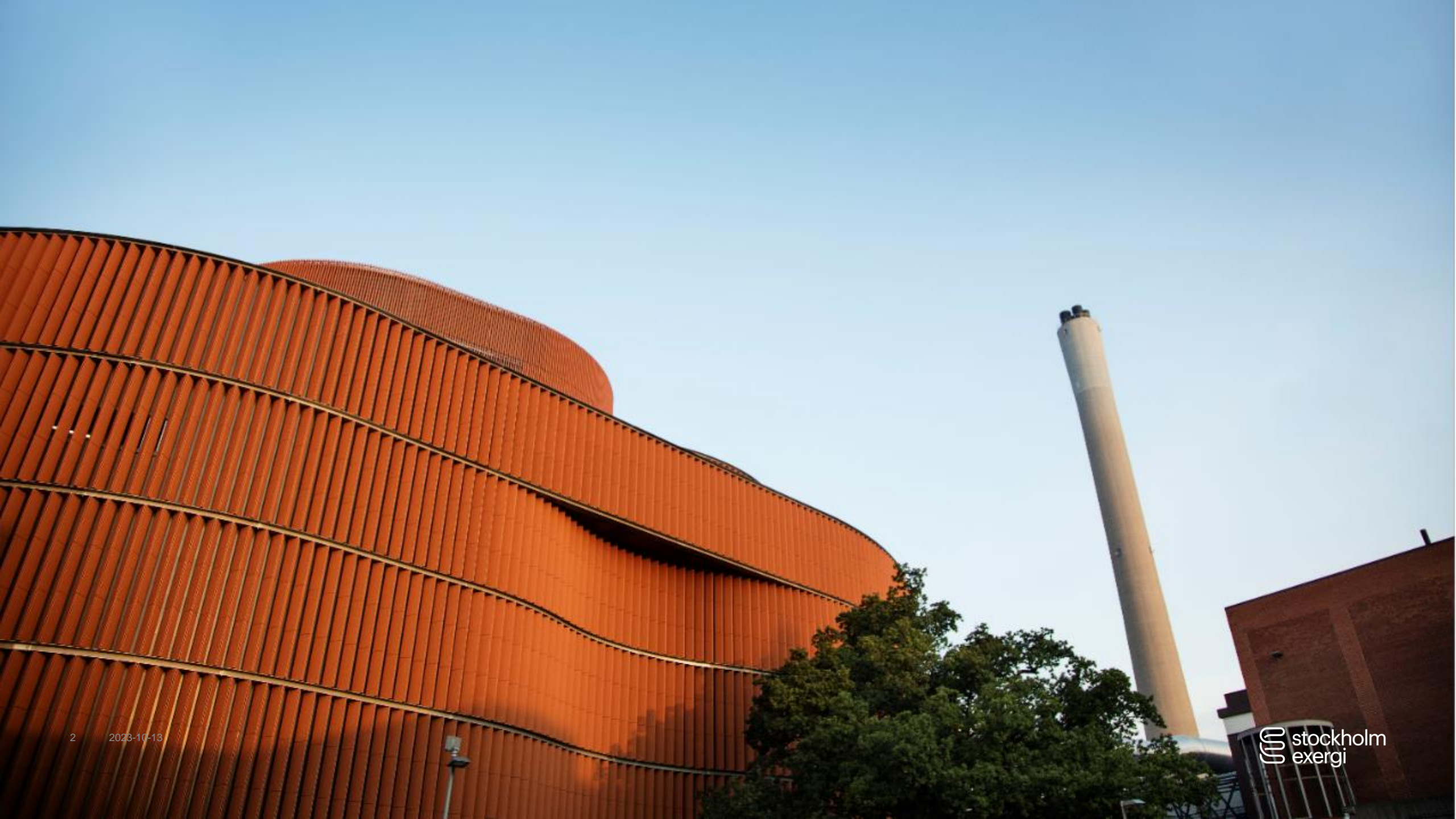


Negative emissions - Sweden's next export industry

Anders Egelrud
CEO, Stockholm Exergi





Growing population

11 B

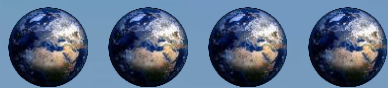
7,7 billions 2018

Urbanisation

80%

lives in cities
2050

World resources



