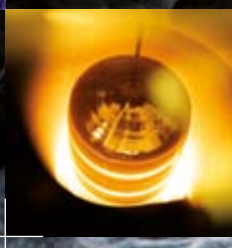
The Research Council of Norway

Research in Norway

Research actors focus on China



About The Research Council of Norway

The Research Council of Norway is a national strategic and funding agency for research activities. The Council serves as a chief source of advice on and input into research policy for the Norwegian Government, the central government administration and the overall research community. It is the task of the Research Council to identify Norway's research needs and recommend national priorities. The Research Council provides a central meeting place for those who fund, carry out and utilise research and works activity to promote the internationalisation of Norwegian research.

The Research Council seeks to enhance international cooperation in areas that promote higher quality and greater innovation capacity in Norwegian research, that reinforce research and developement areas of national importance, and that strengthen Norway's role as a global partner. The Council also works actively vis-á-vis international organisastions to promote common initiatives and to furnish researchers and organisations abroad with information on Norwegian research opportunities.

NORWAY EXPO 2010 挪威

EXPO 2010 in Shanghai

Norway will participate at the World EXPO 2010 in Shanghai. The largest World Exposition in modern times will address the urban challenges with the theme "Better Cities, Better Life". Norway's concept for this World EXPO is "Norway Powered By Nature". The Research Council will be organising a number of scientific seminars at the exhibition.

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Foreword



Cooperation on education and research between China and Norway has increased considerably in recent years. The Research Council is encouraging Norwegian researchers and companies to expand cooperation with China in all fields and thematic areas.

This brochure has been produced by the Research Council of Norway in connection with EXPO 2010 to provide an overview of the Norwegian research system and present the most important research actors that have established cooperation with China.

Cooperation on education and research between China and Norway has increased considerably in recent years. The number of Norwegian companies establishing themselves in China is growing, and many of these are also making contacts with the Chinese research community. The Research Council is encouraging Norwegian researchers to expand cooperation with China in all fields and thematic areas.

In autumn 2007 the Norwegian Government launched a new China strategy in which research and education are important components. In 2008 a cooperation agreement on research and technology was signed between the Norwegian Ministry of Education and Research and the Ministry of Science and Technology of the People's Republic of China. A cooperation agreement was also entered into with the Chinese Ministry of Education. These agreements supplement a number of other agreements involving research that have been concluded between various ministries in Norway and their counterparts in China.

The Research Council has established a separate research programme designed to enhance Sino-Norwegian cooperation, Research Cooperation with China (CHINOR). The CHINOR programme encompasses the fields of climate, environment and welfare and collaborates with other Research Council programmes within these fields. In addition, the Research Council provides funding for a number of mobility schemes for students and researchers, together with the Chinese authorities.

The Research Council's EXPO 2010 seminars are designed to provide insight into how Norway has increased its focus on environment-friendly energy research, among other things. For Norwegian researchers and research institutions these seminars offer a unique opportunity to establish contacts with the Chinese research community. For the Chinese participants, they represent a fruitful venue for learning about Norwegian research. It is our hope that the contacts established here will give rise to full-fledged partnerships in a long-term perspective.

Norway and China share many common interests as well as a longstanding tradition of open and positive cooperation on research and education. The Research Council seeks to facilitate research collaboration that is beneficial to both parties and that will lead to increased knowledge and opportunities for innovation.


Photo: Erlend Aas/Scanpix


Photo: Bård Gudim

Arvid Hallén
Director General

Kari Kveseth
International Director

Climate research in Norway

Research plays a crucial role in developing knowledge about global warming and increasing people's awareness of how serious the situation is. Norwegian researchers are playing a key role in this work.

Norway has internationally recognised research groups working on the climate system, climate trends and the impacts of climate change on ecosystems. In addition, Norway has a leading position in technological climate-related research, especially on carbon capture and storage.

Norwegian climate and energy research has been considerably expanded in recent years, and these fields are receiving high priority in political and research circles alike.

The NORKLIMA climate research programme
One of the Research Council's Large-scale Programmes is the ten-year NORKLIMA programme (2004–13). The programme is designed to generate knowledge about the climate system, climate trends and the impacts of climate change on the natural environment and society. Several of the projects that are receiving funding from the programme involve research cooperation between China and Norway.
www.rcn.no/norklima

Examples of findings from NORKLIMA projects:

Soot and the climate
An interdisciplinary research project is giving us more insight into the links between soot emissions and climate change.

After CO_2, soot (or black carbon) and methane are probably the biggest contributors to global warming. But much less is known about how soot emissions affect the climate.

The NORKLIMA project "Climate effects of reducing black carbon emissions" has found that the amount of soot deposited on snow and ice in Svalbard has probably been halved in the last 25 years. However, soot particles in the atmosphere probably contribute about four times as much to global warming as soot on snow and ice.

The research project has also looked at where in the world it will be most cost-effective to take action against soot emissions.

"On the basis of our findings, it would clearly be most sensible to start by reducing soot emissions in China and to some extent in India," says Professor Terje Berntsen of the University of Oslo.

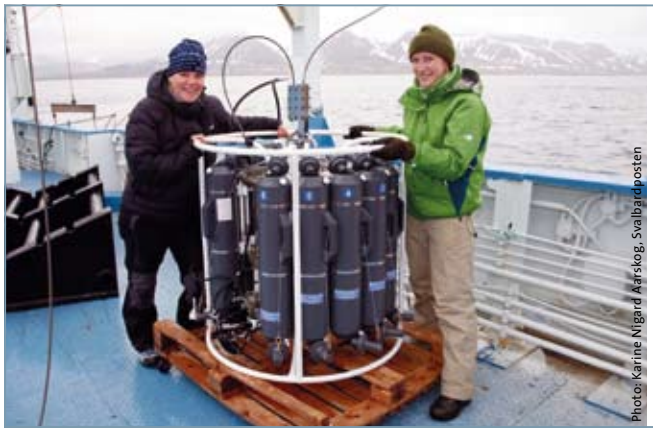


Photo: Karine Nigard Aarskog, Svalbardposten

Svalbard as an Arctic research platform

It is believed that the effects of global warming will be greatest and will first be felt in the Arctic. Alarming changes in the Arctic climate have already been documented, and the temperature is rising faster here than in other parts of the world.

In the past 10–15 years, the Norwegian archipelago of Svalbard has become one of the most important research platforms in the Arctic. Svalbard's situation in the High Arctic provides excellent opportunities for research, and Norway has invested heavily in research infrastructure on the islands.

Climate change will disrupt marine ecosystems in the Arctic

Climate change is a threat to ice algae, and their problems have repercussions throughout the ecosystems.

Ice algae are of vital importance for animals such as fish, walruses and polar bears at higher levels of Arctic food chains. Ice algae need very little light, and show a burst of productivity very early in spring, long before the spring bloom of algae in open water. As the ice recedes, the habitat of the ice algae disappears.

Arctic food chains are short, with few links between algae and fish and mammals. Ice algae are therefore an important food source for the whole ecosystem.

After the spring bloom, ice algae drift down through the water to the seabed, where they become food for benthic animals such as shrimps, molluscs and sea cucumbers. A reduction in the distribution of ice algae will therefore disrupt food supplies for benthic organisms as well.

Photo: Sebastian Gerland, Norsk Polarinst. (utsnitt)

Photo: Eiscat

Norwegian welfare research

Welfare research is an area in which the Nordic countries excel. Research activities are designed to increase understanding of the interaction between the welfare state, the market economy, civil society, the family and other social institutions.

The Nordic welfare model
The Nordic welfare model is a social model that places importance on universal welfare provisions and the re-distribution of welfare and social security. The model is dominant in the Nordic countries and is characterised by: extensive public welfare schemes that provide the citizens of the Nordic region with a high level of social security, solid economic growth, a high standard of living, high levels of education, low unemployment and relatively little income disparity. "Nordic" is a joint term, but there are differences between the Nordic countries.

Research Programme on Welfare, Working life and Migration (VAM)
The Research Council of Norway has launched a major new programme, Research Programme on Welfare, Working life and Migration (VAM), which aims to generate new knowledge about the welfare state over a ten-year period.

This is the largest social science research programme to be established in Norway. The programme encompasses a broad range of thematic areas and extends across many different disciplines and sectors of society. It will therefore provide a basis for studying important social changes across sectors, disciplines and thematic areas.
www.rcn.no/vam

Examples of Norwegian welfare research:

Active aging in Norway and Europe
Dealing with the aging population and the issues surrounding social participation for people of all ages is one of the greatest challenges of our time. A new research project addresses the concepts, processes and mechanisms that underlie Norwegian and European aging policy.

What are Norway and other European countries seeking to achieve with a policy for a successful and active old age? "Aging policy is much more than a policy for the aged. Ideally, it encompasses all phases of life and shares an interface with most policy areas, from family policy to the labour market and pensions," says Rune Ervik, a researcher at the Stein Rokkan Centre for Social Studies, University of Bergen. The project is part of a ten-year initiative focusing on research on aging.

Are we working longer hours?
Are the standardised working hours of the industrial age disappearing? Are we working more? Is work time becoming more flexible or is the work we do more intense? Do social differences such as salary disparity and social class lead to different practices as regards working hours? These are some of the questions currently being researched by Professor Anne Lise Ellingsæter of the University of Oslo.

Her research indicates that, measured in terms of number of working hours, the overall amount of paid work carried out in Norwegian society has remained stable. If there is a trend, it is in a downward direction. But there has been a shift between the social classes. Nowadays, the middle classes work the longest hours, and long working hours are associated with high status.

