

Arctic Biodiversity and Ecosystem Services:

How the Conservation of Arctic Flora and
Fauna (CAFF) Program can help

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Arctic

— importance to global biodiversity



- 14.8 million km² of land - 13 million km² of ocean
- Vast wilderness areas
- Largest global freshwater reserves (with Antarctic)
- Globally significant array of biodiversity
- Unique and diverse indigenous cultures
- Arctic ecosystems critical to the biological, chemical and physical balance of the globe



Arctic

— importance to global biodiversity



- Natural resource use
 - hunting, fishing, grazing, fisheries, tourism, etc.
- Dramatic changes in biodiversity and ecosystem services underway
- Changes in economy both negative and positive
- Threats to resilience and sustainability
- Global repercussions for the planet's biodiversity



Arctic

— pressures/stressors

- Climate change
 - Warming – double over oceans than over land
- Resource development
 - e.g. oil and gas explorations
- Increased shipping/air traffic
- Habitat destruction and fragmentation
- Invasive species
- Overexploitation



Arctic

— what is happening now (ACIA)

- Rapid warming - worldwide implications
- Biota – geographical and numerical shifts
- Coastal communities - increasing physical exposure
- Less sea ice - increase transport and resource access
- Thawing - disrupts infrastructure; feeding areas shift
- Indigenous peoples - economic and cultural impacts
- Elevated UV radiation - affect people and biota
- Multiple interactions - impacts to people and ecosystems

What is the Conservation of Arctic Flora & Fauna (CAFF)?

- Working Group of the Arctic Council (one of six)
- Focus on biodiversity conservation
- Board members from:
 - 8 Arctic countries
 - 6 Indigenous organisations
- Observers from:
 - International organisations
 - Non-Arctic states



—— CAFF Designated Area

CAFF

— mandate

- ... to address the conservation of Arctic biodiversity, and to communicate the findings to the governments and residents of the Arctic, helping to promote practices which ensure the sustainability of the Arctic's living resources ...
- ...to monitor, assess, report on and protect biodiversity in the Circumpolar Arctic



CAFF

— what is needed now

- Evaluate status and trends of biodiversity
- Establish baseline data
- Improve and enhance capacity to monitor
- Integrated approach to biodiversity monitoring
- Monitoring on a circumpolar as against national scale
- Analyse gaps in monitoring programs
- Understand changes with focused research

CAFF

— how responding to these needs

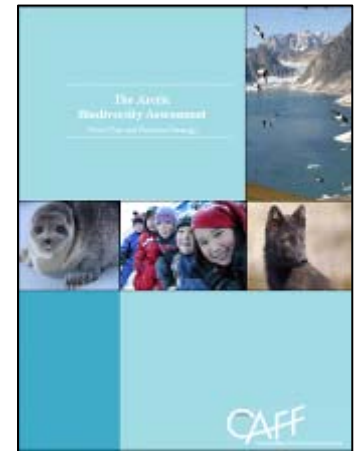
- Circumpolar Biodiversity Monitoring Programme
- Arctic Biodiversity Assessment
- Expert Groups – Seabirds, Flora & Protected Areas
- Individual projects, e.g. ECORA
 - Endorsement of Arctic projects



Arctic Biodiversity Assessment

— overview (www.caff.is/aba)

- Purpose:
 - *To synthesize and assess the status and trends of biological diversity in the Arctic*
- Baseline data:
 - Compile up-to-date scientific & TEK
 - Identify gaps in data records
 - Identify main stressors and key mechanisms driving change
 - Produce recommendations
- Co-leads – Greenland/Denmark, Finland and the US



Arctic Biodiversity Assessment

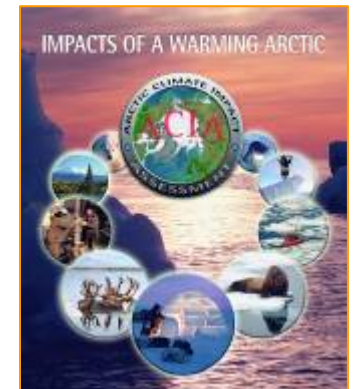
— overview (www.caff.is/aba)

