



Ten years of Nordic Research Funding

2009–2018



NordForsk

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NordForsk is an organisation under the Nordic Council of Ministers that provides funding for and facilitates Nordic cooperation on research and research infrastructure.

Ten Years of Nordic
Research Funding
2009-2018

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NordForsk
Stensberggata 27
0170 Oslo, Norway
nordforsk.org
Org.nr. 971 274 255

Text and data
Anna Herou

Cover illustration
KRUT Collective /
Måns Eklund

Design
KRUT Collective,
krut.fi

PREFACE

NordForsk was established by the Nordic Council of Ministers in 2005 and has funded a large number of research projects and other activities over the years. The mechanisms and instruments for funding Nordic research collaboration have changed over the past decade, and the topics and themes have varied a great deal.

NordForsk collaborates closely with the national research funding organisations in the Nordic countries. Since 2017, NordForsk has reached the goal of two-thirds of the budget coming from national research funders, and the remaining one-third coming from Nordic Council of Ministers. The remaining one-third of the budget has come from the basic funding from the Nordic Council of Ministers. We would like to thank the national funders of research for their generous contributions to our work and look forward to continuing to develop NordForsk together in close collaboration.

In order to learn more about the research NordForsk funds, we decided to carry out a portfolio analysis to measure and map the research conducted. The report covers the past ten-year period, from 2009 to 2018 and the aims of this portfolio analysis were to map funded research and to generate a quality-assured material that describes the developments and results of funding decisions and strategies over the years, as a basis for further discussions.

This analysis shows that the approval rate for Project Grants has varied widely between calls, but the overall approval rate was 14 per cent. The approval rate for Project Grants indicates that there has been widespread interest for NordForsk among researchers. The keen competition for funding may also indicate that only research of high quality was funded.

Notably, the overall approval rate for project grants was exactly the same (14 per cent) for female and male project leaders. Moreover, the ratio of female and male researchers involved in projects funded in the period 2015–2018 has been close to 50/50. These results show that there is no implicit gender bias in NordForsk activities and procedures, and that the ambitious gender policy drawn up in 2013 has had the intended effect. When it comes to the funding granted, however, male project leaders have received 66 per cent of the total funding over the ten-year period. Thus, there is still work to be done to reduce gender imbalances in our funding system.

This portfolio analysis does not examine the Nordic added value of the projects per se. However, we have mapped both Nordic research cooperation and how the research supports the UN Sustainable Development Goals, and have found that all 17 goals are being addressed to some degree. Based on the large number of applications submitted under NordForsk calls, the high number of researchers receiving funding from NordForsk, and in particular the very positive figures showing the high proportion of female researchers involved in NordForsk projects, it is clear that NordForsk has contributed positively to the development of the Nordic Research Area.



ARNE FLÅØYEN
Director, NordForsk

SUMMARY

The portfolio analysis Ten years of Nordic Research Funding 2009–2018 explores the development and distributions of funding to Nordic research cooperation within NordForsk during the years 2009–2018. NordForsk has in this period granted NOK2124million to Nordic research cooperation through 49 calls. Out of the 1 358 applications, 323 have been granted funding.

At least 2 640 researchers are involved as project leaders or participating researchers in funded Project Grants, Nordic Centres of Excellence and Nordic University Hubs. The proportions of female and male involved researchers have become more balanced in recent years, with precisely 50 per cent female and male researchers in grants awarded in 2018.

Male project leaders have been granted 66 per cent of the total funding 2009–2018. Among the total submitted applications, 39 percent have a female project leader and 61 per cent a male project leader. The total approval rate is 14 per cent for both female and male project leaders. The results indicate that more male project leaders than female apply for calls with the highest grant allocations.

Project leaders from Norway have had the highest approval rate (19 per cent) for calls for Project Grants, Nordic Centres of Excellence and Nordic University Hubs. Swedish project leaders have received the largest percentage of funding (30 per cent), followed by Norwegian (26 per cent) and Danish (23 per cent). This does not take into account that the nature of NordForsk funding means that it is distributed to involved researchers in several Nordic countries. We see that among involved researchers, the largest group is from the same country as the Project leader. Further, female project leaders tend to lead a more balanced group of female and male researchers than male project leaders.

All 17 UN Sustainable Development Goals are, to some extent, addressed in the research funded since 2013. Thematic calls that encourage or require interdisciplinarity are common in the NordForsk portfolio, and most project leaders (68 per cent) also consider their research to be more interdisciplinary than disciplinary. Since 2013, NordForsk has funded research within all research areas. The largest percentage of funding has gone to research within Medical and Health Sciences, most common in Project Grants. Natural and Social Sciences have been funded to a similar degree, especially within Nordic Centres of Excellence and Nordic University Hubs. Within Nordic University Hubs most of the funding to Humanities and the Arts as well as Engineering and Technology can be found.

A large part of funded research (77 per cent) is considered Strategic Basic Research or Applied Research. Almost half of funded research is either Pure Basic or Strategic Basic Research. 12 per cent is considered Experimental Development.

NordForsk
has granted

2124

**MILLION
NOK**

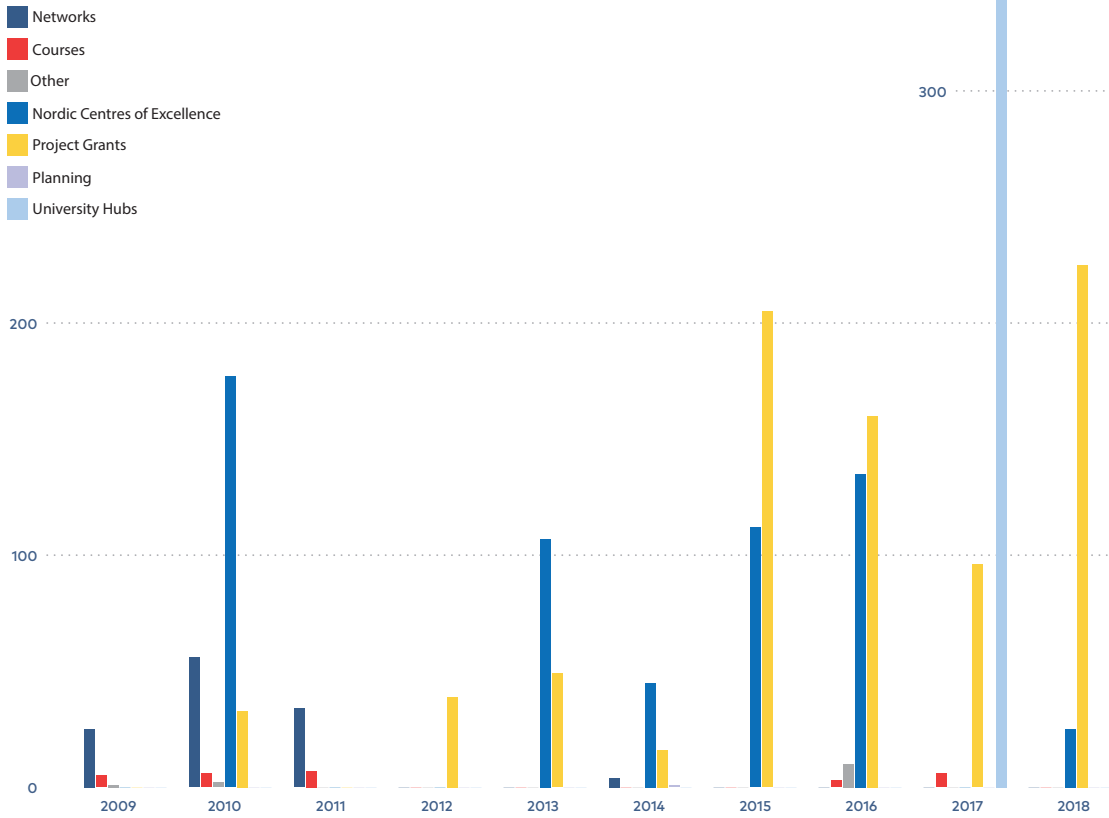
to Nordic research
cooperation through

49
calls.

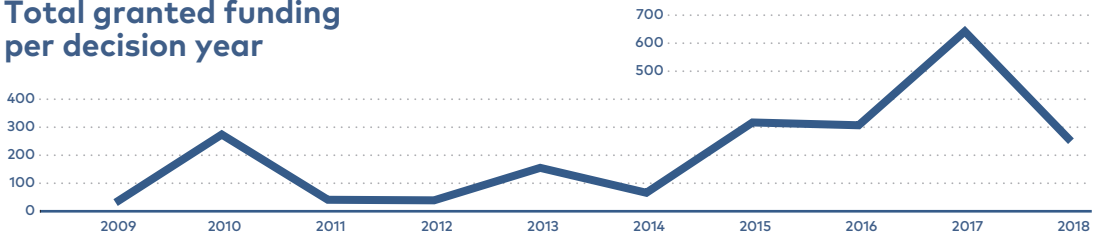
BACKGROUND

Funding to types of grants per decision year

Million NOK



Total granted funding per decision year



CONT. →

The NordForsk funding portfolio has evolved over the past ten years, from a focus on network grants and funding for courses to greater focus on larger grants such as Project Grants, Nordic Centres of Excellence and Nordic University Hubs. The past few years have also seen a change in the initiation of calls and programmes with an open invitation to all national research funders to submit joint expressions of interest.

