Forskningsrådet

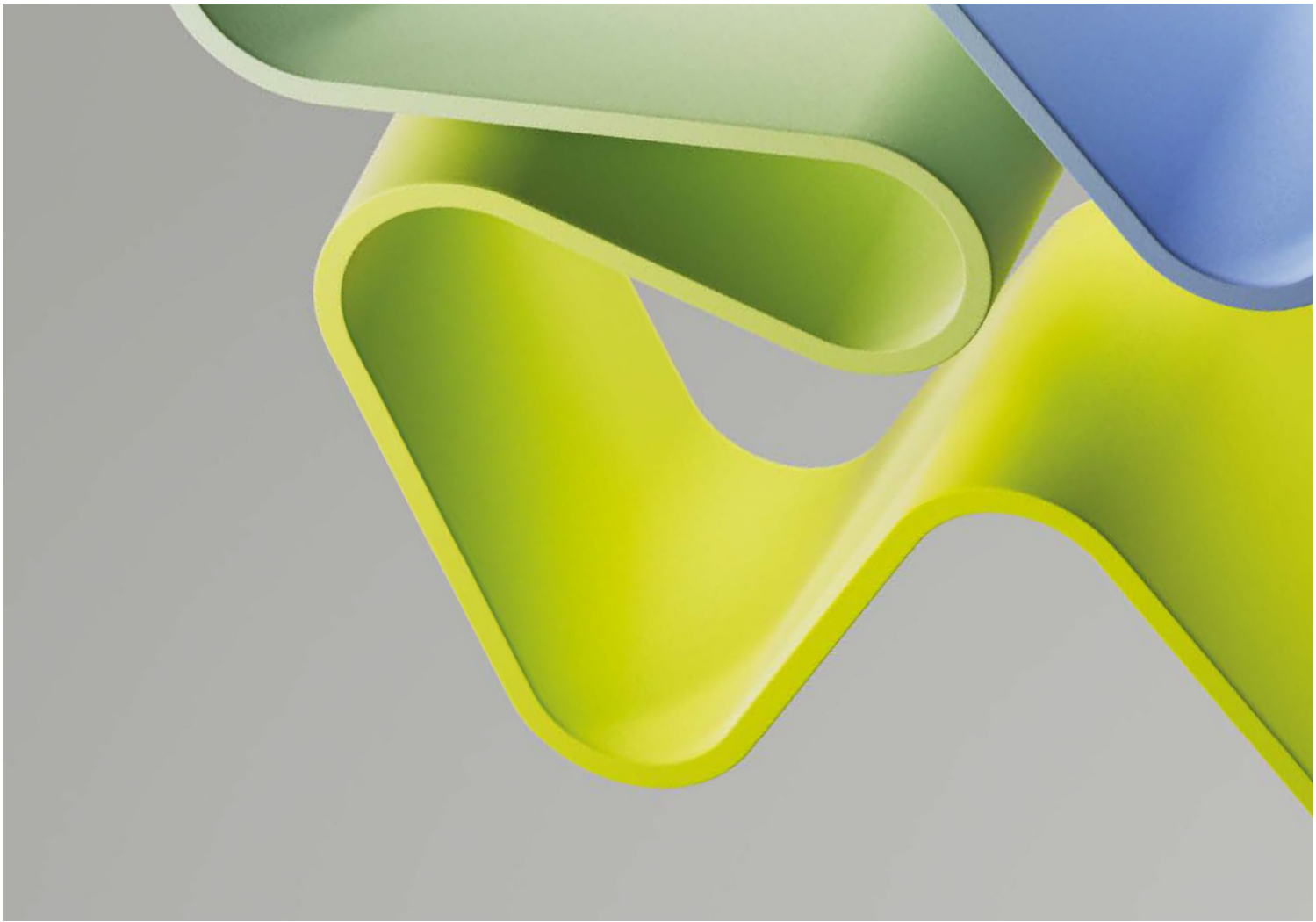
Evaluation of Life Sciences 2022–2024

Evaluation of Biosciences 2022–2023

Evaluation report

Norwegian Polar Institute (NPI)

December 2023



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Statement from Evaluation Committee 3 (Institute Sector)

This report is from Evaluation Committee 3 which evaluated the following administrative units representing the institute sector in the Evaluation of Biosciences 2022-2023:

- Institute of Marine Research, Havforskningsinstituttet
- Norwegian Institute for Nature Research, NINA
- Norwegian food research institute, Nofima
- Norwegian Polar Institute, NPI
- Biotechnology and Nanomedicine (BTN), SINTEF Industry

The conclusions and recommendations in this report are based on information from the administrative units (self-assessment), digital meetings with representatives from the administrative units, bibliometric analysis and personnel statistics from the Nordic Institute for Studies of Innovation, Research, and Education (NIFU) and Statistics Norway (SSB), and selected data from Studiebarometeret and the National Teacher Survey (Norwegian Agency for Quality Assurance in Education [NOKUT]). The digital interviews took place in Autumn 2023.

This report is the consensus view from committee 3. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee 3 consisted of the following members:

Visiting professor
Collin Moffat (chair),
Robert Gordon University

Professor
Barbara König,
University of Zurich

Professor
Bengt Persson,
Uppsala University & Karolinska Institute

Professor
Douglas McMillian
University of Kent

Geert van der Veen, Managing Partner, Technopolis Group, was the committee secretary.

Oslo, December 2023

Profile of the administrative unit

NPI-FAVD has a total of 85 employees out of which two are research directors, four are program leaders, 22 are senior research scientists, 29 are research scientists/scientists, 25 are postdoctoral workers / Doctor of Philosophy (PhD) candidates and two are senior advisors/senior executive officers. The share of women in the department is 42%.

As part of this assessment, the Evaluation Committee received two Research Group reports. One covered Ocean/Sea Ice – Geology/Geophysics while the second was for Biodiversity and Ecotoxicology.

The overarching research strategy of the Norwegian Polar Institute (NPI) is to conduct management-oriented research to help meet the knowledge-related needs of the Norwegian government, the Norwegian Environment Agency and the Governor of Svalbard. Its tasks and responsibilities are detailed in the annual letter of instruction, and in the annual letter of allocation – both developed by the Ministry of Climate and Environment. The Instructions for cooperative and financial governance define their scope and work, while the annual letter of allocation is a lot more dynamic. To deliver on these tasks NIP´s scientific staff must cover a broad range of fields and they focus in particular on the following fields: ecotoxicology, marine mammals, terrestrial ecology, seabirds, marine ecology, glaciology, geology, oceanography and sea ice. From an organisational perspective, it is critical that it has a high level of flexibility to respond to novel environmental challenges and tasks. This has been accomplished, for example, by hiring of a scientist specialising in research on plastic in the polar environment. To follow the changes in the polar environment they maintain timeseries for monitoring of key variables such as population changes of key species and climatic drivers. The unit also acts as Norway's competent environmental authority in the Antarctic.

In line with the requirements of being a Norwegian research institute, strives to meet four goals[1]. In relation to this, NPI-FAVD mentions in its self-assessment that the Norwegian authorities have an objective for Svalbard to be one of the world's best managed wilderness areas, and NPI contributes to the achievement of this objective by means of specialist reports, advice and consultation statements. In Antarctica, the institute is the environmental management authority for all Norwegian activity. The institute is also the administrative authority regarding the protective regulations for the island of Bouvetøya. The Research department's (admin unit) main remit is to act as an advisor to the environmental management and administration of the polar regions. Its advice is based on research from competitive- and sector-specific funding published in peer reviewed journals. It produces 100-120 peer reviewed articles per year.

Based on its self-assessment, NPI-FAVD in the future might take advantage of the large political and scientific focus on the Arctic and Antarctic and being a specialist polar institute. It benefits from the focus and its expertise is sought after. Moreover, the unit may benefit from the fact that the general high focus on the polar regions is internationally making funds available for research and collaboration.

Overall assessment

The Norwegian Polar Institute (NPI) is a directorate under the Ministry of Climate and Environment and carries out research and environmental monitoring in the Arctic and in Antarctica, working in the fields of ecotoxicology, marine mammals, terrestrial ecology, seabirds, marine ecology, glaciology, geology, oceanography and sea ice.

NPI is well-positioned in polar research, as is evidenced from the publications. NPI has, for some time, had a clear role in the Norwegian research landscape.

Being a governmental body, NPI has reasonably stable funding. Most of their funding is governmental, while only a minor part is competitive.

NPI clearly has an important role in the Norwegian research landscape. NPI has in 90 years provided knowledge and given advice to the Norwegian Government, conducted geologic and topographic mapping and ensured a Norwegian presence in the polar regions.

NPI's overarching research strategy is to conduct management-oriented research to help meet the knowledge-related needs of the Norwegian government, the Norwegian Environment Agency and the Governor of Svalbard. In line with this, NPI contributes to the Norwegian authorities' objective for Svalbard to be one of the world's best managed wilderness areas. NPI does this by providing specialist reports, advice and consultation statements. In Antarctica, the institute is the environmental management authority for all Norwegian activity.

NPI annually produces 80–140 peer reviewed articles. NPI aims to maintain robust research groups but since the unit only consists of two research groups with about 45 permanent employees (through time) they collaborate with other institutes. Quality-wise the research groups perform well (cf. section 2.1).

A weakness of NPI is the low number of scientists in some areas. They are aware of this and try to attract staff in these fields and compensate by cooperating with other institutes. The high costs of the activities in the Arctic and Antarctic are also a possible weakness: a large proportion of the budget is allocated to logistics, as confirmed by their high turnover per staff member.

The four impact cases clearly show that NPI is relevant for society. It contributes with important knowledge regarding the changing climate and the effect on the environment. NPI has also actively engaged with media to document their research work, which has resulted in dissemination through the National Broadcaster (NRK), newspapers, and internationally through the BBC, National Geographic and others.

