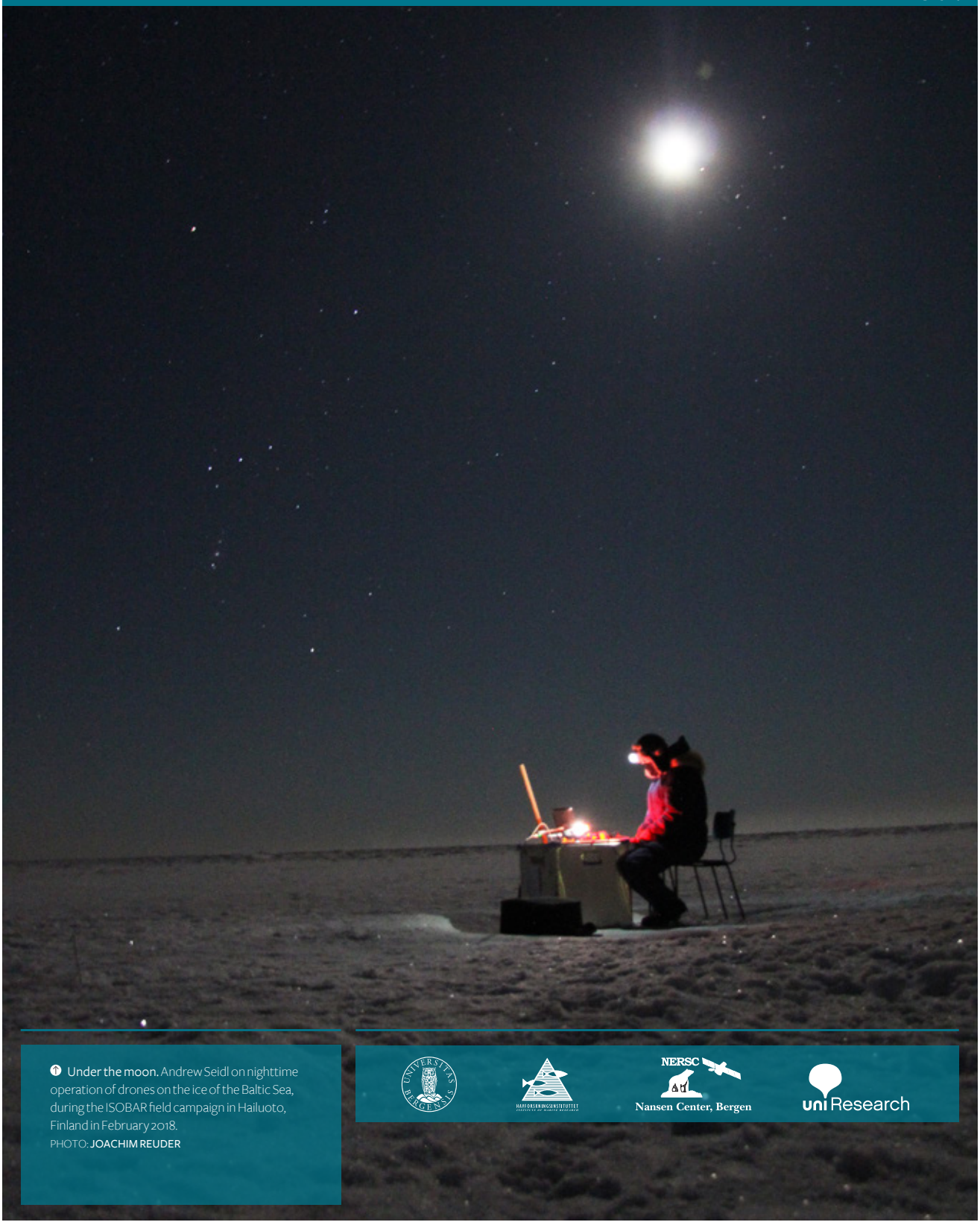
2017
in numbers

BJERKNES CENTRE
for Climate Research



Under the moon. Andrew Seidl on nighttime operation of drones on the ice of the Baltic Sea, during the ISOBAR field campaign in Hailuoto, Finland in February 2018.
PHOTO: **JOACHIM REUDER**

Nansen Center, Bergen

❶ Prime Minister Erna Solberg in front of 30 international researchers, representing nations present at the Bjerknes Centre for Climate Research.
PHOTO: **PAUL SIGVE AMUNDSEN**

❷ Prime Minister Erna Solberg officially declared our new premises for opened late May. The refurbished West Wing at the Geophysical Insitute gathers about half of the scientists at the Bjerknes Centre.
PHOTO: **GUDRUN SYLTE**

❸ From the left Research Theme Leader Camille Li, Prime Minister Erna Solberg and Tore Furevik, Director at the Bjerknes Centre.
PHOTO: **PAUL SIGVE AMUNDSEN**

❹ Celebrations in our new premises, Andreas Plach (to the left) and Leonidas Tsopouridis.
PHOTO: **GUDRUN SYLTE**

❺ From the left Martin King, Beatriz Balino, Eystein Jansen and Camille Li.
PHOTO: **GUDRUN SYLTE**

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Joachim Reuder, Professor in Meteorology, UiB and the Bjerknes Centre for Climate Research

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Objectives and research

The aim of the Bjerknes Centre is to understand and quantify the climate system for the benefit of society.

The Bjerknes Centre for Climate Research is a collaboration between four partner institutions:

- Uni Research
- University of Bergen
- Institute of Marine Research
- Nansen Environmental and Remote Sensing Centre

The centre engages more than 200 scientists from 34 countries, and is one of the largest climate research units in Europe.

The research is organised into four themes, each with specific goals, objectives and implementation plans:

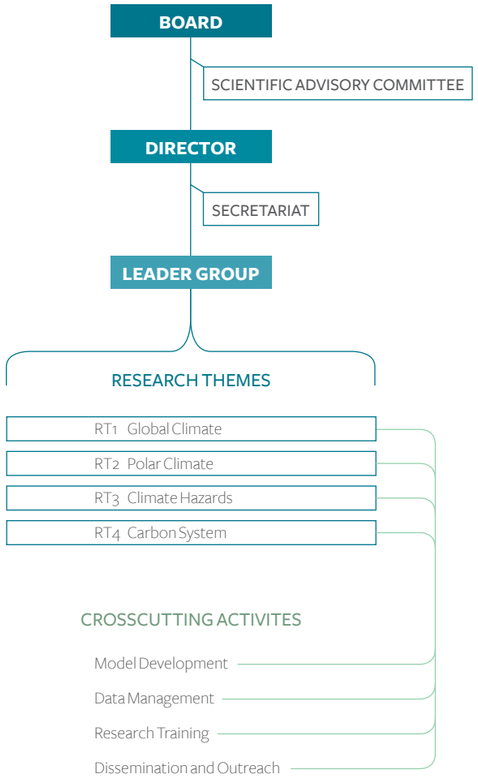
- RT1 Global Climate
- RT2 Polar Climate
- RT3 Climate Hazards
- RT4 Carbon System

The Bjerknes Centre combines observations with theoretical and modelling studies of past, present and future climates.

