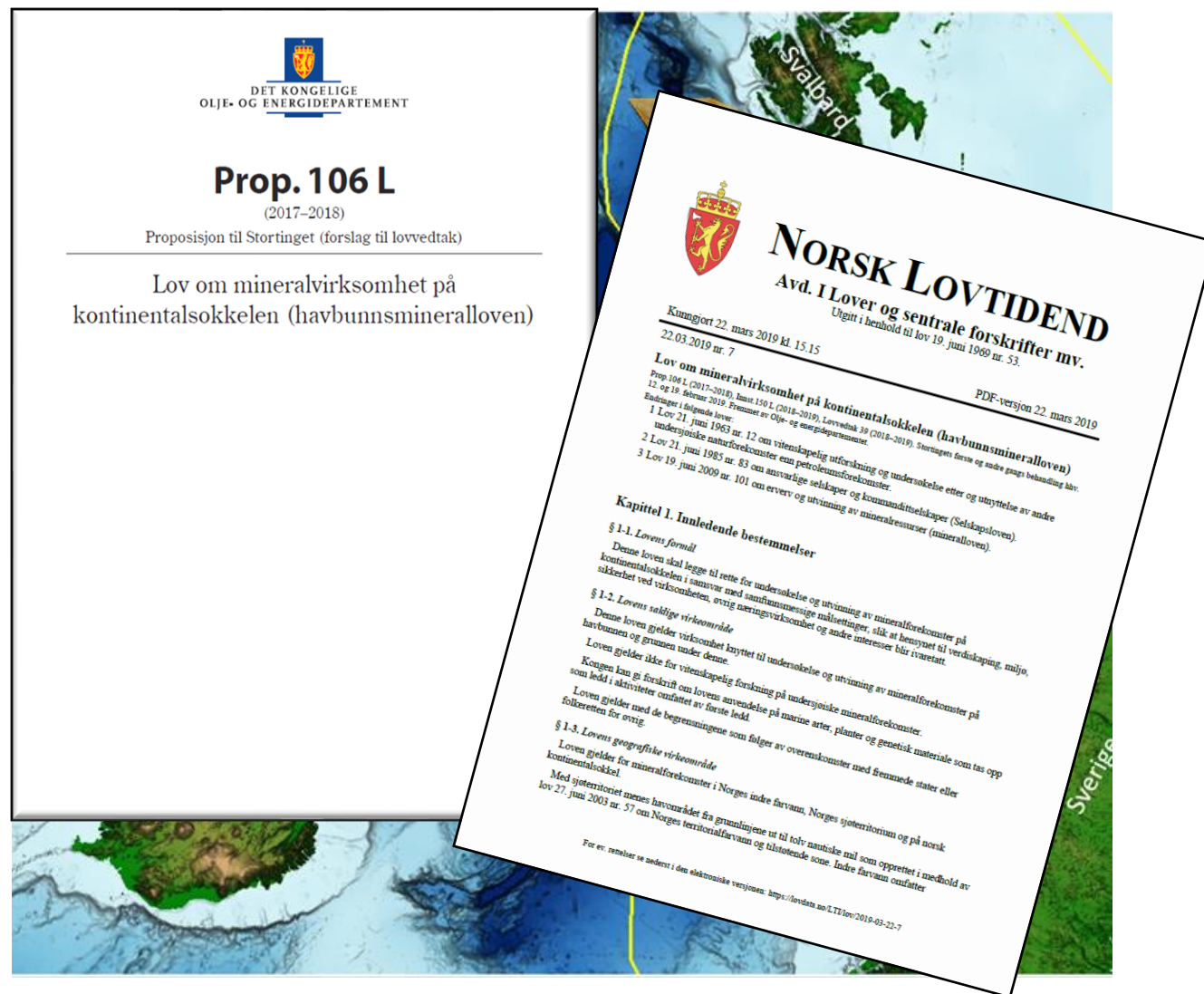


Havbunnsmineral – norsk kontinentalsokkel

Sikkerhetsforum 09.11.2023
Nils Rune Sandstå
Oljedirektoratet

Forvaltningsrammer

- Forvaltningsansvaret for havbunnsmineraler på norsk sokkel er lagt til Olje- og energidepartementet
- Oljedirektoratet er departementets fagetat på dette området
- Havbunnsmineralloven trådte i kraft 1. juli **2019**
- Åpningsprosess igangsatt mai **2020**, OED har ansvaret for KU og OD er gitt oppgaven med å utarbeide KU
- OD har ansvar for kartlegging og vurdering av ressurspotensialet, OD utarbeidet ressursrapport januar **2023**.
- Stortingsmelding levert 20.06 **2023**

