

**NORWAY 2015**

colour code:

Institute of Marine Research (Norway) IMR	Norwegian Polar Institute (NPI)	Other Institutions, Natural Science Projects	Social Science Institutions/Projects
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Project title	Contact	Institution - lead	Institution - other	Country - lead	Country - other	Project leader	Other participants	Project period	Investigated area	Description/abstract
Regular workshops on the red king and snow crab	Ann Merete Hjelset (IMR), Jan H. Sundet (IMR), Konstantin Sokolov (PINRO), Slava Bizikov (VNIRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)	Norway and Russia		see contact		2009 -	Barents Sea	Workshops will be held every third year to update knowledge on the two crab species in the Barents Sea and to highlight new prioritized issues for research. A workshop was arranged in Tromsø in March 2014 with representatives from Russia and Norway. See report; "Rapport fra Havforskningen Nr 18 - 2014".
Joint 5-year program between IMR and PINRO, on the research on red king - and the snow crab in the Barents Sea	Jan H. Sundet (IMR), Konstantin Sokolov (PINRO), Sergey Bakanov (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Russian Federal Research Institute of Fisheries and Oceanography (VNIRO), University of Tromsø, Norway	Norway and Russia		see contact		2014-2018	Barents Sea	Main thematic issues: - Ecological role of the red king crab and the snow crab in the Barents Sea; - Main life history parameters of these two crab species introduced into the Barents Sea; - New methods for crab stock assessments and monitoring (sampling gears; survey area etc.).
Joint Norwegian Russian ecosystem survey in the Barents Sea	Jan Erik Stiansen (IMR), and Evgenij Shamray (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)		Norway and Russia		see contact		2003 -	Barents Sea	Joint investigations of all aspects of the ecosystem in the Barents Sea. Involves oceanography, plankton investigations, fish and benthos investigations and observations of sea mammals.
Research related to management of harp and hooded seals in the Northeast Atlantic	Tore Haug (IMR), Vladimir Zabavnikov (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)		Norway and Russia		see contact		1950 -	Northeast Atlantic Ocean	
Research related to management of grey seals in coastal waters of Norway and Russia	Kjell Tormod Nilssen (IMR), Andrey Kondakov (MMBI)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)		Norway and Russia		see contact		1990 -	Coastal waters of Russia and Norway	
Management and advice on fisheries for commercial species in the Barents Sea	Harald Gjørsæter (IMR) and Evgenij Shamray (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)	Norway and Russia		see contact		1976 -	Barents Sea	Joint work on preparing advice to the joint Russian Norwegian fisheries commission.
Joint investigations on commercial species in the Barents sea - survey in the winter	Asgeir Aglen (IMR), Evgenij Shamray (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)		Norway and Russia		see contact		1982 -	Barents Sea	Investigations of young cod and haddock, redfish and alibut in winter. Data needed to assess the stock size
Joint work in ICES AFWG	Bjarne Bogstad (IMR) and Yuriy Kovalev (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)	Norway and Russia		see contact		1959 -	Barents Sea	Joint work on assessing the status of commercial fish stocks in the Barents sea and providing advice for total quotas. Chair of the working group has been alternated between Norwegian and Russian scientists in later years
Annual scientific meetings	Harald Loeng (IMR), Evgenij Shamray (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Russian Federal Research Institute of Fisheries and Oceanography (VNIRO)	Norway and Russia		see contact		1958 -	Barents Sea	Annual scientific meeting to address matters of cooperation and to answer requests from the joint fisheries commission
Annual exchange of personnel and other meetings to improve cooperation	Cecilie Hansen (IMR), Evgenij Shamray (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)		Norway and Russia		see contact		2013-2015	Barents Sea	Fundings from Ministry of foreign affairs to support activities to increase cooperation between Russian and Norwegian partners.
Several projects concerning environment	Cecilie Hansen (IMR), Oleg Titov (PINRO)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Ministry of natural resources in Russia and Ministry of Climate and Environment in Norway	Norway and Russia		see contact		2009 -	Barents Sea	Work under the joint Russian Norwegian Environmental Commission organised by the Ocean Environmental Working Group
ATLANTIS: socioEconomics and Ecosystem-based fisheries management	Ken Drinkwater	Institute of Marine Research (IMR)	Institute of Marine Research (IMR) and Knipovich Polar Research Institute of Marine Fisheries and Oceanography (PINRO)	Norway	Russia, USA, Australia	see contact	Cecilie Hansen, Mette Skern-Mauritzen, Anne Jahkel	July 2012-June 2015		
Barents Sea walrus Ecology	Drs Christian Lydersen & Kit M. Kovacs	Co-leads Norwegian Polar Institute (NPI) & Marine Mammal Council (Russia)		Norway-Russia Environment Commission Bi-lateral (2 leads not one)	Russia	For Norway: Drs Christian Lydersen & Kit M. Kovacs; for Russia: Dr Stas Belikov & Andre Boltunov (MMC)	Varvara Semenova	2014-2015	Barents Sea (Svalbard in the north, Pechora in the south)	Studying stock structure, movement patterns and general ecology of Barents Sea walrus.
