

## Projects in the Fram Centre Flagships for 2015

Research areas/Project titles	Project leader (s)	Participating institutions	Flagship	E-mail project leader
<b>Effects of climate change on sea and coastal ecology in the north (Fjord and Coast)</b>				
<i>Physical-biological coupling: Oceanography and habitat use by predators and their prey</i>				
Effects of climate on cod life history and ecology along a temperate-arctic gradient	Hector Andrade	ApN, IMR, UNIS, UT, BC	Fjord and Coast	<a href="mailto:hector.andrade@akvaplan.niva.no">hector.andrade@akvaplan.niva.no</a>
Effects of oceanic inflow and glacial runoff on fjord circulation in Kongsfjorden, Svalbard; establishment of a high resolution ocean circulation model system	Arild Sundfjord	NPI, IMR, UNIS	Fjord and Coast	<a href="mailto:arild.sundfjord@npolar.no">arild.sundfjord@npolar.no</a>
A coastal, ice-associated arctic whale in a changing climate	Christian Lydersen	NPI, UoT, NVH, UoW	Fjord and Coast	<a href="mailto:christian.lydersen@npolar.no">christian.lydersen@npolar.no</a>
How do a dominant predator and climate shape fish biodiversity over space and time in large marine ecosystems?	Kari Ellingsen	NINA, IMR, UoT, BS PINRO, BedIn, MU	Fjord and Coast	<a href="mailto:Kari.Ellingsen@nina.no">Kari.Ellingsen@nina.no</a>
The invasive red king crab as a stressor on coastal marine food webs	Jan Sundet	IMR, UoT	Fjord and Coast	<a href="mailto:jan.sundet@imr.no">jan.sundet@imr.no</a>
Seabird habitat use and migration strategies	Børge Moe	NINA, UoT, ApN, NILU, UNIS, UB	Fjord and Coast	<a href="mailto:borge.moe@nina.no">borge.moe@nina.no</a>
The coastal migratory behavior of anadromous fish in relation to environmental parameters	Guttorm Christensen	ApN, UoT, NINA, NIVA, FOC, UoWa	Fjord and Coast	<a href="mailto:guttorm.christensen@akvaplan.niva.no">guttorm.christensen@akvaplan.niva.no</a>
Impact of harbour seal predation on Tana salmon and Tana salmon fishery	Marius W. Næss	NIKU, NINA, UiT, TRFM	Fjord and Coast	<a href="mailto:marius.naess@niku.no">marius.naess@niku.no</a>

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<i>Structure, function and change in Arctic and boreal fjord ecosystems</i>				
Recovery of coastal kelp ecosystems – driven by climate change or predators?	Hartvig Christie	NIVA, UoT, UoM	Fjord and Coast	<a href="mailto:Hartvig.christie@niva.no">Hartvig.christie@niva.no</a>
Region- and stock-specific catch and migration models of Barents Sea salmon	Martin Svenning	NINA, UoT, IMR, UTu, PINRO	Fjord and Coast	<a href="mailto:martin.svenning@nina.no">martin.svenning@nina.no</a>
Nordic Marine Fjords: Spatial Mapping and Ecosystem Understanding	Lis Lindal Jørgensen	IMR, UoT, ApN, AWI	Fjord and Coast	<a href="mailto:lis.lindal.joergensen@imr.no">lis.lindal.joergensen@imr.no</a>
Benthic biodiversity and ecosystem function in Svalbard and North Norway	Sabine Cochrane	ApN, NINA, IMR, UNIS	Fjord and Coast	<a href="mailto:sabine.cochrane@akvaplan.niva.no">sabine.cochrane@akvaplan.niva.no</a>
Life on the edge - Blue mussels on Svalbard	Jørgen Berge	UoT, UNIS, ApN, AU, IOPAS, BC	Fjord and Coast	<a href="mailto:jorgen.berge@uit.no">jorgen.berge@uit.no</a>
An integrated approach to understanding weather–ocean interactions along seabird feeding routes	Kjell Einar Erikstad	NINA, IMR, NTNU, UR	Fjord and Coast	<a href="mailto:kjell.e.erikstad@nina.no">kjell.e.erikstad@nina.no</a>
Direct age determination in crustaceans: Validation of periodicity of age bands in Barents Sea red king crabs	Bodil Bluhm	UoT, ApN, UNIS, BC, UoNB, UoM	Fjord and Coast	<a href="mailto:bodil.bluhm@uit.no">bodil.bluhm@uit.no</a>
Marine base maps for the Porsanger Fjord	Aivo Lepland	NGU	Fjord and Coast	<a href="mailto:aivo.lepland@ngu.no">aivo.lepland@ngu.no</a>
Pelagic ecosystems in ice-covered and ice-free fjords under climate change	Claudia Halsband	ApN, UoT, UNIS	Fjord and Coast	<a href="mailto:clh@akvaplan.niva.no">clh@akvaplan.niva.no</a>

