

(DE-)LEGITIMATION IN THE ANTHROPOCENE: A PERSPECTIVE OF AGONISTIC POLITICS

PHILIPP CENSKOWSKY (philipp.censkowsky@unil.ch)

DÉBORAH PHILIPPE (deborah.philippe@unil.ch)

FACULTY OF BUSINESS AND ECONOMICS

UNIVERSITY OF LAUSANNE (SWITZERLAND)

TECHNICAL NOTE

This technical note gives additional methodological detail to the calculations underlying Figure 1 (a, b, c) of the related manuscript. In this Figure, we display (a) the depletion rate of recoverable resources in Norway and the UK (in %, excluding resources in unopened areas); (b) the share of transfers from petroleum revenue over total government revenue in the period from 1970 to 2024 and (c) the number of oil and gas offshore license awards in Norway and the U.K. (Annual averages per 5-year period, 1964-2023).

Additional details concerning Figure 1 (a) – depletion rate

The indicated depletion rate is the share of extracted resources over recoverable resources in Norway and the UK between 1970 and 2024. This figure excludes resources in unopened areas, which could, in particular in Norway, lower the displayed depletion rate significantly through new discoveries (Nelsen & Hunter, 2024). All figures in (a) for Norway based on Norwegian Offshore Directorate (2024a, b); and for the UK based on Department for Energy Security and Net Zero (2024a, b). All unit converted with Norwegian Offshore Directorate's (2023) list.

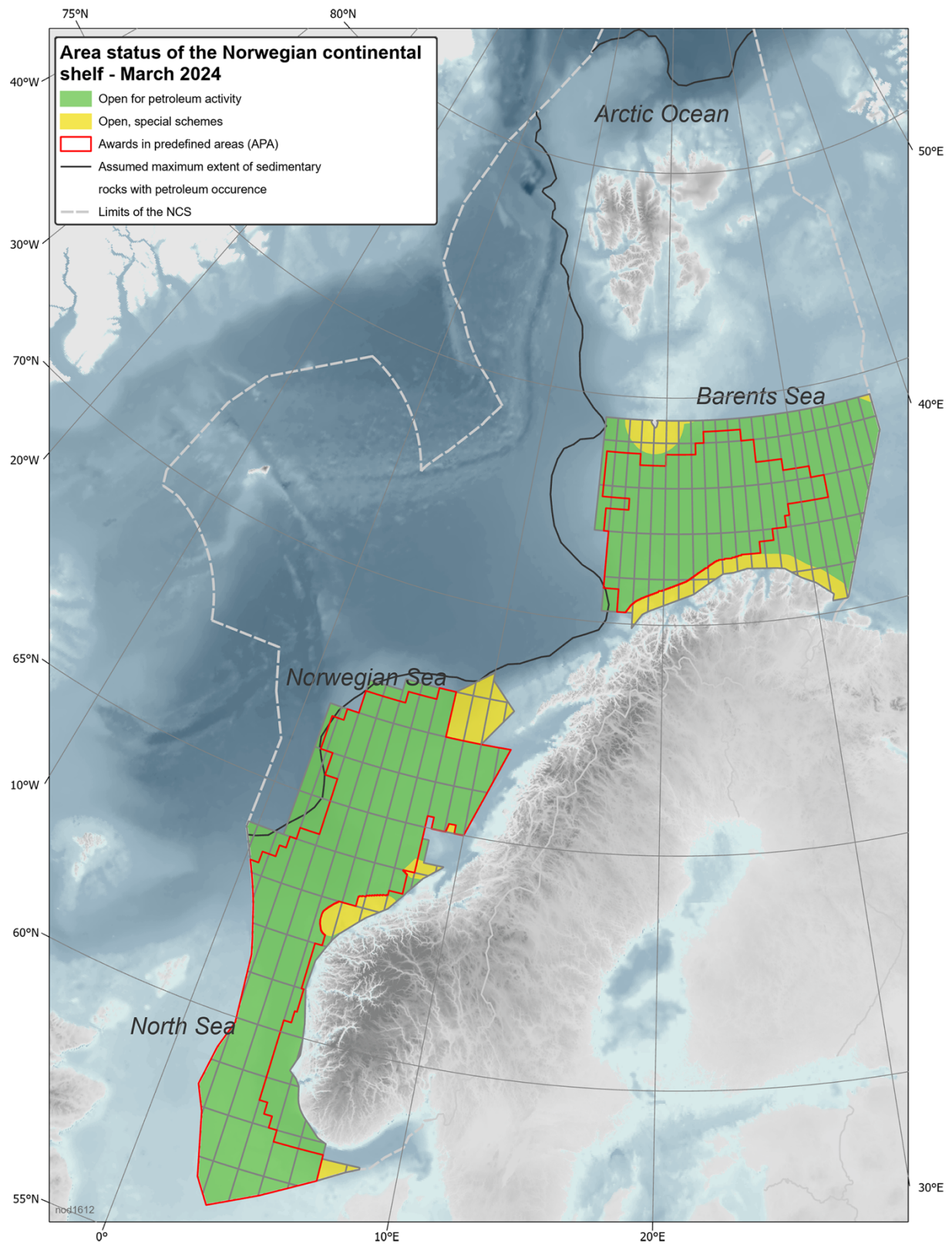
Additional details concerning Figure 1 (b) – government revenue from O&G