Pechora walrus abundance	Drs Christian Lydersen & Kit M. Kovacs	Co-leads Norwegian Polar Institute (NPI) & Research and Design Institute for Fishing Fleet "Gyprorybflot" (Russia)	Russian Academy of Science, University of St Petersburg	Norway-Russia Environment Commission Bi-lateral (2 leads not one)	Russia	For Norway: Drs Christian Lydersen & Kit M. Kovacs; for Russia: Drs. Vladimir I. Chernook & Dimitri Glazov	Irina S. Trukhanova	2011-2012	Pechora Sea	Abundance determination of Pechora Sea walrus.
Estimating the size of the Barents Sea polar bear population	Jon Aars	Norwegian Polar Institute (NPI)	probably: All-Russian Research Institute for Nature Protection, Moscow, Russia	Norway	Russia	Jon Aars	Stanislav Belikov		Barents Sea	The population size of Barents Sea polar bears will be estimated by line transect methodology from helicopter operating from a vessel or land. The survey will cover Svalbard, Franz Josef Land, and all sea ice habitat between 10 and 60 degrees east. The survey is a follow up to a similar Norwegian-Russian survey in 2004, that was conducted by the same partners. The aim is to reveal if the population has changed significant in size, and to provide a new estimate for comparison to future estimates.
Population studies on ivory gull	Hallvard Strøm, Maria V. Gavrilov	Co-leads Norwegian Polar Institute (NPI) and National Park Russian Arctic		Norway and Russia		Hallvard Strøm, Maria V. Gavrilov		2006 -	Svalbard and Russian the Arctic	Population studies on the population of ivory gull in Svalbard and the Russian Arctic
Seabird colony database for the Barents and Kara Seas	Hallvard Strøm, Grigory Tertitski	Co-leads Norwegian Polar Institute (NPI) and Institute of Geography, Russian Academy of Science	Murmansk Marine Biological Institute (MMBI) Institute of Geography, Russian Academy of Science, Moscow Kandalaksha State Nature Reserve Solovetski State Nature Reserve All-Russian Institute for Nature Research and Reserves (VNI Priroda) Russian Arctic National Park, Arkhangelsk	Norway and Russia		Hallvard Strøm, Grigory Tertitski	Juri Krasnov, Alexander Cherenkov, Vladimir Semashko and Maria Gavrilov	1990 -	Barents, White and Kara Seas	Database containing all available data on seabird colonies in the investigated area
Joint Seabird Literature Database	Hallvard Strøm, Grigory Tertitski	Co-leads Norwegian Polar Institute (NPI) and Institute of Geography, Russian Academy of Science	Murmansk Marine Biological Institute (MMBI) Institute of Geography, Russian Academy of Science, Moscow Kandalaksha State Nature Reserve Solovetski State Nature Reserve All-Russian Institute for Nature Research and Reserves (VNI Priroda) Russian Arctic National Park, Arkhangelsk	Norway and Russia		Hallvard Strøm, Grigory Tertitski	Juri Krasnov, Alexander Cherenkov, Vladimir Semashko and Maria Gavrilov	1990 -	Barents, White and Kara Seas	Database containing Russian scientific literature on seabirds
SEATRACK	Hallvard Strøm, Sebastien Descamps	Norwegian Polar Institute (NPI)	Murmansk Marine Biological Institute (MMBI) Institute of Geography, Russian Academy of Science, Moscow Kandalaksha State Nature Reserve Solovetski State Nature Reserve All-Russian Institute for Nature Research and Reserves (VNI Priroda) Russian Arctic National Park, Arkhangelsk	Norway	Russia, Iceland, Denmark/Faroe Islands, United Kingdom	Hallvard Strøm, Sebastien Descamps	Participants in Norway, Russia, Iceland, Faroes, UK	2014-	Barents, White, Norwegian and North Seas	Large scale tracking program for seabirds.
Russian-Norwegian Seabird Network	Morten Ekker, Hallvard Strøm	Co-leads Norwegian Environment Agency and Norwegian Polar Institute (NPI)	Murmansk Marine Biological Institute (MMBI) Institute of Geography, Russian Academy of Science, Moscow Kandalaksha State Nature Reserve Solovetski State Nature Reserve All-Russian Institute for Nature Research and Reserves (VNI Priroda) Russian Arctic National Park, Arkhangelsk	Norway and Russia		Morten Ekker, Hallvard Strøm	Juri Krasnov, Alexander Cherenkov, Vladimir Semashko, Maria Gavrilov, Andrey Volkov, Rob Barrett, Vidar Bakken, Tycho Anker-Nielsen and Magnus Irgens	1989 -		Network of managers and scientist working on seabirds in Norway and Russia.

