

ICES/PICES/PAME Working Group on Integrated Ecosystem Assessment for the Central Arctic Ocean (WGICA)

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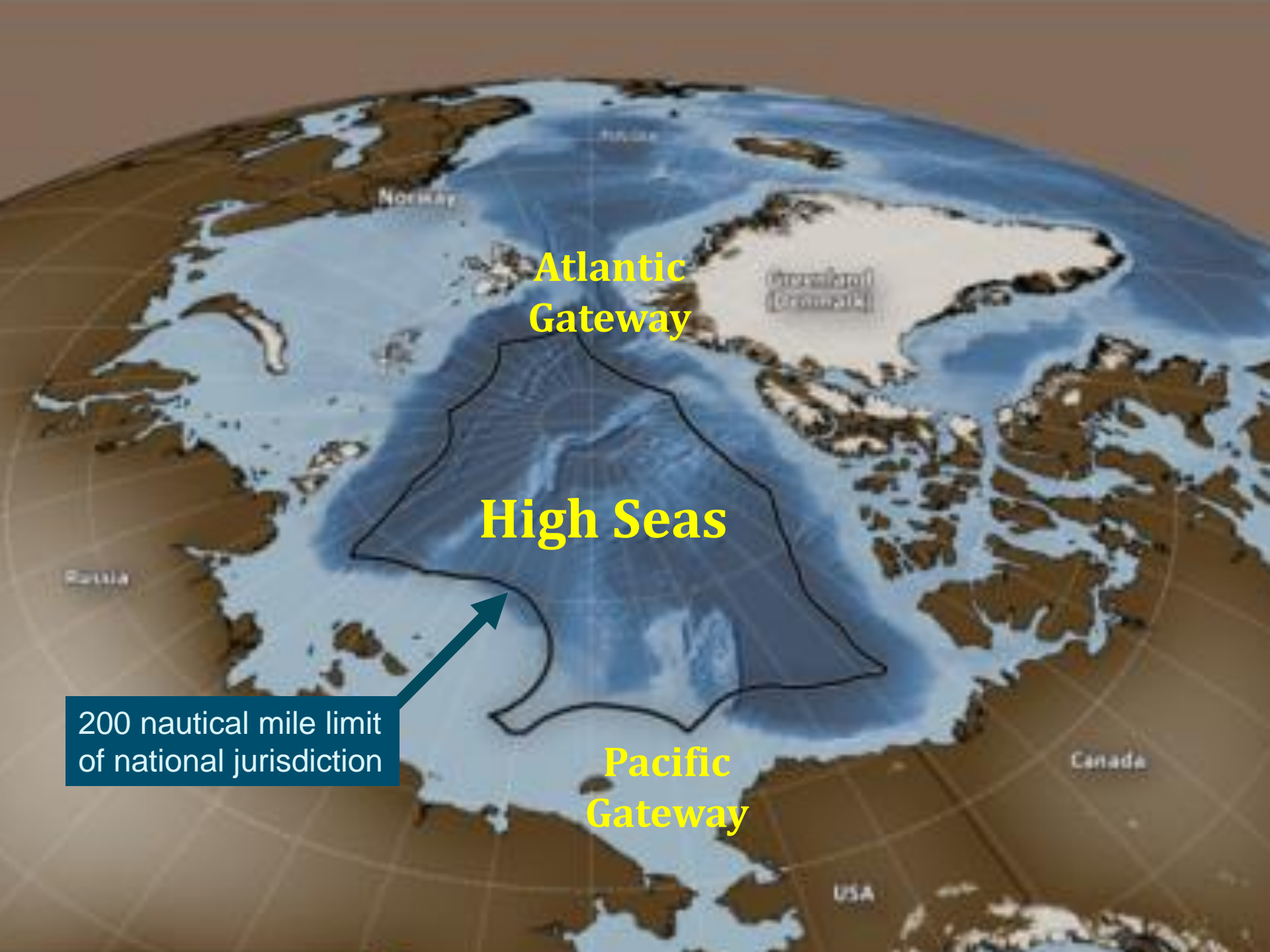
WGICA



