



# Transposition of the EU CCS Directive : progress and problems

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# What is the Directive, what does transposition mean?

- Directive 2009/31/EC of the European Parliament on the geological storage of carbon dioxide entered into force on 25 June 2009
- It establishes a legal framework for the environmentally safe geological storage of carbon dioxide as part of the fight against climate change
- It states that: "Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 25 June 2011".

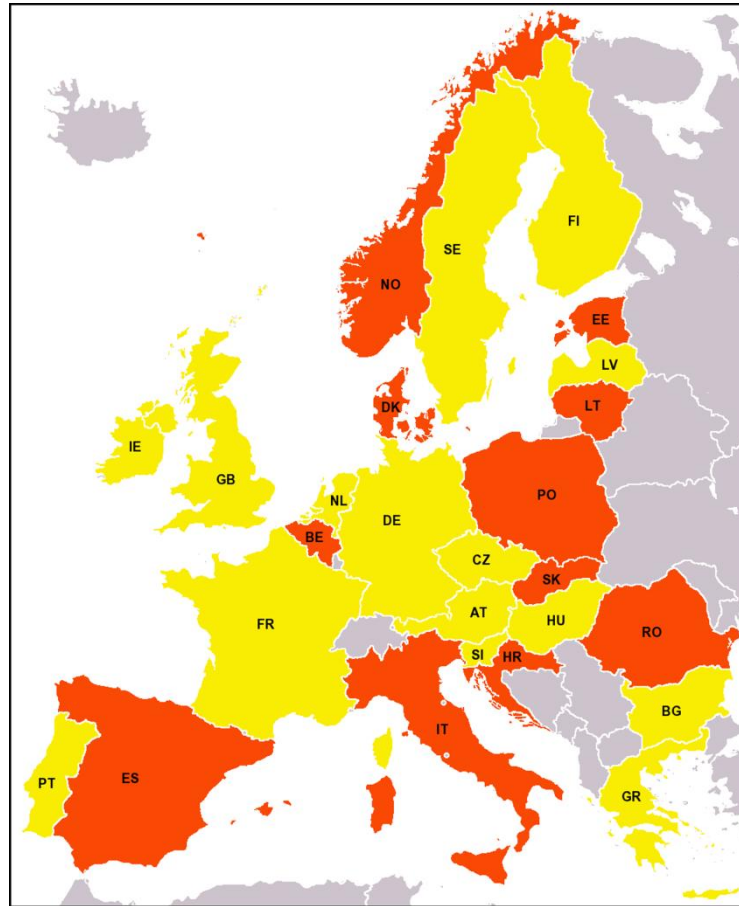


# Reasons for monitoring transposition

- It was clear that the transposition process would take place against a background of rapidly developing policies, plans and public engagement in CCS
- Therefore the partners in the CGS Europe FP7 project decided to monitor the progress of transposition to:
  - See how it and the policy of the various governments and state jurisdictions within the EU developed
  - Gain better understand the driving forces, barriers and prospects for CCS in Europe