Recommendations

1. NPI should further develop strategies to attract new staff. Staff seem to thrive at NPI, since few employees on a permanent contract leave NPI. However, on the recruitment side, there are difficulties in that NPI is located in the north of Norway which does not attract a lot of people. Furthermore, NPI has trouble attracting applicants from Norway; this is a growing concern which NPI is aware of and works on strategies to get more applicants. The Evaluation Committee recommends that NPI continues to further develop these strategies. Given that most of the funding is stable, NPI should be able to have a larger proportion of permanent contracts.
2. It is a complex situation when considering the use of the Norwegian language, with NPI being a public authority, and at the same time having ambitions to attract international staff. NPI welcomes international applicants, but the primary language within NPI is Norwegian so knowledge about that, Swedish or Danish is good. All new employees are offered courses in Norwegian. At the section level the working language is English, although this is dependent on the staff. The Evaluation Committee encourages NPI to consider changing from a purely Norwegian-speaking institute to a bilingual institute in order to increase their attraction of excellent international scientists.

3. The Evaluation Committee would encourage NPI to increase the proportion of income that is external funding, especially from the EU, given the unique position that NPI has in the international research landscape.

1. Strategy, resources and organisation of research

The Norwegian Polar Institute (NPI) is a directorate under the Ministry of Climate and Environment and carries out research and environmental monitoring in the Arctic and in Antarctica. The institute undertakes research in the fields of ecotoxicology, marine mammals, terrestrial ecology, seabirds, marine ecology, glaciology, geology, oceanography and sea ice.

Being a governmental body, NPI has reasonably stable funding. About 80% of their funding is governmental, while only a minor component is competitive. The EU contributed approximately 2% of the funding. NPI has activities in the Arctic and Antarctic, both on land and in the ocean. This is costly and a large proportion of their budget is allocated to the logistics of working in such difficult environments. In the case of Antarctica, this is compounded by the significant geographic distance from Norway to the location of the research activity.

NPI consider themselves to be a flexible organisation which enables it to respond to novel environmental challenges and tasks. They accomplish the flexibility by either current staff taking on new tasks, or through hiring of new staff with the necessary skill set and competence. NPI is well-positioned in polar research, as is evidenced from the publications.

NPI has, for some time, had a clear role in the Norwegian research landscape. According to the assessments of the research groups, NPI is performing well in research, but they need to attract more external funding, even though a few groups already have external funding.

NPI has several collaborations with other national or international institutes for research and various networks for observing systems and polar policy development.

NPI consider it an advantage being a small institute. This makes it easy to organise projects since people know each other and this facilitates cooperation. NPI therefore think they are in a good position to plan and conduct interdisciplinary science and give management advice on complex issues. Overall, the Evaluation Committee considers NPI an excellent research institute that has a comfortable position with ample funding because of its position inside the government.

1.1 Research Strategy

NPI is a directorate under the Ministry of Climate and Environment and carries out research and environmental monitoring in the Arctic and in Antarctica.

NPI's overarching research strategy is to conduct management-oriented research. NPI works in the fields of ecotoxicology, marine mammals, terrestrial ecology, seabirds, marine ecology, glaciology, geology, oceanography and sea ice.

From 2011 to 2019 NPI's research and environmental monitoring activities were organised in four sections: Ecotoxicology, Biodiversity, Sea and Sea ice, and Geology and Geophysics. In 2019, NPI established four programmes in order to strengthen the links between their research activities and their environmental management tasks (Antarctic, Polar Ocean, Svalbard, and Ny-Ålesund programmes). In more recent times the 4 groups have been increased to 6 groups.

Research plans are updated every 4–5 years. Organisationally, NPI finds it important to have a high level of flexibility in order to respond to novel environmental challenges and task, which the Evaluation Committee finds appropriate.

NPI's tasks and responsibilities are detailed in the annual letter of instruction, and in the annual letter of allocation, from the Ministry of Climate and Environment. There is a large political and scientific focus on the Arctic and Antarctic, which NPI benefits from. NPI is well-positioned in polar research, as is also evidenced from the publications (cf. below).

1.2 Organisation of research

NPI is a directorate under the Ministry of Climate and Environment. From 2011 to 2019, the staff in the research department were organised into four sections: Biodiversity, Ecotoxicology, Sea and Sea ice, Geology and Geophysics.

NPI has since undertaken a reorganisation creating a matrix organisation with four programmes. In 2019, when they became a programme-based organisation, the programmes were geographically based. The staff in the research department were organised in four sections. These were Biodiversity, Environmental Pollution, Ocean and Sea ice, and Geology and Geophysics.

Subsequently (2021) NPI split up some of the sections to give them the current six sections. According to the virtual site visit, the new organisation works well, even though it might be still too early to judge.

Being a directorate, NPI has predictable (government) base funding.

NPI has expertise that is sought after, as they are frequently consulted by other Norwegian authorities and in international collaborations. NPI considers that one advantage of being a small institute is that they can quickly adapt to changes and that it is easy to conduct interdisciplinary science. NPI has access to state-of-the-art infrastructure and they have dedicated staff.

There is currently a general high focus on the polar regions (Arctic and Antarctic) internationally, making funds available. Given the unique role of NPI and their collections of long time series data, NPI is expected to be an attractive partner in international collaborations, and consequently NPI should be able to attract more EU funding in the future.

Among the weaknesses, NPI lists that in some research fields there are too few scientists. Also, activities in the Arctic and Antarctic are costly and a large proportion of the budget is allocated to logistics, as is evident from the high turnover per staff member.

NPI has, for some time, had a clear role in the Norwegian research landscape, being unique and having expertise on the polar regions.

1.3 Research funding

The main funding sources of NPI are reasonably stable. NPI has a budget of 410 million NOK, of which 40.4% was allocated to Research and Development. In total, 82.8% of the funding is governmental. NPI receives 1.2% from the oil industry for a sea bird project. Only a minor part is competitive. External funding from RCN contributed 9.6% of the total budget. EU contributed 2.2% of the total budget. The remaining 4.2% comes from the Norwegian Coastal Administration, other institutions, universities, regional funds, and other international sources.

NPI works strategically to obtain research funding from regional, national and international sources. In the period 2011–2022, NPI took the lead or took part in the following large initiatives, providing additional (mainly government) funding to NPI:

- SIOS preparatory phase and SIOS-Infra NOR (NPI central partner)
- ICE-Centre and N-ICE2015 (NPI lead)
- SEATRACK (NPI lead)
- COAT (NPI leads the Svalbard part)
- Nansen Legacy (NPI is one of the three leading institutions)
- TONe, observatories, drone service and data system in Antarctica. (NPI lead)

1.4 Use of infrastructures

NPI utilises national infrastructures and contributes to national and international infrastructures, given their special competence in polar research, where they are the key organisation running research infrastructures in arctic Norway and for Norway in the Antarctic.

NPI uses Sigma2 high-performance computing resources for modelling the Arctic Ocean and the Southern Ocean. NPI uses NIRD for data storage, and the Norwegian Marine Data Centre (NMDC) where NPI is a partner.

NPI was instrumental in developing SIOS and SIOS-Infra-NOR, which supports and complements NPI's ongoing terrestrial, glaciological, and marine research and monitoring in Svalbard. Total funding from RCN was 94 million NOK.

NPI is also involved in the international infrastructures EMSO and ICOS. NPI is also a partner in several projects funded by ESA.

NPI has access to two research stations, one scientific ice breaker and research facilities in Longyearbyen. The ice breaker operates in the Arctic and Antarctic Ocean, and NPI has exclusive right of use for a total of 90 days per year. According to the virtual site visit, the ice breaker is also made available for international collaborations to utilise the ship efficiently.

NPI runs and manages the Norwegian Polar Data Centre, where research and monitoring data from NPI is available and accessible for use by others.

1.5 National and international collaboration

NPI undertakes a number of collaborations with other national or international institutes for research and various networks for observing systems and polar policy development.

The SEATRACK programme to study the distribution of seabirds in the North Atlantic is led by NPI in collaboration with the Norwegian Institute for Nature Research (NINA) and the Norwegian Environment Agency with a total of 50 partners from 11 countries.

NPI's Ecotoxicology Section was established ~2000, and the screening studies have been performed on assignment from the Norwegian Environment Agency (NEA), in collaboration with the Norwegian Institute for Air Research (NILU) and Norwegian Institute for Water Research (NIVA).

NPI is a partner in many projects funded by ESA (European Space Agency), e.g. calibration-validation activities involving the polar regions and the cryosphere.

NPI scientists contribute to multinational status assessments (CAFF's State of the Arctic, World Commission on Protected Areas (IMMAs) and the IPCC (Cryosphere Report)). This includes many years of research on climate change impacts on marine mammals in one of the Arctic hot-spots.

NPI also has collaboration with additional international institutions such as the Korea Polar Research Institute.

For international/global benchmarks, the NPI compares themselves with the Norwegian Institute of Marine Research (IMR), having a similar role, albeit in a different setting. NPI wants to be 'up there' with other polar institutes, and the Evaluation Committee therefore is a bit surprised that in the self-evaluation, NPI does not compare themselves with other leading polar institutes abroad.

1.6 Research staff

NPI's research department has 85 employees, almost all with a PhD; gender distribution is 42% female, 58% male. Of the staff, 47 are permanently employed, while the rest are on shorter contracts (up to 3 years). Thus, the turnover of staff is remarkably large, around 20% every year.

Career development is mainly based upon annual "employee interviews". For postdoctoral workers, there are dedicated career promotion activities, e.g. proposal writing, outreach and conferences to build networks.

NPI supports research collaboration and network building, and scientists from NPI can spend shorter/longer times at collaborating institutions in Norway or abroad.

Staff seem to thrive at NPI, since few of the permanent employees leave the organisation. However, on the recruitment side, there are difficulties in that NPI is located in the far north of Norway which

appears not to be attractive to a lot of people. Furthermore, NPI has trouble getting applicants from Norway itself; this is a growing concern which NPI is aware of and is working on strategies to attract more applicants from Norway.

NPI welcomes international applicants, but the major language within NPI is Norwegian so knowledge about that, Swedish or Danish is good. All new employees are offered courses in Norwegian. At the section level the working language is often English. Although this is dependent on the staff composition in the group.

2. Research production, quality and integrity

The Ocean Sea Ice Geology Geophysics group is outstanding and well resourced. It is working very effectively given the wide range of requirements that NPI is required to meet. They have a strong track record in winning competitive external funding for their research.

The Biodiversity and Ecotoxicology group has good scientific credentials, publishes extensively, and provides a significant volume of useful information of both an ecological and ecotoxicological nature. They play a pivotal role in NPI and provide science-orientated advice to Norwegian authorities on Arctic and Antarctic issues.

