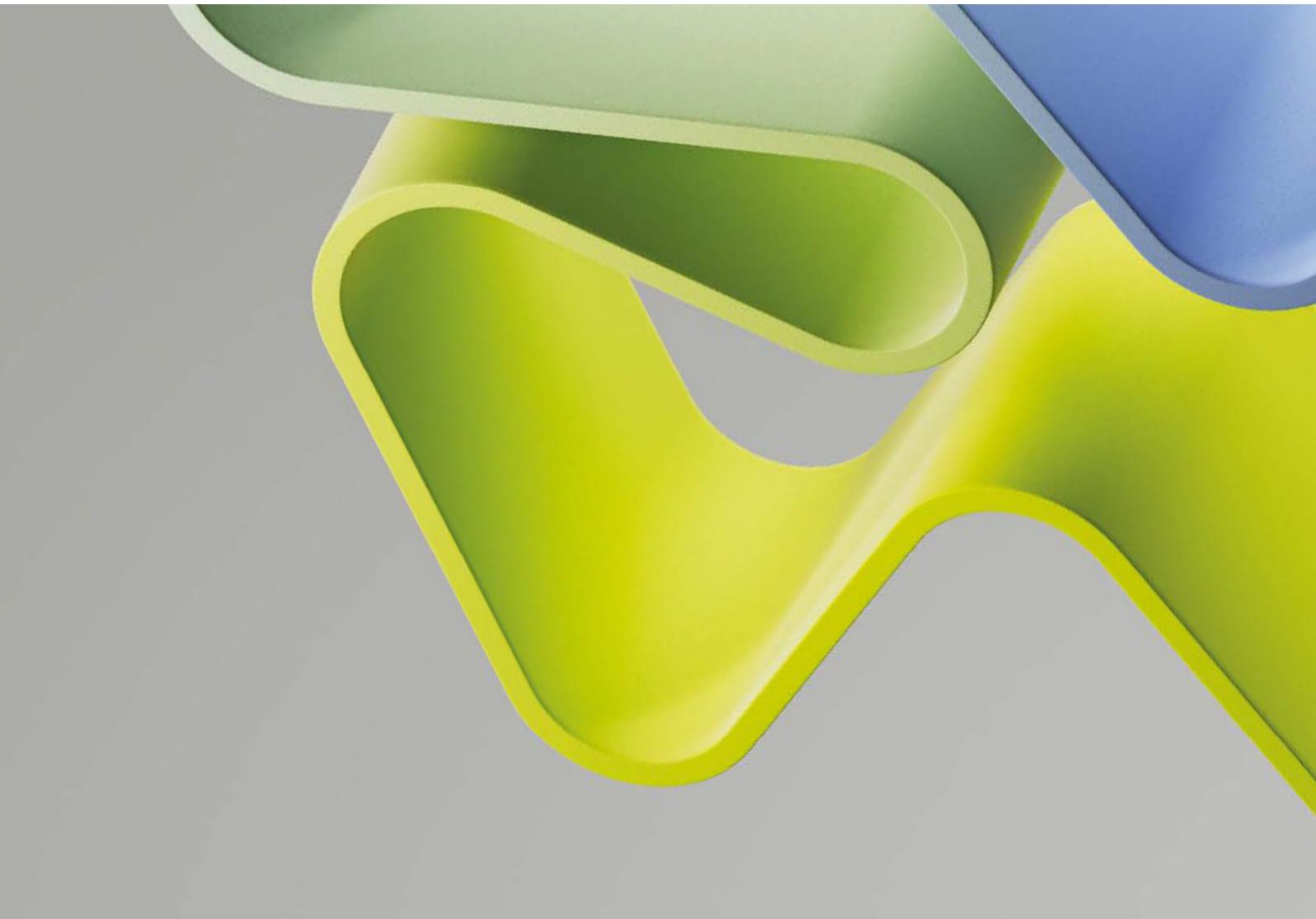


Evaluation of Natural Sciences 2022-2024

Evaluation report

Nansen Environmental and Remote Sensing Centre

January 2024



Contents

Preface	3
Description of the administrative unit	4
Overall assessment	5
Recommendations	6
1. Strategy, resources and organisation of research	7
1.1 Research Strategy	8
1.2 Organisation of research	9
1.3 Research funding	9
1.4 Use of infrastructures	10
1.5 National and international collaboration	10
1.6 Research staff	10
2. Research production, quality and integrity	11
2.1 Research quality and integrity	11
2.2 Open Science	12
3. Diversity and equality	13
4. Relevance to institutional and sectorial purposes	13
5. Relevance to society	14
Appendices (link to website)	15

Statement from Evaluation Committee – Institute II

The members of this Evaluation Committee have evaluated the following administrative units at the research institutes within natural sciences in 2022-2023 and submitted a report for each administrative units:

- CICERO Centre for Climate Research
- Norwegian Meteorological Institute – Weather and Climate (MET)
- Norwegian Institute for Sustainability Research (NORSUS)
- Norwegian Research Centre (NORCE) – Climate and Environment
- Norwegian Institute for Air Research (NILU) – Environmental Chemistry Department
- Norwegian Institute for Air Research (NILU) – Atmospheric and Climate Research Department
- Norwegian Water Resources and Energy Directorate (NVE)
- Nansen Environmental and Remote Sensing Centre (NERSC)

The members of the Evaluation Committee are in collective agreement with the assessments, conclusions and recommendations presented in this report. None of the committee members has declared any conflict of interest.

The Evaluation Committee has consisted of the following members:

Professor **Mat Collins**, (Chair)

University of Exeter, United Kingdom

Professor **Dorthe Dahl-Jensen**,
Niels Bohr Institute, Denmark

Professor **Hayley Fowler**,
Newcastle University, United Kingdom

Professor **Martin Siegert**,
Imperial College London, United Kingdom

Professor **Thomas Jung**,
Alfred Wegener Institut, Germany

Description of the administrative unit

NERSC is a non-profit research foundation governed by a board. An international scientific council meets once a year and advises on the foundation's professional activities. Day-to-day management is exercised by the director and the centre's leader group consisting of the director and the heads of administration, economy, and coordination. NERSC has 67 employees, 11 of which are Researcher I, 38 of which are Researcher II and III, three are PhD Scholars, two are post-Docs, three are scientific programmers and ten are described as being in admin, finance, IT, and communication.

