Annual and sustainability report | 2022

NORCE

Research Director Ketil Djurhuus in the hydrogen laboratory in Bergen.

COVER PHOTO **SILJE KATRINE ROBERTSON**

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01 Introduction

NORCE (Norwegian Research Centre AS) is an independent research institute that engages in research, development and innovation in collaboration with both the public and the private sector. We have extensive research operations spanning energy, health, climate, environment, society and technology. Our ambition is to be a national and European leader in our chosen areas of focus.

NORCE provides solutions to key societal challenges and contributes to value creation on a local, national and global basis. We deliver research, innovation and skills development for key topics in policy formulation, administration, business and civil society. NORCE contributes to the adaptation of industry and business – in conjunction with businesses and universities, clusters and centres. In addition, NORCE has an important role in research-based renewal of the public sector and the commercialisation of new technologies and systems.

NORCE is an institute with local roots and a global perspective. We can be found in locations from Alta and Tromsø in the north, Bergen, Haugesund and Stavanger in the west and Kristiansand and Grimstad in the south and in Oslo to the east.

This means that at NORCE, we have a strong presence and good interaction with customers and partners through our many locations.

The NORCE Group also includes a number of wholly and partly owned subsidiaries. Only the largest subsidiaries are mentioned in this annual report for the parent company.

The largest owners in NORCE are the four universities in Bergen, Stavanger, Agder and Tromsø, either as direct owners or through regional holding companies. In 2022, we signed collaboration agreements with the University of Agder and the University of Stavanger, and NORCE now has such agreements with all four owner universities.

Other owners are local authorities, research foundations and companies in industry and finance.

From the signing of a new collaboration agreement with UiS. Prorector Merete Vadla Madland from UiS (from left), acting CEO Thor Arne Håverstad from NORCE, Rector Klaus Mohn from UiS and Regional Manager Oddvar Skjæveland from NORCE.

PHOTO **KRISTIN HORNE | UIS**

Sustainable

NORCE's vision is "Passion for knowledge – working together for sustainability", and this carries obligations. Cultivating knowledge to promote sustainability is the driving force behind our research.

In 2022 we hired a sustainability officer, and we have made good progress with internal processes to make NORCE as sustainable as possible. It is therefore only natural that this work be included in our first annual and sustainability report.

NORCE has established its own working group for sustainability with a total of 14 people representing the various research divisions and administration departments. The working group is working on NORCE's climate account and will create a strategy for NORCE to become climate neutral. In addition, the group is working on the EU's taxonomy, which entails the classification of sustainable products and the resulting requirements.

New strategy

In 2022, we adopted an updated strategy for NORCE. Our employees were involved in this work and we have set ourselves clear goals to work towards until 2025.

Our four main objectives are:

- → NORCE will contribute actively with knowledge in society.
- → NORCE will be a national leader and internationally recognised research institute.
- → NORCE will ensure the transfer of knowledge, innovation and the creation of new jobs.
- → NORCE will be an attractive employer with a positive working environment.

CEO Kristin Wallevik stepped down in September 2022, and Thor Arne Håverstad took over as acting CEO. He will remain in the position until 1 October 2023 when Camilla Stoltenberg will take up the role.

Economy

2022 was another abnormal year, with Covid-19 restrictions and a war between Russia and Ukraine affecting both Europe and the global economy. There was also uncertainty in the research sector as a result of budget cuts in the Research Council of Norway and underfunding for the current form of Retur-EU in the coming year. NORCE is nevertheless pleased to have ended 2022 on schedule and in financial balance.

NORCE has focused on winning research projects through the EU, and has had good success with this initiative. In 2022, we were awarded eight new EU projects to be coordinated by NORCE, and 19 coordinated by other partners. The research centres HyValue and CSSR, hosted by NORCE, were officially launched in autumn 2022.

We started up an International unit in 2022, which you can read more about it in the chapter on international work.

Thor Arne Håverstad | CEO

PHOTO **HELGE SKODVIN**

02

Research at NORCE

Complex societal challenges often require an interdisciplinary approach. NORCE has specialist expertise in a number of areas, which ensures an interdisciplinary approach to various issues. NORCE also has relevant regional knowledge and a geographical presence.

NORCE has consolidated its research and knowledge development in the divisions of Technology, Health and Social Sciences and Climate and Environment, as well as four general focus areas that include the greatest societal challenges.

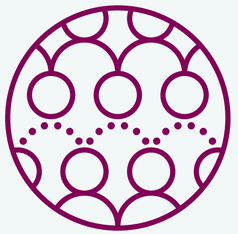
Researcher Hanna Bøpple in a lab with microalgae at Marineholmen in Bergen. In the background are her research colleagues Dorinde Kleinegris (from left) and Pia Steinrücken.

PHOTO **ANDREAS R. GRAVEN | NORCE**

The four priority areas

Energy of the Future

Climate and Environmental Risk



Safe and Good Societies

Sustainable Seas and Coasts

Energy of the Future

Limiting global warming requires major changes to energy systems. We have to replace today's fossil energy consumption with renewable energy, and develop systems that minimise energy loss and ensure efficient use of energy. NORCE is developing future zero-emission energy solutions for buildings, industries, neighbourhoods and regions.

Through three pilot projects, one in Bergen, one in Copenhagen and one in the port city of Sines in Portugal, NORCE will plan and build future urban regions with a view to optimised energy consumption and energy planning as well as zero emissions. Project manager Peter Breuhaus lighting the spark that kicked off the EU project ELEXIA in October 2022.

PHOTO **RUNE ROLVSJORD | NORCE**

Zero greenhouse gas emissions

In the EU project ELEXIA, awarded in 2022, we shall plan and build future urban regions with the aim of finding the most efficient and optimal energy solutions. The goal is zero greenhouse gas emissions.

The Norwegian partners in the EU project ELEXIA together at the kick-off in Bergen. Kjell Svellingen from Eviny (from left), Line Bergfjord from BKK, Peter Breuhaus from NORCE, Laura Ve from Bergen municipality, Tommy Hufthammer from BIR.

PHOTO **RUNE ROLVSJORD | NORCE**

Hydrogen plays an important part

Hydrogen is an energy carrier that can reduce greenhouse gas emissions and that offers great opportunities for value creation and employment. At the FME centre HyValue, we work on, among other things, more efficient methods for the production and shipping of hydrogen, and how to use hydrogen to operate ships in a safe and energy-efficient way. The researchers shall develop new measurement technology, as well as use already existing technology from petroleum research in other ways. HyValue was awarded and opened in 2022.

Since the properties of hydrogen are different from natural gas, measurement concepts used in the oil and gas industry today cannot be transferred directly to hydrogen. NORCE will contribute to ensuring reliable and traceable measurements of hydrogen quantity and quality through different transport chains. This is important to ensure that hydrogen can be traded commercially in line with for example oil, gas and electric power.

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In October 2022, we marked the opening of the FME centre HyValue. As part of the same event, another hydrogen research centre also had its kick-off: FME HYDROGENi, which is led by SINTEF. Nils Røkke (from left), HYDROGENi/SINTEF and Fionn Iversen, HyValue/NORCE.

PHOTO JESSICA SCOTT | SINTEF

From ONS 2022. Acting CEO Thor Arne Håverstad talks about NORCE.

PHOTO **RUNE ROLVSJORD | NORCE**

The subsurface in the future

In the future, the reservoir may become part of the energy mix. The Centre for Sustainable Subsurface Resources (CSSR), opened in 2022. The researchers will now develop new knowledge about how reservoirs in the subsurface can be used in the shift to green, to secure the energy solutions of the future. The researchers will use decades of experience from petroleum research to acquire new knowledge and develop better digital methods for energy-efficient reservoir management, and facilitate storage of carbon and hydrogen.

More space for storage is needed

Various carbon-intensive sectors, such as process industries and waste disposal, increasingly wish to transport CO_2 to the North Sea for storage under the seabed. Storage space is limited, however, and many more facilities will need to be built to meet the growing demand for CO_2 storage.

In the ExpReCCS project, we will develop efficient and accurate simulation tools to handle the interconnection of multiple underground carbon storage sites. We exploit our extensive expertise in geology and reservoir technology in the work of finding safe and long-term solutions for storing CO_2 under the seabed. The project was awarded in 2022.

Opening of the CSSR. Head of CSSR Sarah Gasda is holding the ribbon, while Oil and Energy Minister Terje Aasland cuts it.

PHOTO **RUNE ROLVSJORD | NORCE**

More minerals needed

The ongoing energy transition involves an increase in the electrification of society on a global basis. We therefore need more minerals to be able to produce, among other things, electric cars, wind turbines, batteries and electrical components – but access to mineral raw materials is limited. In 2022 we were awarded the EU project m4mining, which will contribute to making the extraction of minerals more efficient and sustainable.

Testing prior to use in the well

A laboratory for pressure and leakage testing, as well as a new P&A test well in connection with the Ullrigg test rig was completed in the summer of 2022. In the laboratory, we test new materials for plugging wells, and look for any leaks, among other things. It is better to test this in our laboratory than for a leak to occur in a plugged well far out to sea.

Lower emissions with charging at sea

The offshore wind industry is growing rapidly, both in Norway and internationally. It is therefore important to find solutions for how to develop and operate wind farms with the lowest possible carbon emissions. In the Ocean Charger project, we shall find solutions for charging at sea, so that the operation and maintenance of wind farms will be emission-free. NORCE is a partner and work package leader in the Green Platform project, which was awarded in December 2022. NORCE shall find out how charging can be automated, and whether the solutions have potential in other marine industries, such as petroleum, fisheries and offshore fish farming.

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Wind turbines at Sløvåg in Gulen, at Equinor's Wergeland base. Here, several floating wind turbines are prepared before they are towed offshore to Equinor's Hywind Tampen wind farm, the largest of its kind in the world.

PHOTO **ANDREAS R. GRAVEN | NORCE**

Ullrigg at Ullandhaug in Stavanger.
NORCE's own research rig.

PHOTO **GEORG IVAR EIDE | NORCE**

Autonomous solutions

Last winter we saw how important Norwegian gas was for Europe. The oil and gas industry will be part of the future energy mix for a long time, and it is therefore important to contribute to efficient production and reduce its CO_2 footprint. Our drilling researchers contribute to this. Automated solutions have been shown to provide significant reductions in energy consumption and CO_2 emissions. Now the researchers are taking it a step further towards autonomous solutions where, among other things, they make use of artificial intelligence in a highly challenging environment. OpenLab and Ullrigg are important infrastructures for doing this safely.

Benoit Daireaux demonstrates DDHub at Open Lab in Stavanger. OpenLab is a unique research infrastructure, which uses the world's most advanced computational models to recreate the physical processes that occur during a drilling and well operation.

PHOTO **RUNE ROLVSJORD | NORCE**

Chief Scientist at NORCE, Eric Cayeux (on the left), was awarded the International Drilling Award for 2022 by Kamel Ben-Naceur, SPE President 2022. The award is given to individuals who have made significant technical and professional contributions to the industry, and is awarded by the Society of Petroleum Engineers (SPE).

PHOTO **SPE**

Climate and Environmental Risk

With climate change comes more extreme weather events and phenomena. These pose a serious threat to the economy, to our welfare and to society as a whole. Nevertheless, politicians, the public sector and business lack the knowledge base they need to deal with the climate risks of the present and the future. Through our research, we seek to close some of these gaps. NORCE provides relevant knowledge about climate risk in public health, infrastructure, land-use planning, carbon capture and storage, climate policy and biodiversity.

In Recife, Brazil, oceanographers and marine biologists met colleagues who investigate the relationship between fishermen and policymakers. Together they are working to map the climate and ecosystems in the tropical and southern Atlantic today, as well as assessing how conditions will develop in the future.

PHOTO **THIAGO MONTEIRO**

Climate change can, for example, affect the occurrence and spread of infectious diseases, allergies, and the risk of injuries and accidents. In addition, climate change can affect housing and living conditions in a way that has an impact on the health of the population.

Climate solutions in collaboration with business and the public sector

Climate change affects us all to an ever greater extent. At the research centre Climate Futures researchers are working to develop and improve the utility value of climate forecasts that range from ten days to ten years. Climate Futures is a centre for research-based innovation (SFI in Norwegian), uniting research areas such as climate dynamics, economics, statistics and machine learning.

Research is conducted in close collaboration with industry and public sector partners. This method of collaboration is called co-production and requires the commitment and involvement of all involved.

Climate Futures focuses in particular on how climatechange can affect and be used in international shipping, agriculture, aquaculture and renewable energy (water and wind). These are industries that require tailored climate forecasts, so that they can better adapt their operations and production. With better forecasts, it is possible to, for example, optimise ship routes and make better risk assessments. In agriculture, scientists work together with farmers to develop forecasts that can reduce unwanted crop losses while increasing sustainability. Correspondingly, tools and services are now being developed at the centre which can be valuable for the farming industry in terms of planning and preventive measures.

Within wind and hydropower, work is being undertaken on potential locations of new installations and the possibility of extending the forecast window in both Norway and Brazil to ensure sustainable production.

Climate profiles for all Norwegian counties

Plans must be made in Norway for the consequences of climate change at the local, regional and national level. Climate change affects the country in different ways and creates different challenges across the country. At the Norwegian Centre for Climate Services (NCCS), researchers create different climate profiles for all counties, based on observed climate changes and future climatechanges. The centre organises and disseminates climate data so that it can be used to find out which measures are needed and how these can best be carried out. The Norwegian Centre for Climate Services is a collaboration between NORCE, the Norwegian Meteorological Institute, the Norwegian Water Resources and Energy Directorate and the Bjerknes Centre for Climate Research.

Furthermore, in the Horizon Europe project Impetus4Change, the researchers are working to improve our collective ability to develop measures and adapt to near-term climate change. The overall aim of the project is to improve the quality, accessibility and user-friendliness of climate information and services in the short term. The project will work for a better understanding and flow of climate information and translate this into usable information for local risk assessments.

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Expedition in the sea north of Svalbard in which NORCE participated in the autumn of 2022. The expedition vessel is the "Kronprins Haakon". GoNorth is an interdisciplinary initiative to increase Norwegian activity in the Arctic Ocean. NORCE is one of 13 Norwegian research and education partners in GoNorth. Since 2016, work has been underway to develop a programme for extraction of new data on geology, sea ice and seabed minerals, among many other things. Under the auspices of GoNorth, three research cruises to the Arctic Ocean are planned.

PHOTO **DANIEL ALBERT | GONORTH**

Climate change in East Africa

East Africa is a region of 360 million inhabitants, spread over 11 countries, which is highly vulnerable to climate change. In the EU-funded project CONFER, NORCE coordinates a number of international partners, who work together to reduce climate risk in the region. The project develops tailored climate services for the water, energy and food sectors. For example, the researchers are designing flood warning and crop modelling services. Stakeholders and end users are involved in the development of the services, providing them with knowledge and tools that make them better suited to predict and adapt to climate change as it affects them locally.

In October, we held a seminar in Brussels entitled Making the Green Wave Blue together with UiB. Here, Trond Dokken, Executive Vice President for Climate and the Environment, addresses those present.

PHOTO **BENOIT COLLETTE**

Safe and Good Societies

Norway has an ageing population, more young people are not in education or employment than was previously the case, and inequality is increasing. Climate change and a changing economy affect politics and society. Norway is going through a major transition from an oil-based economy to a knowledge-based and green economy. Our researchers find the knowledge and solutions society needs.

Researcher Sveinung Arnesen at Arendalsuka 2022, on board the veteran ship MS Sandnes, in connection with the debate "Is liberal democracy in crisis?"

PHOTO **ANDREAS R. GRAVEN | NORCE**

Norway is one of the world's best countries to live in, but these changes are putting the welfare state, trust in government and the sense of security under pressure. How do we prevent this and how do we best deal with the challenges?

At NORCE, research on safe and good societies is one of four strategic areas of priority. Our researchers find the knowledge and solutions society needs to reduce inequality, safeguard public health, maintain trust in public institutions, stop exclusion and address natural disasters.

Admission practice

Equal access to health services for the entire population is a goal in Norway. However, there is still considerable variation in how often citizens use the health services and the type of services that they use. Several factors including place of residence, distance to health services, gender, age and level of education may affect this.

In Norway, patients are referred by their general practitioner (GP) or doctors at out-of-hours services (OOH) to be admitted to hospital. In our project on the use of health services, the researchers examine the individual OOH doctor’s practice related to admissions. The researchers found that the doctor's practice is of great importance for the burden on the health service, but also for whether serious conditions such as heart attacks, blood clots in the lungs, appendicitis and stroke are discovered. Doctors face a dilemma. They feel pressured not to admit too many patients, yet they must avoid medical errors. Better diagnostic methods, more research and closer cooperation between the primary health care service and the hospitals are necessary.

Better communication with apps and artificial intelligence

In RE-AIMED, we explore how artificial intelligence can improve the workflow of medical call centre staff and enhance communication between caller and operator. Today, operators have to deal with many different work tools. This diverts their attention from the caller, resulting in poor workflow and reduced call quality. Researchers are investigating how artificial intelligence can utilise information from the conversation to provide the operator with customised questions, allowing the conversation to flow naturally.

In the TELE-AMBUS project, researchers are working on a new model for chronic wound management utilising telemedicine together with ambulatory wound teams. The image shows bedside teaching taking place while the researchers observe and take notes in the background.

PHOTO **NORCE**

In the TELE-AMBUS project, researchers are working on a new model for chronic wound management that utilises telemedicine together with ambulatory wound teams. Using an app, wound teams in the municipalities can confer with the dermatology department at Stavanger University Hospital, which has implemented the model. The aim is to improve patient quality of life and provide a more interdisciplinary approach to chronic wound management through skills development and telemedicine.

Coronavirus research

The coronavirus pandemic was largely managed by GPs and out-of-hours services (OOS) in primary healthcare. Through the "Vakttårnprosjektet", the National Centre for Emergency Primary Health Care monitored how OOH services were affected by the epidemic. The week the country locked down, there was a surge in contacts with the OOH services. Half of all contacts were related to coronavirus.

In the CONOPRI research project, researchers are investigating primary care management of Covid-19, patient healthcare utilisation, and risk factors for severe outcomes. This knowledge can help prepare for

Jesper Blinkenberg is the Head of the National Centre for Emergency Primary Health Care in NORCE and is seen here on stage during the Emergency Departments Leadership Conference.

