

Offshore oil and gas – vulnerability and potential effects/impacts

Hein Rune Skjoldal
Institute of Marine Research, Norway
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Assessment of Oil and Gas Activities in the Arctic

- Chapter 1 Introduction
- Chapter 2 Oil and gas activities
- Chapter 3 Social and economic effects
- Chapter 4 Sources, inputs and concentrations
- Chapter 5 Effects on biota and human health
- Chapter 6 Status and vulnerability of ecosystems
- Chapter 7 Conclusions and recommendations
- www.amap.no

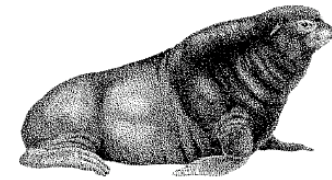
Three main messages ("Commandments")

1. Do not spill oil in ice
2. Use best practices
3. Do not pollute



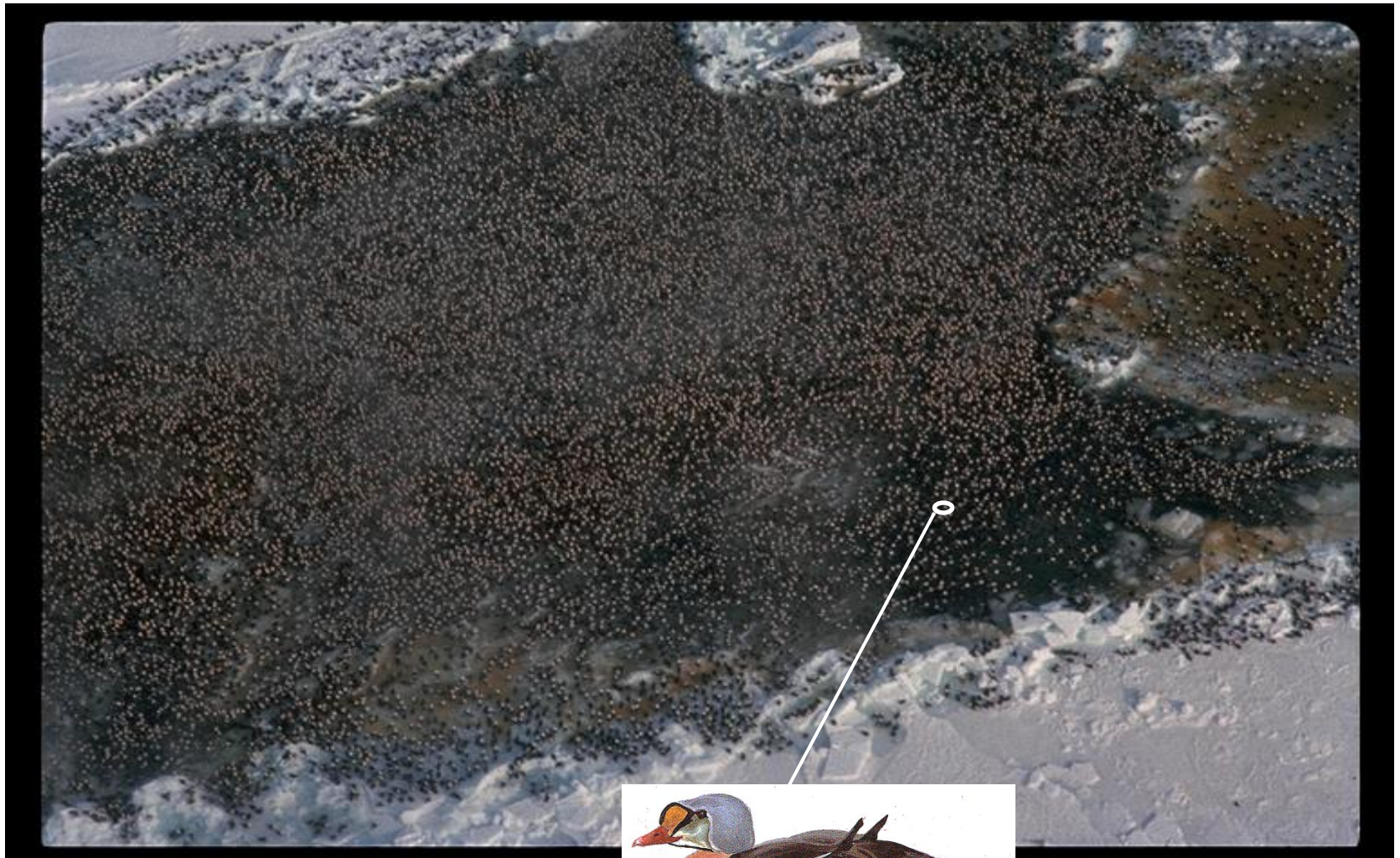
Feathers and fur

- Seabirds
 - Colonies
 - Feeding in leads and polynyas
 - Molting areas (auks and seaducks)
- Waders and waterfowl
- Polar bear, sea otter, northern fur seal
- Seal pups



