

Rising to the Arctic Challenge

Coordinating for Arctic Conservation

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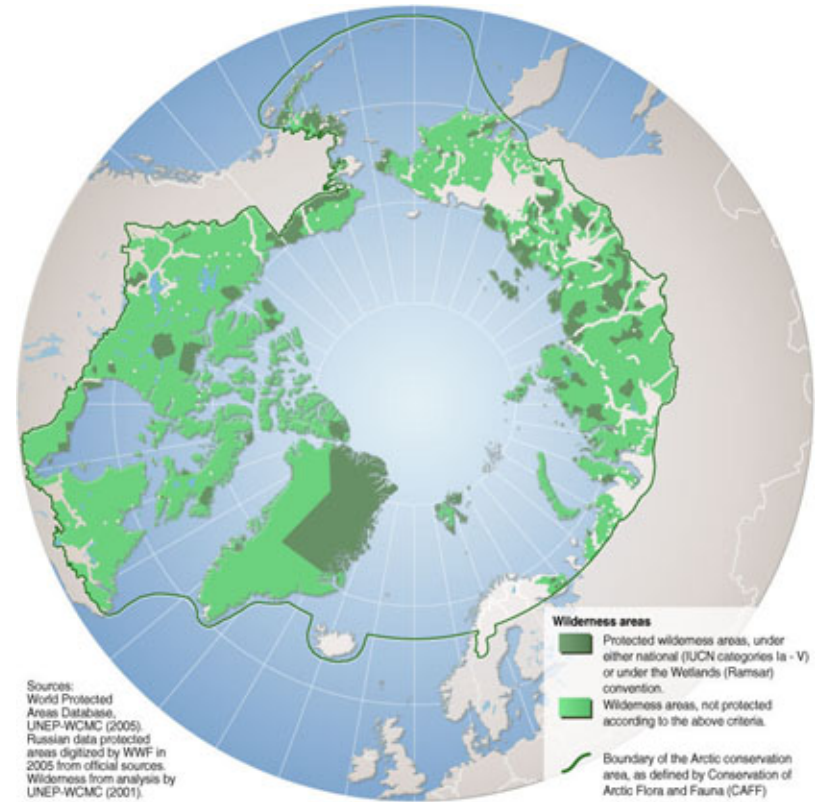
Outline

- The Arctic's Challenge
- Meeting the Challenge: A Coordinated, Circumpolar Approach



Why is the Arctic Important?