PHOTO **NORCE**

In 2022, NORCE researchers provided input to the government-appointed women's health committee led by Christine B. Meyer.

PHOTO **RUNE ROLVSJORD | NORCE**

future epidemics and pandemics. Many OOH services had a plan when the pandemic hit, but not many had practiced it. Some OOH services also needed much more personal protective equipment like gloves, goggles and masks.

It is clear that few OOH services were prepared for a pandemic, but they quickly adapted, establishing respiratory clinics, dedicated testing stations, and specific reception centres for those suspected of being ill. At the same time, they managed to protect other patients who weren't sick with Covid-19, and generally adapted quickly and changed procedures. The research article has not yet been published.

Preventing young exclusion

Over 100 000 young people under 30 are not in education or employment in Norway. This number has increased in recent years – but why is it so difficult to address? At NORCE, we have a thematic focus area on young outsiders to help increase participation in school and working life.

Agder is among the counties with a larger proportion of young disabled people, and Agder County Council is now collaborating with NORCE on a research project to increase completion of upper secondary education and establish a connection to working life. The project researches models for comprehensive follow-up of young people at risk of dropping out of school and work. The aim is to provide knowledge about the effectiveness of advisors in the "Ung support" programme and how the service could potentially be expanded.

Follow-up after negative experiences in childhood At NORCE, we also have several projects where we research how best to support children and youth in difficult life situations and when they are under public care.

In the "Adverse Childhood Experiences" project, researchers investigate the mechanisms that influence later development among children and

youth with adverse experiences in childhood. Researchers are working to identify factors that can be protective and promote positive development in these children. The project is a multidisciplinary collaboration between researchers at NORCE, the University College of Norwegian Correctional Service and Training Centre KRUS, and the University of Miami. The project will provide knowledge in economics, criminology, social science, and psychology.

Foster homes for children with migrant backgrounds A growing number of children with migrant backgrounds are being placed in foster care across European countries. However, we lack knowledge about how current arrangements meet the specific needs of these children. In the "HoMi" project, researchers aim to change this. The primary objective of the project is to enhance the participation and wellbeing of children with migrant backgrounds living in foster care. Researchers will analyse policy documents in six European countries, explore professional practice in Norway and Sweden, and follow a group of children and their foster carers in Norway and Sweden.

Media use and citizenship living in conditions of poverty "Media Poverty" examines media use among citizens living in poverty, focusing on the significance of media use for their ability to exercise citizenship. The main objective of "Media Poverty" is to produce new empirical knowledge and theoretical understanding of how media use is part of the political and social marginalisation processes related to poverty. Another goal is to critically examine a foundational assumption in both research and media policy: that access to news leads to political participation. A third goal is to provide a better knowledge base for policy formulation and more targeted measures to address citizens living in poverty and their living conditions.

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During the year, there was a gathering for the Service Support Program in Trondheim, and RKBU Vest was present. Pictured are Monica Berge (from left), Anne Marit Høyem, Ann-Magrit Grip, Karen J. Skaale Havnen, and Unni Strandman.

PHOTO **NORCE**

Artificial intelligence in administration

Public administration is now undergoing digitisation, with some decision-making processes being automated. In the *Public Fairness Perceptions of Algorithmic Governance* project, researchers investigate how this development affects the relationship between the authorities and the population. A key criterion for the legitimacy of authorities is their ability to make decisions perceived as fair. The overall goal of the project is therefore to identify the criteria that the population of Norway uses as a basis for assessing the algorithms as fair. The Center for Deliberative Democracy at Stanford University and The Digital Social Science Core Facilities (DIGSSCORE) at the University of Bergen are collaborating on the project.

As public administration adopts artificial intelligence and machine learning, open and democratic processes are crucial. This is one of the main conclusions from the researchers in “Democratic Algorithms”, where, on behalf of The Norwegian Welfare Administration (NAV), NORCE has examined how perceptions of NAV as an institution might be influenced when machine learning and artificial intelligence are incorporated into case processing. The project relies on data from the Norwegian Citizen Panel 2021, with 2 000 respondents representing a cross-section of Norway's inhabitants.

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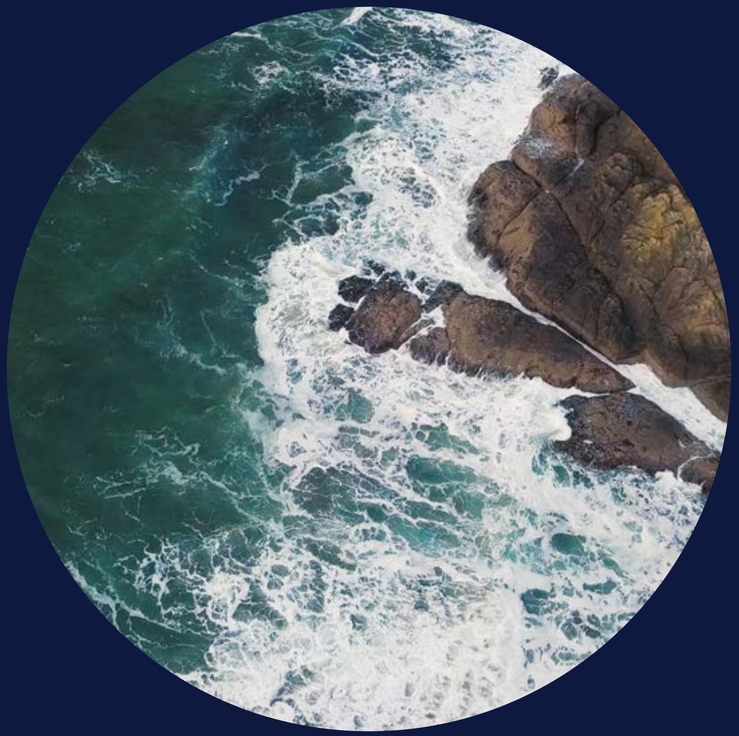
Researcher Merete Labriola on the streets of Bergen to find out what young people are interested in.

PHOTO **ANDREAS R. GRAVEN | NORCE**

Sustainable Seas and Coasts

Through collaboration with industries and authorities, our research provides a comprehensive knowledge and decision basis for sustainable resource management.



Researchers Einar Bye-Ingebrigtsen and Gunhild Bødtker on a research cruise off Gjermundshamn in Kvinnherad, collecting samples from the fjord for the Rein Hardangerfjord project.

PHOTO **ANDREAS R. GRAVEN | NORCE**

Sustainable Oceans and Coasts is one of NORCE's most central strategic areas. Our research on the environment, understanding ecosystems, aquaculture, biotechnology, climate, energy extraction, transport, monitoring and digitalisation contribute to solutions and innovations for growth in the future marine economy within sustainable frameworks.

Waste becomes resources

The major initiative, BIOSIRKEL, which kicked off in 2022, aims to help Western Norway succed in its transition to more efficient utilisation of industrial side streams. Today's waste will become tomorrow's resources for many more industries and businesses than today.

Another project initiated this year, SIRKSJØ, aims to provide a broad knowledge base for further development of a circular economy in the seafood industry. Thorough mapping of status, knowledge requirements, opportunities and challenges will help the industry meet expectations for better resource utilisation.

Ocean monitoring

Ocean monitoring is essential to ensure the effective and sustainable exploitation of the oceans. Through projects like *Polar Low Detection* and *Digital Arctic Shipping*, we are researching how operations can be safely conducted in Arctic regions with real-time data from drones and satellites, supporting local decision-makers in their decisions.

Vossolaksen

For over 20 years, efforts have been made to secure the stock of famously large salmon in the Vosso River. In 2022, the findings from the work NORCE LFI performed on behalf of the environmental authorities were summarised. Several threats to the stock's habitat, and particularly a high sea lice pressure on the smolt migration route, led to NORCE's wild salmon researchers pointing to a clear need for coordinated measures from public administration and industry players.

Plastic research

In the *Rein Hardangerfjord* project, our plastic researchers are discovering more about the fjord's environmental status. This includes investigations of microplastics and biodiversity based on environmental DNA. Experiences

Hans Kleivdal, Deputy Group Director of Climate and Environment, tells the participants on the senior executive voyage about how important cooperation is for achieving the Sustainable Development Goals.

PHOTO CAMILLA AADLAND | NORCE

from Rein Hardangerfjord will contribute to the development of a model for cleaning up plastic, which can be used by similar fjord communities or adapted to coastlines or inland areas, for example.

At NAMC, the North Atlantic Microplastic Centre, the goal is to mobilise leading researchers nationally and internationally to quickly understand the amount of microplastics in the environment and the associated risks.

The final report from the research project *Urban Microplastics* confirms high concentrations of microplastics in downtown Bergen. It's not only the oceans that are full of plastic. The research NORCE has conducted in Bergen will be extremely beneficial for other cities and municipalities, both nationally and internationally.

One Ocean Expedition

Researchers from NORCE have both provided research equipment and participated in parts of the One Ocean Expedition aboard the Statsraad Lehmkuhl.

The expedition began in August 2021 and concludes in April 2023. We've collected a historically high number of water samples to examine the amount of microplastics in the open sea, along coastlines and in ports. We also looked at changes in biodiversity through the analysis of environmental DNA. This will provide new insights into combating microplastics in the oceans and the consequences of plastic pollution.

In September 2022, we gathered leaders from business, public administration, finance, and research aboard the Statsraad Lehmkuhl, in collaboration with Bergen Business Council and Skift. We focused on the UN's Sustainable Development Goals, especially Goal 17, which concerns partnerships.

Photo of Statsraad Lehmkuhl in Japan in connection with the senior executive voyage that was part of the One Ocean Expedition.

PHOTO CAMILLA AADLAND | NORCE

Sustainable feed

Sustainable feed production is a crucial focus area for NORCE. Researchers at the bio-economy centre SUREAQUA have looked at new feed alternatives for sustainable salmon production. In another project, we're examining whether mash, a by-product of beer brewing, can be used as a sustainable ingredient in fish feed and how it should be processed before it is included in the feed.

The ambition of the iFishIENCi project is to deliver innovative solutions for sustainable aquaculture, based on enabling technologies and circular principles. This means more effective ways to monitor fish health and welfare, as well as more effective ways to feed fish.

Sustainable solutions for feed production require good cooperation with the industry.
We work every day on scaling up, and focus on the development of fermentation where we use microorganisms like bacteria to produce proteins in closed fermentation tanks. This includes utilising different sources as feedstock for bacteria, such as waste products and the greenhouse gas CO_2.

We are also investigating how microalgae can be fully utilised in sustainable feed and food production. The EU project ASTRAL aims to develop integrated aquaculture, where multiple species are cultivated simultaneously and waste from one species benefits others, into a sustainable and profitable value chain system for aquaculture production in the Atlantic regions.

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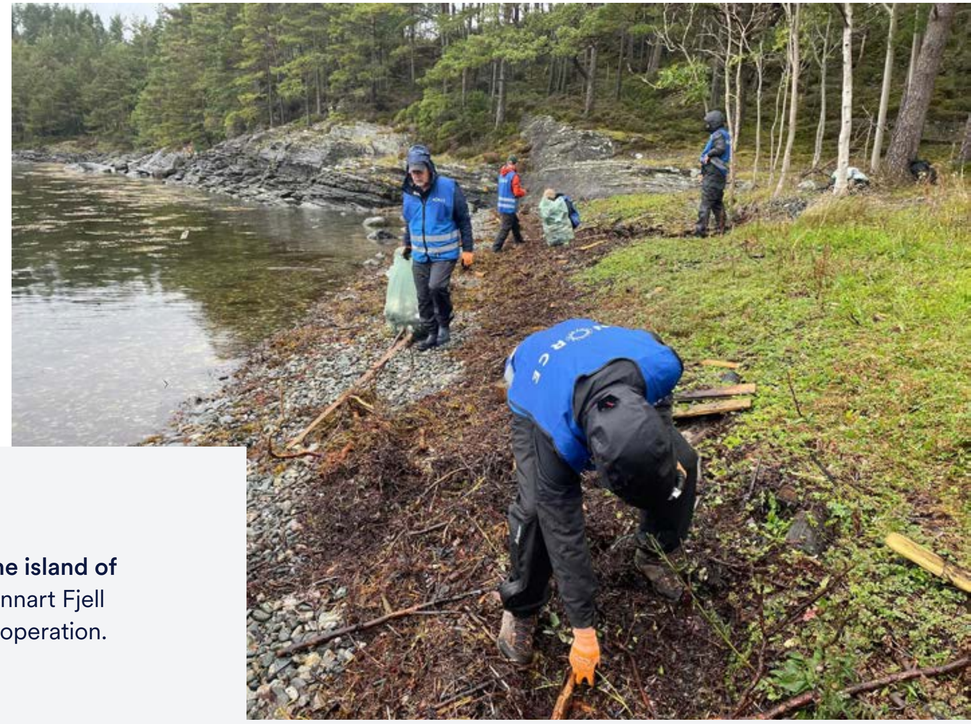
Researchers from NORCE carrying out fieldwork in connection with marking of smolt in Modalen.

PHOTO **NORCE LFI**

NORCE contributed in several ways to *Rein Hardangerfjord*, the world's largest plastic clean-up operation with almost 4000 participants. NORCE is leading the research part of the clean-up operation to study the impact and effect of extensive clearing of the entire Hardangerfjord over the next five years. Together with Framtidshavet and all other partners, we can establish a knowledge-based method for clearing fjords in a safe and responsible manner – a method that can be used in all fjords and coastal zones globally.

PHOTO **THOMAS HOVMØLLER RIIS | NORCE**



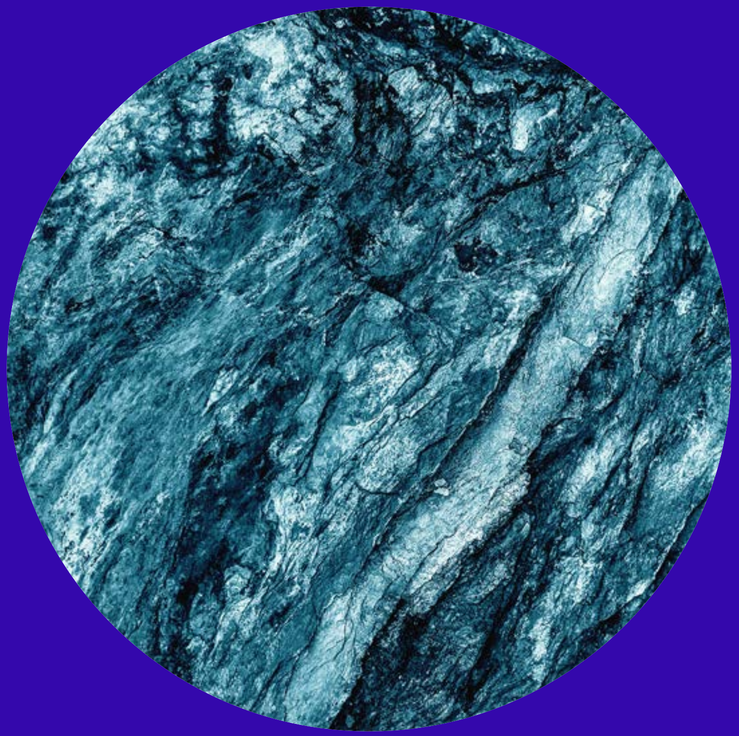
Dedicated NORCE employees cleared two coves of the island of Ånuglo of large amounts of plastic. Kenneth Bruvik, Lennart Fjell and all the partners in *Rein Hardangerfjord* initiated the operation.

PHOTO **THOMAS HOVMØLLER RIIS | NORCE**

03

Our research on carbon storage

All climate and sustainability solutions have their dilemmas. At NORCE, we conduct research both on how to create the best possible solutions, and also on the attitudes the population has towards the solution in question and the dilemmas it entails. The different perspectives provide a good basis for decisions - for business, the public sector and politicians.



Carbon Capture and Storage (CCS) is about capturing carbon dioxide (CO_2) from combustion and industrial production and storing the gas permanently, typically in reservoirs under the seabed. Some of the captured CO_2 can also be transformed and reused.

At NORCE, we research how carbon storage can best be undertaken technically and the attitudes of the population to carbon storage.

Emissions of CO_2 are the largest source of man-made climate change, and carbon capture and storage is essential to reduce CO_2 emissions to zero quickly enough over the next few decades. The UN's climate panel considers the technology to be almost a prerequisite for achieving climate goals.

In Norway, NORCE is a leader in research on carbon storage. CO_2 is typically stored under the seabed, in the same type of geological formations where we discovered oil and gas. Our researchers use knowledge and experience from oil and well drilling to develop storage technology. Because of our experience in the oil and gas industry, we also know that there is only a small risk of leaks from the storage sites. Natural barriers ensure that the CO_2 gas is locked inside the formations under the seabed. Over time, the gas will dissolve.

With carbon capture and storage, it is possible to eliminate emissions that we currently have no technology to reduce in other ways. But this requires significant investment and infrastructure development. Moreover, carbon capture and storage primarily works when large volumes of CO_2 are captured from a few capture facilities. If CO_2 is to be captured from several smaller facilities spread over vast distances, the solution will be much less cost-effective

Many questions remain unanswered. The industry requires knowledge to evaluate which reservoirs are best suited for CO_2 storage, how best to inject CO_2 under the seabed, and how to best monitor the storage sites to detect any leaks quickly. In addition to technical issues, there are a number of issues related to public confidence and attitudes to carbon capture and storage.

Should we prioritise storing emissions from our country, or should we, with vast areas in the North Sea suitable for storage, also accept emissions from other countries and store them in our territory? These are all questions our researchers are looking into. NORCE leads and is a partner in various projects and centres looking at different issues related to carbon capture and storage.

→ **Carbon capture, utilisation and storage** are often abbreviated as CCS or CCUS.
CCS stands for "Carbon Capture and Storage" and CCUS stands for "Carbon Capture, Utilisation and Storage".

→ **"Utilisation"** or **"exploitation"** concerns converting the CO_2 gas from the capture into new products, such as fuel or chemicals.

CO_2 SPICER

CO_2 SPICER is a Czech-Norwegian collaboration project with the primary goal of developing the first land-based pilot project for CO_2 storage in Central and Eastern Europe. CO_2 will be injected into an active oil and gas field nearing the end of its lifespan. Specialists will construct a three-dimensional model of the entire storage complex and simulate the injection of CO_2. In CO_2 SPICER, researchers will also investigate the properties of the storage site, map, analyse, and address the risks of leakage.