NERSC is organised in seven research groups. For EVALNAT these are combined to (1) Sea Ice and Remote Sensing, (2) Climate modelling and observation systems and (3) Operational Oceanography.

In their self-assessment form, NERSC states that their broadest goal is to pioneer environmental and climate research, with the overall ambition to be a leading European research centre in understanding and forecasting changes in the marine environment and climate of the North Atlantic and the Arctic. To this end, NERSC has four strategic focus areas: (1) Societal research needs, (2) research and partnerships, (3) digital and technological development and (4) organisational development. NERSC state in their self-assessment and their *strategy document 2023-2028* that they are seeking to further develop visibility, relationships and influence with key stakeholders who call for research. NERSC has extensive international research collaboration with the five International Nansen Centres, through representing the Norwegian ownership in Mercator Ocean International (Moi) and other strategic institutional cooperation in Norway and abroad.

In their self-assessment form, NERSC state their main strengths are in basic science – the fundamental understanding of nature and the processes transforming it. The results of their work are used in various assessments such as those by the IPCC, WMO, and the EU Copernicus Programme, including Copernicus marine forecasting service for the Arctic. In this way, they state that their work has contributed to the knowledge pool that has led to the Paris agreement and to international and national climate plans and marine services. NERSC is one of four partner institutions in the Bjerknes Centre for Climate Research and have institutional agreements in operational oceanography with MET Norway, Institute of Marine Research and Norwegian Polar institute. NERSC is a partner in two Centres of Research-based innovation, Smart Ocean, and Climate Futures. Both centres have many partners from public and private sectors, and a strong focus on innovations and partnerships. NERSC contributes to academic education, supervision, and research schools. Through these collaborative partnerships and data-sharing procedures, NERSC state that they are contributing to several Norwegian ministries' sector-specific objectives and tasks, where the most important are the Ministry of Climate and Environment, the Ministry of Education and Research, the Ministry of Trade, Industry and Fisheries, and the Ministry of Foreign Affairs.