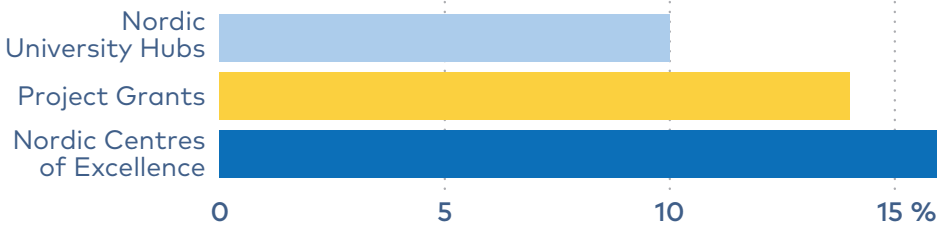
Since 2010, a total of NOK 823 million has been granted to 83 **Project Grants**, with a majority of the projects being funded from 2015. The total approval rate for project grants is 14 per cent for both female and male project leaders. The amount of project funding varies, averaging between NOK 1 and 29 million, depending on the purpose of the call.

Funding for **Nordic University Hubs** was first granted in 2017, where NOK 180 million was distributed to six hubs to promote university cooperation and facilitate the development of world-leading Nordic research environments. The participating institutions themselves contribute with two-thirds of the total budget, in total the consortia have a budget of NOK 540 million. The amount of the funding was between NOK 48 and 128 million. The approval rate for the call was 10 per cent, with 8 per cent for female and 10 per cent for male project leaders.

Most **Nordic Centres of Excellence (NCoE)** have been funded from 2013. In 2010 there were two large-scale calls for Nordic Centres of Excellence following the Nordic Top-level Research Initiative (TRI) towards solving the global climate

Approval rate 2010–2018

Approval rate, per cent



crisis, under which a total of NOK 177 million was granted to six Nordic Centres of Excellence. Since 2013, a total of NOK 424 million has been granted to 18 Nordic Centres of Excellence, most of which received in the vicinity of NOK 20–30 million each. The approval rate for Nordic Centres of Excellence in total is 16 per cent, with 17 per cent for female and 15 per cent for male project leaders. Nordic Centres of Excellence is the type of grant involving the largest number of researchers, with an average of 49 participating researchers.

The **Network Grant** was a smaller grant and the majority of the grants totalled approximately NOK 850 000. The approval rate was high, 35 per cent of all applications were granted funding. Overall, NOK 120 million has been provided for a total of 130 Network Grants from 2009 up to 2014.

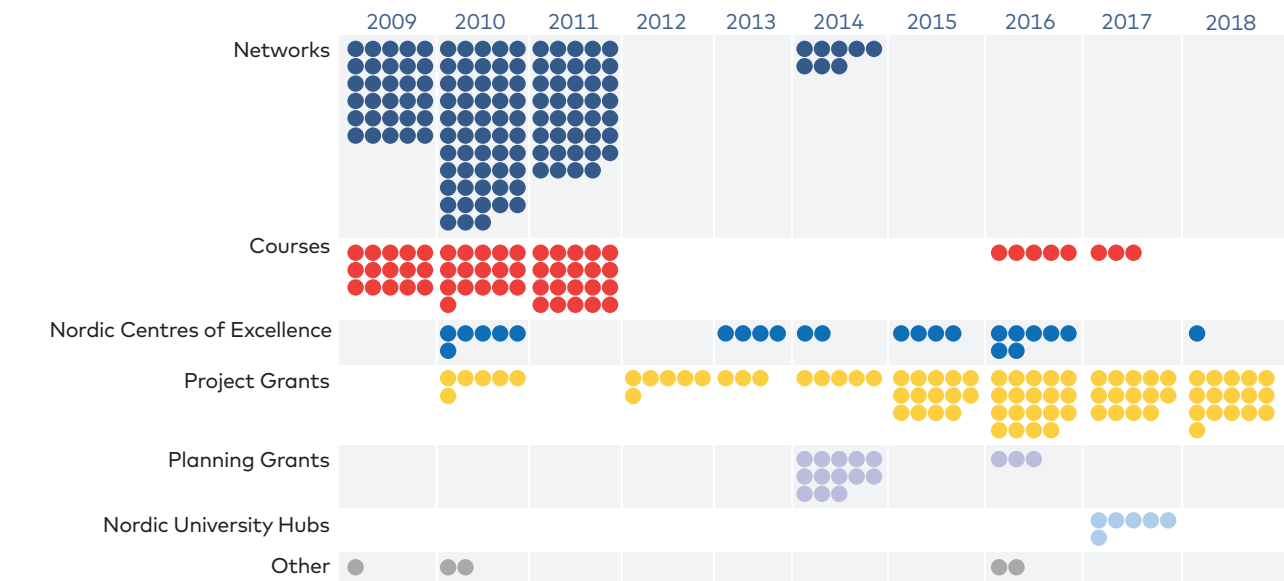
The total approval rate for both **Courses** and **Planning Grants** has been 41 per cent. Funding for Courses was mainly provided before 2012, while Planning Grants have only been granted 2014 and 2016 during the past ten years. Most calls for Courses granted an average of NOK 350 000, while the Planning Grants were all for NOK 100 000.

NordForsk has been the host organisation for the **Nordic e-Infrastructure Collaboration (NeIC)**, since 2012. NeIC facilitates the development of advanced IT tools and services in areas of importance to Nordic researchers. NordForsk has been the host organisation for NeIC since 2012. In total, NOK 247 million of direct funding and in kind have been spent on activities carried out by national e-infrastructure provider organisations and university partners during 2012–2018.

There are ongoing calls at NordForsk, within Migration and Integration, Sustainable Urban Development and Smart Cities, Nordic Research Infrastructure Hubs, Interdisciplinary research and Societal Security, that are not included in this report as no funding decision has been made.

Details relating to the distribution of funding to e.g. research areas, countries and researcher gender are provided throughout this report, and details on the developments in approval rates and application submissions can be found specifically in the chapter *Researchers in Nordic Research Cooperation*.

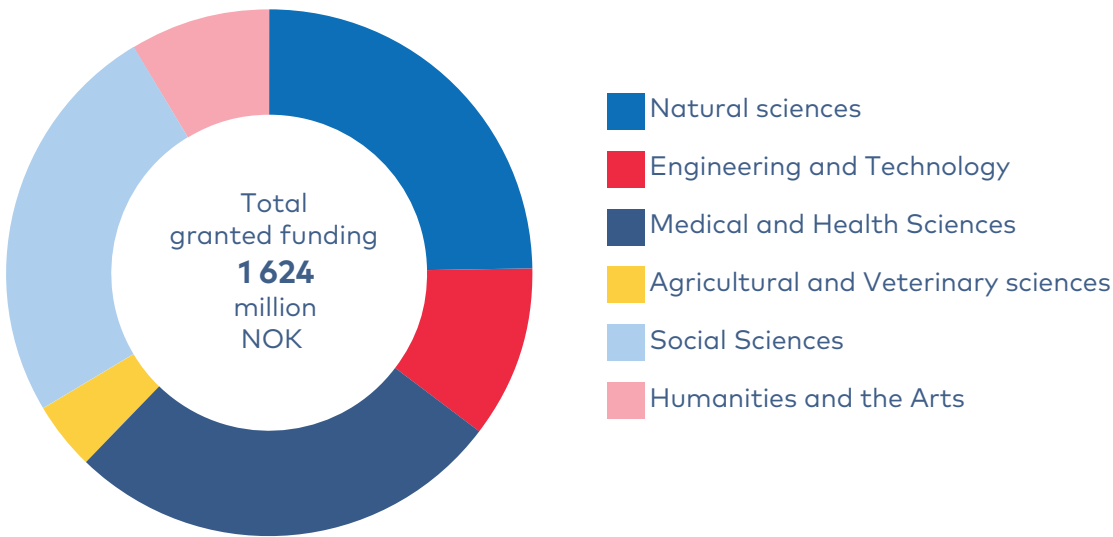
Total number of awarded grants per type and decision year



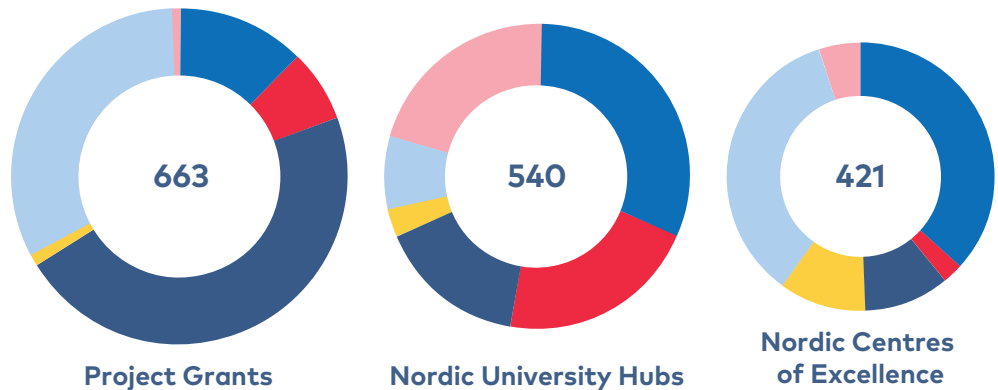
RESEARCH AREAS AND INTERDISCIPLINARITY

Distribution of granted funding (million NOK) per research area

Total of Project Grants, Nordic Centres of Excellence and Nordic University Hubs



Distribution of total funding (million NOK) to research areas within types of grants, NCoE, Projects, University hubs



As one research project may be distributed over up to three research areas, the funding has been fractioned according to estimates of the project leader or equally. Please note that a small number of grants have not been classified according to research area and are missing in the statistics, making the total amount differ between chapters. Funding to Nordic Centres of Excellence totals nearly NOK 421 million. Funding for Project Grants totals NOK 663 million and Nordic University Hubs totals NOK 540 million.