The nations among us
According to Viggo Vestel, Senior Researcher and head of a research project at NOVA (Norwegian Social Research), there are consequences for the nation state when young people identify with global movements. Transnational identities can affect the relationship young people have with their nation.

Movements such as Islam, hip-hop and antiracism can produce identities in young people that go beyond national borders. How does this affect the attachment they have to the country they live in? What consequences does it have for political orientation and social participation? Vestel is seeking answers to these questions and others.

Photo: Pål Bugge/Innovasjon Norge

Norwegian environmental research

Norway has high-quality research groups working in fields such as environmentally hazardous substances and biodiversity, and is making its mark internationally.

Norway played an important part in the development and implementation of the Convention on Biological Diversity. Its objectives are the conservation and sustainability of biological diversity and equitable sharing of the benefits arising out of the utilisation of genetic resources. Halting the loss of biological diversity at all levels from genetic variability to landscapes is a very important but complex and challenging task.

Norwegian environmental research towards 2015 (MILJO2015)
The natural and cultural environment is a vital part of the framework for the development of society at the regional, national and international level. The MILJO2015 programme under the Research Council takes a more multi- and cross-disciplinary approach than traditional environmental research. In 2010, the programme is providing funding to some 85 research projects.

Environmental research is inherently international. International research cooperation and internationalisation of research are therefore a vital part of the MILJO2015 programme. *www.rcn.no/miljo2015*

Examples of findings from Norwegian environmental research:

Agricultural and forest fires spread pollution to the Arctic
Agricultural and forest fires in North America and Eastern Europe have resulted in record atmospheric concentrations of polychlorinated biphenyls (PCBs) over the Norwegian Arctic archipelago of Svalbard. Climate change is expected to worsen the problem of airborne pollution in the Arctic.

In recent decades, high levels of persistent organic pollutants (POPs) such as PCBs have been found in the Arctic. POPs are particularly dangerous because they break down very slowly and become more concentrated along food chains.

"Our aim was to investigate the causes of the pollution load in the Arctic and trace pollution sources," says research scientist Sabine Eckhardt of the Norwegian Institute for Air Research.

"As far as we know, this is the first study to demonstrate a link between biomass burning and elevated concentrations of PCBs in the atmosphere far away from the source. We expect agricultural and forest fires to become more widespread as a result of climate change. This means that they may also cause growing problems in the Arctic," concludes Ms Eckhardt.

National parks can enhance value creation
A global analysis carried out as part of a research programme at the Norwegian Institute for Nature Research has shown that protected areas are clearly the most important and effective way of protecting biodiversity.

Many national parks around the world are under considerable pressure from development, tourism and business interests. Management models and the amount of government funding available vary widely between regions. The European and Scandinavian model involves minimum levels of intervention for management purposes and to give people access to national parks, and low levels of investment. However, it also seems to have the greatest negative effects because business opportunities tend to focus on private developments such as holiday cabins or hotels.

In Asia, North America, South America and Africa, other models are used (substantial government funding, high fees for users or requirements to make use of guides or overnight accommodation). This results in more active management and greater economic activity, although population pressure may pose challenges or result in conflicts related to land use.

Norwegian research on climate and energy technology

Norway has increased investment in research and development relating to environment-friendly energy, giving a major boost to researchers and companies over a very short period of time.

Centres for Environment-friendly Energy Research

Norway has established eight Centres for Environment-friendly Energy Research encompassing the areas of offshore wind energy, solar energy, bioenergy, environmentally-sound energy design, energy efficiency, and CO_2 management.

Each centre forms a national team of research groups, universities and industry players that can generate knowledge and develop solutions in areas where Norway is in a position to make a difference. The centres will provide a hub for international research cooperation.
www.rcn.no/fme

The centres covers these themes:

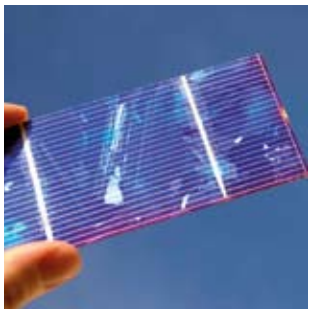
CO_2 management
BIGCCS Centre – International CCS Research Centre
The BIGCCS Centre facilitates sustainable power generation from fossil fuels based on cost-effective CO_2 capture, and safe transport and underground storage of CO_2. The centre builds expertise and closes critical knowledge gaps in the CO_2 chain, developing novel technologies in an extensive collaborative research effort.
www.bigccs.no

Subsurface CO_2 storage – Critical Elements and Superior Strategy (SUCCESS)
SUCCESS is working to develop sound, reliable ways of sequestering CO_2 through international collaborative efforts. The centre focuses on geological characteristics, including storage capacity, injection rate limits, and CO_2 confinement.
www.fme-success.no

Bioenergy
Bioenergy Innovation Centre (CenBio)
CenBio is developing the basis for a sustainable, cost-effective bioenergy industry in Norway to achieve the national goal of doubling bioenergy use by 2020. The centre looks at the entire value chains of virgin biomass and biodegradable waste fractions, including their production, harvesting and transportation, their conversion to heat and power, and the utilisation of residues.
www.cenbio.no

Offshore wind
Norwegian Research Centre for Offshore Wind Technology (NOWITECH)
NOWITECH is laying a foundation for industrial value creation and cost-effective offshore wind farms. The centre focuses on deep-water solutions (over 30 metres) for bottom-fixed and floating wind turbines. New materials, new turbine platforms, a subsea power grid, operations and maintenance, and analysis of new concepts are priority research areas.
www.nowitech.no

Norwegian Centre for Offshore Wind Energy (NORCOWE)
NORCOWE is an interdisciplinary resource centre for maximising power production from offshore wind energy. The centre combines Norwegian know-how from offshore technology with Danish expertise in wind power to develop innovative, cost-effective solutions for offshore wind power in deep waters and harsh environments.
www.norcowe.no



Solar cells
The Norwegian Research Centre for Solar Cell Technology
The centre brings together the major Norwegian scientific and industrial players in the field of photovoltaic technology in the effort to further develop the Norwegian photovoltaic industry and advance solar energy as a significant renewable energy source.
www.solarunited.no

Environmentally-sound energy design
Centre for Environmental Design of Renewable Energy (CEDREN)
CEDREN develops and disseminates effective design solutions for renewable energy production that take adequate account of environmental and societal issues, both locally and globally.
www.cedren.no

Energy use
The Research Centre on Zero Emission Buildings (ZEB)
ZEB seeks to eliminate the greenhouse gas emissions caused by buildings. The centre develops competitive products and solutions to achieve a market breakthrough for buildings whose production, operation and demolition emit no greenhouse gases. Research encompasses both residential and commercial buildings, as well as public buildings.
www.zeb.no

Research Council programmes and schemes addressing energy and climate technology

Power Generation with Carbon Capture and Storage (CLIMIT)
The primary objective of the CLIMIT programme is to commercialise power generation with CO_2 management through research, development and demonstration. The programme is jointly administered by the Research Council of Norway and Gassnova.
www.rcn.no/climit

Clean Energy for the Future (RENERGI)
The primary objective of the RENERGI programme is to develop knowledge and solutions as a basis for ensuring environment-friendly, economically efficient and effective management of the country's energy resources, a highly reliable energy supply and internationally competitive industrial development related to the energy sector.
www.rcn.no/renergi

The Research Council of Norway

The Research Council of Norway (RCN) is a national strategic and funding agency for research activities. The RCN utilises targeted funding schemes to translate national research policy goals into action and serves as an advisory body on research policy issues for the Government, the central government administration and the overall research community.


Photo: Colourbox

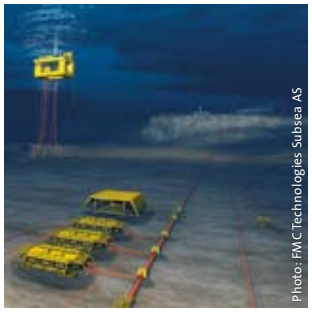


Photo: FMC Technologies Subsea AS

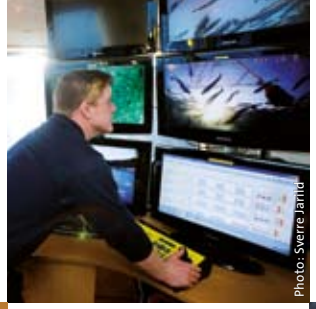
The Research Council works to enhance Norway's knowledge base and meet society's needs for research by identifying such needs and opportunities and recommending national priorities. It is the task of the Research Council to increase the national knowledge base and meet society´s needs for research through identification of Norway´s research needs and oportunities and recommend national priorities. The Council is a strategic and funding agency for basic research, applied research as well as innovation.

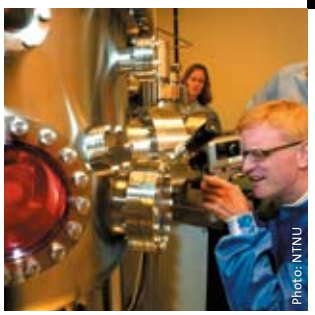
Four national research challenges constitute the basis for the Councils activities;

- To ensure adequate capacity and quality,
- To create a sounder structure,
- To meet the changing needs of society
- To promote new learning

The Research Council provides a central meeting place for those who fund, carry out and utilise research and works to promote the internationalisation of Norwegian research.