CCSMARKET and PerCCSeptions

In CCSMARKET, researchers investigate the attitudes of the population to carbon capture and storage and how these attitudes vary in different North European countries. In particular, the researchers are looking at how people's attitudes to CO_2 storage are affected when storage is undertaken in a country other than their own, or when they live in a country that will store CO_2 originating from another country. In PerCCSeptions, researchers explore factors influencing attitudes to carbon capture and storage in Norway and Germany.

InjectWell

In InjectWell, research focuses on the parameters affecting the risk of unfavourable injection of CO_2 into reservoirs. Among other things, the researchers are testing the functionality of various commercial simulation tools, and investigating the tools' ability to predict injection of CO_2 into wells and reservoirs. This helps the industry evaluate which wells and reservoirs are suitable for storage and how the injection of large amounts of CO_2 can take place safely and efficiently.

CSSR

The Center for Sustainable Subsurface Resources (CSSR) is a research centre where geologists, physicists, chemists and mathematicians research how the subsurface can be used in the shift to green. Among other things, researchers explore how old reservoirs can be reused for large-scale carbon storage and how storage projects are affected by fluctuating availability of energy.

HPC for the gigatonne service

The HPC-G project works to develop the reservoir simulator Open Porous Media (OPM) Flow. OPM Flow is a dedicated simulator for CO_2 storage. NORCE, SINTEF and Equinor are working closely together in the project, which will deliver a simulator that can simulate a much larger area, over a much longer time horizon than we are used to from the petroleum industry.

An important goal of the project is to reduce simulation time, so that the industry can quickly access information from the simulation and adapt its plans accordingly.

ACTOM: Act on Offshore Monitoring

In ACTOM, an interdisciplinary consortium assessed how secure storage should be undertaken and monitored.

In the project, a toolkit was built that collects algorithms for the design of optimal monitoring programs for storage. The toolkit contains procedures related to detecting subtle signals in the seabed indicating leaks.

DigiMon – Digital Monitoring of CO_2 storage projects

Key components of any carbon storage project are measurement, monitoring and verification.

In the DigiMon project, researchers are using different types of sensor technology to develop a monitoring system that is affordable, flexible and smart. The monitoring system will be able to quickly detect unwanted migration, any leaks and barriers below the surface.

↑

The DigiMon project brings together a strong international and interdisciplinary consortium with leading research institutions and industry from Norway, the Netherlands, Germany, the UK, USA, Romania and Greece. Here they are gathered for the kick-off in Bergen 2019.

PHOTO **GUNN JANNE MYRSETH | NORCE**

04

International work

During the year, NORCE has participated actively in several EU programmes, mainly within Horizon Europe, which is the EU's central funding programme for research and innovation.

The GPRI radar system in use during fieldwork on CIRFA cruises in the Fram Strait.

PHOTO TOM RUNE LAUKNES | NORCE

In 2022, NORCE prepared an international strategy for the period 2022–2025, which is anchored in the overall NORCE strategy. The preparation was led by the research policy unit in collaboration with the three research divisions, the research administration and the management, who are all essential contributors over the coming years when the strategy and action plans will be realised.

The same year, NORCE established an international unit to work on European and international activities throughout the institute. The unit contributes to NORCE's short and long-term international strategy and action plan, and coordinates implementation. This includes political work, business development, positioning, networking, collaboration, capacity building, internal communication and methodology. The unit also works on application writing and coordination of the application processes, assessments, and evaluations. The goal is to increase participation in central EU and international programmes, increase the success rate, and provide relevant and strategic guidance.

The unit includes the NORCE office at the Norwegian House of Research and Innovation (NOHRI). The Brussels office aims to access key information about Europe, engage in EU politics, increase NORCE's visibility in Brussels and Europe, and establish/consolidate relationships with EU bodies and Norwegian actors in Brussels.

Research Administration

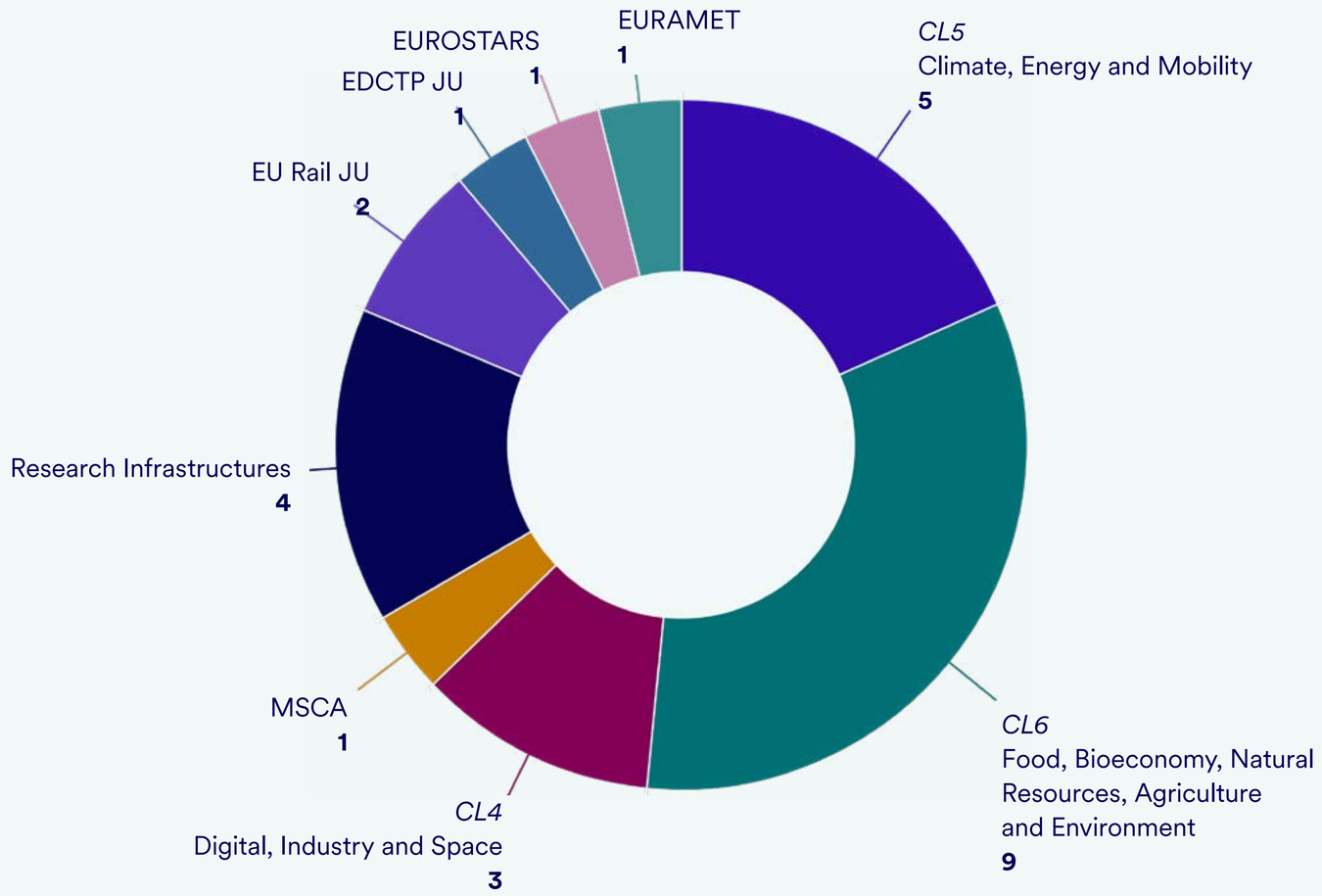
Research Administration recruited several new employees in 2022. NORCE has thereby increased and strengthened its resources with regard to administrative and financial EU project management, with a particular focus on projects coordinated under Horizon Europe.

Research Administration worked to increase competence in budgeting, financial management and project management in Horizon Europe. The international unit also improved internal competence on how Horizon Europe applications are assessed and how researchers without experience from the EU system can get involved and participate in Horizon Europe.

During the year, NORCE has participated actively in several EU programmes, mainly within Horizon Europe, which is the EU's central funding programme for research and

FIGURE I

Horizon Europe projects allocated in 2022 and affiliation with the various clusters/pillars/partnerships



innovation. In Horizon Europe, 61 applications were submitted in 2022, of which 13 were coordinated by NORCE. Of these 61, 48 were from the 2022 call, nine were from the 2021 call, and four were from the 2023 call. Regarding projects awarded in 2022, funds were granted to a total of 27 projects under the Horizon Europe programme, eight coordinated by NORCE and 19 coordinated by other partners. By the end of 2022, NORCE had a success rate of 31% in Horizon Europe.

In addition, two projects under Digital Europe were approved, one of which is a Digital Innovation Hub (DIH). In total, this amounts to approximately EUR 20 million in EU funding in 2022, including Horizon Europe and Digital Europe. On the next page is a list of the total of 29 projects that were granted in 2022.

Coordinated by NORCE

- **COGNIMAN**
  COGNitive Industries for smart MANufacturing (cluster 4)
- **M4MINING**
  Multi-scale, Multi-sensor Mapping and dynamic Monitoring for sustainable extraction and safe closure in Mining environments (cluster 4)
- **ELEXIA**
  Demonstration of a cross-sectoral digitalised energy system integration that increases flexibility and resilience with the goal of achieving an efficient, sustainable, cost-optimised, economical, secure and stable energy supply (cluster 5)
- **IMPETUS4CHANGE**
  Climate, urban, and social experts working together to improve the quality and availability of climate information in cities and regions (cluster 5)
- **OceanICU**
  Ocean-ICU Improving Carbon Understanding (cluster 6)
- **INNOAQUA**
  Innovative Approaches for an Integrated Use of Algae in Sustainable Aquaculture Practices and High-Value Food applications (cluster 6)
- **Euro GO-SHIP**
  Developing a research infrastructure concept to support European hydrography (INFRA)
- **ARCTISTIC:** Arctic sea ice reconstructions using archaeological DNA (aDNA) (MSCA)

With NORCE as a partner and/or associated

- **TRIDENT**
  Technology based impact assessment tool foR sustaInable, transparent Deep sEa miNing exploraTion and exploitation (cluster 4)
- **COLDSPARK**
  A new and modern approach to sustainable hydrogen production (cluster 5)
- **RESCUE**
  Earth system response to resource overuse, climate neutrality, and negative emissions (cluster 5)

→ **URBANE**
Scaling up innovative green urban logistics solutions through multi-stakeholder collaboration (cluster 5)

→ **BIOcean5D**
Assessing and predicting marine biodiversity across spatial, temporal, and human scales (cluster 6)

→ **FishEUTrust**
European integration of new technologies and socio-economic solutions to increase consumer trust and engagement in seafood products (cluster 6)

→ **CHORIZO**
Change of practices and habits through open, responsible and social innovation towards zero food waste (cluster 6)

→ **OCEAN ICE**
Ocean Cryosphere Exchanges in ANTarctica: Impacts on Climate and the Earth System (cluster 6)

→ **BLUEREMEDIOMICS**
Exploiting the marine microbiome for new sustainable biogenics and ecosystem services (cluster 6)

→ **MARCO-BOLO**
MARine COastal BiOdiversity Long-term Observations (cluster 6)

→ **FOLOU**
Bringing knowledge and consensus to prevent and reduce FOod LOss at the primary production stage. Understanding, measuring, training and adopting (cluster 6)

→ **GEORGE**
Next-generation multi-platform ocean observation technologies for research infrastructures (INFRA)

→ **KADI**
Knowledge and climate services from an African observation and data research infrastructure (INFRA)

→ **ANERIS**
OperAtional seNsing lifE technologies for maRIne ecosystemS (INFRA)

→ **Met4H2**
Metrology for the hydrogen supply chain (EURAMET Metrology Partnership)

→ **ODIN**
Enhanced environmental monitoring to promote public health (EDCTP JU)

→ **R2DATO**
Europe's Rail Flagship Project 2 – Rail to Digital – automation for autonomous train operation (Rail JU)

→ **IAM4RAIL**
Europe's Rail Flagship Project 3 – Interdisciplinary and integrated asset management for Europe's rail system (Rail JU)

→ **CORROSENSE**
Adaptation, development, and commercialisation of new non-invasive corrosion detection methodology (Eurostars)

→ **OCEANOPOLIS**
OCEANOPOLIS Digital Innovation Hub (Digital Europe – EDIH)

→ **EUROCC2**
National Competence Centres within the framework of EuroHPC Phase 2 (Digital Europe – HPC)

Throughout 2022, the research divisions, research policy unit, and management participated in or organised numerous events at both the EU and international levels in Norway, Europe, or internationally to position NORCE externally. Among the most important positioning activities in the EU was the position paper jointly developed by the University of Bergen (UiB) and NORCE entitled *Making the Green Wave Blue: Coastal and Arctic ocean research & innovation for a sustainable future*.[1] This position paper was presented in Brussels in October and provided input on direction and priorities to Horizon Europe's strategic plan for 2025-2027. In addition to the position paper, a NORCE delegation had bilateral meetings in Brussels with representatives of the European Commission.

1 Making the Green Wave Blue: Coastal and Arctic ocean research & innovation for a sustainable future: makethegreenwavebluepositionpaper_0.pdf (norceresearch.no)

05

Corporate social responsibility

We contribute with relevant and socially useful research and innovation on what needs to be in place in order to bring about the shift to green. We are doing this in close collaboration with our clients and partners. We also use the broad expertise we have internally for an interdisciplinary approach to various societal challenges.

Sustainability

The transition to a sustainable society with a fair distribution of benefits and burdens is the greatest challenge of our time. An expressed ambition for NORCE is to contribute knowledge and solutions that can increase the tempo of the shift to green. At the same time, we are concerned that the way in which we run the company has the smallest possible climate footprint.

Communication

Communication of research results is a key part of the NORCE social mandate. We actively communicate our research and convey our results to relevant scientific environments, to users of the research and to a wider audience. In order to reach our target groups, we use a number of different channels, such as scientific publications, conferences, webinars, meetings, various media, websites, social media and newsletters.

The ambition is for our research to maintain a profile at a high international level. In 2022, NORCE contributed to 469 scientific publications, which amounts to 421.1 publication points and 0.90 publication points per full-time equivalent researcher. Having one publication point per full-time equivalent researcher is a goal for NORCE. Publication points are an indicator of the scope and quality of our scientific publication. Active participation in public debate with research-based knowledge is a goal for NORCE.

In 2022, NORCE received approximately 2 600 media mentions. We also work through our own channels, such as websites, social media and newsletters. The biggest growth for NORCE during 2022 was on LinkedIn with almost 4 800 new followers during the year. NORCE also gained nearly 500 new followers on Facebook. In 2022, we chose to focus less on Twitter and

Anne Ingeborg Myhr, SVP Biotechnology and Circular Economy, at the Research Square during NorFishing.

PHOTO **KATRINE JAKLIN | NORCE**

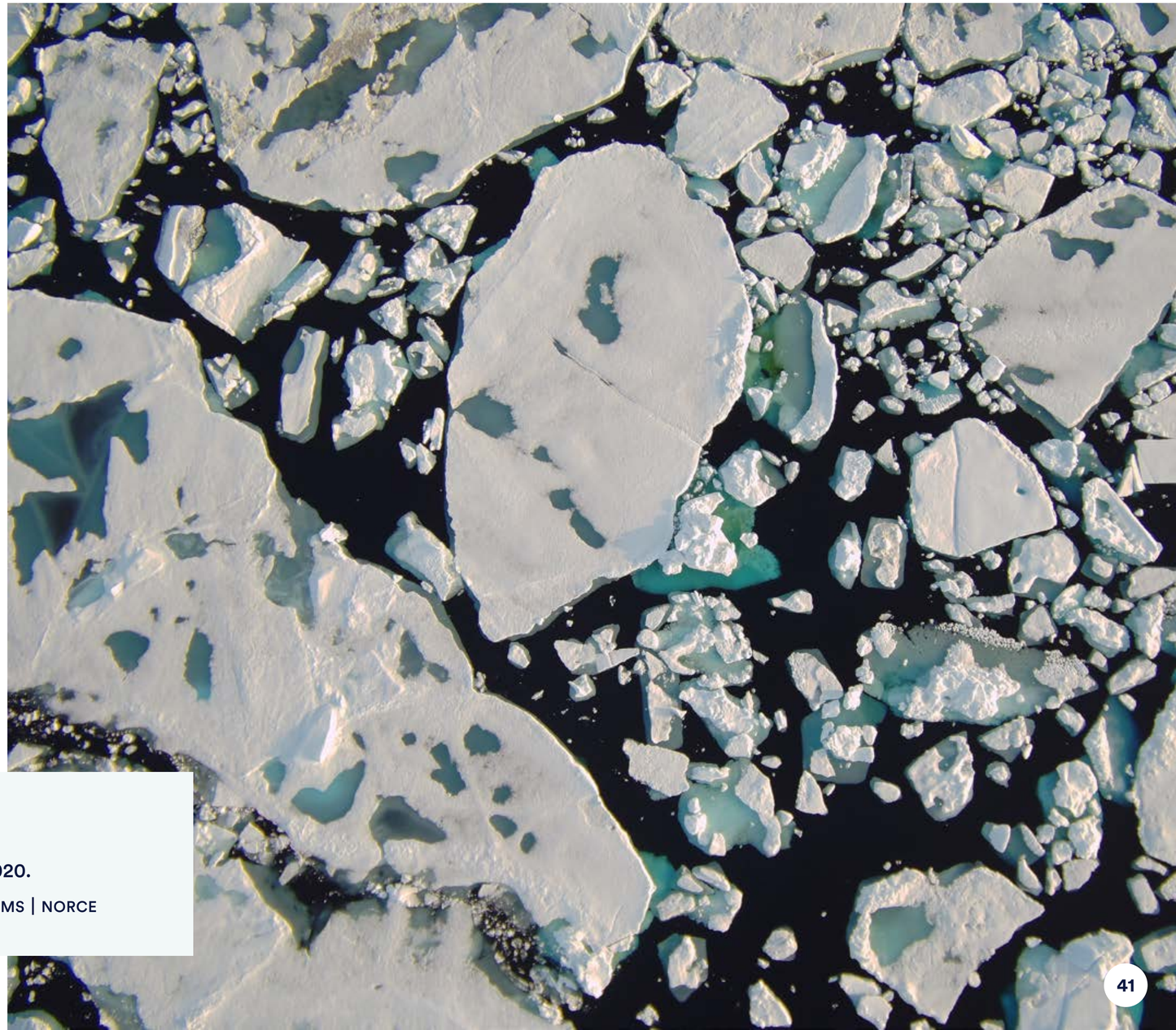
Project manager Gro Bjerga at the kick-off for Biocircle in September 2022.

