The European Network
of excellence on the
Geological Storage of CO_2

National actors driving CCS forward, public awareness and engagement

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“Disclaimer“

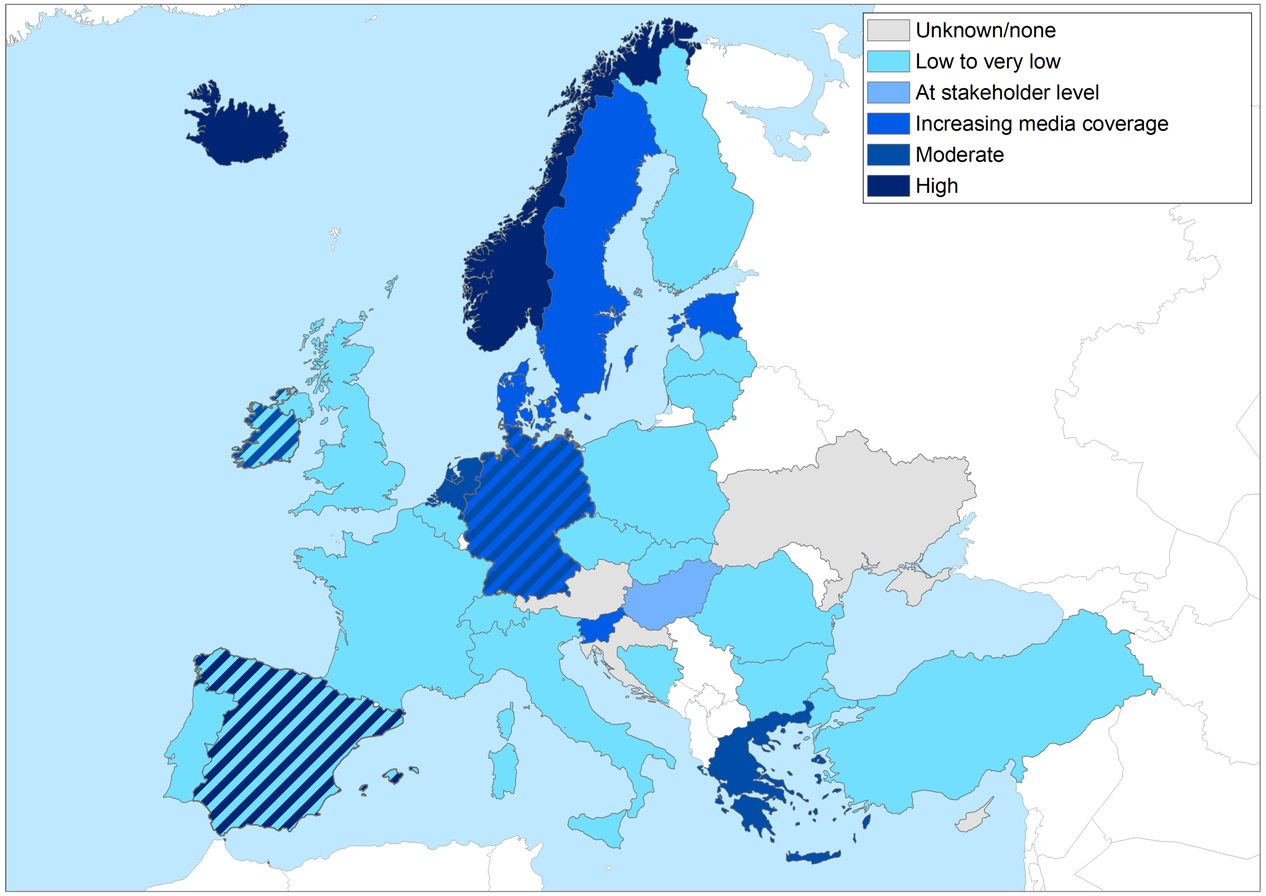
The presented information is largely based on the personal perceptions and experiences of the individual authors as scientific surveys are not available in the literature for all countries or projects.