Northern Fur Seal *Callorhinus ursinus* 1.4-2.1 m

25,000-30,000 kongeederfugle



Oil spills in ice

- Animal aggregations
- Even a small spill could potentially affect many individuals
- Small cod-fishes – sensitive components – spawns under ice in winter
- Potentially large ecological impacts

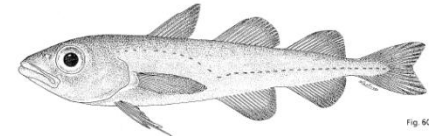
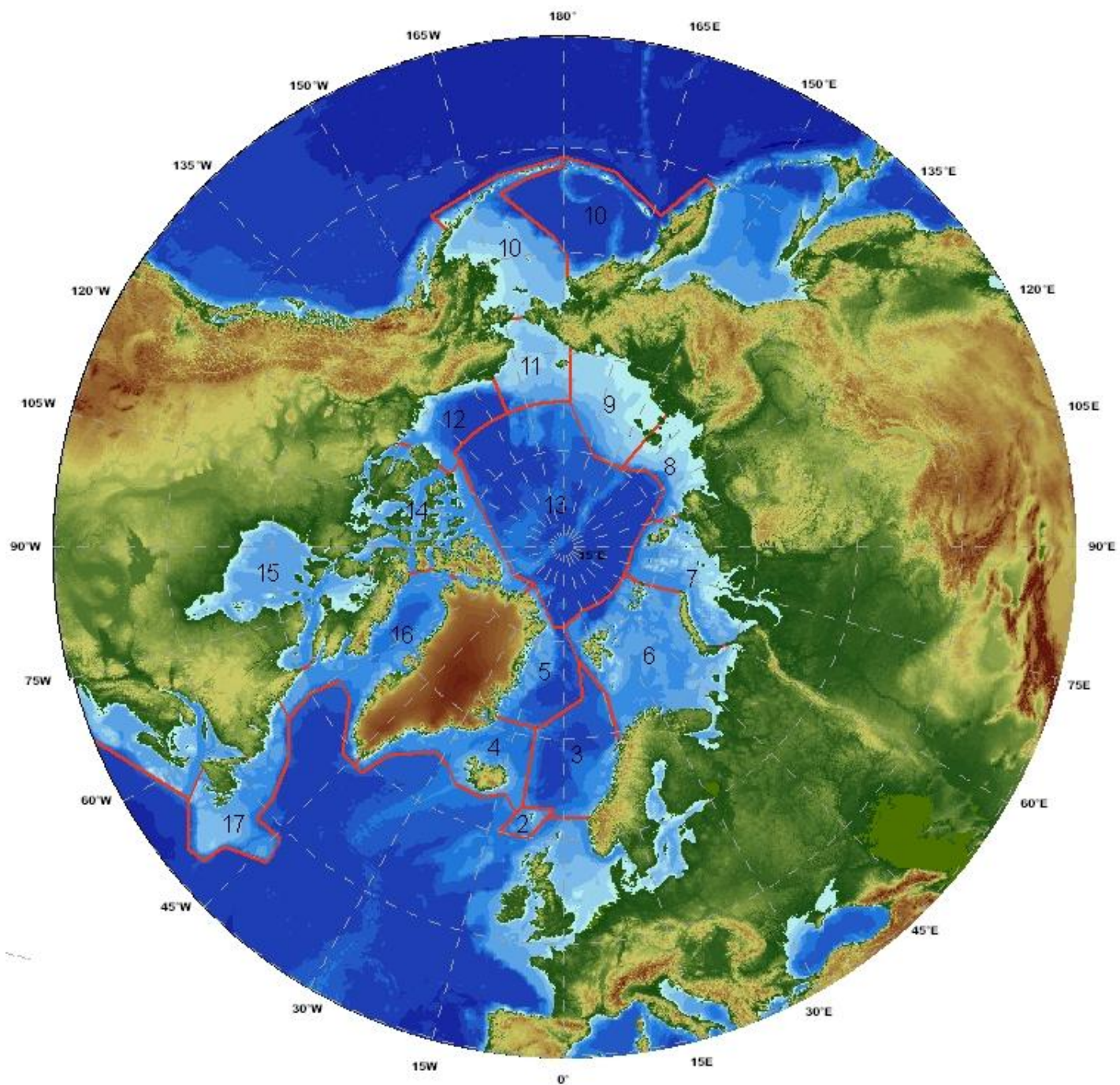
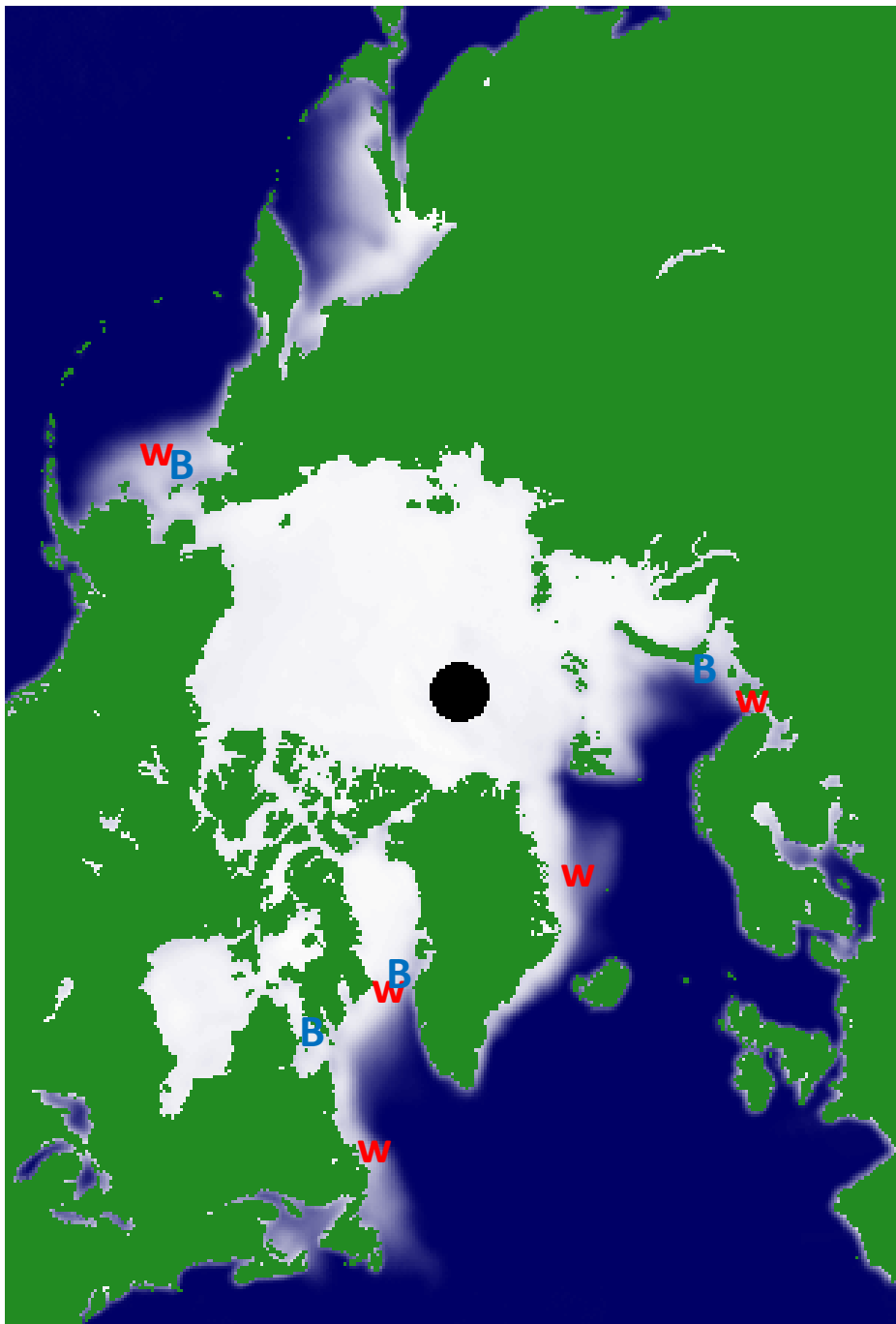


