

ARC-Change - Arctic Marine Resources under Climate Change

Environmental, Socio-Economic Perspectives and
Governance

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Polarforskningsnettverket

ARC-Change 2016 - 2019

- ▶ **ARC-Change** will focus on interactions and mechanisms between physical and ecological changes, economic and social adaptations, and governance implications of climate change in Arctic regions.
- ▶ **ARC-Change** has a cross-sectorial and cross-disciplinary perspective.
- ▶ Project participants from NHH/SNF, IMR, Beijer, NOAA, and others.



Project Background

- ▶ A wedge exists between advanced concepts of management (ecosystem-based management, adaptive governance) and current practical and operational management (*Guerry et al. 2015*, *Skern-Mauritzen et al. 2015*).
- ▶ Need to align scientific research, ideas, and concepts with management, institutions, and operational tools (*Arkema et al. 2006*, *Polasky et al. 2016*).
- ▶ Assessment of current management frameworks in terms of adaptability to anticipated changes and new challenges posed by climate change (*Harsem & Hoel 2013*).
- ▶ *ARC-Change* aim to develop guidelines for Arctic resource governance that need to adapt to climate change.

Project Focus

- ▶ **WP1: Fish stocks under climate change**
(Lead: Angelika Renner, IMR)
 - Assess and identify key regions regarding ocean warming and sea ice retreat.
 - Analyze fish distributions.
 - Investigate scenarios for life cycle changes for key stocks.
- ▶ **WP2: Economics of shared fisheries**
(Lead: Nils-Arne Ekerhovd, SNF)
 - Evaluate economic impact on fishing industry.
 - Analyze how changes in fish stock migrations affect international fisheries management agreements.
 - Study interdependent fisheries and stability of agreements.

Project Focus

- ▶ WP3: Natural resource governance in a warming Arctic
(Lead: Alf Håkon Hoel, IMR)
 - Account of existing legal framework.
 - Discuss implementation of legal framework and governance institutions.
 - Assess capacity and adaptability to climate change.
- ▶ WP4: Synthesis, project management
(Lead: Sturla Kvamsdal, SNF)
 - Project synthesis and future prospects.
 - WP topical meetings, ultimate workshop with stakeholders.

Project Timeline

- ▶ Meetings:
 - Sept. 2016: Kick-off
 - Fall 2017: WP1 meeting
 - Fall 2018: WP2 meeting
 - Spring 2019: WP3 meeting
 - Summer 2019: **ARC-Change** workshop with stakeholders
- ▶ Conferences:
 - Special sessions at relevant conferences (IIFET, ICES, ESSAS)
- ▶ Relevant projects/activities:
 - SI-Arctic, Tibia (IMR)
 - AGAMEM, EINSAM, MESSAGE (SNF)
 - NHH ENE-Centre
 - ESSAS, STOCKSHIFT, norut, BAAMRGP
- ▶ Miscellaneous:
 - Website, newsletters