

PAME II-2019 Reykjavik

Agenda item 8 – Ecosystem Approach to
Management

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Agenda

1. 2nd International EA Conference, Bergen, June 2019 (Agenda 8.1 a)
2. 7th EA workshop in 2020 (Agenda 8.1 b)
3. Report on Ecological Objectives (Agenda 8.1 c)
4. Integrated Ecosystem Assessment of the Central Arctic Ocean (Joint WGICA) (Agenda 8.2)
5. Other EA-relevant activities (Agenda 8.1 d)

Two documents

1. Annotations to the EA agenda point 8
2. Report from the Bergen Conference

EA-EG – Brief history

- Established **2007**, joint group in 2011
- **6 workshops** 2011-2018
- Two international conferences – 2016 and 2019
- 18 Arctic **LMEs**
- **EA framework** with 6 elements
- EA **guidelines** – Rovaniemi May 2019
- Report ‘Status of EA implementation in the Arctic’ 2017
- Report ‘EA guidelines’ 2019

7th EA workshop on 'values and valuation'

- Work plan item: Convening of the 7th EA Workshop in 2020 with a focus on element No. 5 of the EA framework: Value the cultural, social, and economic goods and services produced by the ecosystems
- Draft workshop prospectus
- Venue and time are to be decided
- Late spring or autumn 2020, up north?
- Agreement by PAME on objectives and scope of workshop
- Planning group to develop workshop program

Element 'Value ecosystem goods and services'

- 'Taking the **full economic picture** of human developments into account, including the downside in the form of **costs associated with environmental degradation and loss of biodiversity**, is an important part of what has been called 'greening of the economy'. On the other hand, there are **spiritual (religious) and cultural values** that perhaps should not be equated with money, but which nevertheless need to be brought into the 'equation' when options for future development are considered.'
- 'The **basic value systems** may differ substantially between Indigenous Peoples and 'western' societies, which needs to be recognized up front.'
- EA guidelines – '**scoping study** on Arctic ecosystem services and values using the Economics of Ecosystems and Biodiversity (**TEEB**) approach and methodology' (CAFF, UNEP, WWF).

7th EA workshop - Objectives

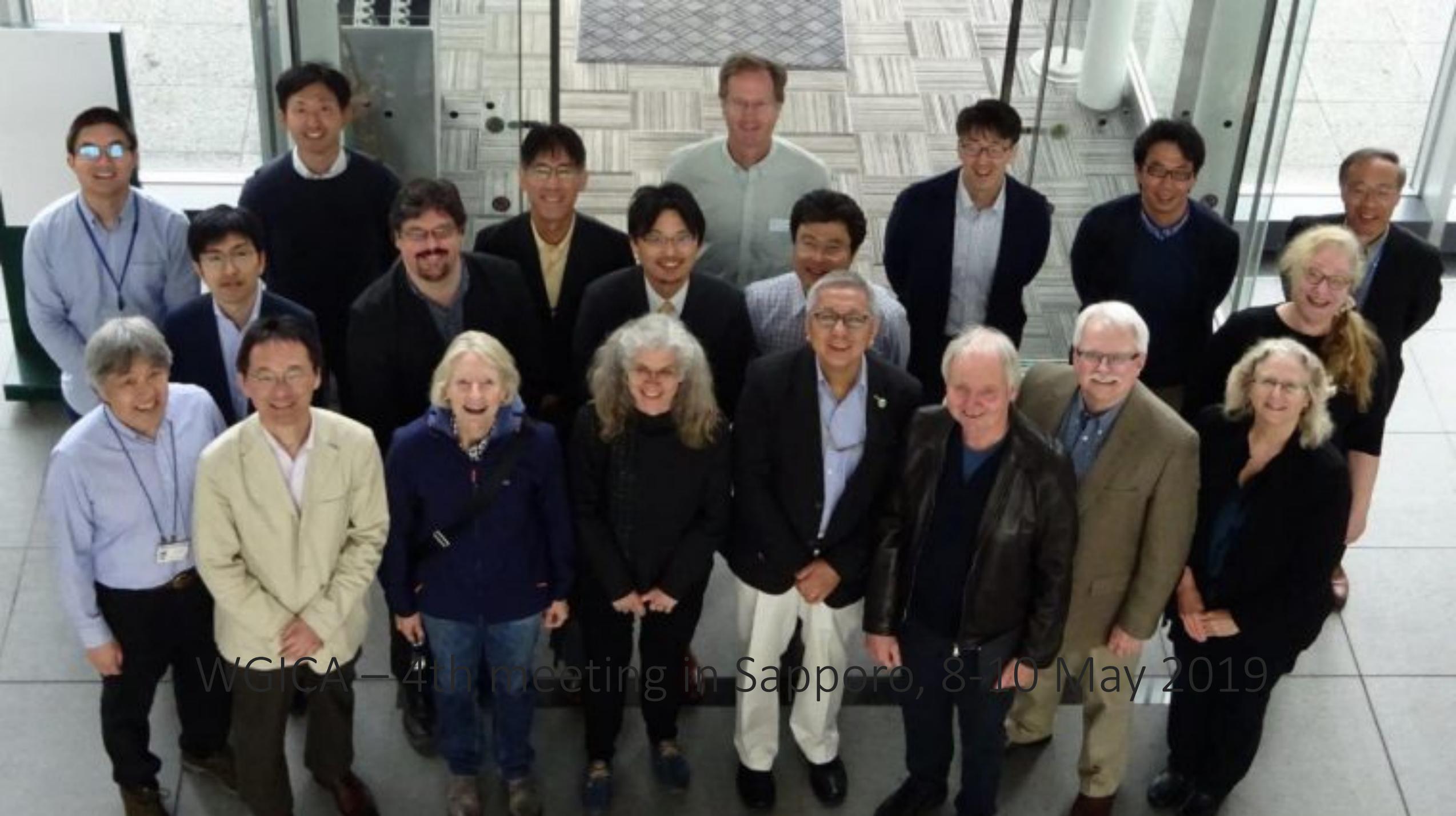
- Explore the **relation** between the fundament of **cultural and social values** and the **issue of valuation** of ecosystem goods and services.
- Consider the compatibility and approaches to deal with **monetary** and **other, non-monetary values** (e.g. cultural and spiritual).
- Identify **next steps** for work on the element of valuation in the Ecosystem Approach framework.