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<b>Sea ice in the Arctic Ocean, Technology and Systems of Agreements (Arctic Ocean)</b>				
<i>Sea ice, ecosystems and models</i>				
SOLICE: Developing Modelling Tools to Understand the Role of Solar Radiation to Sea Ice Mass Balance in a Seasonally Ice Covered Arctic	Mats Granskog	NPI, MET, UoT, ApN, FMI, CRREL, AWI	Arctic Ocean	<a href="mailto:mats.granskog@npolar.no">mats.granskog@npolar.no</a>
Long-term variability and trends in the Atlantic water inflow region (ATWAIN)	Vladimir Pavlov	NPI, IMR, UNIS, UoT, IOPAS, WHOI	Arctic Ocean	<a href="mailto:vladimir.pavlov@npolar.no">vladimir.pavlov@npolar.no</a>
Mesoscale modeling of ice, ocean and ecology of the Arctic Ocean	Tore Hattermann	ApN, IMR, NPI, SINTEF, MET	Arctic Ocean	<a href="mailto:tore.hattermann@akvaplan.niva.no">tore.hattermann@akvaplan.niva.no</a>
Ecosystem modeling of the Arctic Ocean around Svalbard (ArctisMod)	Pedro Duarte	NPI, ApN, NIVA, UoT	Arctic Ocean	<a href="mailto:pedro.duarte@npolar.no">pedro.duarte@npolar.no</a>
<i>Driving forces and development of new industry</i>				
Drivers for Arctic shipping: Transport alternatives, demand for minerals, and supply and demand of Russian icebreakers	Eirik Mikkelsen	NORUT, FNI, ApN, Capia, UAF	Arctic Ocean	<a href="mailto:Eirik.Mikkelsen@norut.no">Eirik.Mikkelsen@norut.no</a>
<i>Regimes for sustainable management</i>				
A-LEX: Regulating Arctic Shipping - Political, technological and environmental challenges	Tore Henriksen	UoT, MarinTek, ApN	Arctic Ocean	<a href="mailto:tore.henriksen@uit.no">tore.henriksen@uit.no</a>
<i>Technology</i>				
Ice floe interaction with ships and waves – IfiSaw	Karl Gunnar Aarsæther	SINTEF, UoT, TO, Opilio Inc.	Arctic Ocean	<a href="mailto:Karl.Gunnar.Aarsather@sintef.no">Karl.Gunnar.Aarsather@sintef.no</a>

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<b>Ocean acidification and ecosystem effects in northern waters (Ocean acidification)</b>				
<i>Understanding the physical and chemical mechanisms controlling ocean acidification (OA) in Arctic waters – past, present and future</i>				
Current OA state and variability-OASTATE	Agneta Fransson	NPI, NIVA, IMR, UoT, UNIS, BedIn	Ocean acidification	<a href="mailto:agneta.fransson@npolar.no">agneta.fransson@npolar.no</a>
Biogeochemical drivers and climate change on OA -OADRIVERS	Agneta Fransson	NPI, IMR, UoH, BedIn	Ocean acidification	<a href="mailto:agneta.fransson@npolar.no">agneta.fransson@npolar.no</a>
<i>Biological effects of Ocean Acidification (OA)</i>				
Physiological challenges of OA on copepods	Howard Browman	IMR, NPI, BOS, UoM, CU, RU	Ocean acidification	<a href="mailto:howardb@imr.no">howardb@imr.no</a>
Transgenerational effects of OA	Caludia Halsband	ApN, NPI	Ocean acidification	<a href="mailto:claudia.halsband@akvaplan.niva.no">claudia.halsband@akvaplan.niva.no</a>
Evolutionary adaptation during Arctic OA	Peter Thor	NPI, ApN, UNIS, UQAR, UoGo, DTU	Ocean acidification	<a href="mailto:peter.thor@npolar.no">peter.thor@npolar.no</a>
Ontogeny and physiological constraints on early life history stages of <i>Lophelia pertusa</i>	Johanna Järnegren	NINA, FSU	Ocean acidification	<a href="mailto:johanna.jarnegren@nina.no">johanna.jarnegren@nina.no</a>
Pteropod shell thickness and composition in different regimes	Agneta Fransson	NPI, IMR, JAMSTEC, IOPAS	Ocean acidification	<a href="mailto:agneta.fransson@npolar.no">agneta.fransson@npolar.no</a>
<i>Coupled climate-ecosystem-acidification modelling from organism to basin</i>				
Validation and comparison of coupled physical-biogeochemical models	Philip Wallhead	NIVA, IMR	Ocean acidification	<a href="mailto:philip.wallhead@niva.no">philip.wallhead@niva.no</a>
Investigate pelagic ecosystem sensitivity and feedbacks to Arctic Ocean acidification	Philip Wallhead	NIVA, IMR	Ocean acidification	<a href="mailto:philip.wallhead@niva.no">philip.wallhead@niva.no</a>
Population-level effects of Arctic Ocean acidification on copepods	Pedro Duarte	NPI	Ocean acidification	<a href="mailto:pedro.duarte@npolar.no">pedro.duarte@npolar.no</a>