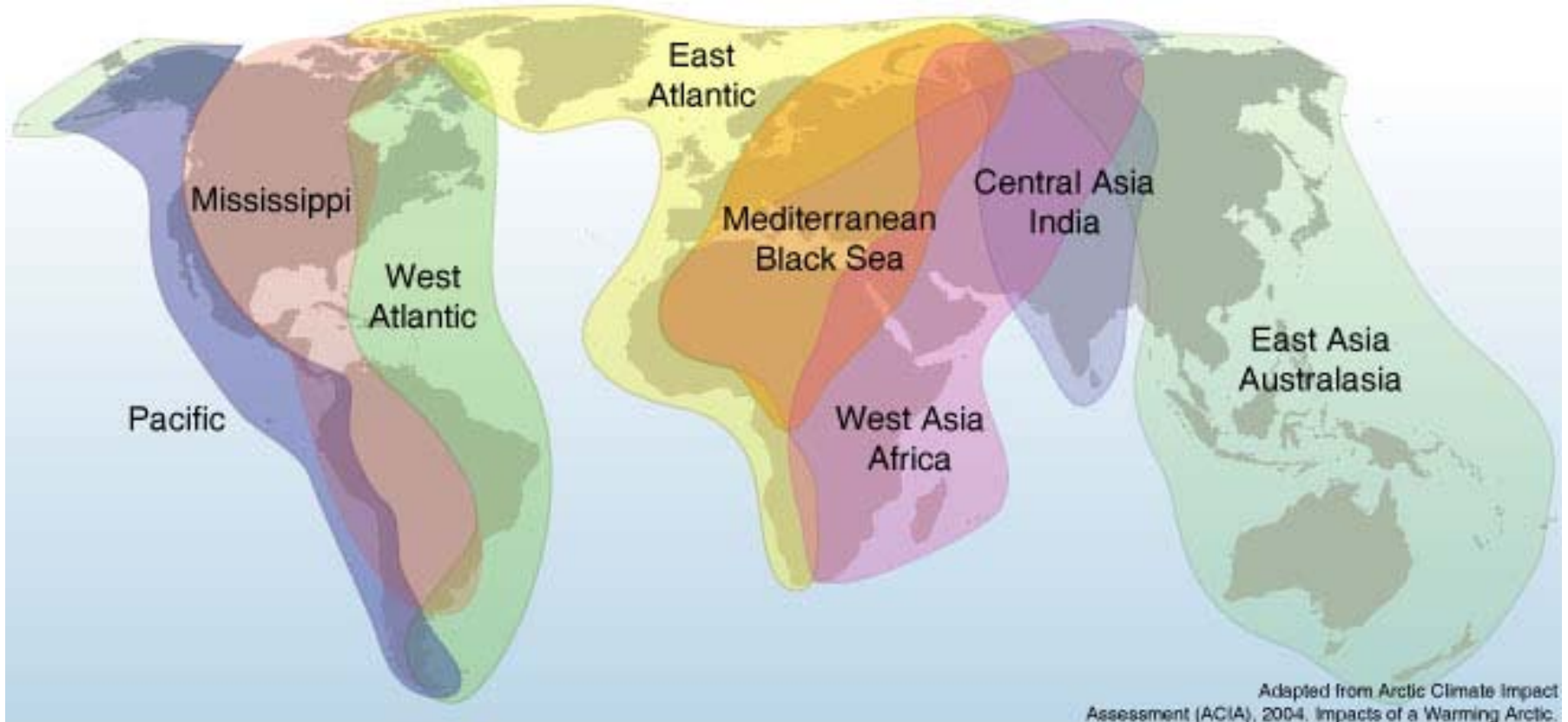
- Regulates Earth's physical, chemical and biological balance
- Vast wilderness areas, some of it protected
- Unique biological diversity
- Largest freshwater resources (with Antarctic)
- Unique and diverse indigenous cultures



———— CAFF Designated Area



Global Connections: Bird Migration Routes to the Arctic



Artist: Hugo Ahlenius, UNEP/GRID-Arendal



Arctic Supports Globally Significant Populations

- Several million reindeer and caribou
- Over 50% of world's shorebird species
- 80% of global goose population
- 28% of world's commercial fish harvest