The Research Council is administered under the auspices of the Ministry of Education and Research. Sixteen ministries contribute to the budget of the Research Council.





International focus
Research and innovation are coming to play an increasingly important part in a variety of policy areas, and international R&D cooperation has become an integral component of global political cooperation.

The Research Council is a bridge builder between Norwegian and international research. The Research Council's activities are designed to draw attention to Norwegian research institutions as places of work and as partners for collaboration with international researchers and research institutions.

Cooperation within the EU is the largest arena for international research cooperation for Norwegian researchers and institutions. The Research Council facilitates the efforts of Norwegian institutions to use EU research cooperation as an arena for cooperation with priority partner countries and regions that are not members of the EU.

Norway participates in bilateral research cooperation with a large number of countries outside Europe. Political priorities include the US, Canada, Japan, China, India and South Africa. Special political attention is also given to Russia, Brazil, Argentine and Chile.
www.rcn.no

Centres of Excellence (SFF)
In 2003 the Research Council of Norway established a Centres of Excellence (CoE) scheme, with the intention of bringing more Norwegian researchers and research groups up to a high international standard. The 21 centres are affiliated with Norway's top universities and leading independent research institutes.
www.rcn.no/sff

Centres for Research-based Innovation (SFI)
The Centres for Research-based Innovation (SFI) scheme seeks to promote innovation by providing funding for long-term research conducted in close cooperation between R&D-performing companies and prominent research groups. The 14 SFI centres are working to develop expertise of high international calibre in fields of importance to innovation and value creation.
www.rcn.no/sfi

Centres for Environment-friendly Energy Research (FME)
Norway has established eight Centres for Environment-friendly Energy Research (FME) encompassing the areas of offshore wind energy, solar energy, bioenergy, environmentally-sound energy design, energy efficiency, and CO_2 management. The centres provide a hub for high-quality international research cooperation.
(see description, page 10)
www.rcn.no/fme

Strong focus on China

Research is an important tool in Norway's efforts to increase its contacts with China. As part of the effort to follow up the Norwegian Government's China strategy, the Research Council has established a new research programme designed to facilitate Sino-Norwegian cooperation, Research Cooperation with China (CHINOR).

The CHINOR programme was launched in 2009. In its initial phase the programme is giving priority to research on climate, climate technology, the environment and welfare. The scope of the programme will be expanded over time to encompass other research fields.

The CHINOR programme was established to provide a cohesive framework for initiatives targeting China. Sino-Norwegian research cooperation will be incorporated into the Research Council's thematically-oriented activities in order to ensure a high level of scientific collaboration.

"China is one of the world's leading research nations and cooperation with China will become increasingly important in the time to come," states Arvid Hallén, Director General of the Research Council. Both China and Norway are giving priority to research in the field of renewable energy and to technology areas such as nanotechnology, biotechnology and ICT.

Common challenges

"If we are successful in expanding cooperation in the fields of energy and environmental technology, this could set the stage for industrial cooperation further down the line," says Hansteen, Programme Coordinator for the CHINOR programme.

"China and Norway share some common challenges. China is the world's largest fisheries and aquaculture nation and the prospects for cooperation in this field are good. Norwegian researchers have also developed considerable expertise in the fields of food production and the environment," says Hansteen,

The CHINOR programme will distribute NOK 20 million per year from 2009 to 2017 to projects under the programme's central thematic priorities: climate change, environmental research, welfare policy and renewable energy and climate technology.

Successful start

The first call for proposals, which focused on studies of climate change and pollution on Chinese territory and in the Arctic, was met with great interest. Six research projects related to climate change are established, in addition to six network projects on welfare policy.

Assisting companies

An increasing number of Norwegian companies are establishing themselves in China and the Research Council of Norway will work together with Innovation Norway to assist these companies in their activities abroad. In the autumn of 2010 the Research Council of Norway plans to launch an alumni network for Chinese nationals who have studied in Norway. This network will then be linked to the Norwegian business sector.

www.rcn.no/chinor

The Norwegian research system

Research in Norway is organised according to the sectoral principle. This means that the various ministries provide funding for research related to their own sectors.

All of Norway's 18 government ministries allocate funds for research to varying degrees.

Political responsibility
At the political level the Storting (Norwegian parliament) and the Government establish the framework conditions and define the overall objectives and priorities for research policy. The Ministry of Education and Research is responsible for coordinating research policy and administers over 50 per cent of state funding for research. The Ministry of Trade and Industry is the next largest source of research funding.

The Research Council of Norway – a key actor
Some 26 per cent of public funding is channelled through the Research Council of Norway. Norway has a unified Research Council encompassing all disciplines and fields, for basic research as well as industry-oriented research.

The Research Council cooperates closely with Innovation Norway on innovation and development activities in individual companies.

Norway has:
7 universities
28 university colleges
96 independent research institutes

Who carries out research in Norway?
Research-performing institutions include universities and university colleges, research institutes, regional health authorities, museums, libraries and archives. Research carried out at universities and university colleges accounts for a quarter of Norway's total research activity. Some 60 per cent of public research funding is allocated directly to universities and university colleges.

Norway's universities and university colleges have national responsibility for basic research and researcher training.

Norway has a large number of research institutes, and these, too, comprise an integral part of the research establishment. Cooperation between trade and industry and the independent research institutes is well-established and the division of tasks between them is clearly defined.

A major portion of Norway's R&D is carried out within the business sector, accounting for nearly 50 per cent of all R&D activity in Norway. The greatest investment in R&D takes place within Norway's larger scale enterprises.

Researcher mobility

Most of the funding for research mobility is allocated under specific research projects, but the Research Council also has programmes that deal exclusively with individual mobility scholarships for researchers from China.

Two reciprocal programmes under the Cultural Agreement with China aim to establish and expand academic and cultural contacts between research and education institutions in China and Norway and between individual researchers in the two countries.

One of the programmes is targeted towards advanced students and younger researchers and provides funding for mobility periods of 10 months.

The other programme is targeted towards specialists and covers short-term visits.

Both scholarships are open to all research areas and fields of study, including the applied and performing arts.

Photo: www.chinare.cn

The Research Council of Norway and the National Natural Science Foundation of China also provide funding for Sino-Norwegian basic research collaboration within all natural science disciplines. Funding is available for exchange of researchers and scientific seminars.
www.rcn.no/is
www.euraxess.no

Photo: Colourbox

The Norwegian Centre for International Cooperation in Higher Education

The Norwegian Centre for International Cooperation in Higher Education (SIU) is a competence centre that promotes internationalisation, cultural communication and international mobility within higher education.

Contact

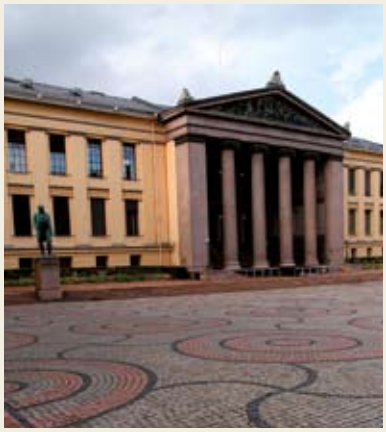
The Norwegian Centre for International Cooperation in Higher Education
PO Box 1093
NO-5811 Bergen
Norway
Tel: +47 55 30 38 00
Email: siu@siu.no
Web: www.siu.no

The centre coordinates efforts on a national level in accordance with official political guidelines. SIU is organised as a public agency under the auspices of the Ministry of Education and Research and is located in Bergen, Norway.

SIU has national responsibility for promoting Norway as an attractive location for study and research. The website www.studyinnorway.no and various publications are valuable tools in these efforts and serve as key information channels for Chinese students and researchers considering pursuing an education in Norway.

Cooperation with China
As a partner for Norwegian higher education institutions in their efforts to enhance cooperation with China, SIU supplies information on the Chinese education system, courses and degrees taught in English in China, as well as on trends and numbers related to student mobility between China and Norway.

Universities »



University of Oslo

Since its founding in 1811 the University of Oslo (UiO) has played a key role in the political, cultural and economic development of Norway.

Contact

University of Oslo
PO Box 1081, Blindern
NO-0317 Oslo
Norway
Tel: +47 22 85 50 50
Email: international@admin.uio.no
Web: www.uio.no

UiO is a comprehensive research-intensive university comprising eight faculties, as well as various specialised centres, museums and graduate-level research schools.

Today UiO has approximately 30,000 students and 5,800 employees. Basic research constitutes the cornerstone of the university's activities. A cross-cutting approach to major global challenges is fundamental to much of the research at UiO.

Cooperation with China
In terms of cooperation in research and education, China is one of the most important partner countries for UiO. Cooperation with China is extensive and growing and involves most faculties, centres and museums, as well as several of UiO's Centres of Excellence and prioritised interdisciplinary research areas.

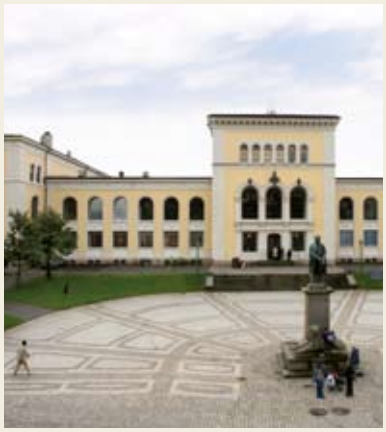
Most of the cooperation activities are initiated on a researcher-to-researcher basis, and are then followed up and supported at faculty and institution levels. Among the most important institutional links are the Nordic Centre at Fudan University, Shanghai, and the Sino-Norwegian Centre for Interdisciplinary Environmental Research (SINCIERE), which was initiated and is coordinated by UiO in cooperation with the Chinese Academy of Sciences and involves a network of Norwegian and Chinese institutions. Renewable energy is a new focus area for the centre.