In their self-assessment form, NERSC states several strengths that better position them for the future. These include: (1) Strong and competitive expertise and experience in understanding and forecasting changes in the marine environment and climate of the northern Atlantic and Arctic, (2) networks and strategic partnerships in climate research and modelling, both nationally and internationally and (3) Small and flexible organisation with little bureaucratic overload that enable short and rapid decisionmaking procedures. However, in their self-assessment NERSC state that uncertainties in research project funding and relatively low amounts of basic funding have implications for long-term research strategies and personnel planning both at centre and research group levels, which could impact NERSC's position in the future.

Overall assessment

NERSC's activities in general meets its strategic goals. The unit is producing excellent scientific research and moreover is providing very valuable scientific output to support the wider international scientific community. In terms of its size, NERSC excels in its contribution and should be commended.

The groups contain a strong mix of researchers across different stages of their careers. This is reflected in the innovation and international collaboration. The publication record is good with the major contribution within the field of geosciences. The performance varies with one group being impressive and the two others less so.

A weakness is the gender balance with few female researchers. While the NERSC researchers supervise PhD or Postdoc students, especially at the University of Bergen, it would be recommended to have more PhD and Postdoc students situated directly within NERSC.

The collaboration with the five international Nansen centres situated in Russia, China, India, South Africa, and Bangladesh is not aligned with the focus of NERSC being research within the North Atlantic and the Arctic. While there are joint publications, the management involvement is weak.

A strength of the unit is specialising in data assimilation, with a strong funding and publication record. They make an important contribution to Norwegian and European society, especially through the European Copernicus services, including the lead contribution to the Copernicus Marine Service.

A concern of the committee is the potentially fragile nature of Norway's climate modelling, as highlighted by the group in their self-assessment. Consistent support is important for continued excellence in this area.

A strong impact case is on the air pollution in Bergen, For the sea ice and remote sensing group there is little reflection on the different types of knowledge transfer. No connections to stakeholders or the public are mentioned.

Recommendations

1. The evaluation committee recommends that further progress is made on EDI, especially regarding the gender balance of research staff. NERSC should continue to nurture young talents and build a diverse team and, if possible, increase the number of PhD students and postdocs at NERSC.
2. With a research staff of 49, we recommend NERSC to consider if they are spread too thin over seven research areas which may dilute their ability to achieve the necessary depth of research.
3. The main risk to the unit is a lack of core funding for long-term development of models, observing systems and data systems. NERSC should be engaging in ways/strategies to attract a portion of core funding to support the long-term development of their work. A plan to ensure attracting long-term support on the modelling activities and assimilation is recommended.
4. In addition, a medium to long term strategy should be developed for financial and computational resources, to ensure continuity in such an important part of the climate/society infrastructure. It must be clarified where there are overlaps with Met Norway and UiB and how a joint strategy here is developed.
5. From the group evaluations: it is recommended that the outdated Micom as the OGCM component should be updated or exchanged with a newer component. As the model is not

in general use, the burden of development and testing lies entirely within Norway. More generally, a coherent and efficient strategy should be developed to consider the ocean model component within the NorESM project, though this recommendation is not specific to this unit.

6. The role and benefit of the international Nansen centres is not clear, and the strategy should be extended to how these collaborations should be maximised or stopped.
7. The evaluation committee recommends the unit revisit their vision and mission statements as the vision statement does not reflect what NERSC is working towards but more what they are doing.
8. It is recommended for the unit to display more transparency on how the NERSC board is constituted and what decisions it is commissioned to take as this is currently unclear.