The displayed figure represents an estimate of the share of government revenue. This estimate was readily available from Norwegian official statistics (Statistics Norway and Ministry of Finance, 2024). In contrast, the authors estimated a comparable statistic for the UK based on reports published by the British Office for Budget Responsibility that were available only until the year 2023 (Office for Budget Responsibility 2023a, b).

Additional details concerning Figure 1 (c) – national licensing procedures

We provide an estimate of annual production licenses (five-year average) for Norway and the UK in Figure 1 (c). In Norway, we base our estimate on data reported by the Norwegian Offshore Directorate (2025a) who report all production licenses on the Norwegian continental shelf since 1965. According to Offshore Norway, a production license “confers the right to prospect, drill and produce in the specified area [...]” (Offshore Norge, 2025). This includes licenses granted under the Awards in predefined Areas (APA) licenses and numbered licensing rounds for frontier areas. The latter has been suspended since 2021 following the political blockage of the 26th licensing round by the Socialist Left Party. Pre-defined areas, however, cover a vast majority of the North Sea and the Norwegian sea that has existing infrastructure and known geological conditions (**APPENDIX FIGURE 1**). Meanwhile, commercially more interesting new discoveries are expected from frontier areas – in Norway typically above the 65° North (Norwegian Petroleum, 2025). Since the APA round in 2023, the predefined areas in the Barents Sea have been expanded by 34 blocks, while in the Norwegian Sea only by three blocks (Norwegian Offshore Directorate, 2025b). O&G production in Norway is licensed solely for subsea hydrocarbon production.

APPENDIX FIGURE 1



Source: <https://www.norskpetroleum.no/en/exploration/licensing-position-for-the-norwegian-continental-shelf/>

In the UK, we base our estimate on archival data including on past licensing rounds covering the years 1964-2010 (UK Government, 2016), reporting by the North Sea Transition Authority (North Sea Transition Authority, 2025) as well as press releases to cross-validate information and cover missing years. We here consider only so-called seaward production licenses and don't include onshore planning permits for O&G or coal mines. While we note that the award of a production licenses does not in all cases imply actual production from the area licensed (Race, 2023), they are nonetheless a good overall proxy for the activity level on the shelf. A map of blocks licensed out during the UK's historic production is available (**APPENDIX FIGURE 2**).

APPENDIX FIGURE 2



9.6.2025

UKCS_Licensed_Blocks_History_ETRS89

World_Hillshade

1:14,975,552
0 70 140 280 mi
0 112.5 225 450 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, USGS

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