

Shaping the European future of CCS and clean hydrogen

Competitive edge founded on experience, infrastructure and customers.



15-30 MTPA

CO₂ transport and storage capacity by 2035

Equinor share

>25%

CO₂ transport and storage market share in Europe by 2035

3-5 MAJOR INDUSTRIAL CLUSTERS

Clean hydrogen projects by 2035

>10%

Clean hydrogen market share in Europe by 2035

Northern Lights value chain



- Phase 1 in operation August 2024 1.5 million ton/year
- Phase 2 ready by 2026 5.0 million ton/year (Subject to contracted volumes)
- [\(1\) Northern Lights value chain animation - YouTube](#)



CarbFix



Lots of storage in Nordics & (hopefully also) Baltics

Northern Lights

Sleipner

Acorn

Endurance

Greensand

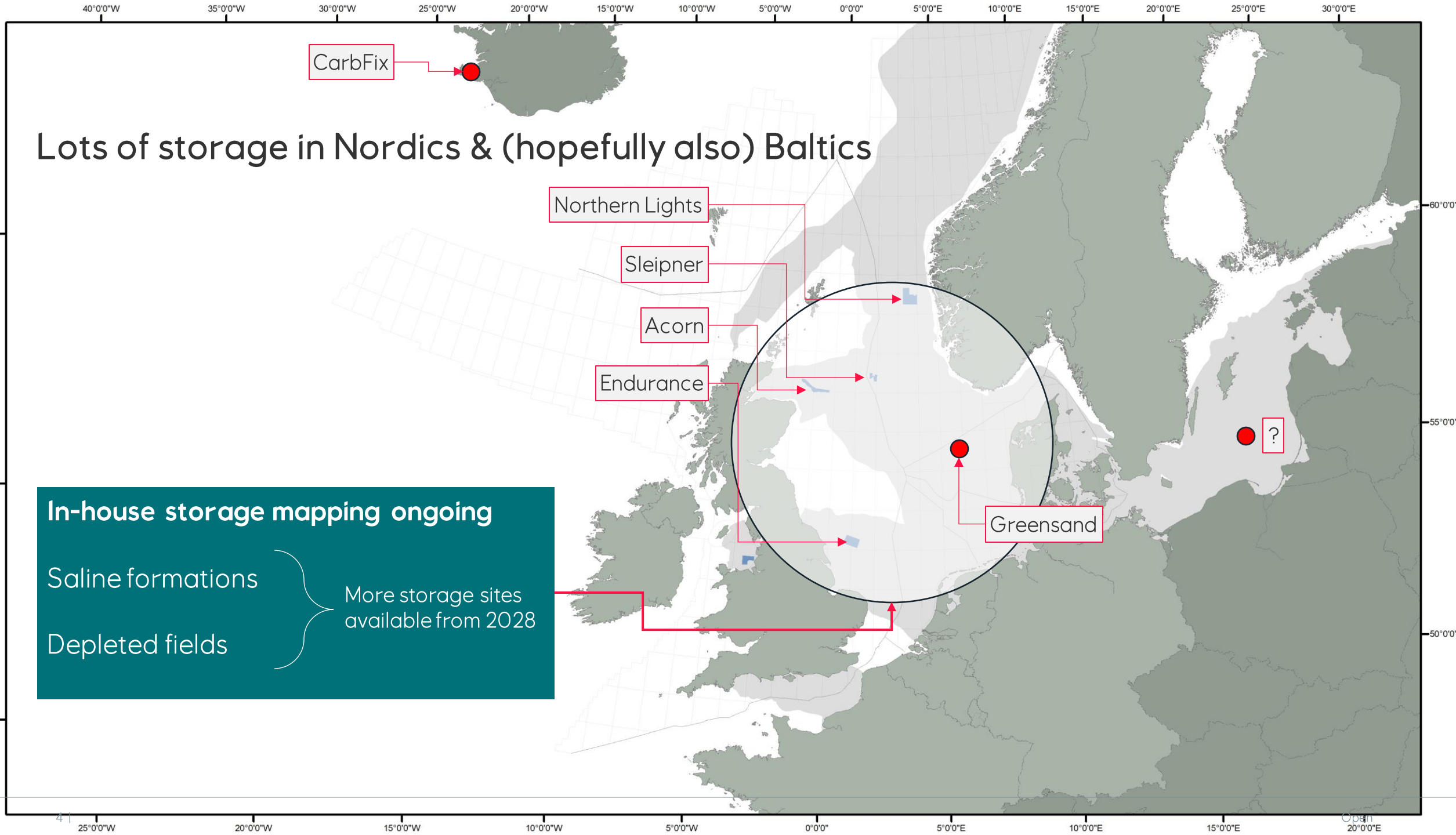


In-house storage mapping ongoing

Saline formations

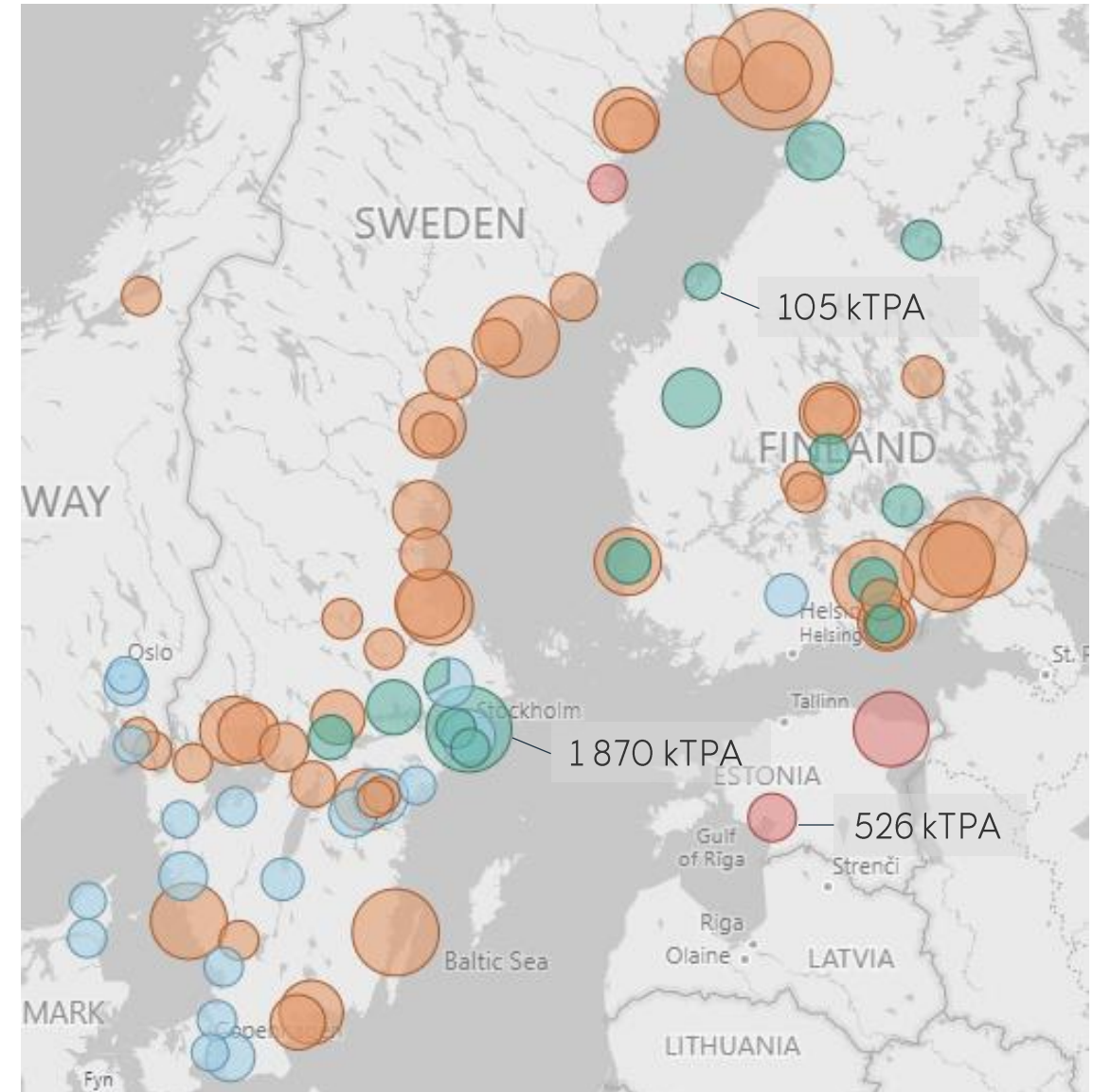
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More storage sites
available from 2028