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Benthic-pelagic coupling of Arctic Ocean acidification	Evgeny Yakushev	NIVA	Ocean acidification	<a href="mailto:evgeny.yakushev@niva.no">evgeny.yakushev@niva.no</a>
<i>Socio-economic consequences and management options</i>				
Socio-economic consequences and management options	Eirik Mikkelsen	NORUT, UoT, NIVA, UoQ	Ocean acidification	<a href="mailto:eirik.mikkelsen@norut.no">eirik.mikkelsen@norut.no</a>
<b>Effects of climate change on terrestrial ecosystems, landscapes, society and indigenous peoples (Terrestrial)</b>				
<i>Vegetation state change and herbivore management</i>				
NCoE-Tundra: Herbivore effects on tundra overgrowth, management and environmental gains	Jane Uhd Jepsen	NINA, UoT	Terrestrial	<a href="mailto:jane.jepsen@nina.no">jane.jepsen@nina.no</a>
KLIMAVEG: Long term vegetation change in alpine areas in Northern-Norway and Poland – relation to climate and grazing	Jutta Kapfer	NFLI, UoT, UoOu	Terrestrial	<a href="mailto:jutta.kapfer@skogoglandskap.no">jutta.kapfer@skogoglandskap.no</a>
Species identification and demographic information from fecal NIRS scans? A study on fox and small rodents	Kari Anne Bråthen	UoT, NINA, NPI	Terrestrial	<a href="mailto:kari.brathen@uit.no">kari.brathen@uit.no</a>
<i>Ecosystem effects of extreme climate events and changing seasons</i>				
WINNIT – effects of extreme weather and long distance pollution on plant societies	Jarle W. Bjerke	NINA, Bioforsk, UoT	Terrestrial	<a href="mailto:jarle.werner.bjerke@nina.no">jarle.werner.bjerke@nina.no</a>
Ecosystem stress from the combined effects of WInter CLimate change and Air Pollution – how do the impacts differ between biomes? (WICLAP)	Jarle W. Bjerke	NINA, MET, NORUT	Terrestrial	<a href="mailto:jarle.werner.bjerke@nina.no">jarle.werner.bjerke@nina.no</a>
Sentinel Synergy Framework (SenSyF)	Eirik Malnes	NORUT, NINA, UoT	Terrestrial	<a href="mailto:Eirik.Malnes@norut.no">Eirik.Malnes@norut.no</a>

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FINEGRASS: Effect of climate extremes on inland production of grass in North-Norway	Gregory Taff	NFLI, Bioforsk, NINA	Terrestrial	<a href="mailto:gta@skogoglandskap.no">gta@skogoglandskap.no</a>
SnoEcoPhen: Phenological synchrony of arctic plants and their pollinators at altered snow regimes	Elisabeth Cooper	UoT, UNIS	Terrestrial	<a href="mailto:elisabeth.cooper@uit.no">elisabeth.cooper@uit.no</a>
<i>Capacity for adaptation in indigenous people and local societies</i>				
The re-distribution of common winter pastures – a comparative analyses of land tenure privatization (REDISTRIBUTE)	Marius Warg Næss	NIKU, NINA, UCL	Terrestrial	<a href="mailto:marius.naess@niku.no">marius.naess@niku.no</a>
<i>Adaptive management of ecosystem services</i>				
Adaptive goose management beyond borders	Ingunn Tombre	NINA, NIKU, NORUT, AU	Terrestrial	<a href="mailto:ingunn.tombre@nina.no">ingunn.tombre@nina.no</a>
<i>Observation systems for climate effects</i>				
COAT: Climate-ecological-Observatory-for-Arctic-Tundra	Rolf Ims	UoT, NINA, NPI, UNIS, MET	Terrestrial	<a href="mailto:rolf.ims@uit.no">rolf.ims@uit.no</a>