PHOTO **NORCE**

more on Instagram. During 2022, our Instagram followers increased from 1 005 to 1 236. We also sent out 11 newsletters to our subscribers in 2022. In addition to disseminating research through various channels, we tested a new campaign concept in 2022. Over several weeks, we showcased the breadth of our expertise in topics such as youth exclusion, drone technology, and offshore wind.

Research ethics

NORCE follows national and international guidelines on research ethics to ensure that NORCE conducts its business in accordance with the highest ethical standards. The company also has its own guidelines for research ethics and a separate integrity committee.



→

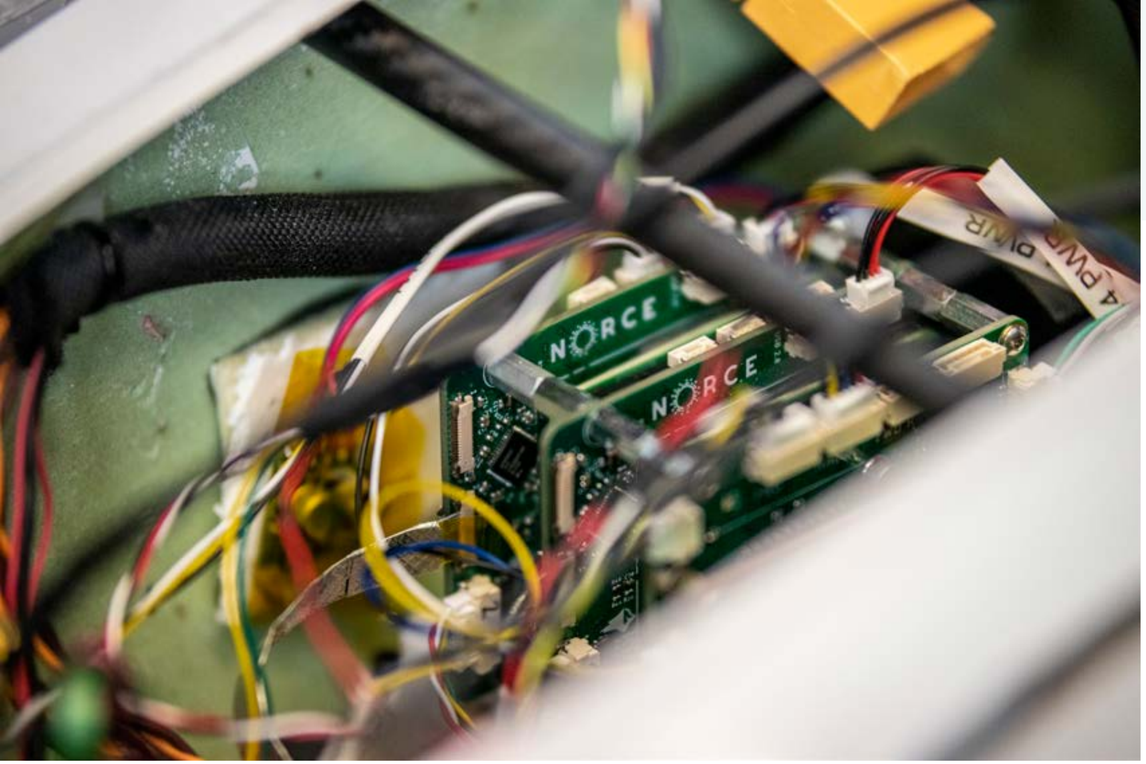
CAATEX cruise with KV Svalbard in 2020.

PHOTO **DRONES AND AUTONOMOUS SYSTEMS | NORCE**

06

Commercialisation

Commercialisation of research results is an integral part of NORCE's core activities. In 2022, we have had a particular focus on further developing spin-off companies with significant potential to create new jobs and realise financial gains for NORCE.



Drones equipped with technology from NORCE.

PHOTO **RUNE ROLVSJORD | NORCE**

Offshore Sensing's autonomous sailing drones have, among other things, been searching for krill in Antarctica.

PHOTO **AKER BIOMARINE**

The main task of NORCE Innovation AS is the development and realisation of values in research-based limited companies, which are usually based on ideas and research results that have been developed in the academic communities at NORCE over several years.

In 2022, there has been a particular focus on further developing spin-off companies with significant potential to create new jobs and realize financial gains for NORCE. This applies in particular to the companies Xsens AS, Offshore Sensing AS and Gas2feed AS.

Xsens AS

Xsens AS manufactures and supplies measurement technology that can be attached to operational process pipes and measure the rate and certain properties of the liquid flow. The company's products and services are based on 5 patent families that ensure commercial exclusivity for new innovative solutions in many countries. NORCE owns 48% of Xsens AS. For more information, see **www.xsensflow.com**

Offshore Sensing AS

Offshore Sensing AS manufactures and delivers autonomous ocean-going sailing drones that can be equipped with many different types of sensors and controlled via satellite. The sailing drones are very robust and have been used for a long time in both polar areas and cope well out at sea in hurricanes with 14 metre high waves. By having solar cells on deck, the sailing drones can be at sea for several months. NORCE owns 87% of Offshore Sensing AS.
For more information, see **www.sailbuoy.no**

Gas2feed AS

Gas2feed AS is a company that will develop sustainable protein by recycling carbon and using green hydrogen in a microbiological fermentation process. This process has so far been demonstrated at the laboratory scale. In the coming years, the process will be tested in larger tanks, and the protein will be tested for applications within aquaculture, with the long-term goal of establishing large-scale industrial feed production. NORCE owns 36% of Gas2feed AS.
For more information, see **www.g2f.no**

In 2022, NORCE Commercialisation also took responsibility for managing NORCE's ownership interests in research infrastructure and clusters organised as joint-stock companies. In this way, other parts of NORCE's organisation can benefit from the expertise available in NORCE Commercialisation with regard to the management of limited companies. Furthermore, NORCE Commercialisation supported NORCE's research divisions with expertise in industrialisation through active participation in the preparation of several applications for public support for innovation projects.

↑

From Mechatronics Innovation Lab AS (MIL) in Grimstad. MIL is part of the national infrastructure for innovation, pilot testing, experimental development of industrial products, systems, and services. NORCE is a co-owner of MIL.

PHOTO **RUNE ROLVSJORD | NORCE**

07 Subsidiaries

The NORCE Group has several subsidiaries.
Here, we highlight some of the largest ones.

→ **Nasjonalt Utviklingssenter for Barn og Unge AS (NUBU - The Norwegian Centre for Child Behavioral Development)**
Helps children and young people with severe behavioural problems, their families, kindergartens and schools to get research-based, relevant, individually tailored and effective help.

→ **Nasjonalt kunnskapssenter om vold og traumatisk stress AS (NKVTS - Norwegian Centre for Violence and Traumatic Stress Studies)**
Develops and disseminates knowledge and expertise on violence and traumatic stress.

→ **Nordisk institutt for odontologiske materialer AS (NIOM - Nordic Institute of Dental Materials)**
Contributes to safe and effective dental materials.

→ **NORCE Innovation AS**
Contributes to the commercialisation of results from the research in NORCE, through underlying subsidiaries, affiliates and other ownership interests.

↑

Researcher Marianne Opaas at NKVTS during a webinar about the project RefugeesWellSchool. The study is based on school as an essential arena for newly arrived refugees.

PHOTO **ANNIKA BELISLE**

→

The photo was taken on September 23, 2022 during the launch of the "Vision Loss and Mental Health" report. The launch was held at NKVTS' premises in Nydalen/Oslo. In the picture, researcher Trond Heir presents the contents of the report.

PHOTO **RUNHILD GRØNLIE | NKVTS**

08

Health, safety, environment and quality

Our objective is for all activities at NORCE to be conducted without harm to people and property and with the least possible negative impact on our surrounding environment.

TABLE I

Overview of incidents and near misses

Year	Adverse events	Near-misses	Incidents causing personal injury	Incidents causing sickness absence
2022	30	23	15	1
2021	37	27	7	0

Wastewater collected from Tromsø municipality's treatment plant.

PHOTO **KATRINE JAKLIN | NORCE**

Health, safety and the environment

HSE policy

The overall objective at NORCE is for all activities to be conducted without harm to people and property and with the least possible negative impact on our surrounding environment.

HSE targets

The targeted and systematic HSE work was also the main focus at NORCE in 2022. The status of the work was regularly followed up on in all general meetings, management meetings, and group management's weekly meetings.

HSE incidents and near misses

HSE statistics for 2021 and 2022 are given in the table above, but the figures on incidents are not directly comparable since the categorisation of incidents in relation to non-conformities was changed in autumn 2021.

Some of the cases that were recorded in 2021 would have been classified as process non-conformities in 2022.

We registered fifteen personal injuries in NORCE in 2022. A large majority of these were minor injuries that did not require medical treatment. One incident, where ventilation conditions in a lab resulted in the spread of H_2S to an office outside the lab, caused great discomfort to exposed personnel and the person concerned was sent for observation in A&E and hospital.

Emissions to the external environment

In 2022, we had two minor emissions to the external environment. One was just under ten litres of soapy water mixed with some cement. There was also an emission of about 150 litres of molasses. None of these emissions had a serious environmental impact. NORCE has nevertheless implemented additional measures and controls to also prevent emissions of this nature.

Safety organisation and working environment committee

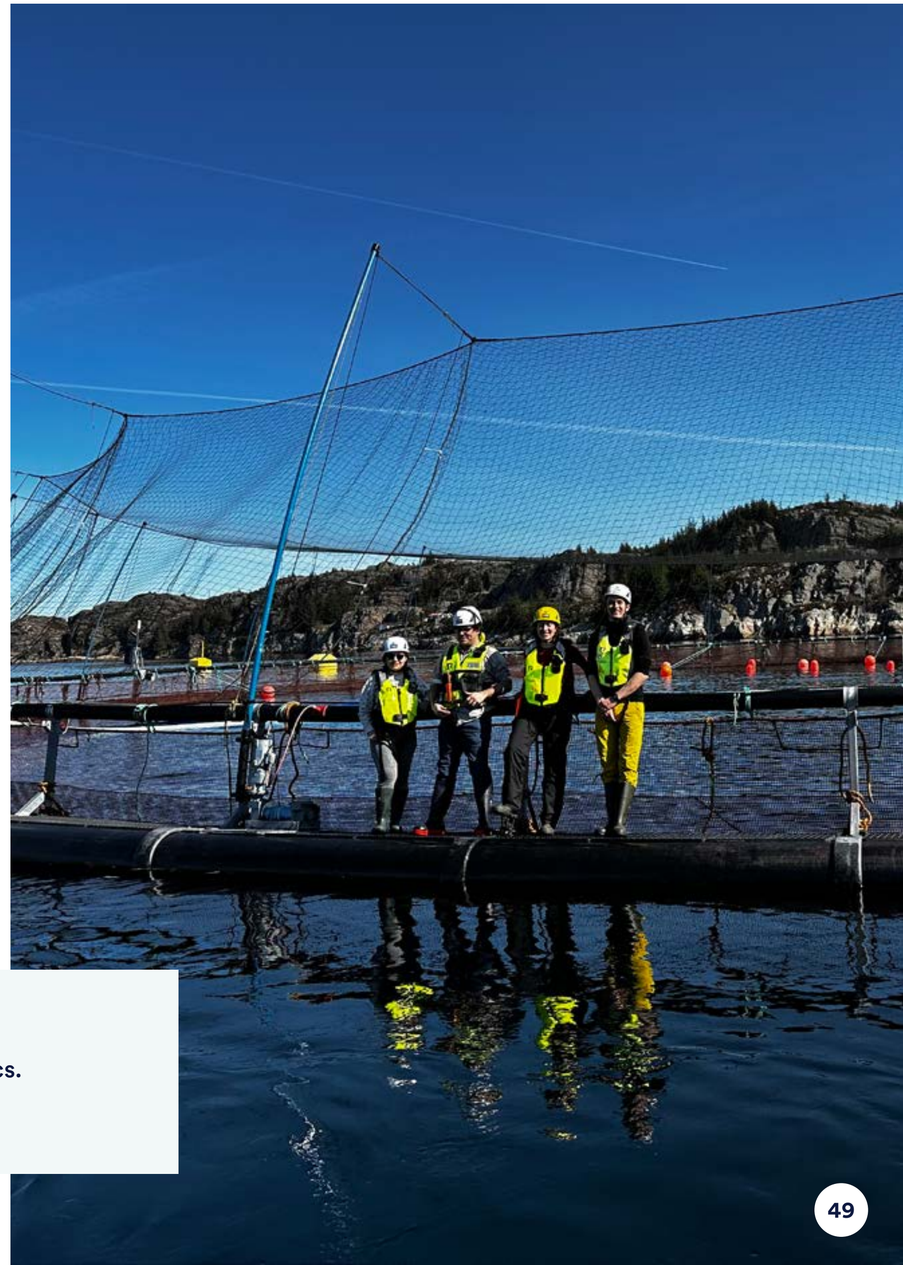
In 2022, we conducted four WEC meetings. Minutes from all the meetings are made available to all employees via the NORCE intranet. The employee side chaired the committee in 2022. Most safety rounds in laboratories and offices were carried out as planned.

Environmental aspects

Given the nature of the company, there are relatively few activities in NORCE that represent negative environmental aspects and overall, the negative impact of the company on nature and the environment is small. NORCE focuses on the positive environmental aspects that large parts of the business represent, and has continued to work to increase this further in 2022.

Security and emergency preparedness

Good security for NORCE's assets and corresponding preparedness is important for NORCE. In 2022, a separate resource was hired for this work. Preparedness training has been carried out at all levels, and NORCE has entered into a new agreement with a supplier related to security and preparedness.



→

Fieldwork in connection with the EU project BluRemediomics.

PHOTO **NAOUEL GHARBI | NORCE**

Quality

Quality policy

NORCE aims to deliver services and products at the agreed time and price and of the agreed quality. We aim to carry out research and research-related activities of high scientific quality and in accordance with recognised scientific methods, as well as to comply with the statutory requirements and ethical research principles.

Internal audits and Management reviews
The Management reviews were carried out as planned in April and October. Internal audits have been carried out in accordance with the audit plan. We conducted 31 internal audits in 2022.

Management system

In 2022, we further developed NORCE's management system, MAPS, based on submitted improvement suggestions and systematic non-conformity management. All new employees receive training in the system within the first two weeks of joining NORCE. In addition, repeated reviews have been carried out in the research groups as needs are identified.

Certification

NORCE is certified in accordance with ISO 9001:2015 and ISO 14001:2015. Entry in the Magnet JQS and Achilles supplier databases has been continued.

"The Transparency Act"

In 2022, systematic efforts were made regarding NORCE's approach to the Transparency Act. During the autumn, guidelines and processes for conducting due diligence assessments for suppliers and partners have been prepared. The actual assessments will be conducted in 2023.

Read more about how NORCE works with the Transparency Act at:
https://www.norceresearch.no/om-oss/slik-arbeider-norce-med-apenhetsloven

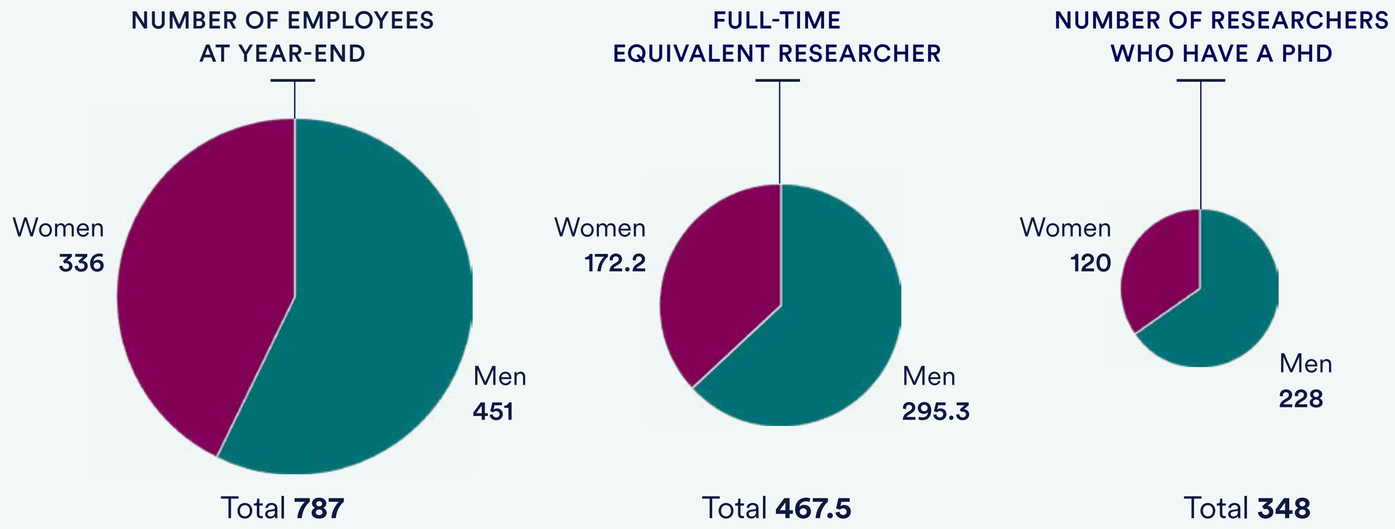
09

People

Our employees are our most important resource. NORCE aims to be a workplace with a good working environment and good development opportunities for all.

FIGURE I

People at NORCE



Key researchers in the EU project BlueRemediomics.
Neda Gilannejad (from left), Antonio Garcia-Moyano, Gro Bjerga, Naouel Gharbi and Lars Ebbesson.

