Swedish Agency
for Marine and
Water Management

PAME Workshop Helsinki, September 2017:
How Arctic Marine Protected Area networks may reduce
negative effects of climate change and ocean acidification

SYKE
Finnish Environment Institute

Introduction to Group Work Thursday

Workshop aim

Identify possibilities on how MPA networks, and other area-based measures, may be used to decrease the negative effects of climate change and ocean acidification and their interactions with other human-induced stressors in the Arctic.

Workshop output

Report
Fact Sheet
Post-workshop Questionnaire
Additions to the PAME MPA-network Toolbox

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Introduction to Group Work Thursday

- Group composition and rooms (3 themes, 6 groups, follow rapporteur with your group number, keep track of the rapporteur after lunch to get back to the room

- Available time for group discussions is 3 hours

- Facilitators help to keep the discussion focused

- Rapporteurs prepare a 1-2 page summary of the discussion for the report that will be circulated before publishing

- Facilitators and rapporteurs prepare two slides for the plenary session at 16:20. Presentation 5 min per group + 1-2 min plenary discussion. Hand slides to Leena

- Slide 1: Key conclusions, *what we know* (3-5 conclusions)

- Slide 2: Key challenges, *what we do not know* (3-5 challenges)

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Theme A (Groups A1 & A2)

Current status, projected changes and knowledge gaps

(1) What is known, and what are the uncertainties, about the likely extent of climate change and ocean acidification in the Arctic in 2050 and 2100?

(2) How can we better understand spatial and temporal heterogeneity in the magnitude, rate, and direction of change in the Arctic? i.e. to what extent might small-scale (< 100 km) shifts in marine climate regime change the conservation effectiveness of protected areas (networks)?

(3) What modelling / monitoring / observing / TLK information do we need to be able to plan MPA networks (or other spatial tools) effectively?

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Theme B (Groups B1 & B2)

Climate change and ocean acidification effects on marine biodiversity and the environment

(1) What is known, and what are the uncertainties, about key species, process & ecosystem vulnerabilities?

(2) To what extent can we generalise known responses of species & processes? What existing information is relevant for the Arctic? (other polar information? Can we generalise from non-polar regions?). How broadly can we generalise, and how do we know?

(3) How will projected changes shift ecologically important features (e.g. how will ice edges move in space and time)? How big is the biological challenge to protect them? What will be the impacts on Arctic food webs?

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Theme C (Groups C1 & C2)

Climate change and ocean acidification effects on ecosystem services

(1) What are the most important ecosystem services that will likely be impacted? What provisioning services? What regulating services?

(2) What additional stressors might have substantial modifying effects (either positive or negative)? What options are there for adaptation / remediation?

(3) How will changing foodwebs, changing food quantities and qualities affect human activities in the Arctic?