First meeting: May 2016, Copenhagen

Second meeting: April 2017, Seattle

Third meeting: April 2018, St. John's, Newfoundland



Atlantic Gateway

High Seas

Pacific Gateway

200 nautical mile limit of national jurisdiction

WGICA Terms of Reference

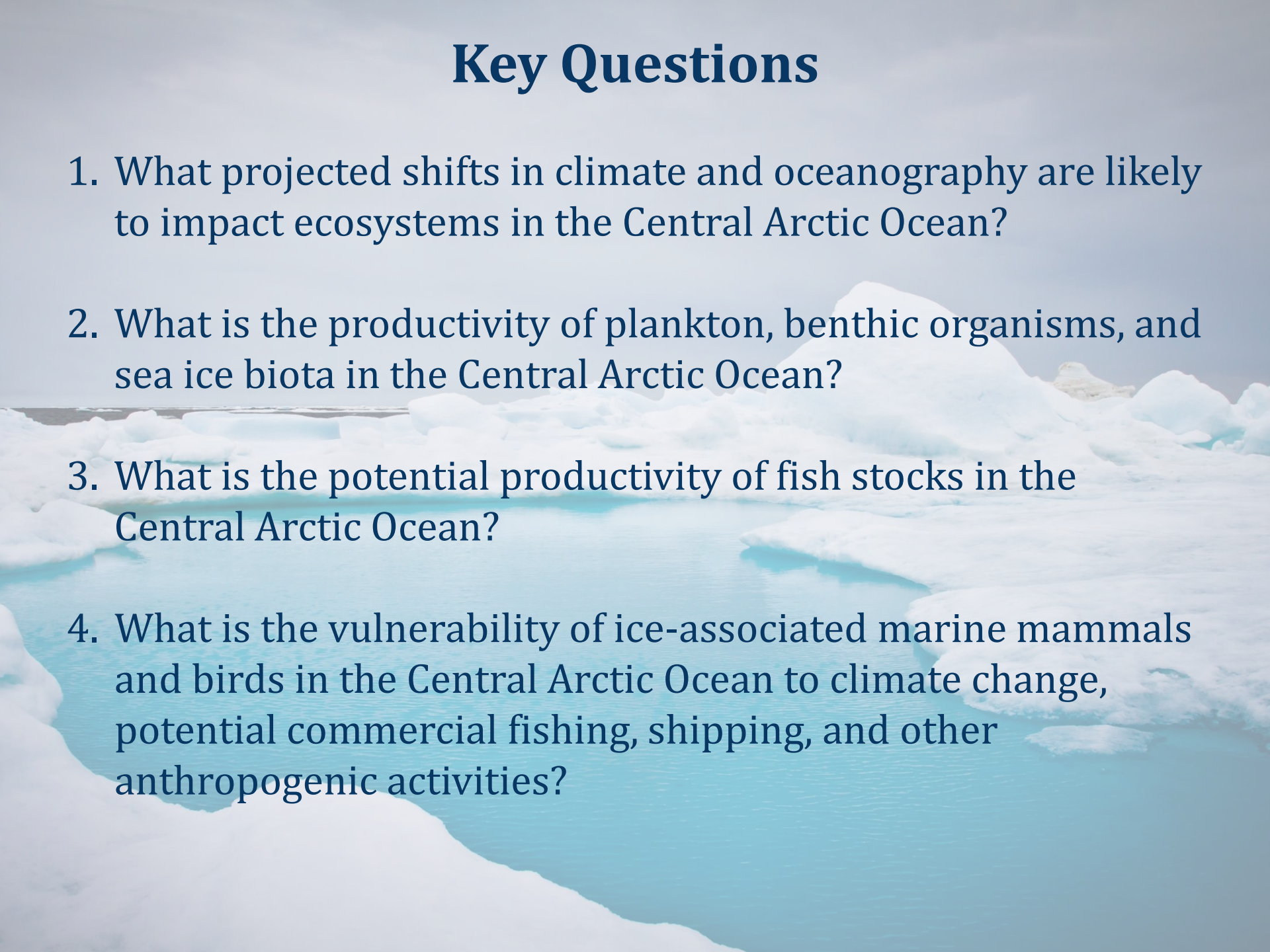
- Clarify **approach and methodology** for doing an IEA
- **Assemble data and information**, carry out appropriate analyses
- **Prepare an IEA** for the current status of the CAO ecosystem
- Requirements and design of future **research and monitoring**
- Identify **priority research issues**

Ecosystem Approach Framework (PAME)

