

The 15<sup>th</sup> Russian-Norwegian Symposium in Longyearbyen, Svalbard, Norway, 7-8  
September 2011

## “Climate change and effects on the Barents Sea marine living resources”

### Program

#### Wednesday 7 September

0800 – 0845

#### Registration

0845 - 0915

#### Opening addresses

*Ole Jørgen Lønne* (UNIS, Norway)

*Ole Arve Misund* (IMR, Norway)

*Yuri Lepesevich* (PINRO, Russia)

#### Theme session I: What are the changes? (Chair Ingolf Røttingen)

0915-1015

#### Keynotes:

*Asgeir Sorteberg* (Univ Bergen, Norway): **Arctic temperature and sea ice changes: Forcings and feedbacks.**

*James E. Overland* (NOAA PMEL, Seattle, USA): **Arctic surprises: Sea ice loss and increased Arctic/Sub-Arctic linkages.**

1015-1045

#### Coffee & Posters

1045-1240

#### Talks:

*Salve Dahle* (Akvaplan-niva, Norway): **On drifting ice to the North Pole.**

*Vidar S. Lien* (IMR, Norway) and *Alexander G. Trofimov* (PINRO, Russia): **The Barents Sea – Arctic Ocean gateway: Water mass characteristics and transformations.**

*Randi Ingvaldsen*, *Harald Loeng*, *Sigrid L. Johansen* and *Ole Humlum* (IMR, Norway): **Barents Sea climate variability during the last decade.**

*Boris N. Kotenev*, *Andrey S. Krovnin* and *G.N. Rodionov* (VNIRO, Russia): **Climate trends forecast for the Norwegian Sea and the Barents Sea for the period 2012-2025.**

*Bjørn Ådlandsvik*, *W. Paul Budgell* and *Anne Britt Sandø* (IMR, Norway): **Regional climate scenarios for the Barents Sea.**

*Igor Esau* (Nansen Centre / Bjerknes Centre, Norway) and *Irina Repina* (Obukhov Institute for Atmospheric Physics, Moscow, Russia): **Observations and fine-resolution large-eddy simulations of the katabatic wind over Kongsvegen glacier, Kongsfjorden and Ny Ålesund.**

## **Theme session II: What effects can be expected on the ecosystem? (Chair Yuri Lepesevich)**

**1240-1300**

### **Talk:**

*Nils Chr. Stenseth* (CEES, University of Oslo, Norway): **The effect of climate on the ecological dynamics in the Barents Sea.**

**1300-1400**

**Lunch** Served at the symposium venue

**1400-1500**

### **Keynotes:**

*Svein Sundby* (IMR, Norway): **Impacts of climate variability and change across trophic levels in the arctic and subarctic marine ecosystems.**

*Oleg Titov* (PINRO, Russia): **Fishery and oceanographic aspects of performance of the Barents Sea ecosystem and the experience with their application by the ICES AFWG.**

**1500-1600**

### **Talks:**

*Harald Loeng* (IMR, Norway): **From the Barents Sea to the Arctic Ocean.**

*Ken Drinkwater* and the NESSAR Team (IMR, Norway): **The Polar Front and its influence on the Barents Sea ecology.**

*Lene Buhl-Mortensen*, *Pål Buhl-Mortensen*, *Børge Holte*, *Lis L. Jørgensen* and *Anne Helene Tandberg* (IMR, Norway): **Baseline mapping: a necessity for an assessment of effects on climate changes on benthic communities.**

**1600-1630**

## Coffee & Posters

**1630-1830**

### Talks:

*Igor Manushin*, N. Anisimova, and P. Lubin (PINRO, Russia): **Long-term changes of macrozoobenthos in the southeastern Barents Sea.**

*Michael L. Carroll*, William G. Ambrose Jr. (Akvaplan-niva, Norway), Benjamin S. Levin, Gregory A. Henkes (Bates College, Lewiston, Maine, USA), Haakon Hop (Norwegian Polar Institute), William Locke (Bates College, Lewiston, Maine, USA) and Paul E. Renaud (Akvaplan-niva, Norway): **Pan-Svalbard growth rate variability and environmental regulation in the Arctic bivalve *Serripes groenlandicus*.**