The Bjerknes Centre will

- Identify processes controlling natural and human-induced climate change.
- Understand large-scale teleconnections and couplings in the atmosphere and ocean.
- Understand and quantify past climate variations at regional and global scales.
- Determine changes in the earth's cryosphere (sea-ice, permafrost, glaciers, ice sheets).
- Understand and quantify global and regional sea-level changes.
- Quantify global biogeochemical cycles and their couplings to the climate system.
- Provide scenarios for future climate at global and regional scales.
- Develop methods for providing seasonal to decadal climate predictions.
- Contribute actively to the climate change mitigation and adaptation processes.
- Play an important role in the training of future generations of climate scientists.
- Communicate research results to stakeholders and society at large.

Organisation



THE LEADER GROUP

The leader group is comprised of the Director, Head of Administration, Head of Communication, and research leaders of the Bjerknes Centre together with representatives from the partner institutions Institute of Marine Research, Nansen Environmental and Remote Sensing Centre, and Uni Research. Their mandate includes the forging and implementation of the Centre`s strategic scientific development and to act as a channel of communication among the partners.

TORE FUREVIK	Professor (Director), Climate dynamics, UiB
TOR ELDEVIK	Professor, Oceanography, UiB
CAMILLE LI	Associate Professor, Atmospheric dynamics, UiB
ARE OLSEN	Associate Professor, Biogeochemistry, UiB
ANNA NELE MECKLER	Researcher, Paleoclimate, UiB
FRANCOIS COUNILLON	Researcher, Oceanography, NERSC
FRODE VIKEBØ	Senior Researcher, Oceanography, IMR
PETRA LANGEBROEK	Senior Researcher, Paleoclimate and ice sheet dynamics, Uni Research
GUDRUN SYLTE	Head of Communication, UiB
RAGNHILD STOLT-NIELSEN	Head of Administration, UiB

RESEARCH THEMES	LEADER (CO-LEADER)
RT1 Global Climate	CAMILLE LI (BJØRG RISEBROBAKKEN)
RT2 Polar Climate	TOR ELDEVIK (ANNE BJUNE)
RT3 Climate Hazards	ANNA NELE MECKLER (JAN EVEN ØIE NILSEN)
RT4 Carbon System	ARE OLSEN (JÖRG SCHWINGER)

CROSSCUTTING ACTIVITIES	LEADER
Model Development	MATS BENTSEN
Data Management	BENJAMIN PFEIL
Research Training	THOMAS SPENGLER
Dissemination and Outreach	GUDRUN SYLTE

BOARD OF DIRECTORS

ARVID HALLÉN	Leader
MARGARETH HAGEN	Pro-Rector, UiB
CARIN A. DAHL	Researcher, Uni Research
SEBASTIAN H. MERNILD	Director, NERSC
SVEIN SUNDBY	Researcher, IMR

SCIENTIFIC ADVISORY COMMITTEE

DOROTHEE BAKKER	University of East Anglia, UK
MAGDALENA BALMASEDA	ECMWF, UK
COLIN JONES	MET Office, UK
GUNHILD ROSQVIST	Stockholm University, Sweden
TAPIO SCHNEIDER	ETH Zurich, Switzerland
FIAMETTA STRANEO	WHOI, USA
CLAIRE WAELBROECK	LSCE/IPSL, France

SECRETARIAT

RAGNHILD STOLT-NIELSEN	Head of Administration
GUDRUN SYLTE	Head of Communication
ELLEN GRONG	Senior Secretary
ØYVIND PAASCHE	Senior Adviser
QUYNH-GIAO THI DO	Financial Officer
ELLEN VISTE	Communication Advisor

Finances

The sources of income to the Bjerknes Centre are a 12-year grant from the Ministry of Research and Education to the Centre for Climate Dynamics (SKD), recruitment positions from the University of Bergen, and research grants from the Research Council of Norway (RCN) and the European Commission (EC), as well as public and private funds.

In 2017 the Centre's overall income was approximately 183 million NOK, a growth of 15 million NOK compared to 2016.

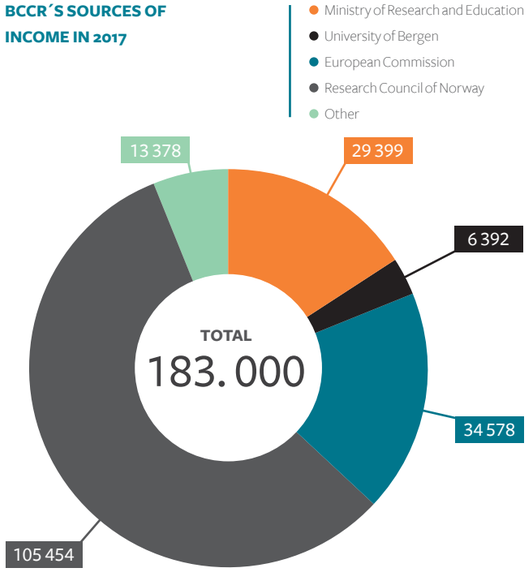
The increment is mostly due to research grants from the Research Council of Norway. The share of RCN funding increased from 49% to 57% in 2017. The share of EC funding is 18%.

Grants from the major funding agencies (EC, RCN) accounts for 75% of the Centre's total income. The Ministry supported the Centre with 29.4 million NOK while the University of Bergen – SKD's host – funded seven recruitment positions (5 PhD, 2 postdoc). Other public and private funding, mainly from Bergen Research Foundation, was stable at 6% of the total income.

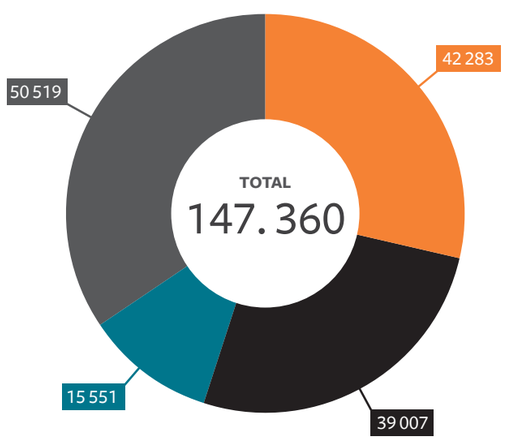
In-kind contributions from partner institutions (e.g. staff salary, ship time, computer resources etc.) are not included in the table.

FUNDING	NOK 1 000,–
Ministry of Research and Education	*29 399*
University of Bergen	*6 392*
European Commission	*34 578*
Research Council of Norway	*105 454*
Other	*13 378*
Total income	183 000

BCCR´S SOURCES OF INCOME IN 2017



BCCR´S FUNDING DISTRIBUTION IN 2017



EXTERNAL FUNDING*

The graph illustrates the funding distribution by strategic research theme at the Bjerknes Centre. Amounts in NOK.