Sweden

Global warming

1,5 °C



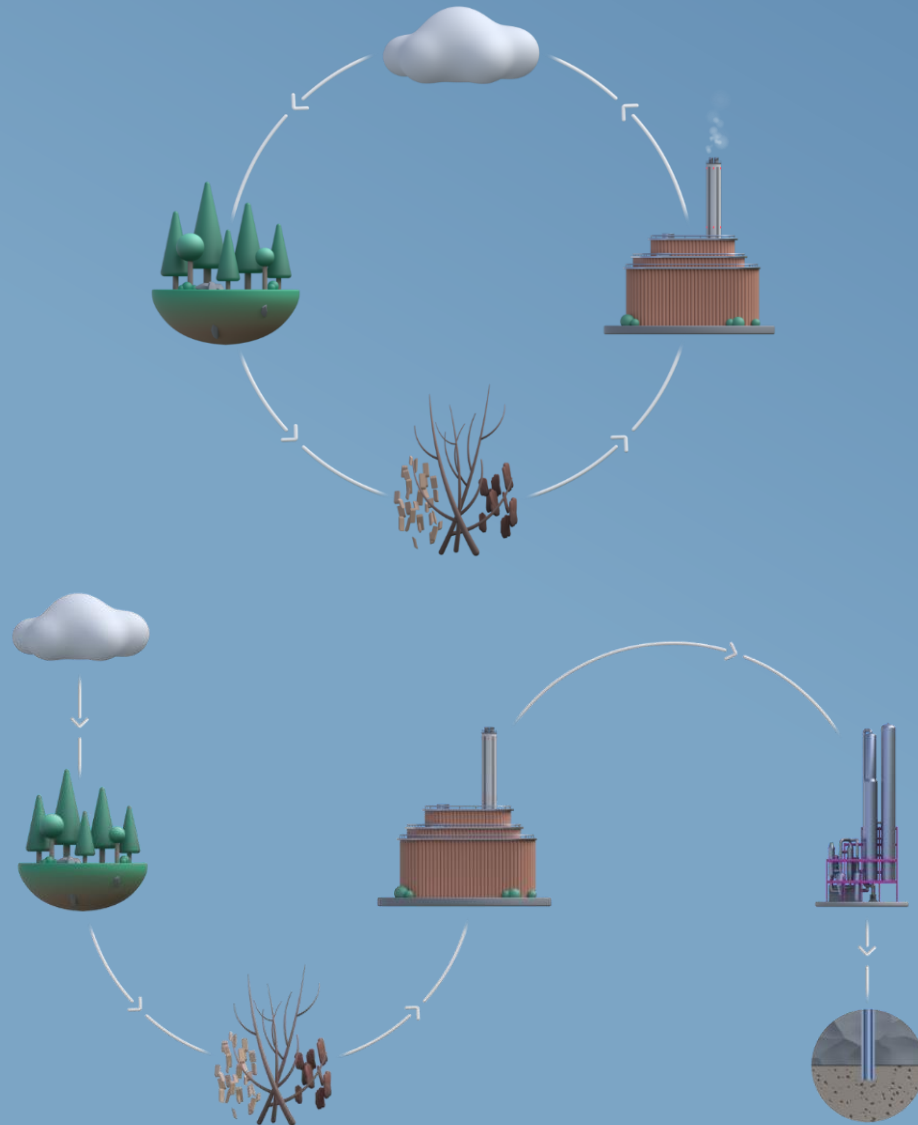
The energy
transformation
is an enabler

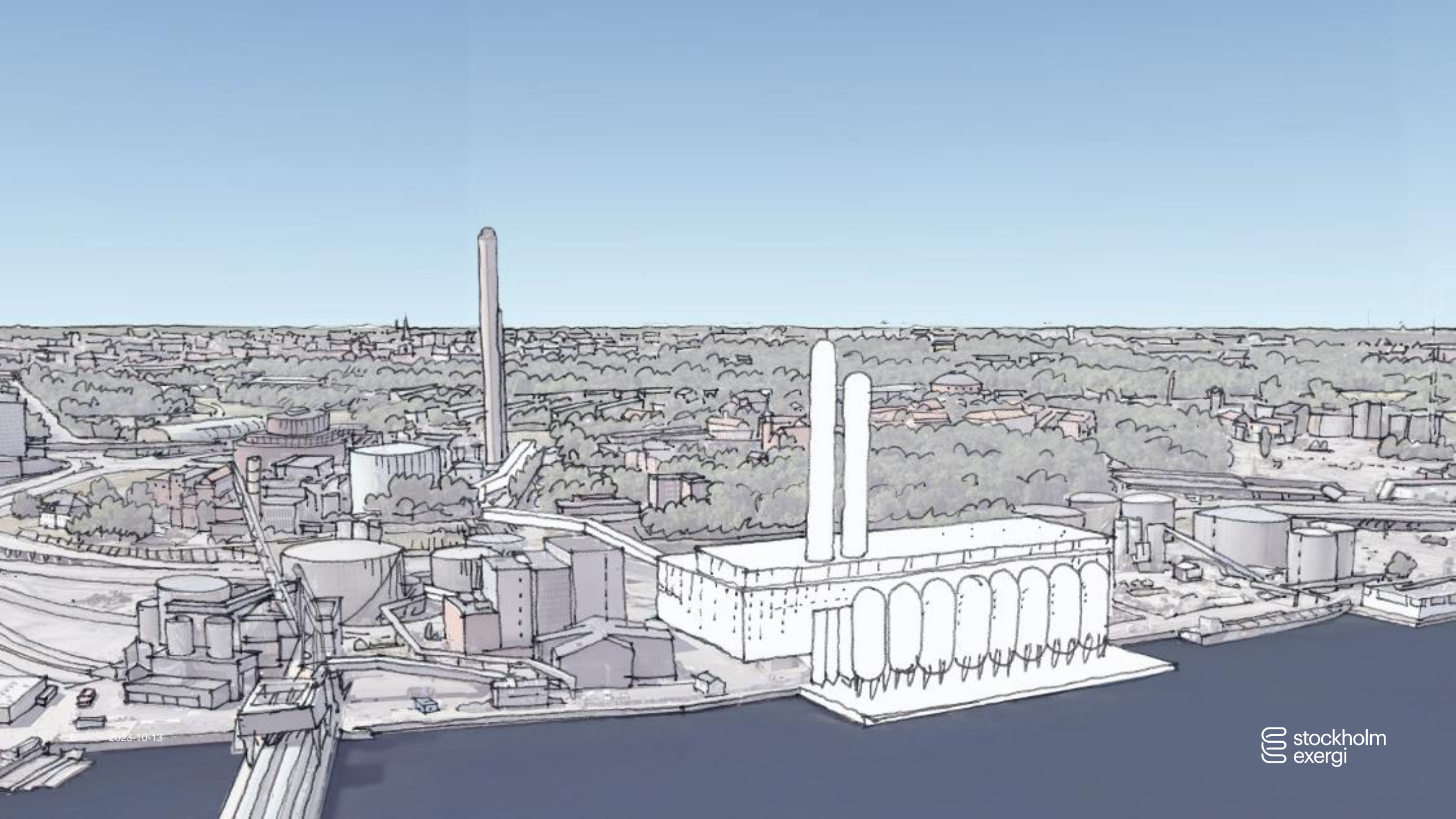
The world needs negative emissions

IPCC AR6 WG1:

“Anthropogenic CO2 removal (CDR) has the potential to remove CO2 from the atmosphere and durably store it in reservoirs (high confidence). CDR aims to compensate for residual emissions to reach net zero CO2 or net zero GHG emissions or, if implemented at a scale where anthropogenic removals exceed anthropogenic emissions, to lower surface temperature”.