Fig. 50





W - Whelping
area seals

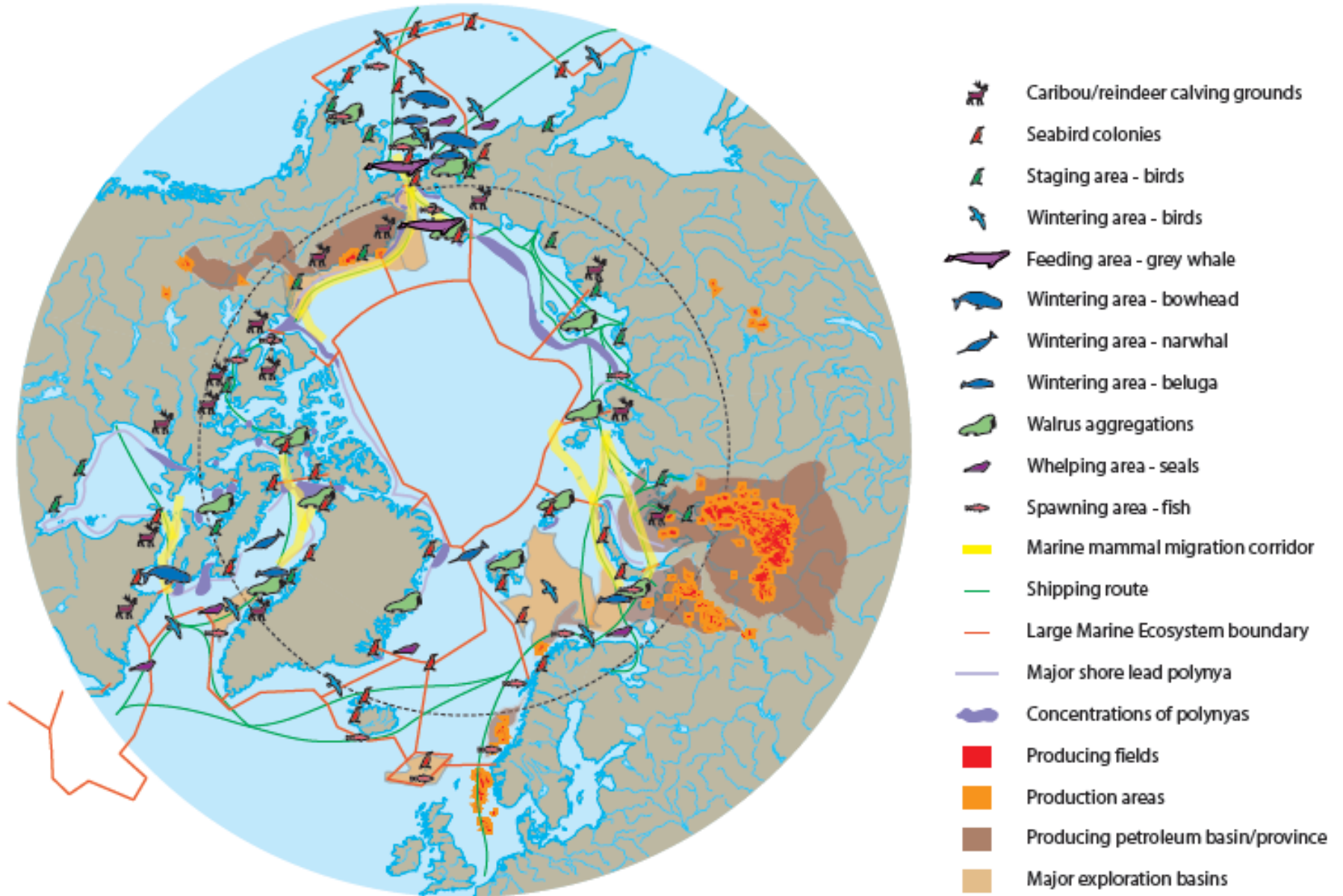


Harp Seal *Phoca groenlandica* 1.6-1.7 m

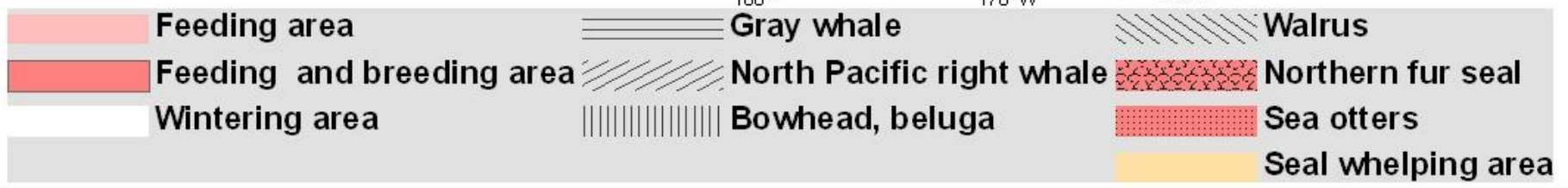