In addition, there is extensive co-operation in the field of medicine between the UiO and Chinese institutions, notably within cancer research.

A new Chinese-Nordic Cultural Centre was established in 2009 at Nanjing University with UiO as a major partner. Since 1995 the Faculty of Humanities at UiO has coordinated and chaired the Network for University Cooperation Tibet – Norway. At the Faculty of Law, the Norwegian Centre for Human Rights runs a China Programme, which cooperates with several Chinese institutions, including the Chinese Academy of Social Sciences, and provides input and advice to the Norwegian Ministry of Foreign Affairs.

The University of Oslo has bilateral cooperation agreements with 11 institutions in China, including joint research and student exchange with Peking University, Fudan University, Nanjing University, Wuhan University and others, as well as with the Chinese Academy of Sciences and the Chinese Academy of Social Sciences.

University of Bergen



The University of Bergen (UiB), with 14,500 students and 3,200 faculty and staff, is a typical city university.

It is an integral part of the unique landscape and historical and cultural landmarks of Bergen, the second largest and one of the oldest cities in Norway. The University of Bergen has earned a reputation as Norway´s most international university and is involved in partnerships and research collaboration worldwide, including with academic centres of excellence in Europe, North America and Asia.

Cooperation with China
The University of Bergen was one of the founders of the Nordic Centre at Fudan University in Shanghai in 1995. For many years UiB has provided courses on globalisation and modern Chinese politics and society to Norwegian and Chinese students through the centre at Fudan University.

UiB has signed bilateral cooperation agreements with 18 Chinese universities that encompass research, education and exchange of students, doctoral candidates and researchers.

UiB also cooperates with the Chinese Academy of Sciences in Beijing and was one of the first Norwegian universities to have established close cooperation with the academy. Nanjing University, Zhejiang University in Hangzhou and UiB are all members of the Worldwide Universities Network (WUN), a partnership of research-led universities from Europe, North America, South East Asia, Australia and Africa, which cooperate on research and exchange of researchers and doctoral candidates.

UiB also houses the Confucius Institute in Bergen, the only one of its kind in Norway. The institute in Bergen is ranked as one of the ten top priority institutes of over 300 Confucius Institutes around the world. UiB offers Chinese language (mandarin) tuition in cooperation with the Confucius Institute in Bergen.

Contact

University of Bergen
PO Box 7800
NO-5020 Bergen
Norway
Tel: +47 55 58 00 00
Email: post@uib.no
Web: www.uib.no


Photo: NTNU

The Norwegian University of Science and Technology

The Norwegian University of Science and Technology (NTNU) is the second largest university in Norway and Norway's leading academic institution for technology and the natural sciences.

Contact

The Norwegian University of Science and Technology
NO-7491 Trondheim
Norway
Tel: +47 73 59 50 00
Email: postmottak@adm.ntnu.no
Web: www.ntnu.no

NTNU also has dynamic research groups in the social sciences, the fine arts and humanities, medicine and architecture.

NTNU maintains an international focus and carries out leading-edge research in specific technology areas. Six inter-disciplinary strategic areas that address key societal challenges have been identified:

1. Energy and petroleum, resources and environment
2. Globalisation
3. Information and communication technology
4. Medical technology
5. Marine and maritime research
6. Materials technology

The university has roughly 20,000 students and 4,800 staff distributed across seven faculties and 53 departments. Half of the students are studying technology-related subjects or natural sciences.

Cooperation with China
Cooperation with Chinese universities and research groups has been a priority for NTNU's leadership and research groups over the past few years.

NTNU is in the process of developing close relations with top Chinese universities in areas of major strategic and societal importance to China and Norway alike, where NTNU, together with its Chinese and industrial partners, is in a position to contribute with leading-edge research results and technological solutions.

NTNU has signed bilateral agreements with 20 Chinese universities, including Tsinghua University, Shanghai Jiao Tong University, Fudan University, Renmin University of China, Xi'an University of Architecture and Technology, Wuhan University, Xiamen University and Chengdu University.

The agreements have led to research and education cooperation in a wide range of areas, including materials technology; marine technology; aquaculture and marine and maritime research; energy research, including renewable energies, gas technology, industrial technology, energy systems and energy conservation in buildings; water technology; architecture and rural development; ICT, including health informatics and ICT for the public sector; medicine; social sciences; and the humanities.

University of Tromsø

The University of Tromsø (UiT) is the northernmost university in the world. It has 9,000 students and 2,500 faculty and staff. UiT is an international university that attracts students from all over the world.

UiT is involved in research collaboration with academic centres of excellence in Europe, North America and Asia.

Cooperation with China

Marine sciences
The Faculty of Biosciences, Fisheries and Economics enjoys long-standing cooperation in the fields of international trade in the fisheries sector, fisheries management, aquaculture, marine environmental research and marine biotechnology. Several Chinese students have received their master's and doctoral degrees in Tromsø. Among our partners are the Ocean University of China, Shanghai Ocean University, Ningbo University and Yunnan University.

Northern Lights and Space Physics
Researchers at our Faculty of Science and Technology are world leaders in northern lights research. They participate closely with Chinese research institutions (China Research Institute of Radio Wave Propagation, Polar Research Institute of China) and researchers in the international research organisation EISCAT (European Incoherent Scatter Scientific Association). China is playing a leading role in the construction of a new large EISCAT radar on Spitzbergen.

Complementary and Alternative Medicine
The National Research Centre in Complementary and Alternative Medicine at our Faculty of Health Sciences is a contact point for research on traditional Chinese medicine and forms part of the health-related co-operation efforts between Norway and China.

Indigenous peoples
Our Centre for Sámi Studies focuses on strengthening Sámi and indigenous perspectives in a wide range of research at the University of Tromsø. In 2007, we received a delegation from China's State Ethnic Affairs Commission to discuss local rural development projects and sustainable tourism development in Northern Norway.

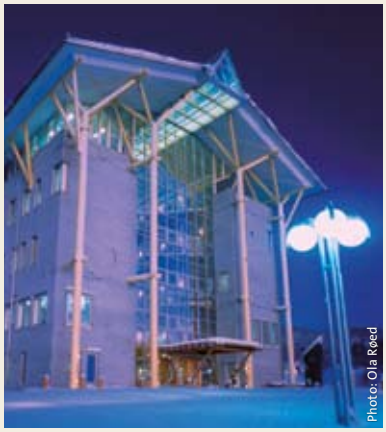


Photo: Ola Røed

Contact

University of Tromsø
NO-9037 Tromsø
Norway
Tel: +47 77 64 40 00
Email: postmottak@uit.no
Web: www.uit.no


Photo: Bente Gevinq

Norwegian University of Life Sciences

The Norwegian University of Life Sciences (UMB) is located at Ås, 35 kilometres south of Oslo, the capital of Norway.

Contact

Norwegian University of Life Sciences
PO Box 5003
NO-1432 Ås
Norway
Tel: +47 64 96 50 00
Email: postmottak@umb.no
Web: www.umb.no

Together with the independent research institutes at Campus Ås, the university represents one of the largest bioscience clusters in Norway. The independent research institutes are the Norwegian Research Institute for Agricultural and Environmental Research (Bioforsk), the Norwegian Forest and Landscape Institute, Nofima Mat (Research on food, taste and food for health) and Nofima Marin (Research on aquaculture and fisheries).

Cooperation with China
Most of UMB's cooperation projects in China focus on research on the impacts of climate change on eco-systems in agriculture, forestry and aquaculture, and on the sustainable development of aquaculture and feed resources for production fish. UMB is engaged in active cooperation and has exchange agreements with five Chinese universities and with institutes in three different science academies. Professors from UMB hold guest professorships at Tsinghua University in Beijing, and Zhejiang Ocean University in Zhoushan.

Since 1998 the Department of Plant and Environmental Sciences (IPM) has collaborated on various projects with a number of Chinese research groups that are experts on the impacts of climate change on ecosystems. Its most important partners are Tsinghua University, the Chinese Academy of Sciences (Research Center for Eco-Environmental Sciences), Chinese Academy of Agricultural Sciences, and the Chinese Academy of Forestry, which are all located in Beijing.

Since 2003 UMB, in its capacity as host institution for the Aquaculture Protein Centre, has been one of four partners involved in the Joint Marine Fish Nutrition Laboratory in Zhoushan, Zhejiang. The three other partners are the Institute of Hydrobiology at the Chinese Academy of Sciences in Wuhan, Zhejiang University in Hangzhou and Zhejiang Institute of Marine Research in Zhoushan. Intensive efforts are currently underway to establish a centre for sustainable development of freshwater aquaculture, in cooperation with the Institute of Hydrobiology at the Chinese Academy of Sciences and relevant Norwegian industry stakeholders.

The Department of Plant and Environmental Sciences has offered a course in soil pollution for Chinese students at Tsinghua University since 2003, and in 2008 a bilateral cooperation agreement was signed that encompasses research, education and exchange visits by students, doctoral candidates and researchers. In 2004 an agreement focusing on cooperation and educational exchange was entered into with Zhejiang Wanli University, and similar cooperation agreements were also signed in 2008 with Zhejiang University and Zhejiang Ocean University.