PHOTO **ANDREAS R. GRAVEN | NORCE**

Gender equality and diversity

Complex societal challenges require an interdisciplinary approach, and NORCE has unique expertise to address societal challenges with new perspectives and innovative, holistic solutions. This requires attracting and retaining a diverse workforce. NORCE aims to be a workplace with a good working environment and good development opportunities for all.

Equality, diversity, and equal opportunities for all employees are therefore important value drivers in this work and NORCE has clarified in its guidelines how we will take care of equality and diversity within the organisation and how we will meet societal diversity in a good way. This is also reflected in our social mandate.

Representatives from employers, employees and elected representatives participate in NORCE's committee for gender equality and diversity. The committee has prepared an action plan for gender equality and diversity for 2022. A report has also been prepared for the gender equality and diversity work for 2022, and this will be available on our website.

Skills development

Systematic skills development is addressed through NORCE Academy, a strategic tool for the skill development of employees and leaders. In 2022, NORCE's management development program was conducted for one group. In addition, divisions and HR developed courses, workshops and digital offerings that in particular built skills for employees in research roles, project managers, and employees in specialist divisions.

Reorganising processes

NORCE implemented structural changes in its administration in 2022. This was undertaken to strengthen the various academic environments. Additional managerial positions were also created in this context. Preparations were also made for an operational transfer involving a small number of employees from NORCE Innovation to NORCE Norwegian Research Center. Structural changes were made in one research division with the aim of standardizing departmental structures across the entire company. These organisational changes were carried out after consultation with union representatives.

Working environment

A new working environment survey was conducted in December 2022. To compare results with the previous survey and with the institute sector, the same working environment survey was used as last time. There was a high response rate, and the results showed significant improvement in all areas, closely matching the rest of the sector.

Sickness absence

Average sickness absence was 4.7% in 2022. This was an increase from the previous year. Although we have good follow-up routines, the focus going forward will be on preventative measures.

Board liability insurance

The company has taken out board liability insurance that applies to the boards of the parent company and Group subsidiaries. The insurance covers up to MNOK 50 per claim per year.

Senior scientist Marte Haave at NORCE shows us a container of microplastics.

PHOTO **ANDREAS R. GRAVEN | NORCE**

10 Finance

NORCE's parent company reported operating revenues of MNOK 1 082 in 2022. The operating profit for 2022 was 10.5 MNOK, compared to 9.8 MNOK in 2021. Ordinary profit before tax was MNOK 70.5, where the difference to operating profit is primarily due to dividends from the subsidiary NORCE Innovation.

NORCE research aircraft outside the hangar at Tromsø Airport.

PHOTO RUNE ROLVSJORD | NORCE

Finance

For the Group as a whole, revenue totalled MNOK 1 313 and operating profit was MNOK -0.3. Ordinary profit before tax was MNOK -6.4. The difference between operating profit and profit before tax is primarily due to losses in companies in the group that have negative results in a build-up phase. Dividends paid to the parent company by a subsidiary have been eliminated in the consolidated accounts.

In many ways, 2022 was another abnormal year. The start of the year was marked by a new round of Covid-19 restrictions. The restrictions barely had time to be lifted before war broke out between Russia and Ukraine, which affected both Europe and the world economy, and especially the energy markets. Weak growth in China, combined with high global inflation further impacted the situation.

In the research sector, uncertainty was also created as a result of budget cuts in the Research Council, shortfall in the current form of Retur-EU in the coming year, as well as various planned changes in disbursement practices for both Research Council projects and EU projects which are likely to increase working capital requirements throughout the industry. NORCE is very pleased to have nevertheless delivered a 2022 on schedule and in financial balance, but is closely monitoring the future implications of these conditions.

It is proposed that the profit for the year in the parent company is carried forward to other equity. The parent company has satisfactory liquidity at the end of 2022. The annual accounts for the company have been prepared on the condition of continued operations.

TABLE I

Financial KPI 2022

	Parent company	Group
Operating income	MNOK 1 082	MNOK 1 313
Operating profit	MNOK 10,5	MNOK -0.3
Profit before tax	MNOK 70,5	MNOK -6-4
Equity	MNOK 626.5	MNOK 522,8*
Equity ratio	47 %	36 %

* The Group companies, NKVTS and NUBU have net uncovered pension obligations of MNOK 78 and MNOK 57 respectively, totalling MNOK 135. NKVTS has put in place a government allocation structure where a capital base can be built up over time to balance the unsecured liabilities. A similar solution is being worked on for NUBU. Corrected for the unfunded pension obligations, Group equity would increase from a book value of MNOK 523 (36%) to an adjusted value of MNOK 658 (45%).

11

Risk and risk management

We work to reduce and manage risk at NORCE, and have guidelines for this work.

Researchers Valentina Tronci and Naouel Gharbi in the laboratory to look at samples taken in connection with the project PigghåFRI.

PHOTO ANDREAS GRAVEN | NORCE

Overall objectives and strategy

NORCE is exposed to risk in various areas, both operationally and financially. The goal is to manage the risk down to an acceptable level. The Board of Directors has adopted guidelines for reducing and managing risk, and the administration has implemented these in the business.

Operational risk

There is a general operational risk that assignments may not generate sufficient revenue to cover project costs. NORCE has established organisational structures, control processes and authority matrices to ensure proper risk assessment before new contracts are concluded. A lack of sufficient assignments for the company poses another operational risk. The company is continuously working on developing market opportunities, which reduces this risk in the short and long term.

NORCE is also exposed to operational risks related to the operation of infrastructure such as laboratories and testing facilities. The company has established procedures, including certification to ensure that these risks are subject to adequate control. NORCE also has employees on cruises and working in locations that require special monitoring.

In 2022, a major project has started which is not part of the company's normal operations. This concerns the establishment of the Risavika Gas Centre and the relocation of a research group to Risavika. The project is complex and involves a number of different fields in NORCE, and there is a degree of uncertainty about the total financial cost of the project. NORCE is working to establish new procedures to better manage projects of similar complexity in the future.

Financial risk

NORCE aims to conduct its research and other activities with limited exposure to financial risk. The Board of Directors of the company has adopted guidelines to reduce exposure to a manageable level, including an authority matrix, financial and management policy and foreign exchange policy.

The biggest financial risks to which NORCE is exposed are

→ **Risk of loss of value of financial investments.** In December 2021, the Board adopted a new Financial and Management Policy, and implementation began in February 2022. A distinction is made between liquidity capital, which will be managed in banking and money market funds and assets under management, which will be managed in a diversified portfolio with a long-term perspective.

The Board of Directors has adopted a strategic allocation of assets under management, and uses the following asset classes: money market funds, bonds, property, private equity and hedge funds. The allocation has been made to create a good risk-adjusted return. The agreed distribution between fixed-income securities and shares/ alternative investments is 15% / 85%. Due to considerable global economic turmoil, there were significant fluctuations in the portfolio throughout the year. The time-weighted return on Assets under management in 2022 ended at -1.2%.

→ **Risk of loss of value in subsidiaries.**
NORCE works on commercialising research and innovation through subsidiaries owned and managed by the wholly-owned subsidiary, NORCE Innovation AS. These investments are at different stages of commercialisation and exposed to different risks.

Guidelines have been established for corporate governance to mitigate the relevant risks.

→ **Counterparty risk (risk of loss on claims against clients).**
The risk of losses on receivables has been historically low and is now also considered small.
The company has made provisions for potential losses.

→ **Foreign exchange risk in projects with foreign clients or with foreign suppliers and partners.** NORCE is only exposed to currency risk to a limited extent. In projects that have significant earnings in foreign currencies, a procedure for currency hedging has been established.

→ **Liquidity risk (risk of not being able to meet payment obligations when they fall due).**
The risk is considered low as NORCE has sufficient liquidity capital.

There is still an unresolved future pension obligation of significant size for the subsidiary NUBU, where dialogue with the authorities to find a solution to the matter is ongoing. For NKVTS, there are also pension obligations of considerable size, but here a government allocation structure has now been put in place where a capital base can be built up over time to balance the unsecured liabilities.
In the Group's annual accounts, pension obligations are included in full for both NUBU and NKVTS.

12 Outlook ahead

NORCE is budgeting in 2023 with a positive result from operations, although there are still a number of local and global risks in play.

The Board is pleased to have ended the year positively and on schedule, especially considering the turmoil in the world in 2022, with the pandemic continuing at the start of the year, uncertainty about funding from the Research Council, high electricity costs and high inflation.

Positive liquidity capital and assets under management largely as a result of successful work on commercialisation and sale of enterprises are contributing to financial security and flexibility.

NORCE is budgeting in 2023 with a positive result from operations, although there are still a number of local and global risks in play. The spring of 2023 is still impacted by the war in Ukraine. In Norway, this has particularly affected electricity costs and general inflation, which in turn has put great pressure on wage settlements. This in turn affects the cost level in NORCE and thus our competitiveness. Financial conditions in the Research Council continue to create uncertainty around important sources of funding for the company, such as Retur-EU. Furthermore, changes in disbursement conditions for both Research Council and EU projects may increase the need for working capital. However, NORCE is well equipped to manage different situations both financially and operationally.

10 percent of the population suffers from irritable bowel syndrome. Although there are many different treatment options, it is difficult for the patient to navigate the options available and make use of treatment. Researcher Sverre Litleskare and colleagues therefore plan to develop a mobile game that can help patients with irritable bowel syndrome to manage the disease.

PHOTO **NORCE**

Dorinde Kleinegris and Gro Bjerga (from left) celebrate with colleagues after learning that the EU project INNOAQUA has been awarded. The project will commence in spring 2023.

PHOTO **ANDREAS R. GRAVEN | NORCE**

13

Climate account

The most important contribution NORCE can make in the work for sustainable social development is to provide new knowledge through research that can lead to informative decisions in the shift to green.

NORCE also has ambitions for how the organisation is to develop as a sustainable institution. This chapter contains a general presentation of NORCE's climate account for 2022. This is assessed against the previous year, and against the organisation's ambitions to become climate neutral by 2040. The complete climate account is attached.

NORCE's climate account is prepared in accordance with the GHG protocol (Greenhouse Gas Protocol), where emissions are divided into three "Scopes", each with its own subcategories.

Scope 1 – Direct emissions
Scope 2 – Indirect emissions from the purchase of energy
Scope 3 – Purchase of goods and services

The emissions for NORCE are divided as follows: less than 1 per cent in Scope 1, 8 per cent in Scope 2 and 90 per cent in Scope 3. The account for 2022 shows that NORCE has total greenhouse gas emissions of 3 911 CO_2equivalents (tCO_2e), corresponding to 6 tCO_2e per full-time equivalent. This is an increase of approximately 3 616 tCO_2e from 2021, cf. table 1. The increase is mainly related to investments in equipment and machinery, as well as other purchases.

Another reason why the increase has been so significant is that purchases were not included in the previous climate account, and that this is the first year we are using Klimakost's calculation method.

Travel activity increased by 754 tCOe from 2021 to 2022. The explanation for this is that the organisation was still also heavily impacted by the coronavirus pandemic in 2021. Data for business travel is taken from our travel expense management system, and the quality of the data depends on the level of detail of the travel information the individual employee has registered. As a measure to obtain more accurate data, reporting changes have been made that provide the necessary information to be able to calculate emissions.

Filming ahead of the democracy debate at Arendal Week. Thomas Hovmøller Riis films Sveinung Arnesen (from left), Hilmar Mjelde and Camilla Aadland.

PHOTO **GUNN JANNE MYRSETH | NORCE**

TABLE I

NORCE's documented greenhouse gas emissions 2019–2022 (Numbers in tCO_2e)

Figures in tCO_2e	2019	2020	2021	2022
Scope 1 – Direct emissions				
Combustion, own vehicles	25.94	29.06	33	44.79
Scope 2 – Indirect emissions from the purchase of energy				
Power consumption		458	129	70.65
District heating consumption				258.71
Scope 3 – Other indirect emissions				
Purchase of goods and services				1 843.38
Waste handling				32.40
Business travel	422	104	109	887.38
Buildings				769.38
Total carbon footprint		**607**	**295**	**3 904**
Emissions per full-time equivalent				5.997

Scope 1 – Direct emissions

Direct greenhouse gas emissions in Scope 1 totalled 44.79 tCO_2e. Most of this contribution is related to NORCE's own vehicles and aircraft.

By the end of 2022, NORCE had ten vehicles, which are used, among other things, in field work where equipment and personnel must be transported to take measurements and undertake research. In addition, NORCE invested in its own research aircraft in 2022 in order to expand our capabilities within remote sensing and to more easily develop larger payloads and then integrate these into drones.

With regard to emissions here, we see that there is a somewhat higher level of activity in 2022 than in 2021, and emissions have increased. This is related to investment in NORCE's aircraft which is used for research. One possibility to reduce emissions from our vehicles is to renew the car fleet, which in 2021 consisted exclusively of fossil-powered cars. The vehicles sometimes have to drive over long distances, and in places with poor charging facilities. With developments in battery technology and more extensive charging networks, it will be possible to replace these vehicles with electrically-powered vehicles.

Scope 2 – Indirect emissions from the purchase of energy

Scope 2 includes emissions from the purchase of electricity and district heating. For both of these energy carriers, there is debate about the amount of emissions that should be calculated per kilowatt-hour, and the results from different assumptions can differ considerably. Based on the locally-based principle of emissions underlying the GHG Protocol, emissions from energy totalled 333.48 tCO_2e in 2022. Of this, 70.65 tCO_2e were from electricity and 258.71 tCO_2e from district heating (4.12 from district cooling).

Scope 3 – Procurement of goods and services

The majority of NORCE's climate emissions fall under Scope 3. In 2022, these emissions amounted to 3 532 tCO_2e. Most of this is related to the extensive aggregate category "purchases", a total of 1 766.3 tCO_2e. The emissions are mainly estimated on the basis of detailed information on all purchases made during 2022.

A detailed overview is given in table 3 (page 67). The emission factors in the accounts are based on Asplan Viak's Klimakost model. In line with this, an emission factor has been estimated per account type in NORCE's accounts. Total emissions are then obtained by multiplying the emission factor by total revenue per account type.

A disadvantage of the method based on economic data – without supplementary indicators – is that it largely only creates incentives to cut costs and not greenhouse gas emissions. Work will gradually be undertaken towards analysing some of the larger purchases based on physical data (primary data). In this context, emphasis is placed on requesting data from suppliers. The goal is that in the long term this can give a more accurate result than if one relies solely on economic emission factors. At the same time, this will make the transition to more climate-friendly varieties of products visible in the climate account. By using only economic emission factors, such a change may lead to an apparent increase in emissions for a purchase if the more climate-friendly variant is more expensive.

↑

Here, team leaders in the Technology division work on strategy. Ranveig Bjørk (from left), Ketil Djurhuus, Torleif Lothe, Fionn Iversen and Stian Anfinsen.

PHOTO **CAMILLA AADLAND | NORCE**

TABLE II

NORCE's air travel activities 2019–2022

	2019	2020	2021	2022
Norway	207	72	67	437.20
Nordic countries				3.41
Europe	215	32	42	173.42
Intercontinental				258.82
Total	**422**	**104**	**109**	**872.85**

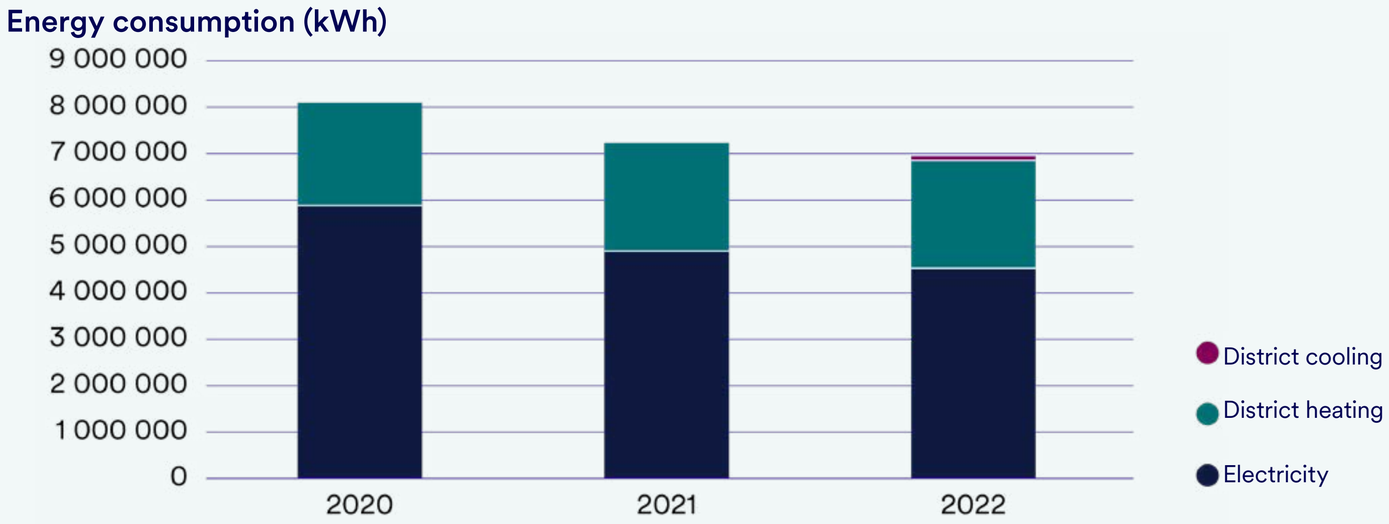
Travel

NORCE's travel guidelines are being prepared, and will be used as a step to achieving a structured and more conscious relationship with travel activity internally in the organisation, both in terms of emissions, the number of trips and the possibility of freeing up time for other activities. As table 2 shows, NORCE has significantly increased its air-travelactivities from 2021, with an increase of 763.85 tCO_2e.

If the objective of reducing emissions related to travel is to be maintained in the longer term, it is important to further develop and continue the use of digital tools for video conferences and digital meetings. In addition, principles must be set for when travel can be replaced by video meetings and determining which travel must be carried out, or can be carried out in a more sustainable way.

During 2023, NORCE will carry out a travel habits survey which will map how employees travel to and from NORCE's offices. Furthermore, we will also look at measures that can be initiated to choose more sustainable means of travel.

FIGURE I



Energy consumption

NORCE is located in many different cities throughout Norway and has a range of buildings and facilities. We lease premises from many different lessors, and electricity consumption is often included in the lease charge. Much of our leased space consists of offices, as well as laboratories and test facilities, which consume a lot of energy. We have collected data on electricity consumption in all the larger buildings, and only some individual offices and warehouses have been omitted.