- Three components:
 - Arctic Biodiversity Highlights Report (2010)
 - Scientific Report (2013)
 - Overview & Policy Recommendations (2013)
- Highlights Report - AC contribution to the UN International Biodiversity Year 2010
- Measure progress towards the 2010 CBD target ... *to reduce the rate of biodiversity loss*
- Baseline for future assessments of Arctic biodiversity

CBMP

— circumpolar biodiversity monitoring programme

- ACIA recommendation - *expand & enhance long-term Arctic biodiversity monitoring*
- International network to improve detection, understand and report on biodiversity trends
- A focal point for cutting edge Arctic biodiversity information
- Biodiversity component of SAON



CBMP

— circumpolar biodiversity monitoring programme

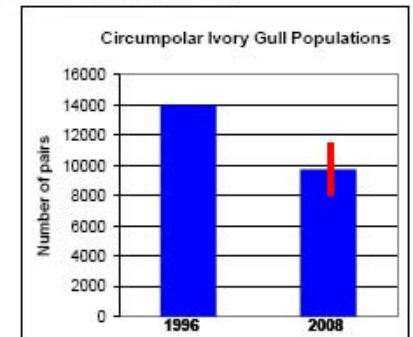
- Ecosystem based management approach
 - Over 60 Global Partners
 - 33 of which are Arctic networks
- Led by Canada – current funding from Canada, US, Finland, Sweden, Norway, and EU
- Coordinating body of monitoring networks
- More details provided by Mike Gill, Chair of CBMP



CAFF activity in focus

— seabirds (www.caff.is/cbird)

- Identify main conservation issues
- Conservation strategies & action plans
- Arctic Seabird Monitoring Network
 - Mapping seabird sites and trend analyses
- Compilation on issues and reporting
- Focused bi-/multilateral research
- Contribute to other AC projects, e.g. oil and gas assessment