While there are no restrictions regarding the research areas that may be funded by NordForsk, most calls have had a clear theme that is of greater relevance to some research areas than others. Of the NOK 1624 million that have been granted to Project Grants, Nordic Centres of Excellence and Nordic University Hubs since 2013, funding has been distributed to a similar degree to the broader areas of Natural Science, Engineering and Technology and Agricultural and Veterinary

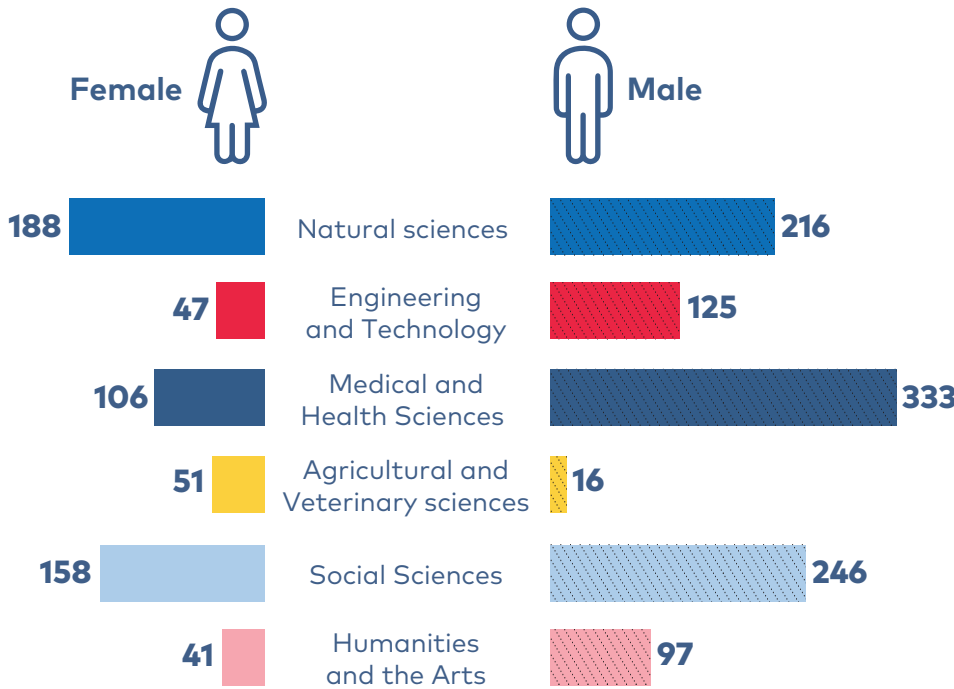
Sciences, which combined have received NOK 643 million; Medical and Health Science, which has received NOK 439 million; and Social Science and the Humanities, which have received NOK 542 million.

The largest amount has gone to research within Medical and Health Sciences, which is most common within Project Grants. Natural and Social Sciences have been funded to a similar extent, especially within Nordic Centres of Excellence and Nordic University Hubs. Within Nordic University Hubs most of the funding to Humanities and the Arts as well as Engineering and Technology can be found. It is worth noting that much of the research involves more than one research area, so the funding within one grant may be distributed over more than one area. This is also evident in the distribution of funding within the research programmes, where, for example, nearly one fourth of the research under Health and Welfare is research in Social sciences. In most cases this is research that is also defined as belonging to Clinical Medicine or Health Sciences.

One of the most diverse programmes in terms of research areas is the Nordic University Hubs, which also did not have a designated theme. The majority of funding under Nordic University Hubs has gone to research within Natural Sciences, Engineering and Technology and Humanities and the Arts, while 72 per cent of funding under calls for Nordic Centres of Excellence was granted within Natural

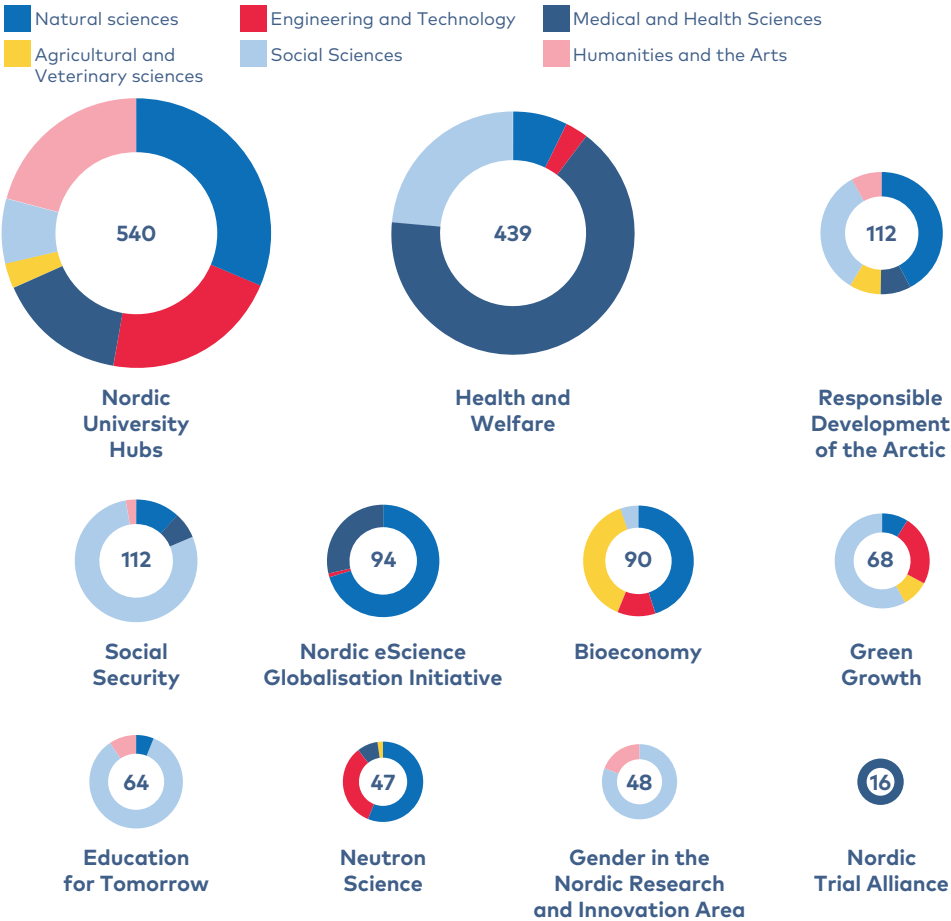
Total granted funding (million NOK) to research areas, per gender of project leader

Project Grants, Nordic Centres of Excellence and Nordic University Hubs 2013–2018



Research areas within programmes based on distribution of funding

Proportions based on total granted funding. Project Grants, Nordic Centres of Excellence and Nordic University Hubs with funding decision 2013–2018



Sciences and Social Sciences. Medical Sciences on their own have received 47 per cent of Project Grant funding, followed by Social Sciences at 32 per cent.

The classification of the research has been made through a survey in which the project leaders have indicated up to three specific areas that best describe their research. The categorisation of research areas is based on the two levels of the *OECD Fields of science and technology classification*. The classification has only been carried out for research funded from 2013 to 2018. If more than one area has been indicated, the funding has been divided up proportionately to reflect the estimations by the project leaders or equally.

Most calls for Nordic Centres of Excellence and Project Grants have a specific theme or focus on one or several research areas. This means that there is an established strategic basis for part of the distribution of funding with regard to what the research can address and how this is weighted in relation to the excellence of the research in the funding decision.

Interdisciplinarity

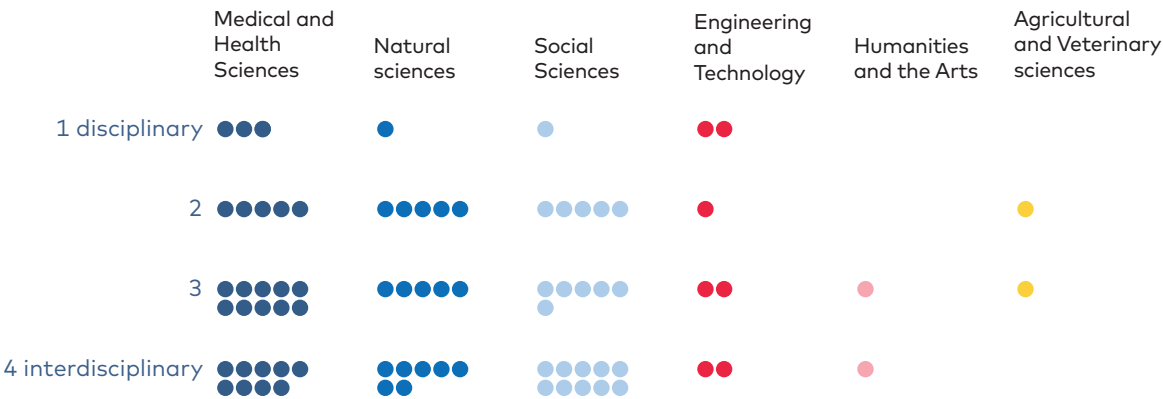
In any study of the interdisciplinarity in research there will be a discussion of definition, and there are many definitions of, and distinctions between, inter-, multi- and transdisciplinary research. For the purpose of the NordForsk portfolio, interdisciplinary research is defined as research that "integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge to advance fundamental understanding or to solve problems whose solutions are beyond the scope of a single discipline or area of research practice." This definition can be found with the National Science Foundation, USA, while similar definitions can be found with other research organisations.

Project leaders of research funded from 2013 and onwards have been asked to classify the level of interdisciplinarity of their NordForsk-funded research according to a simple scale based on this definition.