There are major differences in emissions from different energy sources. Power production in Norway has a very low climate footprint compared to other countries, so the electricity we physically use has low emissions. However, we are part of a larger market for electricity, and guarantees of origin for electricity are traded between all EU and EEA countries. Some of the clean Norwegian electricity is bought by foreign customers, while Norwegian customers who do not buy a guarantee of origin receive fossil energy sources and nuclear power in return.

In 2021, NORCE had a guarantee of origin for 92% of its energy consumption. Only two buildings did not have a guarantee of origin. For locations where we lease premises, the company cannot buy this directly, but must go through the lessor. We will continuously work to reduce energy consumption and to increase the proportion of district heating in our buildings. Energy consumption in 2022 is quite similar to 2021.

Measures are being implemented to help with energy efficiency, including focusing on energy efficiency in power supplier agreements and investigating the installation of solar panels on our buildings.

Emissions from goods and services

Emissions from goods and services make up a significant part of NORCE's overall climate impact. In 2022, this amounted to 1 766.31 tCO_2e.

This is mainly related to the organisation's investments in machinery as well as fixtures and fittings. NORCE has invested in and is in the process of establishing Risavika. This shall become a research and infrastructure centre that will be a national and international hub in the development and scaling up of industrial biotechnology, CCS and the circular carbon economy.

Supplies associated with NORCE's research activities in laboratories have also been a significant contributor.

Much of the carbon footprint falls into this category, which is modelled with economic emission factors. Gaining a good insight into this area is labour-intensive, primarily because good quality emission factors (LCA data, EPDs) have not yet been clarified. Work on mapping the largest investments and the areas within supplies, and preparing an LCA to be able to clarify the investments' life cycle and thus climate impact will be initiated.

TABLE III

Emissions from goods and services

	tCO_2e 2022
Investments in machinery, inventory and transport equipment	688.32
Rental of machinery and inventory	15.50
Fixtures and fittings, tools and operating materials	62.53
Computer equipment	42.12
Software	0.70
Supplies	636.05
Workwear and protective equipment	22.24
Repair and maintenance of equipment	105.84
Repair and maintenance, other	5.25
Office supplies	44.08
Subsistence allowance	63.47
Dues and gifts	80.22
Total	**1 766.32**

Buildings

As mentioned earlier, NORCE is located in many different cities throughout Norway and has a range of buildings and facilities. Where NORCE leases buildings, we can exert influence, but only to a limited extent. There is a process underway that will include energy efficiency and putting in place assessments about sustainability and efficiency in renovation and negotiations on agreements.

NORCE shall work purposefully to reduce energy consumption at NORCE's premises. In the coming years, the implementation of various measures is planned that will contribute to the work towards reducing NORCE's overall consumption up to 2040.

This applies primarily to

- Improving area efficiency and renovation of buildings.
- Development of solutions for renewable energy, such as solar power systems on own buildings.
- Several major and minor measures related to energy efficiency.

NORCE leases many office premises, and now has few vacant offices, but many vacant rooms. With more co-use/drop-in use, we can avoid leasing more space due to expansion or reduce space through better office solutions. NORCE is in a process where the current office solution is being assessed, with area efficiency as the main focus.

TABLE IV

Emissions from buildings

	tCO_2e 2022
Investments in building and real estate	38.18
Leases, premises	675.31
Repair and maintenance of buildings	55.90
Total	**769.38**

Waste

Waste was previously handled differently in the companies that now make up NORCE. In some of the previous companies, there was no focus on reporting sorting rates or on reducing the amount of waste. NORCE is working to improve this. Early in 2021, we put in place an agreement on disposal of IT waste and the Tromsø location put in place a new agreement, which means we will gain insight into the waste we deliver.

Green IT

Within the IT equipment category, an agreement on reuse and recycling has been made with an external company.
Work has also been initiated (Green IT) with the aim of looking at how NORCE can better recycle its IT equipment, and put recycled equipment into use.

EU taxonomy

NORCE has a separate working group, led by NORCE's sustainability officer, which works actively to map NORCE's research activities that can be classified as sustainable activities under the EU's taxonomy. A large part of NORCE's ongoing project portfolio covers the topic of sustainability.

Some examples are technical solutions, opportunities within the circular economy, the use of waste as a raw material, reduced emissions to air and water and societal significance. Much of NORCE's research goes directly towards the shift to green, and contributes to the necessary transition. The EU's taxonomy will help us shed light on this. This work takes place linearly with the work aimed at making the organisation itself carbon neutral.

Researcher Einar Bye-Ingebrigtsen takes samples of microplastics at Nygårdshøyden in Bergen.

PHOTO **ANDREAS R. GRAVEN | NORCE**

Comments from management

The climate account for 2022 provides an important overview of greenhouse gas emissions, both direct and indirect, showing how the organisation affects the climate. The climate account provides an understanding of the most important areas to focus on in further climate work. This year we have included additional elements in the account in order to be as transparent as possible. This gives us a good reference level in our efforts to become carbon neutral.

The focus going forward in this work will be to identify where we can make simple changes that have an impact, and gradually introduce measures towards more long-term solutions.

Particular attention is being paid to area efficiency and purchasing, where there is a significant potential for emission reductions.

Here, for example, we can facilitate reuse, increased product life and better use of available resources. A focus on more efficient energy consumption will also be an important measure.

NORCE is an important contributor to the shift to green through our research, but it is also important to look at how the organisation affects the climate. The climate account enables us to plan how we will carry out activities and collaborate with external actors in a better way.

→

NORCE specializes in the development of control and sensor systems, remote sensing and environmental monitoring in cold climates, and has conducted drone-based research activities in Svalbard since 2006 (then as Norut).

PHOTO **BENJAMIN STRØM | DRONENORD**

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Annual accounts

NORCE Norwegian Research Centre AS
2022

Profit and Loss Statement

(All figures in kNOK)

Parent company				Group	
2021	**2022**		**Note**	**2022**	**2021**
776 635	851 531	Sales income, project income	14, 15	939 490	864 161
184 146	219 069	Base grants, framework grants, etc.	14	363 959	326 470
14 825	11 884	Other operating income	14, 15	9 820	220 368
975 607	**1 082 484**	**Total operating income**		**1 313 269**	**1 410 999**
195 128	217 749	Project costs, commodity costs	15	220 741	200 270
780 478	**864 734**	**Net operating income**		**1 092 528**	**1 210 729**
601 905	660 185	Payroll cost	11, 16	819 882	750 445
25 349	25 466	Depreciation of tangible fixed assets and intangible assets	1, 2	27 676	26 510
0	0	Write-down of tangible fixed assets and intangible assets	1, 2	0	57
143 453	168 539	Other operating costs	15, 16	245 221	216 106
770 708	**854 190**	**Total operating costs**		**1 092 780**	**993 118**
9 771	**10 544**	**Operating profit**		**-252**	**217 611**
118 738	60 000	Income from investments in subsidiaries and affiliated companies	3	-7 461	-6 725
0	0	Income from other investments	5	519	250
39	0	Interest income from companies in the same group		0	0
5 894	6 416	Other interest and financial income		9 742	8 494
0	-3 034	Change in the value of financial instruments at fair value	7	-3 712	-422
0	-167	Write-down of financial assets/Reversal of previous write-downs		-512	0
0	0	Interest costs to companies in the same group		0	0
-4 150	-3 287	Other interest and financial costs		-4 741	-4 372
120 521	**59 929**	**Net financial income**		**-6 165**	**-2 775**
130 292	**70 473**	**Profit/loss before tax expense**		**-6 417**	**214 836**
0	0	Tax on ordinary profit	12	548	174
130 292	**70 473**	**Annual result**	9	**-6 965**	**214 662**
		Of which for minority interests	9	-1 263	22
		Profit/loss for the year for majority interests	9	-5 702	214 641
		TRANSFERS			
130 292	70 473	Allocated to/covered from other equity	9		
130 292	**70 473**	**Total transfers**			

Balance Sheet as at 31.12

(All figures in kNOK)

Parent company				Group	
31/12/2021	31/12/2022	ASSETS	Note	31/12/2022	31/12/2021
8 078	9 885	Concessions, patents, licenses, trademarks and similar, rights	1	10 214	8 495
0	0	Deferred tax asset	12	0	0
8 078	**9 885**	**Total intangible assets**		**10 214**	**8 495**
17 153	19 795	Sites, buildings and other real estate	2	61 662	17 153
70 910	77 797	Movable assets, fixtures and fittings, tools, office machinery and similar	2	84 369	77 834
88 063	**97 592**	**Total fixed assets**		**146 031**	**94 987**
128 686	171 240	Investments in subsidiary	3, 17	0	0
0	0	Loans to companies in the same group	4,5	0	0
0	0	Investments in affiliated companies	3	21 082	26 415
0	0	Loans to affiliated companies		0	0
2 452	2 286	Investments in shares and interests	5	14 111	14 925
4 524	4 390	Other receivables	4	4 390	4 524
135 662	**177 917**	**Other financial fixed assets**		**39 583**	**45 865**
231 803	**285 393**	**TOTAL FIXED ASSETS**		**195 829**	**149 346**
0	**0**	**Goods**		**3 628**	**625**
137 304	146 090	Accounts receivable	4	148 813	136 268
115 102	140 429	Earned, non-invoiced income		140 429	116 612
22 783	23 959	Other receivables	6	29 502	28 819
275 190	**310 478**	**Total receivables**		**318 744**	**281 699**
345 141	412 904	Share of market-based equity, bond and fixed income funds	7	452 300	388 776
345 141	**412 904**	**Total investments**		**452 300**	**388 776**
220 334	**323 052**	**Bank deposits, cash, etc.**	8	**477 332**	**429 285**
840 666	**1 046 434**	**TOTAL CURRENT ASSETS**		**1 252 003**	**1 100 386**
1 072 469	**1 331 827**	**TOTAL ASSETS**		**1 447 833**	**1 249 732**

Balance Sheet as at 31.12

(All figures in kNOK)

Parent company				Group	
31/12/2021	31/12/2022	EQUITY AND LIABILITIES	Note	31/12/2022	31/12/2021
2 160	2 160	Share capital	9, 10	2 160	2 160
349 214	349 214	Share premium	9, 10	349 214	349 214
351 374	**351 374**	**Total shareholder's equity**		**351 374**	**351 374**
202 089	275 124	Other equity	9	162 603	152 786
202 089	**275 124**	**Total retained earnings**		**162 603**	**152 786**
		Minority interests	9	8 857	10 101
553 463	**626 498**	**TOTAL EQUITY**		**522 834**	**514 261**
20 383	10 381	Pension liabilities	11	145 732	170 823
0	0	Deferred tax	12	1 306	0
24 650	22 539	Other provisions	13	22 539	24 650
45 032	**32 920**	**Total provisions for liabilities**		**169 576**	**195 473**
0	0	Liabilities to financial institutions		0	0
2 795	2 605	Other non-current liabilities		3 210	3 318
2 795	**2 605**	**Total other non-current liabilities**		**3 210**	**3 318**
0	0	Liabilities to financial institutions	4, 8	0	0
62 265	60 588	Accounts payable	6	73 861	73 305
0	0	Tax payable	12	552	174
56 704	64 596	Public duties payable		76 160	67 378
246 337	305 706	Advances from clients		322 613	271 499
105 872	238 912	Other current liabilities	6	279 026	124 324
471 179	**669 803**	**Total current liabilities**		**752 213**	**536 680**
519 006	**705 329**	**Total debt**		**924 999**	**735 471**
1 072 469	**1 331 827**	**TOTAL EQUITY AND LIABILITIES**		**1 447 833**	**1 249 732**

Bergen, 1 June 2023

Marianne Marthinsen
Chair of the Board

Geir Henning Wintervoll
Deputy board member

Harald Furre
Board member

Aslaug Mikkelsen
Board member

Heidi Hindberg
Board member

Eva Karin Sandanger Dugstad
Board member

Hege Indresand
Board member

Erlend Randeberg
Board member

Gisle Andersen
Board member

Lisbet K. Nærø
Board member

Robert Bjerknes
Board member

Thor Arne Håverstad
CEO

Cash flow statement

(All figures in kNOK)

Parent company 2021	Parent company 2022	CASH FLOWS FROM OPERATING ACTIVITIES	Group 2022	Group 2021
130 292	70 473	Ordinary profit before tax	-6 965	214 662
0	0	Tax paid	174	0
25 350	25 466	Ordinary depreciation	27 676	26 510
0	0	Impairment	0	57
0	0	Change in inventories	-3 003	-275
29 872	-34 112	Change in accounts receivable and earned, non-invoiced income	-36 362	-1 580
15 693	-1 677	Change in Accounts payable	561	25 897
49 559	59 369	Change in advances from clients	51 114	47 009
0	0	Repayment of income from investment in associated companies (equity method)	7 461	6 725
-118 738	0	Items classified as investing/financing activities	0	-213 089
-1 560	73 543	Change in other time delimitations	156 490	16 772
130 468	**193 061**	**Net cash flow from operating activities**	**197 145**	**122 688**
		CASH FLOW FROM INVESTING ACTIVITIES		
0	-42 554	Invested in shares	-2 129	-14 927
0	0	Liquidation of companies	0	0
159 117	0	Proceeds from sale of shares and interests	814	195 533
0	0	Proceeds from sale of tangible fixed assets and intangible assets	0	0
-1 956	-5 008	Payments for purchases of intangible assets	-5 008	-1 956
-5 042	-4 908	Payments for purchases of buildings and other real estate	-47 396	-5 042
-22 155	-26 886	Payments for purchases of movable assets	-28 035	-24 780
-250 907	-70 797	Net liquidity change for investments in market-based equity, bond and fixed income funds	-67 236	-240 161
20 000	60 000	Payment of dividends	0	0
-100 943	**-90 153**	**Net cash flow from investing activities**	**-148 990**	**-91 333**
		CASH FLOW FROM FINANCING ACTIVITIES		
-154	-189	Payments on repayment of non-current liabilities	-108	-27
3 800	0	Instalment payments on non-current receivables from group companies	0	0
-1 588	0	Liquidity supplied through mergers	0	0
2 058	**-189**	**Net cash flow from financing activities**	**-108**	**-27**
31 582	102 718	Net cash flow for the period	48 048	31 327
188 752	220 334	Cash and cash equivalents as at 01.01., including merged companies	429 285	397 958
220 334	**323 052**	**Cash and cash equivalents as at 31.12.**	**477 333**	**429 285**

Accounting principles

The accounts are drawn up in accordance with the Accounting Act and good accounting practice. Amounts in the notes are in kNOK unless stated otherwise.

Use of estimates
In accordance with the Norwegian Accounting Act, the preparation of the annual accounts requires the use of estimates. Furthermore, the application of the company's accounting principles requires management to exercise discretion. Areas that largely contain such discretionary assessments, a high degree of complexity, or areas where assumptions and estimates are essential for the annual accounts are described in the notes.

Shares in subsidiaries and affiliated companies
Subsidiaries are companies in which the parent company has control and thus has a controlling influence on the financial and operational strategy of the entity, usually through ownership of more than half of the voting capital. Investments with 20-50% ownership of voting capital and considerable influence are defined as affiliated companies.

Investment in subsidiaries is recognised according to the cost method.

Investments in affiliated companies and joint ventures are recognised using the equity method.

See Note 3 for an overview of subsidiaries and second-tier subsidiaries included in the Group on 31/12 and affiliated companies as at 31/12.

Accounting principles for shares in subsidiaries and affiliated companies
The cost method is used as an accounting principle for investments in subsidiaries and affiliated companies in the company accounts. The cost price increases when funds are added in the event of an increase in capital or when group contributions are made to subsidiaries. Distributions received are initially recognised as income. Distributions that exceed the share of retained earnings after the purchase are recognised as a reduction in acquisition costs. Dividends/group contributions from subsidiaries are recognised in the same year that the subsidiary makes a provision for the amount. Dividends from subsidiaries and from other companies are recognised as financial income when the dividend is approved. For the parent company, the sale of subsidiaries or affiliated companies is classified as Income from investment in subsidiaries and affiliates.

In the consolidated financial statements, the equity method is used as an accounting principle for investments in affiliated companies. The use of the method means that the book value in the balance sheet corresponds to the share of equity in the affiliated company, adjusted for any remaining added values from the purchase and unrealized internal gains. The profit and loss share in the income statement is based on the share of the net income in the affiliated company and is adjusted for any depreciation of added values and unrealised gains. In the profit and loss statement, the profit and loss share is shown under financial items. As part of the Group operational activities are to develop, commercialise and dispose of subsidiaries and associated companies, gains are classified upon exit from the Group and the sale of associated companies as other operating income in the consolidated financial statements.

Consolidation principles Subsidiaries are consolidated from the time the control is transferred to the Group (the acquisition date).

In the Group accounts, the item investments in subsidiaries is replaced with the subsidiary's assets and liabilities. The Group accounts are prepared as if the Group is a single economic entity. Transactions, unrealized earnings and outstanding accounts between the companies in the group are eliminated.

Purchased subsidiaries are recognized in the Group accounts based upon the parent company's acquisition cost. The acquisition cost is allocated to identifiable property and liabilities in the subsidiary which is entered in the group accounts as true value at the time of acquisition. Potential added value beyond what can be entered as identifiable property and liability are recognised on the balance sheet as goodwill. Goodwill is treated as a residual and is recognised in the balance sheet with the share observed in the acquisition transaction. Added value in the consolidated accounts is depreciated over the expected lifetime of the acquired property.

Conversion of foreign subsidiaries occurs by converting the balance sheet at the exchange rate of the balance sheet date and converting the income statement at an average exchange rate. Any significant transactions are converted at the exchange rate of the transaction date. All conversion differences are recognised directly in equity.

Sales revenue, project revenue

For project revenue, continuous revenue recognition is applied in line with the progress of the project. The completion rate is normally calculated based on accrued project costs. The income is recognised at the fair value of the consideration at the time of the transaction, net after deduction of any VAT. In special cases, where uncertainty relates to estimated profit and/or the degree of completion, ongoing settlement without earnings is used. For projects that are assumed to result in losses, the entire estimated loss is expensed immediately.