University of Stavanger

The University of Stavanger (UiS) has approximately 8,300 students and 1,200 academic and administrative staff members.


Photo: Statsbygg

As an innovative and internationally-oriented university, UiS offers a variety of degree programmes in English, mainly at master and doctoral level. Stavanger city, also known as the oil and energy capital of Europe, attracts many international students from all over the world who come to study petroleum engineering, offshore technology, etc.

The academic activity is run by three faculties (Science and Technology, Social Sciences and Arts and Education), the Museum of Archaeology and several research centres. Many of our research activities are carried out in collaboration with our research institute, the International Research Institute of Stavanger (IRIS) and with industry.

Cooperation with China
The University of Stavanger currently has bilateral agreements with 11 Chinese higher education institutions.

Since 2000, UiS has been involved in research collaboration in information technology with the Chinese Academy of Sciences, Huazhong University of Science and Technology, Sun Yat-Sen University, Guangzhou University, Beijing Jiaotong University and Nanjing University of Posts and Telecommunications. The collaboration has led to two European patent applications, the publication of journal papers, as well as the organisation of international conferences.

Since 2005, UiS has offered a Master's Programme (Master of Service Management) at the Beijing Institute of Tourism (BIT), Beijing Union University. To date, 33 Chinese students have graduated from this programme.

Our cooperation with BIT, has resulted in extensive research cooperation in the field of tourism and hospitality. In 2008 UiS and BIT signed an agreement which enables BIT teachers to enter the UiS doctoral programme under joint supervision. Two teachers from BIT are currently working on a doctoral degree at UiS.

In addition, UiS enjoys extensive cooperation with Beijing Institute of Fashion Technology. This includes a research project on CSR (Corporate Social Responsibility), funded by the Research Council of Norway.

Contact

University of Stavanger
NO-4036 Stavanger
Norway
Tel: +47 51 83 10 00
Email: post@uis.no
Web: www.uis.no

University of Agder

The University of Agder (UiA) became a full-fledged university in 2007 with 8,500 students and 930 faculty and staff.

Contact

University of Agder
Service Box 422
NO-4604 Kristiansand
Norway
Tel: +47 38 14 10 00
Email: postmottak@uia.no
Web: www.uia.no

It is situated on the southern coast of Norway and has close international ties with partner universities all over the world.

Cooperation with China
As one of the partners in the Studylink project (http://www.studylink.no), together with Gjøvik University ollege and Telemark University College, the university has signed cooperation agreements with nine Chinese universities, primarily in Beijing, Wuhan, Chendu and Shenzhen. These agreements encompass both research, primarily in ICT, and education.

The University of Agder welcomes Chinese master's and doctoral students, as well as exchange students, particularly in the fields of ICT and business administration, and specialises in international management and strategy.

University colleges »

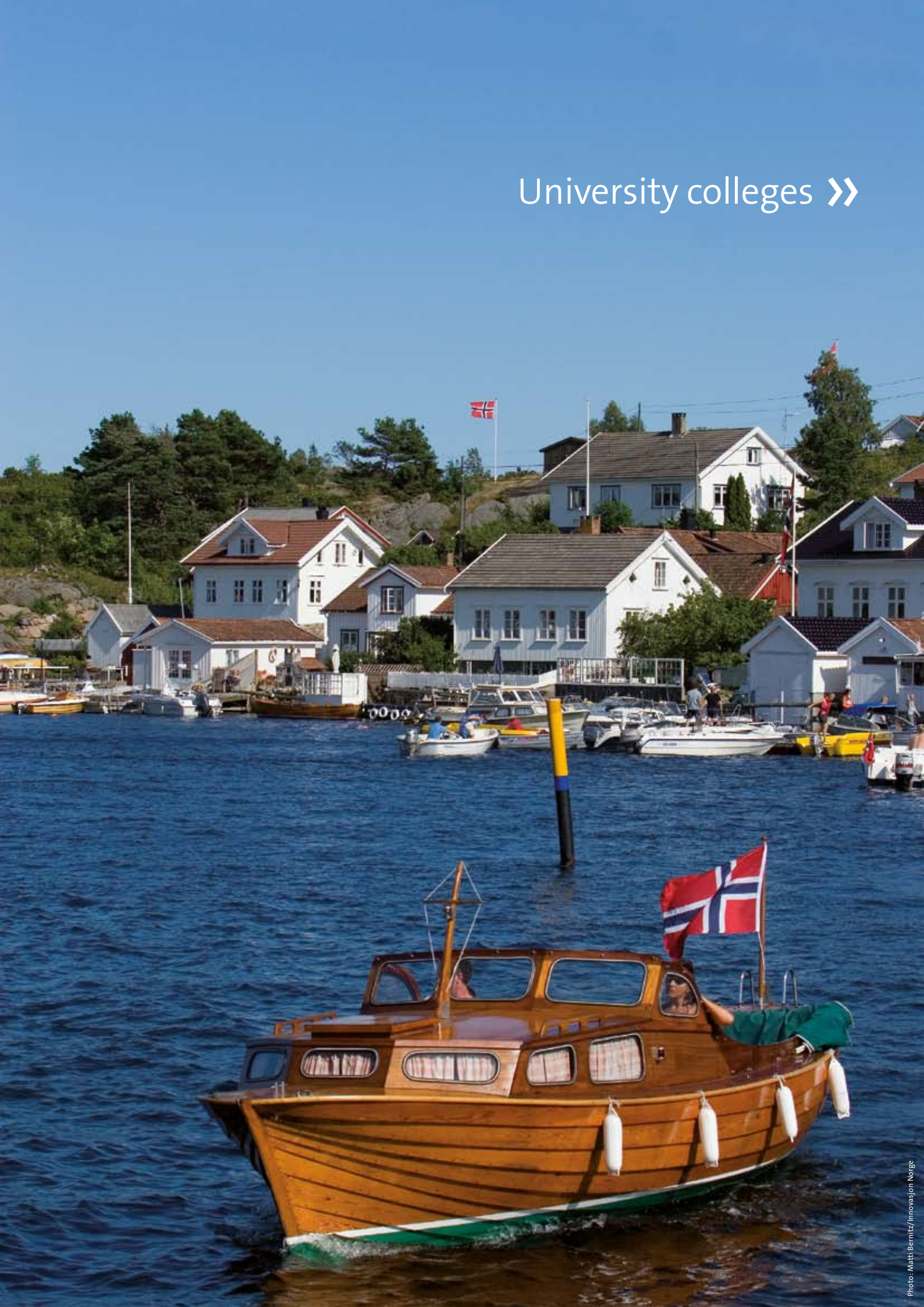


Photo: Matti Bernitz/Innovasjon Norge

From the Vigeland Park in Oslo

Contact

The Norwegian School of Management
Nydalsveien 37
NO-0484 Oslo
Norway
Tel: +47 46 41 00 00
Email: info@bi.no
Web: www.bi.no

Norwegian School of Management

The Norwegian School of Management (BI) is an independent, fully accredited university-level institution specialising in the area of management and business administration.

With 9,000 full-time and 9,500 part-time students, BI is one of the largest higher education institutions in Norway and one of the largest business schools in Europe. Research is one of BI's key strengths.

Cooperation with China
BI was one of the co-founders of the Nordic Centre at Fudan University in 1995 and has enjoyed extensive cooperation with the School of Management of Fudan University ever since. BI and Fudan currently offer a joint programme, the BI-Fudan MBA Programme, in Shanghai. The programme admits 120, predominantly Chinese, participants every year. As of 2010, close to 1,500 Chinese managers are alumni of the BI-Fudan MBA Programme.

BI and Fudan also cooperate on a Bachelor programme in International Marketing through which some 30 Norwegian students spend a year at Fudan University each year.

In the summer of 2009, BI and Fudan signed an agreement to set up a joint research centre, which will host annual research seminars and is designed to increase the level of cooperation.

In addition, BI has cooperation agreements with Hong Kong University of Science & Technology, the University of Hong Kong, the University of Macau and Renmin University of China.

Oslo University College

Oslo University College (OUC) is the fourth largest educational institution in Norway. OUC is becoming a higher education institution of high standing in professional studies and research.

Its focus is on creating a multicultural and international learning environment and strengthening research and development. OUC has five priority areas of research:

1. Care, health and welfare
2. Communication, education and culture
3. Educational research
4. Professional studies
5. Technology, design and environment.

Cooperation with China

Since 2003 OUC has given priority to co-operation with China and has signed 16 agreements with Chinese institutions. These include:

- Communication University of China, Beijing
- University of International Business and Economics, Beijing
- Capital Normal University, Beijing
- Peking University Health Science Center
- China Rehabilitation Research Center/China Disabled Persons' Federation, Beijing
- Renmin University of China, Beijing
- Shanghai Institute of Health Sciences, Shanghai
- Putuo District Education Bureau, Zhoushan, Zhejiang Province
- Nanjing University, School of Liberal Arts, Nanjing
- Xinjiang University, Urumqi
- Tsinghua University, Institute of Built Environment and Building Mechanics, Beijing
- Hainan Normal University

Cooperation with Chinese institutions includes exchange visits by students and staff and collaboration on research projects. Some recent projects include:

- The Faculty of Social Sciences at OUC coordinates an interdisciplinary Norwegian-Chinese network within research on welfare, poverty, disability and rehabilitation. Partners in the network include Oslo University College, the University of Oslo, Sunnaas Rehabilitation Hospital, China Rehabilitation Research Center, China Disabled Persons' Federation, Peking University Health Science Center and the Chinese Academy of Social Sciences.
- The Faculty of Art, Design and Drama at OUC is cooperating with the School of Liberal Arts at Nanjing University on a project entitled Intercultural Mask Practice in Nanjing.
- The LATINA/lab (Learning and Teaching in a Digital World Laboratory) and the Faculty of Design, Art and Drama is cooperating with Hainan Normal University on the ACHRON project (Art and Cultural Heritage Resources ONline) for digital representation and dissemination of cultural resources.
- The Faculty of Journalism, Library and Information Science cooperates with the Communication University of China.
- Oslo University College-Putuo Oral English Development Project is a multifaceted cooperative project that includes annual English workshops run by OUC staff for teachers in the Putuo District.