Open Access journals are encouraged (~70%). NPI owns all data and provides them on an open and accessible basis that is free of charge, unless there is a risk of harm to vulnerable species or natural resources.

NPI has 9–10% of their publications among the 10% most cited ones, and their mean normalised citation score is above the Norwegian average (134–142 compared to 120) and 40% above the world average, which the Evaluation Committee finds impressive, given that only countries with large research traditions participate in polar research.

2.1 Research quality and integrity

Research Group: Biodiversity and Ecotoxicology

Overall Assessment:
This group has good scientific credentials, publishes extensively, and provides a significant volume of useful information of both an ecological and ecotoxicological nature. However, on the basis of the information provided, the group comes across as quite autonomous. They undertake the science that they feel is required (this may well be spot on), and then engage with society in terms of the outcomes of the work. Improved societal engagement in the development of ideas would make a difference. That said, the work of this research unit is important given the rate of change in the Svalbard area due to the impacts of climate change. This makes the type of science being done by this research group of high importance.

The Biodiv&Ecotox unit plays a pivotal role in NPI and provides science-orientated advice to Norwegian authorities on Arctic and Antarctic issues. The group conducts year-on-year monitoring actions and maintenance of statutory and long-term monitoring and datasets for the Polar Regions. The group is productive and has generated papers covering critical and timely topics of high scientific impact and with broad relevance. (From Evaluation report – Panel 1)

Research Group: Ocean Sea Ice Geology Geophysics

Overall Assessment:
This is an outstanding, well resourced, research group that are working very effectively given the wide range of requirements that NPI have to meet. They are meeting their strategic goals. They produce high quality research and are strongly engaged in knowledge transfer and impact. They are an international partner of choice and clearly have contributed to and delivered on leading

international projects. They also have a strong track record in winning competitive external funding for their research. However, it is clear from the self-assessment document that the group are stretched quite thinly across a wide range of activities for some of which they do not have 'strength in depth'. Indeed they note that there are essentially single point failures possible on some of their work. Further investment, notably around staffing and recruitment would allow them to become more resilient. (From Evaluation report – Panel 10)

2.2. Open Science

Open Access journals are encouraged (~70%). NPI owns all the data and provides them on an open and accessible basis, free of charge, unless there is a risk of harm to vulnerable species or natural resources.

3. Diversity and equality

NPI works actively and systematically to promote equality, and prevent discrimination and harassment due to sex, ethnicity, religion, or outlook of life, and the institute have dedicated written action plans. Currently, the sex distribution is 42% female and 58% male for the entire staff. The share of women varies between 36% and 48% for the large categories (research scientists, post-docs, PhDs), while there is a large variation between 25% and 100% for the small categories (senior advisor, research director, programme leader). The Evaluation Committee is not aware of inclusion policies focused on topics other than sex and gender.

4. Relevance to institutional and sectorial purposes

NPI contributes to the Norwegian authorities' objective for Svalbard to be one of the world's best managed wilderness areas. NPI provides specialist reports, advice and consultation statements.

In Antarctica, the institute is the environmental management authority for all Norwegian activity.

NPI produces annually 80–140 peer reviewed articles. NPI aims to maintain robust research groups but since the unit only consists of about 45 permanent employees (through time) they collaborate with other institutes to get additional competence.

Commercialisation is not in NPI's mandate.

NPI clearly has an important role in the Norwegian research landscape. NPI has, over 90 years, provided knowledge and given advice to the Norwegian Government, conducted geologic and topographic mapping and ensured Norwegian presence in the polar regions. The Institute has developed a unique and interdisciplinary competence on the polar regions over decades. NPI's ambition is to continue to take the lead in the development, use and communication of management-relevant knowledge from research and monitoring from the polar regions to Norwegian ministries and management authorities.

The NPI research activities are largely tailored to provide the research and monitoring needed to support Arctic and Antarctic policy and management, focussed on climate change and its effects on the ecosystems both in Antarctica and in the Arctic. Research and monitoring go hand in hand and their research is largely based on their long-term monitoring time series.

5. Relevance to society

The four impact cases clearly show that NPI provides significant contributions of observational data from the polar regions. These data are widely used both nationally and internationally and are critical for a large number of reports. NPI research has a large impact on environmental decisions in the polar regions and is important in the observation of ongoing climate change.

Thus, in the opinion of the Evaluation Committee, NPI is clearly relevant for society. It contributes with important knowledge regarding the changing climate and environment. NPI contributes by generating knowledge and transforming this into advice to the Norwegian Government. NPI's social mandate also contributes to the UN Sustainable Development Goals.

Comments to impact case 1
Global regulation of hazardous substances
NPI's research on legacy and emerging pollutants in Arctic ecosystems has played an important role in providing input to the Stockholm Convention. NPI's research since 2010 (and earlier) has contributed to all four criteria for a compound to be listed under the Stockholm Convention: persistency, ability for long-range transport, bioaccumulation/biomagnification and toxicity. NPI's Ecotoxicology Section was established in ~2000, and the screening studies have been performed on assignment from the Norwegian Environment Agency (NEA), in collaboration with Norwegian Institute for Air Research (NILU) and Norwegian Institute for Water Research (NIVA). Research conducted by NPI on concentrations, trends and biological effects of POPs in Arctic biota has contributed to the regulation of 12 out of the 19 POPs listed since 2009.

Furthermore, NPI has recently contributed to the regulation process for perfluoroalkyl substances (PFAS). Research at NPI has shown that PFAS exposure in polar bears originates solely from long-range transport.

Finally, NPI has been a driver for conducting research on interactions between climate change and pollutants in arctic food webs.

Comments to impact case 2
SEATRACK - mapping seabird non-breeding distribution for better management and marine protection in the North Atlantic
The SEATRACK programme (2014–present day) is led by NPI in collaboration with the Norwegian Institute for Nature Research (NINA) and the Norwegian Environment Agency with a total of 50 partners from 11 countries. SEATRACK has provided knowledge of the distribution of seabirds in the North Atlantic, by using new and appropriate technology and through large-scale international collaboration. Using Global Location Sensors (GLS or geolocators) has made it possible to study the seasonal movements of seabirds throughout their entire annual life cycle.

Two spatial datasets have been developed: (i) kernel distribution maps for all 11 species and colonies showing the seasonal (autumn, winter, spring) distribution of tracked species and colonies and (ii) a unique spatial dataset of the predicted monthly distribution of the six most common pelagic seabird species, covering 23.5 million adult birds, constituting 87% of their combined breeding populations in the Northeast Atlantic. Both spatial datasets have been widely used for research (40+ peer-reviewed papers produced by 2023) and in management processes, including for example the identification of populations influenced by marine protected areas and human activities.

Among societal impacts at international and national levels are: 1) designation of a new large marine protected area (NACES) in the North Atlantic by the OSPAR Commission (the OSPAR Commission is the mechanism by which fifteen governments and the EU cooperate to protect the marine environment of the North-East Atlantic), 2) providing the knowledge base for national policies on marine conservation, 3) international harvest plan for Brünnich's guillemot (*Uria lomvia*), which is one of the most abundant Arctic seabirds, but where several populations now are declining.

Comments to impact case 3

Monitoring and research on polar sea ice informing decision and policy makers and society

NPI's research and monitoring of polar sea ice (Arctic and Antarctic) and the accumulated expertise has been important for providing the basis for decisions by policy makers and for informing the broader public. NPI has contributed to better understanding of the changes in the sea ice thickness distribution and the volume of ice exported from the Arctic. Apart from NPI's field studies, sea ice observations have often also been used for satellite or airborne validation (ESA, NASA).

Researchers contribute to national and international assessments in the subject lending their expertise to these products, e.g. contributions to Arctic Monitoring and Assessment Programme SWIPA (Snow, Water, Ice and Permafrost in the Arctic) reports from 2011 and 2017 and a climate update in 2021; the ARC sea ice essays since 2012; and to IPCC AR5 (2013) and AR6 (2019–2022). These reports also support environmental management of Norway's territories and representation of Norway in many international bodies and working groups.

Several of the monitoring and research studies of NPI have been cited in recent IPCC reports.

NPI has also actively engaged with media to document their research work, which has resulted in dissemination through National Broadcaster (NRK), newspapers, and internationally through the BBC, National Geographic and others.

Comments to impact case 4

NPI marine mammal research and societal impacts

Marine mammal research and monitoring at NPI has provided important knowledge for management and conservation of marine ecosystems at local, regional, circumpolar, and global scales. NPI's marine mammal research team has produced most of the existing knowledge for endemic Arctic seals, whales, and polar bears in the European High Arctic. Generation of data has involved both short-term studies (often funded by NRC) and long-term monitoring in multiple fields. The ecological studies have significantly advanced understanding of the impacts of climate change.

The NPI data and expertise are underpinning protected area planning in both the Arctic and the Southern Ocean and providing the basis for assessments of populations (OSPAR, North Atlantic Marine Mammal Commission (NAMMCO), Arctic Council groups, International Union for the Conservation of Nature (IUCN)) and Red List assessments at national, European and global levels (Artsdatabank, IUCN Europe and Global). Furthermore, NPI scientists contribute to multinational status assessments (CAFF's State of the Arctic, World Commission on Protected Areas (IMMAs), IPCC (Cryosphere Report)), including research on climate change impacts on marine mammals in one of the Arctic hot-spots which NPI has been covering for decades. NPI work has contributed to the Arctic Council's State of the Arctic Marine Biodiversity Report (SAMBR) in 2015, and NPI has led the first taxonomic group update of this report in 2021.

NPIs marine mammal data have been used to help designate appropriate protected areas at local scales in the Svalbard Archipelago.