Walrus.
Photo: Associated press



Peary Caribou.
Photo: Jim Brandenburg



Greenland Shark
Photo: Nick Caloyianis



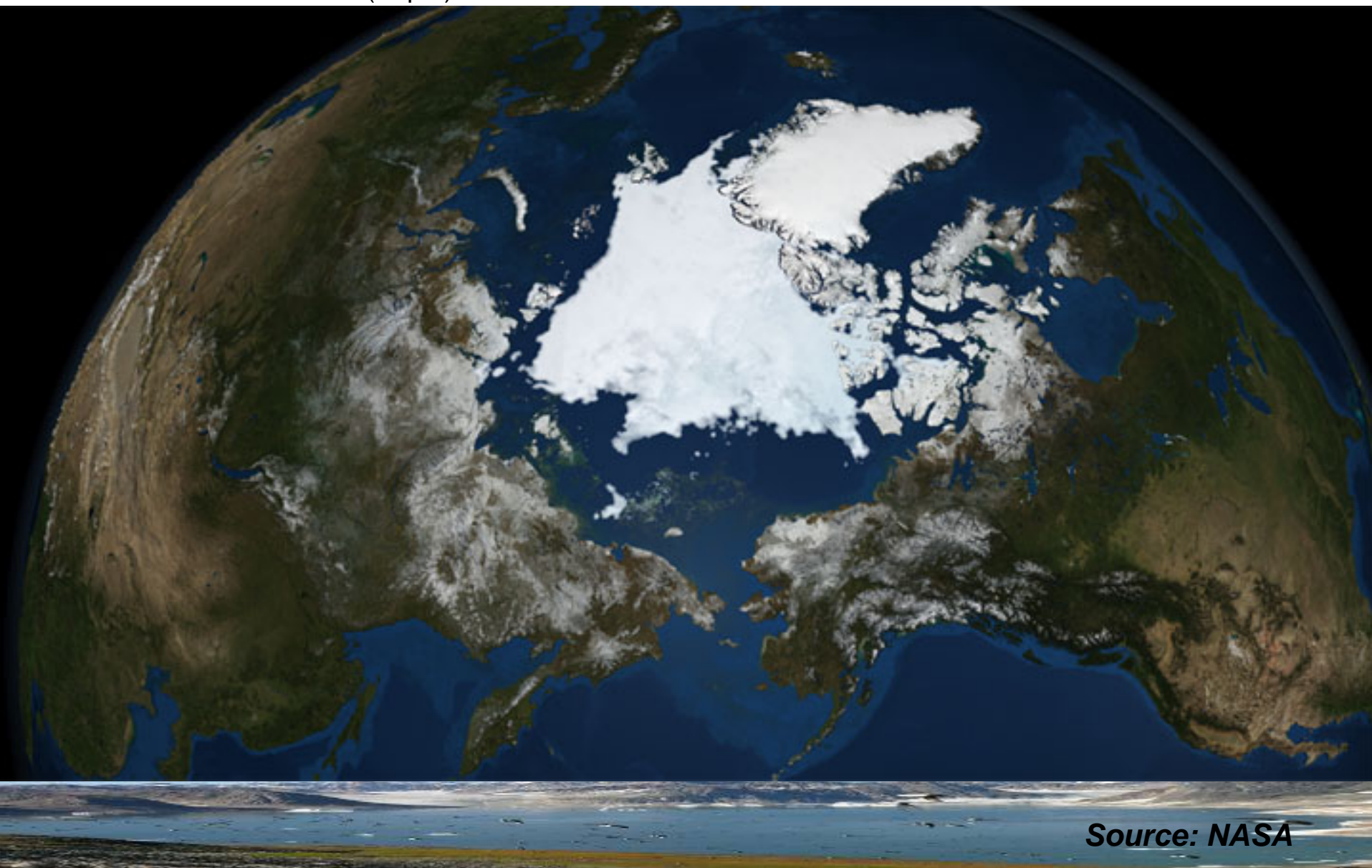
Arctic is under increasing pressure

- **Climate Change**
- **Contaminants**
- **Invasive species**
- **Increasing shipping/air traffic**
- **Oil and Gas exploration**
- **Elevated UV exposure**
- **... and others**