- Global Climate
- Polar Climate
- Climate Hazards
- Carbon System

* European Commission, Research Council of Norway, and other public and private funds.

Guided tour in Raet National park: Øyvind Paasche is guiding a group in the new marine National Park in southern Norway. The tour was one of many events by the Bjerknes Centre at the annual political festival week Arendalsuka.
PHOTO: **GUDRUN SYLTE**

Doctoral dissertations 2017

In 2017, BCCR scientists provided supervision and training in climate research to 58 PhD candidates. The following successfully defended their dissertations:

March 24th 2017
Paul Eduard Bachem

A multi-proxy study of Pliocene Norwegian Sea paleoceanography.
Paul Bachem has studied sediments from the Norwegian Sea dating from five to three million years before today, the time period known as the Pliocene. Organic chemicals produced by tiny algae during this period are closely linked to the temperature. The results show that throughout the Pliocene, the Norwegian Sea underwent several warming and cooling episodes. This behaviour is different from many other regions of the world, which had a relatively stable warm climate. It implies that the Norwegian Sea responded more strongly to factors that influence the climate system than other regions did. It is likely that changes in the flow of ocean currents influenced the temperature of the Norwegian Sea during the Pliocene. This has implications for the development of ice sheets in the Northern Hemisphere as well as the future Norwegian climate if the Gulf Stream is affected by global warming.

June 27th 2017
Friederike Fröb

Climate controlled mechanisms of subpolar North Atlantic carbon uptake.
A large fraction of the human-induced CO_2 is stored in the ocean carbon sink, where the North Atlantic Ocean plays a dominant role in global carbon uptake. However, the uptake efficiency is variable in space and time due to complex interactions between atmospheric, hydrographic, and biogeochemical processes. Fröb's thesis shows that the variability in the natural carbon cycle should be taken into consideration when discussing magnitude and trends of the carbon uptake processes.

August 11th 2017
Algot K. Peterson

Mixing processes in the changing Arctic Ocean.
North of Svalbard, relatively warm water is mixed up from the deep towards the sea ice, even in winter. In spring, more heat from the ocean reaches the ice, causing the ice to melt quickly. Peterson's thesis examines this mixing. In addition to stirring up surface waters, passing storms are shown to generate internal waves in the ocean, mixing water masses deeper down as well. His study brings in new data from a region that is difficult to reach and where winter observations are scarce.

August 25th 2017
Stephanie Gleixner

Impacts of the Walker Circulation on inter-annual Ethiopian rainfall variability and future changes in tropical cyclones.
The Walker Circulation refers to circulation cells along the latitudes in the tropics, with sinking air at one end and rising air at the other. Over the Pacific this circulation is reduced during El Niño events. Gleixner's thesis relates dry summers in Ethiopia to such changes, raising hope for the possibility of predicting Ethiopian droughts months ahead. Her results also indicate that a weakening of the Walker Circulation may reduce tropical cyclones in the Southern Hemisphere over the 21st century.

October 30th 2017
Marie Eide

Broad-scale distribution of stable carbon isotopes in the global ocean.
Space and time variations of the relative abundance of the stable isotopes of carbon – 12C and 13C – in dissolved inorganic carbon are recorded in ocean sediments. These are among our primary windows into the oceans of past times. The distribution of carbon isotopes has been used as a storyteller of ocean circulation and ventilation. In her thesis, Eide has produced a global overview of the distribution of these isotopes, based on observational data. This overview is helpful for validating climate models and for unravelling past climates based on data from sediment cores. Her global overview is also a tool for estimating the ongoing ocean uptake of anthropogenic CO_2.

November 14th 2017
Elsheikh Bashir Ali

The inorganic carbon cycle of the Red Sea.
About one fourth of the CO_2 released to the atmosphere is absorbed by the world's oceans. Some ocean regions also release CO_2 to the atmosphere, and the Red Sea has been thought of as one of these. Now, Ali's work shows that for part of the year, the Red Sea is a sink for atmospheric CO_2. With the first such data series from the western Red Sea, he has documented how conditions vary from season to season and over years. Ocean currents drive the observed seasonal variations.

November 29th 2017
Erwin Lambert

On freshwater and the density-driven circulation in the northern seas.
In the Atlantic, the Gulf Stream flows northward and extends into the Norwegian Sea. The warm surface current cools and sinks in the Nordic Seas, before flowing back south in the deep ocean. When global temperatures rise, we face more meltwater and precipitation in the Arctic. This contributes to more freshwater in the Arctic Ocean and the Nordic Seas. Lambert has developed theory and models to predict how more freshwater can affect ocean circulation and climate in the Polar Ocean. Lambert's findings show that increasing precipitation in the north may be less important for the circulation in the Atlantic than previously believed. The Gulf Stream will not be affected by more freshwater in the Arctic Ocean.

December 1st 2017
Mari Fjalstad Jensen

Abrupt changes in sea ice and dynamics of Dansgaard-Oeschger events.
Several times during the last glacial, temperatures on Greenland jumped 10–15 degrees in a decade or two. Reductions in the sea-ice cover in the Arctic are assumed to have played an important role. Jensen´s work shows that even small changes in ocean temperature and freshwater supply in the Arctic may cause large changes in sea ice. This suggests that observed changes in the temperature of Atlantic water entering the Arctic may be more important for the stability of the sea ice than previously thought.

December 7th 2017
Ingrid Husøy Onarheim

Regional, seasonal, and predictable Arctic sea ice change.
If the world does not meet the targets set in the Paris agreement, the Barents Sea will be ice-free at the end of this century. This is one of the findings in Onarheim's thesis. This does not, however, mean there will never be winter ice there. The sea ice may return for periods up to decades, before disappearing again. This is mainly because the amount of ice depends on the transport of warm water along the Norwegian coast. Both in the long-term and near future, activities in the Barents Sea will need predictions of the winter ice, predictions that Onarheim shows can be made 1–3 years ahead.

December 7th 2017
Caroline Clotten

Pliocene sea-ice evolution in the Iceland and Labrador Sea – A biomarker approach.
Caroline Clotten has studied sea-ice distribution in the Iceland Sea and the Labrador Sea in the Pliocene, dating from three to five million years ago. This period in the Earth's history is characterised by global CO_2 concentrations and temperatures comparable to today. From sediment cores, she has extracted organic chemical components (biomarkers) produced by small algae that live in the sea ice. When the sea ice melts, these components sink to the bottom of the sea, marking the extent of sea ice at a certain time. Clotten's results show that sea ice was present in the subarctic sea despite warm temperatures and high CO_2 levels, but its distribution depended on the ocean current strengths. The new findings can help improve climate models that predict the fate of sea ice in a future warmer world with higher CO_2 concentrations.