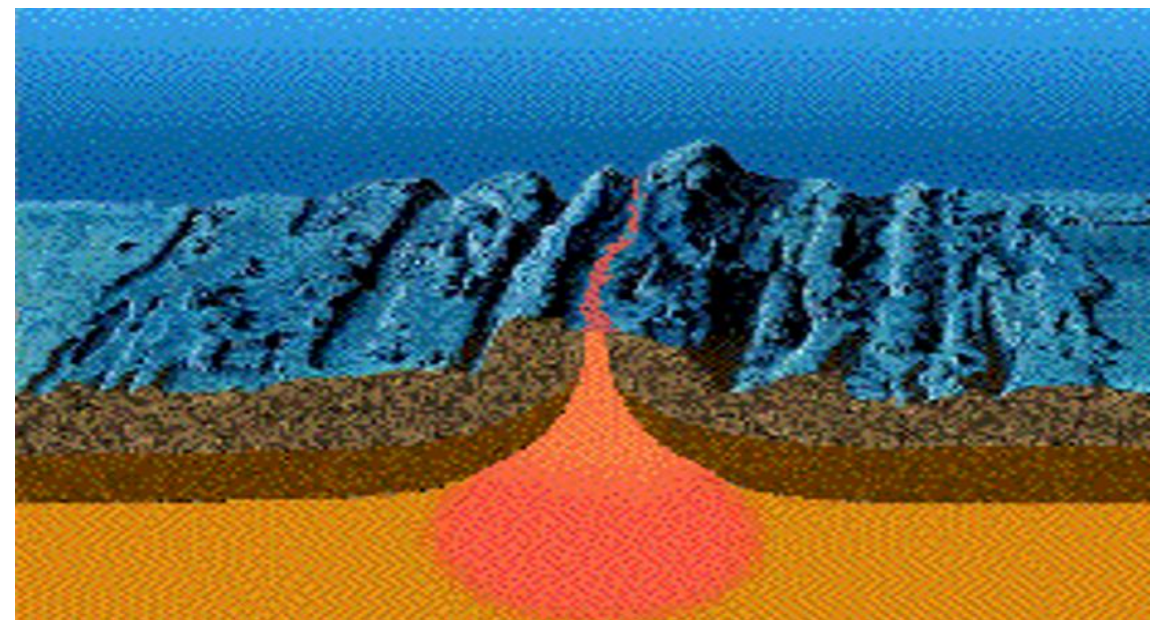




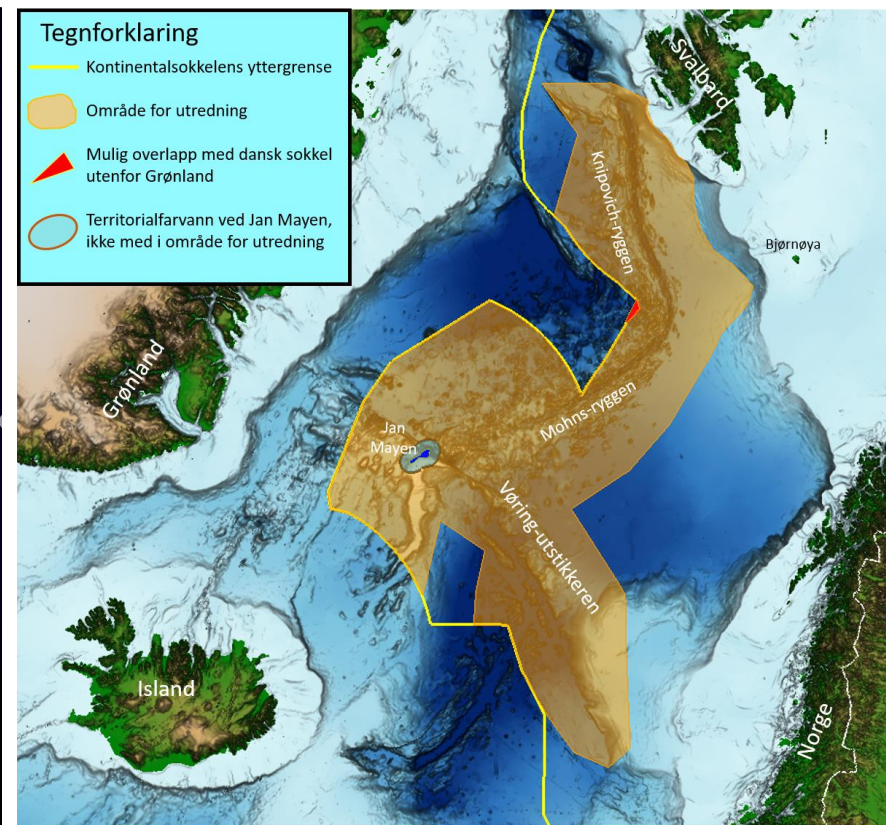
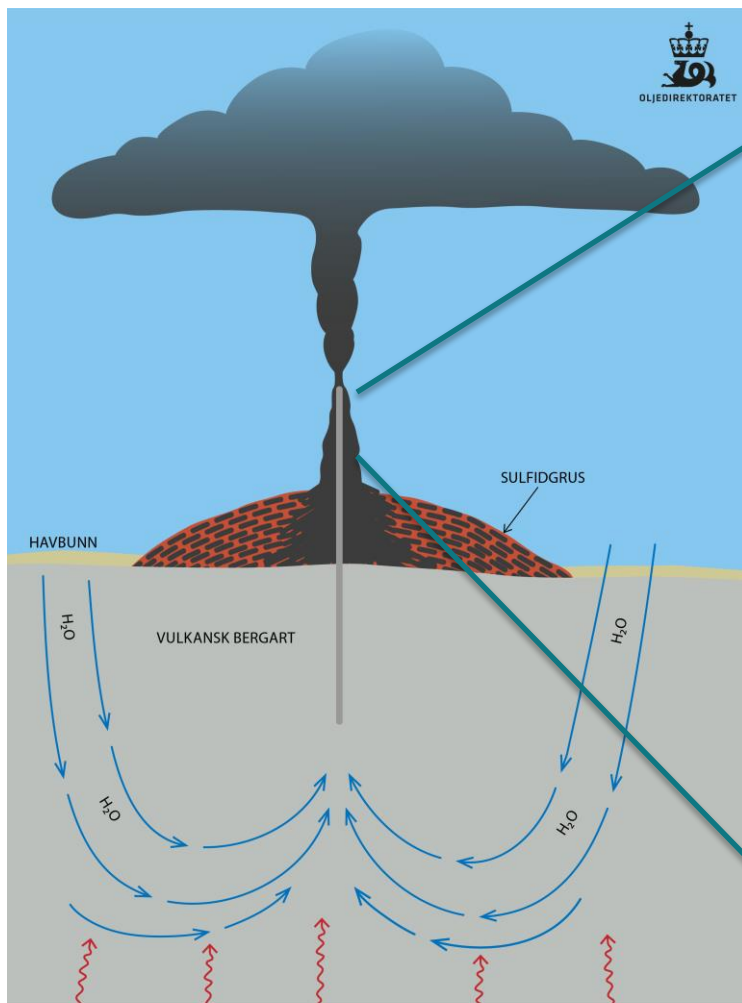
Den midtatlantiske ryggen