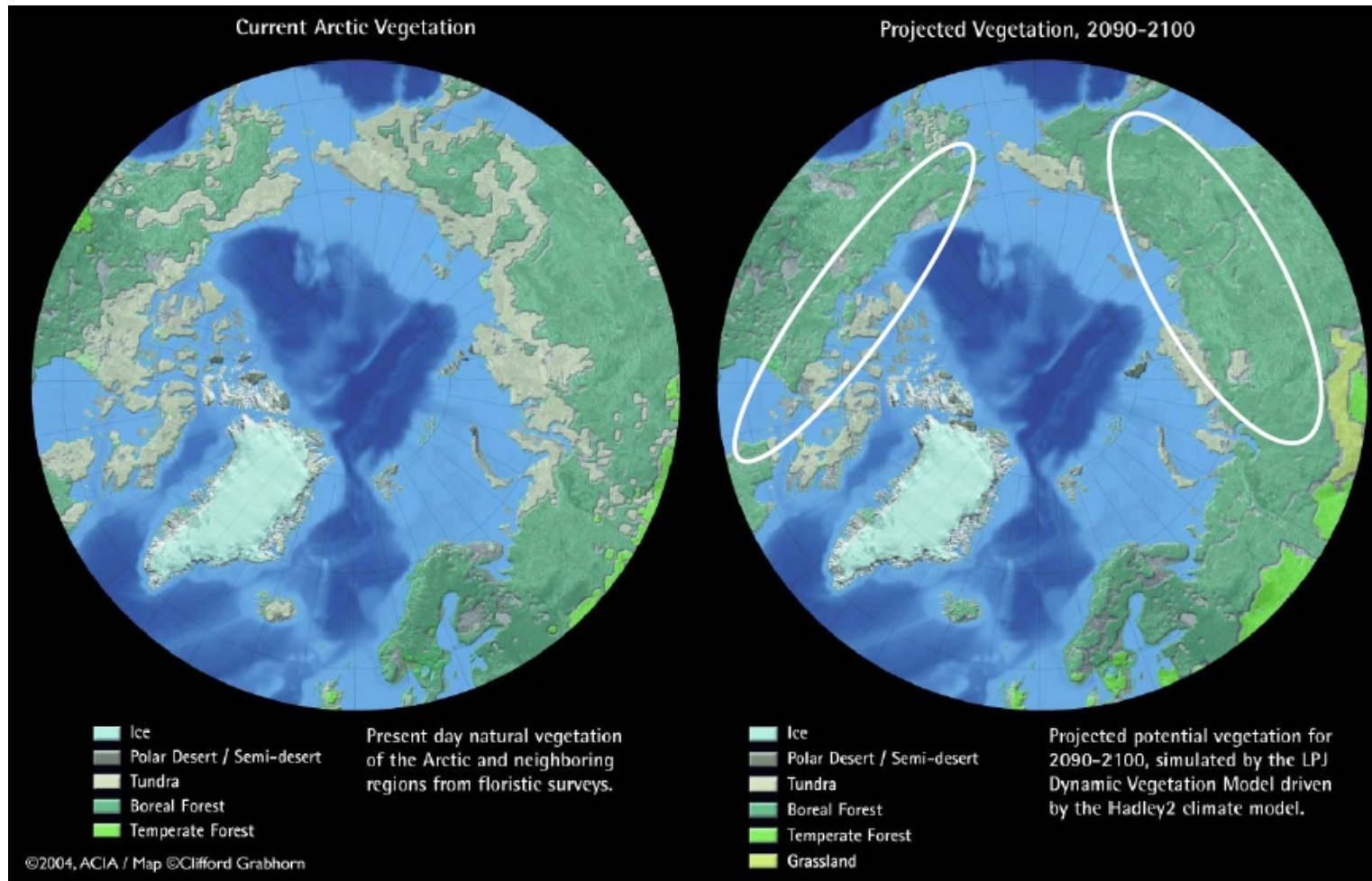
CIRCUMPOLAR BIODIVERSITY MONITORING PROGRAM

Minimum sea ice extent 2008 (Sep 9)



Source: NASA

Shift from High Arctic to Low Arctic Ecosystems



Complex Picture

In much of the Arctic the:

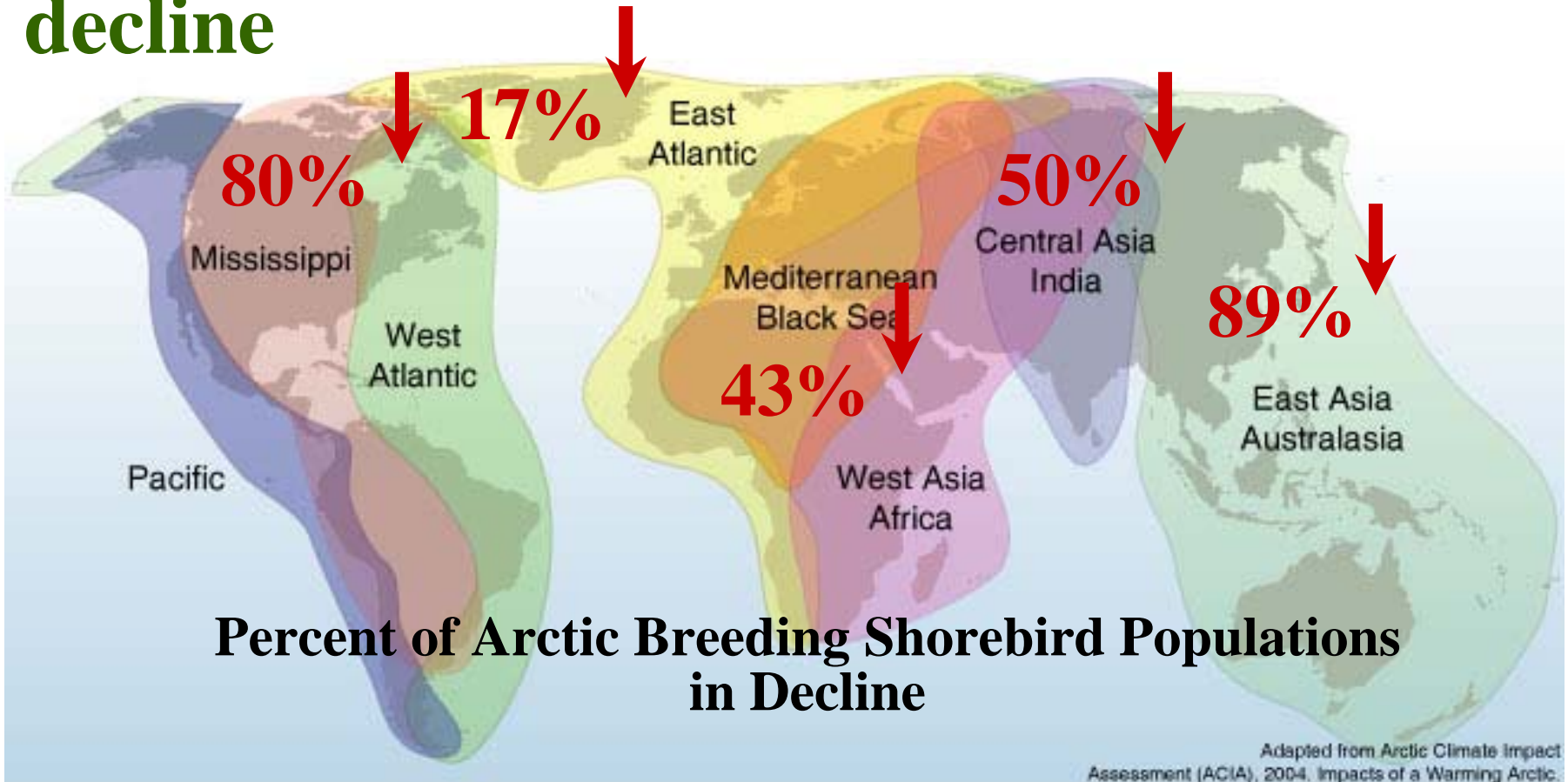
- Tundra is getting shrubbier/wetter; sub-arctic wetlands drying out
- Earlier green-up and higher biomass in tundra; decline in biomass in boreal
- Phenology mismatches
- Changing accessibility to local foods



Spatial distribution of trends in May to Aug photosynthetic activity across the northern high latitudes from 1981 through 2005.



Some species groups are on a worldwide decline



Artist: Hugo Ahlenius, UNEP/GRID-Arendal



Current Biodiversity Monitoring: Limitations



\$500 M+¹ spent each year, BUT:

- Lack of coordination and long-term commitment
- Existing information ignored or inaccessible
- Limited involvement of local people

¹Estimate based on Arctic country annual expenditures (excluding Greenland, Russia and non-Arctic states).