Engagements 2017

GLOBAL DIMENSION

Argo Programme: Kjell Arne Mork is a member of the Argo Steering Team.

Arctic-Subarctic Ocean Fluxes (ASOF): Tor Eldevik, Svein Østerhus and Øystein Skagseth are members of the international scientific steering group.

Fixed-point Open Ocean Observatories (FIXO3): Truls Johannessen is a member of the steering committee.

Forum for Research on Ice Shelf Processes (FRISP): Elin Darelius is an early-career scientist representative and Svein Østerhus represents Norway.

Framework of Ocean Observing (FOO/GOOS): Christoph Heinze is a member of the Ocean Observing Panel for Biogeochemistry.

Global Climate Forum (GCF): BCCR is a member of the Global Climate Forum (GCF), a non-profit organization located at the Potsdam Institute for Climate Impact Research (PIK), Germany.

Global Ocean Acidification Observing Network (GOA-ON): Benjamin Pfeil is an executive council member.

Global Ocean Ship-Based Hydrographic Investigations Program (GO-SHIP): Emil Jeansson is a member.

Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO):

- IOC-UNESCO: Peter M. Haugan is chair.
- Global Ocean Surface Underway Data (GOSUD): Benjamin Pfeil is a scientific steering group member.
- IOC UNESCO and SCOR's International Ocean Carbon Coordination Project (IOCCP): Siv Lauvset and Benjamin Pfeil are scientific steering committee members.

International Arctic Science Committee (IASC): Thomas Spengler is a representative for Norway in the Atmospheric Working Group (AWG) and currently elected as chair of the AWG.

International Commission on Dynamical Meteorology (ICDM): Thomas Spengler is elected vice president.

International Council for the Exploration of the Seas (ICES):

- Working Group on Hydrography: Kjell Arne Mork, Svein Østerhus and Øystein Skagseth are members.
- Study Group on Ocean Acidification: Are Olsen is a member.
- Working Group on Integrated Assessments of the Norwegian Sea WGNIOR: Morten Skogen is a member.
- Working Group on Operational Oceanographic Products for Fisheries and Environment
- Working Group on Integrative Physical-Biological and Ecosystem Modelling WGIPEM: Morten Skogen and Solfrid Hjøllo are members.

International Eurasian Academy of Science (IEAS): Igor Esau is an elected full member.

International Geosphere-Biosphere Programme (IGBP) and World Climate Research Programme (WCRP):

- Climate and the Cryosphere Project (CliC): Lars H. Smedsrud is a member of the scientific steering group.
- Integrated Marine Biogeochemistry and Ecosystem Research (IMBER): Ken Drinkwater is co-chair of the regional program Ecosystem Studies of Subarctic Seas.
- Past Global Changes (PAGES): UlyssesNinnemann is in the scientific steering committee of IMAGES, the marine component of PAGES.
- PAGES Arctic 2k working group: Jostein Bakke is co-leader.
- PAGES EcoRe3: Alistair Seddon is the leader.
- PAGES/CLIVAR joint working group: Eystein Jansen is a member.
- CLIVAR Atlantic Region Panel: Noel Keenlyside is a member.
- CLIVAR Climate Dynamics Panel: Noel Keenlyside is a member.
- CLIVAR Global Synthesis and Observations Panel: Are Olsen is a member.
- CLIVAR Ocean Model Development Panel: Mats Bentsen is a member.
- CLIVAR/CLiC Northern Oceans Regional Panel (NORP): Tore Eldevik and Laurent Bertino are members.
- IC3-Climate Centre, Barcelona: Eystein Jansen is a member of the scientific advisory board.

International Marine Global Changes Program (IMAGES): Ulysses S. Ninnemann is the Norwegian representative.

International Ocean Carbon Coordination Project (IOCCP): Siv Lauvset and Benjamin Pfeil are scientific steering committee members.

International Surface Ocean Lower Atmosphere Study (SOLAS): Siv Lauvset is the national representative from Norway.

North Atlantic Virtual Institute (NAVIS): Tor Eldevik is a member of the NSF collaborative project's steering committee.

OceanSITES: Svein Østerhus is a member of the steering committee.

Pan-Eurasian Experiment (PEEX): Igor Esau is a member.

PANGAEA – Data Publisher for Earth and Environmental Science: Benjamin Pfeil is a member of the editorial board.

Southern Ocean Observing System (SOOS): Benjamin Pfeil is a member of the data committee.

Surface Ocean CO_2 Atlas (SOCAT): Benjamin Pfeil and Are Olsen are members of the Global Coordination Group. Camilla Landa, Benjamin Pfeil and Are Olsen are members of the SOCAT automation group.

World Universities Network (WUN) Global Challenge – Responding to Climate Change: Tore Furevik is in the steering group.

EUROPEAN DIMENSION

Bolin Centre, University of Stockholm: Eystein Jansen is member of the science advisory board.

Coordinated Regional Downscaling Experiments (Euro-CORDEX): Stefan Sobolowski is co-coordinator and point of contact.

CORDEX Flagship Pilot Studies (CORDEX-FPS):

- Stefan Sobolowski is co-leader of the FPS on Convective processes over Europe and the Mediterranean.
- Stefan Sobolowski is a participant in the FPS on Land use and climate across scales (LUCAS).

COST – European Cooperation in Science and Technology:

- Svein Østerhus is a member of the COST action Everyone's Gliding Observatories management committee.
- Anne Britt Sandø and Laurent Bertino are members of the COST action Evaluation of Ocean Syntheses.

Five of our ten new doctors in 2017. From the left: Algot Peterson, Ingrid Husøy Onarheim, Marie Eide, Mari Fjalstad Jensen and Stephanie Gleixner gathered at the honouring of new doctorates in the University Aula on the 26th of January 2018.
PHOTO: THOR BRØDRESKIFT/UNIVERSITY OF BERGEN

East Greenland ice core drilling project (EGRIP): Kerim H. Nisancioglu is the Norwegian representative and member of the steering committee.

ECCORD Science Support and Advisory Committee (ESSAC): Helga F. Kleiven is the Norwegian national delegate.

European Climate Research Alliance (ECRA):

- Lars H. Smedsrud is co-chair of the programme on Arctic Climate Stability and Change.
- J. Even Ø. Nilsen is co-chair of the collaborative programme on Sea Level and Climate Change.
- Eystein Jansen is member of the executive board of ECRA.

European Geoscience Union Outreach Committee: Mathew Stiller-Reeve is a member.

European Marine Board: Helga F. Kleiven is the Norwegian academic representative.

Joint Programming Initiative (JPI) Climate – Module 1: Tore Furevik is national representative.

Joint Programming Initiative (JPI) Climate – Action Group "Next generation of climate sciences in Europe": J. Even Ø. Nilsen is a member.

Joint Programming Initiative (JPI) Oceans: Tor Eldevik is a member of the national reference group.

International Quaternary Map of Europe (IQUAME): Anna Hughes is on the scientific advisory board.

