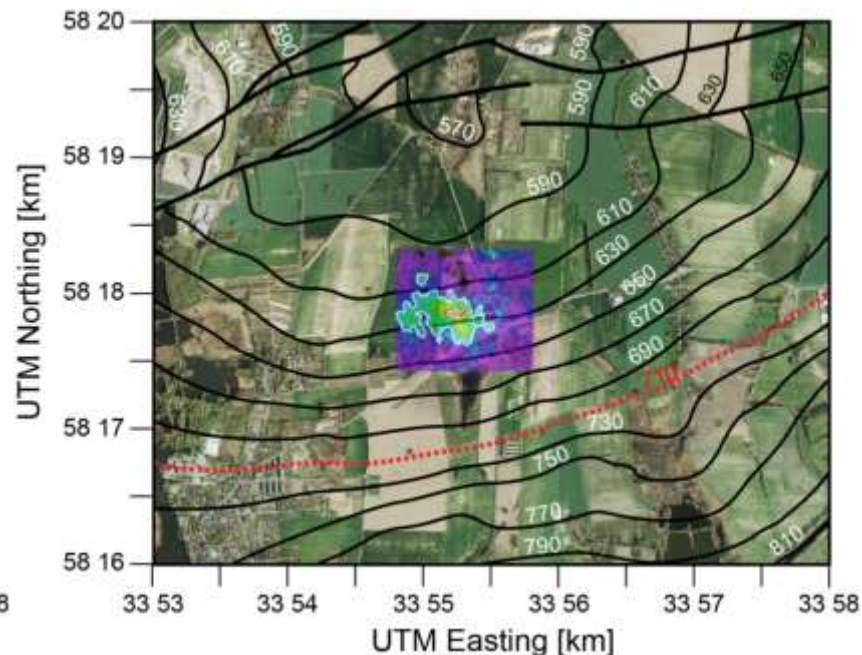
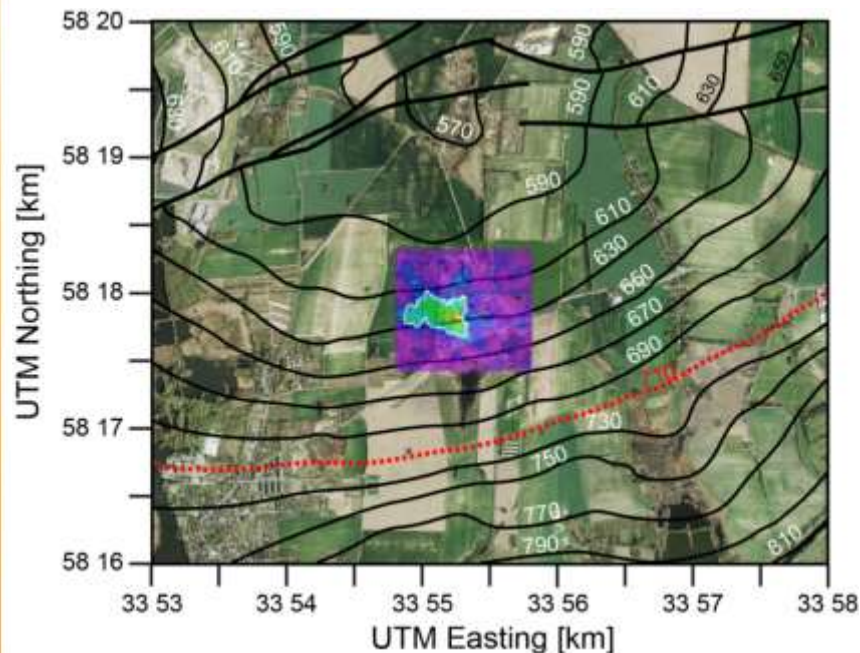
- ➔ Saline aquifer at 630 m depth
- ➔ In operation from 2007 to 2013: 67 kt CO<sub>2</sub> injected



# Seismic imaging of CO<sub>2</sub> plume extension

Baseline – 2009; 22 kt CO<sub>2</sub>  
~ **0.08 km<sup>2</sup>**

Baseline – 2012; 61 kt CO<sub>2</sub>  
~ **0.15 km<sup>2</sup>**



- ➔ CO<sub>2</sub> plume indicate preferred WNW – ESE extension
- ➔ Centered at injection site, far from spill-point and central fault zone