Temporal trends of contaminants in seabird eggs from the Barents Sea (1973-2013)	Geir Wing Gabrielsen, Maria Gavrilov, Grigory Tertitski	Norwegian Polar Institute (NPI)	Arctic and Antarctic Research Institute St. Petersburg, Kandalaksha State Nature Reserve	Norway	Russia	Geir Wing Gabrielsen	Rob T. Barrett, Lisa B. Helgasson, Kjetil Sagerup, Anuschka Polder, Elisabeth Lie and Hallvard Strøm	2014-2016	Røst (Lofoten), Hornøya (Finnmark), Onga (White Sea), Novaya Zemlya, Frans Josef Land, Bjørnøya and Kongsfjorden	The present monitoring set of seabird eggs is the longest existing time trend series of organic contaminants in the European Arctic. Tromsø University Museum and the Norwegian School of Veterinary Science set up the study in 1973. Since then samples have been collected regularly at 10-year intervals. The Norwegian Polar Institute and the Murmansk Marine Biological Institute (MMBI) were involved in 1993. The Norwegian Polar Institute has been a central partner in the monitoring project ever since. Initially the study focused on chlorinated organic compounds, such as DDT and PCBs, and the heavy metal mercury (Hg). From 1983 onwards BFRs and PFAS were also analysed and in 2003 brominated flame retardants (BFRs) and fluorinated compounds (PFAS) were added (retrospectively). The study has generated a large number of scientific papers. In addition, results from the time series have been used by the Climate and Pollution Agency (Klif) and the Arctic Monitoring and Assessment Program (AMAP). The results have also contributed to the international program for elimination of hazardous pollutants – the Stockholm Convention and the Convention on long-range pollutants (CLRTAP). Previous studies have not been able to demonstrate geographical differences in the concentrations of "old" (legacy) organic pollutants in eggs collected in different areas in the Barents Sea. For heavy metals, the picture is the same, except that arsenic (As) was found in higher concentrations in bird eggs from Novaya Zemlya compared to other areas. However, geographical information is lacking for "new" contaminants. The fluorine-containing PFAS group is an example of a new pollutant. The physical and chemical properties of this pollutant group differ from those of chlorinated compounds. Whereas chlorinated compounds bind to body fat, PFAS bind to proteins. Hence correlations between chlorinated compounds and PFAS have not been found in Arctic and other animals. Different contaminant groups thus need to be assessed separately, as it is possible that their geographical distribution is different. In order to study both the north-south and the east-west gradients we propose to collect samples from Røst in Lofoten, Hornøya in Eastern Finnmark, the White Sea, Novaya Zemlya, Franz Josef Land, Kongsfjorden at Svalbard and Bjørnøya. This would result in a total of seven locations: three breeding colonies in the south, two in the north-east and two in the western part of the Barents Sea
Detection and characterization of anthropogenic oil pollution in the Barents Sea by synthetic aperture radar	Camilla Brekke (UIT)	University of Tromsø (UIT)	Russian Academy of Science, P.P. Shirshov Institute of Oceanology (IO RAS), Moscow Northern Research Institute (Norut) Norwegian Polar Institute (NPI) Kongsberg Satellite Services AS (KSAT), Norway	Norway	Russia	Camilla Brekke (UIT)	Andrei Ivanov (IO RAS), Rune Storvold (Norut), Gunnar Spreen (NPI), Gunnar Pedersen (KSAT)	2014-2016	Barents Sea	Norwegian Research Council project, NORRUSS programme. The overall goal of this project is to increase the knowledge required for optimal utilization of Earth observation satellite data for environmental pollution monitoring at the high latitudes. The project shall gain new insight to the characterization of dark slicks in the Barents Sea and Arctic region with satellite based polarimetric synthetic aperture radar (SAR). Oil pollution, biogenic slicks and new sea ice will be the primary surface cover classes under investigation. Specifically, new algorithms for discriminating between dark phenomena, e.g., oil spills and grease ice, in SAR measurements will be developed, targeting the challenges we will face with a potential spill in the ice-infested waters of the Arctic region. Satellite measurements from both quad-polarization SAR modes (with smaller swath widths) and the emerging compact polarimetry modes (with larger coverage) will be the target input data types for the algorithms developed. Collection of ground truth data (including LIDAR data) corresponding to the satellite measurements is considered the most challenging part of this project. This project addresses the urgent need of environmental monitoring capabilities related to human caused oil pollution in the Barents Sea. The outcome of this project has obvious and direct relevance for the operational oil spill preparedness and clean up services.