Thematic calls that encourage or require interdisciplinarity are common in the NordForsk portfolio. Most project leaders also consider their research to be more interdisciplinary than disciplinary, regardless of research area. 68 per cent have classified their research as 3 or 4 on the 4-level scale. Whereas all research that

Research areas of interdisciplinarity

Project Grants, Nordic Centres of Excellence and Nordic University Hubs with funding decision 2013–2018



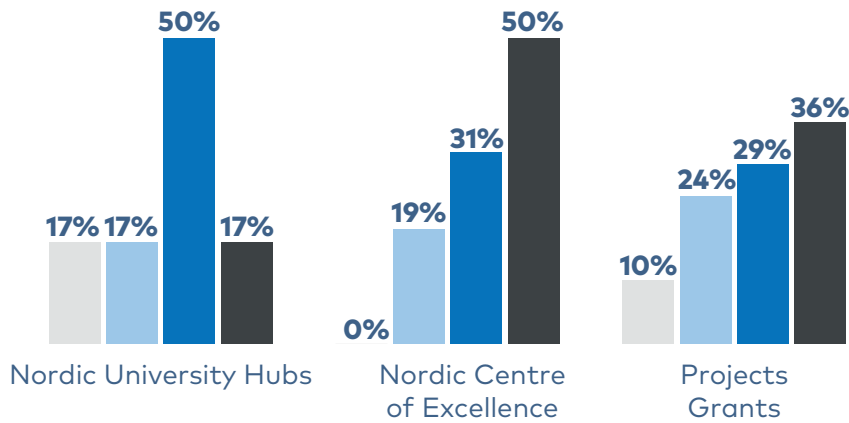
Number of applications - fractions of 1. As one research project may be distributed over up to three research areas, they have been fractioned according to estimates of the project leader or equally.

Most funding is granted to interdisciplinary research

Total granted funding 2013–2018
Number of applications



Projects, Nordic Centre of Excellence and Nordic University Hubs with funding decision 2013-2018, separately
Percentage of applications



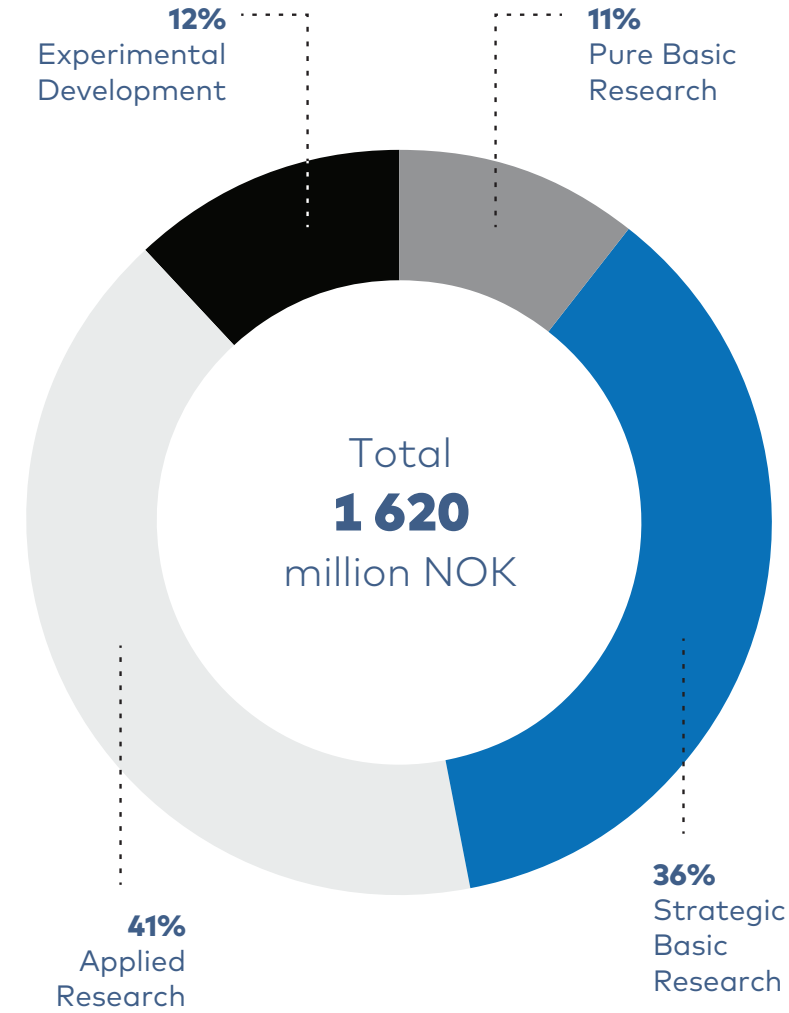
includes areas in Humanities and the Arts as well as Agricultural and Veterinary Sciences is classified as interdisciplinary to some degree, the other research areas are all classified under disciplinary research as well.

The project leaders of the Nordic Centres of Excellence have classified their research as the most interdisciplinary. The calls have often had a cross-, multi or interdisciplinary approach. The funding of Centres of Excellence can create a space for interdisciplinary research that may not otherwise fit in a disciplinary structure, and is commonly targeted towards addressing grand challenges or to strengthen a strategic area.

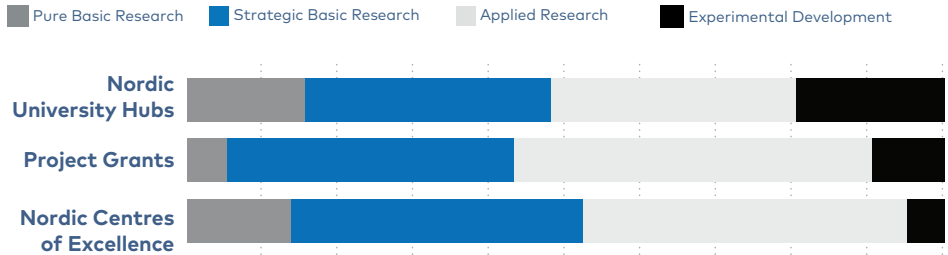
RESEARCH ACTIVITY

Applied and Strategic Basic Research receive most funding

Total granted funding to research activities;
Project Grants, Nordic Centres of Excellence,
Nordic University Hubs 2013–2018



Research activities in types of grant, distribution per granted amount



Research activity describes where the research is on a scale from basic research, which is mainly concerned with the advancement of knowledge without consideration of application or profit, to experimental development, which includes innovation of products, processes or services. The simple four-stage is meant to follow every area of research, while there are other, more precise scales for specific areas. The scale is based on the OECD guidelines and the Australian and New Zealand Standard Research Classification. Descriptions of each research activity can be found in Information and disclaimers.

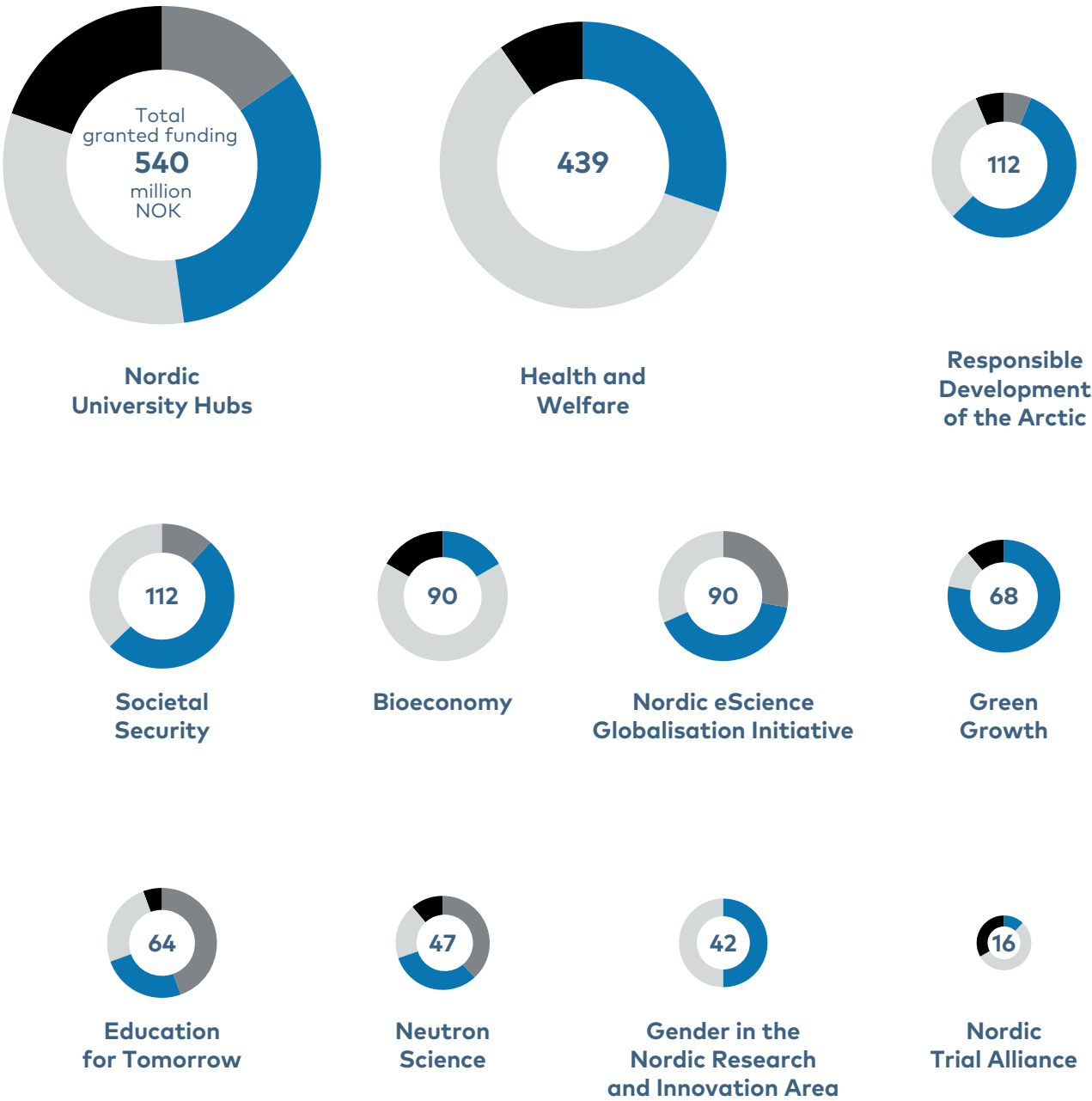
The research activity mapping shows that the majority of research funded in the period 2013–2018 lies within Strategic Basic Research (36 per cent) and Applied Research (41 per cent). Several project leaders have indicated that their research extends across more than one activity, which is shown in the breadth of each funded research and programme. Nordic University Hubs have the largest proportion of both Pure Basic Research and Experimental Development activity, compared to the distribution within Project Grants and Nordic Centres of Excellence. However, all types of grants are similar in that they exhibit a majority of Strategic Basic Research and Applied Research activity. Together, Pure Basic Research and Strategic Basic Research activity comprises 47 per cent of funded research.