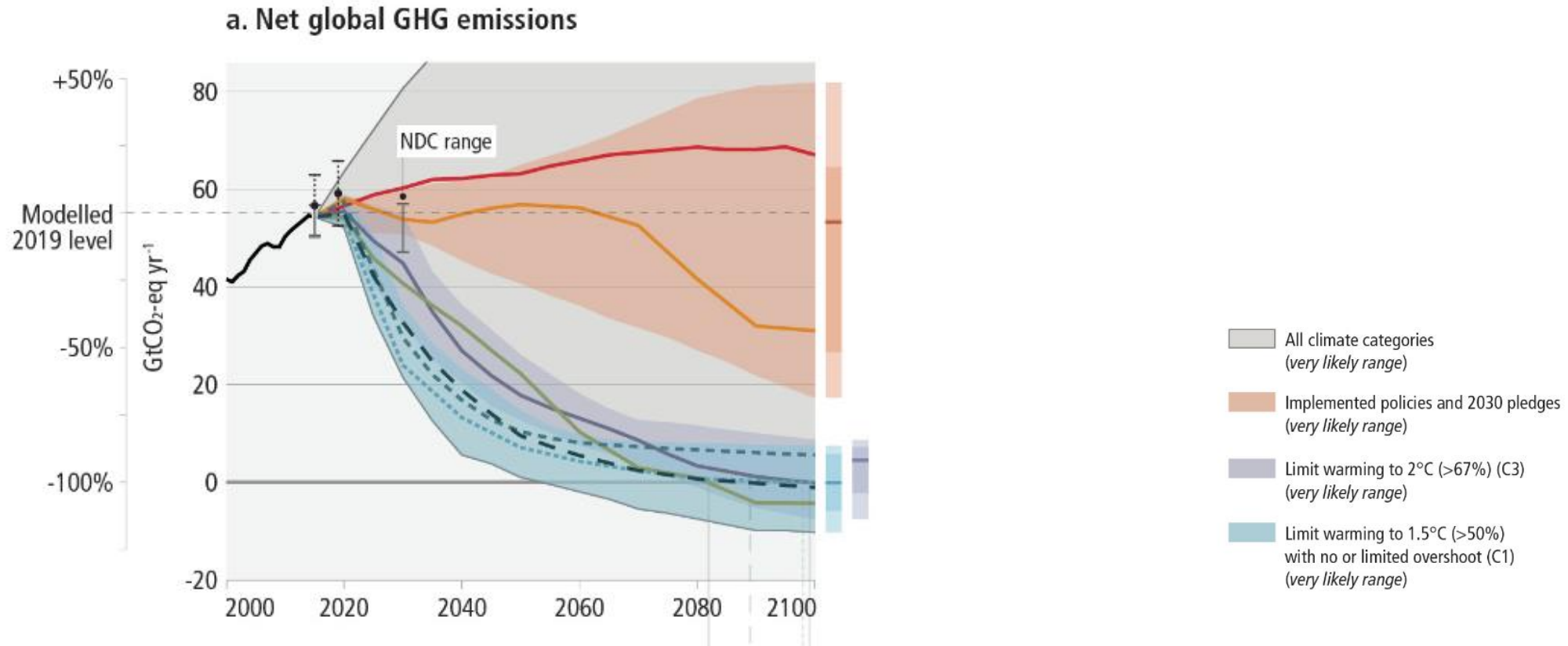
73 of 78 scenarios in IPCC SR15 rely on BECCS to create anthropogenic CDR.