Arctic Climate Processes Linked Through the Circulation of the Atmosphere	Yvan Joseph Orsolini (NILU)	Norwegian Institute for Air Research (NILU)	Russian Research Inst. For Hydrometeorological Information - World data center (RIHMI-WDC)	Norway	Russia	Yvan Joseph Orsolini (NILU)	Alfred Wegener Institute (Potsdam, Germany), University of Bern (CH)	Sept. 2012-Sept. 2014		Norwegian Research Council project, NORRUSS programme. The climate of the Arctic is the product of interactions between a large range of physical, chemical, and radiative processes, involving ocean, sea ice, land-surface, snow cover, clouds, and aerosols. Many of the interactions operate via atmospheric circulation. The circulation moves weather systems across the Arctic and controls surface climate, including snow cover, it transports heat, water vapour, and black carbon and other aerosol particles into the Arctic, it distributes these quantities within the Arctic, it affects sea ice through wind stress, and it is coupled with the stratosphere. At the same time, circulation itself is affected by the radiation balance, sensible and latent heat transport (and thus sea ice and snow cover), and by factors outside the Arctic. In this project we will study the role of these interactions for decadal variability and trends in Arctic and subarctic climate, with a focus on Eurasia. The project consists of 6 subprojects (SP), one led by each team (with a partner team) and a common activity. The SPs will use a variety of methods (statistical analysis, numerical modelling, Lagrangian modelling) and data (observations, reanalyses, model data). While each SP is able to stand on its own and will lead to new insights, the true benefit of the project results from linking the different aspects to a comprehensive overview of climate processes in the Arctic and subarctic region. The project will strengthen our understanding of Arctic climate processes and their role for decadal variability and trends. The knowledge may eventually lead to a better assessment of climate models, supporting an increased accuracy of seasonal predictions, projections, and adaptation plans. The more immediate outcome of the project will be topical scientific papers and a common review article.
CLIMate variability and change in the Eurasian Arctic in the 21st century (CLIMARC)	Ola M. Johannessen (NERSC)	Nansen Environmental and Remote Sensing Center (NERSC)	Voikov Main Geophysical Observatory (VMGO), St. Petersburg Nansen International Environmental and Remote Sensing Center (NIERSC), St. Petersburg	Norway	Russia	Ola M. Johannessen (NERSC)	Lasse H. Petteresson (NERSC) Yongqi Gao, NERSC Igor Esau, NERSC Valentin Melesko (VMGO) Tatiana Lvova; VMGO Igor M. Shkolnik; VMGO Leonid P. Bobylev (NIERSC) Svetlana Kusmina (NIERSC)	January, 2013 December-2015	Arctic and Arctic Ocean, with focus on Russian/Norwegian sectors	Norwegian Research Council project, NORRUSS programme. Global warming is enhanced in the Arctic regions and its surface air temperature has increased to nearly the double of the global average over the last 100 years. Sea ice retreat is increasing during the summer and the total ice volume is diminishing. State of-the-art global climate models are not capable to fully resolve these processes. Errors in these CMIP5 model projections are most pronounced in the Arctic region -specifically in those of joint Russian-Norwegian interest. Assessing the degree of uncertainty of future Arctic climate projections, particularly caused by natural variability, is a challenging task not fully resolved. CLIMARC will expand the Norwegian-Russian strategic scientific cooperation in the High North on integrative climate research. This will be done through (i) collecting and analyze major climate data records for the Arctic region, using these (ii) to analyse, validate and assess the reliability of the climate variability and change in the 20th century generated by global climate models for the Eurasian Arctic, and (iii) select the "best" models for regional down-scaling of climate projections. Use (iv) Weather Research and Forecast (WRF) and other models to down-scale and perform climate process studies, in order to (v) produce improved regional climate projections for the 21st century for the Eurasian Arctic, with focus on the Barents Sea and Northern Sea Route. CLIMARC will also improve the bilateral Russian-Norwegian cooperation in climate research, through exchange of data, methodology and scientific results, as well as visiting scientists and students. CLIMARC will contribute to the education of the climate scientists of the future through mutual exchange and teaching of young Russian and Norwegian PhD students. Dissemination of the CLIMARC scientific results will be prepared for practical applications to the benefit of the society, with focus on the bilateral Russian-Norwegian interests in the Barents Sea and the Northern Sea Route.
FREMONEC: Effect of climate change and related stressors on fresh and brackish water ecosystems in Svalbard	Bjørn Walseng (NINA)	Norwegian Institute for Nature Research (NINA)	Moscow State University, University Studies in Svalbard (UNIS)	Norway	Russia, Denmark	Bjørn Walseng (NINA)	Mikhail V. Chertoprud (MSU), Elena S. Chertoprud (MSU), Anna A. Novichkova (MSU), Kirsten Christoffersen (UNIS), Inta Demantovica (NINA), Martin Svenning (NINA)	June 2013-Dec. 2015	Svalbard	This project refers to the objective of the POLRES sub-program NOR-RUSS with the aim to strengthen the cooperation between Norway and Russia on polar research on Svalbard. The project's practical task is to study effects of the climate change and related stressors on poorly investigated arctic habitats (fresh and brackish water ecosystem and invertebrate population structure) and to ensure a future collaboration between Norwegian and Russian scientists via joint papers and other scientific activities in line with the NOR-RUSS thematic areas. This project applies to the thematic areas - climate change, impacts of climate change, ecology and implements cooperation priorities such as - establishment of a database, network-building between Norwegian and Russian research groups, joint scientific activities and Russian participation at the Norwegian research station in Ny-Ålesund (Norwegian Polar Institute Sverdrup Research Station). In addition activities in collaboration with UNIS will be carried out. NINA (The Norwegian Institute for Nature Research) is also an associated partner of SIOS. Further, the knowledge and material obtained within this project will provide data for the implementation of the integrated and sustained arctic freshwater biodiversity monitoring plan (what is now being developed by Freshwater Expert Monitoring Group for the Circumpolar Biodiversity Monitoring Program).