The largest proportion of Pure Basic Research activity is found within the programmes Education for tomorrow, Neutron Science and the Nordic eScience Globalisation Initiative. The Nordic Trial Alliance, the Nordic cooperation on clinical research, has the largest proportion of Experimental Development activity, followed by Nordic University Hubs and Bioeconomy. Further, research within Bioeconomy is generally further along on the scale, and has a majority of its funding within Applied Research. Health and Welfare and the Nordic Trial Alliance also have a majority of funding within Applied Research, while Green Growth has a clear majority of funded research within Strategic Basic Research.

Research activities vary between programmes

Total granted funding (million NOK) to research activities per programme
Project grants, Nordic Centres of Excellence, Nordic University Hubs 2013–2018

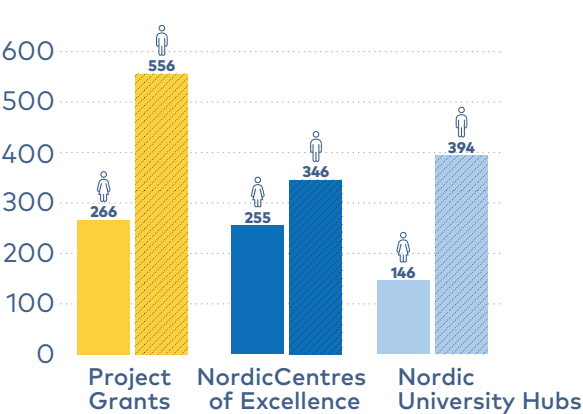
Pure Basic Research Strategic Basic Research Applied Research Experimental Development



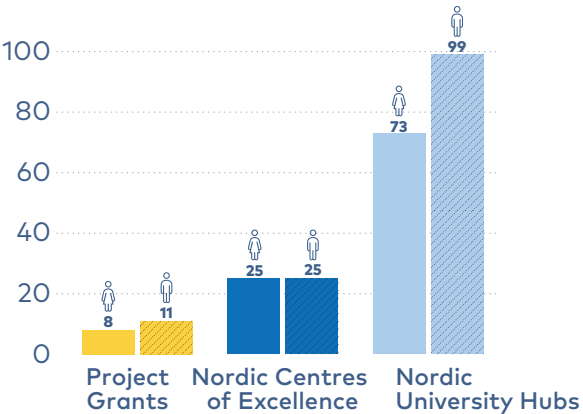
RESEARCHERS AND NORDIC RESEARCH COOPERATION

Total size of funding 2010–2018

Total granted amount
million NOK



Average grant size
million NOK



Funding Granted

Of the NOK 2 124 million granted within all calls 2009-2018, 34 per cent of the funding has been granted to projects with a female project leader and 66 per cent with a male project leader. Looking specifically at NordForsk's recent grant types Project Grants, Nordic Centres of Excellence and Nordic University Hubs, the proportions are the same (34 and 66 per cent), and in real funding this entails NOK 667 million to female and NOK 1 296 million to male project leaders. The largest percentage of funding to female project leaders (42 per cent) has been within calls for Nordic Centres of Excellence, while the largest percentage for male project leaders (73 per cent) is within Nordic University Hubs.

In terms of average grant size, the amounts for female project leaders are closest to the same as for male project leaders in the calls for Nordic Centres of Excellence, with NOK 25 million for both. Male project leaders have been granted larger sized grants and a higher total funding amount in both Project Grants and Nordic University Hubs. This can to some extent be explained by the different size of grants under different calls, as an example there is no fixed size for a typical Project Grant.

Swedish project leaders have received the largest amount (30 per cent) of funding to Project Grants, Nordic Centres of Excellence and Nordic University Hubs, followed by Norway (26 per cent) and Denmark (23 per cent).

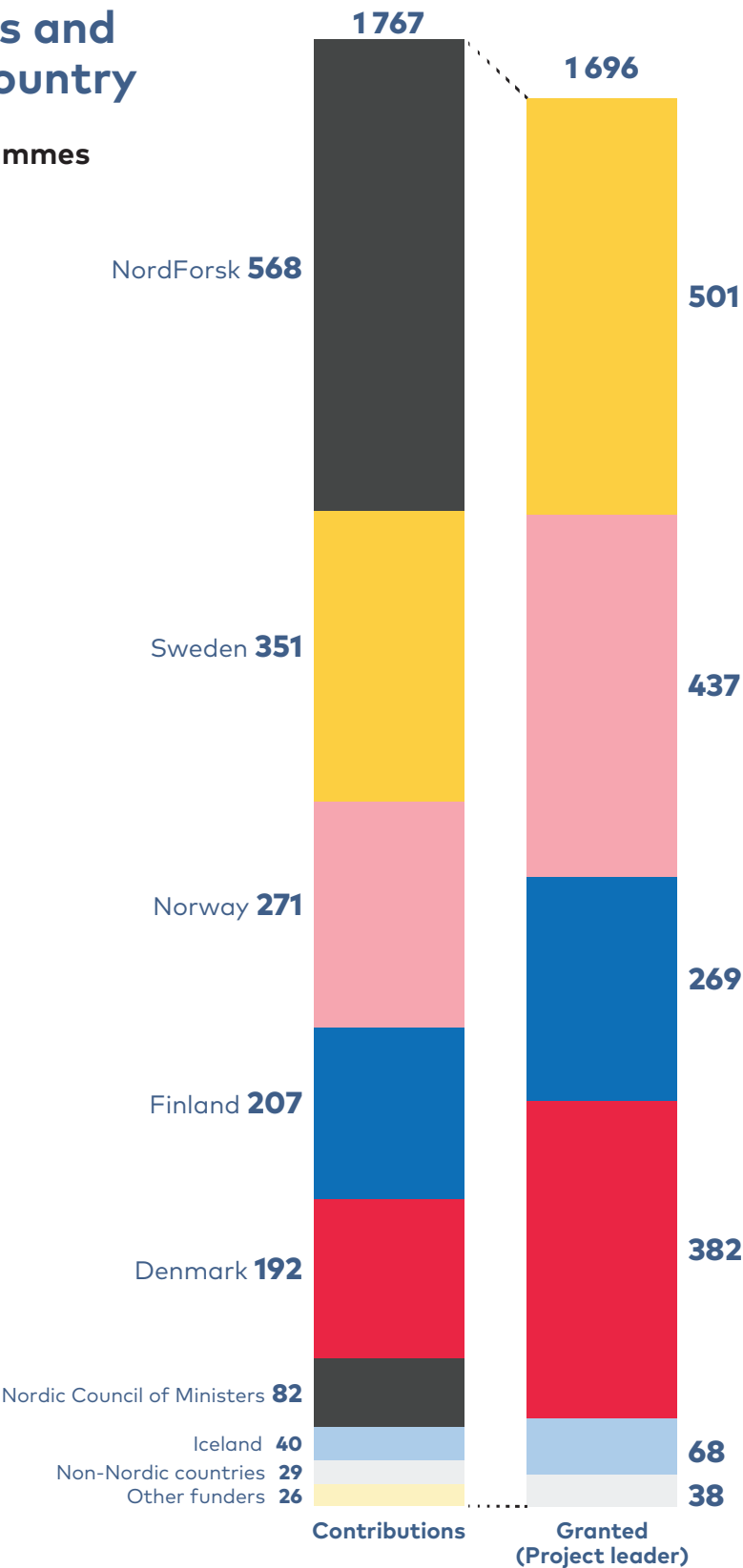
Please note that these proportions do not take into account that funding is distributed to several researchers of different genders and in several countries, within a grant, but focuses on gender and country of the researchers set as project leaders.

