# **Arctic Biodiversity Congress,**

October 9. 2018 - Rovaniemi, Finland

# SESSION: The CBMP as an international player and a regional BON of GEO BON: exploring synergies







Arctic Biodiversity Congress, October. 2018 - Rovaniemi, Finland





### **CBMP** – in **CAFF**



### CIRCUMPOLAR BIODIVERSITY MONITORING PROGRAM

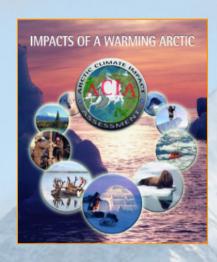
- CAFF's biodiversity monitoring programme
- Started as response to Arctic Council recommendations on biodiversity and ecosystem monitoring (ACIA)
- Now also a tool for CAFF to implement ABA Action Plan.
- Focal point for current and credible Arctic biodiversity information

www.cbmp.is

www.ABDS.is











# Structure and work; CBMP October 2018





CBMP Coordination Committee & Technical Team. (DK / GL, US, CAFF sec).

Terrestrial-SG (Iceland/ Sweden)



Freshwater-SG (Canada / Sweden)



Coastal Expert Monitoring Group (US/ Canada)



Marine SG (Canada/ US)











- Focus on their first CBMP Freshwater Assessment (SAFBR)
- State og The Arctic Freshwater Report (SAFBR); 70 pages, May 2019
- Special Journal Issue 2019; 13 articles in Freshwater Biology.
- Extensive (harmonized) database on ABDS; 2018

### Implementation status; CBMP October 2018 **CAFF Board CBMP** Coordination Committee & Technical Team. (DK / GL, US, CAFF sec). Terrestrial-SG **Coastal Expert Monitoring** Marine SG Freshwater-SG (Iceland/ Sweden) Group (US/ Canada) (Canada/US) (Canada / Sweden) **Expert networks** Vegetation Mammal **Expert Expert** Network Network • Focus on their first CBMP Terrestrial assessment: State of The Arctic Terrestrial Biodiversity Report (StArT) **StArT: 50 pages, 2019 Invertebrate** Bird

Special Journal Issue in AMBIO in 2020; Articles will go online as they

**Expert** 

Network

are finished.

**Expert** 

Network

# Structure and work; CBMP September 2017 CAFF Board

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Plankton Expert Network Benthos Expert Network Fish Expert Network Seabird Expert Network Marine Mammal Expert Network

Sea Ice Expert Network



### Marine:

- First Marine CBMP Assessment published in 2017 (SAMBR): 190 pages.
- Focus: Next steps after SAMBR. How to communicate and use key findings and advice for future monitoring? How to use lessons learned? Synergies with other groups?

# CAFF

# Structure and work; CBMP October 2018





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### **Coastal:**

- Focus on prioritization on identified FEC's (attributes & parameters)
- · Organization and implementation plan
- Synergies with other CBMP groups
- Strong TLK participation
- Monitoring and implementation plan expected published spring 2019



# Long term ecosystem based adaptive monitoring plans

(Lindenmayer & Likens)





### **Conceptual Model**

- Identify FEC and key monitoring targets



### **Management questions**

Science
Experiments
Exsisting Networks

### Monitering design

- Sampling methods
- Scale to use



Collect data



Data: analyse

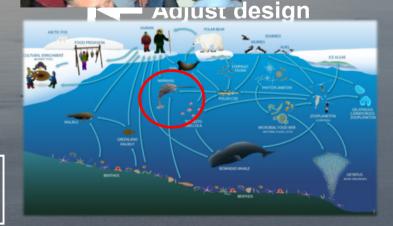


Communication of data (dependent of target group)



wledge







# **CBMP** outputs



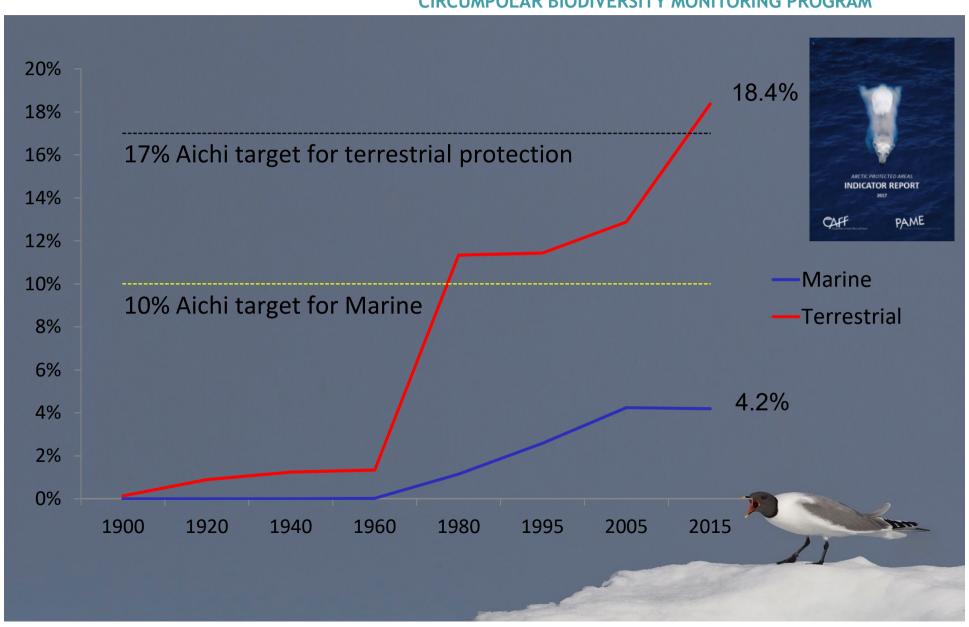
- Regular assessments: *State of Arctic Biodiversity* report, including status reports (Scintific and TK information)
- Outputs as scientific publications
- Revised / adjusted strategies and adaptive monitoring plans and protochols
- Headline Indicator reports
- Various summaries and other communications material
- Input to the ABDS (www.abds.is) that will be an important tool for faster and timely reporting





