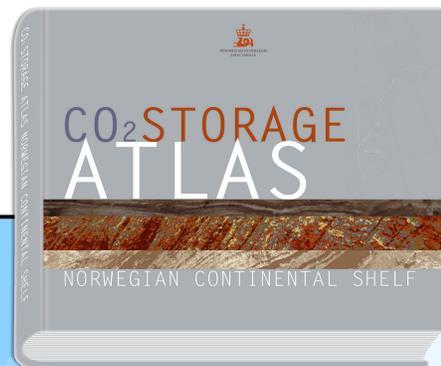
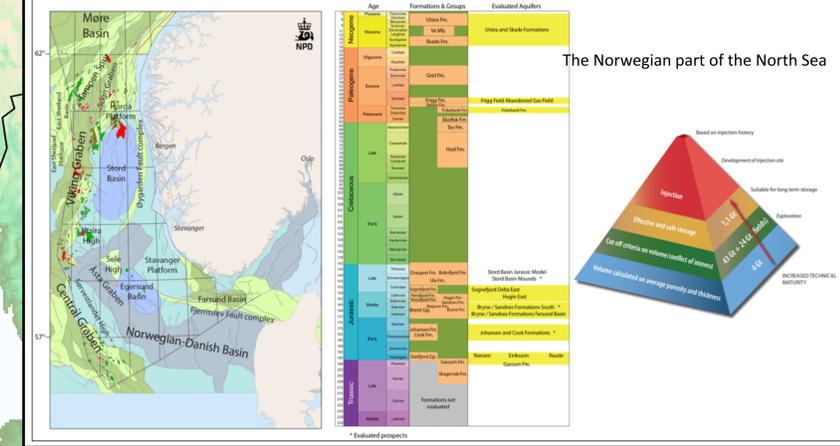
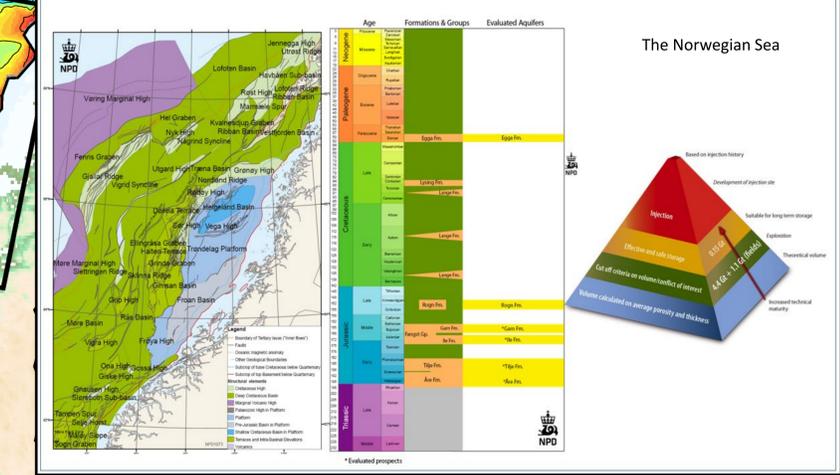
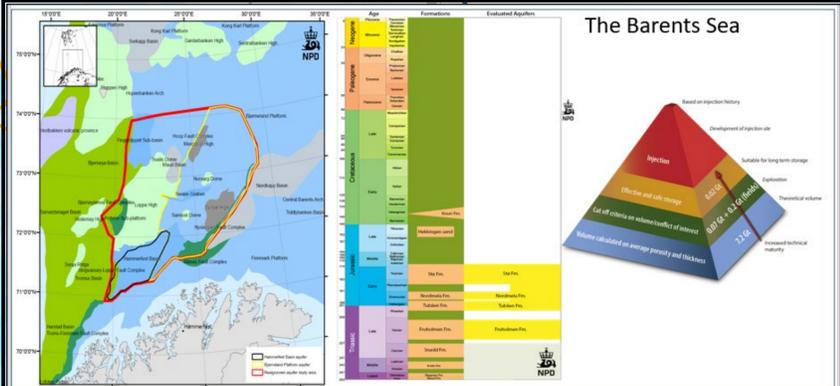
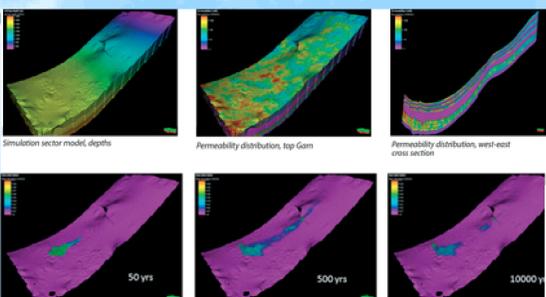
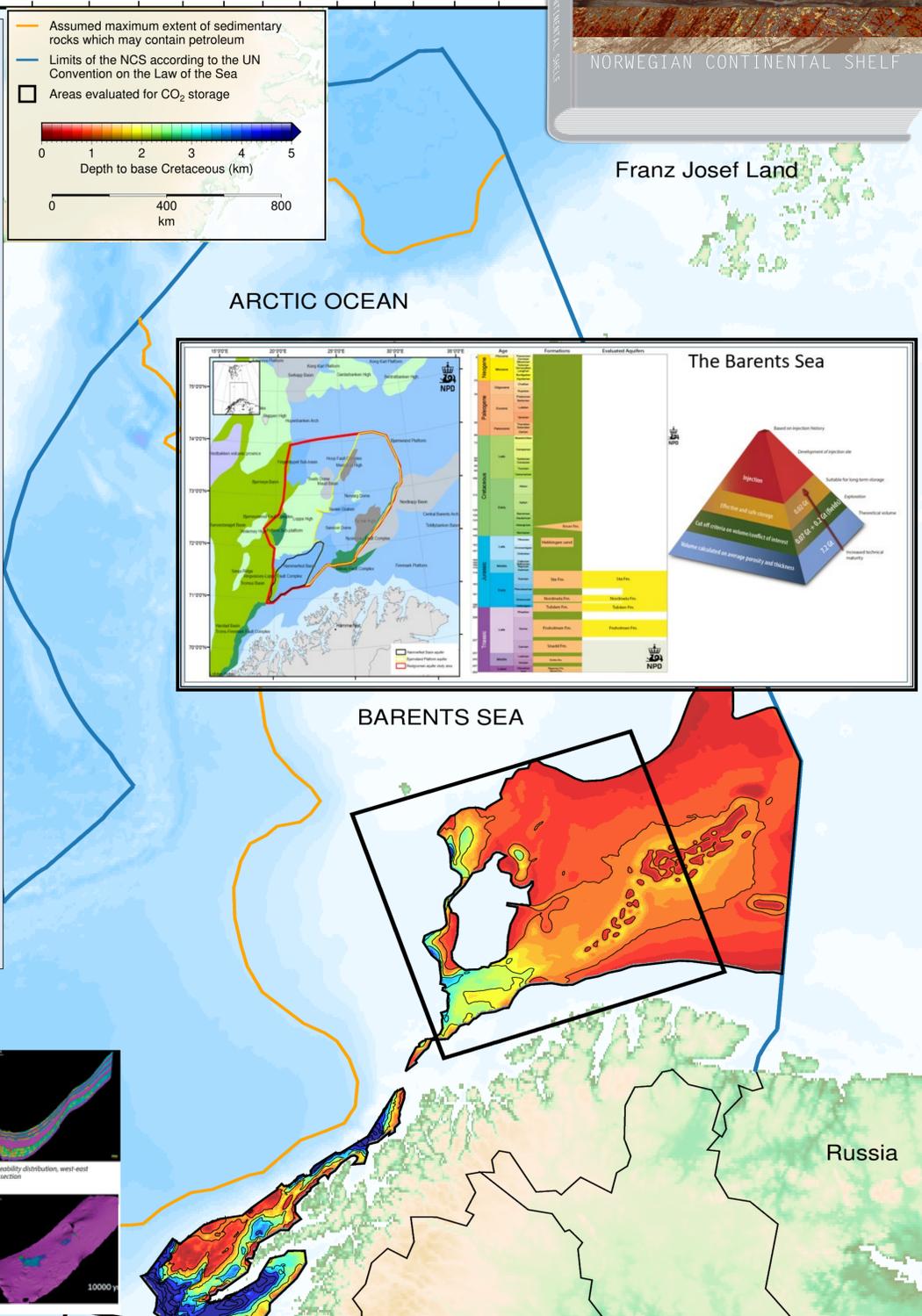