—

verdens lengste geologiske struktur



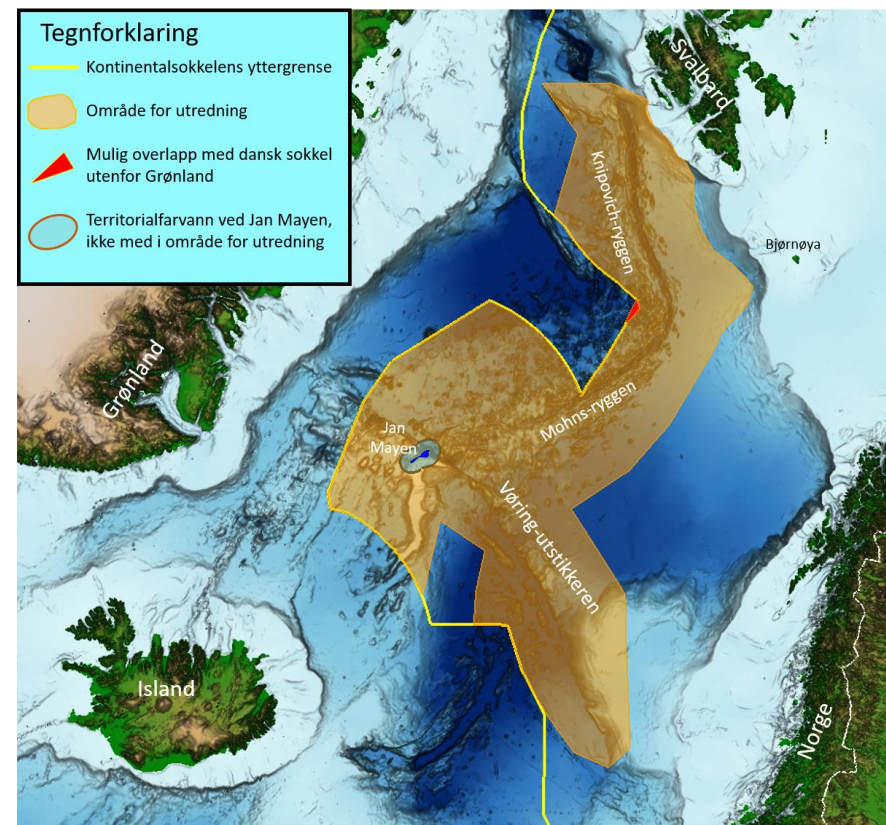
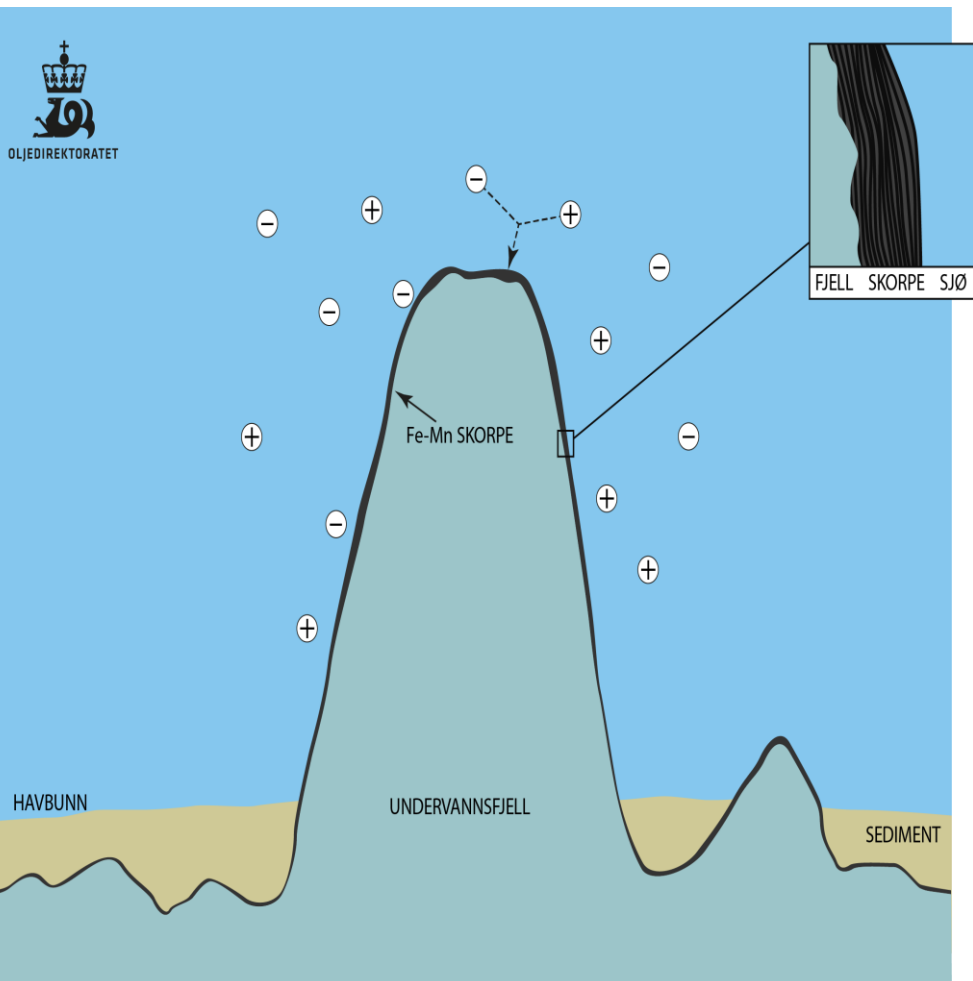
Sulfider på norsk kontinentalsokkel



Magmakammer

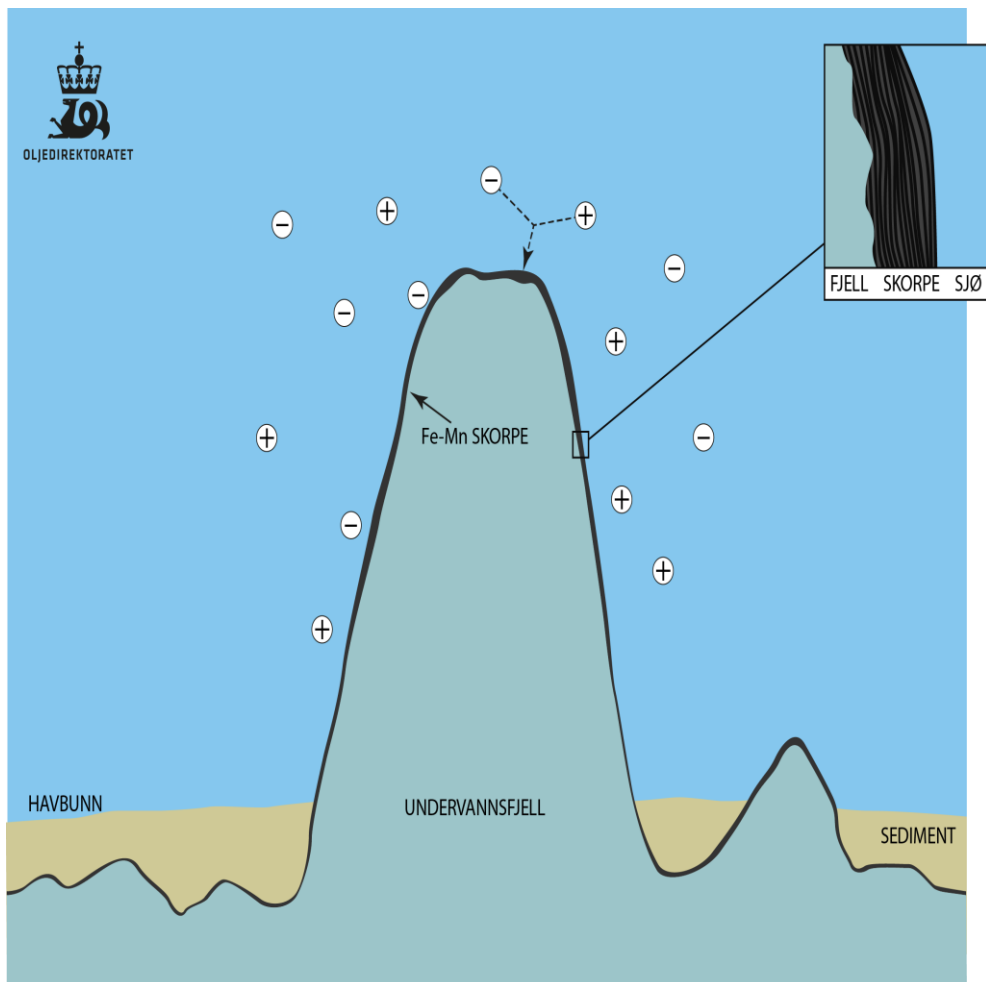
Hovedsaklig sink, kopper, kobolt, bly, gull og sølv