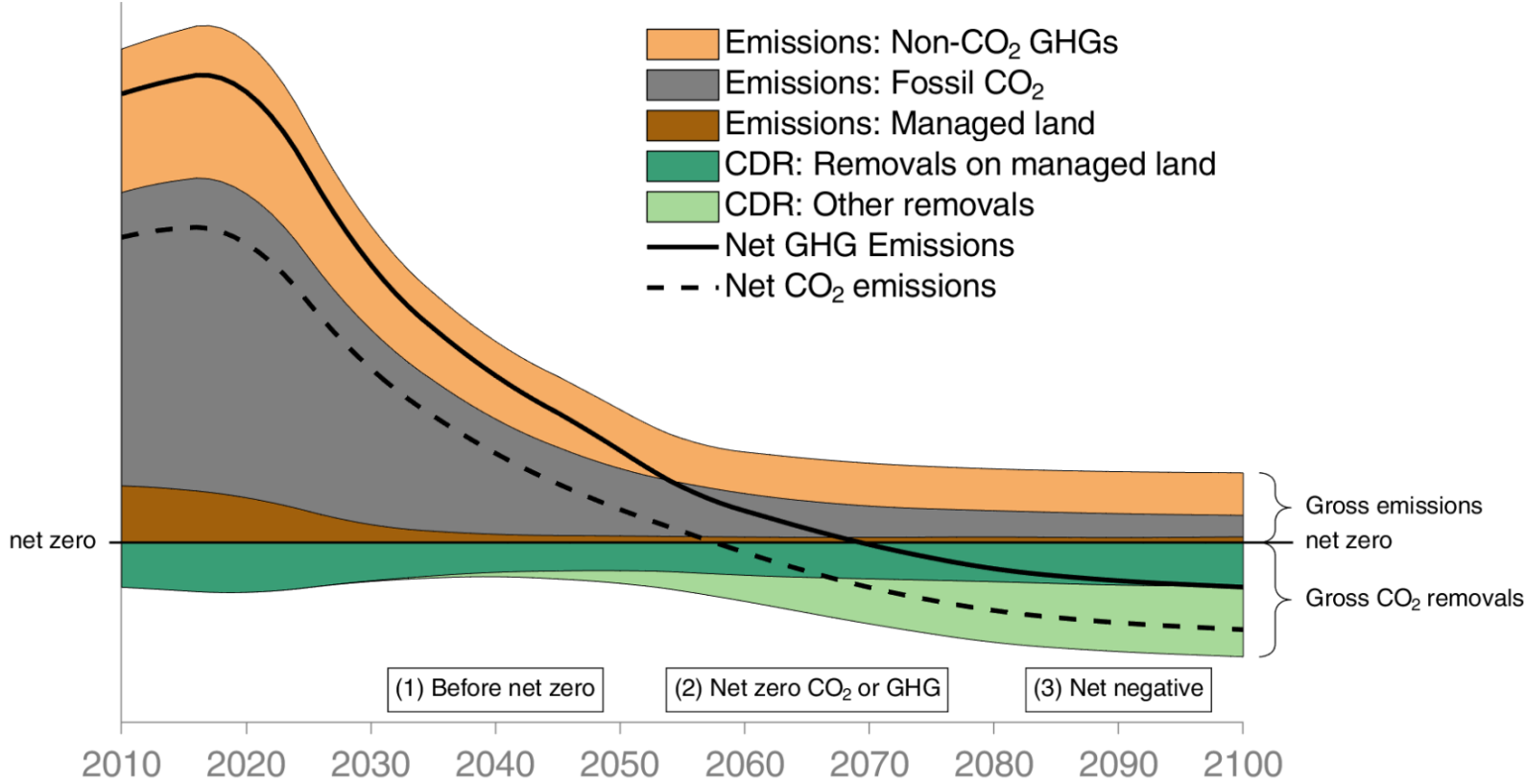
Towards Net-Zero - role of BECCS

Modelled mitigation pathways that limit warming to 1.5°C, and 2°C, involve deep, rapid and sustained emissions reductions.



Greenhouse gas emissions

(stylised pathway)



BECCS has the potential to be a new global industry with positive economic benefits for Sweden

- Sweden has the potential to capture and store 30 million tons of carbon dioxide per year
- 11,500 direct employment opportunities
- 28,000 jobs in total if counting indirect employment opportunities
- It would also contribute SEK 24 billion to Sweden's GDP



Crucial biomass

Sustainable biomass

- Residuals from the forestry- , wood- , pulp- and paper industries
- Rejects along this value-chain