Isfjorden - past and present climate	Eirik Førland (MET)	Meteorological Institute, Univ. Of Oslo (MET)	Arctic and Antarctic Research Institute (AARI) Saint Petersburg State University (SPSU)	Norway	Russia	Eirik Førland (MET)	Boris Ivanov (AARI), Pavel Svyashchenikov, (SPSU) Ketil Isaksen (MET)	Mar. 2013-Feb. 2016	Svalbard	Norwegian Research Council project, POLARPROG programme. By comparing old and new meteorological measurements in Pyramiden; Isfjord Radio and Barentsburg with regular measurements at Norwegian weather stations, links will be established between Russian and Norwegian climate series from Svalbard. The established datasets will be used in analysis of long-term climate variations and climate gradients in Isfjorden. By implementing and analysing old and new Russian and Norwegian sea-ice observations, the influence of sea-ice on local climate in the Isfjorden area will be studied. The project will contribute in making Russian and Norwegian Arctic climate datasets more consistent, enhance availability of climate data and metadata from the Svalbard region, and provide updated analysis of climate variability and change on Svalbard during the last 100 years.
CARSIC: Ocean Acidification in the Arctic: effects of ice	Evgeniy Yakushev (NIVA)	Norwegian Institute for Water Research (NIVA)	Russian Academy of Science, P.P. Shirshov Institute of Oceanology (IO RAS), Moscow	Norway	Russia	Evgeniy Yakushev (NIVA)	Petr Makkaveev (SIO RAS)	Jul. 2013-June 2016	Svalbard (field and intercalibration work), Arctic ocean (database)	Norwegian Research Council project, POLARPROG programme. CARSIC will develop basic knowledge through studies related to process understanding of Arctic Ocean biogeochemistry and ocean acidification: aiming to estimate future carbonate system parameters state in the Arctic Ocean. We plan to work on a database, perform field studies in Svalbard, and make an intercalibration work. CARSIC promotes international research cooperation and exchange of new knowledge as it involves scientist from Russia and Norway, and reinforces Norway position as a leading nation in marine ecosystem related research. The applied project will increase the understanding of the fate and effect of increased ocean CO2 in relation to the ice dynamics. This is an important knowledge necessary for predictions of the role of polar oceans in the global carbon cycle.
Study of non-linear phenomena in the polar ionosphere induced by the SPEAR heating facility	Lisa Jane Baddeley (UNIS)	University Studies in Svalbard (UNIS)	Arctic and Antarctic Research Institute (AARI), St. Petersburg; Instrumentation supporting role: Polar Geophysical Observatory (PGI), Barentsburg	Norway	Russia	Lisa Jane Baddeley (UNIS)	Tatiana Borsisova (AARI); Nataly Blagoveshchenskaya (AARI); Aleksei Kalishin (AARI); Irina Ivanova (AARI); Roamn Yurik (PGI); Kjellmar Oksavik (UNIS, now at UiB)	2010-2013	Upper atmosphere above Svalbard	Norwegian Research Council project, POLARPROG programme. This proposal seeks to build up a close collaboration in Svalbard in upper atmosphere physics between UNIS and AARI. The focus of this project is to study non-linear phenomena in the upper polar atmosphere above Svalbard using available Norwegian and Russian radio instrumentation in Longyearbyen and Barentsburg. The UNIS operated SPEAR heating facility will be used for ionospheric modification experiments to generate ionospheric irregularities, and the EISCAT Svalbard Radar will be used to monitor the behaviour of plasma parameters. Russian radio equipment operated by AARI in Barentsburg will be used for studies of intensive stimulated electromagnetic emissions (SEE) phenomenology in the HF modified polar ionosphere. Remote diagnostics will be performed with use of the long-distance diagnostics radio equipment at the AARI observatory in St. Petersburg. In 2010-2013 we will carry out several joint experiment campaigns. We will have joint workshop and data analysis meetings in Longyearbyen and at AARI in St. Petersburg. Presentation of joint results will be made at international conferences.
Sustainable Arctic Marine and Coastal Technology (SAMCoT)	Sveinung Løset (NTNU)	Norwegian University of Science and Technology (NTNU)				Sveinung Løset (NTNU)		Apr. 2011-Mar. 2019		Norwegian Research Council project, SFI programme.