Appendices

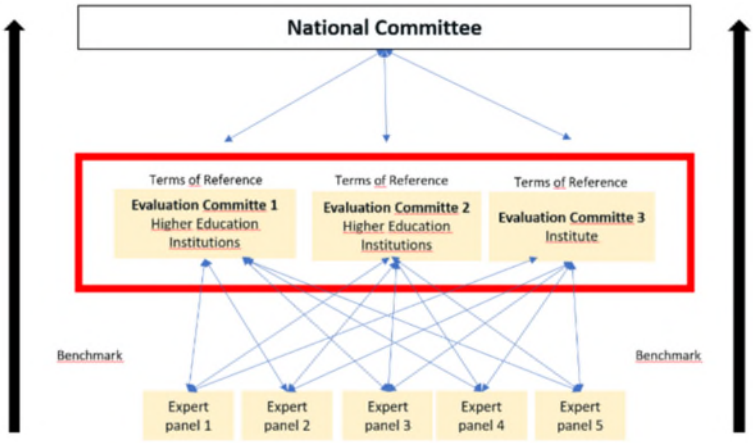
Evaluation of Biosciences 2022-2023

By evaluating Norwegian research and higher education we aim to enhance the quality, relevance, and efficiency. In accordance with the statutes of the Research Council of Norway (RCN), the RCN evaluates Norwegian professional environments to create a solid and up-to-date knowledge base about Norwegian research and higher education in an international perspective.

The evaluation of life sciences is conducted in 2022 - 2024. The evaluation of biosciences takes place in 2022 - 2023, and the evaluation of medicine and health is carried out in 2023-2024. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. The evaluation shall result in recommendations to the institutions, the RCN and the ministries.

Evaluation of biosciences (EVALBIOVIT) 2022-2023
The evaluation of biosciences includes twenty-two administrative units (e.g., faculty, department, institution) which are assessed by evaluation committees according to sectorial affiliation and/or other relevant similarities between the units. The administrative units enrolled their research groups (97) to five expert panels organised by research subjects or themes and assessed across institutions and sectors.

Organisation of evaluation of biosciences research 2022 - 2023



The institutions have been allowed to adapt the evaluation mandate (Terms of Reference) to their own strategic goals. This is to ensure that the results of the evaluation will be useful for the institution's own strategic development. The administrative unit together with the research group(s) selects an appropriate benchmark for each of the research group(s).

The Research Council of Norway has commissioned an external evaluation secretariat at Technopolis Group for the implementation of the evaluation process.

Each institution/administrative unit is responsible for following up the recommendations that apply to their own institution/administrative unit. The Research Council will use the results from the evaluation in the development of funding instruments and as a basis for advice to the Government.

The web page for the evaluation of biosciences 2022-2023:
https://www.forskningsradet.no/en/analysis-numbers/evaluations/subject-theme/biosciences/

Til innmeldte administrative enheter til
fagevaluering av biovitenskap (EVALBIOVIT)

Vår saksbehandler/tlf.	**Vår ref.**	**Oslo,**
Hilde D.G. Nielsen/4092 2260	21/10653	21.04.2022
	Deres ref.	

Fagevaluering av biovitenskap (EVALBIOVIT) 2022 – 2023

Vi viser til invitasjonsbrev om å delta i fagevaluering av biovitenskap (EVALBIOVIT) datert 11.11.2021 og til informasjonsmøte med innmeldte administrative enheter 15.12.2021.

Porteføljestyret for livsvitenskap vedtok evalueringsprotokollen for fagevaluering av biovitenskap 05.04.2022 (vedlegg 1). Protokollen beskriver roller, prosesser og ansvarsfordeling i evalueringsarbeidet og er i tråd med forslaget til nytt nasjonalt rammeverk for evaluering av forskning og høyere utdanning utarbeidet i regi av Kunnskapsdepartementet.

Forskningsrådet har mottatt innmelding av 37 administrative enheter til EVALBIOVIT. Disse vil bli fordelt på sektorspesifikke evalueringskomitéer: 1-2 evalueringskomité/er for administrative enheter som tilhører instituttsektoren og 1-2 evalueringskomité/er for administrative enheter som tilhører UH-sektor. Universitetsmuseene vil bli evaluert samlet i én evalueringskomité for UH-sektor.
Det skal i tillegg opprettes internasjonale fagekspertpaneler etter faglig eller tematisk likhet på tvers av sektorer. Ekspertpanelene skal evaluere forskergruppene som de administrative enhetene melder inn. Evalueringskomitéene og ekspertpanelene skal vurdere de innsamlede dataene og gi anbefalinger til den enkelte institusjon, til Forskningsrådet og til departementene.

Tilpasning av mandat (vedlegg 1)

Forskningsrådet ber med dette administrative enheter om å tilpasse mandatet (vedlegg 1) til de lokale forhold ved egen institusjon. Tilpasningen gjøres ved å fylle inn de åpne punktene i malen (Appendix A). Utfylt skjema sendes på epost til evalbiovit@forskningsradet.no *innen 30. september 2022.*

Innmelding av forskergrupper (vedlegg 2a og 2b)

Forskningsrådet ber administrative enheter om å melde inn forskergrupper i tråd med forskergruppedefinisjonen beskrevet i kapittel 1.2 i evalueringsprotokollen. Det bes også om at forskergruppene innplasseres i den tentative fagpanelinndelingen for EVALBIOVIT (vedlegg 2a). Utfylt regneark (vedlegg 2b) sendes til evalbiovit@forskningsradet.no *innen 31. mai 2022.*

Forskningsrådet vil ferdigstille panelstruktur og avgjøre den endelige fordelingen av forskergruppene på fagpaneler *etter* at alle forskergrupper er meldt inn.

Norges forskningsråd/
The Research Council of Norway
Drammensveien 288
Postboks 564
NO–1327 Lysaker

Telefon +47 22 03 70 00
post@forskningsradet.no
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Org.nr. 970141669

Invitasjon til å foreslå eksperter (vedlegg 3a og 3b)

Forskningsrådet inviterer administrative enheter til å spille inn forslag til eksperter som kan inngå i evalueringskomitéene og i ekspertpanelene (vedlegg 3a). Hver evalueringskomité skal bestå av 7-9 komitémedlemmer. Hvert ekspertpanel skal bestå av 5-7 eksperter. Utfylt regneark (vedlegg 3b, fane 1 og fane 2) sendes til evalbiovit@forskningsradet.no *innen 31. mai 2022.*

Forskningsrådet v/porteføljestyret for livsvitenskap vil oppnevne leder og medlemmer til evalueringskomitéene og til ekspertpanelene.

Data og datainnsamling

Forskningsrådet har nå ute et oppdrag for analyse av data om personal og forskningsproduksjon. Analysen skal i hovedsak baseres på data i DBH, NIFUs forskerpersonaleregister og Cristin. Analysene vil inkludere indikatorer som skal brukes for evaluering av alle institusjoner.

Videre vil institusjonene få et ansvar for innsamling av data til en egenevaluering som skal inngå i vurderingsgrunnlaget for evalueringskomiteene. For å sikre at evalueringen blir nyttig for forskningsinstitusjonenes utvikling, vil Forskningsrådet også invitere institusjonene til å delta i utvelgelse av relevante evalueringsdata og indikatorer som kan danne grunnlag for vurdering opp mot institusjonens egne strategiske mål og sektormål. På bakgrunn av dette har Forskningsrådet en forventning om at institusjonene som deltar i evalueringen stiller med nødvendige ressurser gjennom hele evalueringsprosessen.

Forskningsrådet har, etter en anbudskonkurranse om sekretariatstjenester, inngått en avtale med Technopolis Group som skal bistå Forskningsrådets administrasjon i arbeidet med EVALBIOVIT. Sekretariatet skal blant annet koordinere datainnsamlingen fra institusjonene og systematisere det innsamlede materialet for vurdering i ekspertpaneler og evalueringskomitéer.

Endring av administrativ enhet

For noen få tilfeller kan det være behov for å gjøre noen endringer i forhold til den administrative enheten[1] som allerede er innmeldt til EVALBIOVIT. For eksempel kan et fakultet som ble meldt inn samlet til EVALBIOVIT i desember 2021 finne det mer hensiktsmessig å heller melde inn fakultetets institutter som egne administrative enheter. Hvis man ønsker å endre på den administrative enheten må dette meldes Forskningsrådets administrasjon så fort som mulig, men ikke senere enn 31.05.2022. Melding om endring sendes på epost til: evalbiovit@forskningsradet.no.

Informasjonsmøte 9. mai 2022 og nettside for EVALBIOVIT

Forskningsrådet arrangerer 09.05.2022 kl. 12.00-12.45 et informasjonsmøte for alle som deltar i EVALBIOVIT. Møtet vil foregå digitalt (Zoom). Vi vil i møtet bl.a. gå gjennom evalueringsprotokollen samt at det vil være mulig å stille spørsmål. Påmelding til evalbiovit@forskningsradet.no *innen 07.05.2022.*

Forskningsrådet har opprette en egen nettside hvor informasjon om EVALBIOVIT vil bli publisert fortløpende. Lenke til nettsiden finner dere her: https://www.forskningsradet.no/statistikk-evalueringer/biovitenskap-2022-2023/.

[1] Med administrativ enhet menes en organisatorisk enhet på nivå 2 eller 3 i organisasjonsstrukturen til DBH for UH sektor eller NIFUs organisasjonsregister for institutt- og helsesektoren.

Spørsmål som gjelder fagevalueringen kan sendes på epost til evalbiovit@forskningsradet.no eller ved å kontakte Hilde Dorthea Grindvik Nielsen på epost hgn@forskningsradet.no /mobil 40 92 22 60.

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge
avdelingsdirektør
Avdeling for helseforskning og helseinnovasjon

Hilde G. Nielsen
spesialrådgiver
Avdeling for helseforskning og helseinnovasjon

Vedlegg
1. Evalueringsprotokoll for fagevaluering av biovitenskap 2022-2023
2a. Tentativ fagpanelinndeling for evaluering av forskergrupper
2b. Skjema for innmelding av forskergrupper
3a. Invitasjon til å foreslå eksperter og informasjon om evalueringskomitéer og ekspertpaneler
3b. Skjema for å foreslå eksperter til evalueringskomitéer og ekspertpaneler

The Research Council of Norway

Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

By decision of the Portfolio board for life sciences April 5., 2022

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1 Introduction

Research assessments based on this protocol serve different aims and have different target groups. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), and by the institute sector and regional health authorities and health trusts. These institutions will hereafter be collectively referred to as Research Performing Organisations (RPOs). The assessments should serve a formative purpose by contributing to the development of research quality and relevance at these institutions and at the national level.