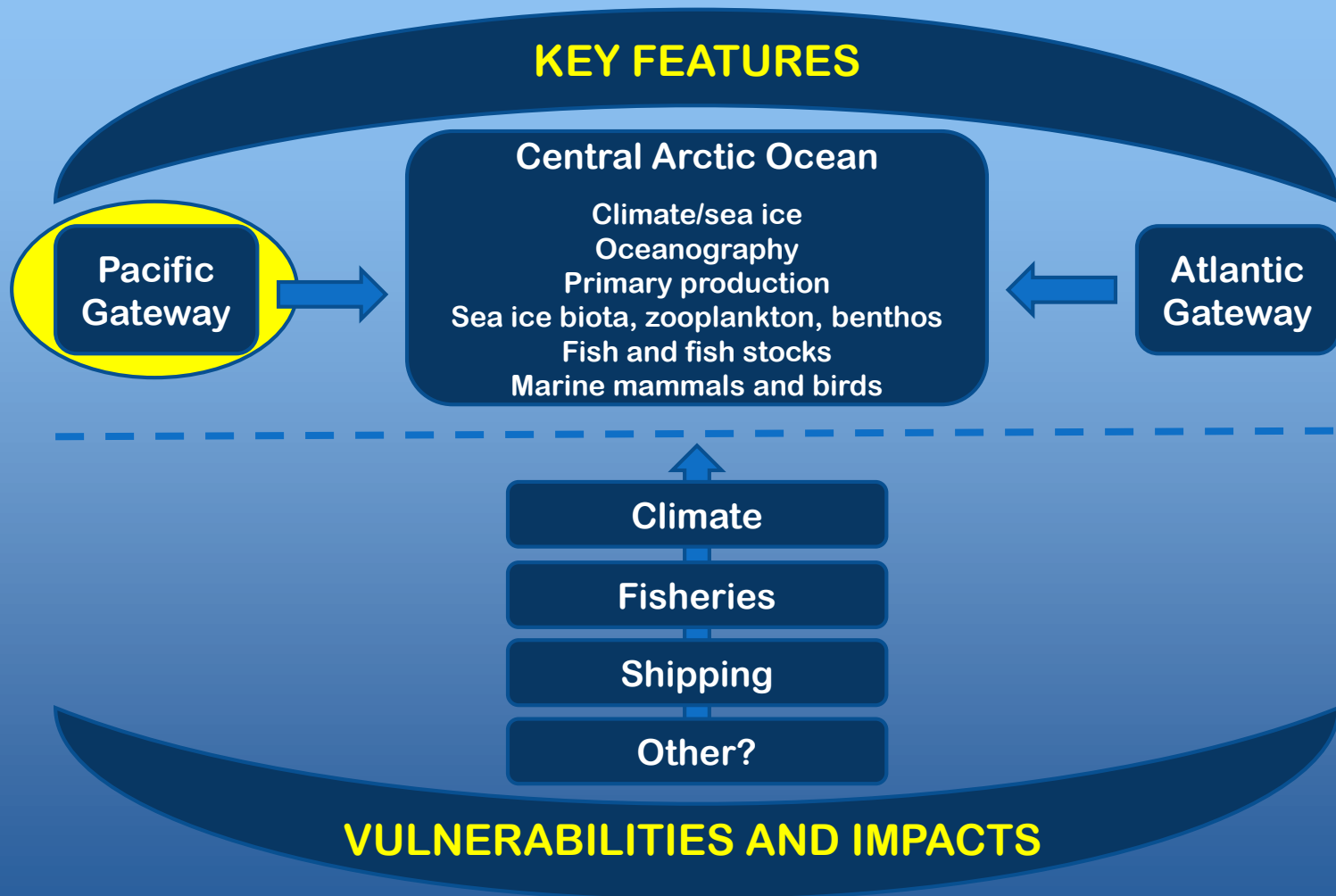
- **Define** the ecosystem
- **Describe** the ecosystem
- **Set** ecological objectives
- **Assess** the ecosystem (IEA)
- **Value** the ecosystem
- **Manage** human activities



Key Questions

1. What projected shifts in climate and oceanography are likely to impact ecosystems in the Central Arctic Ocean?
 2. What is the productivity of plankton, benthic organisms, and sea ice biota in the Central Arctic Ocean?
 3. What is the potential productivity of fish stocks in the Central Arctic Ocean?
 4. What is the vulnerability of ice-associated marine mammals and birds in the Central Arctic Ocean to climate change, potential commercial fishing, shipping, and other anthropogenic activities?
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CAO Integrated Ecosystem Assessment