Lots of bio-CO2 in Nordics & Baltics – available in industrial volumes and concentrations already *TODAY*

- All pulp and paper, biomass and bioenergy for power and heat, WtE and wood
- 49 Mtpa of bio-CO2 (of total 141 Mtpa)
- 85 facilities (of total 239)
- Sweden & Finland are continuously being “forested”, with increasing volumes of biomass in the forests every year binding more CO2:
 - More trees are planted
 - More biomass “in place” binding more CO2
 - More biomass harvested
 - More products from biomass
- Forestry biomass industry is already a “double climate winner”, can be triple winner with negative emissions

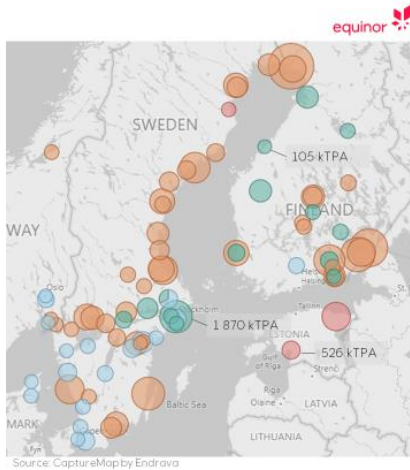


Source: CaptureMap by Endrava

«All stars aligned» for Nordics & Baltics to become global superpower of BECCS, negative emissions and climate positivity

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Bio-CO2 from Sweden and Finland

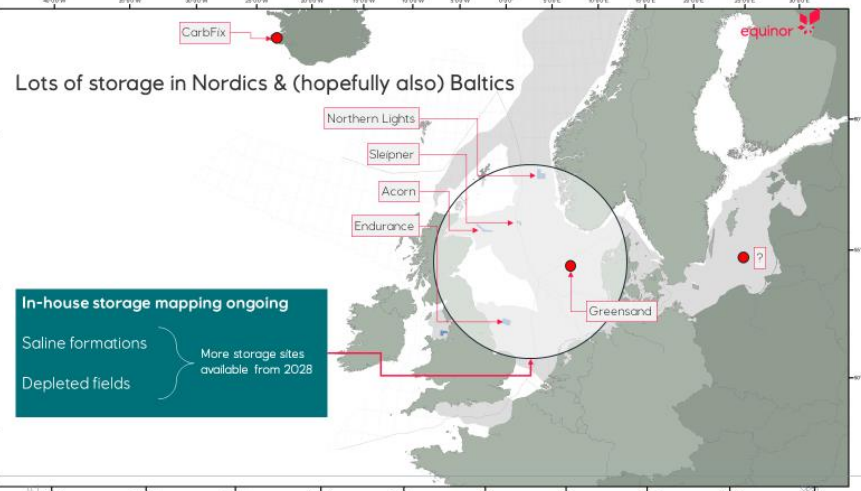
First storage in Northern Lights, Norway - 2024

Then also Denmark and more Norway – mid 2020's

Hopefully also Sweden & Baltics – 2030+?