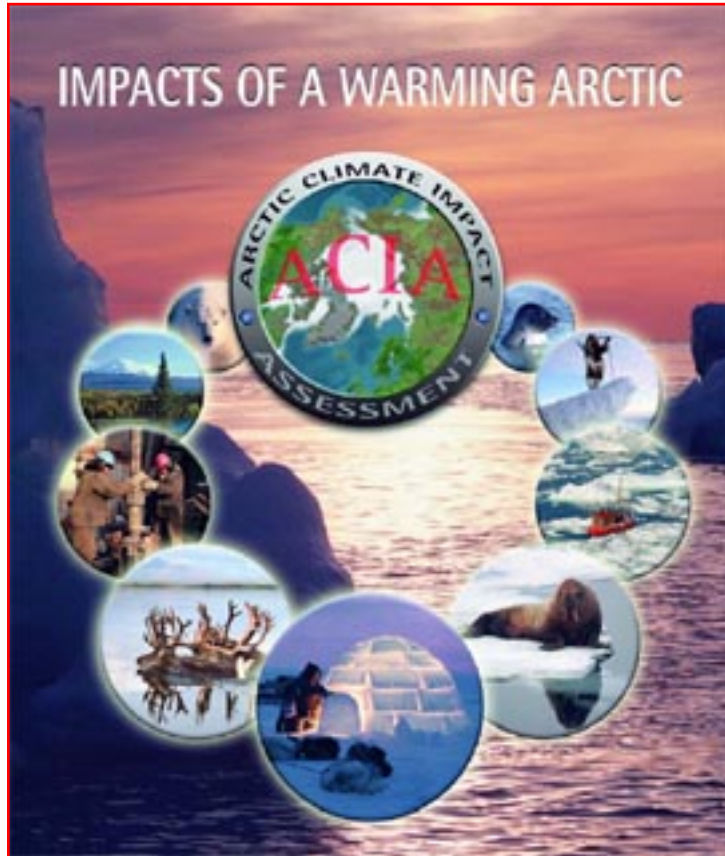


Current Biodiversity Monitoring: Limitations

- Lack of circumpolar perspective
- Incomplete and irregular coverage
- Limited ability to detect and understand change
- Weak linkages to public and decision/ policy makers



What is the CBMP?



- ACIA recommendation:
“*expand and enhance long-term Arctic biodiversity monitoring*”
- International network working to:
 - improve detection, understanding and reporting of Arctic biodiversity trends
- A focal point for cutting edge Arctic biodiversity information



Program Status

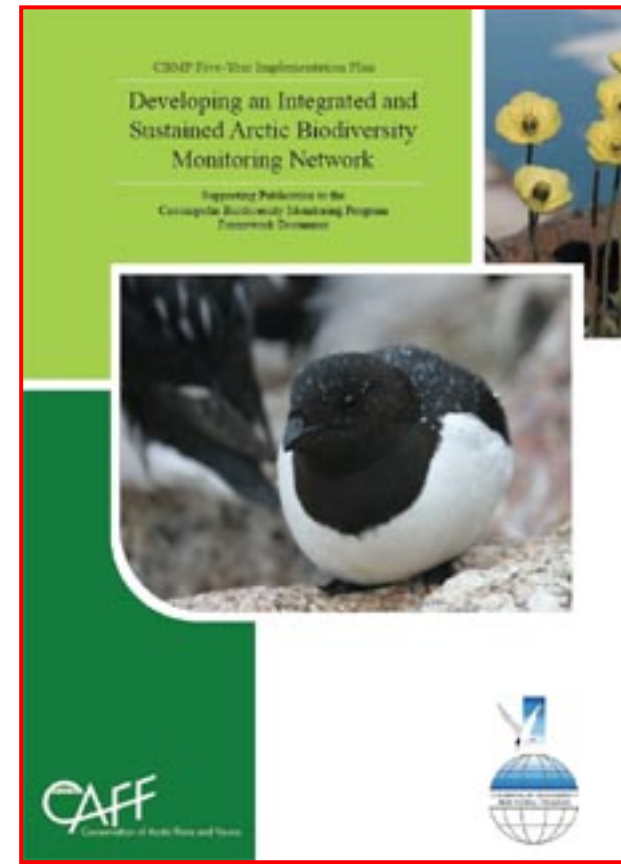


- Lead by Canada
- Multiple project funding sources
- Canada, EU, Finland, Norway, Sweden and U.S.
- Over 60 partners (regional, national, global monitoring programs) and 600 members



Strategic Links

- Arctic Biodiversity Assessment
- International Polar Year
- Sustaining Arctic Observing Networks
- State of the Arctic Reporting
- 2010 Biodiversity Indicators Partnership
- GEO-BON?



