

Projects in the Fram Centre Flagships for 2012

Research areas/Project titles	Project leader	Participating institutions	Flagship	E-mail project leader
Effects of climate change on sea and coastal ecology in the north (Fjord and Coast)				
<i>Physical-biological coupling: Oceanography and habitat use by predators and their prey</i>				
The role of sea ducks in benthic fjord ecosystems in relation to invasive red king crabs and varying ice conditions	Sveinn Are Hanssen	NINA, IMR	Fjord and Coast	sveinn.a.hanssen@nina.no
Anadromous Arctic charr in Northern-Norway – migration, habitat use and effects of climate change.	Guttorm Christensen	ApN, NIVA, VI, UiT	Fjord and Coast	kari.norheim@vetinst.no guttorm.christensen@akvaplan.niva.no
Atlantic salmon; an interdisciplinary approach, combining natural and social science, to improve the management of salmon sea-fisheries in northern coastal areas (ASCA).	Martin Svenning	NINA, NIKU, UiT, IMR	Fjord and Coast	martin.svenning@nina.no
Drift of fish larvae, fish-stock interactions and their effect on seabird dynamics	Kjell Einar Erikstad	NINA, IMR	Fjord and Coast	kjell.e.erikstad@nina.no
Seabird habitat use and migration strategies	Børge Moe	NINA, NPI	Fjord and Coast	borge.moe@nina.no
<i>Structure, function and change in Arctic and boreal fjord ecosystems</i>				
Habitat structure and ecosystem function of eel grass (<i>Zostera marina</i>) meadows in the high north in relation to human traditional use and exploitation	Nina M. Jørgensen	ApN, NIVA, UiT, IMR, Norut	Fjord and Coast	nina.jorgensen@akvaplan.niva.no
Marine base maps for the Porsanger fjord	Aivo Lepland	NGU	Fjord and Coast	Aivo.Lepland@NGU.NO

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Benthic biodiversity and ecosystem function in Svalbard and North Norway	Sabine Cochrane	ApN, NINA	Fjord and Coast	sc@akvaplan.niva.no
Reduced sea urchin grazing-effect on climate change or predator change?	Hartvig Christie	NIVA, ApN, IMR, HiFi	Fjord and Coast	hartvig.christie@niva.no
Ecosystem structure and use of marine resources from bivalve and fish bone proxies	Michael Carroll	ApN, NIKU	Fjord and Coast	mlc@akvaplan.niva.no
Trophic interactions in pelagic ecosystems	Tove M. Gabrielsen	UNIS, NPI, ApN	Fjord and Coast	tove.gabrielsen@unis.no
<i>Human dimensions of ecosystem response to climate change</i>				
Mapping cultural seascape and changing environment in Porsanger fjord	Einar Eythórsson	NIKU, UiT	Fjord and Coast	einar.eythorsson@niku.no
Climate change and institutional response: The cases of local/regional planning strategies and cultural heritage management	Arild Buanes	Norut, NIKU	Fjord and Coast	Arild.Buanes@norut.no
Sea ice in the Arctic Ocean, Technology and Systems of Agreements				
Characterization of Arctic sea ice properties from remote sensing observations	Torbjørn Eltoft	UiT, NPI, Norut, Met.no, Kongsberg	Arctic Ocean	torbjorn.eltoft@uit.no
Long-term variability and trends in the Atlantic water inflow region	Vladimir Pavlov Randi Ingvaldsen	NPI, IMR, UNIS, UiT	Arctic Ocean	vladimir.pavlov@npolar.no randi.ingvaldsen@imr.no
Mesoscale modeling of ice, ocean and ecology of the Arctic ocean	Ole-Anders Nøst	ApN, IMR, NPI, SINTEF, Met.no	Arctic Ocean	ole.anders.nost@npolar.no
Understanding Arctic shipping – Systematic and automatic collection and presentation of data on Arctic shipping and its driving forces	Eirik Mikkelsen	Norut, Capia, DnV, MarinTek, FNI	Arctic Ocean	Eirik.Mikkelsen@norut.no
Fate, effect and risk modeling of accidental oil spill in the sea ice ecosystem	Lionel Camus	ApN, Norut, UNIS, UiT, NPI, NRPA, NIVA, NILU, SINTEF	Arctic Ocean	lionel.camus@akvaplan.niva.no
Introduction of marine invasive species through ballast water and biofouling	Inger Greve Alsos	UiT, IMR, UNIS, NPI, ApN	Arctic Ocean	inger.g.alsos@uit.no
Regulating Arctic shipping: Political, legal,	Tore Henriksen	UiT, MarinTek, ApN	Arctic Ocean	tore.henriksen@uit.no