# Countries monitored in our study (case studies are shown in orange)

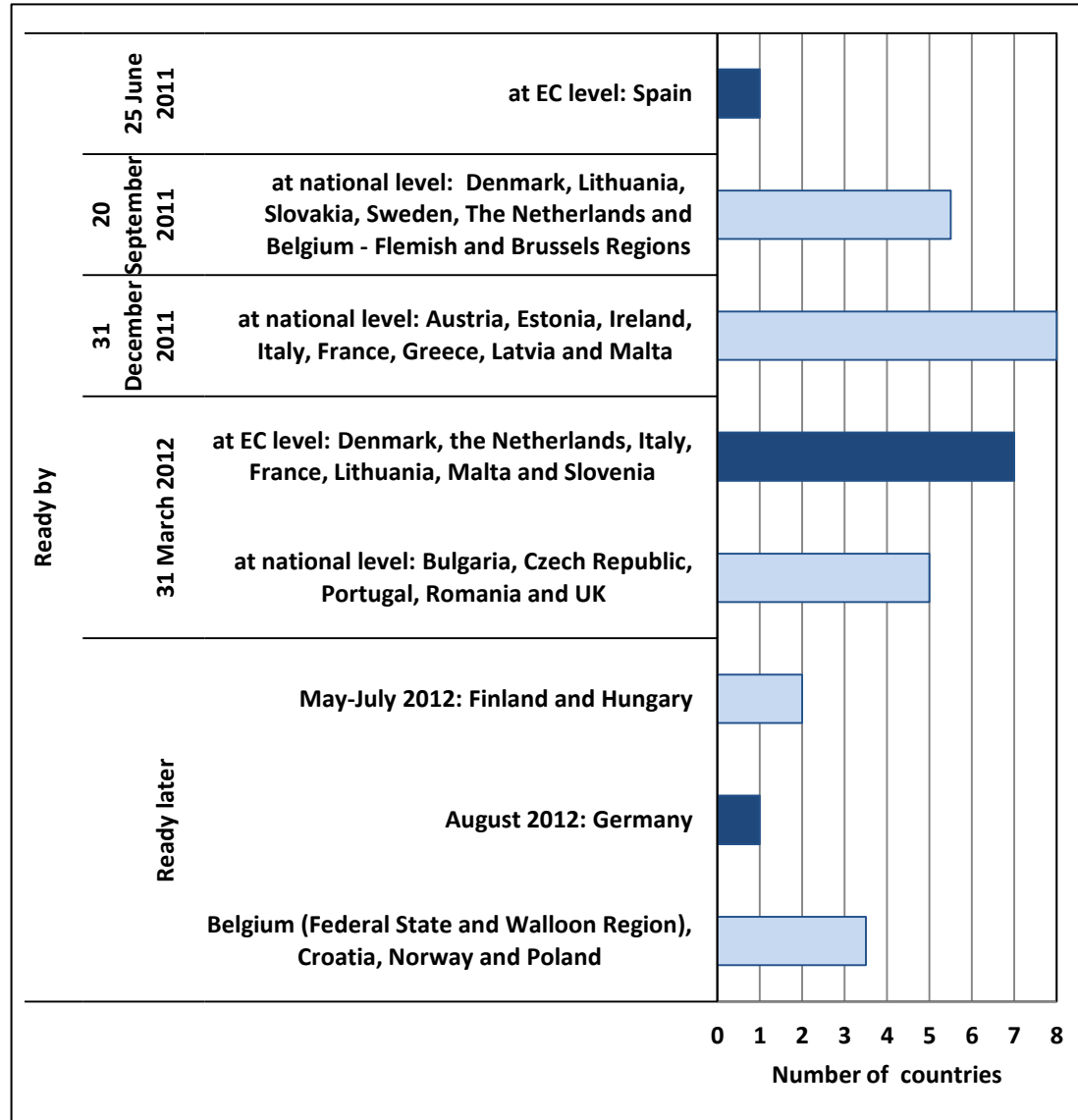


# What does a country have to do to transpose the Directive?

- Enact national laws and regulations that enable the Directive to enter into legal force in their country
  - May require amendments of other national laws
  - Requires parliamentary and thus public consent
- Communicate this legislation to the Commission, who will approve it or require changes.



# Progress by the deadline



# Progress by the deadline

- A relatively short time was allowed to enact the legislation (2 years, deadline 25 June 2011)
- By the deadline:
  - only Spain had completed transposition and had it approved by the EU
  - Denmark and Sweden reported their readiness for the EU approval process as did Lithuania and Romania a few days after the deadline
  - A further nine member states reported some progress and 13 did not report any progress