Outline of Central Arctic Ocean IEA

1. Overview of the CAO

- a. CAO key features
- b. Pacific Gateway
- c. Atlantic Gateway

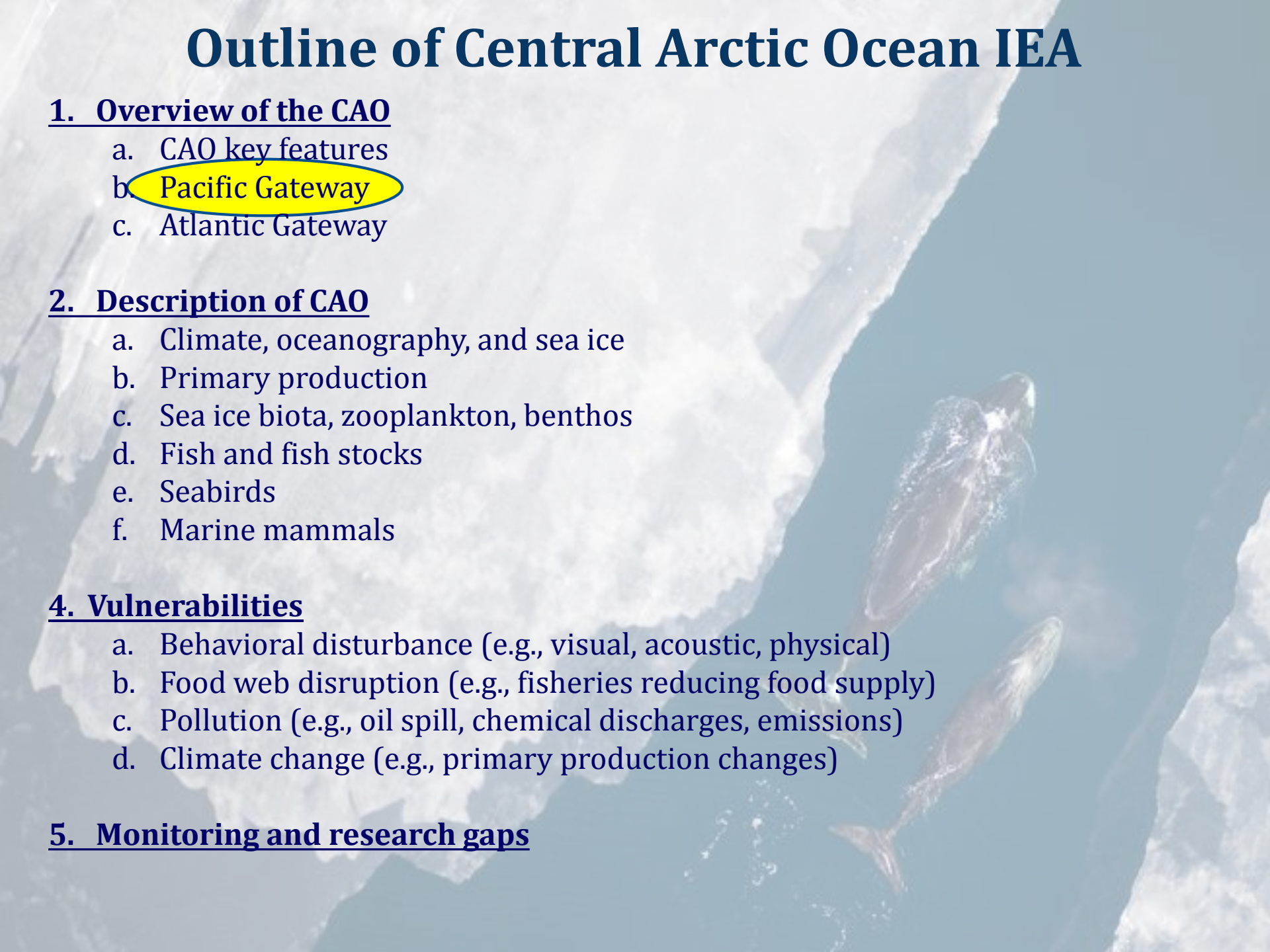
2. Description of CAO

- a. Climate, oceanography, and sea ice
- b. Primary production
- c. Sea ice biota, zooplankton, benthos
- d. Fish and fish stocks
- e. Seabirds
- f. Marine mammals

4. Vulnerabilities

- a. Behavioral disturbance (e.g., visual, acoustic, physical)
- b. Food web disruption (e.g., fisheries reducing food supply)
- c. Pollution (e.g., oil spill, chemical discharges, emissions)
- d. Climate change (e.g., primary production changes)

5. Monitoring and research gaps



Next Steps

An aerial photograph showing a dark, open water area with several fish swimming. The water is surrounded by large, white, jagged ice floes. The fish are scattered across the dark water, some appearing as bright spots against the dark background.

Finalize IEA initial draft text
(October 2018)

Complete IEA final draft
(December 2018)



Thank you