technological and environmental challenges				
Dynamic interactions between large zooplankton (amphipods and krill) and seals: Impacts of climate change (ZOOSEAL)	Tore Haug	IMR, NPI, ApN, UNIS, AWI, NVH	Arctic Ocean	tore.haug@imr.no
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Ocean acidification and ecosystem effects in northern waters (Ocean acidification)				
<i>Understanding the physical and chemical mechanisms controlling ocean acidification in Arctic waters – past, present and future</i>				
Establishing the current status of ocean acidification in the Norwegian Arctic (OA _{state})	Agneta Fransson Kai Sørensen	NPI, NIVA, IMR, UNIS, international partners	Ocean acidification	agneta.fransson@npolar.no kai.sorensen@niva.no
The role of Sea Ice processes on CO ₂ exchange and Calcium carbonate saturation levels (SICCA)	Agneta Fransson Melissa Chierici	NPI, IMR, NIVA, UNIS, international partners	Ocean acidification	agneta.fransson@npolar.no Melissa.Chierici@imr.no
<i>Ocean acidification effects on key components of the Arctic marine ecosystem</i>				
Effects of ocean acidification and temperature on Arctic vs. boreal zooplankton species and populations	Haakon Hop Howard Browman	NPI, IMR, ApN	Ocean acidification	haakon.hop@npolar.no howardb@imr.no
Effects of Ocean acidification on the reproduction of the reef building cold water coral <i>Lophelia pertusa</i> – continued	Johanna Järnegren	NINA, SINTEF, UiT, NPI, IMR	Ocean acidification	johanna.jarnegren@nina.no
<i>Socio-economics of ocean acidification</i>				
Economic value and Ocean acidification – continued	Claire Armstrong Eirik Mikkelsen	UiT, NIVA, Norut, NINA	Ocean acidification	claire.armstrong@uit.no Eirik.Mikkelsen@norut.no
Effects of climate change on terrestrial ecosystems, landscapes, society and indigenous peoples (Terrestrial)				
<i>Vegetation state change and herbivore management</i>				
NCoE-Tundra: Herbivore effects on tundra overgrowth, management and environmental	Jane Uhd Jepsen	NINA, UiT	Terrestrial	jane.jepsen@nina.no

gains				
TUNDRAscape: Analyzing the effect of climate and human uses on tundra ecosystems by remote sensing	Dorothee Ehrich	NINA, NIKU, UiT	Terrestrial	dorothee.ehrich@uit.no
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<i>Ecosystem effects of extreme climate events and changing seasons</i>				
Svalbard terrestrial ecosystem – climate impacts and trophic interactions	Åshild Pedersen	NPI, NINA, UNIS	Terrestrial	ashild.pedersen@npolar.no
Climate-dependent infectious agents and diseases in reindeer (wildlife diseases)	Morten Tryland	NVH, VI, UiT	Terrestrial	Morten.Tryland@veths.no
EWWA: Winter climate and effects of extreme warm weather on vegetation in northern ecosystems	Jarle W. Bjerke	NINA, Norut, Bioforsk, UiT	Terrestrial	jarle.werner.bjerke@nina.no
Climate changes and archaeological deposits	Elin R. Myrvoll	NIKU, Bioforsk, UiT	Terrestrial	elin.myrvoll@niku.no
<i>Capacity for adaptation in indigenous people and local societies</i>				
Traditional indigenous knowledge 21 st Century-climate change and adaptation	Astrid Ogilvie	CICERO, NIKU, UiT	Terrestrial	astrid.ogilvie@cicero.uio.no
Climate & reindeer 2	Bård J. Bårdsen	NINA, CICERO	Terrestrial	bard.jorgen.bardsen@nina.no
<i>Adaptive management of ecosystem services</i>				
GOOSEHUNT: (Reducing damage to agriculture by migratory geese by means of population control by hunting)	Ingunn Tombre	NINA, NIKU, Norut, Aarhus University	Terrestrial	ingunn.tombre@nina.no
MIGRAPOP: (Adaptive management of migratory populations: North-Norway, Svalbard and the European continent)	Ingunn Tombre	NINA, NIKU, Bioforsk	Terrestrial	ingunn.tombre@nina.no
Climatic adaptation: Reindeer herding and adaptation to climatic changes	Jan Åge Riseth	Norut, NINA, UiUppsala	Terrestrial	janar@norut.no