Barents Sea Tectonic Basin Modelling (BarMod) with focus on potential petroleum systems in the Central Barents Sea Region	Jan Inge Faleide (UIO)	University of Oslo (UIO)				Jan Inge Faleide (UIO)		Jan. 2011-May 2015		Norwegian Research Council project, PETROMAKS2 programme. The Barents Sea is both geologically and geopolitically divided into western and eastern regions. Until recently, research and data acquisition in the Central Barents Sea has been limited due to the disputed area between Norway and Russia. Because of this, the transition between the wide sag basins of the east and the narrow rift basins of the west is poorly understood. The recent agreement between Norway and Russia concerning the borderline opens new opportunities with respect to research, mutual competence building and petroleum exploration. Waiting for new data covering the former disputed area, we can initiate new research activities by integrating Norwegian and Russian knowledge and data across the Central Barents Sea. Some relevant data already exist that will increase our understanding of the proposed study area. Large structures/prospects are evident, but there are many uncertainties (high exploration risk) related to evaluations of the petroleum systems, e.g. source rocks (distribution and maturity), reservoir rocks (distribution and quality), structural evolution, and effects of the late uplift and erosion. We propose to model several intersecting W-E and N-S regional 2D profiles capturing the major provinces of the entire Barents Sea shelf, with particular focus on the transitional domain in the central Barents Sea. Two distinctly different methods (forward modelling and backstripping) will be applied and developed in the tectonic basin modelling. This integrated approach will allow us to evaluate the resource potential of the largely unexplored, formerly disputed border region while preserving a link to lithospheric-scale processes resulting in wider areas of uplift and subsidence, in particular the deep sag basins of the eastern Barents Sea, a number of structural highs in the Central Barents Sea, and the pervasive erosion related to Neogene uplift.
4DARCTIC: Structure and Evolution of Arctic crust and mantle based on multi-scale geophysical studies	Carmen Gaina	University of Oslo (UIO)	NORSAR, Norway; Institute for Petroleum Geology and Geophysics (IPGG), Russian Academy of Science, Novosibirsk, Russia	Norway	Russia	Carmen Gaina	Jan Inge Faleide (UIO), Nina Lebedeva-Ivanova (UIO), Ivan Koulakov (IPGG)	Dec. 2012-Sep. 2016	Circum-Arctic region (60 to 90 degrees north)	Norwegian Research Council project, NORRUSS programme. We aim to undertake an interdisciplinary collaborative project with Russian partners where existent and new geophysical data will be used to build multi-scale models that will unravel the structure and evolution of Arctic's crust and mantle and their interaction through time. We will assemble, quality-check and compile a variety of geophysical data (potential field, paleomagnetic, heatflow, bathymetry, seismic data, etc) and geological evidences for volcanism and vertical movements through time in order to be able to characterize the heterogeneities of the present-day Arctic crust and model its kinematic evolution since the Late Jurassic (ca. 150 million years ago). New, multi-scale tomographic models for the Arctic mantle will be constructed using travel time data from the global ISC catalogue. In order to cover the less seismic active areas or with low seismic station coverage, reflected PP data will be also included and to further improve the resolution and reliability of the tomographic models in some regions, we plan to add any available information from regional networks, as well as data on Russian super-long seismic profiles acquired with nuclear explosions. Besides regional models of 1000s km scale, we plan to study the crust and uppermost mantle in selected regions (10s-100s km scale) based on local seismicity data, including data from network deployments on drifting ice. Acquisition of new seismic data along the Russian Arctic coast is also part of this project. Kinematic reconstructions and regional tomographic models of the Circum-Arctic regions will be used to construct geodynamic models that will include 3D numerical calculations of the mantle flow using existent academic codes and new software developed by Russian and Norwegian participants. Finally, we will compute the dynamic topography due to the mantle flow and mantle plumes and assess its implications to anomalous subsidence and volcanism in the Arctic area through time.
Food and health security in the border region	Eidbjørg Heimstad, NILU	Norwegian Institute of Air Research (NILU)	Akvaplan-niva, NORUT, NRPA, UIT, Fylkesmannen i Finnmark, University of Oulu, Finnish Meteorological Institute, Murmansk Country Birth Registry, Institute for Ecological Problems, The Northwest Public Health Researcher Center	Norway	Finland, Russia	Torkjel Sandanger, NILU/UIT	Northern and environmental issues (NEI), Thule Institute, University of Oulu, Oulu, Finland, Finnish Meteorological Institute (FMI), Helsinki, Finland Murmansk Country Birth Registry (MCBR), Murmansk, Russia Institute for Ecological Problems (INEP), Kola Science Centre, Apatity, Russia The Northwest Public Health Researcher Center (NPC), St Petersburg, Russia	25.10.2012-24.12.2014	Border region between Norway, Russia and Finland	see: kolarctic.nilu.no
Russia's defence industry - an engine for economic growth	Tor Bukkvoll	Norwegian Defence Research Establishment (FFI)	Center for the Analysis of Strategies and Technologies (Moscow), and the Swedish Defence Research Agency	Norway	Russia, Sweden	Sigurd Glærum	Tor Bukkvoll, Una Hakvaag, Cecilie Sendstad, Susanne Oxenstierna, Thomas Malmlof, Konstantin Makienko, Vasili Kashin, Andrei Frolov	Autumn 2013 to Autumn 2016		Topic: Russian defence industry and effects on the rest of the Russian economy. The questions we seek to answer are: Why has modernizing Russia's military-industrial complex become a top political and economic priority at a time when there is no obvious threat of war, and is this trend likely to continue? Does Russia's defence industry's have the capacity to stimulate growth and innovation? And, how is the extensive defence spending affecting the overall development of the Russian economy?

