Description of Arctic species and Arctic LMEs – integrating information on species and habitats

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Criteria:
- Bathymetry
- Oceanography
- Productivity
- Trophic linkages

18 Arctic Large Marine Ecosystems - LMEs
Number of species in the Arctic

- 35 marine mammals – 21 whales, 11 pinnipeds, polar bear, sea otter
- Ca 200 birds – seabirds, waterfowl, shorebirds
- Ca 750 fishes
- Several thousand benthos species
- 100s-1000s plankton species
Subspecies and populations

• Different forms or races of a species – species are not homogenous but have considerable variation, sometimes structured geographically into subspecies

• Examples:
  • Ringed seal
    • Arctic subspecies
    • Baltic Sea, Sea of Okhotsk, Lake Ladoga, Lake Saimaa
  • Polar bear – 19 subpopulations
  • Brown bear and wolf – 20-30 subspecies each, some made extinct
Bowhead whale
* Okhotsk Sea
* Bering-Chukchi-Beaufort stock
* Eastern Canada-West Greenland
* Spitsbergen
Walrus
Atlantic – ca 8 stocks
Pacific
Laptev
Narwhal
AMSA IIC - Types and use of areas

**Fish**
- Spawning
- Nursery
- Wintering

**Birds**
- Spring staging
- Breeding
- Feeding
- Moulting

**Marine mammals**
- Fall staging
- Wintering
- Migration
- Breeding
- Feeding
- Resting
- Wintering
Description of Arctic species and LMEs

- H.R. Skjoldal et al.
- Descriptions of Arctic marine species and ecosystems – baseline information for assessments of impacts of climate change and human activities. Arctic Monitoring and Assessment Programme (AMAP) and Institute of Marine Research, Norway.

- Part I – General, pan-Arctic
  - Chapters on Oceanography, plankton, benthos, fish, birds, mammals

- Part II – Arctic LMEs
  - Sections on geography/topography, oceanography, plankton, benthos, fish, birds, mammals

- All species of mammals and birds, most species of fish, main species of benthos and plankton