1.1 Evaluation units

The assessment will comprise a number of *administrative units* submitted for evaluation by the host institution. By assessing these administrative units in light of the goals and strategies set for them by their host institution, it will be possible to learn more about how public funding is used at the institution(s) to facilitate high-quality research and how this research contributes to society. The administrative units will be assessed by evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.

The administrative units will be invited to submit data on their *research groups* to be assessed by expert panels organised by research subject or theme. See Chapter 3 for details on organisation.

Administrative unit	An administrative unit is any part of an RPO that is recognised as a formal (administrative) unit of that RPO, with a designated budget, strategic goals and dedicated management. It may, for instance, be a university faculty or department, a department of an independent research institute or a hospital.
Research group	Designates groups of researchers within the administrative units that fulfil the minimum requirements set out in section 1.2. Research groups are identified and submitted for evaluation by the administrative unit, which may decide to consider itself a single research group.

1.2 Minimum requirements for research groups

1) The research group must be sufficiently large in size, i.e. at least five persons in full-time positions with research obligations. This merely indicates the minimum number, and larger units are preferable. In exceptional cases, the minimum number may include PhD students, postdoctoral fellows and/or non-tenured researchers. *In all cases, a research group must include at least three full-time tenured staff*. Adjunct professors, technical staff and other relevant personnel may be listed as group members but may not be included in the minimum number.

2) The research group subject to assessment must have been established for at least three years. Groups of more recent date may be accepted if they have come into existence as a consequence of major organisational changes within their host institution.
3) The research group should be known as such both within and outside the institution (e.g. have a separate website). It should be able to document common activities and results in the form of co-publications, research databases and infrastructure, software, or shared responsibilities for delivering education, health services or research-based solutions to designated markets.
4) In its self-assessment, the administrative unit should propose a suitable benchmark for the research group. The benchmark will be considered by the expert panels as a reference in their assessment of the performance of the group. The benchmark can be grounded in both academic and extra-academic standards and targets, depending on the purpose of the group and its host institution.

1.3 The evaluation in a nutshell

The assessment concerns:

- research that the administrative unit and its research groups have conducted in the previous 10 years
- the research strategy that the administrative units under evaluation intend to pursue going forward
- the capacity and quality of research in life sciences at the national level

The Research Council of Norway (RCN) will:

- provide a template for the Terms of Reference[1] for the assessment of RPOs and a national-level assessment in life sciences
- appoint members to evaluation committees and expert panels
- provide secretarial services
- commission reports on research personnel and publications based on data in national registries
- take responsibility for following up assessments and recommendations at the national level.

RPOs conducting research in life sciences are expected to take part in the evaluation. The board of each RPO under evaluation is responsible for tailoring the assessment to its own strategies and specific needs and for following them up within their own institution. Each participating RPO will carry out the following steps:

1) Identify the administrative unit(s) to be included as the main unit(s) of assessment
2) Specify the Terms of Reference by including information on specific tasks and/or strategic goals of relevance to the administrative unit(s)

[1] The terms of reference (ToR) document defines all aspects of how the evaluation committees and expert panels will conduct the [research area] evaluation. It defines the objectives and the scope of the evaluation, outlines the responsibilities of the involved parties, and provides a description of the resources available to carry out the evaluation.

3) The administrative unit will, in turn, be invited to register a set of research groups that fulfil the minimum criteria specified above (see section 1.2). The administrative unit may decide to consider itself a single research group.
4) For each research group, the administrative unit should select an appropriate benchmark in consultation with the group in question. This benchmark can be a reference to an academic level of performance or to the group's contributions to other institutional or sectoral purposes (see section 2.4). The benchmark will be used as a reference in the assessment of the unit by the expert panel.
5) The administrative units subject to assessment must provide information about each of their research groups, and about the administrative unit as a whole, by preparing self-assessments and by providing additional documentation in support of the self-assessment.

1.4 Target groups

- Administrative units represented by institutional management and boards
- Research groups represented by researchers and research group leaders
- Research funders
- Government

The evaluation will result in recommendations to the institutions, the RCN and the ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

This protocol is intended for all participants in the evaluation. It provides the information required to organise and carry out the research assessments. Questions about the interpretation or implementation of the protocol should be addressed to the RCN.

2 Assessment criteria

The administrative units are to be assessed on the basis of five assessment criteria. The five criteria are applied in accordance with international standards. Finally, the evaluation committee passes judgement on the administrative units as a whole in qualitative terms. In this overall assessment, the committee should relate the assessment of the specific tasks to the strategic goals that the administrative unit has set for itself in the Terms of Reference.

When assessing administrative units, the committees will build on a separate assessment by expert panels of the research groups within the administrative units. See Chapter 3 'Evaluation process and organisation' for a description of the division of tasks.

2.1 Strategy, resources and organisation

The evaluation committee assesses the framework conditions for research in terms of funding, personnel, recruitment and research infrastructure in relation to the strategic aims set for the administrative unit. The administrative unit should address at least the following five specific aspects in its self-assessment: 1) funding sources, 2) national and international cooperation, 3) cross-sector and interdisciplinary cooperation, 4) research careers and mobility, and 5) Open Science. These five aspects relate to how the unit organises and actually performs its research, its composition in terms of leadership and personnel, and how the unit is run on a day-to-day basis.

To contribute to understanding what the administrative unit can or should change to improve its ability to perform, the evaluation committee is invited to focus on factors that may affect performance.

Further, the evaluation committee assesses the extent to which the administrative unit's goals for the future remain scientifically and societally relevant. It is also assessed whether its aims and strategy, as well as the foresight of its leadership and its overall management, are optimal in relation to attaining these goals. Finally, it is assessed whether the plans and resources are adequate to implement this strategy.

2.2 Research production, quality and integrity

The evaluation committee assesses the profile and quality of the administrative unit's research and the contribution the research makes to the body of scholarly knowledge and the knowledge base for other relevant sectors of society. The committee also assesses the scale of the unit's research results (scholarly publications, research infrastructure developed by the unit, and other contributions to the field) and its contribution to Open Science (early knowledge and sharing of data and other relevant digital objects, as well as science communication and collaboration with societal partners, where appropriate).

The evaluation committee considers the administrative unit's policy for research integrity and how violations of such integrity are prevented. It is interested in how the unit deals with research data, data management, confidentiality (GDPR) and integrity, and the extent to which independent and critical pursuit of research is made possible within the unit. Research integrity relates to both the scientific integrity of conducted research and the professional integrity of researchers.

2.3 Diversity and equality

The evaluation committee considers the diversity of the administrative unit, including gender equality. The presence of differences can be a powerful incentive for creativity and talent development in a diverse administrative unit. Diversity is not an end in itself in that regard, but a tool for bringing together different perspectives and opinions.

The evaluation committee considers the strategy and practices of the administrative unit to prevent discrimination on the grounds of gender, age, disability, ethnicity, religion, sexual orientation or other personal characteristics.

2.4 Relevance to institutional and sectoral purposes

The evaluation committee compares the relevance of the administrative unit's activities and results to the specific aspects detailed in the Terms of Reference for each institution and to the relevant sectoral goals (see below).

Higher Education Institutions

There are 36 Higher Education Institutions in Norway that receive public funding from the Ministry for Education and Research. Twenty-one of the 36 institutions are owned by the ministry, whereas the last 15 are privately owned. The HEIs are regulated under the Act relating to universities and university colleges of 1 August 2005.

The purposes of Norwegian HEIs are defined as follows in the Act relating to universities and university colleges[2]

- provide higher education at a high international level;
- conduct research and academic and artistic development work at a high international level;
- disseminate knowledge of the institution's activities and promote an understanding of the principle of academic freedom and application of scientific and artistic methods and results in the teaching of students, in the institution's own general activity as well as in public administration, in cultural life and in business and industry.

In line with these purposes, the Ministry for Research and Education has defined four overall goals for HEIs that receive public funding. These goals have been applied since 2015:

1) High quality in research and education
2) Research and education for welfare, value creation and innovation
3) Access to education (esp. capacity in health and teacher education)
4) Efficiency, diversity and solidity of the higher education sector and research system

The committee is invited to assess to what extent the research activities and results of each administrative unit have contributed to sectoral purposes as defined above. In particular, the committee is invited to take the share of resources spent on education at the administrative units into account and to assess the relevance and contributions of research to education, focusing on the master's and PhD levels. This assessment should be distinguished from an

[2] https://lovdata.no/dokument/NLE/lov/2005-04-01-15?q=universities

assessment of the quality of education in itself, and it is limited to the role of research in fostering high-quality education.

Research institutes (the institute sector)

Norway's large institute sector reflects a practical orientation of state R&D funding that has long historical roots. The Government's strategy for the institute sector[3] applies to the 33 independent research institutes that receive public basic funding through the RCN, in addition to 12 institutes outside the public basic funding system.

The institute sector plays an important and specific role in attaining the overall goal of the national research system, i.e. to increase competitiveness and innovation power to address major societal challenges. The research institutes' contributions to achieving these objectives should therefore form the basis for the evaluation. The main purpose of the sector is to conduct independent applied research for present and future use in the private and public sector. However, some institutes primarily focus on developing a research platform for public policy decisions, others on fulfilling their public responsibilities.

The institutes should:

- maintain a sound academic level, documented through scientific publications in recognised journals
- obtain competitive national and/or international research funding grants
- conduct contract research for private and/or public clients
- demonstrate robustness by having a reasonable number of researchers allocated to each research field

The committee is invited to assess the extent to which the research activities and results of each administrative unit contribute to sectoral purposes and overall goals as defined above. In particular, the committee is invited to assess the level of collaboration between the administrative unit(s) and partners in their own or other sectors.

The hospital sector

There are four regional health authorities (RHFs) in Norway. They are responsible for the specialist health service in their respective regions. The RHFs are regulated through the Health Enterprises Act of 15 June 2001 and are bound by requirements that apply to specialist and other health services, the Health Personnel Act and the Patient Rights Act. Under each of the regional health authorities, there are several health trusts (HFs), which can consist of one or more hospitals. A health trust (HF) is wholly owned by an RHF.