Higher Education in the High North: Regional Restructuring through Educational Exchanges and Student Mobility.	Associate Professor Marit Sundet	University of Nordland (UiN), Faculty of Social Sciences	Northern (Arctic) Federal University (NArFU), Nordic Institute for Studies in Innovation, Research and Education (NIFU), Karlstad University and Linköping University	Norway	Russia, Sweden	Associate Professor Marit Sundet		August 2012 – July 2015		<p>The primary objective is to produce new knowledge about challenges and outcomes, successes and failures, of regional and international cooperation within the field of higher education institutions with Northwest Russia made possible by the Bologna principles. Internationalization of higher education and mutual learning processes represents a central field with crucial consequences for future international cooperation in other areas and for regional and economic development. The secondary objective is to acquire knowledge about how the regional cooperation within higher education between Norway/Bodø and Northwest Russia is manifested through the institutions, the actors and the learning processes that are important for cooperation in the education sector. The project will aim to uncover and explore the challenges which the institutions and actors meet in these processes, and also analyze the output which the institutions and involved actors acquire from this cooperation.</p> <p>This project will study internationalization of higher education (HE) in the Barents region related to two aspects: institutional cooperation and student exchange between Russia and Norway. The project is based on an established collaborative network between different academic cultures. Internationalisation of HE is taking place at different, though interrelated, levels; the government level (macro), the institutional level (meso), and the individual/student level (micro) (Trondal, Gornitzka and Gulbrandsen 2003). The global competition for talent is increasing, and student mobility is a vital part of the flow of human capital (Florida 2007). Internationalisation and student exchange is high on the policy agenda in many countries and the flow of human capital in the High North have increased dramatically as a result of reforms in the Russian higher education systems. In terms of numbers and investments in HE the development in the Barents region cannot compare with what is currently taking place in the populous and prosperous regions of Asia and the Middle East. Although more limited in scope and volume and being just a narrow segment of the global knowledge food chain, the changes in higher education and cultural exchange being implemented in the High North is what counts in this region. There is an urgent need to produce empirical knowledge about how it is enacted and experienced at the various local levels that represent an important factor contributing to development of democracy and individual welfare. This research involves the institutions; administration and teaching staff, and students in eight HE institutions in North-West Russia and three HE institutions in Northern Norway. The methods used in the study are both qualitative and quantitative. The results will be fed directly back to the empirical field through production of academic articles and a dissemination conference.</p>
Arctic Bridge: Cooperation on PhD Education and Research Training in the field of Management in Extractive Industries in the High North	Bourmistrov, Anatoli (UiN), Volkova, Marina (BSTU)	University of Nordland (UiN)	Baltic State Technical University, Murmansk State Technical University, Northern Arctic Federal University, Tyumen State University, Ukhta State Technical University, Moscow State Institute (University) of the Ministry of International Relations of Russia (MGIMO)	Norway	Russia	Bourmistrov, Anatoli	Baltic State Technical University, Murmansk State Technical University, Northern Arctic Federal University, Tyumen State University, Ukhta State Technical University, Moscow State Institute (University) of the Ministry of International Relations of Russia (MGIMO)	2012-2015		<p>Topics:</p> <p>1) ways of harmonization of PhD education between Norway and Russia;</p> <p>2) research on Arctic extractive industries and relevant High North aspects.</p> <p>Our main goal, is to strengthen Norwegian-Russian knowledge cooperation in the field of Management in Extractive Industries in the High North between institutions in the network. This will be done by establishing and running an International PhD program in Management of Arctic Extractive Industries. This joint research training program will strengthen the existing partnership within the areas of petroleum, climate and energy, sustainable use of resources as well as business development. Thus, this project is in the line with the Norwegian government's High North Strategy and Russian policies towards developing the High North.</p>
Modern Knowledge for Energy Sector: "Development of New Study Materials for joint Norwegian-Russian Education programs in the field of energy"	Bourmistrov, Anatoli (UiN), Vasiliev, Sergey (MGIMO)	University of Nordland (UiN)		Norway	Russia	Bourmistrov, Anatoli	Gubkin Russian State University of Oil and Gas	2011-2015 (2012)		<p>Topic: New research methods and relevant aspects in energy management.</p> <p>The main goal of the project is to develop up-to-date study materials to be used in joint Russian-Norwegian Master and Bachelor level programs in energy related fields. The key project task it to prepare a text book which will be included in the pensum at the Master of Science in Energy Management program between Norway and Russia.</p>