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<b>Hazardous substances – effects on ecosystems and human health (Hazardous substances)</b>				
<i>Climate change impact and new contaminants</i>				
Climate mediated increases in organic matter export to arctic coastal waters	Amanda Poste	NIVA, ApN, NPI, UoT, UoO, EC, SALT	Hazardous substances	<a href="mailto:amanda.poste@niva.no">amanda.poste@niva.no</a>
TraPha- Transformation properties and environmental risk-pharmaceuticals	Roland Kallenborn	NMBU, UNIS, UoT, NILU, NPI, ApN, SRCES RAS	Hazardous substances	<a href="mailto:roland.kallenborn@nmbu.no">roland.kallenborn@nmbu.no</a>
Influence of pollution and climate variation in rivers and coastal waters indicated by freshwater and marine bivalves (Kolarctic)	Michael Carroll	ApN, Bioforsk, NINA, BC, NHS, UoJ, LCED, TECABN, INEP	Hazardous substances	<a href="mailto:michael.carroll@akvaplan.niva.no">michael.carroll@akvaplan.niva.no</a>
Cyclic volatile methyl siloxanes (cVMS) - A case study of Storvatn, Hammerfest	Nicholas Warner	NILU, ApN, UoL	Hazardous substances	<a href="mailto:Nicholas.Warner@nilu.no">Nicholas.Warner@nilu.no</a>
Uptake and trophic magnification of organophosphorus flame retardants in Arctic lake ecosystems	Anita Evenset	ApN, NIVA, NPI, NILU, UoT	Hazardous substances	<a href="mailto:Anita.Evenset@akvaplan.niva.no">Anita.Evenset@akvaplan.niva.no</a>
<i>Environmental contaminants in a multi-stress perspective</i>				
Multi-stress relationships in seabird populations: Interactions between natural stressors and environmental contaminants	Jan O. Bustnes	NINA, NPI, NVH, ApN, NILU, NTNU, CEBC	Hazardous substances	<a href="mailto:Jan.Bustnes@nina.no">Jan.Bustnes@nina.no</a>
Effects of contaminant exposure on energetics	Heli Routti	NPI, NILU, UoT, NVH, SINTEF, UoB, UoAa	Hazardous substances	<a href="mailto:heli.routti@npolar.no">heli.routti@npolar.no</a>
Impacts of environmental contaminants and natural stressors on northern raptors	Jan O. Bustnes	NINA, NILU, UoT, UoA	Hazardous substances	<a href="mailto:Jan.Bustnes@nina.no">Jan.Bustnes@nina.no</a>
Microplastics in arctic marine food chains; biological uptake pathways and socio-economic consequences	Claudia Halsband Dorte Herzke	ApN, NIVA, NILU, NINA, NORUT, NPI, UNIS, UoT, SALT, TM	Hazardous substances	<a href="mailto:claudia.halsband@akvaplan.niva.no">claudia.halsband@akvaplan.niva.no</a> <a href="mailto:dhe@nilu.no">dhe@nilu.no</a>

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Is the Arctic charr population in Lake Ellasjøen, Bjørnøya, affected by chronic exposure to contaminants?	Anita Evenset	ApN, NIVA, NILU, UoT, CRRLU, UoW	Hazardous substances	<a href="mailto:Anita.Evenset@akvaplan.niva.no">Anita.Evenset@akvaplan.niva.no</a>
Effect of pollution on survival of a top predator: A case study integrating ecotoxicology climatology and demography (TOXICLIM)	Kjell E. Erikstad	NINA, UoT, BS, UoR	Hazardous substances	<a href="mailto:Kjell.e.erikstad@nina.no">Kjell.e.erikstad@nina.no</a>
<i>Pollution from petroleum activities and shipping in the north – Effects on Arctic ecosystems and communities</i>				
Characterization of new biomarkers of endocrine disruption in <i>Chlamys Islandica</i> : From natural seasonal baseline levels to their sensitivity towards oil related compounds	Perrine Geraudie	ApN, NILU, IDAEA-CSIC	Hazardous substances	<a href="mailto:pge@akvaplan.niva.no">pge@akvaplan.niva.no</a>
Epigenetic effects of oil pollutants in polar cod	Øivind Andersen	Nofima, ApN	Hazardous substances	<a href="mailto:oivind.andersen@nofima.no">oivind.andersen@nofima.no</a>
Trophic transfer and genotoxicity of PAHs, their alkylated homologues and metabolites along Arctic and sub-arctic marine food chains	Maria Granberg	NPI, ApN, NINA, UoT, NTNU, UoCo	Hazardous substances	<a href="mailto:maria.granberg@npolar.no">maria.granberg@npolar.no</a>
<i>Human health effects, risk analysis &amp; communication</i>				
Contaminants, food and health security in border region	Eldbjørg Heimstad	NILU, NORUT, UoT, ApN, NRPA, FMFI, UoOu, NEI, FMI, NPC, MCBR, INEP - RAS	Hazardous substances	<a href="mailto:esh@nilu.no">esh@nilu.no</a>