Sustainable bioenergy with short term climate pay back

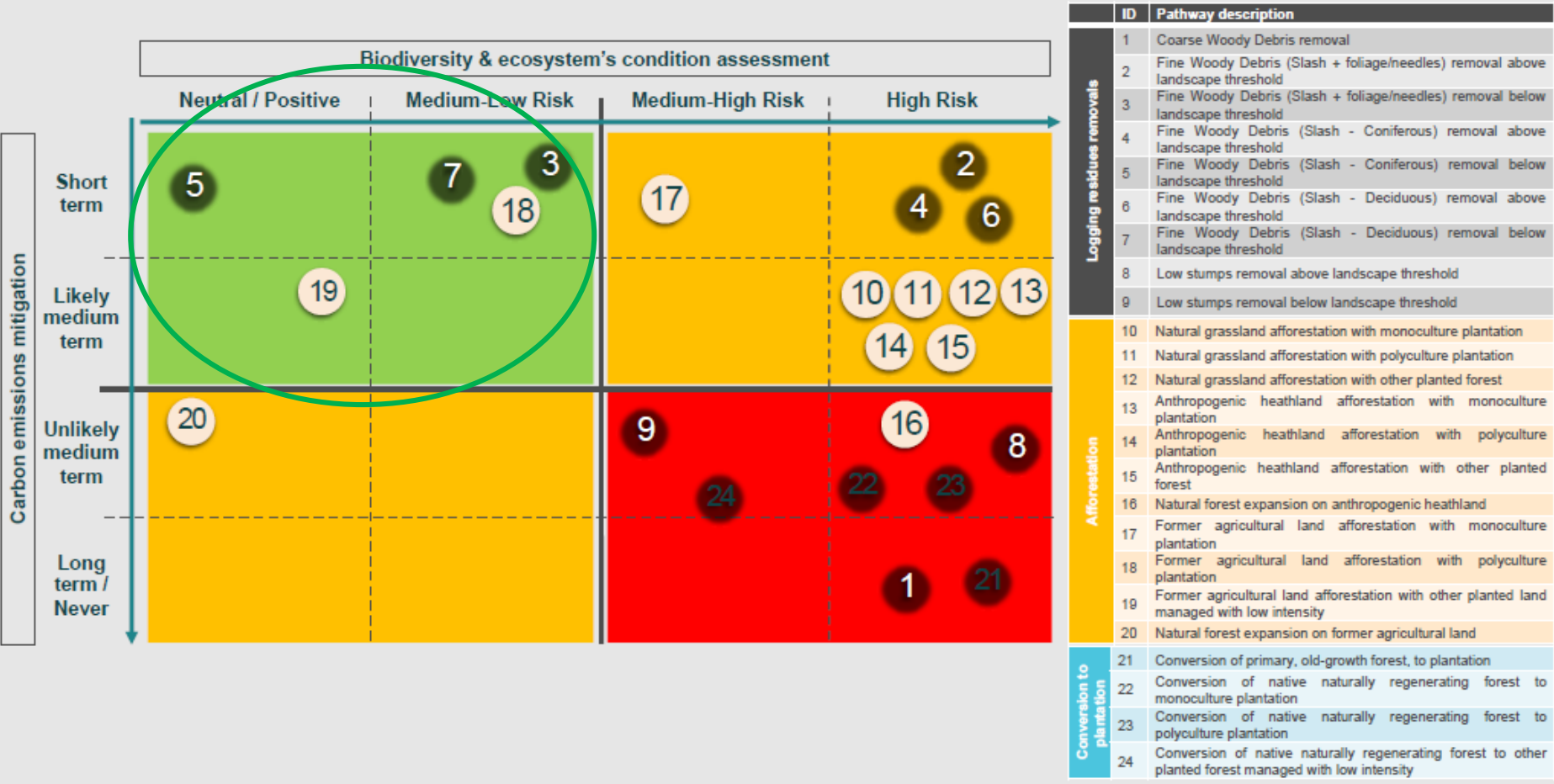


Figure 42. Qualitative assessment of the archetype pathways based on their climate and biodiversity impacts. Black symbols represent pathways referring to 'logging residues removal' intervention, yellow symbols refer to pathways for 'afforestation', and blue symbols refer to 'conversion to plantation' interventions. Uncertainty ranges are placed where payback time for carbon emissions could not be placed within a single one of the already broadly defined levels. The position of the interventions within each sub-section is arbitrary.



Datum