*Paul Wassmann* and Marit Reigstad (Univ Tromsø, Norway): **Climate induced changes in primary production and pelagic-benthic coupling in the northern Barents Sea.**

*Corinna Schrum*, U. Daewel, D. Pushpadas (Univ Bergen, Norway), Evgeniy Yakushev (NIVA, Norway) and M. Årthun (Univ Bergen, Norway) : **Decadal variability of hydrodynamics and productivity in the Barents Sea.**

*Janne E. Søreide* (UNIS, Norway), Michael L. Carroll (Akvaplan-niva, Norway), Haakon Hop (Norwegian Polar Institute), William G. Ambrose Jr. (Bates College, Lewiston, USA), Else N. Hegseth (Univ Tromsø, Norway), and Stig Falk-Petersen (Norwegian Polar Institute): **Trophic structure and carbon flow in Arctic- and Atlantic regimes around Svalbard revealed by stable isotopes and fatty acid tracers.**

*Øystein Varpe* (Norwegian Polar Institute), Christian Jørgensen (Uni Research, Norway) and Øyvind Fiksen (Univ Bergen, Norway): **Double menu for *Calanus* in the Arctic: what are the life history consequences in a changing climate?**

**1930** Adventure in the wild – hiking tour (with dinner) in Adventdalen

## Thursday 8 September

**Theme session II (continued) . (Chair Knut Sunnanå)**

**0830-1030**

### Talks:

*Stig Falk-Petersen*, Malin Daase, Eva Leu, Anette Wold, Øystein Varpe (Norwegian Polar Institute), Janne E. Søreide, Jørgen Berge (UNIS, Norway), Daria Martynova (Russian Academy of Science, St. Petersburg), Delphine Benoit University of Quebec, Canada), Gerald Darnis, Louis Fortier (Laval University Quebec, Canada) and Ketil Eiane (Univ Nordland, Norway): **Timing of the blooms determines the life strategy of Arctic *Calanus glacialis*.**

Andrej Shadrin (Lomonosov Moscow State University, Russia), Elena Eriksen (IMR, Norway), Valerij Makhotin (Lomonosov Moscow State University, Russia), *Harald Gjøsæter* and Samuel Subbey (IMR, Norway): **Embryological studies of capelin eggs under different temperature conditions.**

Randi Ingvaldsen and *Harald Gjøsæter* (IMR, Norway): **Impact of marine climate variability and stock size on the distribution area of Barents Sea capelin.**

*Haakon Hop* (Norwegian Polar Institute) and Harald Gjøsæter (IMR, Norway): **Polar cod and capelin in relation to water masses and sea ice conditions.**

*Jan Erik Stiansen*, Silje Seim, Geir Odd Johansen and Harald Gjøsæter (IMR, Norway): **The south-western distribution limit of polar cod in the Barents Sea – a useful indicator of climate variation?**

*Olav Sigurd Kjesbu*, Jon Egil Skjæraasen, Francisco Rey (IMR, Norway), Christian Jørgensen (Univ Bergen, Norway): **The link between temperature, fish size, spawning time and reproductive success of Atlantic cod.**

## **1030-1100**

### **Coffee & Posters**

## **1100-1300**

### **Talks:**

*Bjarte Bogstad*, Gjert Endre Dingsør, Harald Gjøsæter and Randi Ingvaldsen (IMR, Norway): **Changes in the relations between oceanographic conditions and recruitment of cod, haddock and herring in the Barents Sea.**

Boris N. Kotenev, Andrey S. Krovnin, *Vladimir M. Borisov* and M.V. Bondarenko (VNIRO, Russia): **Year classes strength of cod, haddock and herring in the Norwegian-Barents region in relation to forecasted climate changes in 2012-2025.**