<i>Observation systems for climate effects</i>				
COAT: Climate-ecological-Observatory-for-Arctic-Tundra	Rolf Ims	UiT, NINA, NPI, UNIS, Met.no	Terrestrial	rolf.ims@uit.no
LIPA: Limnological systems in Pasvik	Karl Øystein Gjelland	NINA, UiT, Bioforsk, ApN	Terrestrial	karl.gjelland@nina.no
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Hazardous substances – effects on ecosystems and human health (Hazardous substances)				
<i>Human health and society</i>				
Mixtures and metabolic syndrome	Torkjel Sandanger	UiT, NILU	Hazardous substances	Torkjel.Sandanger@nilu.no
Mixtures and hormonal changes	Jon Ø. Odland	UiT, NILU	Hazardous substances	jon.oyvind.odland@uit.no
ARCRISK - Time trends and modeling	Torkjel Sandanger	NILU, UiT	Hazardous substances	Torkjel.Sandanger@nilu.no
Contaminants , food security in the border region (Kolarctic)	Marit Aure	ApN, Norut, NILU, UiT, NRPA	Hazardous substances	marit.aure@norut.no
<i>Animal health and ecosystem</i>				
New contaminants (chlorinated paraffins and Me-Hg)	Nicholas Warner	ApN, NIVA, NPI, NILU	Hazardous substances	Nicholas.Warner@nilu.no
COPOL II - Importance of primary and secondary sources	Anita Evenset	ApN, NIVA, NPI, NILU	Hazardous substances	Anita.Evenset@akvaplan.niva.no
Influence of pollution and climate variation in rivers and coastal waters indicated by freshwater and marine bivalves - Sør-Varanger	Paul E. Aspholm	Bioforsk, ApN, NINA	Hazardous substances	paul.eric.aspholm@bioforsk.no
Environmental stress in seabirds	Jan O. Bustnes	ApN, NINA, NILU, NPI	Hazardous substances	Jan.Bustnes@nina.no
Effects of contaminant exposure on energetics	Heli Routti	NPI, NILU, UiT, UiB	Hazardous substances	heli.routti@npolar.no
Arctic charr population at risk? Lake Ellasjøen, Bjørnøya	Anita Evenset	ApN, NIVA, NILU, UiT	Hazardous substances	Anita.Evenset@akvaplan.niva.no

Exposure to pollutants and quantification by qPCR of IFN gene expression in arctic wildlife	Jacques Godfroid	NVH, NPI, NILU	Hazardous substances	Jacques.Godfroid@nvh.no
Reproductive health of pied flycatcher - Pasvik	Oddmund Kleven	NINA, Bioforsk, NRPA, UiT	Hazardous substances	oddmund.kleven@nina.no
Raptors-multistress	Jan O. Bustnes	NINA, NPI	Hazardous substances	Jan.Bustnes@nina.no
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<i>Petroleum pollution</i>				
The combined effects of radionuclides, metals and organic contaminants in produced water on early life stages of Calanus finmarchicus	Louise K. Jensen	NRPA, UiT, NIVA	Hazardous substances	louise.kiel.jensen@nrpa.no
Physiological responses to petroleum-related compounds in polar cod	Jasmine Nahrgang	UiT, UNIS, ApN, IMR, MMBI	Hazardous substances	jasmine.m.nahrgang@uit.no
"Oil in ice" - Fate, Effect, and Risk Modeling	Lionel Camus	ApN, NIVA, NRPA, Norut, NPI, SINTEF, UiT, UNIS	Hazardous substances	lionel.camus@akvaplan.niva.no
<i>Risk communication</i>				
Understanding strategies and communication	Alena Bartonova	NILU, Norut, UiT	Hazardous substances	alena.bartonova@nilu.no

*A number of projects have a significant amount of international cooperation

Abbreviations:

ApN: Akvaplan-NIVA Inc.; **AWI:** Alfred Wegener Institute; **Bioforsk:** Norwegian Institute for Agricultural and Environmental Research; **CICERO:** Center for International Climate and Environmental Research – Oslo; **DnV:** Norwegian Veritas; **FNI:** Fridtjof Nansen Institute; **IMR:** Institute of Marine Research; **HiFi:** Finnmark University College; **Kongsberg:** Kongsberg Satellite Services; **Kystverket:** Norwegian Coastal Administration; **MarinTek:** The Norwegian Marine Technology Research Institute; **Met.no:** The Norwegian Meteorological Institute; **MMBI:** Murmansk Marine Biological Institute; **NGU:** Geological Survey of Norway; **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; **Nofima:** The Norwegian Institute of Food, Fisheries and Aquaculture Research; **Norut:** Northern Research Institute; **NPI:** Norwegian Polar Institute; **NRPA:** Norwegian Radiation Protection Authority; **NTNU:** Norwegian University of Science and Technology; **NVH:** Norwegian School of Veterinary Science; **SINTEF:** The Company for Industrial and Technological Research; **SSHf:** Centre of Sami Health Research; **TØI:** The Institute of Transport Economics; **UiB:** University of Bergen; **UiT:** University of Tromsø; **UNIS:** The University Centre in Svalbard; **Unilab:** Unilab Analysis Inc.; **VI:** Norwegian Veterinary Institute

