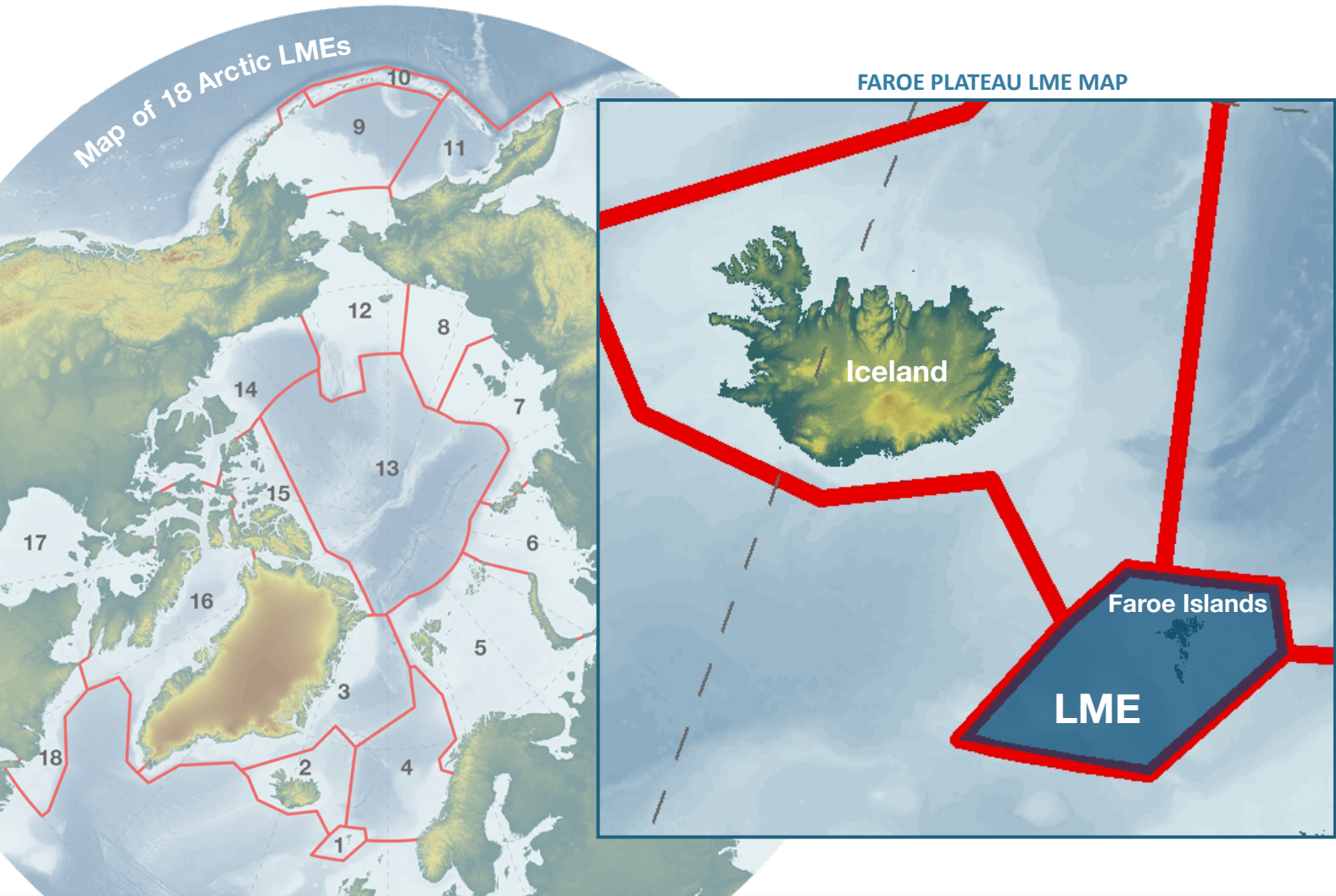


# FAROE PLATEAU LME



# ARCTIC LMEs

Large Marine Ecosystems (LMEs) are defined as regions of ocean space of 200,000 km<sup>2</sup> or greater, that encompass coastal areas from river basins and estuaries to the outer margins of a continental shelf or the seaward extent of a predominant coastal current. LMEs are defined by ecological criteria, including bathymetry, hydrography, productivity, and trophically linked populations. PAME developed a map delineating 17 Arctic Large Marine Ecosystems (Arctic LME's) in the marine waters of the Arctic and adjacent seas in 2006. In a consultative process including agencies of Arctic Council member states and other Arctic Council working groups, the [Arctic LME map was revised in 2012](#) to include 18 Arctic LMEs. This is the current map of Arctic LMEs used in the

work of the Arctic Council in developing and promoting the Ecosystem Approach to management of the Arctic marine environment.

