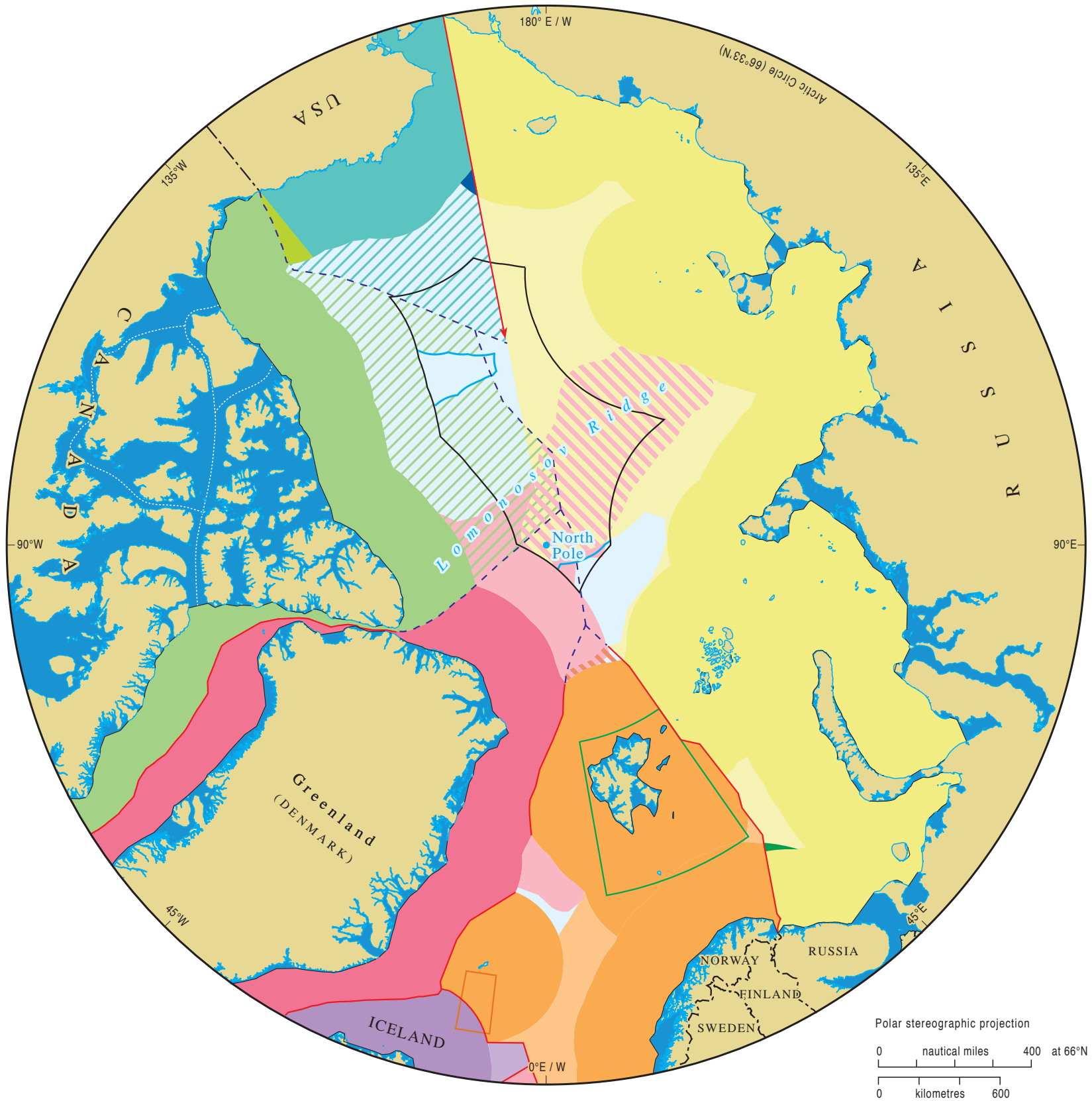


Maritime jurisdiction and boundaries in the Arctic region



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|--|--|---|
| Internal waters | Russia territorial sea and EEZ | Straight baselines |
| Canada territorial sea and exclusive economic zone (EEZ) | Russia claimed continental shelf beyond 200 M (note 4) | Agreed boundary |
| Potential Canada continental shelf beyond 200 M (see note 1) | Norway-Russia Special Area (note 5) | Median line |
| Denmark territorial sea and EEZ | USA territorial sea and EEZ | 350 M from baselines (note 1) |
| Denmark claimed continental shelf beyond 200 M (note 2) | Potential USA continental shelf beyond 200 M (note 1) | 100 M from 2500 m isobath (beyond 350 M from baselines) (note 1) |
| Iceland territorial sea and EEZ | Overlapping Canada / USA EEZ (note 6) | Svalbard treaty area (note 8) |
| Iceland claimed continental shelf beyond 200 M (note 2) | Russia-USA Eastern Special Area (note 7) | Iceland-Norway joint zone (note 9) |
| Norway territorial sea and EEZ / Fishery zone (Jan Mayen) / Fishery protection zone (Svalbard) | Unclaimed or unclaimable continental shelf (note 1) | Main 'Northwest Passage' shipping routes through Canada claimed internal waters |
| Norway claimed continental shelf beyond 200 M (note 3) | | |

Notes

1. The depicted potential areas of continental shelf beyond 200 nautical miles (nm) for Canada and the USA are theoretical maximum claims assuming that none of the states claims continental shelf beyond median lines with neighbouring states where maritime boundaries have not been agreed. **In reality, the claimable areas may fall well short of the theoretical maximums** (see the summary of the definition of the outer limit of the continental shelf below and the seabed relief map on page 3). It is also possible that one or more states will claim areas beyond the median lines.

Where the continental margin of a coastal state extends beyond 200 nm from the state's territorial sea baseline, the outer limit of the continental shelf is defined with reference to two sets of points: (i) points 60 nm from the foot of the continental slope; (ii) points at which the thickness of sedimentary rocks is at least 1% of the shortest distance from the points in question to the foot of the continental slope. The outer limit of the continental shelf is defined by a series of straight lines (not exceeding 60 nm in length) connecting the seawardmost of the points in the two sets described above. This map does not attempt to depict such lines, which can only be identified with precision through bathymetric and seismic surveys. However, it is possible to depict the 'cut-off' limit beyond which states may not exercise continental shelf jurisdiction regardless