Research is one of the four main tasks of hospital trusts.[4] The three other mains tasks are to ensure good treatment, education and training of patients and relatives. Research is important if the health service is to keep abreast of stay up-to-date with medical developments and carry out critical assessments of established and new diagnostic methods,

[3] Strategy for a holistic institute policy (Kunnskapsdepartementet 2020)

[4] Cf. the Specialist Health Services Act § 3-8 and the Health Enterprises Act §§ 1 and 2

treatment options and technology, and work on quality development and patient safety while caring for and guiding patients.

The committee is invited to assess the extent to which the research activities and results of each administrative unit have contributed to sectoral purposes as described above. The assessment does not include an evaluation of the health services performed by the services.

2.5 Relevance to society

The committee assesses the quality, scale and relevance of contributions targeting specific economic, social or cultural target groups, of advisory reports on policy, of contributions to public debates, and so on. The documentation provided as the basis for the assessment of societal relevance should make it possible to assess relevance to various sectors of society (i.e. business, the public sector, non-governmental organisations and civil society).

When relevant, the administrative units will be asked to link their contributions to national and international goals set for research, including the Norwegian Long-term Plan for Research and Higher Education and the UN Sustainable Development Goals. Sector-specific objectives, e.g. those described in the Development Agreements for the HEIs and other national guidelines for the different sectors, will be assessed as part of criterion 2.4.

The committee is also invited to assess the societal impact of research based on case studies submitted by the administrative units and/or other relevant data presented to the committee. Academic impact will be assessed as part of criterion 2.2.

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

- Commission a professional secretariat to support the assessment process in the committees and panels, as well as the production of self-assessments within each RPO
- Commission reports on research personnel and publications within life sciences based on data in national registries
- Appoint one or more evaluation committees for the assessment of administrative units.
- Divide the administrative units between the appointed evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.
- Appoint a number of expert panels for the assessment of research groups submitted by the administrative units.
- Divide research groups between expert panels according to similarity of research subjects or themes.
- Task the chairs of the evaluation committees with producing a national-level report building on the assessments of administrative units and a national-level assessments produced by the expert panels.

Committee members and members of the expert panels will be international, have sufficient competence and be able, as a body, to pass judgement based on all relevant assessment criteria. The RCN will facilitate the connection between the assessment levels of panels and committees by appointing committee members as panel chairs.

3.1 Division of tasks between the committee and panel levels

The expert panels will assess research groups across institutions and sectors, focusing on the first two criteria specified in Chapter 2: 'Strategy, resources and organisation' and 'Research production and quality' The assessments from the expert panels will also be used as part of the evidence base for a report on Norwegian research within life sciences (see section 3.3).

The evaluation committees will assess the administrative units based on all the criteria specified in Chapter 2. The assessment of research groups delivered by the expert panels will be a part of the evidence base for the committees' assessments of administrative units. See figure 1 below.

The evaluation committee has sole responsibility for the assessments and any recommendations in the report. The evaluation committee reaches a judgement on the research based on the administrative units and research groups' self-assessments provided by the RPOs, any additional documents provided by the RCN, and interviews with representatives of the administrative units. The additional documents will include a standardised analysis of research personnel and publications provided by the RCN.

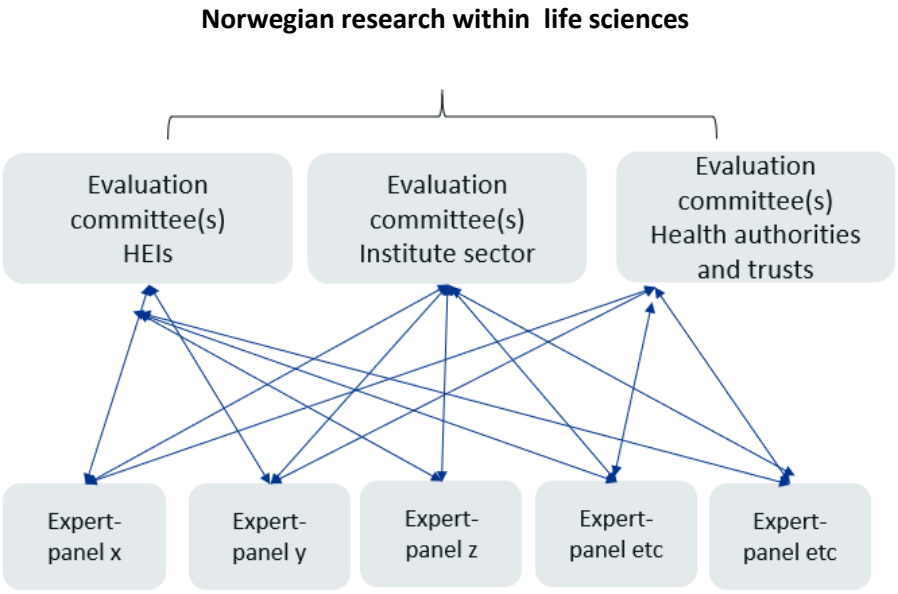

Figure 1. Evaluation committees and expert panels

The evaluation committee takes international trends and developments in science and society into account when forming its judgement. When judging the quality and relevance of the research, the committees shall bear in mind the specific tasks and/or strategic goals that the administrative unit has set for itself including sectoral purposes (see section 2.4 above).

3.2 Accuracy of factual information

The administrative unit under evaluation should be consulted to check the factual information before the final report is delivered to the RCN and the board of the institution hosting the administrative unit.

3.3 National level report

Finally, the RCN will ask the chairs of the evaluation committees to produce a national-level report that builds on the assessments of administrative units and the national-level assessments produced by the expert panels. The committee chairs will present their assessment of Norwegian research in life sciences at the national level in a separate report that pays specific attention to:

- Strengths and weaknesses of the research area in the international context
- The general resource situation regarding funding, personnel and infrastructure
- PhD training, recruitment, mobility and diversity
- Research cooperation nationally and internationally
- Societal impact and the role of research in society, including Open Science

This national-level assessment should be presented to the RCN.

Appendix A: Terms of References (ToR)

[Text in red to be filled in by the Research-performing organisations (RPOs)]

The board of [RPO] mandates the evaluation committee appointed by the Research Council of Norway (RCN) to assess [administrative unit] based on the following Terms of Reference.

Assessment
You are asked to assess the organisation, quality and diversity of research conducted by [administrative unit] as well as its relevance to institutional and sectoral purposes, and to society at large. You should do so by judging the unit's performance based on the following five assessment criteria (a. to e.). Be sure to take current international trends and developments in science and society into account in your analysis.

a) Strategy, resources and organisation
b) Research production, quality and integrity
c) Diversity and equality
d) Relevance to institutional and sectoral purposes
e) Relevance to society

For a description of these criteria, see Chapter 2 of the life sciences evaluation protocol. Please provide a written assessment for each of the five criteria. Please also provide recommendations for improvement. We ask you to pay special attention to the following [n] aspects in your assessment:

1. …
2. …
3. …
4. …

…

[To be completed by the board: specific aspects that the evaluation committee should focus on – they may be related to a) strategic issues, or b) an administrative unit's specific tasks.]

In addition, we would like your report to provide a qualitative assessment of [administrative unit] as a whole in relation to its strategic targets. The committee assesses the strategy that the administrative unit intends to pursue in the years ahead and the extent to which it will be capable of meeting its targets for research and society during this period based on available resources and competence. The committee is also invited to make recommendations concerning these two subjects.

Documentation
The necessary documentation will be made available by the life sciences secretariat at Technopolis Group.

The documents will include the following:

- a report on research personnel and publications within life sciences commissioned by RCN
- a self-assessment based on a template provided by the life sciences secretariat
- [to be completed by the board]

Interviews with representatives from the evaluated units
Interviews with the [administrative unit] will be organised by the evaluation secretariat. Such interviews can be organised as a site visit, in another specified location in Norway or as a video conference.

Statement on impartiality and confidence
The assessment should be carried out in accordance with the *Regulations on Impartiality and Confidence in the Research Council of Norway*. A statement on the impartiality of the committee members has been recorded by the RCN as a part of the appointment process. The impartiality and confidence of committee and panel members should be confirmed when evaluation data from [the administrative unit] are made available to the committee and the panels, and before any assessments are made based on these data. The RCN should be notified if questions concerning impartiality and confidence are raised by committee members during the evaluation process.

Assessment report
We ask you to report your findings in an assessment report drawn up in accordance with a format specified by the life sciences secretariat. The committee may suggest adjustments to this format at its first meeting. A draft report should be sent to the [administrative unit] and RCN by [date]. The [administrative unit] should be allowed to check the report for factual inaccuracies; if such inaccuracies are found, they should be reported to the life sciences secretariat no later than two weeks after receipt of the draft report. After the committee has made the amendments judged necessary, a corrected version of the assessment report should be sent to the board of [the RPO] and the RCN no later than two weeks after all feedback on inaccuracies has been received from [administrative unit].

Appendix B: Data sources

The lists below shows the most relevant data providers and types of data to be included in the evaluation. Data are categorised in two broad categories according to the data source: National registers and self-assessments prepared by the RFOs. The RCN will commission an analysis of data in national registers (R&D-expenditure, personnel, publications etc.) to be used as support for the committees' assessment of administrative units. The analysis will include a set of indicators related to research personnel and publications.