Program Areas

- Coordination and Integration of Arctic Monitoring
- Data Management
- Capacity Building
- Communications, Education and Outreach
- Reporting



Coordination and Integration

- Expert Monitoring Groups:
 - Marine, Coastal, Freshwater, and Terrestrial
 - Integrated, ecosystem-based approach to monitoring
 - Forum for scientists and community experts
 - Develop pan-Arctic, integrated monitoring plans
- Other:
 - Circumpolar Protected Areas Monitoring Framework
 - Arctic Marine Mammal Monitoring Framework
 - 33 theme- and site-based networks (CBIRD, CFG, ITEX, CARMA, etc.)





SEABIRD INFORMATION NETWORK

Seabird Search

Species:

Activity:

Date: (mm/dd/yyyy)

Start Date:

End Date:

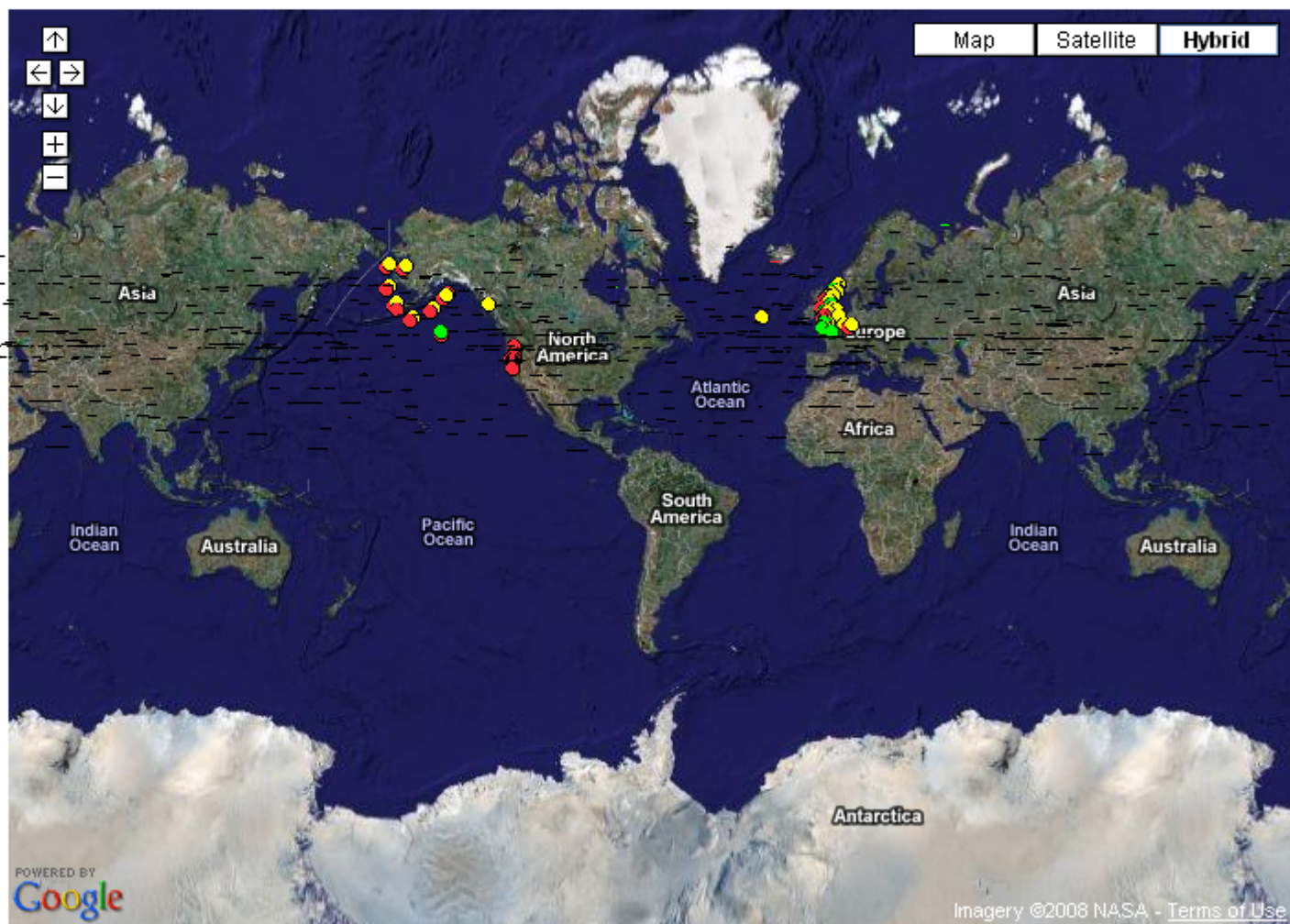
[Seabird Gallery](#)