## Joint EA Expert group

PAME established an Ecosystem Approach to Management expert group in 2011 with the participation of other Arctic Council working groups (AMAP, CAFF and SDWG). This joint Ecosystem Approach Expert Group (EA-EG) has developed a [framework for EA implementation](#) where the first step is identification of the ecosystem to be managed. Identifying the Arctic LMEs represents this first step.

This factsheet is one of 18 in a series of the Arctic LMEs.

## OVERVIEW: FAROE ISLANDS PLATEAU LME

The Faroe Islands are positioned on the ridge that stretches between Scotland and Iceland and further to Greenland. They are located in the region where Atlantic water enters the Nordic Seas, with main flows on both sides of the Faroes.

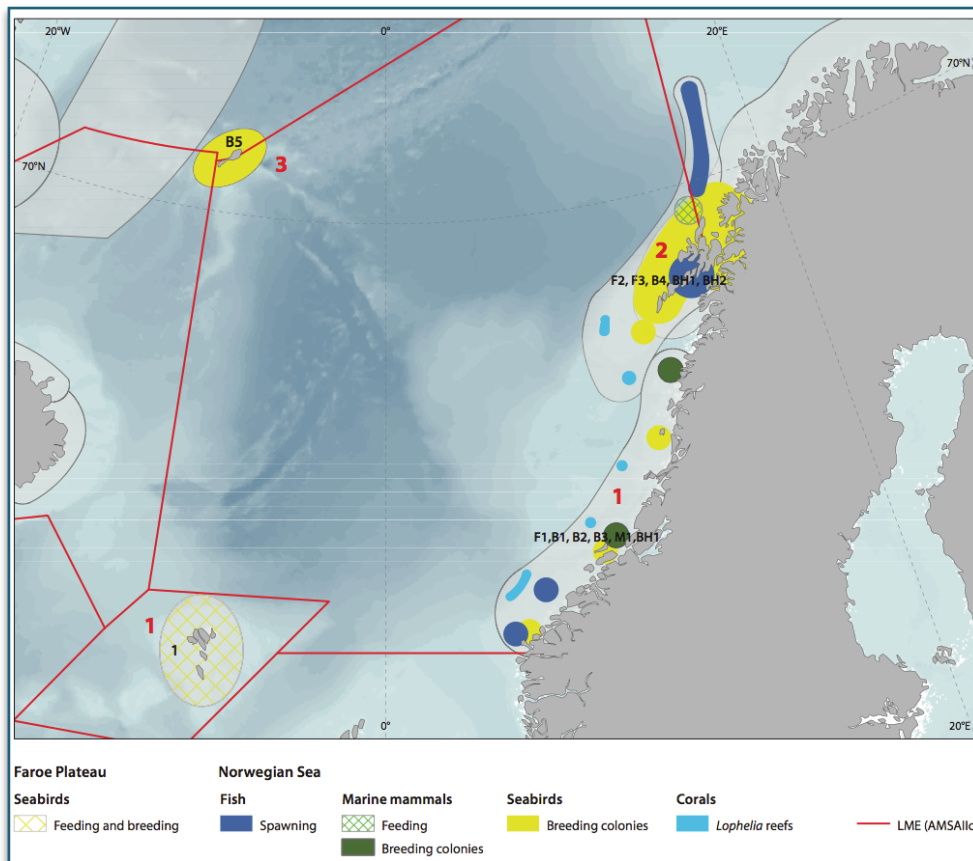
The Faroe Plateau LME consists of the shelf surrounding the Faroe Islands and the shallow Faroe Bank to the southwest separated by the Faroe Bank Channel. This is the smallest Arctic LME, being only about 0.11 million km<sup>2</sup>.

The circulation on the Faroe shelf is anticyclonic (clockwise) and a persistent tidal front separates the shelf water from the surrounding ocean.

Due to the circulation pattern with retention of the shelf water, the Faroe Plateau LME contains self-sustained populations of demersal fish, mainly cod, haddock and saith. These support the fisheries that are important to the Faroese economy. Pelagic fish species also occur and are important to the fisheries.

Sandeels are also found on the Faroe Plateau and they play an important role in the ecosystem as prey for fish and seabirds. There appears to be clear trophic relationships between plankton, fish and seabirds, with marked interannual variability driven by changes in the physical conditions.