SeaDataCloud: Benjamin Pfeil is a member of the scientific committee.

MOSAIC: Benjamin Pfeil is a team coordinator for data.

MARUM, University of Bremen: Nele Meckler is a member of the scientific advisory board.

NATIONAL DIMENSION

Arctic Frontiers: Tor Eldevik is member of the steering committee.

Notur/Norstore Resource Allocation: Noel Keenlyside is a member.

Nansen Environmental and Remote Sensing Centre: Solfrid Hjøllo is a member of the Scientific Council.

Nansen legacy (Arven etter Nansen) – a national consortium for a coordinated research programme: Nils G. Kvamstø is a member of the steering committee and Tor Eldevik is Co-PI.

Norwegian Climate Foundation: Helga F. Kleiven is on the board of directors.

Norwegian Climate Service Centre: Tore Furevik is board leader.

Research Council of Norway: KLIMAFORSK programme board: Tore Furevik is vice chairman.

Research Council of Norway: Norway–India Programme Advisory Committee: Eystein Jansen is a member.

Scientific Committee of Oceanographic Research (SCOR): Peter M. Haugan is national chair.

Subsurface CO_2 storage – Critical Elements and Superior Strategy (SUCCESS): Truls Johannessen is the University of Bergen's board member.

UNIS - Universitetssenteret på Svalbard: Helga F. Kleiven is deputy on the board of directors.

Staff

SCIENTISTS

Adakudlu	Muralidhar	India	Uni Research	Atmospheric modelling
Asplin	Lars	Norway	IMR	Oceanography, modelling
Bakhoday	Mostafa	Iran	NERSC	Ocean modelling
Bakke	Jostein	Norway	UiB	Palaeoclimates
Bentsen	Mats	Norway	Uni Research	Climate modelling
Bergh	Jon	Sweden	NERSC	Oceanography & sea ice
Bertino	Laurent	France	NERSC	Data assimilation
Bethke	Ingo	Germany	Uni Research	Climate modelling
Bhatt	Bhuwan	India	UIB	Regional modelling
Birks	Hilary	UK	UIB	Palaeoecology
Birks	John	UK	UIB	Palaeoecology
Bjune	Anne	Norway	UIB	Palaeoecology
Born	Andreas	Germany	UIB	Paleoclimate modelling, climate dynamics
Bouillon	Sylvain	Belgium	NERSC	Sea ice dynamics
Budgell	Paul	Canada	IMR	Oceanography, modelling
Carrassi	Alberto	Italy	NERSC	Geophysics & mathematics
Chafik	Leon	Sweden	UIB	Ocean dynamics
Chen	Linling	China	NERSC	Meteorology
Counillon	Francois	France	NERSC	Climate predictions, data assimilation
Dahl	Carin Andersson	Sweden	Uni Research	Palaeoclimates
Dahl	Svein Olaf	Norway	UiB	Palaeoclimates
Darelius	Elin	Sweden	UiB	Physical oceanography
Davy	Richard	Norway	NERSC	Climate physics
De Schepper	Stijn	Belgium	Uni Research	Palaeoclimates
Demissie	Teferi	Ethiopia	Uni Research	Climate modelling
Dokken	Trond	Norway	Uni Research	Palaeoclimates
Drange	Helge	Norway	UIB	Climate modelling
Drinkwater	Ken	Canada	IMR	Oceanography & marine ecosystems
Eldevik	Tor	Norway	UiB	Oceanography, climate dynamics
Ezau	Igor	Russia	NERSC	Meteorology
Faber	Anne-Katrine	Denmark	UiB	Atmospheric science, paleoclimate
Fer	Ilker	Turkey	UiB	Physical oceanography
Furevik	Tore	Norway	UIB	Ocean dynamics and modelling
Gao	Shuang	China	UiB	Biogeochemistry
Gao	Yongqi	China	NERSC	Oceanography
Goris	Nadine	Germany	Uni Research	Carbon cycle modelling
Gundersen	Kjell	Norway	IMR	Biogeochemistry
Guo	Chuncheng	China	Uni Research	Physical oceanography/ocean climate modelling
Gupta	Alok Kumar	India	Uni Research	Climate modelling
Haflidason	Haflidi	Iceland	UiB	Palaeoclimates
Hannisdal	Bjarte	Norway	UIB	Geobiology
Haugan	Peter	Norway	UIB	Polar oceanography
He	Yanchun	China	NERSC	Oceanography/modelling
Heinze	Christoph	Germany	UIB	Carbon cycle modelling
Hjøllo	Solfrid	Norway	IMR	Ecosystem modelling, oceanography
Hughes	Anna	UK	UiB	Palaeoclimate, ice sheets
Ilicak	Mehmet	Turkey	Uni Research	Ocean dynamics and modelling
Irvali	Nil	Turkey	UiB	Palaeoclimates
Jansen	Eystein	Norway	UiB	Palaeoclimates
Jeansson	Emil	Sweden	Uni Research	Biogeochemistry
Johannessen	Truls	Norway	UiB	Biogeochemistry
Keenlyside	Noel	Australia	UiB	Tropical meteorology
King	Martin	Malaysia	Uni Research	Meteorology
Kleiven	Helga Kikki	Norway	UiB	Palaeoclimates
Kolstad	Erik	Norway	Uni Research	Meteorology
Koseki	Shunya	Japan	UIB	Meteorology
Kvamstø	Nils Gunnar	Norway	UiB	Meteorology
Langebroek	Petra	Netherlands	Uni Research	Palaeoclimates
Langehaug	Helene R.	Norway	NERSC	Palaeoclimates
Lauritzen	Stein Erik	Norway	UiB	Palaeoclimates
Lauvset	Siv	Norway	Uni Research	Biogeochemistry
Lee	Hanna	Korea	Uni Research	Terrestrial biogeochemistry
Li	Lu	China	Uni Research	Hydologist
Li	Camille	Canada	UiB	Atmospheric dynamics
Linge	Henriette	Norway	UIB	Palaeoclimates
Luo	Yiming	China	UiB	Oceanography
Lygre	Kjetil	Norway	NERSC	Biogeochemistry & modelling
Mangerud	Jan	Norway	UiB	Palaeoclimates
Mayer	Stephanie	Germany	Uni Research	Meteorology
Meckler	Nele	Switzerland	UiB	Palaeoclimates
Mesquita	Michel	Brazil	Uni Research	Atmospheric dynamics
Michel	Clio	France	UiB	Meteorology