Manganskorper på norsk kontinentalsokkel



OD 1810001 Hovedsaklig mangan and jern og mindre megnder titan, kobolt, nikkel, cerium, zircon and sjeldne jordarter

Manganskorper på norsk kontinentalsokkel



OD 1810001

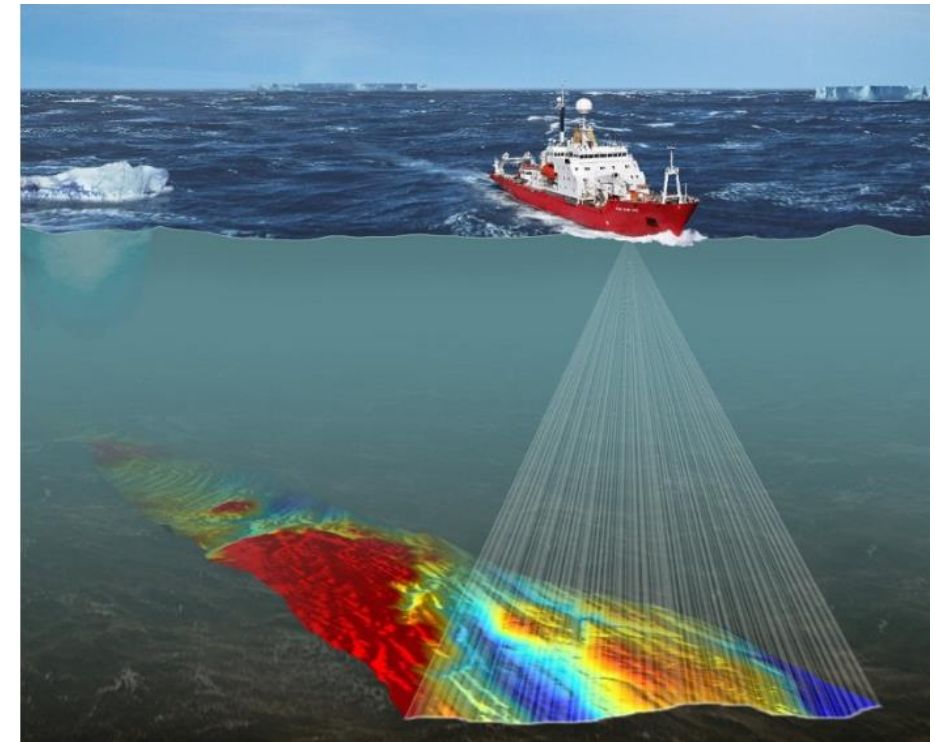
Hovedsaklig mangan and jern og mindre megnder titan, kobolt, nikkel, cerium, zircon and sjeldne jordarter

ODs kartlegging

Data acquisition

A general approach used for the NPD's mapping work has been

- Use of **ship-based bathymetric data** collection to gain an overall picture of the seabed.



www.africasurveyorsonline.com/2020/07/21/why-is-hydrography-survey-important/

Data acquisition

A general approach used for the NPD's mapping work has been

- Use of ship-based bathymetric data collection to gain an overall picture of the seabed.
- Followed by **AUV** (autonomous underwater vehicle) collection to provide a more detailed picture,

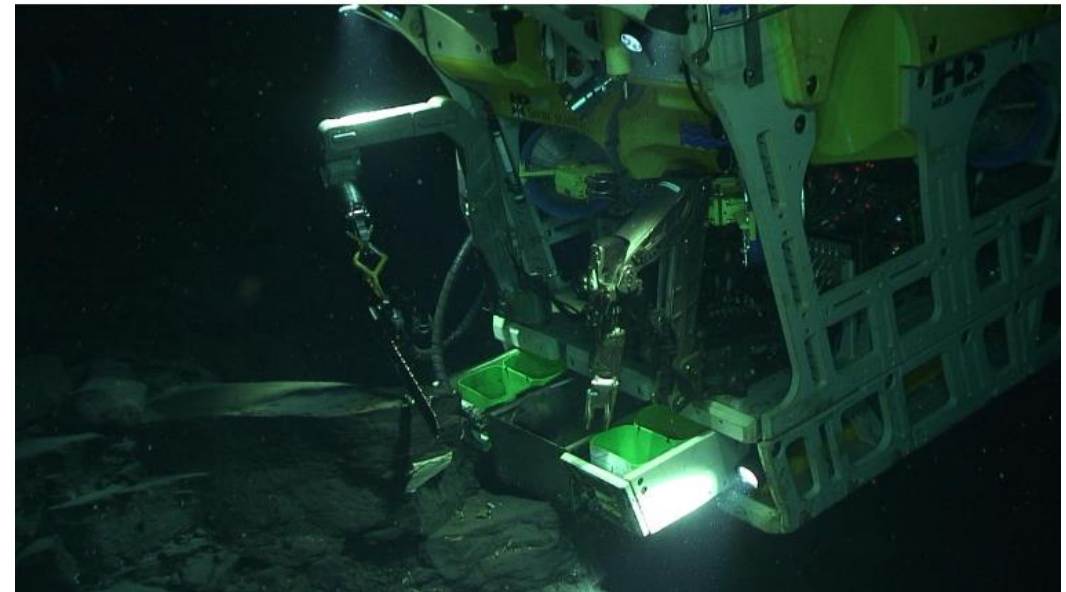


www.kongsberg.com/maritime/products/marine-robotics/autonomous-underwater-vehicles/autonomous-underwater-vehicle-hugin-endurance/