The table below presents the specific aspects of the evaluation the administrative Unit requested the evaluation explore and indicated where these are addressed in more detail in the subsequent report.

Specific Request from the Unit's Terms of Reference	Where it is addressed in the report
Combination of Earth system science, innovations, and service development (e.g. the European Copernicus program and in Norway through e.g. services, centres of excellence, in innovation and use of research results)	Addressed in Sections 1.4 and 1.5
Geographical research focus on high latitudes and the Arctic	Addressed in Section 1
Academic contributions to marine research, cryosphere and atmospheric research through development, use and distribution of observations, numerical ocean and climate modelling and data assimilation.	Addressed throughout the evaluation
Strategic national and international partnerships and collaboration	Addressed in Sections 1.4 and 1,5
Contributions to research training and education through student supervision and training courses, as well as PhD and Postdoc recruitments	Addressed in Section 1.6

1. Strategy, resources, and organisation of research

NERSC's vision is to pioneer environmental and climate research, with the overall ambition to be a leading European research centre in understanding and forecasting changes in the marine environment and climate of the North Atlantic and the Arctic. The research and innovation activities are taking place in the centre's seven research groups. In addition, there are five international centres in Russia, China, India, South Africa, and Bangladesh related to NERC. Internationally, NERSC has a central role in the development, implementation, and operations of the European Copernicus services. 90% of the funding is external and 60-70% are from national sources.

NERSC provides an excellent environment to develop researchers and situate them in a good position to produce high-quality research.

NERSC activities meet its strategic goals. The group is producing excellent scientific research and moreover is providing very valuable scientific output to support the wider international scientific community. In terms of its size, excels in its contribution and should be commended. The research group for Sea Ice and Remote Sensing is more focussed on services than other international research groups. Compared to other international research groups, the development of its own sea ice model is a remarkable achievement.

In terms of future goals, no road map is described to detail how the unit will achieve these goals, nor how they will evaluate their performance. The evaluation committee agrees with the SWOT analysis that being a small institute makes NERSC sensitive to changing strategies nationally and internationally. The evaluation committee also agree that a strength to improve upon, is that NERSC would benefit from strengthening cross-group collaboration within the centre.

1.1 Research Strategy

NERSC states that their overarching goal is to pioneer environmental and climate research, with the overall ambition to be a leading European research centre in understanding and forecasting changes in the marine environment and climate of the North Atlantic and the Arctic.

Within the focus area 'Societal Research Needs' the vision is to expand the communication with key stakeholders and gain more influence in research forums and networks. An overall goal is to contribute to the green transition and a sustainable blue economy in selected industries.

Within the focus area 'Research and Partnerships' the vision is to continue to improve earth system observations and models, to develop strategic partnerships with complementary expertise in research and services and to strengthen research collaboration with the International Nansen Centres.

Within the focus area 'Digital and Technology Infrastructure', the vision is to strengthen capabilities with Big Data technologies, contribute to development of digital twins, develop, and use innovative sea ice and ocean observing systems and technologies and advance the development of interoperable data management systems.

Within the focus area 'Organisational development' the vision is to develop a «stronger together» culture, develop organisational structure and capacity to succeed with the strategic ambition, systematic competence and employee development and continuous attention to compliance and quality in all sustainability areas.

The research groups at NERSC contribute towards the focus areas. The research groups are very different and include modelling groups, observational groups and data and assimilation groups within the fields of climate, ocean and sea ice research. They do improve earth system observations and models. Examples here are the very strong involvement in the European Copernicus services, including the lead contribution to the Copernicus Marine Service and the development of the sea- ice model, nextSIM.

NERSC has strong partnerships though the involvement in international programs and the international Nansen centers. The character of the partnerships are not always aligned with the strategy to be a leading European research centre in understanding and forecasting changes in the marine environment and climate of the North Atlantic and the Arctic.