Report on ecological objectives

- Ecological objectives vs Ecological Quality Objectives (EcoQOs)
- Status report on setting ecological objectives was on the 2015-2017 work plan. Topic of 5th EA workshop in Bergen. Report was dropped because of 'conceptual difficulties'.
- Brought back on the 2019-2021 work plan: 'Report on development in defining or setting Ecological Objectives'
- Planning phase – two main parts of report
 - Concepts and terminology
 - Experiences (e.g. EU MSFD)
- EA co-leads produce an extended outline by 1 December
- Nomination of experts by PAME delegates and others by 20 December

WGICA – Joint working group on CAO

- ICES/PICES/PAME Working Group on Integrated Ecosystem Assessment of the Central Arctic Ocean – WGICA
- 2015 – Scoping workshop, Bergen 2015
- 2016-2018 – First 3-year period of work with 3 meetings of WGICA (Copenhagen, Seattle, St. John's)
- Report – 'Integrated Ecosystem Assessment of the Central Arctic Ocean: Ecosystem description and vulnerability characterization'
- Final stages of preparation and review
- ICES Cooperative Research Report, including peer review and technical editing



WGICA – 4th meeting in Sapporo, 8-10 May 2019

New Terms of Reference (ToRs) for 2019-2021

- Review and consider **approaches and methodologies** for conducting an IEA of the CAO ecosystem.
- Review and report on **ongoing and recent changes and events** in the CAO ecosystem associated with changes such as in sea ice, oceanographic circulation, and hydrographic properties.
- Continue to examine **effects of climate change on the CAO ecosystem** by compiling and reviewing information on changes in response to the ongoing '**Great melt**', and assess likely consequences to the CAO ecosystem of projected future changes associated with further loss of sea ice and other climate-related changes (i.e. a climate impact assessment).
- Assess the consequences of recent and ongoing climatic and oceanographic changes on **transport pathways** (physical and biological) and potential **effects of contaminants** in the CAO ecosystem.