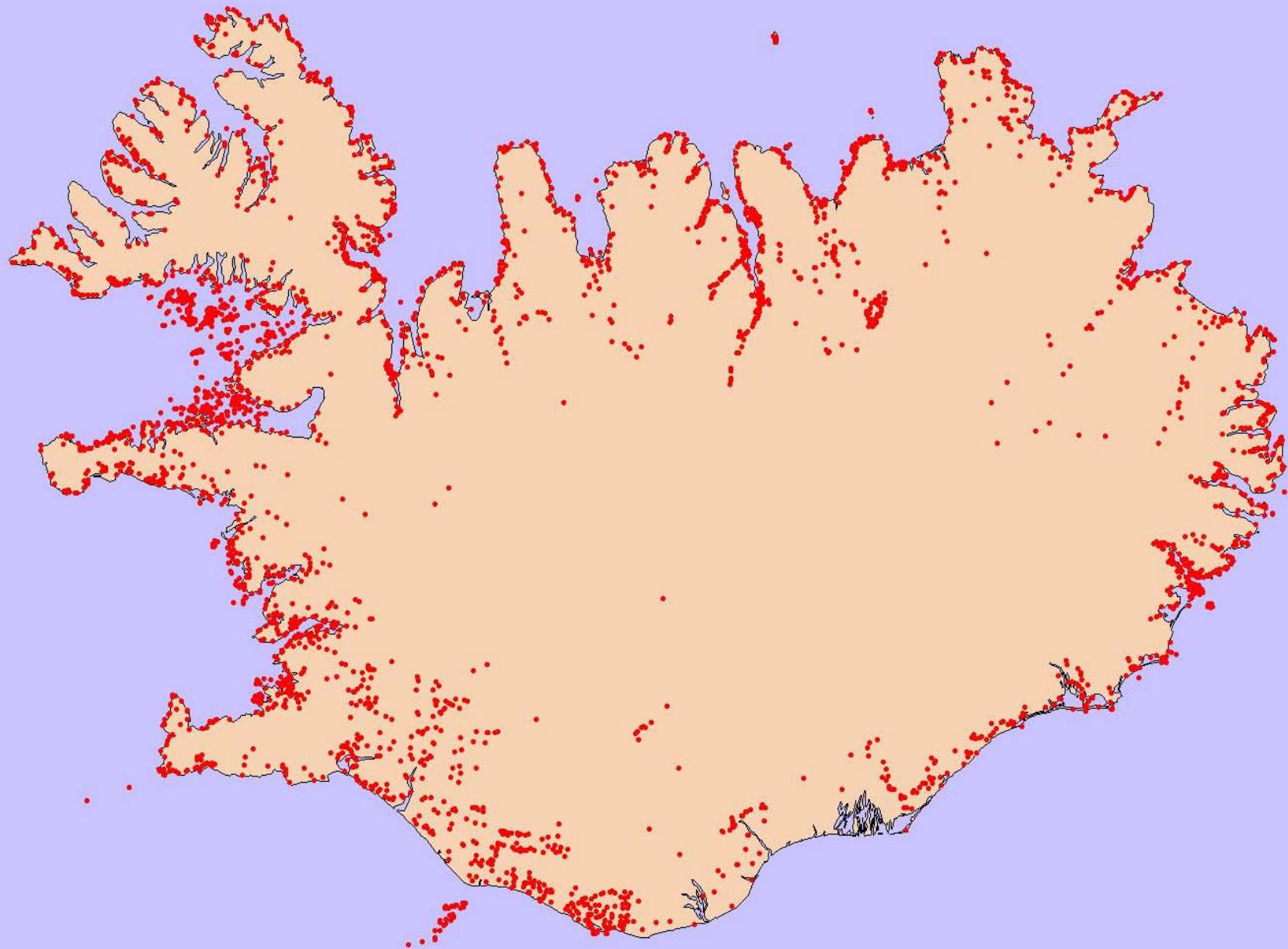


CAFF activity in focus

— seabirds (www.caff.is/cbird)

- Eiders, Murres, Ivory Gull
- Attend to new, urgent conservation issues
- Various reports, e.g. harvest, bycatch, disturbance
- Glaucous Gulls, Arctic Terns
- Mapping colonies; Trend Analyses; Analyses of climate change effects



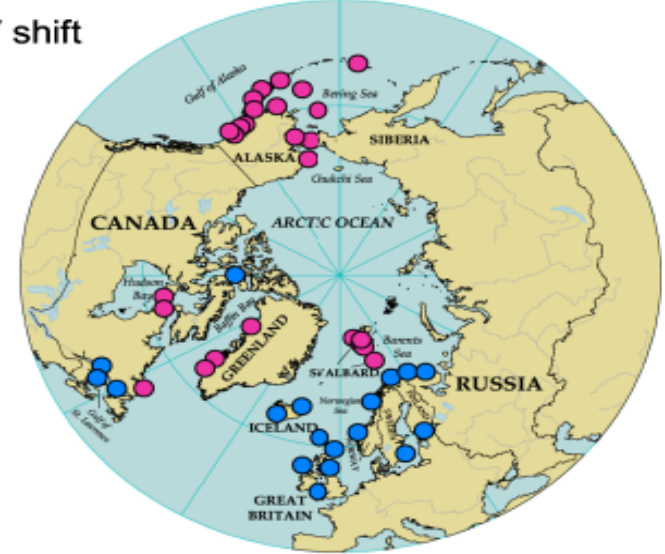


CAFF activity in focus

— Arctic Seabird Monitoring Network
(www.caff.is/cbird)

- Arctic Seabird Monitoring Network - main components:
 - Colony monitoring
 - At-sea surveys
 - Harvest statistics
 - Breeders/non-breeders lists
 - Red lists

(a) 1977 shift



(b) 1989 shift



Change in average sea surface temperature

● Colder ● Warmer

Sustainable Development of the Arctic in the face of Global Climate Change

Monaco, March 3 -6th, 2009

www.caff.is

17/14

Arctic species

— trends: Ivory Gull

- High Arctic distribution
- Linked with Polar Bear
- Red listed nationally & IUCN
- Dramatic recent decline in Canada
- Russia holds bulk of world population
- CAFF priority