Thus, no clear statistics and rating could be given and only tendencies and trends will be reported on a more general level with specific examples.

Public awareness of CCS (as of 2020) (I)

In many countries,

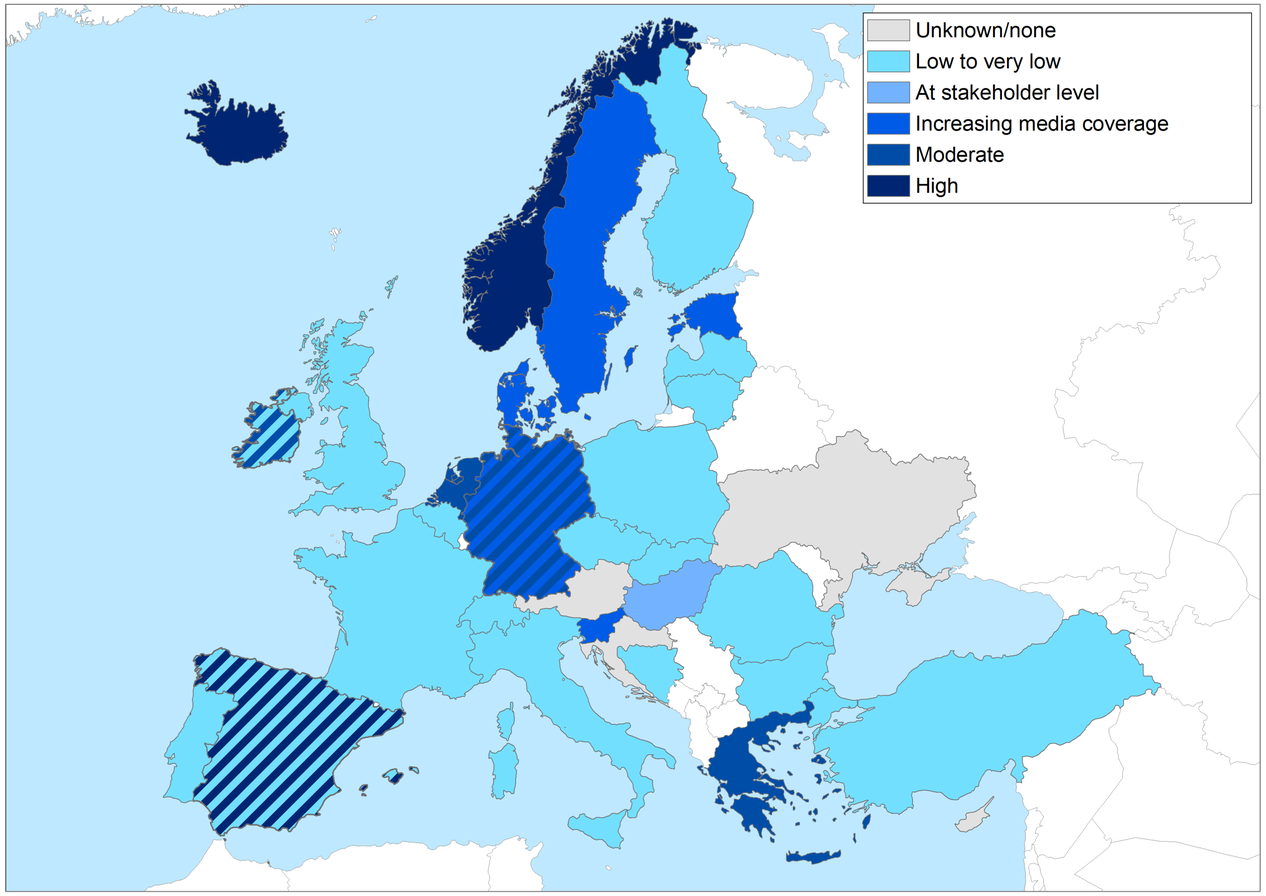
- awareness / knowledge of CCS within general public (very) low;
- “climate change“ with higher awareness, but drivers and potential consequences, as well as magnitude of changes required to meet climate targets also quite poorly understood by general public.