Possibly also Iceland – basalt storage

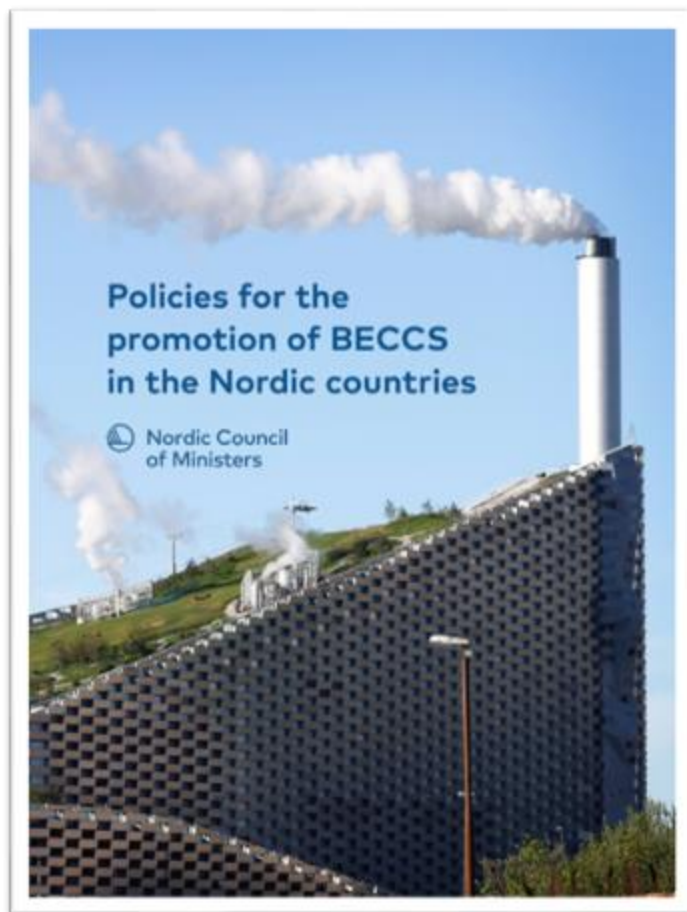
Critical issue for BECCS is to prove sustainability of biomass supply – no one can do this better than Swedish & Finnish forestry industry



Needed for rapid success at scale:

- Biomass industry grasps the BECCS opportunity
- Governments kick-start markets, e.g. like Swedish reverse auctions
- Companies source innovative funding for negative emissions
- Storage providers develop capacity rapidly
- Nordic collaboration