Financial contributions and granted funding per country

All types of grants, active programmes

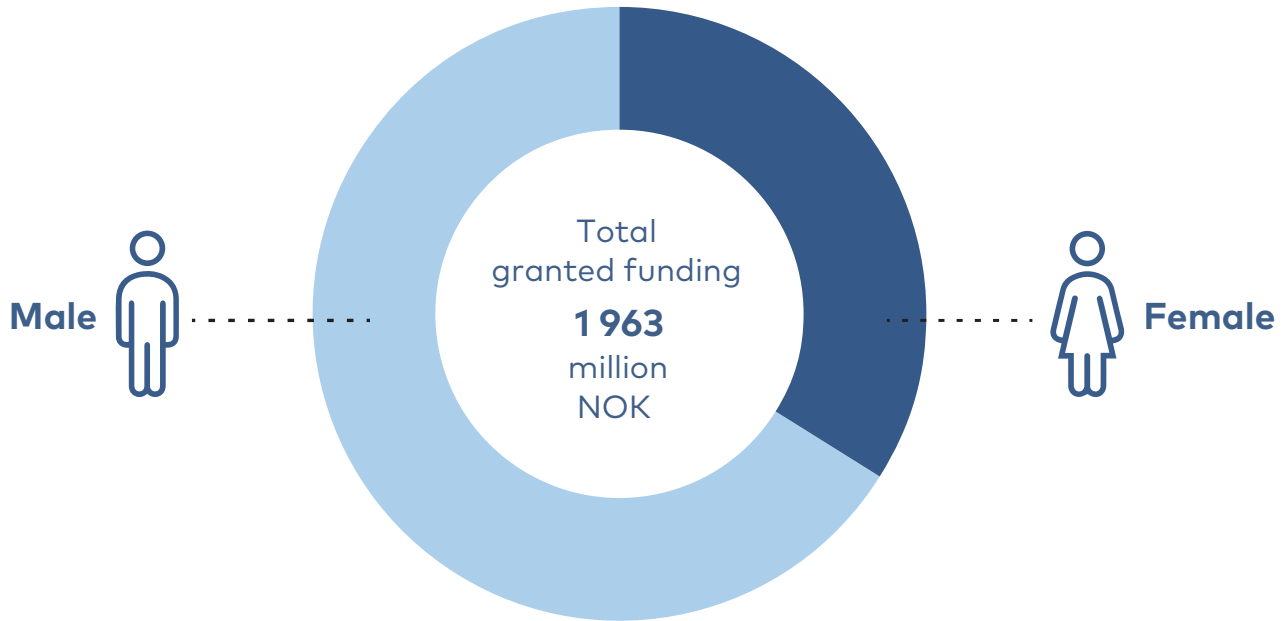
Granted funding distributed according to country of project leader, except for Nordic University Hubs where both financial contributions and granted funding have been distributed according to actual budget. The total financial contributions include funding to research grants as well as other programme activities.

Funding within programmes active in 2018, with funding decisions within calls 2012-2018. Namely: Nordic eScience Globalisation Initiative, Education for Tomorrow, Gender in the Nordic Research and Innovation Area, Nordic Bioeconomy programme, Nordic Green Growth Research and Innovation Programme, Nordic Neutron Science Programme, Nordic Programme on Health and Welfare, Nordic Societal Security Programme, Responsible Development of the Arctic and Nordic University Hubs.

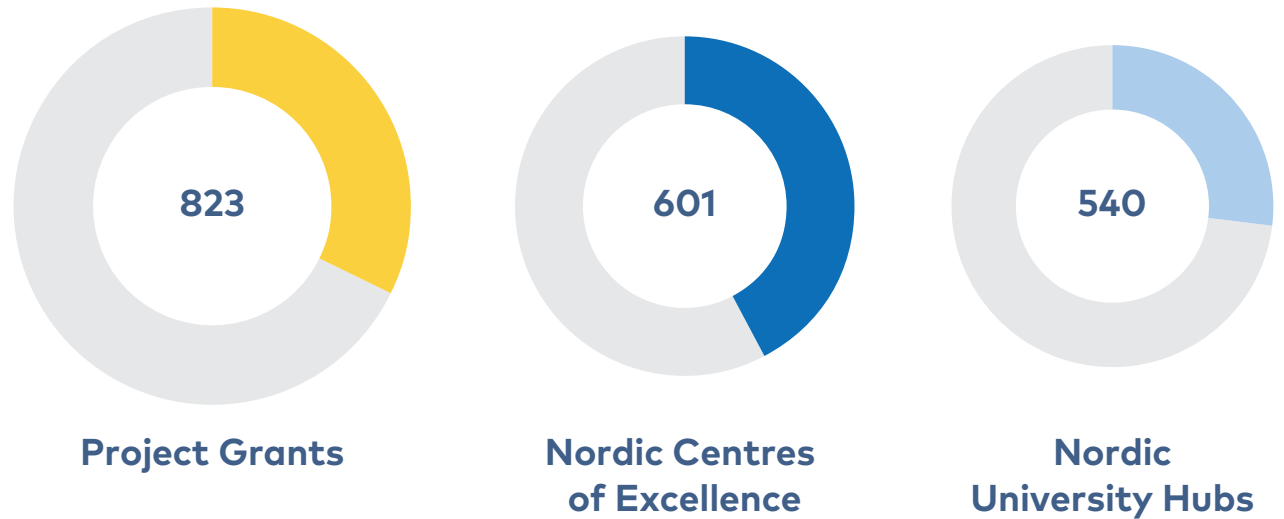


Male project leaders have received two thirds of total funding

In total, one third of the funding was granted to female project leaders and two thirds to male project leaders within Project Grants, Nordic Centres of Excellence and Nordic University Hubs.



The proportion of funding to female and male project leaders differs between Project Grants, Nordic Centres of Excellence and Nordic University Hubs.



1217
unique
applicants
have
submitted
applications
to NordForsk
calls 2009–
2018.

Application Submission and Approval Rate

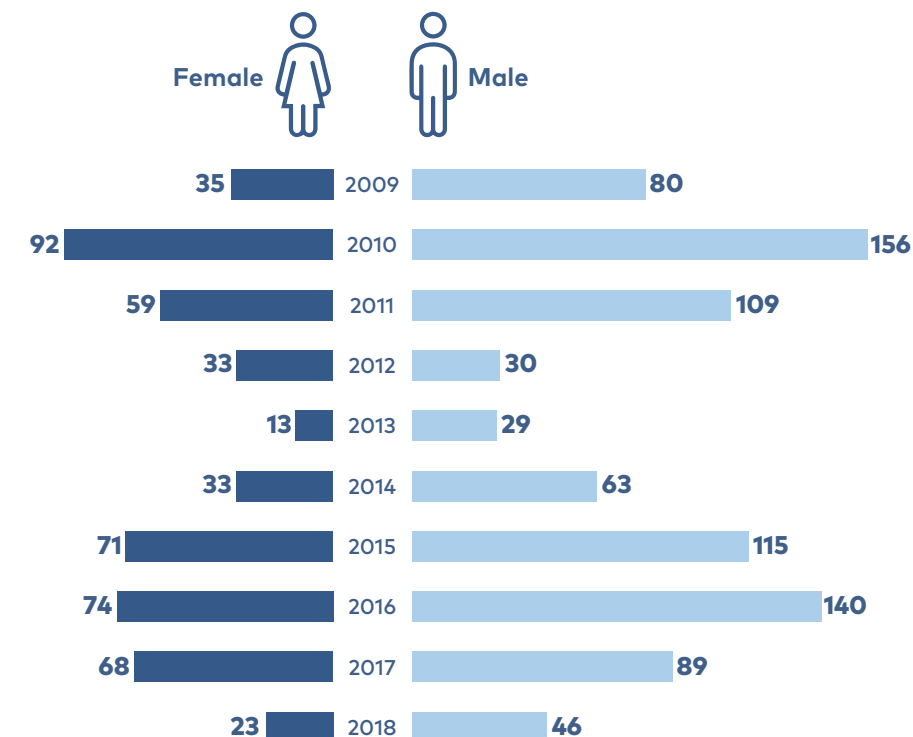
Counting all types of NordForsk calls from 2009 to 2018, there have been 1 217 unique applicants with successfully submitted applications. There were 452 female and 765 male project leaders, of whom 292 (112 female and 180 male) were granted funding.

With regard to applications to each of the grant types Projects Grants, Nordic Centres of Excellence and Nordic University Hubs, the ratio of applications from female and male project leaders is roughly the same; women are proposed as project leaders in around 39 per cent of the applications and men in around 61 per cent within all grant types.

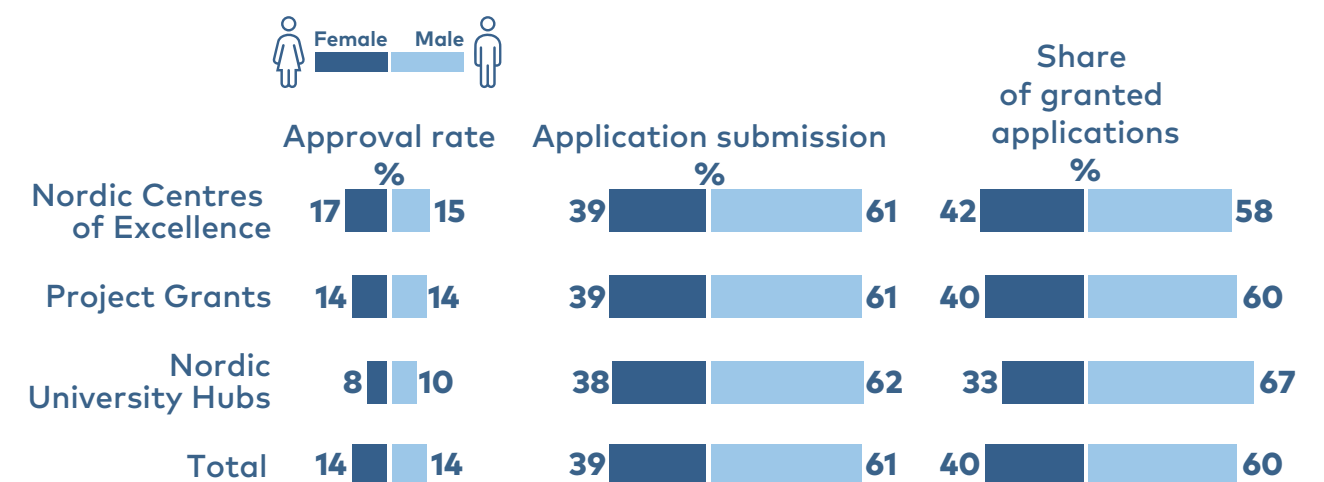
Looking at application submission, the results indicate that more male project leaders than female apply to calls for Project Grants, Nordic Centres of Excellence and Nordic University Hubs where the average amount approved is higher. The number of applications from female project leaders is lower than male project leaders in most calls for Nordic Centres of Excellence except for three of the calls (within gender, education and societal security) where female project leaders comprised a majority among all the applicants. It is important to note that, the number of applications for individual calls is between 3 and 97, while the number of those granted funding is between 1 and 7. This makes it more informative to view the effects of funding efforts for types of grants or programmes as a whole.