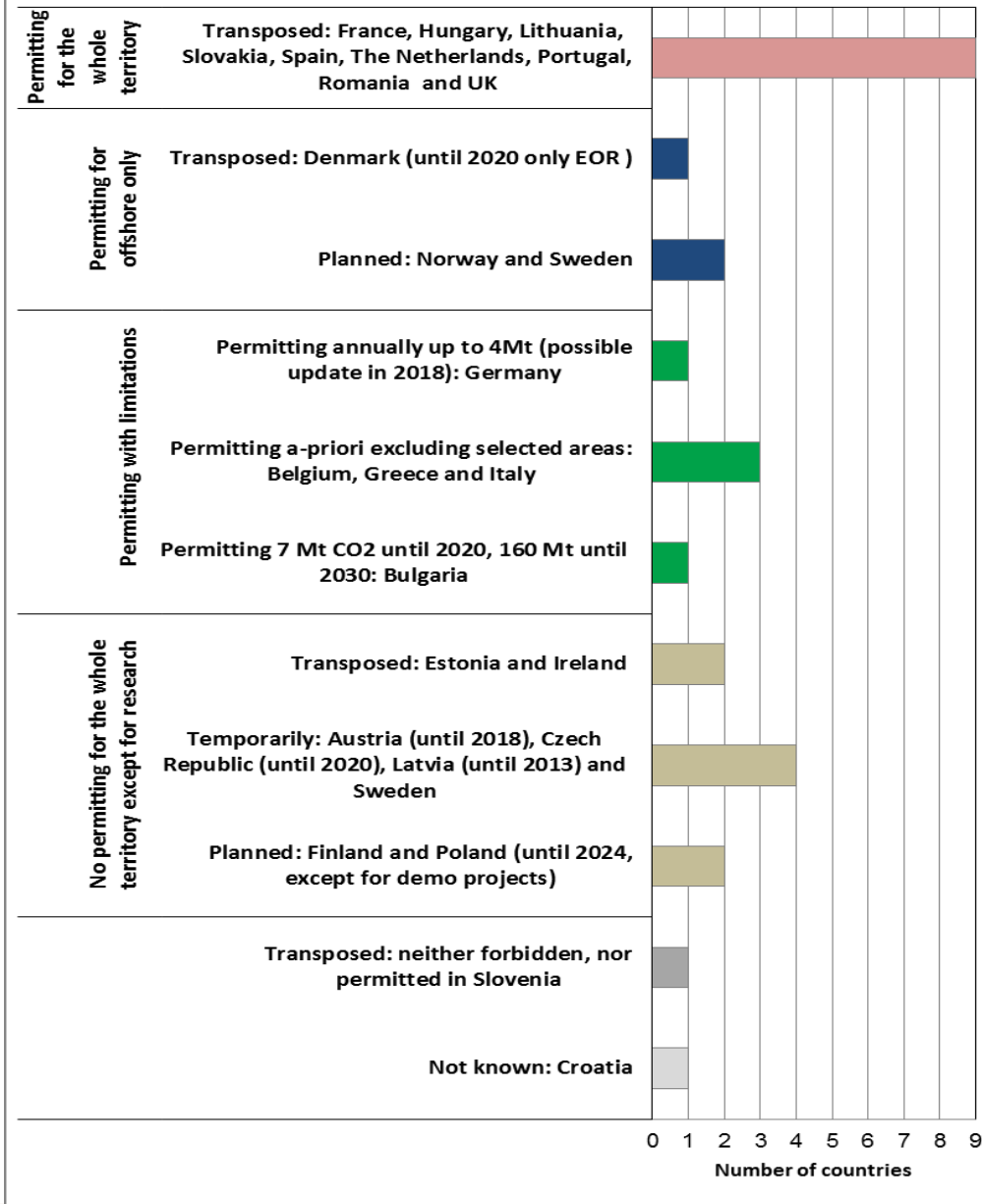
# Progress to Spring 2012

- Romania completed transposition after publishing additional laws according to EU requirements
- Most countries had finished transposition, but only nine of them had it approved by the EC (Spain, Denmark, The Netherlands, Italy, France, Lithuania, Malta, Slovenia and recently Germany)
- The process had been held up for a variety of reasons: e.g. change in government in Poland, public opposition in Germany
- Hungary and Finland published their laws in May-July 2012
- The CCS Directive has been transposed into German law, effective from the 24th of August 2012 (and recently has been accepted by EC - the ninth country with CCS law accepted by Commission)
- Among studied countries Poland, Croatia and Norway have still not finalized their laws





## Permitting/no permitting CO<sub>2</sub> storage in national laws



# What national policies had emerged at the end of the transposition period?

## → North Sea countries

- **Denmark:** Onshore storage on hold until [at least] 2020. Offshore storage permitted when undertaken principally for EOR
- **Netherlands:** Onshore storage on hold: “not sufficient societal support for onshore CCS.” Offshore storage permitted.
- **Germany:** Only demo projects onshore with total annual storage up to 4 Mt (1.3 Mt per one project annually). Update is possible in 2018.
- **UK:** Offshore storage permitted, “...would not anticipate implementing the Directive onshore in the first instance. Any change in this position will be subject to consultation.”
- **Norway:** Offshore storage permitted outside areas of hydrocarbon exploration and production. No capacity onshore
- **Belgium:** Storage permitted where there is capacity (no capacity offshore)