Data acquisition

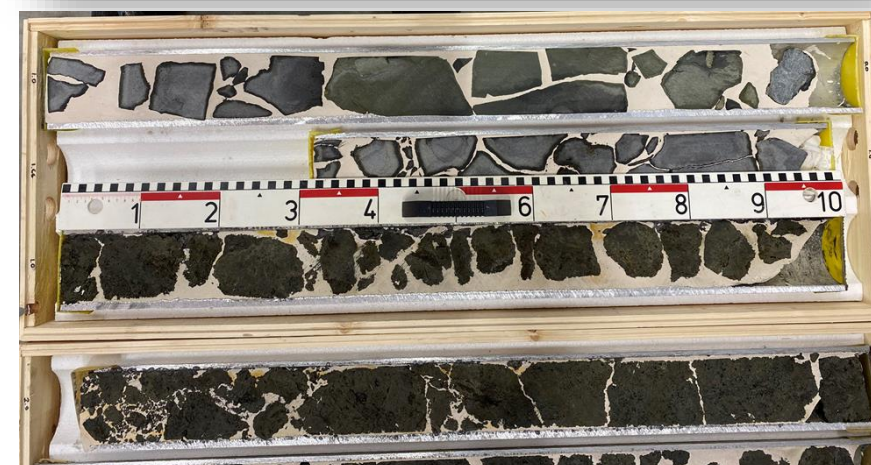
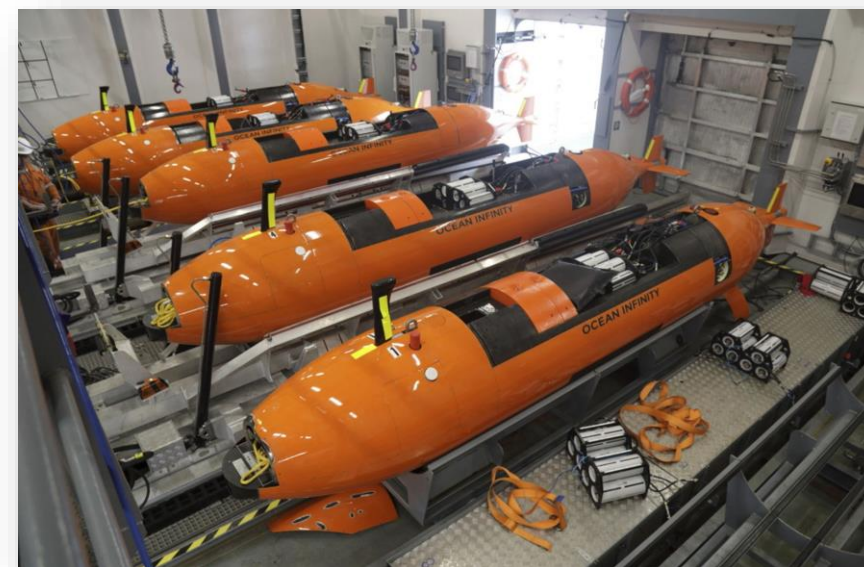
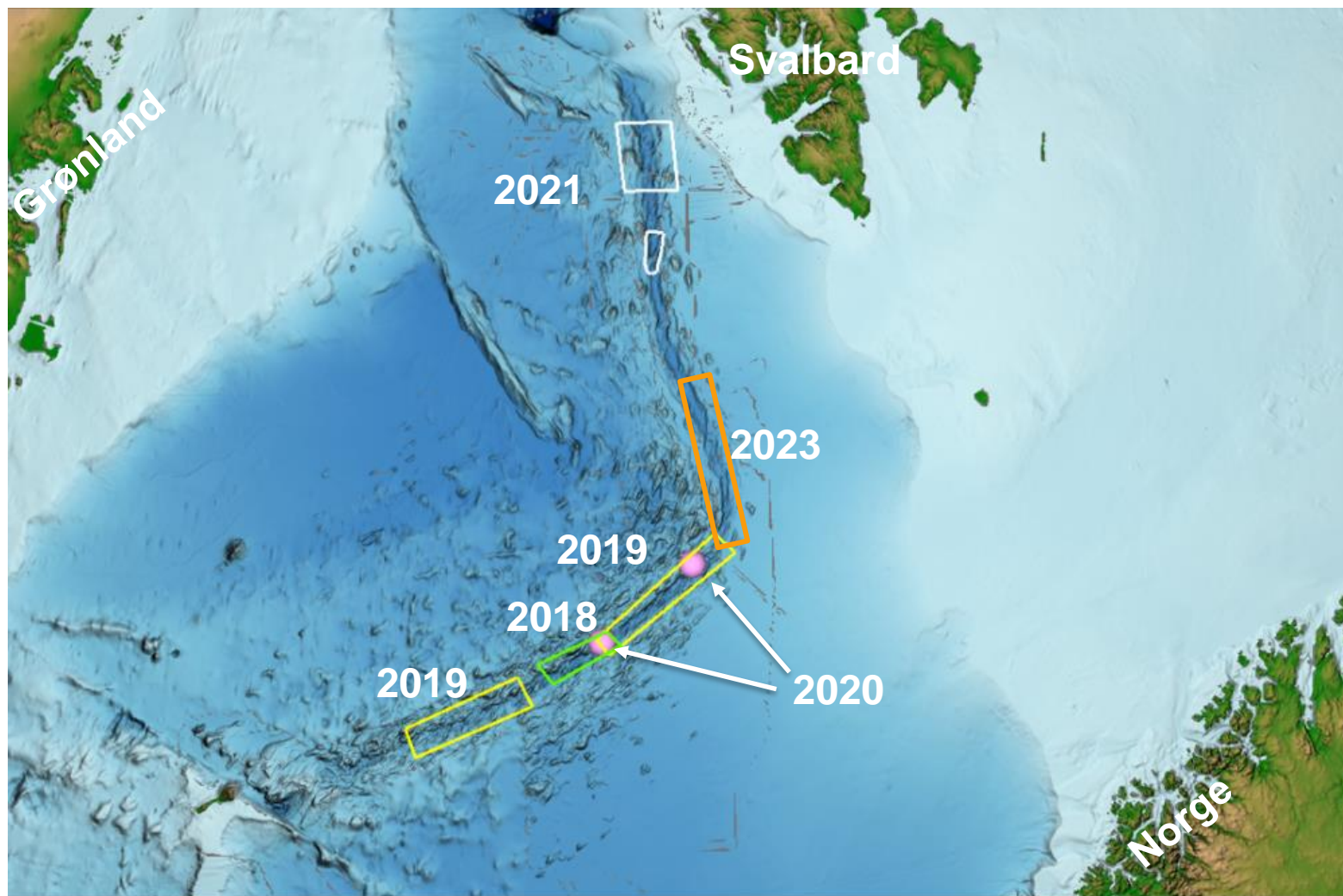
A general approach used for the NPD's mapping work has been

- Use of ship-based bathymetric data collection to gain an overall picture of the seabed.
- Followed by AUV (autonomous underwater vehicle) collection to provide a more detailed picture,
- Followed by **ROV** (remotely operated vehicle) operations to document and collect sample material from the seabed.