The coasts of the Faroe Islands are predominantly rocky, with many pebble and shingle shores, some sandy beaches, but almost no areas of soft muddy sediment. Only one area can be characterised as salt-march (Hvalvík) and one as lagoon.



Map: Areas of heightened ecological significance in the Faroe Plateau LME and the Norwegian Sea LME. Source: AMSAIIIC Report

The waters around the Faroe Islands are important areas for birds that breed and visit this area. The Faroe Islands are home to about 1.7 million breeding pairs of seabirds with northern fulmar, Atlantic puffin, European storm-petrel, black-legged kittiwake and common murre as the most numerous species. There are 18 major breeding colonies, all of them of international importance.





## MARINE MAMMALS

**Harbour porpoise** and **grey seal** are the only two resident marine mammal species occurring on the Faroe Plateau. Grey seals feed in shallow waters and have haul-out sites along the shore associated with breeding and moulting. Harbour porpoise has also an inshore distribution where it occurs in higher numbers from spring to autumn.

The grey seal can be observed throughout the archipelago, but prefer to reside in exposed coastal areas, away from human settlements. Grey seals breed (and likely moult) primarily in caves, common along the Faroese coastline. They haul out together on rocky shores, mostly along the wave exposed east coasts of the islands, away from areas of human activity.

Systematic scientific investigations have not been conducted on grey seals in the Faroe Islands, but the present population level is presumably around 1,000 to 2,000 animals.

Other marine mammals use the Faroes waters as a seasonal feeding area and are distributed on the Faroe Plateau mainly from late spring to late autumn. Most notable is the **pilot whale** that feed primarily on squid. This species is caught in a traditional whaling where schools or pods of individuals are herded with small boats onto shore where they are stranded and killed. **Bottlenose dolphin** and **white-sided dolphin** are also common in Faroese waters.

The seasonal visitors include minke, fin and bottlenose whales. Other species, like hooded seal, killer whale, sei whale and white-beaked dolphin are only stragglers in the area. Except for grey seal and harbour porpoise, and occasionally white-sided dolphin, that use the shallow part of the Faroe Plateau, the other species are distributed mainly in the upwelling waters around the slope of the plateau.

Hooded seals and bearded seals are common seasonal predators on fish, but do not breed around the islands





The Faeroe Isles is home to a substantial portion of the seabirds in the Northeast Atlantic that breed in colonies on the cliffy volcanic islands. Twenty-one seabird species breed regularly, and their total number is estimated at about 1.7 million pairs. Including sub-adults, the total number of seabirds may be about 5 million within the LME.

Northern fulmar and Atlantic puffin are the most numerous breeders, followed by European storm petrel and black-legged kittiwake. The most important breeding habitats are steep west- and north-facing cliffs, grass-covered slopes, and boulder screes that hold large colonies. Many of the seabirds breed in dense, mixed colonies, and all the cliffs where common guillemots, puffins, and kittiwakes have their breeding colonies are of international importance. There are 18 such sites, with 15 of them supporting 1% or more of the world's population of several seabird species.

In addition, breeding sites for guillemot and razorbills are regarded as sensitive sites of highest priority. The sensitivity of these breeding sites are highest during the summer season, when the birds spend much time on the water, and thus are very sensitive to oil spills.

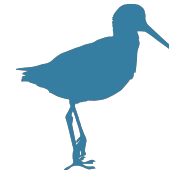
In summer the seabirds mainly feed within 60 km from land at depths less than 150 m on the Faeroe Plateau, but in the winter most of them migrate away from the islands, particularly to Norway, the North Sea, and the UK.



Common eider breeds at the Faeroe Isles with a separate and endemic subspecies faeroeensis. Faeroe eider is resident in Faroese coastal waters year-round. The breeding population is estimated to be 6,000 breeding pairs.

Red-breasted merganser breeds at the Faroes Isles with about 25 pairs. Other species of sea ducks like long-tailed duck, black scoter, common goldeneye, and goosander may occur around the Faroes as visitors or vagrants.

Greylag goose and barnacle goose occur as breeders on the Faroe Isles. Other geese occur there as visitors, including pink-footed goose, greater white-fronted goose, and brent goose. Whooper swan occurs also as a visitor, while mute swan has been introduced.



## SHOREBIRDS

Ten species of shorebirds are regular breeders on the Faroes. These are Eurasian oystercatcher, northern lapwing, Eurasian golden plover, common snipe, black-tailed godwit, whimbrel, common redshank, purple sandpiper, dunlin, and red-necked phalarope.