Notes

Hover your mouse over a colony to see latest data. Click on a colony to see detailed data for the colony.

Map Key

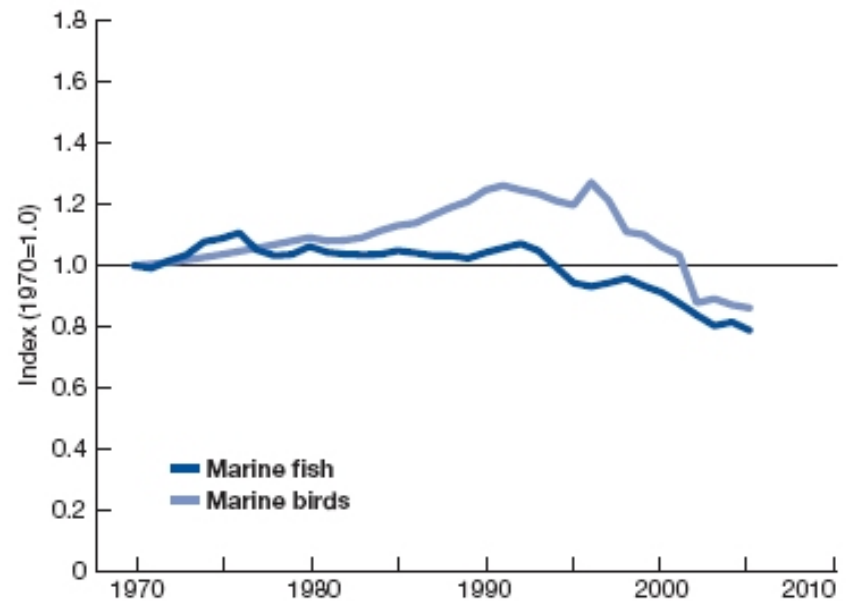
High Productivity



Reporting

- Arctic Report Cards
- CBMP Biodiversity Indices/Indicators
 - Arctic Species Trend Index
 - Arctic Red List Index
 - Arctic Trophic Level Index
 - Arctic Wilderness Index
 - Arctic Human well-being Index

Fig. 12: MARINE FISH AND BIRD INDICES, 1970–2005



Recommendations

- Recognize that the conservation of Arctic ecosystems is a necessary condition for sustainable development of the current and future well-being of the Arctic region, its inhabitants and the entire globe.
- Recognize that Arctic ecosystems and the biodiversity they support now face growing pressure as a result of climate change and resource development; and acknowledge that, in order to successfully conserve the natural environment and allow for economic development, improved baseline data and trend analysis of Arctic biodiversity is needed.
- Endorse and expand support for CAFF's Circumpolar Biodiversity Monitoring Programme and its efforts to establish a comprehensive, cost-effective and integrated Arctic biodiversity monitoring and reporting system.
- Encourage Arctic and non-Arctic countries to contribute to and participate in the CBMP's Expert Monitoring Groups and encourage Arctic countries to expand biodiversity monitoring efforts and contribute the resulting data towards the development of the CBMP's indices and indicators.



Merci Beaucoup!