Miles	Martin	USA	Uni Research	Palaeoclimates
Miles	Victoria	Russia	NERSC	Environmental remote sensing
Mooney	Priscilla	Ireland	Uni Research	Regional climates, climate modelling
Mork	Kjell Arne	Norway	IMR	Ocean modelling
Nesje	Atle	Norway	UiB	Palaeoclimates
Nilsen	Jan Even Øie	Norway	NERSC	Oceanography
Ninnemann	Ulysses	USA	UiB	Palaeoclimates
Nisancioglu	Kerim	Norway	UIB	Past climate dynamics
Olason	Einar	Iceland	NERSC	Sea ice dynamics
Olsen	Are	Norway	UiB	Biogeochemistry
Omar	Abdirahman	Somalia	Uni Research	Biogeochemistry
Ostrowski	Marek	Norway	IMR	Physical oceanography
Otterå	Odd Helge	Norway	Uni Research	Climate modelling
Outten	Stephen	UK	NERSC	Atmospheric dynamics
Rampal	Pierre	France	NERSC	Physical oceanography & glaciology
Reuder	Joachim	Germany	UiB	Meteorology
Risebrobakken	Bjørg	Norway	Uni Research	Palaeoclimates
Samuelsen	Annette	Norway	NERSC	Physical oceanography
Sandø	Anne Britt	Norway	IMR	Ocean modelling
Schwinger	Jörg	Germany	Uni Research	Carbon cycle modelling
Seddon	Alistair	UK	UiB	Palaecology, global change
Shen	Mao-Lin	China	UiB	Meteorology
Skagseth	Øystein	Norway	IMR	Physical oceanography
Skjelvan	Ingunn	Norway	Uni Research	Biogeochemistry
Skogen	Morten	Norway	IMR	Ocean modelling
Skoglund	Rannveig	Norway	UiB	Physical Geography/ Palaeoclimates
Smedsrud	Lars H.	Norway	UiB	Polar oceanography
Sobolowski	Stefan	USA	Uni Research	Atmospheric dynamics
Sodemann	Harald	Germany	UiB	Atmospheric dynamics
Sorteberg	Asgeir	Norway	UiB	Meteorology
Spengler	Thomas	Germany	UiB	Meteorology
Stiller-Reeve	Mathew	UK	Uni Research	Meteorology
Strømsøe	Jørund	Norway	Uni Research	Palaeoclimates
Suo	Lingling	China	NERSC	Meteorology
Svendsen	John-Inge	Norway	UiB	Palaeoclimates
Søiland	Henrik	Norway	IMR	Physical oceanography
Telford	Richard	UK	UiB	Palaeocology
Tisserand	Amandine A.	France	Uni Research	Palaeoclimates
Tjiputra	Jerry	Indonesia	Uni Research	Carbon cycle modelling
Toniazzo	Thomas	Italy	Uni Research	Meteorology
van Hulten	Marco	Netherlands	UiB	Ocean biogeochemical modelling
Vasskog	Kristian	Norway	UiB	Palaeoclimates
Vikebø	Frode	Norway	IMR	Climate & marine ecosystems
Våge	Kjetil	Norway	UiB	Physical oceanography
Wakamatsu	Tsuyoshi	Japan	NERSC	Data assimilation, physical oceanography
Wang	Yiguo	China	NERSC	Statistics
Williams	Timothy	UK	NERSC	Oceanography
Wolf-Grosse	Tobias	Germany	NERSC	Meteorology
Yumruktepe	Çaglar	Turkey	NERSC	Oceanography
Zhang	Zhongshi	China	Uni Research	Palaeoclimates
Østerhus	Svein	Norway	Uni Research	Physical oceanography
Ådlandsvik	Bjørn	Norway	IMR	Physical oceanography
Årthun	Marius	Norway	UiB	Oceanography, climate dynamics
Mousing	Erik Askov	Denmark	IMR	Marine ecology, ecosystem modeling
Vandvik	Vigdis	Norway	UiB	Plant and vegetation ecology, biodiversity

POSTDOCS

Becker	Meike	Germany	UiB	Biogeochemistry, Chemical Oceanography
Berben	Sarah	Belgium	UiB	Palaeoclimates
Bosse	Anthony	France	UiB	Physical oceanography
Brendryen	Jo	Norway	UiB	Palaeoclimates
Bringedal	Carina	Norway	UiB	Mathematics, oceanography
Cheung	Ho Nam	UK	UiB	Atmospheric Science
Christiansen	Casper Tai	Denmark	Uni Research	Terrestrial ecology, soil biogeochemistry
de Fleurian	Basile	France	UiB	Palaeoclimates
Devilliers	Marion	France	UiB	Climate - air quality
Ekici	Altug	Turkey	Uni Research	Permafrost modelling, land modelling, carbon cycle
Fan	Yuanchao	China	Uni Research	Land surface modelling, remote sensing
Felde	Vivian	Norway	UiB	Palaeoecology
Galaasen	Eirik	Norway	UiB	Palaeoclimates
García-Ibáñez	Maribel	Spain	Uni Research	Seawater Inorganic Carbon System
Halbritter	Aud	Norway	UiB	Climate change ecology
He	Shengping	China	UiB	Atmospheric Science
Hezel	Paul	USA	UiB	Atmospheric dynamics
Ho	Sze Ling	Malaysia	UiB	Palaeoclimates
Kimmritz	Madlen	Germany	NERSC	Sea ice modelling
Lorenz	Torge	Germany	Uni Research	Numerical modeling of atmosphere
Madonna	Erica	Switzerland	UiB	Atmospheric dynamic
Muschitiello	Francesco	Italy	Uni Research	Paleoclimate

Ogawa	Fumiaki	Japan	UiB	Meteorology
Omrani	Nour-Eddine	Germany	UiB	Tropical meteorology
Papritz	Lukas	Switzerland	UiB	Meteorology
Piasecki	Alison	USA	UiB	Quaternary Earth Systems
Pilskog	Ingjald	Norway	Uni Research	Modelling, biogeochemistry
Reuder	Susana Mendes	Portugal	UiB	Meteorology
Schemm	Sebastian	Switzerland	UiB	Atm, ocean & climate dynamics
Simon	Margit	Germany	Uni Research	Palaeoclimates
Sorokina	Svetlana	Russia	UiB	Meteorology
Spensberger	Clemens	Germany	UiB	Meteorology
Svendsen	Lea	Norway	UiB	Climate dynamics
Tartaglione	Nazario	Italy	Uni Research	Meteorology and climate
Terpstra	Annick	Netherlands	UiB	Polar meteorology
Tsubouchi	Takamasa	Japan	UiB	Physical oceanography
van der Bilt	Willem	Netherlands	UiB	Paleoclimates
Weijenborg	Christian	Netherlands	UiB	Dynamical meteorology
Werner	Johannes	Germany	UiB	Palaeoclimates
Bui	Hai	Vietnam	UiB	Numerical modeling, atmospheric dynamics
Aydogdu	Ali	Turkey	NERSC	Mathematics, oceanography