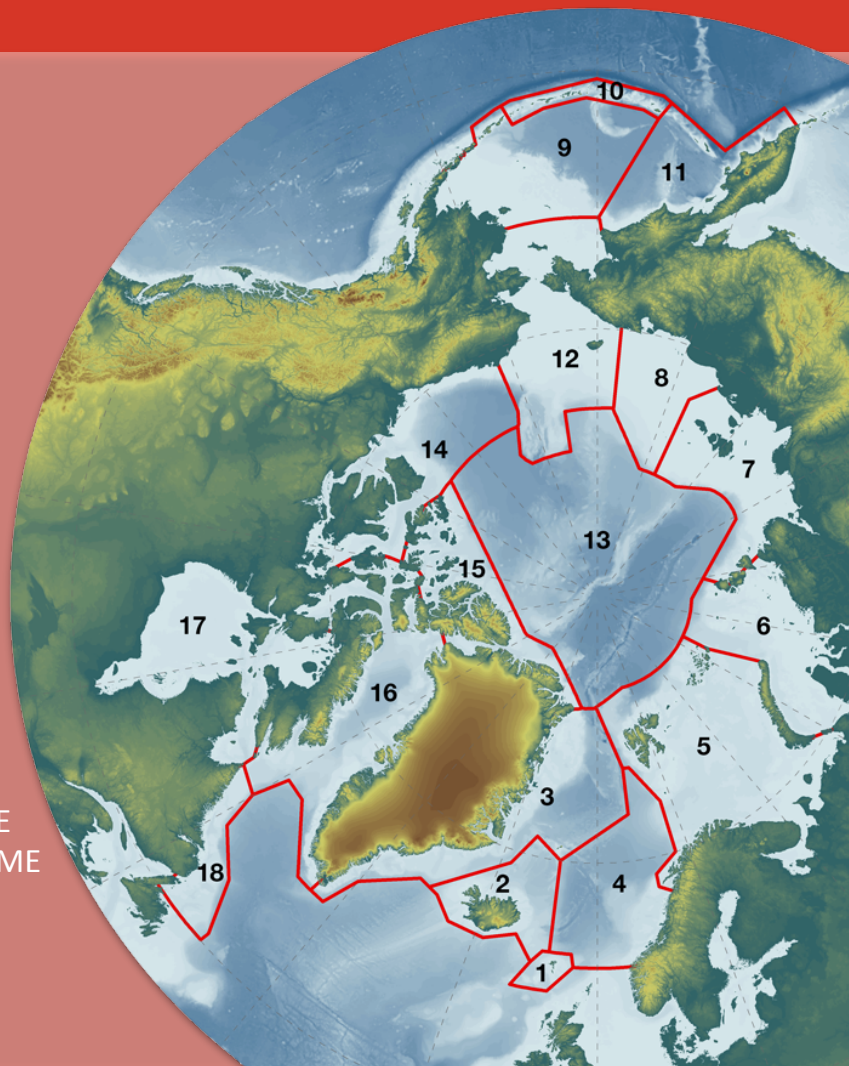
The shorebird fauna of the Faroes is very similar to that of Iceland, with most species belonging to the same subspecies and populations. Several species occur with distinct subspecies on Iceland and the Faroes: common snipe, black-tailed godwit, whimbrel, and common redshank. Due to the much larger area of habitats on Iceland, the breeders there make up the large majority of the common populations.





## ARCTIC LMEs

1. Faroe Plateu LME
2. Iceland Shelf and Sea LME
3. Greenland Sea-East Greenland LME
4. Norwegian Sea LME
5. Barents Sea LME
6. Kara Sea LME
7. Laptev Sea LME
8. East Siberian Sea LME
9. East Bering Sea LME
10. Aleutian Islands LME
11. West Bering Sea LME
12. Northern Bering-Chukchi Sea LME
13. Central Arctic Ocean LME
14. Beaufort Sea LME
15. Canadian High Arctic - North Greenland LME
16. Canadian Eastern Arctic - West Greenland LME
17. Hudson Bay Complex LME
18. Labrador-Newfoundland LME



## LITERATURE REFERENCES

- *The 2007 assessment of Oil and Gas in the Arctic (OGA) - AMAP (2007)*
- *Arctic Marine Areas of Heightened Ecological and Cultural Significance: Arctic Marine Shipping Assessment (AMSA) IIC - AMAP/CAFF/SDWG (2013)*
- *Large Marine Ecosystems (LMEs) of the Arctic area Revision of the Arctic LME map - PAME (2013)*

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