of the location of the foot of the continental slope and the thickness of sediment seaward of that point. The cut-off limit is the seawardmost combination of two lines: (i) a line 350 nm from the state's territorial sea baseline; (ii) a line 100 nm seaward of the 2,500 metre isobath. Both the 350 nm line and (where it runs seaward of the 350 nm line) the 2,500 m + 100 nm lines are depicted on the map. The 2,500 m + 100 nm line is derived from the US National Geophysical Data Center's ETOPO2 bathymetry dataset.

Canada submitted preliminary information concerning the outer limit of its continental shelf in the Arctic Ocean to the United Nations Commission on the Limits of the Continental Shelf (CLCS) in December 2013. The document described the continental margin of Canada in the Arctic Ocean as being "part of a morphologically continuous continental margin around the Canada Basin and along the Amundsen Basin. It comprises a number of seafloor elevations (Lomonosov Ridge and Alpha Ridge) and forms the submerged prolongation of the land mass of Canada. Throughout, the areas of continental shelf extend beyond 200 nautical miles from the territorial sea baselines of Canada and, on the Alpha and Lomonosov Ridges, beyond the 350 nautical mile constraint."

The USA has yet to ratify UNCLOS, and would appear to be unable to make a submission to the CLCS until it becomes a party to the Convention.

2. The delimitation of the continental shelf beyond 200 nm in the northeast Atlantic Ocean is set out in the "Agreed Minutes on the Delimitation of the Continental Shelf beyond 200 Nautical Miles between the Faroe Islands, Iceland and Norway in the Southern Part of the Banana Hole of the Northeast Atlantic" of 20 September 2006. The entitlements of Denmark and Norway in the area in question have been confirmed by the CLCS (see www.un.org/depts/los/clcs_new/submissions_files/dnk28_09/2014_03_14_SCDNK_REC_COM_20140521.pdf and www.un.org/depts/los/clcs_new/submissions_files/nor06/nor_rec_summ.pdf). Iceland has made a submission to the CLCS concerning the limit of its continental shelf in the Ægir Basin (www.un.org/depts/los/clcs_new/submissions_files/isl27_09/isl2009executivesummary.pdf) but the Commission has yet to make recommendations concerning that submission.

Denmark and the government of Greenland made a partial submission to the CLCS concerning the outer limit of the North-Eastern Continental Shelf of Greenland on 26 November 2013 (www.un.org/depts/los/clcs_new/submissions_files/dnk68_13/DNK2013_ES.pdf). The proposed limit creates an overlap with the continental shelf of Norway as recommended by the CLCS (see note 3) of approximately 140 square nautical miles. It also means that 2,450 square nautical miles of seabed in the will form part of The Area.