A weakness is the low engagement in the focus goal 'Societal Research Need'. It is not always present in the goals and achievements of the research groups.

The focus area "Organisational development" is important as it is not clear that there is interaction between all of the research groups.

1.2 Organisation of research

NERSC is a non-profit research foundation governed by a board. An international scientific council meets once-a-year and advises on the foundation's professional activities. Day-to-day management is exercised by the director and the centre's leadership group which consists of the director and the heads of administration, economy, and coordination. NERSC has 67 employees, 11 of which are Researcher I, 38 of which are Researcher II and III, three are PhD Scholars, two are post-Docs, three are scientific programmers and ten are described as being in administration, finance, and communications.

The research and innovation activities are taking place in the centre's seven research groups. In addition, there are five international centres in Russia, China, India, South Africa, and Bangladesh related to NERSC. A research coordination unit is responsible for information on coming calls, and contributes to coordination of research proposals, support in the proposal writing process, and necessary quality control. A communications person is responsible for internal and external communication, as well as helping with proposals.

The research group, of which several also contain several units, cover a very big research field and it is very impressive how strong impact the researchers have both nationally and internationally. The coordination between the groups in relation to joint research is not so clear and it seems difficult to guide a strategy when external funding is the main source of income.

Several of the seven research groups are involved in teaching and supervision of students and early career scientists. Training PhD candidates is not a core focus of this unit and there are very few PhD students directly connected to NERSC, though there is more supervision through collaboration with the Bjerkness Centre and UNIS.

1.3 Research funding

Approximately 90% of the total annual turnover are received through research grants (75%) or commissioned research (15-20%) in open competition/ tenders. At any time, the centre has around 90-100 active research projects.

During the last five years, the grants and competitive research projects incomes have typically been 60 MNOK to 70 MNOK per year, with extra high turnover in years with instrumentation purchases and field campaigns. The Research Council of Norway has been the prime funding source with 53% of the unit's funding. The national funding is typically 60-67% of the turnover.

NERSC is operating a data centre that provides data storage and servers for data processing. The centre owns instruments, but it is not clear how this relates to the research groups activities.

Strong dependency on competitive funding is a risk to long-term development of models, observations, data, and infrastructure capability generally.

NERSC participates in 30 to 54 projects each year. As the unit is composed of 49 researchers, the evaluation committee finds this to be a large number of projects. It is thus a concern that the researchers are spread too thin and therefore limits their performance.

1.4 Use of infrastructures

NERSC has a strong participation in National and International infrastructures, especially considering the size of the unit.

At the national level, NERSC has participated in several national research infrastructures mainly related to oceanographic database, ocean and marine observation systems, satellite Earth observation data in ocean and marine research, Norwegian Scientific Data Network, Svalbard Integrated Arctic Earth Observing System, as well as climate modelling. The centre is an extensive user of Norwegian High-Performance Computing and storage facilities, currently Sigma2 and NIRD.

Internationally, NERSC has a central role in the development, implementation, and operations of the European Copernicus services, including the lead contribution to the Copernicus Marine Service, and the assessment of the Copernicus Climate Service products for the Arctic. NERSC participates in several European Space Agency (ESA) programs related to satellite-based monitoring systems. Climate simulations are provided and used in the WCRP Coupled Model Inter-comparison Project (CMIP). The modelling activities at the centre rely critically on the supercomputing and data storage provided by Sigma2 and the European supercomputer PRACE. NERSC has deployed several buoys for the International Arctic Buoy Program during our field investigations to the ice-covered Arctic and North Pole.

The infrastructures that NERSC participate in are relevant and strongly enhance the research output. The evaluation board find this is one of the strengths of NERSC.

1.5 National and international collaboration

NERSC has strong national and international collaboration, which is crucial as a big part of both research and funding depend on this.

Nationally, NERSC is one of four partners in the Bjerknes Centre. NERSC is also partners in the national 'Nansen Legacy' project and a new 'The future Polar Ocean' programme.