Public awareness of CCS (as of 2020) (II)

In many countries,

- CCS perceived as risky technology (due to unfamiliarity);
- somewhat higher awareness and knowledge & more positive perception by industrial and political stakeholders;
- interest in and the media coverage of CCS technology has slightly to moderately increased in recent years.



Local public perception

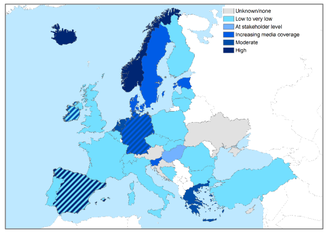
From Gastine et al. 2016

- At various pilot sites, informing and engaging local public has been successful –
  e.g. Hontomín (Spain), Ketzin (Germany),
  Cork (Ireland) and Hellisheidi (Iceland);

- the better the knowledge about the CCS technology, the more the project (and CCS in general) was accepted by the local population.

- Characteristics of the relational context influenced perception:
  - open interactive format favoured acceptance;
  - more frontal approach/imposition of projects stimulated rejecting reactions.

Striking exceptions: NO and IS



relatively high public awareness and knowledge about CCS;
broad political consensus in favour of CCS among main political parties and players;
Reasons include: i) offshore projects ↔ higher public acceptance;
ii) Government investment in high-profile projects such as TCM and Longship/Northern Lights project.

Knowledge about and acceptance of “Carbfix technology” in general public very high due to numerous public information and engagement activities;
rationales = “Carbfix technology” :
i) is based on processes that also occur in nature,
ii) involves rapid mineralisation that significantly reduces leakage risk,
iii) has been developed at a geothermal plant, i.e. in renewable energy sector,
iv) is perceived as an Icelandic brand within energy and utility sector.

TCM: Technology Centre Mongstad
Carbfix Technology: Injection of CO_2 dissolved in water in basalt leading to CO_2 mineralisation

Perception of CCS and “variants“

Public perception of CO_2 geological storage in many countries more positive if…

- CCS is applied
  - i) NOT for CO_2 emissions from fossil-fired power plants,
  - ii) for hard-to-abate process emissions from industry,
  - iii) to renewable energy sources, e.g. geothermal plants,
  - iv) to production of blue H_2,
  - v) to achieve negative emissions (e.g. capture from bioenergy plants (BECCS) or directly from the air (DACCS)).

https://climeworks.com/news/climeworks-launches-orca

- storage site is offshore (perceived as less risky than onshore storage).

CCU and CO_2-EOR

In some countries, **CCU** receives more attention from public and politicians cf. CCS due to
- potential economic benefits of CCU,
- CCU seen as a value-creating technological option for CO_2 emission reduction,
- CCU seen as an essential building block for an envisaged circular economy,
- capturing/removing CO_2 being more straightforward to regulate,
- no suitable in-country geology for storage,
- CO_2 storage being prohibited by national legislation.

CO_2-EOR: operating CO_2-EOR projects in Croatia, Hungary and Turkey;
different views on technology - good opportunity to kick-start broader CCUS activities or technology to prolong oil production with questionable climate impacts?

National advocates

- National CO_2 Clubs and Networks (ES, RO, IT, FR, NL, UK, NO – see examples),
- national scientific or engineering academies, think tanks or governmental fora (e.g. ,DK, DE, IE, SE, NO)
- individual institutions such as geological surveys or specific research institutions,
- national representatives of regional networks such as BASRECCS or ENeRG,
- national representatives of emission-intensive industries

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Thank you for your attention !

http://www.CO2geonet.com/state-of-play/

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