Denmark and the government of Greenland made a second partial submission to the CLCS concerning the outer limit of the Northern Continental Shelf of Greenland on 15 December 2014 (www.un.org/depts/los/clcs_new/submissions_files/dnk76_14/dnk2014_es.pdf). The submission argues that the Lomonosov Ridge, which runs across the central Arctic Ocean, is "both morphologically and geologically an integral part of the Northern Continental Margin of Greenland". On this basis, Denmark and Greenland have defined a continental shelf limit straddling the ridge which extends up to the outer limit of the Russian exclusive economic zone, more than a thousand nautical miles from the nearest point on the coastline of Greenland. The area of continental shelf beyond 200 nautical miles from Greenland's baselines defined in the submission is around 261,000 square nautical miles. The continental shelf defined by Denmark and Greenland overlaps with the continental shelf areas beyond 200 nautical submitted to the CLCS by Norway (overlap = c.3,020 square nautical miles) and Russia (overlap = c.170,100 square nautical miles). The submission notes that the Greenland shelf is also likely to overlap with a future continental shelf submission by Canada, and may overlap with a future continental shelf submission by the USA. The executive summary notes that Denmark has consulted with all its neighbours regarding its submission, and refers to non-objection agreements with Norway and Russia that allow the CLCS to consider the Danish submission without prejudice to the future delimitation of the areas submitted by the respective parties.

3. A summary of the Recommendations of the Commission on the Limits of the Continental Shelf in regard to the Submission made by Norway in respect of areas in the Arctic Ocean, the Barents Sea and the Norwegian Sea can be found at www.un.org/depts/los/clcs_new/submissions_files/nor06/nor_rec_summ.pdf.
4. Summaries of Russia's Arctic Ocean submissions to the CLCS are available at www.un.org/Depts/los/clcs_new/submissions_files/submission_rus.htm and www.un.org/depts/los/clcs_new/submissions_files/submission_rus_rev1.htm. After reviewing the first submission made in 2001, the CLCS asked Russia to revise its submission relating to its continental shelf in the Central Arctic Ocean; a partial revised submission was made on 3 August 2015. The area covered by the original submission was more than 386,000 square nautical miles, and the 2015 submission added a further 30,000 square nautical miles. The 2015 submission indicates that geological and geophysical research undertaken from 2005 to 2014 confirmed the Russian view that "the Lomonosov Ridge, the Mendeleev Rise, the Chukchi Rise and separating them the Podvodnikov Basin and the Chukchi Basin form a single consolidated block of continental crust [which] is a component of the continental margin of the Arctic Ocean and constitutes a natural prolongation of the continental margin of Eurasia". Noting the overlap between the Russian and Danish submissions to the CLCS, and the likely overlap between the Russian submission and a future Canadian submission, the 2015 submission refers to non-objection agreements with both neighbours which allow for consideration of the Russian submission

without prejudice to future delimitation negotiations. Since the 2015 submission is a revision of the earliest submission made to the CLCS, it will be reviewed by the Commission at the earliest opportunity, and certainly well before the Danish submission of December 2014 (see note 2).