Nordic Council of Ministers: Promoting BECCS in the Nordic countries



August 2021

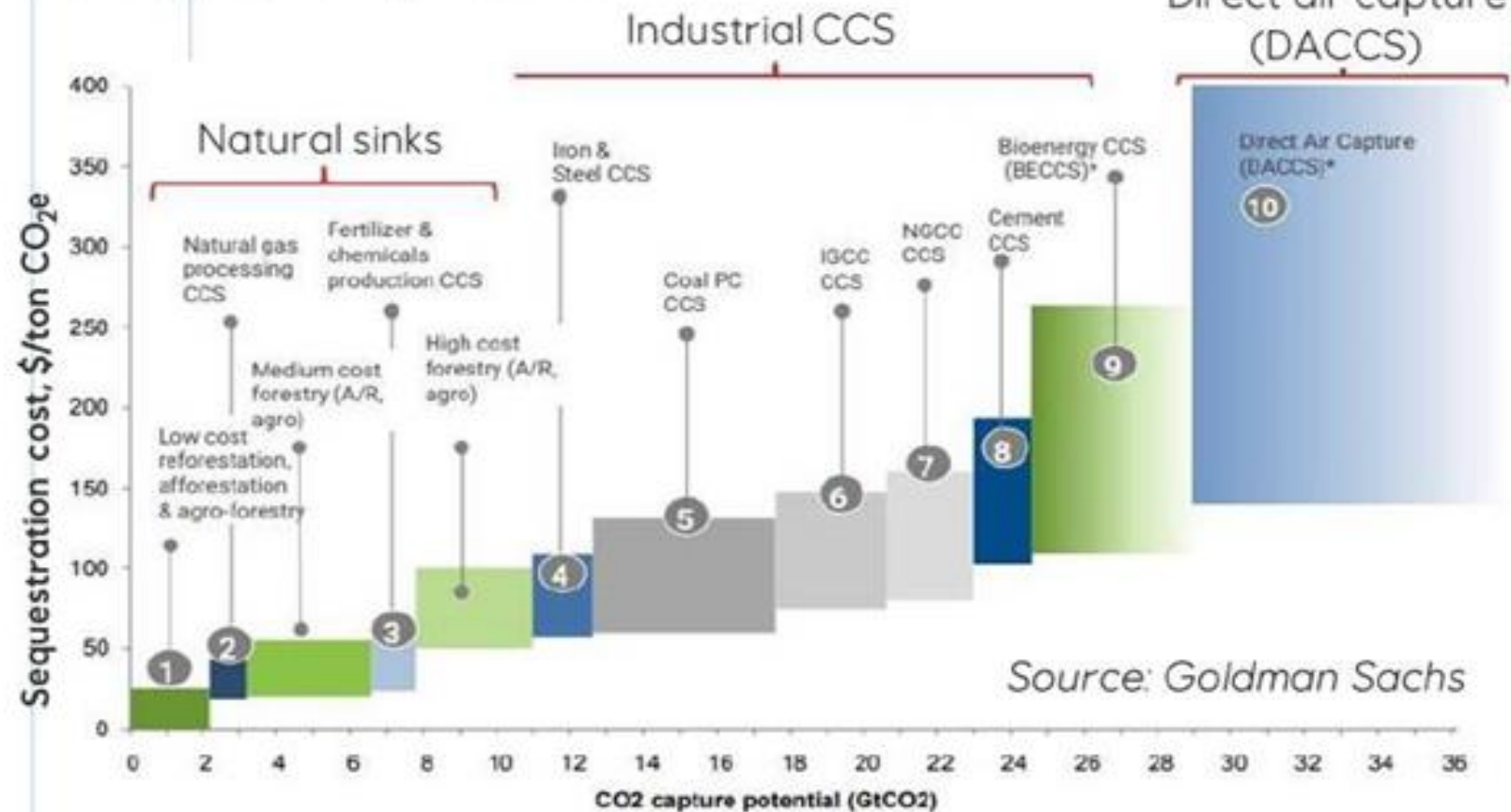
The 2019 Helsinki Declaration on Nordic Carbon Neutrality

- The Prime Ministers declare that Finland, Iceland, Sweden, Norway and Denmark want **to lead by example** and intensify cooperation, including **on removing CO2 from the atmosphere**.
- The **important role of** CO2 capture and storage (**CCS**), including **BECCS** technologies as well as the importance of resolving remaining technical challenges, and **developing business models** for their implementation.

BECCS purposes

1. Offset residual emissions in hard-to-abate sectors (e.g. agriculture, shipping, heavy road transport)
 2. Contribute to net negative emissions on a global level, which are likely to be required since the emissions will probably overshoot what is compatible with the Paris Agreement.
- BECCS - major technology for CO2 removal (CDR) in the vast majority of scenarios achieving the Paris Agreement

Carbon offsetting is necessary for the world to get to net zero: global sequestration cost curve



"Recent academic research shows that [NbS] can provide 25-35% of the GHG emissions reductions needed at less than \$100t/CO₂e with a quarter of this being able to be delivered annually for less than \$10t/CO₂e", Barclays, September 2020