# Other temporary bans

- Austria: to 2018
- Latvia: to 2013
- Czech Republic: to 2020
- Poland: to 2024 (except for demo projects)
- Bulgaria: 7Mt to 2020, 160 Mt until 2030



# No restrictions

- No specific policy restrictions on storage [but each application of course considered on its merits]
  - France
  - Hungary
  - Lithuania
  - Portugal
  - Romania
  - Slovakia
  - Spain



# Research purposes only

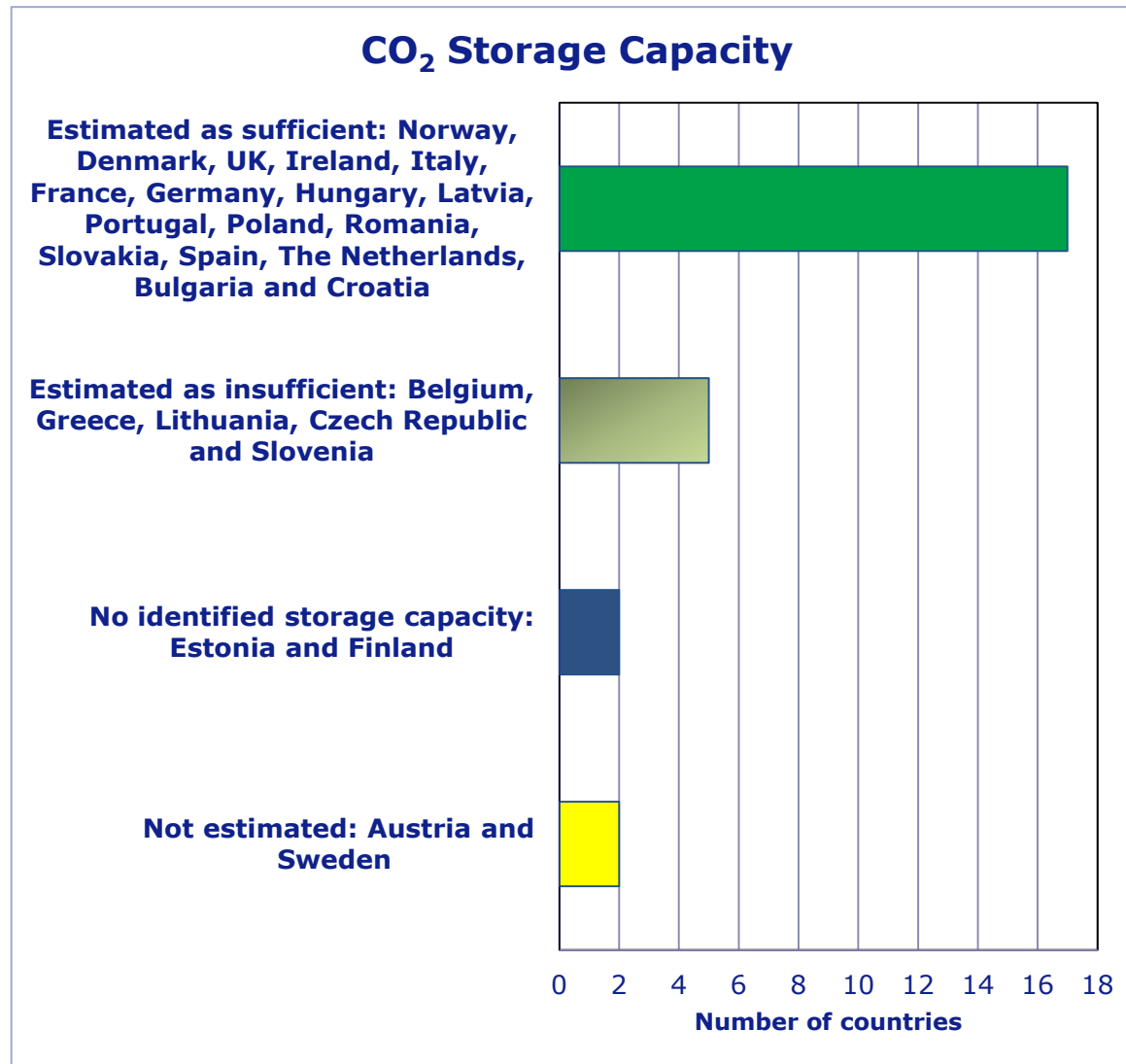
- Ireland and Sweden (discuss to permit storage in future)
- Estonia and Finland (have no storage capacity)