# **Example headline indicators: Protected Areas**





# State of the Arctic (Marine) Biodiversity Report





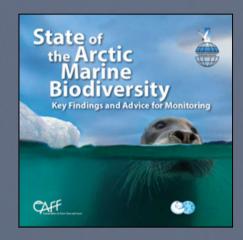
- Scientific peer reviewed report (2017)
- 30 page summary document
- Describe the baseline conditions for FEC's identified within:
  - Seabirds (8)
  - Marine mammals (11)
  - Fish (3)
  - Benthos (3)
  - Plankton (4)
  - Sea Ice Biota (4)
- Describe the status of the monitoring on these FEC's
- Include advice for future monitoring priorities directed towards policy and decision makers



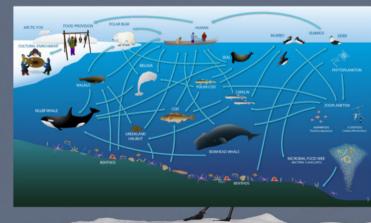
# **SAMBR: Overall picture - snapshots**



- Food resources are being lost for many (high)
   Arctic species
- Current trends indicate that species reliant on sea ice will experience range reductions as sea ice retreat.
- Some Arctic species are shifting their range northward and increasing numbers of southern species are moving into Arctic waters
- Arctic marine species and ecosystems are undergoing pressure from a variety of (new) stressors that may effect cumulative
- Underway or expected change in energy flow in the High Arctic marine environment



Some FEC's and Energy in food web (high arctic)
Figure adapted from Darnis et al 2012 and
Inuit Circumpolar Council – Alaska (2015).





## Details on each FEC can be found in SAMBR

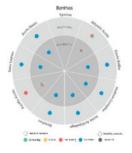


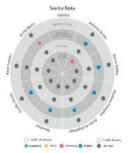
### CIRCUMPOLAR BIODIVERSITY MONITORING PROGRAM

SAMBR include one subchapter for each FEC group with:

- Baselines/ trends on FEC's (if possible)
- Drivers of observed trends
- Comparisons between the AMA's (if possible)
- Current monitoring, monitoring gaps and advise for future monitoring
- Figures and tables on FEC's that are relatively easy to update based on future monitoring



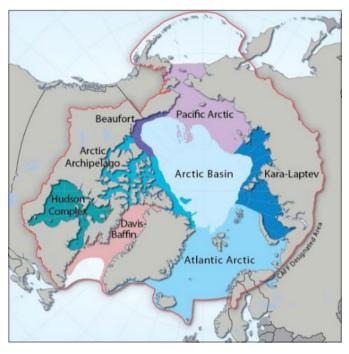








### SAMBR: Arctic Marine Areas





# CBMP Strategic Plan: Overall goals



### CIRCUMPOLAR BIODIVERSITY MONITORING PROGRAM



### Plan approved and published in autumn 2017

### Goals:

- Goal 1: The CBMP is relevant to the Arctic States, Permanent Participants, the scientific community and other partners
- Goal 2: CBMP results support decision making and facilitates coordinated monitoring.
- Goal 3: The CBMP is an adaptive monitoring program
- Goal 4: The CBMP is sustainable (defined by organization, capacity and finances)

Each goal is defined through a number of objectives.



# CBMP Strategic Plan



### CIRCUMPOLAR BIODIVERSITY MONITORING PROGRAM



### **Examples on activities:**

- Align CBMP to support CAFF input .....into national, regional, and global reporting needs
- Map CBMP activities against national/international reporting requirements
- Map how CBMP activities help support the UN Sustainable Development Goals
- Explore how CBMP data might fit in to other reporting requirements
- Take national, Circumpolar and also global needs into account when planning follow up on the SABR's
- Establish new partnerships, so the CBMP support CAFF input to national, circumpolar and global needs;
- Continue to work with existing partners, including GEOBON, to further ensure information on Arctic biodiversity is available and feeds into relevant fora.