Retained, unbilled project revenues are classified as assets in the balance sheet, while prepayments/ unearned income from clients are classified as liabilities in the balance sheet. If a project has both earned, non-invoiced revenues and has received prepayments, this is presented net as assets or liabilities in the balance sheet.

In some cases, the company receives so-called throughput funds. These are cases where the company is responsible for obtaining grants on behalf of other partners in a project. The company then receives payment from the grantee associated with the project. By agreement with the grantee, the funds from the company are paid to another project partner. Such throughput assets are recognised gross in the profit, with the exception of EU projects, where the funds are recognised only in the balance sheet. Income and costs related to throughput assets are accrued to the same accounting period.

Base grants, framework grants

The company receives base grants from the Research Council of Norway in three arenas – technical-industrial, social sciences and the environment. Grants from RES-EU - EU results-based base grants for research institutes - is also included.

Framework grants mainly apply to the Norwegian Directorate of Health and the Directorate of Children, Youth and Family Affairs.

Grants from the public sector are recognised in income during the period to which the grant applies.

Earmarked grants with clear guidelines for use are recognised in income together with the implementation of the activity covered by the grant.

Grants without earmarking are recognised in income at the time of payment.

Other operating revenue

Other operating revenue includes rental income and other administrative services, as well as funds for the continuation of Institute Merger and Cooperation (INSTFUS).

Classification of balance sheet items

Property determined as for permanent ownership or use is classified as fixed assets. Property connected to commodity flows is classified as liquid assets. Receivables are otherwise classified as current assets if they are to be repaid within one year. For debt, analogue criteria are used as a basis. However, first year payments on long-term receivables and long-term liabilities are not classified as current assets and current liabilities.

Acquisition cost

Asset acquisition costs include the purchase price of the asset, with deductions for bonuses, discounts and similar and with additions for purchase expenses (freight, customs duties, non-refundable government taxes and any other direct purchase expenses). When purchasing in foreign currency, the asset is recognised on the balance sheet at the exchange rate at the time of the transaction.

Intangible assets

Expenses for own R&D activities are expensed on an ongoing basis.

Expenses for other intangible assets are recognised in the balance sheet to the extent that a future economic benefit related to the development of an identifiable intangible asset can be measured reliably. Otherwise, such expenses are expensed on an ongoing basis. The capitalised intangible asset is depreciated on a straight-line basis over its economic life.

Tangible fixed assets

Land is not depreciated. Other fixed assets are recognised on the balance sheet and depreciated on a

straight-line basis to residual value over the expected useful life of the asset. When changing the depreciation plan, the effect is distributed over the remaining depreciation time (the "breakpoint method"). Maintenance of fixed assets is expensed as an ongoing expense under operating expenses. Additional costs and improvements are added to the operating equipment's cost and written off in line with operations. The distinction between maintenance and cost/improvement is calculated in relation to the condition of the fixed asset at the time of acquisition.

Leased fixed assets are recognised on the balance sheet as fixed assets if the lease is deemed financial.

Investment grants

Assets are recognised at gross acquisition cost regardless of the grant and depreciated over the life expectancy (gross recognition). Grants are treated as deferred income recognition and recognised in line with depreciation. The capitalised contribution is recognised as a long-term liability and income recognition is classified as operating income.

Other long-term equity investments

The cost method is used as the principle for investment in other equities, etc. Distributions are initially recognised as financial income when the distribution is adopted. If the distributions significantly exceed the share of retained earnings after the purchase, the excess is recognised as a reduction in the cost price.

Write-down of fixed assets

If there is an indication that the carrying amount of a fixed asset is higher than the fair value, a loss of value test is performed. The test is performed for the lowest level of fixed assets that have independent cash flows. If the carrying amount is higher than both sales value and recoverable amount (present value for continued use/ownership), impairments are made to the sales value or recoverable amount, whichever is highest.

Previous impairments, with the exception of goodwill write-downs are reversed if the conditions for the impairment are no longer present.

Inventories

Goods are valued at the lowest cost between purchase cost (according to the FIFO principle) and the fair value. Fair value is the estimated sales price less the necessary expenses for completion and sale.

Receivables

Accounts receivable are entered on the balance sheet after deduction of provisions for expected losses. Provisions for losses are made on the basis of individual assessment of the receivables and an additional provision that is to cover other foreseeable losses. Significant financial problems with the customer, the likelihood that the customer will go bankrupt or undergo financial restructuring, and deferrals and deficiencies in payments are considered indicators that trade receivables must be written down.

Other receivables, both current and asset receivables, are recognised at the lowest of nominal and fair value. Fair value is the present value of expected future payments. However, no discounting is carried out when the effect of discounting is immaterial to the accounts. Provisions for losses are assessed in the same way as for accounts receivable.

Investments in market-based equity, bond and fixed income funds

The market value principle is used for short-term investments in equity, bond and fixed income funds. The value in the balance sheet corresponds to the market value of the investments at 31/12. Dividends received and realised and unrealised gains/losses, are recognised in the profit and loss statement as financial items.

Other interests in equity, fixed income and bond funds are recognised at market value. The investments are linked to unsecured pension obligations.

Other long-term shares and interests have been recognised according to the cost method.

Foreign currency

Receivables and liabilities in foreign currency are assessed at the exchange rate at the financial year-end. Exchange gains and exchange losses related to sales of goods and purchases of goods in foreign currencies are recognised as financial income and costs.

Forward contracts

The company and the Group use futures contracts on foreign currency to hedge a future exchange rate on existing (recognised) receivables/liabilities (value hedging) or on assumed future payments in foreign currencies (cash flow hedging). In accounting terms,

futures contracts are classified as hedging instruments.

Receivables/liabilities secured by futures contracts are recognised on the balance sheet at the forward exchange rate.

Futures contracts that secure future payments are not recognised.

Liabilities

Liabilities, with the exception of some provisions for liabilities are recognised on the balance sheet at nominal debt amount.

Pensions

The company has different pension schemes. The pension schemes are funded through payments to insurance companies, with the exception of the AFP scheme. The company has both defined contribution schemes and defined benefit schemes.

Defined contribution schemes

In the case of defined contribution schemes, the company makes deposits to an insurance company. The company has no further payment obligation after the deposits have been paid. The deposits are recognised as labour costs. Any prepaid deposits are recognised on the balance sheet as assets (pension funds) to the extent that the deposit can be reimbursed or reduce future payments.

The AFP scheme is an unsecured performance-based multi-enterprise scheme. Such a scheme is actually a defined benefit scheme but for accounting purposes is treated as a defined contribution scheme as a result of the scheme administrator not providing sufficient information for reliable calculation of the liability.

Defined benefit schemes

A defined benefit scheme is a pension scheme that is not a defined contribution scheme. Typically, a defined benefit scheme is a pension scheme that defines a pension payment that an employee will receive upon retirement. Pension payments normally depend on several factors such as age, number of years in the company and salary. The recognised liability relating to defined benefit schemes is the present value of the defined benefits on the balance sheet date minus the fair value of the pension funds (amounts paid to insurance companies), adjusted for non-recognised estimate deviations and non-recognised costs related to previous periods' pension earnings. The pension obligation is calculated annually by an independent actuary in accordance with IAS19, cf. NRS6 Pension Costs. Estimated deviations arising from changes in assumptions are recognised directly in equity after deduction of deferred tax.

TaxTax costs in the profit and loss statement include both the tax due and changes in deferred tax. Deferred tax is calculated based on the provisional differences which exist between accounting and fiscal values, as well as any tax related deficit presented at the end of the fiscal year. Temporary differences due to tax increases and tax reductions that reverse or might be reversed in the same period are offset. Entry of postponed tax benefit on net tax-reducing differences which are not offset and deficit for presentation, is justified by expected future earnings. Deferred tax and tax assets that can be recognised in the balance sheet are recognised net in the balance sheet. Due to uncertainty related to future application, the parent company has not recognised deferred tax assets. Similarly, an independent assessment has been carried out for subsidiaries and second-tier subsidiaries.

Tax reductions on group contributions issued, and tax on group contributions received that are recognised as a reduction in the carrying amount of investment in subsidiaries, are recognised directly against tax in the balance sheet (against tax payable if the group contribution has an effect on tax payable, and against deferred tax if the group contribution has an effect on deferred tax). Deferred tax in both the company accounts and the consolidated financial statements is recognised at a nominal amount.

Cash flow statement

The cash flow position is prepared using the indirect method. Cash and cash equivalents include cash, bank deposits and other short term liquid investments which can, without immaterial exchange risk, be converted to known cash amounts and with a due date less than three months from the creation date.

Note 1 — Intangible Assets

All figures in kNOK

Parent company	Software	Website	Total
Acquisition cost 1.1.	12 702	9 641	22 343
Additions	4 085	923	5 008
Disposals	0	0	0
Acquisition cost 31.12.	16 787	10 564	27 351
Accumulated depreciation 31.12.	9 644	7 823	17 466
Carrying amount 31.12.	**7 143**	**2 742**	**9 885**
The year's depreciation	2 419	783	3 201
Economic life expectancy	5 years	5 years	
Depreciation plan	Linear	Linear	

Group	Software	Website	Patents	Total
Acquisition cost 1.1.	12 702	9 641	617	22 960
Additions	4 085	923	0	5 008
Disposals	0	0	0	0
Acquisition cost 31.12.	16 787	10 564	617	27 969
Accumulated depreciation 31.12.	9 644	7 823	288	17 754
Carrying amount 31.12.	**7 143**	**2 742**	**329**	**10 214**
The year's depreciation	2 419	783	87	3 289
Economic life expectancy	5 years	5 years	10 years	
Depreciation plan	Linear	Linear	Linear	

Note 2 — Tangible fixed assets

Sites, buildings and other real estate

Parent company	Expenditure on rented buildings	Sites, buildings and other real estate	Total
Acquisition cost 1.1.	38 465	11 068	49 532
Additions	4 907	0	4 907
Disposals	0	0	0
Acquisition cost 31.12.	43 372	11 068	54 440
Accumulated depreciation 31.12.	28 968	5 677	34 645
Carrying amount 31.12.	**14 404**	**5 391**	**19 795**
The year's depreciation	1 738	527	2 265
Economic life expectancy	10 years	10-20 years	
Depreciation plan	Linear	Linear	

Annual rental of non-current assets

Operating equipment	Remaining rental period	Annual rent
Miscellaneous lease contracts premises	1-8 years	53 763

All figures in kNOK

Group	Expenditure on rented buildings	Sites, buildings and other real estate	Total
Acquisition cost 1.1.	38 465	11 068	49 532
Additions	4 907	42 489	47 396
Disposals	0	0	0
Acquisition cost 31.12.	43 372	53 556	96 929
Accumulated depreciation 31.12.	28 968	6 298	35 267
Carrying amount 31.12.	**14 404**	**47 258**	**61 662**
Depreciation for the year	1 738	1 149	2 887
Economic life expectancy	10 years	10-20 years	
Depreciation plan	Linear	Linear	

Annual rental of non-current assets

Operating equipment	Remaining rental period	Annual rent
Miscellaneous lease contracts premises	1-11 years	74 928

Movable assets, fixtures and fittings, tools, office machinery and similar

Parent company	Ships, rigs, aircraft etc.	Movable assets, fixtures and fittings, tools, office machinery	Ullrigg	Total
Acquisition cost 1.1.	6 461	356 174	105 770	468 405
Additions	3 795	23 091	0	26 886
Disposals	0	0	0	0
Acquisition cost 31.12.	10 256	379 265	105 770	495 291
Accumulated depreciation 31.12.	617	333 574	83 303	417 495
Carrying amount 31.12.	**9 639**	**45 691**	**22 467**	**77 797**
The year's depreciation	617	17 382	2 000	20 000
Expected economic lifetime	7-20 years	3-10 years	20 years	
Depreciation plan	Linear	Linear	Linear	

Group	Ships, rigs, aircraft etc.	Movable assets, fixtures and fittings, tools, office machinery	Ullrigg	Total
Acquisition cost 1.1.	6 938	401 635	105 770	514 343
Additions	3 795	24 241	0	28 036
Disposals	0	0	0	0
Acquisition cost 31.12.	10 733	425 876	105 770	542 379
Accumulated depreciation 31.12.	942	372 660	83 303	456 905
Accumulated impairment 31.12.	0	1 104	0	1 104
Carrying amount 31.12.	**9 791**	**52 112**	**22 467**	**84 369**
The year's depreciation	665	18 835	2 000	21 500
Expected economic lifetime	7-20 years	3-10 years	20 years	
Depreciation plan	Linear	Linear	Linear	

Note 3 — Subsidiaries, affiliated companies and joint ventures

All figures in kNOK

Parent company
Investments in subsidiaries are recognised according to the cost method

Subsidiaries	Business office	Owner/voting share	Equity last year (100%)	Profit last year (100%)	Balance sheet value 2022	Balance sheet value 2021
NORCE Innovation AS	Stavanger	100%	99 098	-11 744	128 435	128 435
NORCE Risavika Eiendom AS	Bergen	100%	31 771	-1 444	42 554	-
Odontologiske materialer AS (NIOM)	Oslo	51%	15 940	-2 881	51	51
Nasjonalt Utviklingssenter for Barn og Unge AS (NUBU)	Oslo	100%	12 836	-2 591	100	100
Vold og Traumatisk Stress AS (NKTVS)	Oslo	100%	9 681	-976	100	100
Carrying amount 31.12.					**171 240**	**128 686**

NORCE (parent company) has acquired 100% of the shares in NORCE Risavika Eiendom AS as at 1.7.2022 from SIVA.
NORCE Risavika Eiendom AS lease buildings/facilities in Risavika (Sola Municipality) to NORCE.

Second-tier subsidiary	Parent company	Business office	Owner/voting share	Equity last year (100%)	Profit last year (100%)
Indikel AS	NORCE Innovation AS	Bergen	100%	-134	-630
Offshore Sensing AS	NORCE Innovation AS	Bergen	89%	9 512	1 376
Xilentech AS	NORCE Innovation AS	Haugesund	100%	3	-6
Biosentrum AS	NORCE Innovation AS	Stavanger	100%	-2 223	-141
Hole In One Producer AS	NORCE Innovation AS	Stavanger	100%	3 323	-112
Traction Tool AS	NORCE Innovation AS	Stavanger	Wound up	0	-60
Digital Innovation Hub Oceanopolis AS	NORCE Innovation AS	Kristiansand	100%	-141	-811
Co2Bio AS	NORCE Innovation AS	Stavanger	100%	30	0

Co2Bio AS was founded on 9.12.2022 with share capital of NOK 30 000.
Traction Tool AS was wound up/deleted on 4.10.2022.

Group
Investments in affiliated companies and joint ventures are recognised using the equity method.

Affiliated company	Owner company	Business office	Shareholding/voting rights
Gas 2 Feed AS	NORCE Innovation AS	Stavanger	36%
Xsens AS	NORCE Innovation AS	Bergen	48%

Calculation of profit share for the year	Gas 2 Feed AS	Xsens AS	2022	2021
Change in affiliated companies 2021 after consolidated financial staten	0	583	583	-
Share of profit for the year	-1 308	-6 737	-8 044	-6 725
Profit share for the year	**-1 307**	**-6 154**	**-7 461**	**-6 725**

Calculation of Carrying amount 31.12.	Gas 2 Feed AS	Xsens AS	2022	2021
Carrying amount 1.1.	2 210	24 205	26 415	18 213
Additions/disposals in the period	2 129	0	2 129	14 927
Profit share for the year	-1 307	-6 154	-7 461	-6 725
Carrying amount 31.12.	**3 032**	**18 051**	**21 082**	**26 415**

Note 4 — Receivables and liabilities

All figures in kNOK

Parent company 2021	2022		Group 2022	2021
		Accounts receivable		
139 094	148 122	Accounts receivable at nominal value	150 874	138 086
-1 790	-2 032	Provision for loss on accounts receivable	-2 061	-1 819
137 304	**146 090**	**Accounts receivable on the balance she**	**148 813**	**136 268**

2021	2022	**Receivables due in more than one year**	2022	2021
4 357	4 357	Equity grant KLP	4 357	4 357
167	0	Subordinated loan capital	0	167
0	33	Other receivables	33	0
4 524	**4 390**	**Total**	**4 390**	**4 524**

2021	2022	**Loans to companies in the same group**	2022	2021
0	0	Loans to subsidiaries	0	0
0	**0**	**Total**	**0**	**0**

2021	2022	**Non-current liabilities due in more than 5**	2022	2021
0	0	Liabilities to financial institutions	0	0
0	**0**	**Total**	**0**	**0**

Parent company 2021	2022		Group 2022	2021
0	**0**	**Debt secured by collateral**	**0**	**0**
		Carrying amount of pledged assets		
0	0	Tangible fixed assets	0	0
0	0	Accounts receivable	0	0
0	**0**	**Total**	**0**	**0**
		The assets are also provided as collateral for		
0	0	Unused drawing rights	0	0
0	**0**	**Total**	**0**	**0**

Note 5 — Other long-term shares and interests

Parent company	2022	2021
Other shares	3	3
Other long-term units in equity, fixed income and bond funds	2 283	2 450
Carrying amount 31.12.	**2 286**	**2 452**

Other interests in equity, fixed income and bond funds are recognised at market value. The investments are linked to unsecured pension obligations. Other long-term shares and interests have been recognised according to the cost method.

Group	Ownership share	Carrying amount 2022	2021
Risavika Biopark AS	10%	152	214
Stavanger Helseforskning AS	45%	1 104	1 104
TuniChor AS	27%	19	38
Sekal AS	2%	3 859	3 859
Mechatronics Innovation Lab AS	14%	136	136
JSC Petroleum Technologies Ltd	10%	0	0
Nordic Edge AS	1%	89	34
Co2Bio AS	Discontinued	0	231
GreenStat ASA	1%	530	530
Marineholmen Raslab AS	12%	303	694
Sustainable Energy AS	15%	250	250
Valide AS	9%	4 338	4 338
Other shares		1 048	1 048
Other long-term units in equity, fixed income and bond funds		2 283	2 450
Carrying amount 31.12.		**14 111**	**14 925**

Other interests in equity, fixed income and bond funds are recognised at market value. The investments are linked to unsecured pension obligations. Other long-term shares and interests have been recognised according to the cost method.