Application submission per female and male project leaders

All calls 2009–2018

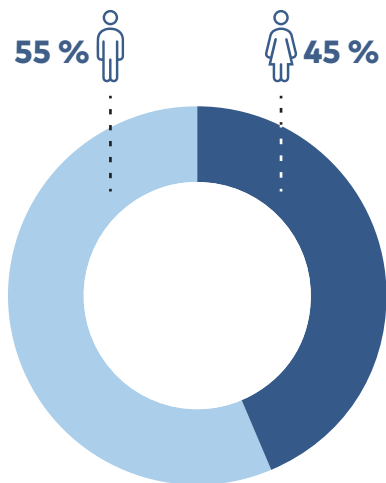


Application submission and approval rates per gender and type of grant



Gender balance in expert panels 2013–2018

The expert panels that evaluate applications of NordForsk calls have had a gender balance of 45 per cent female and 55 per cent male experts, since the introduction of the current gender policy in 2013.

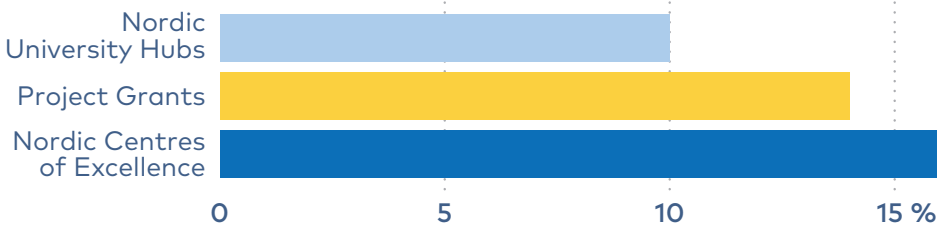


The application submission from female project leaders is 39 per cent for both Nordic Centres of Excellence and Project Grants and 38 per cent for Nordic University Hubs. However, the percentage of approved applications is higher, at 42 per cent of approved Nordic Centres of Excellence and 40 per cent of approved Project Grants. The approval rate is subsequently generally higher for female project leaders for Nordic Centres of Excellence and Project Grants. However, male project leaders have been granted 67 per cent of the University Hub grants, with an approval rate of 10 per cent compared to 8 per cent for female project leaders. For Project Grants the approval rate has been 14 per cent for both female and male project leaders. This rate is relatively low, compared to Nordic national Project Grant calls.

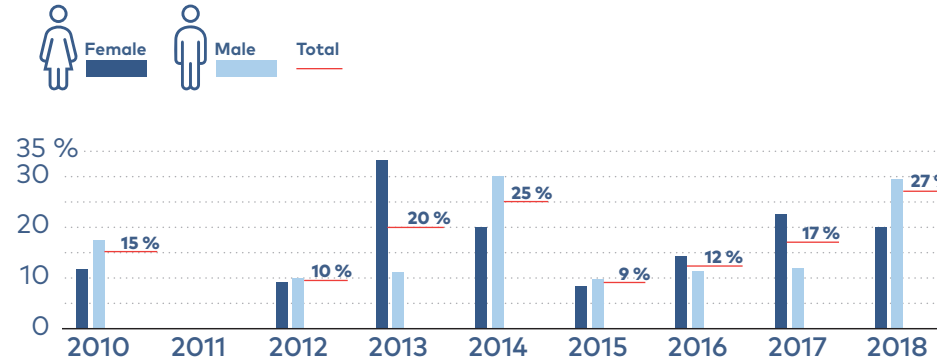
In total for calls for Nordic Centres of Excellence, Project Grants and Nordic University Hubs, project leaders from Norway have the highest approval rate, at 19 per cent, followed by Denmark at 16 per cent, and Sweden at 13 per cent. Project leaders from Sweden have submitted the highest percentage of applications, at 27 per cent, followed by Norway at 23 per cent and Finland at 21 per cent. Project leaders in Sweden have received the largest percentage of funding at 30 per cent, followed by Norway at 26 per cent and Denmark 23 per cent of the NOK 1 946 million that has been granted since 2010. It is important to note that NordForsk grants do not go to researchers in one country alone, as the grants by nature involve a cooperative effort between researchers in multiple countries. Details on the participation of researchers from different countries can be found under *Participating researchers*.

Approval rate 2010–2018

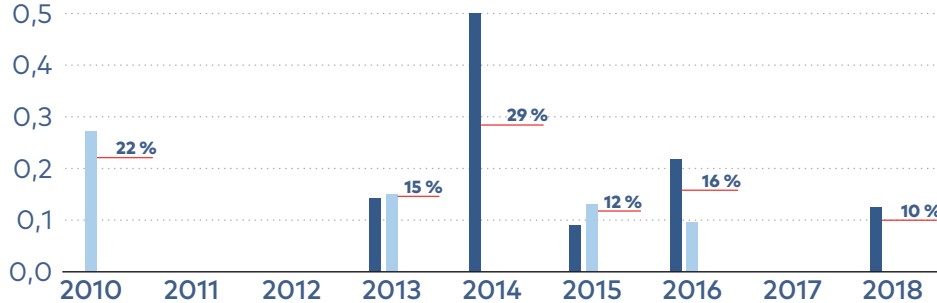
Approval rate, per cent



Project Grants



Nordic Centres of Excellence



Participating researchers

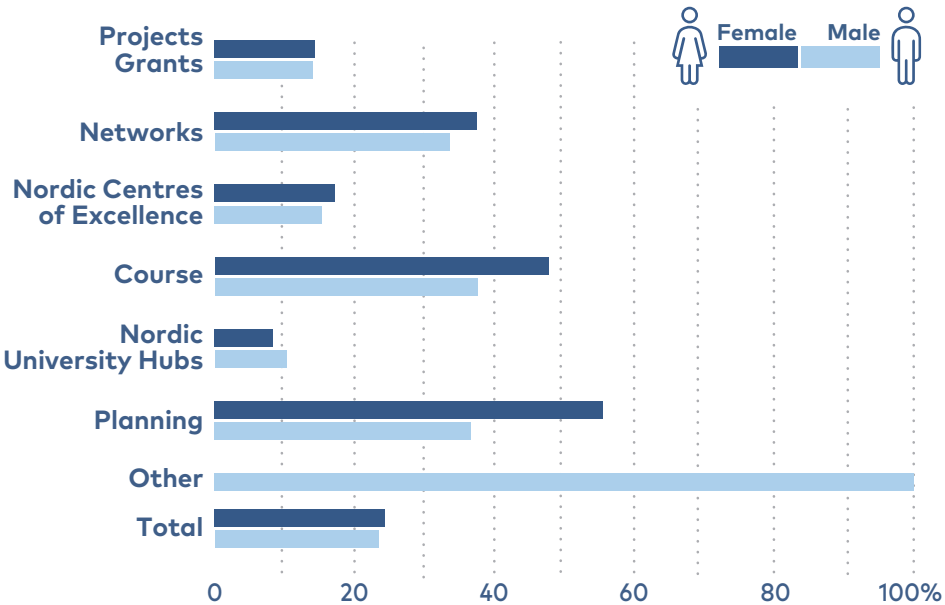
One of the key aims of funding efforts under NordForsk is to bring together national research groups in the Nordic countries. While the research organisation with which the project leader is affiliated is the project owner, funding within a grant goes out to participating researchers in several other countries. Mapping the participating researchers provides a broader image of both the gender and the country of the participating researchers. This does not express the dynamics in all research teams applying to NordForsk, just those that have received funding. Participating researchers are defined as all academic participants within a grant, both those who have a coordinating role and those researchers who are involved in other ways.

Out of funded Project Grants, Nordic Centres of Excellence and Nordic University Hubs 2010–2018, 40 per cent of the project leaders were female and 60 per cent male. Of the total of funded project leaders and participating researchers 2010–2018, 42 per cent were female and 58 per cent male. The proportion of female versus male researchers in funded research teams has become more equal in recent years. For the years 2015–2018, where a majority of the calls have been decided and most of the research funding allocated, the ratio has shifted to 48 per cent female researchers and 52 per cent male researchers.

The Nordic Centres of Excellence involve many researchers in collaboration, on average 49 researchers, which means the proportion of female and male participating researchers has a lot to say for the NordForsk portfolio. There are on average 18 female and 31 male participating researchers in a Nordic Centre of Excellence. The high numbers of participating researchers are strongly affected by the large-scale Nordic Centre of Excellence calls within the Top-level Research Initiative in 2010. In recent years, 2015–2018, the average number of female participating researchers has been 17 versus 20 for males.

Female applicants have slightly higher approval rates

Approval rate by grant type and gender



Within Project Grants the average number of female and male participating researchers has become more equal over the years, and was 9 for both during 2015–2018. Within University Hubs 2018 the average number of female and male participating researchers was 2 and 4, respectively.

Female project leaders involve a more equal team of female and male researchers. While there are slightly more female participating researchers in grants with a female project leader (52 per cent female to 48 per cent male) there are 41 per cent more male than female participating researchers in grants with a male project leader (in total 37 per cent female to 63 per cent male).

Project leaders in Norway have been granted the highest number of grants, and Norway has also had the most researchers involved in NordForsk funded Project Grants, Nordic Centres of Excellence and Nordic University Hubs, followed by Sweden and Finland. Researchers in Norway and Sweden make up 50 per cent of researchers involved. In every country the percentage of female researchers has been lower than male researchers, except for in Iceland where there have been exactly 50 per cent female and male researchers involved in funded research.