NERSC's strongest European partnership is with Mercator Ocean International and Copernicus Marine Services, where NERSC is the Norwegian shareholder also representing Met Norway, Institute of Marine Research, and nuclear physics.

Internationally, the international Nansen Centres in Russia, India, China, South Africa & Bangladesh, and their national networks of academic and private collaborative partners represent a huge knowledge base and sharing of tools for research cooperation, capacity building, education, and recruitment world-wide. The direct collaboration programs are not clearly presented especially when the NERSC is focussed on North Atlantic and Arctic research.

NERSC has a strong network of collaborators including Scripps Research Institute & Woods Hole Oceanographic Institute, Canada, and the Norwegian Coast guard. These partners are especially essential for research related to the Arctic Ocean.

1.6 Research staff

NERSC is a small institution with a strong collaboration with University of Bergen. The development of climate models, the strong component of data assimilation and the strong involvement in Copernicus Services makes NERSC a valuable unit within the University.

NERSC reports that there are 49 researchers, three PhD students, two Postdocs, three Programmers and 10 administrative members of the research unit.

Most of the scientists have education in geophysics (oceanography or meteorology), physics, mathematics, statistics, marine biology, or computer science.

Administrative staff includes general management, HR, HSE, compliance, finances and project control, communication, research coordination and IT-services. Approximately 10 of the 49 Researchers are Female. Three of seven research group leaders are female. Female employees dominate in the administrative side and are underrepresented in the research groups.

NERSC are engaged in supervising master and PhD-students at university of Bergen and many other universities (Oslo, Trondheim, Tromsø, UNIS and internationally) but have very few situated directly at NERSC. Through the international Nansen Centres (Russia, India, China, South Africa, and Bangladesh) NERSC scientists are contributing with external supervision and hosting exchange visits for many candidates (PhD and master) at local Universities and educational institutions.

A concern mentioned in the SWOT analysis is that key expertise areas are vulnerable for resignments as core staff are reaching retirement age.

The evaluation board recommends that a strategy is formed to improve the gender balance among the researchers. In addition, it is recommended to work towards increasing the amount of PhD students at NERSC.

2. Research production, quality and integrity

Research production is reflected through the publications from NERSC. The unit averages one or two publications each year, primarily within Geophysics. The quality can be evaluated through the share of 10% most cited publications and the mean normalised citation score. In the bibliometric statistics and analyses for the period 2012 to 2020, NERSC has very good but not excellent outputs.

There is a significant difference in the research group assessments of the three research areas, with lower evaluations of the 'Sea ice and remote sensing' group. It is mentioned that a weakness is knowledge transfer to the society and that this research group provides little information on the strategy of the group and how they contribute to the institution's mission and goals.

The two other research groups are evaluated to perform at an outstanding level and to produce impressive scientific research.

2.1 Research quality and integrity

Research group an overall assessment

There are three research group evaluations reports:

Research group: Climate models and Observations

The group's activities certainly meet its strategic goals. The group is producing impressive scientific research and moreover is providing very valuable scientific output to support the wider international scientific community. In terms of its size, the group excels in its contribution and should be commended.

The group contains a strong mix of researchers across different stages of their careers. This is reflected in the level of innovation, international collaboration, and a strong publication record.

The national assessment panel should take note of the potentially fragile nature of Norway's climate modelling, as highlighted by the group in their self-assessment. Consistent support is important to maintain continued excellence in this area.

Research group: Operational Oceanography

An outstanding group specialising in data assimilation, with a strong funding and publication record. They make an important contribution to the Norwegian and European society, despite little base funding, and it appears that both financial as well as computing resources are permanently in danger, which can have undesirable knock-on effects. Given their strong international standing it would be desirable to see more student training.

Research: Sea Ice and Remote Sensing

A strength of this group is that they contribute to services in two fields: satellite remote sensing and sea ice forecasting. A weakness of this group is low levels of knowledge transfer to society. The research group provides little information on their strategy and how they contribute to the institutions mission and goals.