The Opera House in Oslo

Contact

Oslo University College
PO Box 4 St. Olavs plass
NO-0130 Oslo
Norway
Tel: +47 22 45 20 00
Email: postmottak@hio.no
Web: www.hio.no/english

Gjøvik University College

Cross country skiing near Gjøvik

Contact

Gjørvik University College
PO Box 191
NO-2802 Gjøvik
Norway
Tel: +47 61 13 54 00
Email: international@hig.no
Web: www.hig.no and
www.studylink.no/

Gjøvik University College (GUC) has over 2,400 students and 270 employees.

GUC's R&D activities and study programmes focus on the areas of health, technology, IT, media and economics and business management/ administration. GUC offers an international environment; as of spring 2010 a total of 24 nationalities are represented among GUC employees.

Gjøvik enjoys a central location in south-eastern Norway, just 120 kilometres from the capital city, Oslo. The town centre is pleasant, surrounded by beautiful forest landscape and not far from the mountains.

Cooperation with China
GUC has cooperated with Chinese partners for three years on a joint project entitled Studylink. Telemark University College and the University of Agder also collaborate on this project.

GUC has direct cooperation agreements with five institutions in China. The agreements involve cooperation at all levels, exchange of master's students, cooperation at doctoral level and joint research projects in the fields of information security and media technology.

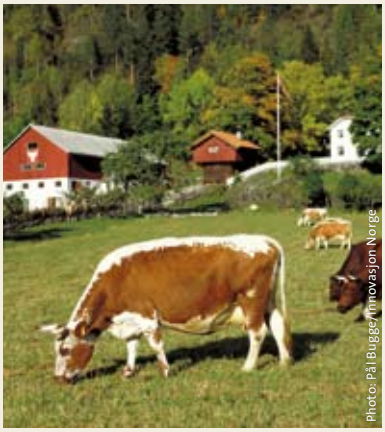
Telemark University College

Telemark University College (TUC) has approximately 5,500 students and 500 employees. Its priority research areas are cultural studies, technology, ecology and health promotion.

TUC is situated in Telemark County in southern Norway. Telemark has a rich and varied private sector, a vibrant cultural life and beautiful natural surroundings.

Cooperation with China
TUC has cooperated with Chinese partners since 2002. In the Studylink project, a joint initiative with Gjørvik University College and the University of Agder, cooperation has primarily focused on technology/engineering, but is currently being expanded to other areas as well.

TUC has cooperation agreements with Wuhan University, Wuhan University of Technology, Huazhong University of Science and Technology, Hubei University, Hubei University of Technology, Harbin Institute of Technology-Shenzhen Graduate School and China Three Gorges University. The agreements encompass cooperation on exchange of master's students, cooperation at doctoral level and joint research projects, in particular within the fields of water purification and bioenergy.



Landscape from Telemark

Contact

Telemark University College
PO Box 203
NO-3901 Porsgrunn
Norway
Tel: +47 35 02 62 00
Email: postmottak@hit.no
Web: www.hit.no and
www.studylink.no

Downhill skiing in Northern Norway

Contact

Narvik University College
PO Box 385
NO-8505 Narvik
Tel: +47 76 96 60 00
Email: postmottak@hin.no
Web: www.hin.no

Narvik University College

Narvik University College (NUC) has approximately 1,250 students and 170 employees. Its areas of special focus are technology, health and society and economics and administration.

NUC has developed considerable R&D expertise in the field of technology, particularly targeted towards cold climate technology and renewable energy. NUC is an international institution with students and employees from over 30 nations.

NUC is situated in Narvik in Nordland County. There are many opportunities for recreational activities in beautiful natural surroundings; from the skiing facility in the middle of the town you can take the ski lift up to a height of 1,000 metres above sea level.

Cooperation with China
NUC has cooperated with Chinese universities for over 15 years. During this period, over 250 Chinese students have embarked on studies at the university college. The students have attended programmes in Narvik for periods of three to seven years, and between them have completed more than 100 bachelor's and master's degrees. All the students have studied Norwegian language and culture prior to starting a professional course of study.

There are approximately 80 Chinese students currently studying at NUC.

Norwegian School of Economics and Business Administration

The Norwegian School of Economics and Business Administration (NHH) is Norway's leading higher education institution in the field of economics and business administration.

NHH currently has 3,000 full-time students and a combined staff of over 390 people. NHH cooperates closely with the Institute for Research in Economics and Business Administration (SNF), one of the largest contract research institutes in Norway, and the Administrative Research Foundation (AFF), one of Norway's largest actors in the field of management and organisational development.

NHH has a clear international orientation and represents Norway as academic member of the prestigious Global Alliance in Management Education (CEMS), and the Partnership in International Management (PIM).

Cooperation with China
NHH cooperates with a number of teaching institutions in China and is one of the partners involved in the Nordic Centre at Fudan University in Shanghai.

Partners in China include Fudan University in Shanghai, China Europe International Business School (CEIBS) in Shanghai, Tsinghua University in Beijing and Guanghua School of Management at Peking University, Beijing. Together with NHH, these teaching institutions are all members of the Partnership in International Management. Cooperation activities involve education and exchange of students and academic staff members, as well as research collaboration.

Bryggen, the old wharf of Bergen

Contact

NHH
Helleveien 30
NO-5045 Bergen
Norway
Tel: +47 55 95 90 00
Email: postmottak@nhh.no
Web: www.nhh.no

Research centres and institutes »

Bjerknes Centre for Climate Research

The Bjerknes Centre for Climate Research (BCCR) has been granted status as a Norwegian Centre of Excellence (CoE). Activities are coordinated by the University of Bergen in cooperation with the Institute of Marine Research, the Nansen Environmental and Remote Sensing Center (NERSC) and Uni Research AS. The BCCR is a leading international research centre in the field of climate understanding, climate modelling and development of scenarios for future climate changes.

Cooperation with China

- The BCCR is responsible for coordinating one of the largest scientific climate research projects under the Research Council's CHINOR programme (Research Cooperation with China), East Asian DecCen: Exploring Decadal to Century Scale Variability and Changes in the East Asian Climate during the last Millennium. There are three Chinese partners participating in the project: Peking University, the Institute of Atmospheric Physics and the Cold and Arid Regions Environmental and Engineering Research Institute. The primary objective of the project is to study the climate in East Asia.
- The Nansen-Zhu International Research Centre (NZC) is a joint venture between the Institute of Atmospheric Physics/Chinese Academy of Sciences, Peking University, the University of Bergen, the Nansen Environmental and Remote Sensing Center, Uni Research AS and the BCCR. Activities at the research centre contribute significantly to climate research, with particular focus on tropical and high-latitude regions and the interactions between these regions.

Contact

Bjerknes Centre for Climate Research
PO Box 7810
NO-5020 Bergen
Norway
Tel: +47 55 58 26 91
Email: post@bjerknes.uib.no
Web: www.bjerknes.uib.no

Center for International Climate and Environmental Research

The Center for International Climate and Environmental Research (CICERO) conducts research on and provides information and expert advice about national and international issues related to climate change and climate policy. The aim is to acquire knowledge that can help to mitigate climate problems and enhance international climate cooperation.

Cooperation with China

- CICERO has cooperated with the Chinese public administration and a number of research institutions for many years, providing consultancy services and capacity building assistance in connection with local action plans to improve air quality, national cost estimates of environmental damage caused by air and water pollution, the impact of soot emissions on the climate in China, macroeconomic analyses of the impacts of Chinese environmental policy and the impact of trade patterns on emissions.
- CICERO's partners in China are Tsinghua University in Beijing, Fudan University in Shanghai and Lanzhou University, as well as a number of institutes under the Chinese Academy of Sciences (CAS).
- CICERO has collaborated with the Development Research Center of the State Council for many years. CICERO has participated in a number of cooperation projects with Chinese environmental authorities and their subordinate agencies.
- Researchers from CICERO have participated in various working groups under the China Council for International Cooperation on Environment and Development.
- CICERO is an active participant in the SINCIERE network, the Sino-Norwegian Centre for Interdisciplinary Environmental Research, and serves as a representative on the board.

Contact

Center for International Climate and Environmental Research
PO Box 1129 Blindern
NO-0318 Oslo
Norway
Tel: +47 22 85 87 50
Email: admin@cicero.uio.no
Web: www.cicero.uio.no

Contact

Centre for Biosafety
PO Box 6418 Forskningsparken
NO-9294 Tromsø
Norway
Tel: +47 77 64 66 20
Email: postmaster@genok.org
Web: www.genok.org

Centre for Biosafety

The core activities of the Centre for Biosafety (GenØk) are research, capacity building and teaching in the field of gene ecology. GenØk focuses in particular on the environmental and health-related consequences (biosafety) of the application of gene technology, gene modification and modern biotechnology.