- **National directorates and data providers**
- Norwegian Directorate for Higher Education and Skills (HK-dir)
- Norwegian Agency for Quality Assurance in Education (NOKUT)
- Norwegian Agency for Shared Services in Education and Research (SIKT)
- Research Council of Norway (RCN)
- Statistics Norway (SSB)

National registers

1) R&D-expenditure
    a. SSB: R&D statistics
    b. SSB: Key figures for research institutes
    c. HK-dir: Database for Statistics on Higher Education (DBH)
    d. RCN: Project funding database (DVH)
    e. EU-funding: eCorda
2) Research personnel
    a. SSB: The Register of Research personnel
    b. SSB: The Doctoral Degree Register
    c. RCN: Key figures for research institutes
    d. HK-dir: Database for Statistics on Higher Education (DBH)
3) Research publications
    a. SIKT: Cristin - Current research information system in Norway
    b. SIKT: Norwegian Infrastructure for Bibliometrics
    (full bibliometric data incl. citations and co-authors)
4) Education
    a. HK-dir/DBH: Students and study points
    b. NOKUT: Study barometer
    c. NOKUT: National Teacher Survey
5) Sector-oriented research
    a. RCN: Key figures for research institutes
6) Patient treatments and health care services
    a. Research & Innovation expenditure in the health trusts
    b. Measurement of research and innovation activity in the health trusts
    c. Collaboration between health trusts and HEIs
    d. Funding of research and innovation in the health trusts
    e. Classification of medical and health research using HRCS (HO21 monitor)

Self-assessments

1) Administrative units
    a. *Self-assessment covering all assessment criteria*
    b. Administrative data on funding sources
    c. Administrative data on personnel
    d. Administrative data on the division of staff resources between research and other activities (teaching, dissemination etc.)
    e. Administrative data on research infrastructure and other support structures
    f. SWOT analysis
    g. Any supplementary data needed to assess performance related to the strategic goals and specific tasks of the unit

2) Research groups
    a. *Self-assessment covering the first two assessment criteria (see Table 1)*
    b. Administrative data on funding sources
    c. Administrative data on personnel
    d. Administrative data on contribution to sectoral purposes: teaching, commissioned work, clinical work [will be assessed at committee level]
    e. Publication profiles
    f. Example publications and other research results (databases, software etc.) The examples should be accompanied by an explanation of the groups' specific contributions to the result
    g. Any supplementary data needed to assess performance related to the benchmark defined by the administrative unit

The table below shows how different types of evaluation data may be relevant to different evaluation criteria. Please note that the self-assessment produced by the administrative units in the form of a written account of management, activities, results etc. should cover all criteria. A template for the self-assessment of research groups and administrative units will be commissioned by the RCN from the life sciences secretariat for the evaluation.

Table 1. Types of evaluation data per criterion

Evaluation units / Criteria	Research groups	Administrative units
Strategy, resources and organisation	Self-assessment Administrative data	Self-assessment National registers Administrative data SWOT analysis
Research production and quality	Self-assessment Example publications (and other research results)	Self-assessment National registers
Diversity, equality and integrity		Self-assessment National registers Administrative data
Relevance to institutional and sectoral purposes		Self-assessment Administrative data
Relevance to society		Self-assessment National registers Impact cases
Overall assessment	*Data related to:* *Benchmark defined by administrative unit*	*Data related to:* *Strategic goals and specific tasks of the admin. unit*

The Research Council of Norway

EVALBIOVIT

Self-assessment for administrative units

Version 1.2

Overview

Institution (name and short name):
Administrative unit (name and short name):
Date:
Contact person:
Contact details (email):

1 Introduction

The primary aim of the evaluation is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), and by the institute sector. For the life sciences area, research undertaken by regional health authorities and health trusts is also included. These institutions will henceforth be collectively referred to as research performing organisations (RPOs). The evaluation report(s) will provide a set of recommendations to the RPOs, the Research Council of Norway (RCN) and the concerned ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research, and society at large.

You have been invited to complete this self-assessment as an administrative unit. The self-assessment contains questions regarding the unit's research- and innovation related activities and developments over the past 10 years. All the submitted data will be evaluated by evaluation committees (for administrative units) and expert panels (for research groups). Please read through the whole document including all instructions before answering the questions to avoid overlaps.

As an administrative unit, you are also responsible for collecting the completed self-assessment for each of the research groups that belong to the unit. The research groups need to submit their completed self- assessment to the unit no later than the 1st of December 2022. The unit will submit the research groups' completed self-assessments and the unit's own completed self-assessment no later than the 5th of December 2022.

The whole self-assessment shall be written in English.

Please use the following format when naming your document: name of the institution, and name of the administrative unit, e.g. UiO_FacBiosci. Send it to evalbiovit@technopolis-group.com no later than 5th of December 2022.

For questions concerning the self-assessment or EVALBIOVIT in general, please contact RCN's evaluation secretariat at Technopolis Group: evalbiovit.questions@technopolis-group.com.

Many thanks in advance![1]

[1] Personal information will be deleted when evaluation reports are published and no later than 30 April 2024

For more information on how Technopolis Group handles data processing, see: http://www.technopolis-group.com/privacy-policy/

For more information on how the Research Council of Norway handles data processing, see: https://www.forskningsradet.no/en/privacy-policy/

2 Self-assessment for administrative units

Self-assessment guidelines:

- Data on personnel should refer to reporting to DBH on 1 October 2021 for HEIs and to the yearly reporting for 2021 for the institute sector
- Other data should refer to 31 December 2021 if not specified otherwise
- Please read the entire self-assessment document before answering
- Provide information – provide documents and other relevant data or figures about the administrative unit, for example strategy and other planning documents, as well as data on R&D expenditure, sources of income and results and outcomes of research
- Describe – explain and present using contextual information about the administrative unit (most often this includes filling out specific forms) and inform the reader about the administrative unit
- Reflect – comment in a reflective and evaluative manner how the administrative unit operates
- 4000 characters including spaces equals one page

2.1 Strategy, resources and organisation of research

2.1.1 Research strategy

2.1.1.1 Describe the main strategic goals for research and innovation of the administrative unit (1000–4000 characters). How are these goals related to institutional strategies?

- Describe the main fields and focus of research and innovation in the unit
- Describe how you work to maximise synergies between the different purposes of the unit
- Describe the planned research-field impact; planned policy impact and planned societal impact
- Describe how the strategy is followed-up in the allocation of resources and other measures
- Describe the most important occasions where priorities are made (i.e., announcement of new positions, applying for external funding, following up on evaluations)
- If there is no long-term research strategy – explain why

Form 1 *Administrative unit's strategic planning documents*

Instructions: For each category (Research strategy, Research funding, Cooperation policy, Open science policy) present up to 5 documents that according to you are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. Please use the following formatting: Name of document, Years active, Link to the document.

Example: Norwegian University of Science and Technology Strategy, 2021–2025, hyperlink to the document

2.1.2 Organisation of research

2.1.2.1 Describe the organisation of research and innovation activities at the unit, including how responsibilities for research and other purposes (education, knowledge exchange, patient treatment, training etc) are distributed and delegated (500–1500 characters).

Form 2 *SWOT analysis for administrative units*

Instructions: Please complete a SWOT analysis for your administrative unit. Reflect on what are the major internal Strengths and Weaknesses as well as external Threats and Opportunities for your research and innovation activities and research environment. Assess what the present Strengths enable in the future and what kinds of Threats are related to the Weaknesses. Consider your scientific expertise and achievements, funding, facilities, organisation and management (500–2000 characters per cell).

2.1.3 Research funding

2.1.3.1 Describe the funding sources of the unit and indicate the share of the unit's budget (NOK) dedicated to research compared to other purposes. Shares may be calculated based on full time equivalents (FTE) allocated to research compared to total FTE in unit (500–1500 characters).

2.1.3.2 Describe how successful the administrative unit has been in obtaining competitive regional, national and/or international research funding grants (200–1000 characters).

Form 3 *Funding levels for the administrative unit for 2021*

Instructions: For administrative units in the institute sector receiving basic funding via RCN, funding levels should be provided for 2021 in the funding categories used in the yearly reporting:

a) National grants (NOK) (post 1.1 og 1.2)):

   i) from the Research Council of Norway (NOK) – excluding basic funding

   ii) from the ministries and underlying directorates (NOK)

   iii) from industry (NOK)

   iv) other national grants including third sector, private associations and foundations (NOK)

b) National contract research (post 1.3)

c) International grants (post 1.4)

d) Funding related to public management (forvaltningsoppgaver post 1.5)

For Higher Education Institutions costs covered by external funding sources should be reported according to the same categories as far as possible. Costs may be classified as Other if they cannot be placed in one of the specified categories. Reporting should be based on incurred costs (regnskapstall) for 2021.

2.1.4 Participation in national infrastructures

2.1.4.1 Describe the most important participation in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Nasjonalt veikart for forskningsinfrastruktur) including as host institution(s) (200–1000 characters).

Form 4 *Infrastructures listed in the Norwegian roadmap for research infrastructures (Nasjonalt veikart for forskningsinfrastruktur)*

Instructions: Please present up to 5 participations in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Nasjonalt veikart for forskningsinfrastruktur) for each area that were the most important to your administrative unit. For each category area, please use the following formatting:

Name of research infrastructure, Years when used, Description (100–500 characters) of the engagement with the research infrastructure (reasoning, objectives, expected/actual outcomes).

[2] Excluding basic funding.

[3] For research institutes only research activities should be included from section 1.3 in the yearly reporting

2.1.4.2 Describe the most important participation in the international infrastructures funded by the ministries (Norsk deltakelse i internasjonale forskningsorganisasjoner finansiert av departementene) (200–1000 characters).

Form 5 *Participation in international research organisations*

Instructions: Please describe up to 5 participations in international and European infrastructures (ESFRI) for each area that have been most important to your research unit. When presenting your participation, please use the following formatting:

Name of research infrastructure, Years when used, Description (100–500 characters) of the participation in the research infrastructure (reasoning, objectives, expected/actual outcomes).

2.1.4.3 Describe the most important participation in European (ESFRI) infrastructures (Norske medlemskap i infrastrukturer i ESFRI roadmap) including as host institution(s) (200–1000 characters).

Form 6 *Participation in infrastructures on the ESFRI Roadmap*

Instructions: For each area, please give a description of up to 5 engagements that have been most important to your research unit. When presenting your participation, please use the following formatting: Name of research infrastructure, Years when used, Description (100–500 characters) of the engagement with the research infrastructure (reasoning, objectives, expected/actual outcomes)."

2.1.5 Accessibility to research infrastructures

2.1.5.1 Describe the accessibility to research infrastructures for your researchers. Considering both physical and electronic infrastructure (200–1000 characters).

2.1.5.2 Describe what is done at the unit to fulfil the FAIR-principles[4] (200–1000 characters).

2.1.6 Research staff

2.1.6.1 Describe the profile of research personnel at the unit in terms of position and gender (200–1000 characters).

Form 7 *Administrative data on the division of staff resources for 2021*

2.1.6.2 Describe the structures and practices to foster researcher careers and help early-career researchers to make their way into the profession (200–1000 characters).

2.1.6.3 Describe how research time is distributed among staff including criteria for research leave (forskningsfri) (200–1000 characters).