PHD CANDIDATES

Ali	Elsheikh Bashir	Sudan	UiB	Chemical oceanography
Althuizen	Inge	Netherlands	UiB	Biogeochemistry, ecology
Asbjørnsen	Helene	Norway	UiB	Polar climate
Bohlinger	Patrik	Germany	UiB	Meteorology
Bonitz	Fabian	Germany	Uni Research	Palaeoclimates
Brakstad	Ailin Dale	Norway	UiB	Physical oceanography
Bretones	Anaïs	France	UiB	Physical oceanography
Castaño-Primo	Rocio	Spain	UiB	Physical oceanography
Clotten	Caroline	Germany	Uni Research	Palaeoclimates
Crespo	Lander Rodriguez	Spain	UiB	Climate dynamics
Daae	Kjersti	Norway	UiB	Physical oceanography
Dugstad	Johannes	Norway	UiB	Physical oceanography
Eide	Marie	Norway	UiB	Oceanography
Elageed	Salma K.D.E	Sudan	UiB	Chemical oceanography
Fremme	Astrid	Norway	UiB	Experimental meteorology
Griem	Lisa	Germany	UiB	Paleoceanography/-climate
Haaga	Kristian Agasøster	Norway	UiB	Time series analysis
Haualand	Kristine Flacké	Norway	UiB	Dynamic meteorology

Haugum	Siri Vatsø	Norway	UiB	Plant communities, land-use changes
Håvik	Lisbeth	Norway	UiB	Physical oceanography
Jaroszynska	Francesca	UK	UiB	Plant ecology
Jensen	Mari Fjalstad	Norway	UiB	Climate dynamics, palaeoclimates
Johansson	Fanny Ekblom	Sweden	UiB	Physical geography
Kessler	Augustin	France	Uni Research	Ocean biogeochemistry
Kral	Stephan	Germany	UiB	Experimental meteorology
Lambert	Erwin	Netherlands	UiB	Climate dynamics
Leutert	Thomas	Switzerland	UiB	Palaeoclimates
Liakka	Johan	Sweden	NERSC	Climate modeling, ice sheet modeling
Lind	Sigrid Gjessing	Norway	IMR	Physical oceanography
Loose	Nora	Germany	UiB	Oceanography, climate modelling
Mangini	Fabio	Italy	NERSC	Oceanography
Meinicke	Niklas	Germany	UiB	Quaternary Earth Systems
Morée	Anne	Netherlands	UiB	Biogeochemistry
Muilwijk	Morven	Netherlands	UiB	Arctic oceanography, sea ice
Onarheim	Ingrid H.	Norway	UiB	Physical oceanography and sea ice
Oppedal	Lea Toska	Norway	UiB	Palaeoclimates
Pariyar	Sunil Kumar	Nepal	UiB	Tropical meteorology
Plach	Andreas	Austria	UiB	Paleoclimates, glaciology
Pontoppidan	Marie	Denmark	Uni Research	Meteorology
Rajasakaren	Balamuralli	India	Uni Research	Biogeochemistry
Regnéll	Carl	Sweden	UiB	Quaternary geology and paleoclimate
Rheinlænder	Jonathan	Denmark	UiB	Physical oceanography
Rutledal	Sunniva	Norway	UiB	Paleoclimate/paleoceanography
Røthe	Torgeir	Norway	UiB	Palaeoclimates
Sadatzki	Henrik	Germany	UiB	Palaeoclimates
Schevenhoven	Francine	Netherlands	UiB	Mathematical modeling
Semper	Stefanie	Germany	UiB	Physical oceanography
Sessford	Evangeline	Canada	UiB	Palaeoclimates
Siew	Yu Feng	China	UiB	Atmosphere dynamic
Smith-Johnsen	Silje	Norway	UiB	Palaeoclimates, glaciology
Steiger	Nadine	Germany	UiB	Physical oceanography
Strand	Kjersti	Norway	IMR	Meteorology and oceanography
Theofilopoulos	Alexios	Greece	UiB	Oceanography/modelling
Trofimova	Tamara	Russia	Uni Research	Palaeoclimates
Tsopouridis	Leonidas	Greece	UiB	Meteorology
Weng	Yongbiao	China	UiB	Meteorology
Zolles	Tobias	Austria	UiB	Glaciology, modelling
Åkesson	Henning	Sweden	UiB	Palaeoclimates, glaciology

TECHNICAL & ADMINISTRATIVE STAFF

Bernard	Christophe	France	UiB	Chief engineer
de Lange	Tor	Norway	UiB	Senior engineer
de Vareilles	Mahaut	France	UiB	Project manager, PREFACE
Grong	Ellen Margrete	Norway	UiB	Senior secretary, Bjerknes secretariat
Henriksen	Jonas Fagnastøl	Norway	UiB	Computer engineer
Hoffmann	Friederike	Germany	UiB	Science coordinator
Jackson	Kristin	USA	UiB	Senior engineer, biogeochemistry
Jones	Steve	UK	UiB	Chief engineer
Landa	Camilla	Norway	UiB	Chief engineer
Lien	Vidar	Norway	IMR	Engineer
Mørkved	Pål Tore	Norway	UiB	Senior engineer
Naustdal	Sigve	Norway	UiB	Chief engineer, measurement science
Paasche	Øyvind	Norway	UiB	Senior adviser, Bjerknes secretariat
Petersson	Algot	Norway	UiB	Chief engineer
Pfeil	Gerrit Benjamin	Germany	UiB	Senior engineer, data management BCDC
Sandquist	Erik	Norway	Uni Research	Science coordinator, Uni Research
Stolt-Nielsen	Ragnhild	Norway	UiB	Head of administration, Bjerknes secretariat
Støren	Eivind	Norway	UiB	Senior engineer
Sylte	Gudrun	Norway	UiB	Head of communications, Bjerknes secretariat
Thi Do	Quynh-Giao	Vietnam	UiB	Finances, Bjerknes secretariat
Viste	Ellen Marie	Norway	UiB	Adviser, communications, Bjerknes secretariat

PERSONNEL SUMMARY

Number of scientific personnel, sorted by category and partners

Category	Staff	Foreigners %	Women %
Academics	226	65 %	35 %
Technicians & administration	21	33 %	43 %
Total	247		