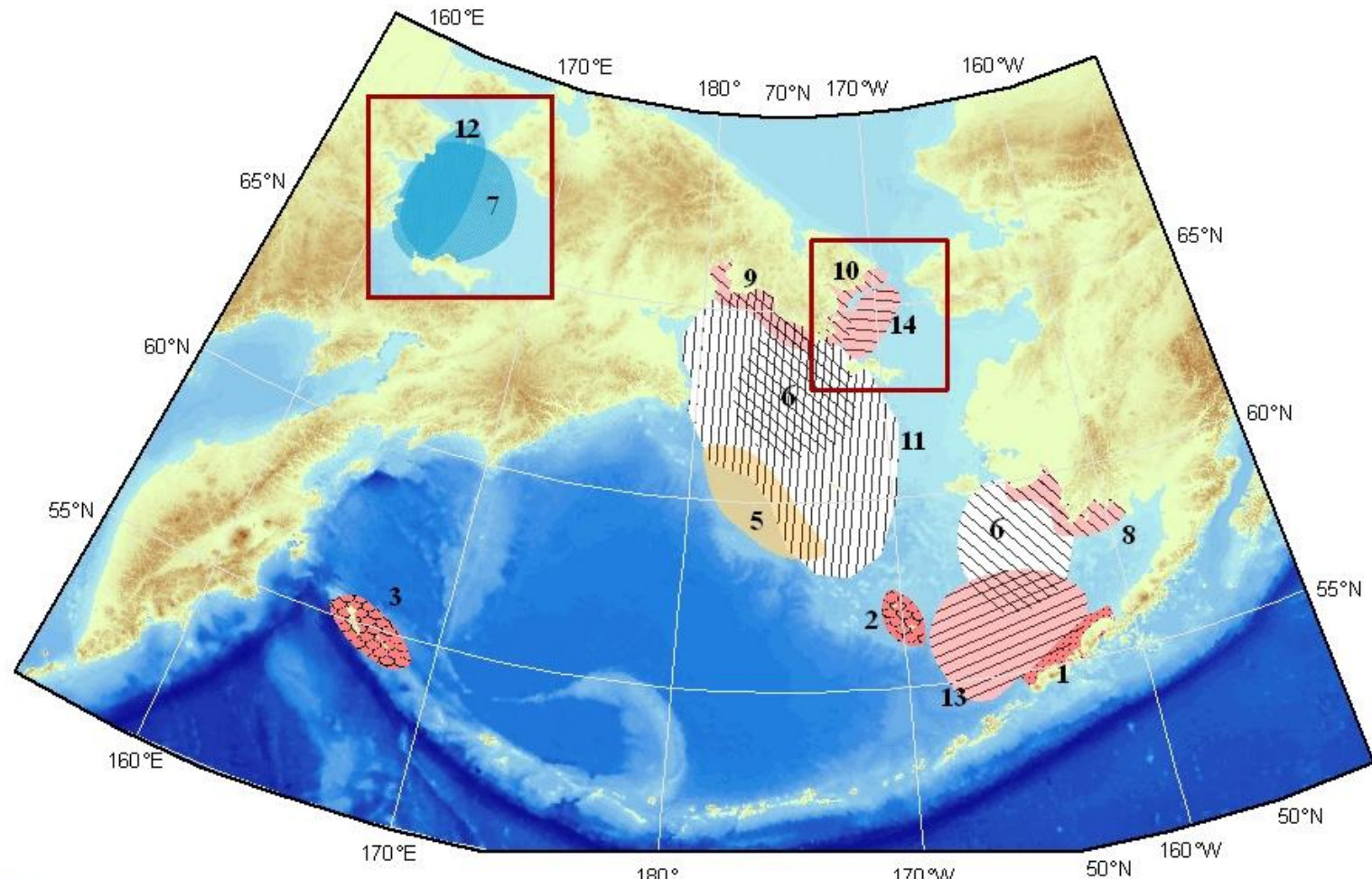
B – Wintering
area Bowhead
and/or beluga



Illustrative circumpolar vulnerability map



Vulnerable areas Bering Sea LME



Vulnerable areas Bering Sea LME