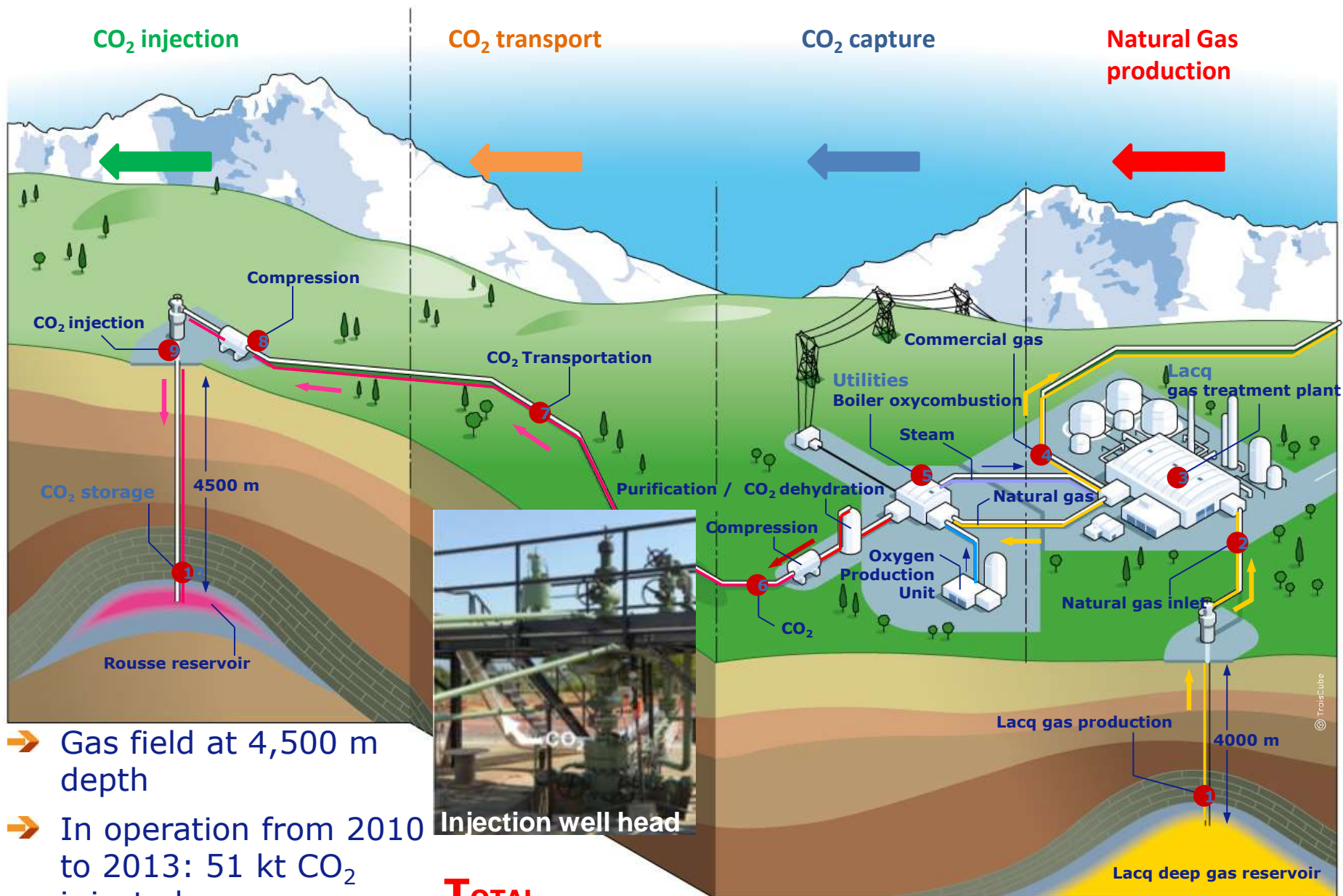
# Hontomin infrastructure (Spain)



- ➔ Saline aquifer at 1600 m depth
- ➔ In early operational phase



# Lacq: Complete CCS infrastructure



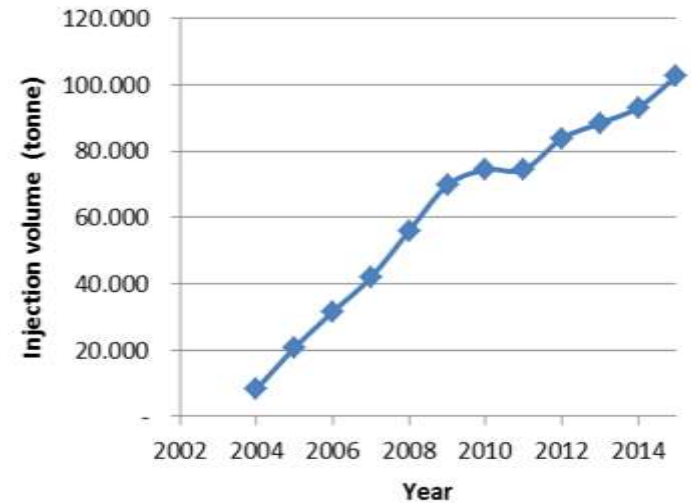
- ➔ Gas field at 4,500 m depth
- ➔ In operation from 2010 to 2013: 51 kt CO<sub>2</sub> injected

Injection well head

**TOTAL**



# Offshore K12-B infrastructure



- Gas field at 3,900 m depth
- In operation since 2004: 102 kt CO<sub>2</sub> injected



# Achievements from real-life CO<sub>2</sub> storage pilots

- Evidence for safe and effective CO<sub>2</sub> storage
- Build local confidence through positive interaction with the public
- Long track record of collaborative research at the pilot sites



# Opportunities for collaboration with CO<sub>2</sub>GeoNet

- ➔ Advise on geological, technical, regulatory and social aspects of CO<sub>2</sub> storage
- ➔ Assisting in deploying technologies at lab and pilot scale
- ➔ Training on the job and collaborative research, e.g. Hontomin
- ➔ Knowledge sharing and capacity building
  
- ➔ CO<sub>2</sub>GeoNet is a UNFCCC-accredited research NGO (RINGO)
- ➔ CO<sub>2</sub>GeoNet is applying for CTCN membership