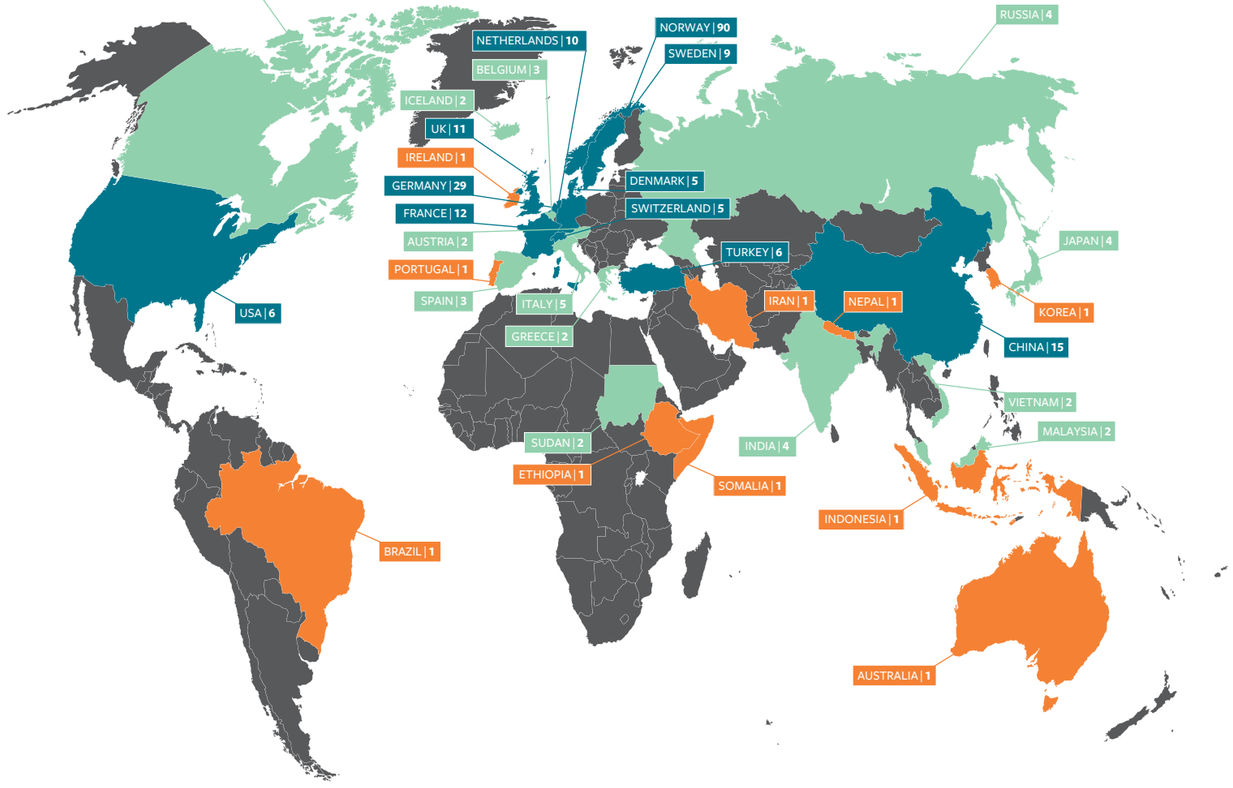
	STAFF						
Category	UiB	Uni Research	NERSC	IMR	Total	Foreigners %	Women %
Scientists	53	35	25	14	127	60 %	25 %
Postdocs	31	9	1	0	41	83 %	37 %
PhD candidates	48	6	2	2	58	62 %	53 %
Total	132	50	28	16	226		

STAFF BY NATIONALITY

The BCCR encompassed 34 nationalities in 2017

COUNTRY	PERSONNEL				
Norway	90	Canada	4	Australia	1
Germany	29	India	4	Brazil	1
China	15	Japan	4	Ethiopia	1
France	12	Russia	4	Indonesia	1
UK	11	Belgium	3	Iran	1
Netherlands	10	Spain	3	Ireland	1
Sweden	9	Austria	2	Korea	1
Turkey	6	Greece	2	Nepal	1
USA	6	Iceland	2	Portugal	1
Denmark	5	Malaysia	2	Somalia	1
Italy	5	Sudan	2	Total	247
Switzerland	5	Vietnam	2		

STAFF FROM 34 NATIONALITIES



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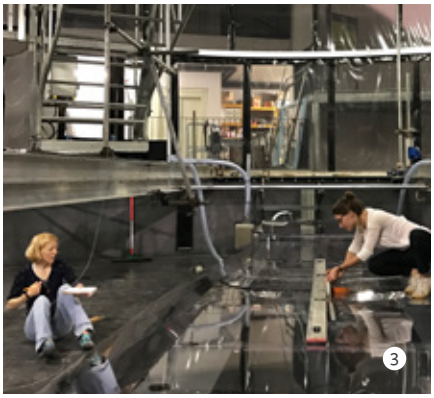
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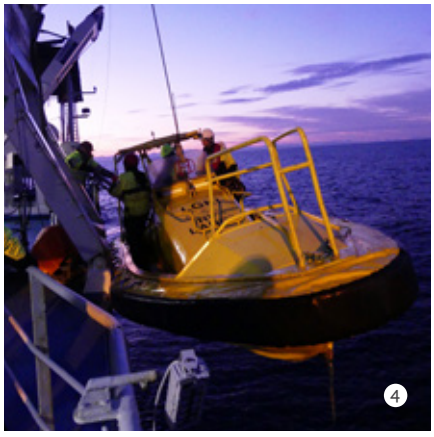
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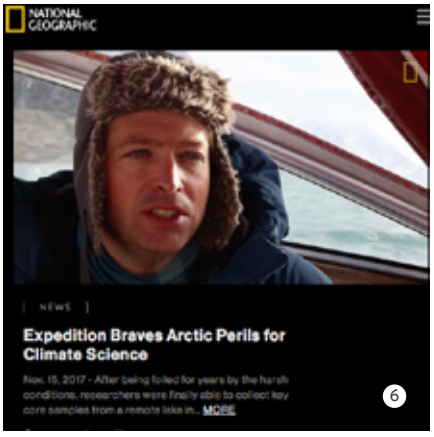

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1 **The official opening:** Researcher Hanna Lee talks to Prime Minister Erna Solberg.
PHOTO: **PAUL SIGVE AMUNDSEN**

4 **Where Atlantic water meets Arctic Ocean:** Morven Muilwijk on cruise in the Norwegian Sea.
PHOTO: **GWÉNAËLLE HAMON/ NORWEGIAN POLAR INSTITUTE**

7 **Outdoor office:** Stefan Sobolowski and Lu Li at work at Finse.
PHOTO: **ELLEN VISTE**

2 **Predicting the Barents Sea Ice:** Ingrid Onarheim and Prime Minister Erna Solberg.
PHOTO: **PAUL SIGVE AMUNDSEN/ UIB**

5 **Recording pCO_2:** Abdir Omar and Sigve Naustdal onboard the Trans Carrier starts up the ICOS recording instruments.
PHOTO: **SIGVE NAUSTDAL**

8 **Geology for kids:** Silje Smith-Johnsen talks to a young audience at the political festival Arendalsuka in August.
PHOTO: **ØYVIND PAASCHE**

3 **A different kind of Antarctic expedition:** Elin Darelius and Nadine Steiger performing laboratory experiments in Grenoble, France.
PHOTO: **MIRJAM GLESSMER**

6 **National Geographic:** Jostein Bakke and crew went to Svalbard for the fifth year in a row, with National Geographic covering their field trip.
FACSIMILE **NATIONALGEOGRAPIC.COM**

9 **Field trip in the mountains:** The Advanced Climate Dynamics Course 2017 took place in Rondane National Park.
PHOTO: **KERIM NISANCIOGLU**