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<b>Environmental impacts of industrial activity in the north (MIKON)</b>				
<i>Knowledge basis for ecosystem based management</i>				
ECOMINA – ECOSystem-based management for areas targeted by deep-sea MINing in the Arctic: A pilot study	Eva Ramirez-Llodra	NIVA, NGU, IMR, UoT, UoS	MIKON	<a href="mailto:eva.ramirez@niva.no">eva.ramirez@niva.no</a>
Net Environmental Benefit Analysis Tool to Assess the Environmental Effects of Arctic Oil Spills and Oil Spill Response Technologies – NEBA	Lionel Camus	ApN, UoT, NPI, UNIS, Cedre, UoLa	MIKON	<a href="mailto:lionel.camus@akvaplan.niva.no">lionel.camus@akvaplan.niva.no</a>
Ecosystem vulnerability assessment of resources in the Ecosystem vulnerability assessment of resources in the Barents Sea (VULRES)	Raul Primicerio	UoT, IMR, ApN	MIKON	<a href="mailto:raul.primicerio@uit.no">raul.primicerio@uit.no</a>
<i>Consequences for organisms and ecosystems</i>				
Improving Methods to Assess Ecological Restoration in North Norway (EcoRest)	Gregory Taff	NFLI, NINA	MIKON	<a href="mailto:gta@skogoglandskap.no">gta@skogoglandskap.no</a>
Biological effects of the Skjervøy diesel oil spill – phase II of the sub-Arctic case study	Kjetil Sagerup	ApN, UoT	MIKON	<a href="mailto:kjetil.sagerup@akvaplan.niva.no">kjetil.sagerup@akvaplan.niva.no</a>
Mapping and monitoring cultural heritage sites and environments in the Svalbard Archipelago (CULRES)	Stine Barlindhaug	NIKU, NINA, NORUT, NPI	MIKON	<a href="mailto:stine.barlindhaug@niku.no">stine.barlindhaug@niku.no</a>
Fate and Impact of Mine Tailings on marine Arctic ecosystems – FIMITA	Anita Evenset	ApN, NGU, IMR, NORUT, NRPA, SIO, UoG	MIKON	<a href="mailto:anita.evenset@akvaplan.niva.no">anita.evenset@akvaplan.niva.no</a>
Arctic Cetaceans and Ocean Noise (ACON)	Kit Kovacs	NPI, UoT	MIKON	<a href="mailto:kit.kovacs@npolar.no">kit.kovacs@npolar.no</a>

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Mineral Extraction in the High North – Radiological Risks, Impacts and Mitigation (MINEXRIM)	Louise Kiel Jensen	NRPA, NIVA, NULS	MIKON	<a href="mailto:louise.kiel.jensen@nrpa.no">louise.kiel.jensen@nrpa.no</a>
<i>Consequences for cultural heritage and society</i>				
Sea urchin harvest: Ecosystem recovery, integrated management of social-ecological system, ecosystem service and sustainability (ECOURCHIN)	Wenting Chen	NIVA, UoT, Nofima, UoC	MIKON	<a href="mailto:wenting.chen@niva.no">wenting.chen@niva.no</a>
Fragmentation, density dependency and climate change – Saami reindeer husbandry on the brink	Marius Warg Næss	NIKU, NINA, UCL	MIKON	<a href="mailto:marius.naess@niku.no">marius.naess@niku.no</a>
Evaluation of impacts of industrial development on cultural heritage and landscapes within an ecosystem services framework (EvaCES)	Marius Warg Næss	NIKU, UoT	MIKON	<a href="mailto:marius.naess@niku.no">marius.naess@niku.no</a>
Environmental Impact Analyses (EIA) for reindeer herding - an evaluation	Jan Åge Riseth	NORUT, NINA	MIKON	<a href="mailto:Jan.Age.Riseth@norut.no">Jan.Age.Riseth@norut.no</a>