Geir Odd Johansen, Edda Johannesen and *Kathrine Michalsen* (IMR, Norway): **Size and age dependent geographic distribution of NEA cod in the Barents Sea - effects of physical conditions and abundance.**

*Andrey V. Dolgov* and A.L. Karsakov (PINRO, Russia): **Species-specific habitat conditions and possible changes in the distribution of fishes in the Barents Sea under climate change.**

*Magnus Aune Wiedmann*, Michaela Aschan and Raul Primicerio (Univ Tromsø, Norway): **Vulnerable fish species in the Barents Sea.**

*Konstantin V. Drevetnyak*, M.Yu. Antsiferov and P.A. Murashko (PINRO, Russia): **The effect of climate fluctuations on demersal fisheries in the Barents Sea and adjacent waters.**

## **1300-1400**

**Lunch** Served at the symposium venue

## **1400-1500**

### **Talks:**

Emma L. Orlova, *Andrey V. Dolgov*, I.P. Prokopchuk and A.P. Yakovlev (PINRO, Russia): **Influence of climatic changes in the Barents Sea on functioning of trophic complex makroplankton-pelagic fishes-cod.**

*Anne Kirstine Frie*, Tore Haug, Ulf Lindstrøm, Kjell Nilssen and Tor-Arne Øigård (IMR, Norway): **Variability in population parameters of Northeast Atlantic harp seals; responses to changes in sea temperature and ice cover?**

*Evgeniy Yakushev* (NIVA, Norway): **Modeling of the role of organic matter production and destruction on the carbonate system seasonal changes in the Barents Sea.**

## **Theme session III: Management implications and challenges. (Chair Oleg Titov)**

## **1500-1600**

### **Keynotes:**

*Alf Håkon Hoel* (IMR, Norway): **Implications of climate change for the management of living marine resources.**

*Evgeny Shamray* and Yuri Lepesevich (PINRO, Russia): **If the management of living marine resources ought to be effected by climate changes?**

## **1600-1630**

### **Coffee & Posters**

## **1630-1830**

### **Talks:**

*Ingolf Røttingen* and Sigurd Tjelmeland (IMR, Norway): **The collapse of the Norwegian spring -spawning herring stock; Climate change or fishing effort?**

*Vladimir M. Borisov*, M.A. Bogdanov and I.V. Tarantova (VNIRO, Russia): **Sea surface temperature (SST) dynamics and year class strength of the capelin (*Mallotus villosus*) in the Barents Sea.**

*Daniel Howell* (IMR, Norway), Anatoly Filin (PINRO, Russia), Bjarte Bogstad, Jan Erik Stiansen and Elena Eriksen (IMR, Norway): **Unquantifiable uncertainty in projecting stock response to climate change: Example from NEA cod.**

*Kathrine Michalsen*, Edda Johannesen (IMR, Norway), Dimitry D. Prozokevich, Tatyana Prokhorova (PINRO, Russia), Randi Ingvaldsen, Harald Gjøsæter, Mette Mauritzen, Tor Knutsen, Elena Eriksen and Lis Lindal Jørgensen (IMR, Norway): **How to investigate climate variation and its effects on species and species interactions.**

*Gennady G. Matishov, D.V. Moiseev, O.S. Lyubina, A.P. Zhichkin, S.L. Dzhenyuk, P.R. Makarevich, E.A. Frolova (MMBI, Russia):* **Hydrobiological indicators of cyclic climate changes in the Western Arctic during XX-XXI centuries**

*Jan Erik Stiansen, Sigbjørn Mehl, Geir O. Johansen, Cecilie Kvamme, Bjørn Ådlandsvik (IMR, Norway), Nils A. Ekerhovd and Røgnvaldur Hannesson (Institute for Research in Economics and Business Administration, Bergen, Norway):* **Future change in the distribution of fish and fisheries in the Barents Sea; experiences from the FishExChange project.**

**1930 Reception** in Svalbard Museum, followed by the **conference dinner** at the conference venue (UNIS)