5. Norway and the Soviet Union agreed a partial maritime boundary in Varangerfjord in 1957 but for many years were unable to agree on the alignment of their maritime boundary in the Barents Sea: Norway claimed the boundary should follow the median line, while Russia sought a 'sector' boundary extending due north (but deviating around the 1920 Svalbard Treaty area). In July 2007 the Varangerfjord boundary was extended through the innermost 73 km of the disputed area, and in September 2010 an agreement was finally signed extending the boundary northwards through the Barents Sea to the outer limit of the two countries' overlapping continental shelf entitlements in the Arctic Ocean. In the area to the east of the boundary which lies within 200 nm of the Norwegian mainland but more than 200 nm from Russian territory, the agreement grants Russia the EEZ rights that would otherwise fall to Norway (this "Special Area" is similar to those established in the vicinity of the Russia-USA maritime boundary in 1990 – see Note 7). The 2010 agreement renewed fisheries cooperation agreements originally signed in 1975 and 1976 for at least a further fifteen years, but the 'Grey Zone' fishing regime established in 1978 has been terminated. The agreement also includes provisions for cooperative exploitation and management of transboundary hydrocarbon deposits.
6. Canada argues that the maritime boundary in the Beaufort Sea was delimited in the 1825 treaty between Great Britain and Russia defining the boundary between Alaska and the Yukon as following the 141° W meridian "as far as the frozen ocean". The USA argues that no maritime boundary has yet been defined and that the boundary should follow the median line between the two coastlines. The area of overlap between the two claims is more than 7,000 nm².
7. The Eastern Special Area lies more than 200 nm from the baseline of the USA but less than 200 nm from the baseline of Russia. Under the June 1990 boundary agreement between the two states, the Soviet Union agreed that the USA should exercise EEZ jurisdiction within this area. A second Eastern Special Area and a Western Special Area (in which the opposite arrangement applies) were established adjacent to the boundary south of 60° north. The agreement has yet to be ratified by the Russian parliament but its provisions have been applied since 1990 through an exchange of diplomatic notes.
8. Under a treaty signed in February 1920, Norway has sovereignty over the Svalbard archipelago and all islands between latitudes 74° and 81° north and longitudes 10° and 35° east. However, citizens and companies from all treaty nations enjoy the same right of access to and residence in Svalbard. Right to fish, hunt or undertake any kind of maritime, industrial, mining or trade activity are granted to them all on equal terms. All activity is subject to the legislation adopted by Norwegian authorities, but there may be no preferential treatment on the basis of nationality. Norway is required to protect Svalbard's natural environment and to ensure that no fortresses or naval bases are established. 39 countries are currently registered as parties to the Svalbard treaty.
9. Under the 1981 continental shelf boundary agreement between Iceland and Norway, each country is entitled to a 25% share in petroleum activities on the other's continental shelf within a 45,470 km² area between latitudes 68° N and 70° 35' N and longitudes 6° 30' W and 10° 30' W. The idea of a joint development zone straddling the boundary was proposed by a conciliation commission set up by the two governments when they were unable to reach a negotiated boundary settlement. The continental shelf boundary itself is located 200 nm from the coast of Iceland but less than 100 nm from Jan Mayen, reflecting the significant disparity in the lengths of the relevant coastal fronts (more than 18:1 in Iceland's favour).
10. Canada claims that the waters of its Arctic archipelago are historic internal waters, and has enclosed them within a system of straight baselines. Under normal circumstances there is no automatic right of innocent passage through internal waters for foreign ships. However, other states (particularly the USA) argue that the channels in the archipelago which form part of the 'Northwest Passage' through the Arctic qualify as straits used for international navigation under Part III of UNCLOS, and that there is therefore a right of transit passage through the straits for foreign ships. While the Northwest Passage was under permanent ice cover, the debate was largely academic - but with the polar ice cap retreating and the Passage becoming increasingly navigable, the question of which legal regime applies has become increasingly pressing. Similar issues affect the straits of the 'Northeast Passage' around Russia's Arctic coastline.

Agreed maritime boundaries

Canada-Denmark (Greenland): continental shelf boundary agreed 17 December 1973.

Denmark (Greenland)-Iceland: continental shelf and fisheries boundary agreed 11 November 1997.

Denmark (Greenland)-Norway (Jan Mayen): continental shelf and fisheries boundary agreed 18 December 1995 following adjudication by the International Court of Justice.

Denmark (Greenland)-Iceland-Norway (Jan Mayen) tripoint agreed 11 November 1997.

Denmark (Greenland)-Norway (Svalbard): continental shelf and fisheries boundary agreed 20 February 2006.

Iceland-Norway (Jan Mayen): fisheries boundary following the 200 nm limit of Iceland's EEZ agreed 28 May 1980; continental shelf boundary and joint zone agreed 22 October 1981 (see note 9).

Norway-Russia: maritime boundary in Varangerfjord partially delimited 15 February 1957 and extended 11 July 2007. Agreement on the maritime boundary in the Barents Sea and Arctic Ocean signed on 15 September 2010 and entered into force on 7 July 2011 (see note 5).

Russia-USA: single maritime boundary agreed 1 June 1990 (see note 8).

Seabed topography

As discussed in note 1, the outer limit of the continental shelf is defined in relation to the geology and geomorphology of the continental margin. The Arctic Ocean seabed is currently rather poorly surveyed, but existing public domain datasets such as US National Geophysical Data Center's ETOPO2 bathymetry dataset, from which the seabed relief map below was generated, suggest that in many areas of the Arctic the outer limit of the continental shelf may fall well short of the theoretical maximum limits shown on the main map. The Arctic coastal states are currently conducting hydrographic and geophysical surveys of the Arctic Ocean in order to identify the outer limits of the continental shelf with precision. Some data being acquired through collaborative ventures are being made available to the public, notably the International Bathymetric Chart of the Arctic Ocean (www.ngdc.noaa.gov/mgg/bathymetry/arctic).



Arctic seabed relief map generated in CARIS LOTS using ETOPO2 data (www.gfdl.noaa.gov/products/vis/data/datasets/etopo2_topography.html)