#### Abbreviations:

**ApN:** Akvaplan-niva Inc.; **AU:** Aarhus University; **AWI:** Alfred Wegener Institute; **BC:** Bates College; **BedIn:** Bedford Institute; **Bioforsk:** Norwegian Institute for Agricultural and Environmental Research; **BOS:** Bigelow Laboratory for Ocean Science; **BS:** The Bjerknes Centre; **CEBC:** Centre d'Etudes Biologiques de Chizé; **Cedre:** Centre of Documentation, Research and Experimentation on Accidental Water Pollution; **CRRL:** Control/Robotics Research Laboratory (NYU Polytechnic School of Engineering); **CRRLU:** Columbia River Research Laboratory USA; **CU:** Clemson University; **DTU:** Technical University of Denmark; **DU:** Dalhousie University; **EC:** Environment Canada; **FMFI:** County governor of Finnmark; **FMI:** Finnish Meteorological Institute; **FNI:** Fridtjof Nansen Institute; **FOC:** Fisheries and Oceans Canada; **FSU:** Florida State University; **JAMSTEC:** Japan Agency for Marine-Earth Science and Technology; **IDAEA-CSIC:** Institute of Environmental Assessment and Water Research – Spanish Council for Scientific Research; **IMR:** Institute of Marine Research; **INEP - RAS:** Institute of North Industrial Ecology Problems – Russian Academy of Sciences; **IOPAS:** Institute of Oceanology, Polish Academy of Sciences; **LCED:** Lapland Centre for Economic Development; **MarinTek:** The Norwegian Marine Technology Research Institute; **MCBR:** Murmansk Country Birth Registry; **MET:** The Norwegian Meteorological Institute; **MU:** Massey University; **NEI:** Northern and environmental issues; **NFLI:** The Norwegian Forest and Landscape Institute, **NGU:** Geological Survey of Norway; **NHS:** Natural Heritage Services; **NINA:** Norwegian Institute for Nature Research; **NIKU:** The Norwegian Institute for Cultural

Heritage Research; **NILU**: Norwegian Institute for Air Research; **NIVA**: Norwegian Institute for Water Research; **NMBU**: Norwegian University of Life Sciences; **Nofima**: The Norwegian Institute of Food, Fisheries and Aquaculture Research; **NORUT**: Northern Research Institute; **NPC**: The Northwest Public Health Researcher Center; **NPI**: Norwegian Polar Institute; **NRPA**: Norwegian Radiation Protection Authority; **NULS**: Norwegian University of Life Sciences; **NTNU**: Norwegian University of Science and Technology; **NVH**: Norwegian School of Veterinary Science; **PINRO**: Polar Research Institute of Marine Fisheries and Oceanography; **RU**: Ryerson University; **SINTEF**: The Company for Industrial and Technological Research; **SIO**: Scripps Institution of Oceanography; **SRCES RAS**: Scientific Research Center for Ecological Safety - Russian Academy of Sciences; **TECABN**: Transport and the Environment County Administrative Board of Norrbotten; **TM**: Tromsø Municipality; **TO**: Troms Offshore; **TRFM**: Tana River Fisheries Management; **UAF**: University of Alaska; **UB**: University of Burgundy; **UCL**: University College of London; **UoA**: University of Antwerpen; **UoAa**: University of Aalborg; **UoB**: University of Bergen; **UoC**: University of California; **UoCo**: University of Copenhagen; **UNIS**: The University Centre in Svalbard; **UoG**: University of Gent; **UoGo**: University of Gothenburg; **UoH**: University of Hokkaido; **UoJ**: University of Jyväskylä; **UoL**: University of Leicester; **UoLa**: University of Laval; **UoO**: University of Oslo; **UoOu**: University of Oulu; **UoM**: University of Maine; **UoNB**: University of New Brunswick; **UoQ**: University of Queensland; **UoR**: University of Reading; **UoS**: University of Southampton; **UoT**: University of Tromsø - The Arctic University of Norway; **UoWa**: University of Waterloo; **UQAR**: Université du Québec à Rimouski; **UR**: University of Reading; **UT**: University of Texas; **UTu**: University of Turku; **WHOI**: Woods Hole Oceanographic Institution