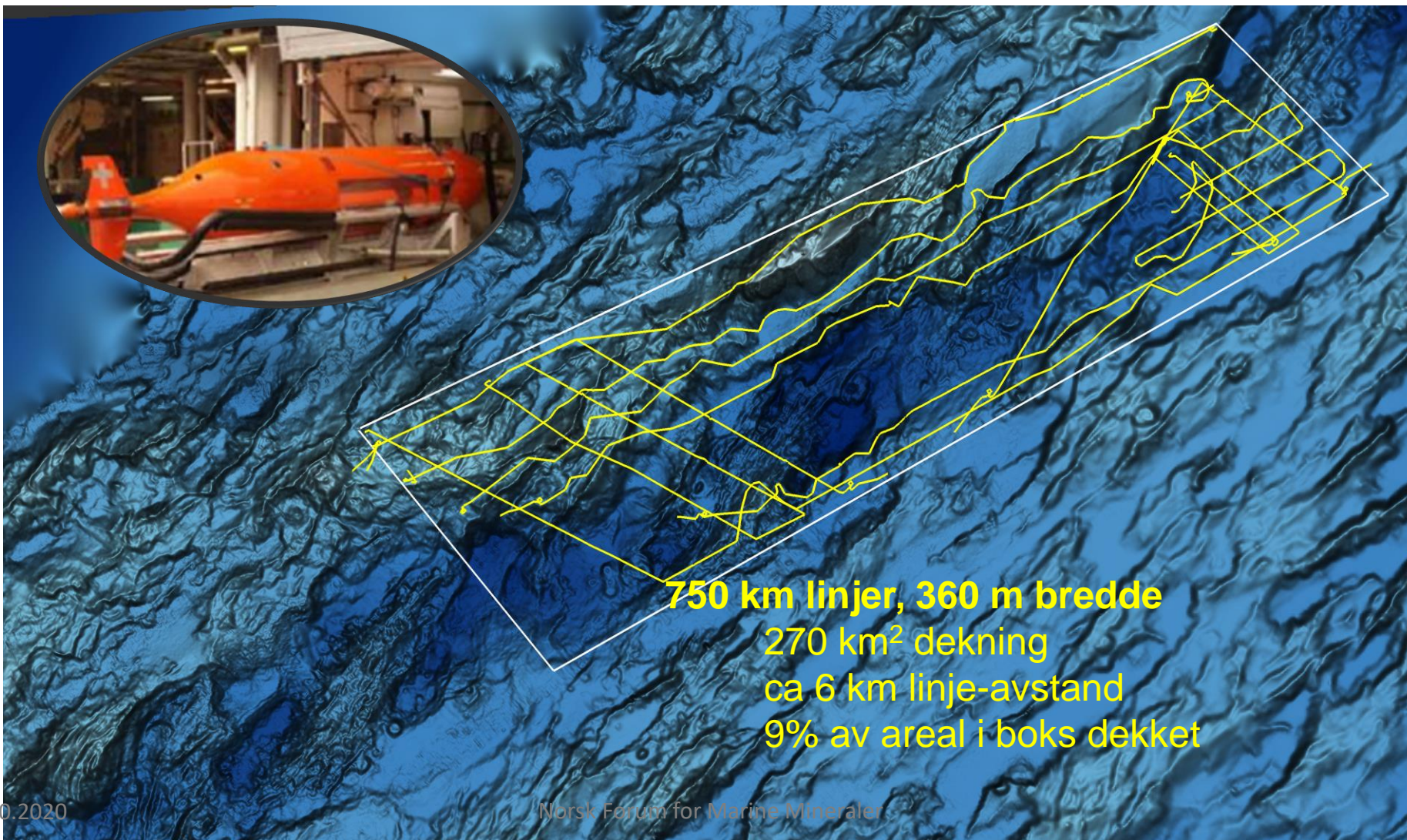


www.uib.no/en/news/51861/new-marine-research-centre-uib

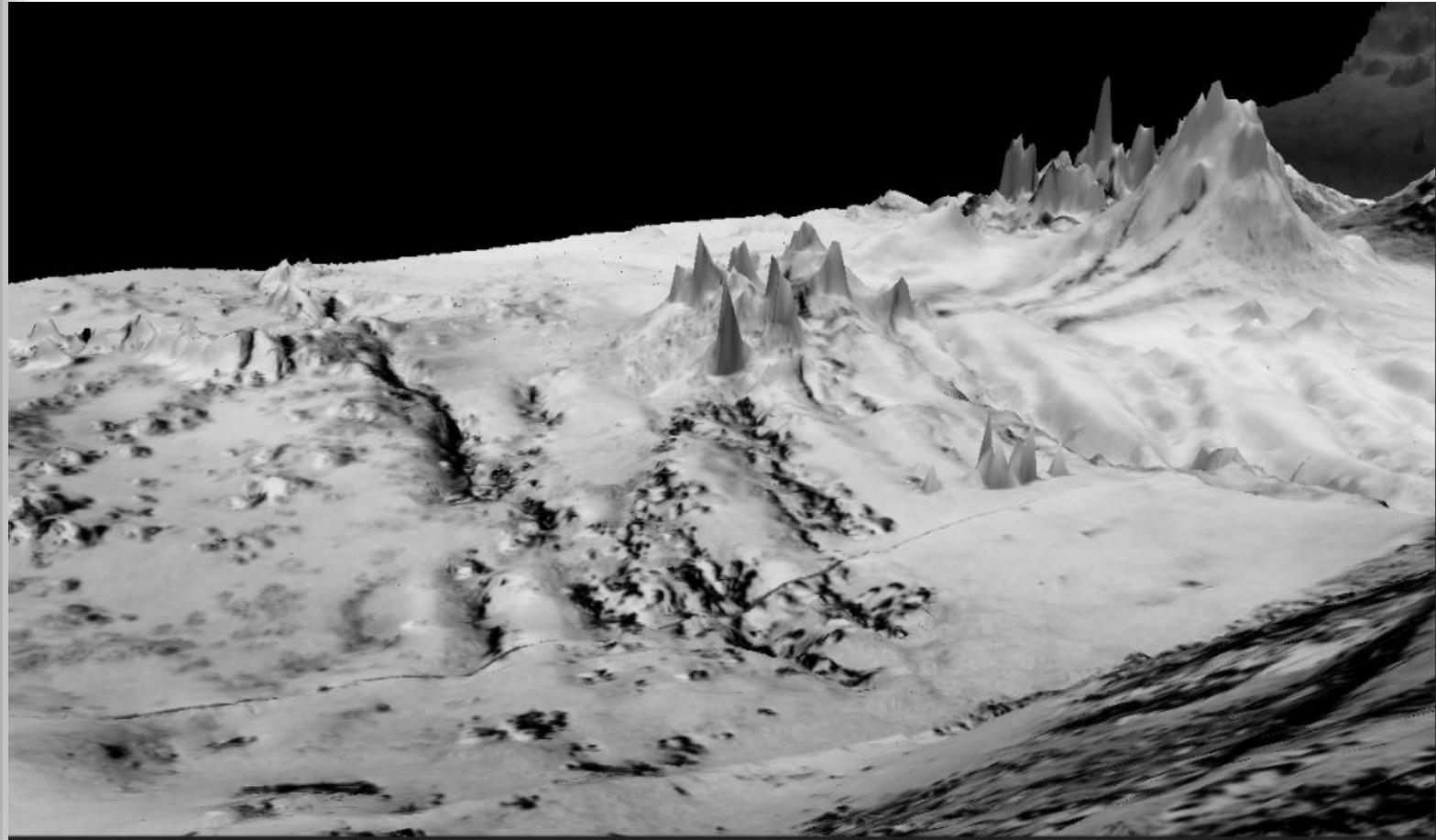
Kartlegging i regi av Oljedirektoratet 2018-2023