New ToRs cont'd

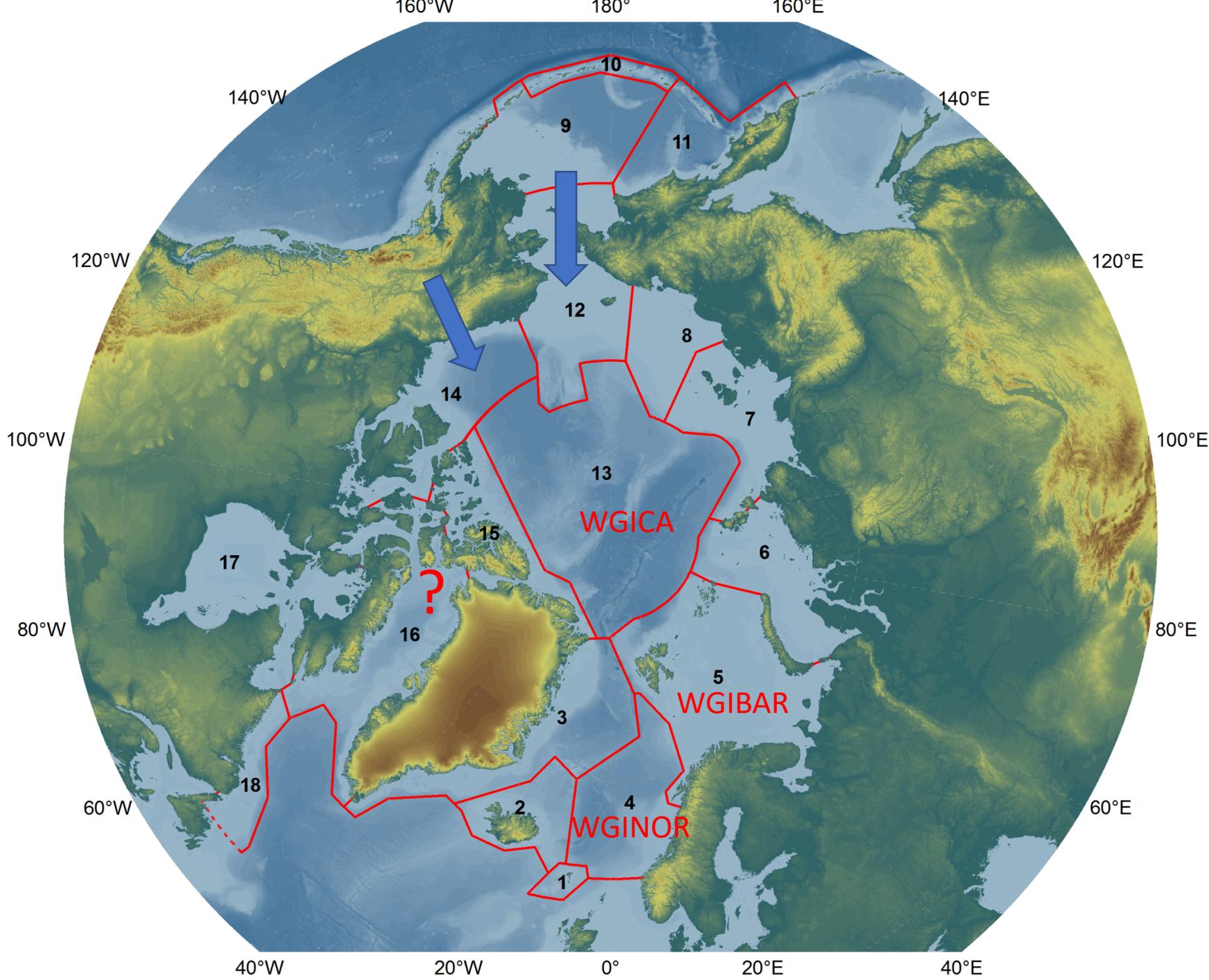
- Review and report on **new studies on fish** as well as other biological components of the CAO ecosystem.
- Continue to identify **priority research needs** and monitor how identified knowledge gaps (needed to improve IEA and management effectiveness) are being addressed and filled.
- Prepare an **Ecosystem Overview** for the CAO ecosystem.

2nd IEA report for the CAO

- 2019-2021
- First report – Ecosystem description and vulnerability characterization
- Second report – more emphasis on impacts of human activities
 - Climate change
 - Pollution
 - Shipping
 - Fisheries

Other EA items – agenda 8.1 d

- PICES-2019 Annual Meeting, Victoria BC, Canada, 16-27 October
- Workshop 17 – **Scoping an IEA of the Northern Bering-Chukchi Seas LME.**
- Convenors: Libby Logerwell, Kirstin Holsman, Raychelle Daniel, and Yutaka Watanuki
- Workshop 7 – PICES contribution to Central Arctic Ocean (CAO) ecosystem assessment
- Invited speaker: Elena Eriksen, co-chair of ICES WGIBAR



Criteria:
Bathymetry
Oceanography
Productivity
Trophic linkages

18 Arctic
Large Marine
Ecosystems -
LMEs

Arctic Oil and Gas 2007



Arctic Council
**Arctic Marine Shipping
Assessment 2009 Report**



AMAP

ASSESSMENT 2007

*Oil and Gas Activities in the Arctic –
Effects and Potential Effects*

Volume One

1



Identification of
Arctic marine areas of
heightened ecological
and cultural significance:

Arctic Marine Shipping
Assessment (AMSA) IIc



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



“Our future is now”
Fred Phillip