2.1.6.4 Describe research mobility options (200–1000 characters).

2.2 Research production, quality, and integrity

2.2.1 Research quality and integrity

2.2.1.1 Describe the scientific focus areas of the research conducted at the administrative unit, including the unit's contribution to these areas (500–2000 characters).

2.2.1.2 Describe the unit's policy for research integrity, including preventative measures when integrity is at risk, or violated (200–1000 characters).[5]

2.2.2 Open Science policies at the administrative unit

2.2.2.1 Describe the institutional policies, approaches, and activities to the following Open Science areas (consider each area separately, 500–1000 characters in total):

- Open access to publications
- Open access to research data and implementation of FAIR data principles
- Open-source software/tools
- Open access to educational resources
- Open peer review
- Skills and training for Open Science
- Citizen science and/or involvement of stakeholders / user groups

2.2.2.2 Describe the most important contributions and impact of the unit's researchers towards the different Open Science areas (consider each area separately, 500–1000 characters in total):

- Open access to publications
- Open access to research data and implementation of FAIR data principles
- Open-source software/tools
- Open access to educational resources
- Open peer review
- Skills and training for Open Science
- Citizen science and/or involvement of stakeholders/user groups

2.2.2.3 Describe the institutional policy regarding ownership of research data, data management, and confidentiality (200–1000 characters). Is the use of data management plans implemented at the unit?

2.3 *Diversity and equality*

2.3.1 Diversity and equality practices

2.3.1.1 Describe the policy and practices to protect against any form of discrimination in the administrative unit (200–1000 characters).

Form 8 *Administrative unit's policies against discrimination*

Instructions: Give a description of up to 5 documents that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then these documents should be referred to. For each document use the following formatting: Name of document, Years active, Link to the document

Example: Norwegian University of Science and Technology Strategy, 2021–2025, hyperlink to the document

2.4 Relevance to institutional and sectorial purposes

2.4.1 Sector specific impact

2.4.1.1 Describe whether the administrative unit has activities aimed at achieving sector-specific objectives[6] or focused on contributing to the knowledge base in general. Describe activities connected to sector-specific objectives, the rationale for participation and achieved and/or expected impacts (500–3000 characters).

- Alternatively, describe whether the activities of the unit are aimed at contribution to the knowledge base in general. Describe the rationale for this approach and the impacts of the unit's work to the knowledge base.

2.4.2 Research innovation and commercialisation

2.4.2.1 Describe the administrative unit's practices for innovation and commercialisation (500–1500 characters).

- Describe the interest among the research staff in doing innovation and commercialisation activities
- Describe how innovation and commercialisation is supported at the unit

Form 9 *Administrative unit's policies for research innovation*

Instructions: Describe up to 5 documents of the administrative unit's policies for research innovation, including IP policies, new patents, licenses, start-up/spin-off guidelines, etc., that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. For each document use the following formatting: Name of document, Years active, Link to the document

Example: Norwegian University of Science and Technology Strategy, 2021–2025, hyperlink to the document

2.4.2.2 Provide examples of successful innovation and commercialisation results, such as new patents, licenses, etc (500–1500 characters).

Form 10 *Administrative description of successful innovation and commercialisation results*

Instructions: Please describe up 10 successful innovation and commercialisation results at your administrative unit. For each result, please use the following formatting: Name of innovation and commercial results, Year, Links to relevant documents, articles, etc. that present the result, Description (100–500 characters) of successful innovation and commercialisation result.

2.4.3 Collaboration

2.4.3.1 Describe the unit's policy towards regional, national and international collaboration, as well as how cross-sectorial collaboration and interdisciplinary collaboration is approached at the administrative unit (500–1500 characters). Please fill out the forms that match your institution: the institute sector fills out Form 11a and Form 11b; HEIs fill out Form 12.

- Reflect on how successful the unit have been in meeting its aspirations for collaborations

Form 11a (institute sector) *Administrative unit's partnerships ('faktisk samarbeid')*

Instructions: For each of the administrative unit's tender and project-based cooperation (which are not tax deducted) please present up to 5 examples under each category (Collaboration with national public institutions; Collaboration with national private institutions; Collaboration with international public institutions; Collaboration with international private institutions). Please use 100– 500 characters to describe the impacts and relevance of collaboration.

Form 11b (institute sector) *Administrative unit's collaboration*

Instructions: For each of the administrative unit's tender and project-based cooperation please present up to 5 examples under each category (Collaboration with academic partners nationally; Collaboration with non-academic partners nationally; Collaboration with academic partners internationally; Collaboration with non-academic partners internationally). Please use 100–500 characters to describe the impacts and relevance of collaboration.

2.4.3.2 Reflect on the importance of different types of collaboration for the administrative unit (200–1000 characters).

- Regional, national and international collaborations

Collaborations with different sectors, including public, private and third sector

Form 12 (HEIs) *Administrative unit's partnerships" ('faktisk samarbeid')*

Instructions: For each of the administrative unit's tender and project-based cooperation (which are not tax deducted) please present up to 5 examples under each category (Collaboration with national public institutions; Collaboration with national private institutions; Collaboration with international public institutions; Collaboration with international private institutions). Please use 100– 500 characters to describe the impacts and relevance of collaboration.

2.4.3.3 Reflect on the importance of different types of collaboration for the administrative unit, the added value of these collaborations to the administrative unit and Norwegian research system (500–1500 characters).

2.4.4 ONLY for higher education institutions

2.4.4.1 Reflect on how research at the unit contributes towards master and PhD-level education provision, at your institutions and beyond (200–1000 characters).7

2.4.4.2 Describe the opportunities for master and bachelor students to become involved in research activities at the unit (200–1000 characters).

2.4.5 ONLY for research institutes

2.4.5.1 Describe how the research activities at the administrative unit contribute to the knowledge base for policy development, sustainable development, and societal and industrial transformations more generally (500–1500 characters).8

2.4.5.2 Describe the most important research activities including those with partners outside of research organisations (500–1500 characters).

2.5 Relevance to society

2.5.1 Administrative unit's societal impact

2.5.1.1 Reflect on the unit's contribution towards the Norwegian Long-term plan for research and higher education, societal challenges more widely, and the UN Sustainable Development Goals (500–1500 characters).

2.5.1.2 Describe how the administrative unit's research and innovation has contributed to economic, societal and cultural development by submitting one to five impact cases depending on the size of the unit. For up to 10 researchers: one case; for 10 to 30 researchers: two cases; for 30-50 researchers: three cases; for 50-100 researchers: four cases, and up to five cases for units exceeding 100 researchers. Please use the attached template for impact cases. Each impact case will be submitted as an attachment to the self-evaluation. Institutions that submit impact cases do not have to fill in the box below.

Case no. 1

Thank you for completing the self-assessment.

[7] Please note: RCN will provide data from the national student survey (Studiebarometeret) on students' experience with research methods and exposure to research activities. The data will most probably be on an aggregate level but including the unit under assessment.

[8] Strategi for helhetlig instituttpolitikk, Kunnskapsdepartementet, p.4): «Instituttsektoren skal utvikle kunnskapsgrunnlag for politikkutforming og bidra til bærekraftig utvikling og omstilling, gjennom forskning av høy kvalitet og relevans.» (The government's strategy for an independent institute sector).

List of research groups

Institution	Administrative unit	Research group
Norwegian Polar Institute	Forskningsavdelingen	*Biodiversty and ecotoxiocology*
		Ocean Sea Ice Geology Geophysics, Norwegian Polar Institute

Scales for research group assessment

Organisational dimension

Score	Organisational environment
5	An organisational environment that is outstanding for supporting the production of excellent research.
4	An organisational environment that is very strong for supporting the production of excellent research.
3	An organisational environment that is adequate for supporting the production of excellent research.
2	An organisational environment that is modest for supporting the production of excellent research.
1	An organisational environment that is not supportive for the production of excellent research.

Quality dimension

Score	Research and publication quality	Score	Research group's contribution Groups were invited to refer to the Contributor Roles Taxonomy in their description https://credit.niso.org/
5	Quality that is outstanding in terms of originality, significance and rigour.	5	The group has played an outstanding role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	4	The group has played a very considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	3	The group has a considerable role in the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
2	Quality that meets the published definition of research for the purposes of this assessment.	2	The group has modest contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.
1	Quality that falls below the published definition of research for the purposes of this assessment.	1	The group or a group member is credited in the publication, but there is little or no evidence of contributions to the research process from the formulation of overarching research goals and aims via research activities to the preparation of the publication.

Societal impact dimension

Score	Research group's societal contribution, taking into consideration the resources available to the group	Score	User involvement
5	The group has contributed extensively to economic, societal and/or cultural development in Norway and/or internationally.	5	Societal partner involvement is outstanding – partners have had an important role in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
4	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is very considerable given what is expected from groups in the same research field.	4	Societal partners have very considerable involvement in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
3	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is on par with what is expected from groups in the same research field.	3	Societal partners have considerable involvement in the research process, from problem formulation to the publication and/or process or product innovation.
2	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is modest given what is expected from groups in the same research field.	2	Societal partners have a modest part in the research process, from problem formulation to the publication and/or process or product innovation.
1	There is little documentation of contributions from the group to economic, societal and/or cultural development in Norway and/or internationally.	1	There is little documentation of societal partners' participation in the research process, from problem formulation to the publication and/or process or product innovation.

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 Evaluation of life sciences in Norway 2022-2023
- Administrative Unit´s Terms of Reference
- Administrative Unit's self-assessment report
- Administrative Unit's impact cases
- Administrative Unit's research groups evaluation reports
- Panel reports from the Expert panels
- Bibliometric data (*NIFU Nordic Institute for Studies of innovation, research and education*)
- Personnel data (*Statistics Norway (SSB)*)
- Funding data – The Research Council´s contribution to biosciences research (*RCN*)
- Extract from the Survey for academic staff and the Student Survey (*Norwegian Agency for Quality Assurance in Education (NOKUT)*)

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 hour-long 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 without adjustments. The Committee judged the information received through documentary inputs and the interview with the Administrative Unit sufficient to complete the evaluation.

The Committee judged that the Administrative Unit's self-assessment report was insufficient to assess all evaluation criteria fully, and some information gaps remained after the interview with the Administrative Unit.

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