MARPART - MARITIME PREPAREDNESS AND INTERNATIONAL PARTNERSHIP IN THE HIGH NORTH -joint research project funded by the Norwegian Ministry of Foreign Affairs and the Nordland County Administration	Odd Jarl Borch (UiN)	University of Nordland (UiN)	Murmansk State Technical University, Northern Arctic Federal University, University Center in Svalbard UNIS), University of Greenland, University of Iceland, Norwegian Ploce University College, Norwegian Defence University College	Norway	Russia, Greenland, Iceland	Odd Jarl Borch	Murmansk State Technical University, Northern Arctic Federal University, University Center in Svalbard, University of Greenland, University of Iceland, Norwegian Ploce University College, Norwegian Defence University College	2014-2016		<p>MARITIME PREPAREDNESS AND INTERNATIONAL PARTNERSHIP IN THE HIGH NORTH</p> <p>Main objectives:</p> <ul style="list-style-type: none"> <li>•Increase understanding of future tasks and the demands for a preparedness system in the High North</li> <li>•Provide analytical concepts for studying coordination challenges in cross-border, multi-tasking operations</li> <li>•Contribute with organizational concepts for inter-organizational partnership and management of joint operations</li> </ul>
BUDRUS "Local governments budgeting reforms in Russia: implications and tensions"	Bourmistrov, Anatoli (UiN), Volkova, Marina (BSTU), Vasiliev, Sergey (MGIMO)	University of Nordland (UiN)	Baltic State Technical University, Murmansk State Technical University, Northern Arctic Federal University, Moscow State Institute (University) of the Ministry of International Relations of Russia (MGIMO)	Norway	Russia	Bourmistrov, Anatoli	Baltic State Technical University, Murmansk State Technical University, Northern Arctic Federal University, Tyumen State University, Ukhta State Technical University, Moscow State Institute (University) of the Ministry of International Relations of Russia (MGIMO)	2013-2016		<p>Topic: Research in the field of budgeting, especially local government budgeting reforms in Russia.</p> <p>The primary objective of the project is to strengthen research competence in producing high quality scientific knowledge in the field of public sector reforms in Russia, their implications on budgeting processes and transformation of local government institutions.</p> <p>The secondary objectives are: 1) Through internationally comparative research efforts, to generate new knowledge about transformation, budgetary processes and local government institutions in the Russian public sector; 2) To strengthen Norwegian-Russian research cooperation between partners and further promote international research networking; 3) To actively disseminate research findings to relevant users through high quality scientific publications, publications in the professional media and international conferences.</p>
The Individual and the State in Russia: Self-images, Coping Strategies, Civil Society (INSTARUSS). The Individual and the State in Russia: Self-images, Coping Strategies, Civil Society (INSTARUSS).	Geir Hønneland (FNI)	Fridtjof Nansen Institute (FNI)	National Research University, Higher School of Economics	Norway and Russia		Geir Hønneland and Dmitry Goncharov		January, 2014 December-2016		<p>The project examines the relations between the individual and the state in Russia, from the viewpoint of individuals and non-governmental organizations (NGOs). Through a series of qualitative in-depth interviews with ordinary people, as well as NGO representatives in Murmansk Oblast, the Republic of Karelia and St Petersburg, project participants investigate citizens' views on the Russian state, their experience with it and strategies towards it, particularly in the fields of education, health and welfare. They further explore how Russians employ civil society in their interaction with the state, e.g. through labour unions. The hypothesis is that there is a counterpart at the individual level to the duality at the system level between a 'normative state' of rule of law and an 'administrative regime' of informal relations. Whereas the 'normative state' rests on, and incorporates, the idea of 'citizens' exercising 'svoboda' (the Western, rational and 'responsible' freedom), the 'administrative regime' is all about intra-elite loyalties and squabbles, reducing ordinary people to mere 'subjects' left to their own devices in the struggle to have their 'volya' (the Russian, 'irrational' freedom unrestricted). How do ordinary Russians handle their encounters with the state, individually and through civil society? Do they approach it as the 'normative state' or the 'administrative regime'? Are they 'citizens' or 'subjects'? To what extent do they experience freedom, as either 'svoboda' or 'volya'? In which situations do they typically resort to informal relations? Which images of Russia are invoked in these encounters? And what does all this tell us about the prospects for good governance in Russia? As a basis for the interview investigation, a legal expert will provide overviews of the formal rights that citizens and NGOs enjoy in Russian legislation.</p>