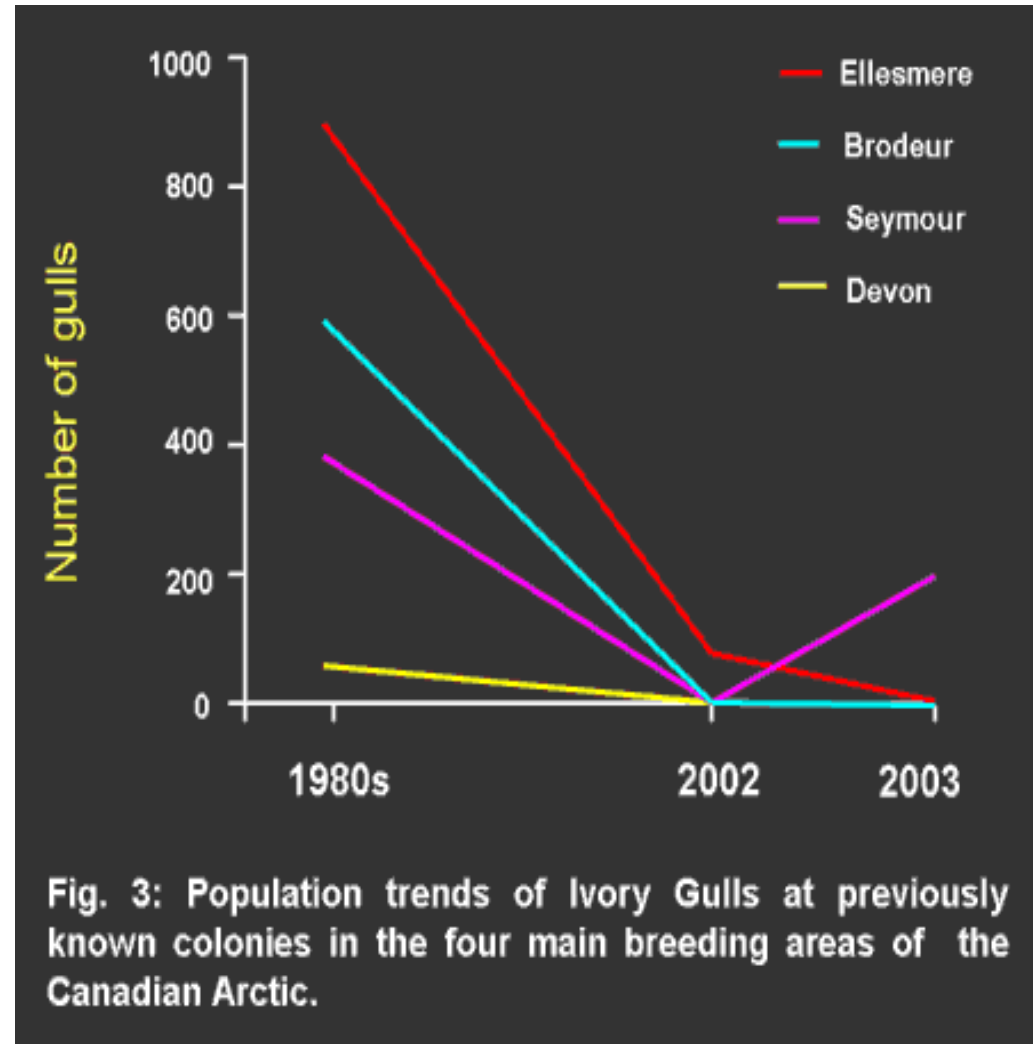




Photo: Maria Gavrilu



Photo: Maria Gavrilov

CAFF

— challenges

- Ensure sustained funding
- Attract Arctic-wide participation
- Ensure access to information
- Management of data
- Dissemination of information to stakeholders
- Continued political commitment
- Identify and fill obvious gaps in knowledge
- Evaluate effects of stressors on biodiversity by
focused research

Recommendations

— overview

- Acknowledge challenges to biodiversity by climate change and other stressors
- Realizing dependence of Arctic Peoples on biodiversity, and importance of Traditional Ecological Knowledge (TEK)
- Endorse the Arctic Biodiversity Assessment (ABA) Highlights Report as contribution to UN International Year of Biodiversity 2010
- Endorse Arctic biodiversity monitoring through CBMP
- Recognize CBMP as component of Sustaining Arctic Observing System (SAON) and IPY legacy



Thank you

Photo courtesy of ARC-PIC.COM