Data availability from the Norwegian CO₂ Storage Atlas Norwegian Petroleum Directorate's Online data repository

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Norwegian Petroleum Directorate (NPD) www.npd.no



- To get an overview of the possibility to inject and store CO₂ in a safe and effective way offshore Norway, potential storage sites have been mapped and evaluated by the Norwegian Petroleum Directorate (NPD).
- A total of 27 geological formations have been individually assessed, and grouped into saline aquifers. Included are several mapped dry-drilled structures and storage potential in oil-and gas fields.
- The evaluation of geological volumes suitable for injecting and storing CO₂ can be viewed as a step-wise approximation which is presented with a pyramid representing the maturity of the storage sites. The assessed aquifers have been characterized according to the guidelines, which have been developed for this study.
- The atlas may be used as an introduction to the Norwegian Continental Shelf or as a thorough dive into the geological properties and storage capacities of the aquifers and formations evaluated.
- NPD would like to see that the data and the results we have presented are used by researchers for different studies. A lot of data from geological interpretation and models and reservoir simulation studies, both static and dynamic is available on NPD's website, <https://www.npd.no/en/facts/carbon-capture-and-storage/>
- We also want every user to give us a feedback on their studies, supplying our database with improvements on our results and models
- The geological spatial data that formed the basis for the atlas are available as downloadable vector data files and raster files. The data is prepared so that it may be used in GIS or seismic interpretation software. The data may also be imported to other kind of software. The raster data may be delivered in a specific format if needed. Definitions of the aquifers and formations are listed in the atlas and on the NPD website.



The maturation pyramid
The evaluation of geological volumes suitable for injecting and storing CO₂ can be viewed as a step-wise approximation, as shown in the maturation pyramid. Data and experience from over 40 years in the petroleum industry will contribute in the process of finding storage volumes as high up as possible in the pyramid.

- Step 4** is the phase when CO₂ is injected in the reservoir. Throughout the injection period, the injection history is closely evaluated and the experience gained provides further guidance on the reservoirs' ability and capacity to store CO₂.
- Step 3** refers to storage volumes where trap, reservoir and seal have been mapped and evaluated in terms of regulatory and technical criteria to ensure safe and effective storage.
- Step 2** is the storage volume calculated when areas with possible conflicts of interest with the petroleum industry have been removed. Only aquifers and prospects of reasonable size and quality are evaluated. Evaluation is based on relevant available data.
- Step 1** is the volume calculated on average porosity and thickness. This is done in a screening phase that identifies possible aquifers suitable for storage of CO₂. The theoretical volume is based on depositional environment, diagenesis, bulk volume from area and thickness, average porosity, permeability and net/gross values.