Datainnsamling 2018 - linjedekning

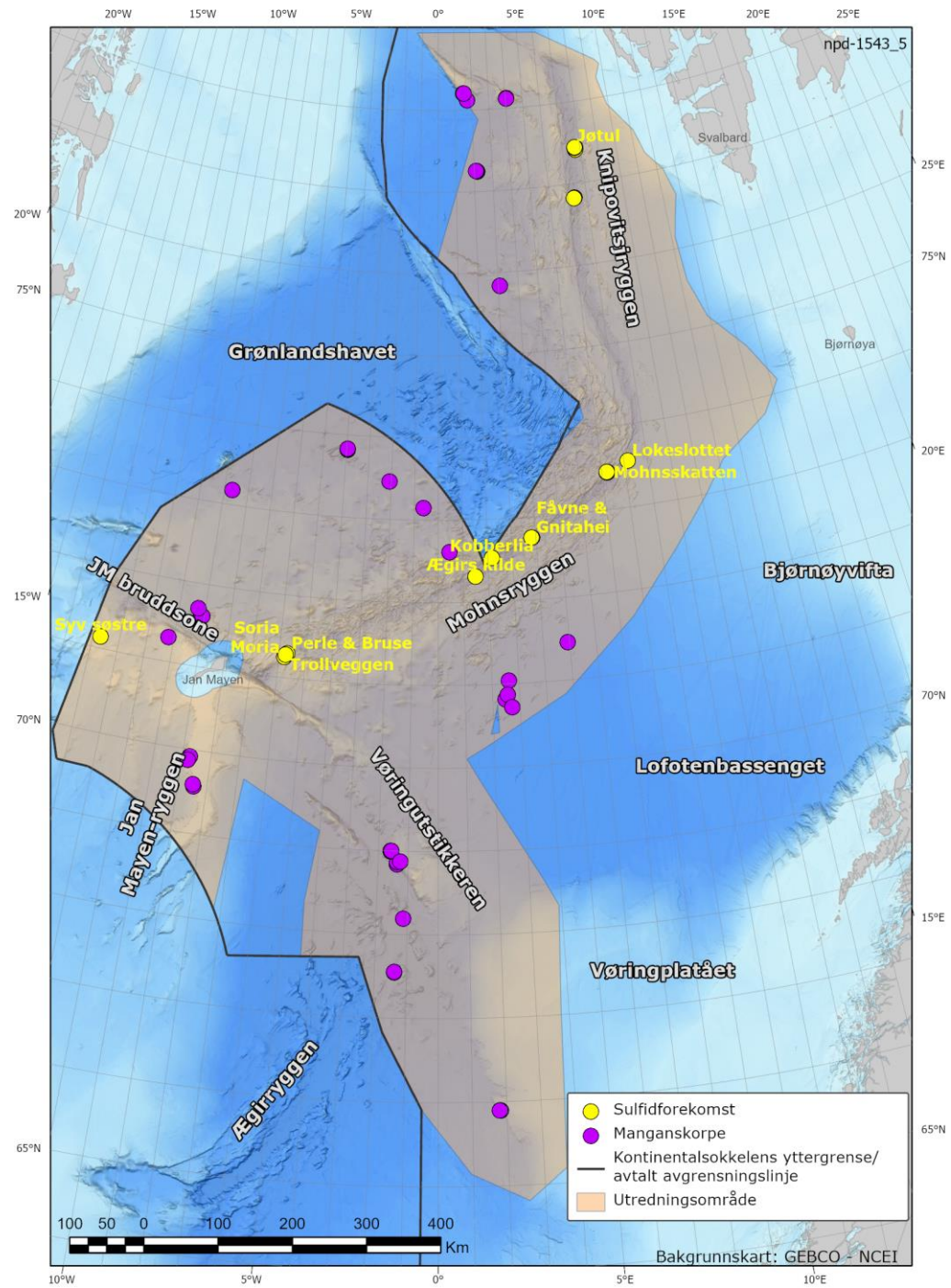


Datainnsamling 2018 - Svarte skorsteiner





Film «Fåvne» og «Gnitahei»