Shares in affiliated companies, of between 20% and 50%, above are not processed according to the equity method in the consolida financial statements on the basis that the balance sheet and profit in the companies are immaterial to assessment of the Group's fin

Write-downs/reversed write-downs of other shares and units for 2022 amounted to NOK 0.4 million.

Note 6 — Intra-group balances, etc.

All figures in kNOK

Parent company

	Accounts receivable		Other current receivables		Loans to companies in the	
	2022	2021	2022	2021	2022	2021
Companies in the same group, etc.	4 100	4 448	0	0	0	0
Total	**4 100**	**4 448**	**0**	**0**	**0**	**0**

	Accounts payable		Other current liabilities		Other non-current liabilities	
	2022	2021	2022	2021	2022	2021
Companies in the same group, etc.	249	750	0	0	0	0
Total	**249**	**750**	**0**	**0**	**0**	**0**

Note 7 — Share of market-based equity, bond and fixed income funds

Parent company	Parent company Market value as at 31.12.		Group Market value as at 31.12.	
	2022	2021	2022	2021
Equity funds	210 502	0	215 598	5 521
Bond funds	44 800	0	61 916	17 493
Money market funds	157 602	345 141	157 602	345 286
Fixed income funds	0	0	17 184	20 476
Total share of market-based equity, bond and fixed income funds	**412 904**	**345 141**	**452 300**	**388 776**

Note 8 — Restricted bank deposits, drawing rights

All figures in kNOK

Parent company 2021	Parent company 2022	Restricted bank deposits 31.12.	Group 2022	Group 2021
22 010	25 291	Withholding tax funds	30 883	27 534
		Drawing rights 31.12.		
0	0	Drawing rights	0	0
0	0	Unused drawing rights	0	0

Note 9 — Equity

Parent company

Annual change in equity	Share capital	Share premium	Other equity	Total
Equity 1.1.	2 160	349 214	202 089	553 463
Pension obligation - deviation estimate for the year			2 563	2 563
Profit/loss for the year			70 473	70 473
Equity 31.12.	**2 160**	**349 214**	**275 124**	**626 498**

In an extraordinary general meeting held on 21.1.2022, it was resolved that an additional dividend would be awarded from the subsidia
The dividend was recognised in the parent company in 2022.

Group

Annual change in equity	Share capital	Share premium	Other equity	Minority interest	Total
Equity 1.1.	**2 160**	**349 214**	**152 786**	**10 101**	**514 261**
Pension obligation - deviation estimate for the year			15 305		**15 305**
Other changes			214	19	**233**
Profit/loss for the year			-5 702	-1 263	**-6 965**
Equity 31.12.	**2 160**	**349 214**	**162 603**	**8 857**	**522 834**

Note 10 — Share capital and shareholder information

"The share capital of NOK 2 160 000 consists of 1 080 shares with a face value of NOK 2 000."

Overview of the shareholders as at 31.12.	Quantity	Ownership share
Universitetet i Bergen	560	51,9 %
Stavanger Research Holding AS	340	31,5 %
Agder Research Holding AS	100	9,3 %
Universitetet i Tromsø – Norges arktiske universitet	35	3,2 %
Equinor Ventures AS	13	1,2 %
Sparebanken Vest	13	1,2 %
SIVA – Selskapet for industrivekst SF	12	1,1 %
Troms og Finnmark fylkeskommune	3	0,3 %
Nordland fylkeskommune	2	0,2 %
Troms Kraft AS	2	0,2 %
Total number of shares	**1 080**	**100%**

Note 11 — Pensions

All figures in kNOK

The company has a defined contribution scheme for all employees of the parent company and subsidiaries in Norway. Defined contribution schemes, including employer's contribution, are expensed on an ongoing basis.

The parent company has a collective closed defined benefit scheme from earlier, pursuant to the Defined Benefit Pensions Act. The liabilities related to the collective scheme are covered through an insurance company. The subsidiaries NUBU and NKVTS have public defined benefit pension schemes in the Norwegian Public Service Pension Fund. The subsidiary NIOM has a defined benefit pension scheme in the Norwegian Public Service Pension Fund, which for accounting purposes is treated as a defined contribution scheme. A small number of employees of the parent company and one of the subsidiaries have an additional pension scheme that is financed

The parent company also has a contractual early retirement plan (AFP). This is regarded as a defined benefit multi-enterprise scheme but is recognised as a defined contribution scheme until reliable and sufficient information is available so that the Group can account for its proportional share of the pension costs, pension liabilities and pension funds in the scheme. The company's liabilities are thus not recognised in the balance sheet as debt.

The company's and the Group's pension schemes satisfy the requirements of the Act relating to Mandatory Occupational Pensions.

People in the schemes	**Parent company**		**Group**	
	Active/ Set up	**Pensioners**	**Active/Set up**	**Pensioners**
Defined contribution scheme	787	0	796	0
Additional pension scheme	16	0	17	0
Defined benefit scheme	226	91	478	121

Income statement	**Parent company**		**Group**	
	2022	**2021**	**2022**	**2021**
Present value of the year's pension savings	0	0	11 664	10 207
Interest costs for the pension liabilities	5 833	4 965	11 681	9 336
Return on pension funds	-5 556	-4 515	-9 052	-7 436
Management and administration costs	420	401	687	669
Other pension costs	-100	-101	2 741	1 847
Pension contributions from employees	0	0	-2 201	-1 762
Net pension cost defined benefit scheme	**598**	**749**	**15 521**	**12 861**
Costs of AFP scheme	8 877	7 831	8 877	7 831
Costs of defined contribution scheme	43 102	36 830	43 835	37 520
Costs of additional pension schemes	0	0	0	0
Total net pension cost	**52 576**	**45 410**	**68 233**	**58 212**

Balance	**Parent company**		**Group**	
	2022	**2021**	**2022**	**2021**
Calculated gross pension liability 31.12.	297 680	310 490	609 116	621 115
Pension funds (at market value) 31.12.	-288 476	-292 511	-481 287	-471 286
Employer contributions	1 177	2 404	17 903	20 994
Net pension liability/funds	**10 381**	**20 383**	**145 732**	**170 823**

Financial basis	**2022**	**2021**
Discount rate	3,00%	1,90%
Expected pay adjustment	3,50%	2,75%
Expected pension increase (discontinued private YTP scheme)	Paid-up policy	Paid-up policy
Expected pension increase (discontinued public YTP scheme)	2,60%	1,75%
Expected G adjustment	3,25%	2,50%
Expected return on fund assets	3,00%	1,90%
Life expectancy tariff/mortality scale	KB2013BE	K2013BE

Commonly used assumptions within the insurance sector are used as a basis for actuary preconditions for demographic factors and

Pension obligation NKVTS AS and NUBU AS

The Group companies, NKVTS AS and NUBU AS have net uncovered pension liabilities of NOK 78.4 million and NOK 57.0 million respectively, totalling NOK 135.4 million. NKVTS has put in place a government allocation structure where a capital base can be built up over time to balance the unsecured liabilities. A similar solution is being worked on for NUBU. Corrected for the unfunded pension liabilities, group equity would increase from a book value of NOK 532 million (36%) to an adjusted value of NOK 658 million (45%).

Note 12 — Tax

All figures in kNOK

Parent company

Calculation of deferred tax/deferred tax assets

Temporary differences	2022	2021	Change
Operating assets	-23 435	-21 272	2 163
Outstanding receivables	-2 032	-1 790	242
Gains and loss account	72	90	18
Other provisions for obligations	-4 925	-2 034	2 891
Net pension liability recognised in the balance sheet	-10 381	-20 383	-10 001
Net temporary differences	-40 701	-45 388	-4 687
Loss to be carried forward	-162 385	-164 618	-2 234
Basis for deferred tax assets	**-203 086**	**-210 006**	**-6 921**
Deferred tax assets (22%)	-44 679	-46 201	-1 523
Of which tax benefit not entered on the balance	44 679	46 201	1 523
Deferred tax assets in the balance sheet	**0**	**0**	**0**

The company has chosen not to enter deferred tax benefit on the balance

Net temporary differences	-40 701	-45 388	-4 687
Change in tax return after publication of accounts for 2021		-3 985	-3 985
Change in temporary differences (included in basis for tax payable)	**-40 701**	**-49 373**	**-8 672**

Basis for tax expense, change in deferred tax and tax payable

Basis for payable tax	2022	2021
Profit before tax	70 473	130 292
Permanent differences	-56 053	-118 632
Basis for tax on profit for the year	14 419	11 660
Change in temporary differences	-8 672	-18 006
Utilisation of loss carry-forward	-5 748	0
Basis for tax payable in the profit/loss accounts	**0**	**-6 346**
+/- Received/submitted group contribution	0	0
Taxable income (basis for payable tax in the balance sheet)	**0**	**-6 346**

Distribution of the tax cost	2022	2021
Tax payable	0	0
Too much, too little allocated last year	0	0
Total tax payable	0	0
Change in deferred tax/tax assets	0	0
Tax expense	**0**	**0**

Payable tax in the balance sheet	2022	2021
Tax payable	0	0

Group

Distribution of the tax cost	2022	2021
Tax expense	548	174
Of which is tax payable outside Norway	0	0

Deferred tax assets in the balance sheet		
Deferred tax asset	0	0

Deferred tax assets in the balance sheet		
Deferred tax	1 306	0

Tax payable in the balance sheet		
Tax payable	552	174

Deficit for carrying forward as at 31.12.	**225 364**	**218 007**

Note 13 — Other provisions for obligations

All figures in kNOK

Parent company 2021	Parent company 2022		Group 2022	Group 2021
58 263	**58 263**	**Original infrastructure allocation**	**58 263**	58 263
-31 166	-33 613	Recognised in previous years	-33 613	-31 166
27 097	**24 650**	**Infrastructure support as at 1.1.**	**24 650**	**27 097**
-2 446	-2 111	Income recognition/depreciation for the yea	-2 111	-2 446
24 650	**22 539**	**Infrastructure support as at 31.12.**	**22 539**	**24 650**
0	0	Other provisions for liabilities	0	0
24 650	**22 539**	**Other provisions for obligations**	**22 539**	**24 650**

Infrastructure support as at 31.12 applies to accrued income relating to infrastructure grants from the Research Council for a total of kNOK 58 263 related to upgrading equipment and facilities.

Infrastructure support will be reduced annually corresponding to depreciation of equipment/construction investment. The recognised portion of infrastructure support is listed under sales revenues, project revenues.

Note 14 — Operating income

Parent company 2021	Parent company 2022		Group 2022	Group 2021
776 635	851 531	Sales revenue, project revenue	939 490	864 161
184 146	219 069	Base grants, framework grants, etc.	363 959	326 470
14 825	11 884	Other operating income	9 820	220 368
975 607	**1 082 484**	**Sum**	**1 313 269**	**1 410 999**

			Group	
2021	**2022**	**Distribution by business areas**	**2022**	**2021**
438 713	448 899	Technology	456 026	654 889
239 708	265 262	Health and Society	491 286	455 296
281 729	354 561	Climate and environment	355 095	283 198
15 457	13 763	Other	10 862	17 617
975 607	**1 082 484**	**Total**	**1 313 269**	**1 410 999**

2021	2022	Geographical distribution	2022	2021
891 945	933 875	Norway	1 144 427	1 307 593
75 357	144 221	Europe	163 758	94 616
824	498	United States and Canada	650	824
3 898	3 080	South America	3 239	3 898
0	228	Africa	228	-
3 180	583	Asia	837	3 666
402	0	Australia	130	402
975 607	**1 082 484**	**Total**	**1 313 269**	**1 410 999**
91%	*86%*	*% Norway*	*87%*	*93%*

Note 15 — Transactions with related parties

All figures in kNOK

Benefits for senior executives are discussed in Note 16 and intra-group balances are discussed in Note 6.

Morselskapets transaksjoner med nærstående parter (selskaper/organisasjoner med direkte eller indirekte eierinteresser og

a) Sale of goods and services	Type	2022	2021
Universitetet i Bergen	Project revenue	32 458	23 890
Universitetet i Stavanger	Project revenue	10 508	19 313
Universitetet i Agder	Project revenue	3 370	4 733
Universitetet i Tromsø - Norges arktiske universitet	Project revenue	5 128	5 604
Stiftelsen Rogalandsforskning	Project revenue	169	0
Xsens AS	Project revenue	662	1 000
Gas 2 Feed AS	Project revenue	50	0
Universitetet i Bergen	Other operating income	0	259
Universitetet i Stavanger	Other operating income	241	414
Universitetet i Agder	Other operating income	0	24
Stiftelsen Rogalandsforskning	Other operating income	12	0
TOTAL		**52 596**	**55 237**

b) Purchase of goods and services	Type	2022	2021
Universitetet i Bergen	Project revenue	12 150	17 439
Universitetet i Stavanger	Project revenue	13 011	8 124
Universitetet i Agder	Project revenue	939	31
Universitetet i Tromsø - Norges arktiske universitet	Project revenue	657	1 076
Gas 2 Feed AS	Project revenue	73	167
Universitetet i Bergen	Other operating income	10 406	11 270
Universitetet i Stavanger	Other operating income	210	10
Universitetet i Agder	Other operating income	2 305	2 153
Universitetet i Tromsø - Norges arktiske universitet	Other operating income	0	1
Stiftelsen Rogalandsforskning	Other operating income	9 227	8 970
Gas 2 Feed AS	Other operating income	36	7
TOTAL		**49 014**	**49 246**

c) Accounts receivable 31.12.	2022	2021
Universitetet i Bergen	14 009	5 021
Universitetet i Stavanger	2 771	2 415
Universitetet i Agder	2 311	2 408
Universitetet i Tromsø - Norges arktiske universitet	845	0
Stiftelsen Rogalandsforskning	76	0
Xsens AS	400	631
Gas 2 Feed AS	63	0
TOTAL	**20 474**	**10 475**

d) Accounts payable 31.12.	2022	2021
Universitetet i Bergen	8 351	8 416
Universitetet i Stavanger	6 950	932
Universitetet i Agder	626	31
Universitetet i Tromsø - Norges arktiske universitet	34	214
Stiftelsen Rogalandsforskning	0	33
Gas 2 Feed AS	0	9
TOTAL	**15 962**	**9 635**

Note 16 — Payroll costs, number of employees, allowances, loans to employees, etc.

Parent company 2021	Parent company 2022	Salaries and payroll costs	Group 2022	Group 2021
475 217	518 377	Salaries	638 071	588 658
73 060	78 997	Employer's National Insurance contribution	98 004	90 742
45 410	52 576	Pension costs	68 233	58 212
8 218	10 235	Other benefits	15 575	12 833
601 905	**660 185**	**Total**	**819 882**	**750 445**
745	787	Antall ansatte pr. 31.12.	943	895

Benefits for senior staff	Group Head (1) 1.1-30.9.	Group Head (1) 1.10-31.12.	The Board
Salary	2 303	554	1 078
Pension	107	36	-
Other allowances	16	9	-

(1) With effect from 2022, the Group has replaced the title CEO with the title Group Head.

The Group Head is subject to an ordinary notice period of 3 months.
The Group Head is covered by the company's current collective pension scheme for salary up to 12G.
Neither the Chair of the Board nor the Group Head has a bonus agreement.
No loans/guarantees have been given to the Group Head, the Chair of the Board or other related parties.
The Group Head's salary for 1.1.-30.9. includes part of the agreed pay compensation at the time of the leaving.

Expensed remuneration to the auditor

Parent company	KPMG
Statutory audit (incl. technical assistance with annual accounts)	1 460
Other certification services	530
Other assistance	500
Total	**2 490**

Group	KPMG
Statutory audit (incl. technical assistance with annual accounts)	2 199
Other certification services	530
Other assistance	899
Total	**3 628**

All amounts are exclusive of VAT.

Note 17 — Events after the balance sheet date

Establishment of NORCE TTO
In spring 2023, employees of NORCE Innovation AS (five people) were transferred to the group NORCE TTO, Division for Commercialisation in NORCE.
This is in part designed to achieve closer cooperation with the research divisions in NORCE. NORCE Innovation AS is thus now simply a pure holding company.

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To the General Meeting of NORCE Norwegian Research Centre AS

Independent Auditor's Report

Opinion

We have audited the financial statements of NORCE Norwegian Research Centre AS, which comprise:

- The financial statements of the parent company NORCE Norwegian Research Centre AS (the Company), which comprise the balance sheet as at 31 December 2022, the income statement and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and
- The consolidated financial statements of NORCE Norwegian Research Centre AS and its subsidiaries (the Group), which comprise the balance sheet as at 31 December 2022, the income statement and cash flow statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion:

- the financial statements comply with applicable statutory requirements,
- the financial statements give a true and fair view of the financial position of the Company as at 31 December 2022, and its financial performance and its cash flows for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and
- the financial statements give a true and fair view of the financial position of the Group as at 31 December 2022, and its financial performance and its cash flows for the year then ended in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company and the Group as required by laws and regulations and the International Ethics Standards Board for Accountants' International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code), and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

The Board of Directors and the Managing Director (management) are responsible for the information in the Board of Directors' report. The other information comprises information in the annual report, but does not include the financial statements and our auditor's report thereon. Our opinion on the financial statements does not cover the information in the Board of Directors' report.

In connection with our audit of the financial statements, our responsibility is to read the Board of Directors' report. The purpose is to consider if there is material inconsistency between the Board of Directors' report and the financial statements or our knowledge obtained in the audit, or whether the Board of Directors' report otherwise appears to be materially misstated. We are required to report if there is a material misstatement in the Board of Directors' report. We have nothing to report in this regard.

Based on our knowledge obtained in the audit, it is our opinion that the Board of Directors' report

- is consistent with the financial statements and
- contains the information required by applicable legal requirements.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with the Norwegian Accounting Act and accounting standards and practices generally accepted in Norway, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's and the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern. The financial statements use the going concern basis of accounting insofar as it is not likely that the enterprise will cease operations.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error. We design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's or the Group's internal control.
- evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- conclude on the appropriateness of management's use of the going concern basis of accounting, and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company and the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company and the Group to cease to continue as a going concern.
- evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves a true and fair view.
- obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial

statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Bergen, 2 June 2023
KPMG AS

Ståle Christensen
State Authorised Public Accountant

Note: This translation from Norwegian has been prepared for information purposes only.

Thanks for reading

Annual and sustainability report | 2022

NORCE

DESIGN **HALTENBANKEN**