## Partial bans

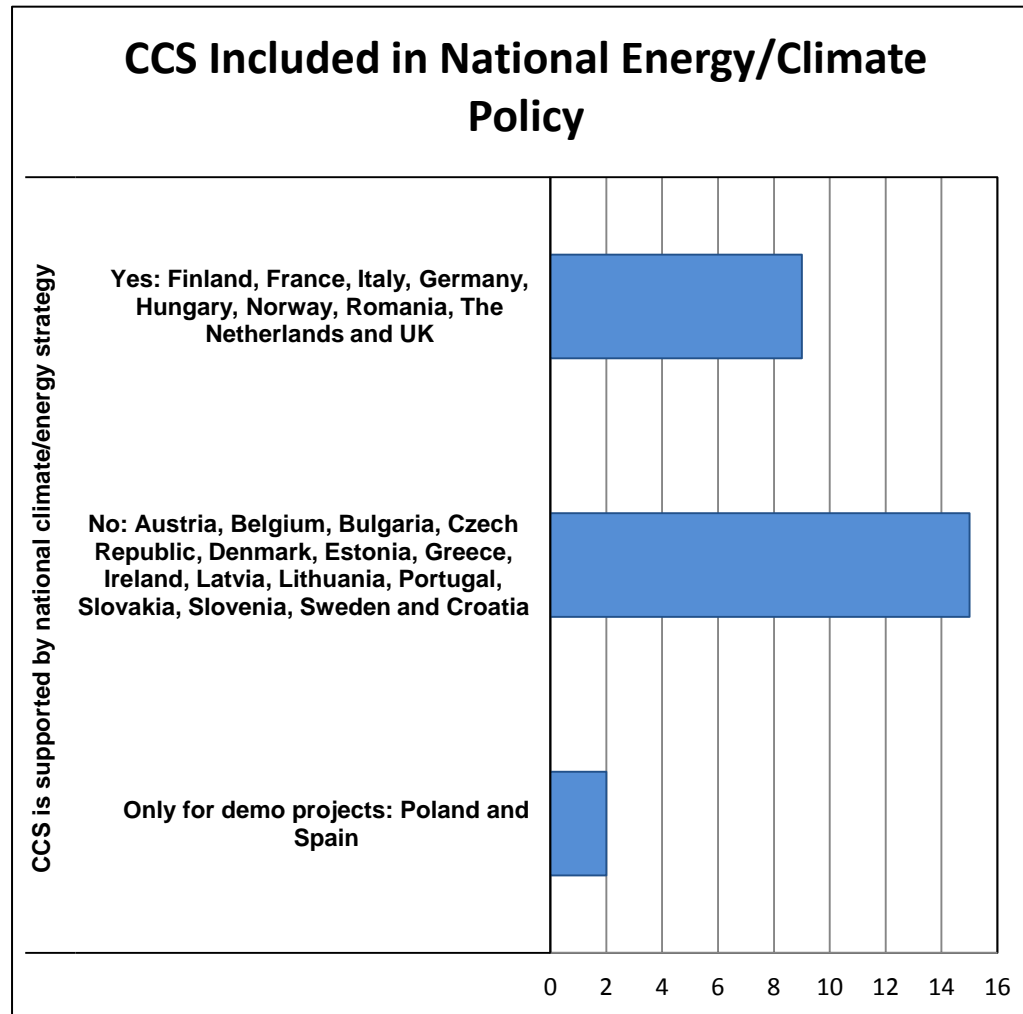
- Italy (no storage in seismic areas)
- Greece (excluding areas where the storage complex extends beyond Hellenic territory)



# Storage capacity in the studied countries



# CCS in national policy



# Conclusions

## → Driving forces

- Govt and industry desire for effective, low-cost decarbonisation of large, industrial, (predominantly power) plant

## → Barriers

- Public concern (onshore)
- Lack of storage capacity (in some jurisdictions)
- Financial problems (arisen from European economic crisis and low CO<sub>2</sub> price in EU ETS)

## → Prospects for CCS in Europe

- The main storage area looks like being the North Sea
- Little appetite for onshore storage around the North Sea - and many other countries.
- Baltic Sea is a next option for the offshore storage in Europe (BASTOR and SwedSTORE<sup>CO2</sup> projects, last including the first pilot planned offshore Sweden, to be implemented in 2015-2018)