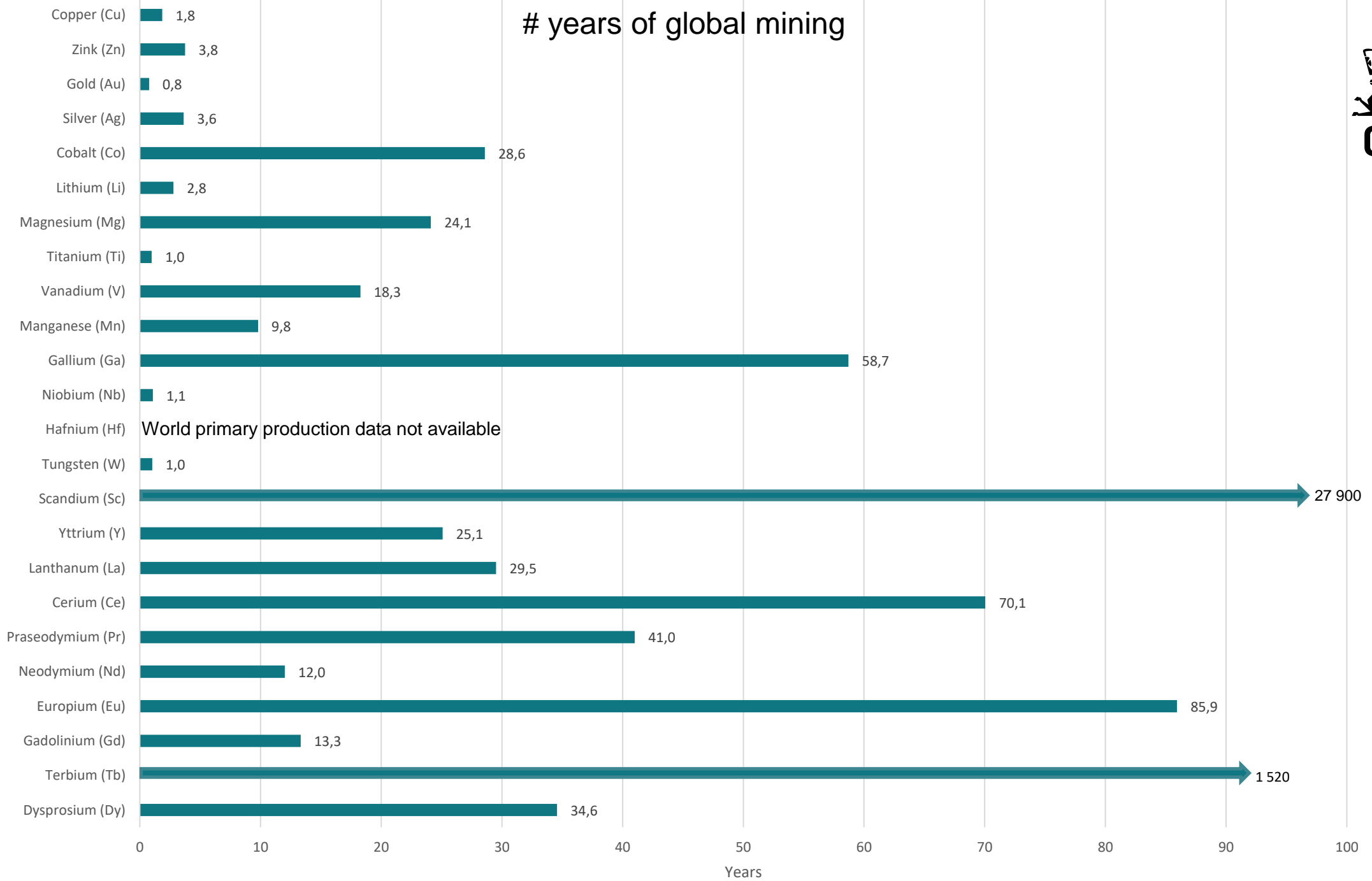
ODs ressursvurdering

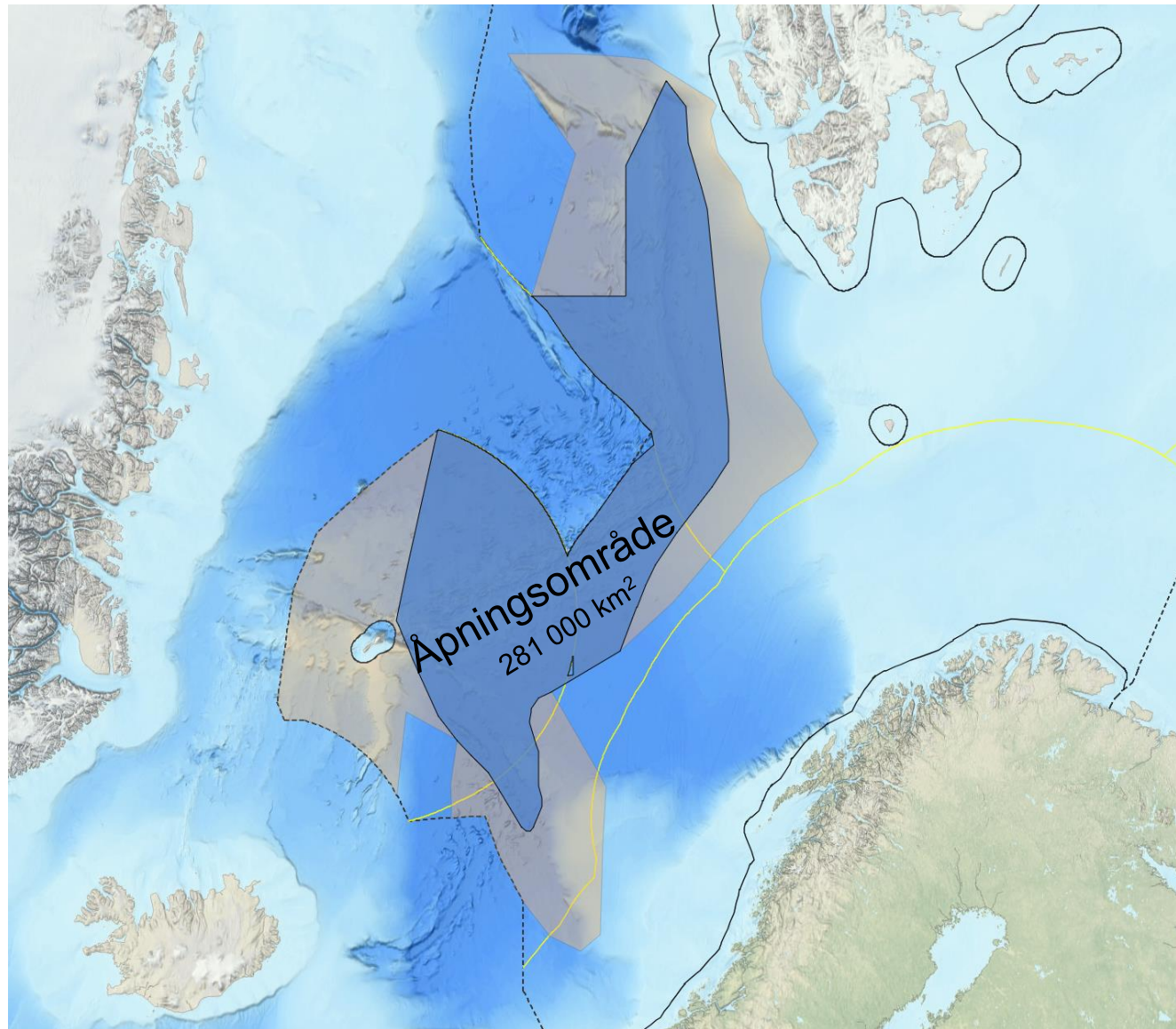
- Presentert i januar 2023
- ODs kartleggingstokt og samarbeid med akademia er grunnlaget for ressursvurderingen
- Det er påvist to typer havbunnsmineraler på norsk kontinentalsokkel
 - Sulfid
 - Manganskorpe
- Gir et anslag på tilstedeværende ressurser



[https://www.npd.no/globalassets/1-
npd/fakta/havbunnsmineraler/publikasjoner/2023/ressursvurdering-
havbunnsmineraler-20230127.pdf](https://www.npd.no/globalassets/1-
npd/fakta/havbunnsmineraler/publikasjoner/2023/ressursvurdering-
havbunnsmineraler-20230127.pdf)

years of global mining





Takk for oppmerksomheten