2.2. Open Science

The evaluation committee notes that NERSC as a project funded organisation, is following the research policy decided by the funding source. However, most publications are open access in agreement with Norwegian policy. In addition, the scientific datasets owned by NERSC are publicly available free of charge.

The established NERSC Data Policy follows the conditions required in national and international projects. The NERSC research group on Scientific Data Management have the necessary tools for practical data sharing, including formatting and meta-data requirements. When conditions for confidentiality are obtained, access to a dataset is limited by agreement with the funding source.

FAIR data principles are followed, and scientific data and software codes and tools are publicly available through data repositories, GitHub, or similar repositories.

When involved in teaching University courses and training courses, educational material is also made publicly available.

In the five-year period from 2016 to 2021 the share of open source publications has increased from 31.7% to 45.7% and the not open source publications has decreased from 63.4% to 18.0%. The share of reports has increased from 4.9% to 38.3%. The shift of publications strategy towards open source is impressive.

3. Diversity and equality

NERSC states that they have established an equality and diversity policy and practice in line with current legislation with the overall goal is to offer a working environment where everyone is met with respect regardless of gender, ethnicity, religion, outlook on life, age, functional ability, or sexual orientation. For NERSC, gender balance and equality are an area of particular focus, and it is NERSC's

goal to increase the proportion of female researchers to 40%. Specific measures are outlined in a separate gender equality plan.

As the number of female researchers is very low as the time of evaluation, the evaluation committee recommends that NERSC takes strong measures to reach the goal of 40% of female researchers.

4. Relevance to institutional and sectorial purposes

NERSC has key expertise that is especially relevant to the research strategies of the Ministry of Climate and Environment (KLD) and the Long-term Plan for Research (LTP).

NERSC is a partner in two Centres of Research-based Innovation, “Smart Ocean” and “Climate Futures”. Both centres have many partners from public and private sectors, and a strong focus on innovations and partnerships. Nationally, NERSC is one of four partners in the Bjerknes Centre and partners in the national Nansen Legacy project, and a new program ‘The future Polar Ocean’.

Internationally, NERSC model data and publications are being used in the assessments of IPCC and WMO. NERSC plays a very central role in Copernicus in relation to use of data from satellites and direct observations combined with data assimilation methods and models for reanalyses and forecasts of a range of physical and biological parameters.

The evaluation board concludes that the output from NERSC is relevant to institutional and sectorial purposes. There is a low engagement in industry projects.

5. Relevance to society

NERSC demonstrates through the three impact cases that the unit strongly contributes to society. Both regional, national, and international initiatives have been important and successful.

The unit’s ambition is aligned with the UN SGDs. SDG number 14 (Life below water), 13 (Climate action), 9 (Industry innovation and infrastructure) and 17 (Partnership for the Goals). The centre plays an active role in the implementation of the UN Decade of Ocean Sciences (2021-2030), Year of Polar prediction (2010-2022) through international research, data, and capacity building.

An excellent example of relevance to society is presented in the impact case ‘Urban air quality assessment and modelling in city of Bergen’. The impact case clearly demonstrates that the research has impacted the policy on handling of vessels in the port and regulations for use of fire stoves, thereby improving the air quality in Bergen.

Comments to impact case 1

Urban air quality assessment and modelling in city of Bergen:

High resolution model simulations of urban air pollution have been performed to quantify the near surface distribution and concentrations of air pollution (NO₂, PM_{2.5} and PM₁₀) from three major local sources including road traffic, wood burning ovens, and vessels in the port of Bergen. NERSC disclosed statistical relationships between this persistent geographical pattern of pollution and large-scale atmospheric blockings. Blockings are reasonably well predictable in global weather and climate models. It created a scientific basis for high-resolution air quality assessment in seasonal, interannual, and even climate perspectives. The municipality politicians, health and planning authorities and the Port of Bergen have assessed the impact of restrictions on emissions of pollution from local sources. Regulations includes requirements for clean burning ovens, periodic bans on car traffic to reduce

emission under unfavourable weather conditions for high near surface air pollution, as well as general electrification of the Port of Bergen.