Research cooperation with China

- GenØk cooperates with the Nanjing Institute of Environmental Sciences (NIES), an administrative and research institute under the auspices of the Chinese Ministry of Environmental Protection.
- Cooperation between GenØk and NIES is part of the Gateways Institute Programme, a north-south network of research institutions whose primary activities comprise capacity building, technology transfer and biosafety research.
- GenØk and NIES in China are currently drawing up detailed plans for research cooperation and funding connected to the potential environmental impacts of the cultivation of genetically modified plants and how changes in the environment affect the plants.

Photo: Norwegian Polar Institute

Polar explorer and High Commissioner for Refugees

Contact

Nansen Environmental and Remote Sensing Center
Thormøhlensgate 47
NO-5006 Bergen
Norway
Tel: + 47 55 20 58 00
Email: admin@nersc.no
Web: www.nersc.no

Nansen Environmental and Remote Sensing Center

The Nansen Environmental and Remote Sensing Center (NERSC) is an independent non-profit research foundation affiliated with the University of Bergen. Its vision is to serve society through advancing knowledge on the behaviour of the marine environment and climate system, in the spirit of Dr. Fridtjof Nansen.

The centre is the parent institution of the Nansen Group, which consists of research institutions in Russia, India and the People's Republic of China.

Cooperation with China

- In 2003, together with the Institute of Atmospheric Physics, the Chinese Academy of Sciences, the Nansen Center was one of the co-founders of the non-profit joint venture the Nansen-Zhu International Research Centre (NZC) in Beijing. The other co-founders were Peking University, Nanjing University, the University of Bergen and Bjerknes Centre for Climate Research.
- Research cooperation focuses on: reconstruction of past climate, melting of glaciers, decadal time-scale climate predictability and teleconnections, air quality observations and forecasting, terrestrial and oceanic uptake of carbon dioxide, data assimilation and operational oceanography, environmental and climate observations from satellite remote sensing and the development of Earth System Modelling.
- Cooperation with the NZC includes extensive exchange of scientific staff and doctoral candidates, organisation of biennial summer schools and joint scientific publications.

Institute for Labour and Social Research

The Institute for Labour and Social Research (Fafo) is an independent and multidisciplinary research foundation that focuses on social welfare and trade policy, labour and living conditions, public health, migration and integration, and transnational security and development issues.

Cooperation with China

- Fafo has worked in China and with Chinese partners since 1994. Collaborative efforts have focused primarily on the development of methodological approaches to collection of data, the implementation of large scale surveys and the analysis of research results for use in policy development.
- Together with its partner in the Ministry of Science and Technology, Fafo has conducted large-scale surveys in western China on living conditions, innovation and development, and assessments of needs, vulnerabilities and reconstruction efforts following the 2008 earthquake in Sichuan.
- Transfer of knowledge and expertise is an important aspect of Fafo's work. Fafo has cooperated with some 20 universities and research institutes in the implementation of research projects. A majority of these were located in western China.
- In 2008, the Party School of the Central Committee of the Communist Party of China initiated cooperation with Fafo and a memorandum of understanding was signed. The collaboration focuses on the fields of public administration, public policy, the role of the government in the market and the development of the welfare state.
- Fafo is cooperating with the Chinese Academy of Science and Technology for Development (CASTED) and has an office at the CASTED premises in Beijing.

Contact

Institute for Labour and Social Research
PO Box 2947 Tøyen
NO-0608 Oslo
Norway
Tel: +47 22 08 86 00
Email: fafo@fafo.no
Web: www.fafo.no

Institute for Energy Technology

The Institute for Energy Technology (IFE) is Norway's largest energy research institute. Research activities extend across the full breadth of the field of energy, from renewable energy and petroleum activities to nuclear power.

Cooperation with China

- IFE's research cooperation with China is focused on two areas: hydrogen storage and the use of radioactive tracers for industry.
- In the field of tracer technology IFE participates in China-related projects in two areas:
  1. Tracer-based reservoir examination of fluid flow between wells in Chinese offshore petroleum fields, together with national and international operators. These examinations are based on IFE's in-house developed tracer technology.
  2. Development of new tracer technology methods for oil reservoir examination and for process studies and control. This research activity is carried out within the framework of a Coordinated Research Project (CRP), organised through the International Atomic Energy Agency (IAEA) in Vienna. The China Institute of Atomic Energy (CIAE) in Beijing is the IFE's main Chinese partner.
- IFE cooperates with the China Institute of Atomic Energy in Beijing on nuclear technology and with the Central Iron & Steel Research Institute in Beijing on materials technology and hydrogen storage.

Contact

Institute for Energy Technology
PO Box 40
NO-2027 Kjeller
Tel: +47 63 80 60 00
Email: firmapost@ife.no
Web: www.ife.no

Contact

Norwegian Geotechnical Institute
PO Box 3930 Ullevål Stadion
NO-0806 Oslo
Norway
Tel: +47 22 02 30 00
Email: ngi@ngi.no
Web: www.ngi.no

Norwegian Geotechnical Institute

The Norwegian Geotechnical Institute (NGI) is a leading international centre for research and consultancy in the field of geosciences. NGI offers expertise on the behaviour of soil, rock and snow and their interaction with the natural and built environments.

NGI works within the energy, natural hazards, environment, building and construction and transportation sectors. NGI was awarded Centre of Excellence status in 2002 and hosts the International Centre for Geohazards.

Cooperation with China

- In 2008, China Geological Survey and NGI signed an agreement on a project entitled Cooperation for Mitigation of Geohazards. The ongoing project is jointly supported by China and Norway.
- The project focuses on the prevention of natural disasters, with emphasis on floods, landslides, climate change and emergency preparedness. Mapping of high risk landslide areas and implementation of mitigation measures to reduce the risk form part of the project.
- NGI's Managing Director, Dr. Suzanne Lacasse, chairs the Slope Safety Technical Review Board for the Geotechnical Engineering Office (GEO) in Hong Kong.
- NGI's Technical Director, Kjell Karlsrud, has been appointed as GEO's expert for the new tunnelling and underground cavern initiatives in Hong Kong.
- NGI has acted as expert consultant on dam engineering for several dam projects in China.

Photo: Colourbox

Contact

Norwegian Institute for Urban and Regional Research
Gaustadalléen 21
NO-0349 Oslo
Norway
Tel: +47 22 95 88 00
Email: nibr@nibr.no
Web: www.nibr.no

Norwegian Institute for Urban and Regional Research

The Norwegian Institute for Urban and Regional Research (NIBR) is one of Norway's environmental research institutes. NIBR uses its expertise in the social sciences to promote integrated, knowledge-based approaches to environmental challenges and issues associated with economic growth.

Cooperation with China

- NIBR's research cooperation with China includes the agreement on the Sino-Norwegian Social Policy Forum, which is organised jointly with the China Institute for Reform and Development. The forum takes place at Haikou and has been an annual event since 2004.
- One important initiative is an ongoing project to develop territorial classification systems, typologies and indicators for China. This activity also involves the Institute of Population and Labor Economics, the Chinese Academy of Social Sciences and the OECD. Another major research activity is the project Climate Change and Social Justice, which is carried out in partnership with the Research Centre for Sustainable Development.
- Through its membership of the Oslo Centre for Interdisciplinary Environmental and Social Research (CIENS), NIBR has also played an active part in the development of SINCIERE (Sino-Norwegian Centre for Interdisciplinary Environmental Research).

National Institute of Nutrition and Seafood Research

The National Institute of Nutrition and Seafood Research (NIFES) is a research institute affiliated with the Ministry of Fisheries and Coastal Affairs and carries out specific research tasks for the public administration. The institute's research focus is nutrition: feed for fish and fish as food. The institute serves the government and food authorities in an advisory capacity, providing research-based input on fish nutrition and the health and safety aspects of seafood consumption from both wild catch and farmed fish.

Cooperation with China

- NIFES has had formal collaboration with the Institute of Nutrition and Food Safety (INFS), the Chinese Center for Disease Control and Prevention since 2001.
- INFS is a partner in an ongoing EU project led by NIFES.
- NIFES collaborates with several universities in China on the exchange of doctoral candidates and researchers.


Photo: Eksportutvalget for fisk

Contact

National Institute of Nutrition and Seafood Research
PO Box 2029 Nordnes,
NO-5817 Bergen
Norway
Tel: +47 55 90 51 00
Email: postmottak@nifes.no
Web: www.nifes.no

Norwegian Institute for Air Research

The Norwegian Institute for Air Research (NILU) targets its research activities towards increasing understanding of the processes and effects of climate change, the composition of the atmosphere, air quality and hazardous substances.

NILU has clients in both the national and international arenas and has extensive experience in issues related to air quality management worldwide, particularly in Asia.

Cooperation with China

- NILU has carried out several projects in China on air quality monitoring and air quality management in various locations, including Guangzhou, Yantai, Shanxi Province, and Guiyang.
- NILU is currently working with the World Bank on the China Air Pollution Management Programme, in which three cities in Shanxi Province have been chosen to conduct integrated air quality management and to evaluate the control measures. The cities will then be asked to draw up proposals for a future investment project aimed at improving urban air quality.
- Together with its partners, NILU has developed a project for the formulation and implementation of co-control strategies for air pollution and greenhouse gas emissions. The aim is to help China achieve its 12th and 13th five-year plans, with the target of significantly reducing sulphur and carbon emissions arising from Chinese development.