The research and the communication from NSERSC on air pollution to the city of Bergen has successfully led to regulations improving the air quality in Bergen.

Comments to impact case 2

Operational Oceanography in the Nordic Seas and Arctic Ocean:

The strong role NERSC has had in development of European Copernicus Marine Services is impressive. The state-of-the-art ocean-sea ice model and data assimilation systems for the Nordic Seas and Arctic called TOPAZ and neXtSIM have taken all the steps from basic research tools to a collaborative operational forecasting activity fitting both the requirements of the European Copernicus Marine Services and the national preparedness mandate at MET Norway. The provision of operational forecasts for the Nordic Seas and Arctic Ocean physics and biogeochemistry, and the related reanalyses using advanced models and data assimilation techniques, have made the Copernicus Marine Services a unique provider of multidisciplinary reanalysis data and forecasts for a large and diverse group of users both National and International.

Comments to impact case 3

Improved Climate Predictions:

NERSC has developed climate prediction capabilities in Norway, and contribute to coordinated experiments, operational predictions, and the research centre for innovation “SFI Climate Futures”, which develops tailored climate predictions for a set of Norwegian stakeholders in both public and private sectors. NERSC is a partner in The Bjerknes Climate Prediction Unit and benefits from integration in the dissemination and Outreach plans and established communication channels of the Bjerkness Centre. The *Climate Futures research centre for innovation (SFI)* proposed proof of concept of the benefit of climate predictions to number of stakeholders – insurance, agriculture, shipping, fisheries, aquaculture, renewable energy. Activities in the SFI project are quickly expanding, and NERSC now leads the ocean Sustainable Food Production node.

List of administrative unit’s research groups

Institution	Administrative Unit	Research Groups
The Nansen Centre	Nansen Environmental and Remote Sensing Centre	Climate models and observations
		Operational Oceanography
		Sea Ice and Remote Sensing

Methods and limitations

Methods

The evaluation is based on documentary evidence and online interviews with the representatives of Administrative Unit.

The documentary inputs to the evaluation were:

- Evaluation Protocol (see appendix 3 Evaluation Protocol) that guided the process
- Terms of Reference
- Administrative Unit's self-assessment report
- Administrative Unit's impact cases
- Administrative Unit's research groups evaluation reports
- Bibliometric data
- Personnel and funding data
- Data from Norwegian student and teacher surveys

After the documentary review, the Committee held a meeting and discussed an initial assessment against the assessment criteria and defined questions for the interview with the Administrative Unit. The Committee shared the interview questions with the Administrative Unit two weeks before the interview.

Following the documentary review, the Committee interviewed the Administrative Unit in an hourlong virtual meeting to fact-check the Committee's understanding and refine perceptions. The Administrative Unit presented answers to the Committee's questions and addressed other follow-up questions.

After the online interview, the Committee attended the final meeting to review the initial assessment in light of the interview and make any final adjustments.

A one-page summary of the Administrative Unit was developed based on the information from the self-assessment, the research group assessment, and the interview. The Administrative Unit had the opportunity to fact-check this summary. The Administrative Unit approved the summary virtually without adjustments.

Limitations

The Committee judged the information received through documentary inputs and the interview with the Administrative Unit sufficient to complete the evaluation.

Appendices (link to website)

1. Description of the evaluation of EVALNAT
2. Invitation to the evaluation including address list
3. Evaluation protocol
4. Self-assessment administrative units
5. Grading scale for research groups

Website: <https://www.forskningsradet.no/tall-analyse/evalueringer/fag-tema/naturvitenskap/>

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Publikasjonen kan lastes ned fra www.forskningsradet.no/publikasjoner

Design: [design]

Foto/ill. omslagsside: [fotokreditt]

ISBN 978-82-12-03997-1 (pd