Photo: Colourbox

Contact

Norwegian Institute for Air Research
PO Box 100
NO-2027 Kjeller
Norway
Tel: +47 63 89 80 00
Email: nilu@nilu.no
Web: www.nilu.no


Photo: NancyBundt/Innovasjon Norge

Contact

The Norwegian Institute for Water Research
Gaustadalléen 21
NO-0349 Oslo
Norway
Tel: + 47 02348
Email: niva@niva.no
Web: www.niva.no

The Norwegian Institute for Water Research

The Norwegian Institute for Water Research (NIVA) is an internationally oriented competence centre for water-related research and development activities on environment and resources, such as monitoring, feasibility studies and integrated water resources management.

NIVA provides information on water-related issues at the national and international levels to the authorities, the private sector and the public. NIVA is a private research foundation, and the largest interdisciplinary applied water research centre in Norway.

Cooperation with China

- NIVA has been involved in research and innovation projects in China since 1995. NIVA is collaborating with leading Chinese universities and research institutes, as well as national, regional and local environmental authorities.
- Topics include water management, environmental contaminants (mercury and persistent organic pollutants), lake restoration, impacts of climate change, impacts of acid rain, and waste water treatment.
- There is active exchange of research staff and students in both directions, and several joint papers are published in international journals each year.
- NIVA signed a collaboration agreement with the Department of Environmental Science and Engineering, Tsinghua University, Beijing in 2006.


Photo: seafood.no

Contact

The Norwegian Institute of Food, Fisheries and Aquaculture Research
PO Box 6122
NO-9291 Tromsø
Norway
Tel: +47 77 62 90 00
Email: nofima@nofima.no
Web: www.nofima.no

The Norwegian Institute of Food, Fisheries and Aquaculture Research

Nofima is a business-oriented research group working in research and development for the aquaculture, fisheries and food industry in Norway.

Cooperation with China

- China is the world's biggest producer and consumer of seafood and comprises a promising market for Norway, the second largest exporter of seafood in the world.
- Nofima has conducted several market research projects in China, focusing particularly on salmon. These studies have included research on consumer and industrial buying behaviour, industrial structures and distribution systems, as well as business culture and competitive strategy.
- Nofima also led a project on offshore fish farming in China in the period 1998-99. It was the first offshore project in China, and had a great impact on the development of net cage-based fish farming in China.

Norwegian Polar Institute

The Norwegian Polar Institute (NPI) is Norway's leading institution for research, environmental monitoring and mapping of the polar regions.

The NPI runs Norwegian research stations in Dronning Maud Land, Antarctica, and in Ny-Ålesund in Arctic Svalbard, where a Chinese research facility is located. The NPI recently opened a new centre focusing on ice, climate and ecosystems. Cooperation with countries that have high mountain glaciers, such as China, is an important part of its activities.

Cooperation with China

- The NPI is currently participating in two projects with Chinese partners. One of the projects, Long range transport of black carbon and the effect on snow albedo in north-east China and in the Arctic (LOTUS), is focused on the study of black carbon. Topics include carbon concentrations in air and snow, the way in which black carbon in snow reduces the snow reflectivity and the transport of black carbon from source regions to the Arctic.
- Two measurement stations have been established, one in north-east China and one in Ny-Ålesund. The Chinese partners are the Research Center for Eco-Environmental Sciences and the Institute of Atmospheric Physics, both under the Chinese Academy of Sciences in Beijing, and Lanzhou University in Lanzhou.
- The other project, Advancing modelling and observing solar radiation of Arctic sea-ice – understanding changes and processes (AMORA), seeks to increase understanding of the surface energy balance of the ice-covered Arctic ocean, and mechanisms leading to observed changes. The Chinese partners are the Polar Research Institute of China in Shanghai and the Dalian University of Technology in Dalian.


Photo: Sebastian Gerland, Norwegian Polar Institute

Contact

Norwegian Polar Institute
NO-9296 Tromsø
Norway
Tel: +47 77 75 05 00
Email: post@npolar.no
Web: www.npolar.no

Simula Research Laboratory

Simula Research Laboratory (Simula) conducts basic research in the fields of networks and distributed systems, scientific computing and software engineering, and promotes the application of the research in both the private and public sectors.

Cooperation with China

- Simula has close research collaboration with several Chinese universities and industrial research centres, in particular in the fields of communications technologies and scientific computing.
- Partners in cooperation include Zhejiang University, Huazhong University of Science and Technology, Hohai University, South China University of Technology, University of Electronic Science and Technology of China, Beijing University of Aeronautics and Astronautics, Shanghai Research Center for Wireless Communications, Peking University, Shanghai Jiao Tong University, and France Telecom R&D Beijing.
- The research cooperation includes co-authored publications, visits, and exchange of researchers and students. Ties with Huazhong University of Science and Technology are particularly well developed.

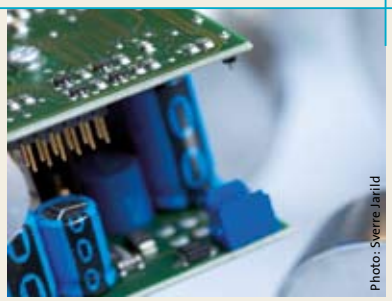


Photo: Sverre Jarild

Contact

Simula Research Laboratory
PO Box 134,
NO-1325 Lysaker
Norway
Tel: +47 67 82 82 00
Email: post@simula.no
Web: www.simula.no

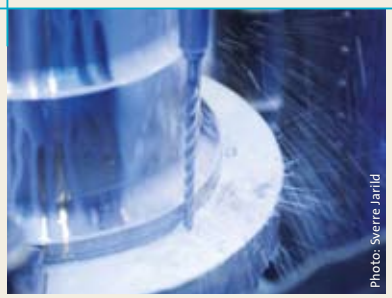


Photo: Sverre Jarild

Contact

SINTEF
NO-7465 Trondheim
Norway
Tel: +47 73 59 30 00
Email: info@sintef.no
Web: www.sintef.no

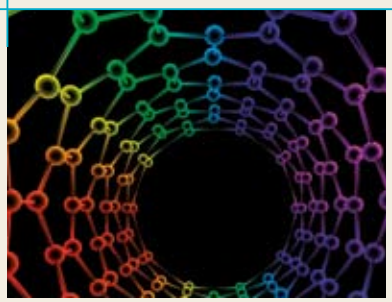
SINTEF

The SINTEF Group is the largest independent research organisation in Scandinavia. SINTEF operates in close partnership with the Norwegian University of Science and Technology (NTNU) in Trondheim.

Cooperation with China
SINTEF has developed close ties with a wide array of Chinese R&D institutions, universities and industries. These include:

- Shanghai Jiao Tong University, which is participating in a SINTEF-led project focused on improving energy efficiency in industrial heating and cooling processes.
- Tsinghua University, which is involved with SINTEF in a Norwegian-led research centre focusing on buildings that achieve net-zero emissions of greenhouse gases over their lifetime.
- The Thermal Power Research Institute (TPRI) in Xi'an, which cooperated with SINTEF in leading the development of carbon capture technologies in the Sino-European project COACH (Cooperation Action within CCS China-EU). The project (2006–2009) was carried out under the auspices of the European Commission and the Ministry of Science and Technology of the People's Republic of China. It involved 10 Chinese partners, including Tsinghua University, Zhejiang University and the Institute of Engineering Thermophysics, the Chinese Academy of Sciences.
- The Guangchaou Diesel Engine Factory, whose efforts to convert Chinese reciprocating engines from diesel fuel to natural gas have been supported by SINTEF, through its affiliate the Norwegian Marine Technology Research Institute (MARINTEK), for years.

SINTEF has participated in various large underground construction projects in China such as the Qinling Zhongnan Mountain Tunnel, the world's second largest road tunnel (light design and rock mechanical investigations). SINTEF also provided advice on rock engineering in connection with the construction of a 7.5 kilometre long sub-sea road tunnel (Quiangdao), jointly with the China Railway Tunnel Design Institute, as well as on a new sewage plant on Hong Kong Island.



Contact

Western Norway Research Institute
PO Box 163
NO-6851 Sogndal
Norway
Tel: +47 906 33 600
Email: info@vestforsk.no
Web: www.vestforsk.no

Western Norway Research Institute

The Western Norway Research Institute (Vestlandsforsking) carries out critical and independent cross-disciplinary research, largely in collaboration with international research groups. The institute has competence in the fields of social studies, natural sciences, technology and the humanities.

Cooperation with China

- The Western Norway Research Institute coordinated the project Europe-China Cooperation in Green Electronics Production Research (EC-GEPRO) under the EU Sixth Framework Programme for Research and Technological Development, research theme "Nanotechnologies and nanosciences, knowledge-based multifunctional materials and new production processes and devices" (FP6-NMP).
- The project focused on the development of technology for the production of green electronic products, and led to the establishment of a Centre of Excellence at Shanghai University for European-Chinese collaboration on environment-friendly electronics.
- The European Commission is currently processing the grant application NANOINTERCONNECT, which was drawn up jointly by Shanghai University and the Western Norway Research Institute. This cooperation project encompasses an assessment of health and environmental aspects associated with the use of nanomaterials in electronic products.

The map shows an overview of where the universities, colleges and research institutes that are presented in the brochure are located.

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www.forskningsradet.no/publikasjoner

The Research Council of Norway
P.O. Box 2700 St. Hanshaugen
NO-0131 Oslo
Norway

Telephone +47 22 03 70 00
post@forskningsradet.no
www.rcn.no/english

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