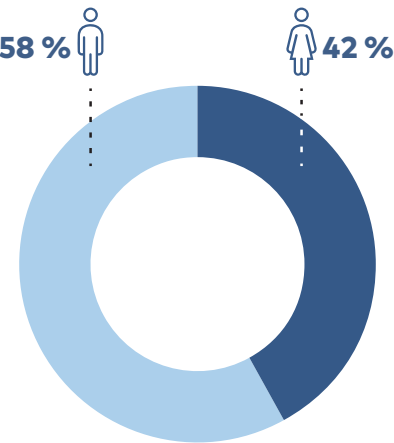
Looking at country involvement based on the country of the project leader, the highest percentage of involved researchers is from the same country in every case. Aside from this, researchers in Norway and Sweden are the most commonly involved for most nationalities of project leaders.

It is important to note that only researchers from the countries providing funding to a call may serve as the project leader in applications, while no such restrictions apply for participating researchers.

Gender equality has increased

Total number of researchers (project leaders and participating researchers) ...

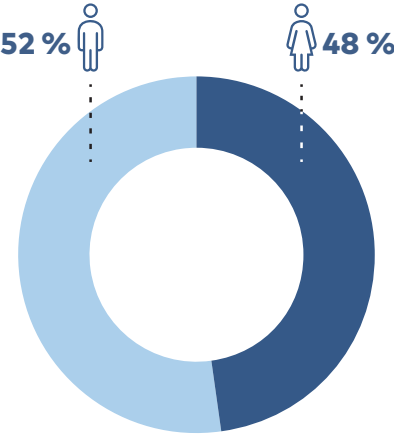
...in **research funded 2010–2018**



Average number of participating researchers per gender 2010–2018

Average female participants		Average male participants	Average participants
18	Nordic Centre of Excellence	31	49
8	Project Grants	10	18
2	Nordic University Hubs	4	6
10	Total	14	24

... in **research funded 2015–2018**

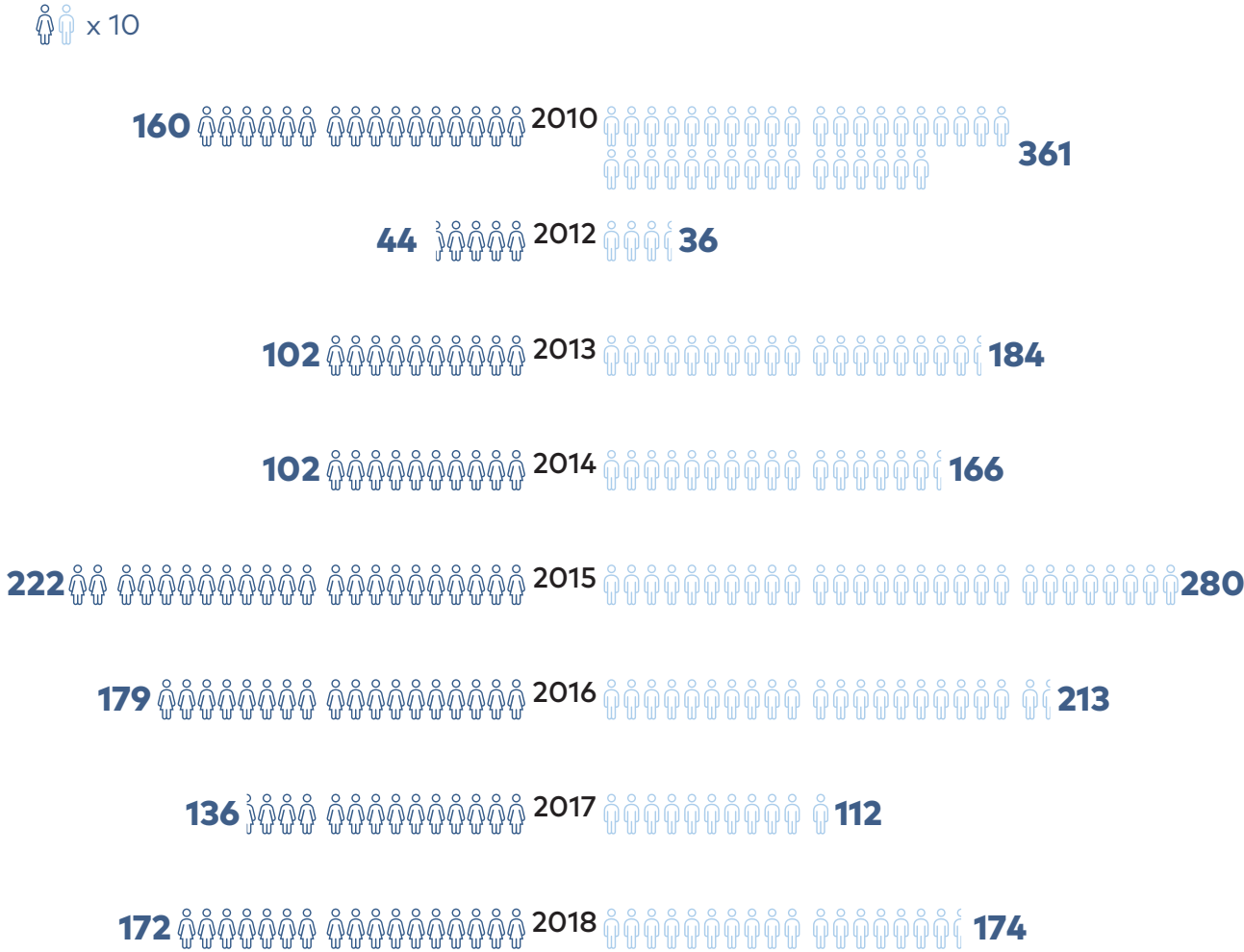


Average number of participating researchers per gender 2015–2018

Average female participants		Average male participants	Average participants
17	Nordic Centre of Excellence	20	37
9	Project Grants	9	17
2	Nordic University Hubs	4	6
9	Total	10	19

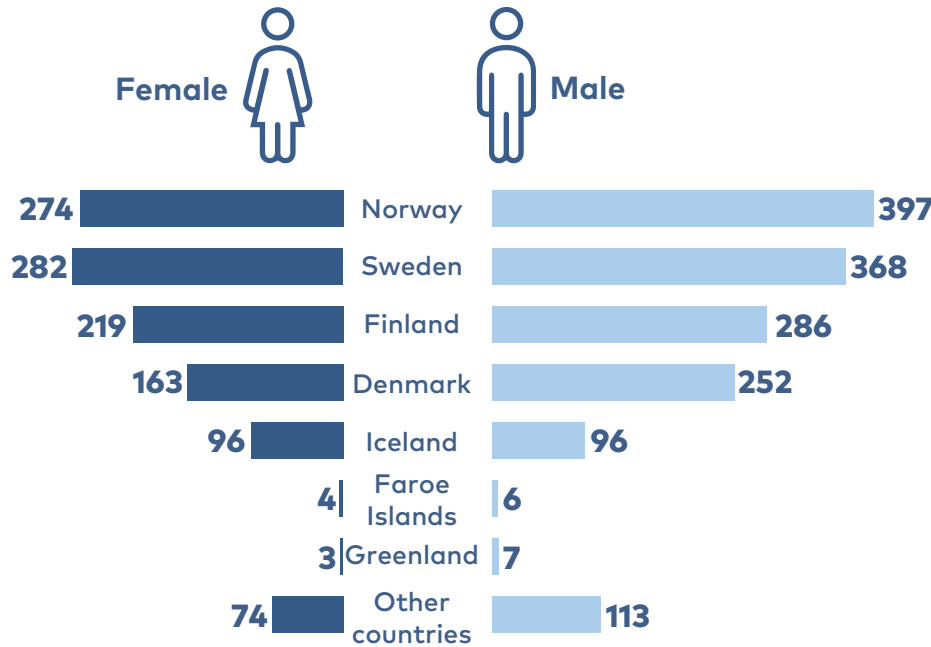
Researchers in funded research

Distribution of total number of researchers per gender in funded research 2010–2018 (project leaders and participating researchers in Project Grants, Nordic Centres of Excellence and Nordic University Hubs).



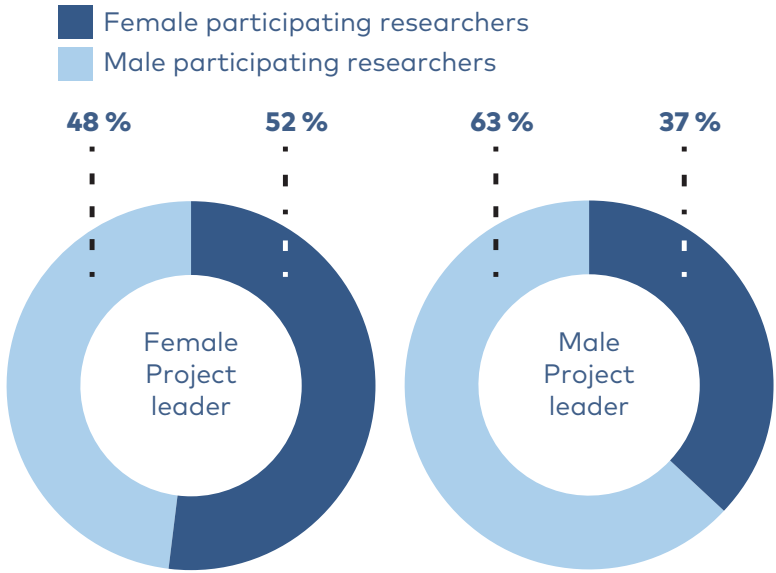
Number of researchers per country

Project leaders and participating researchers 2010–2018



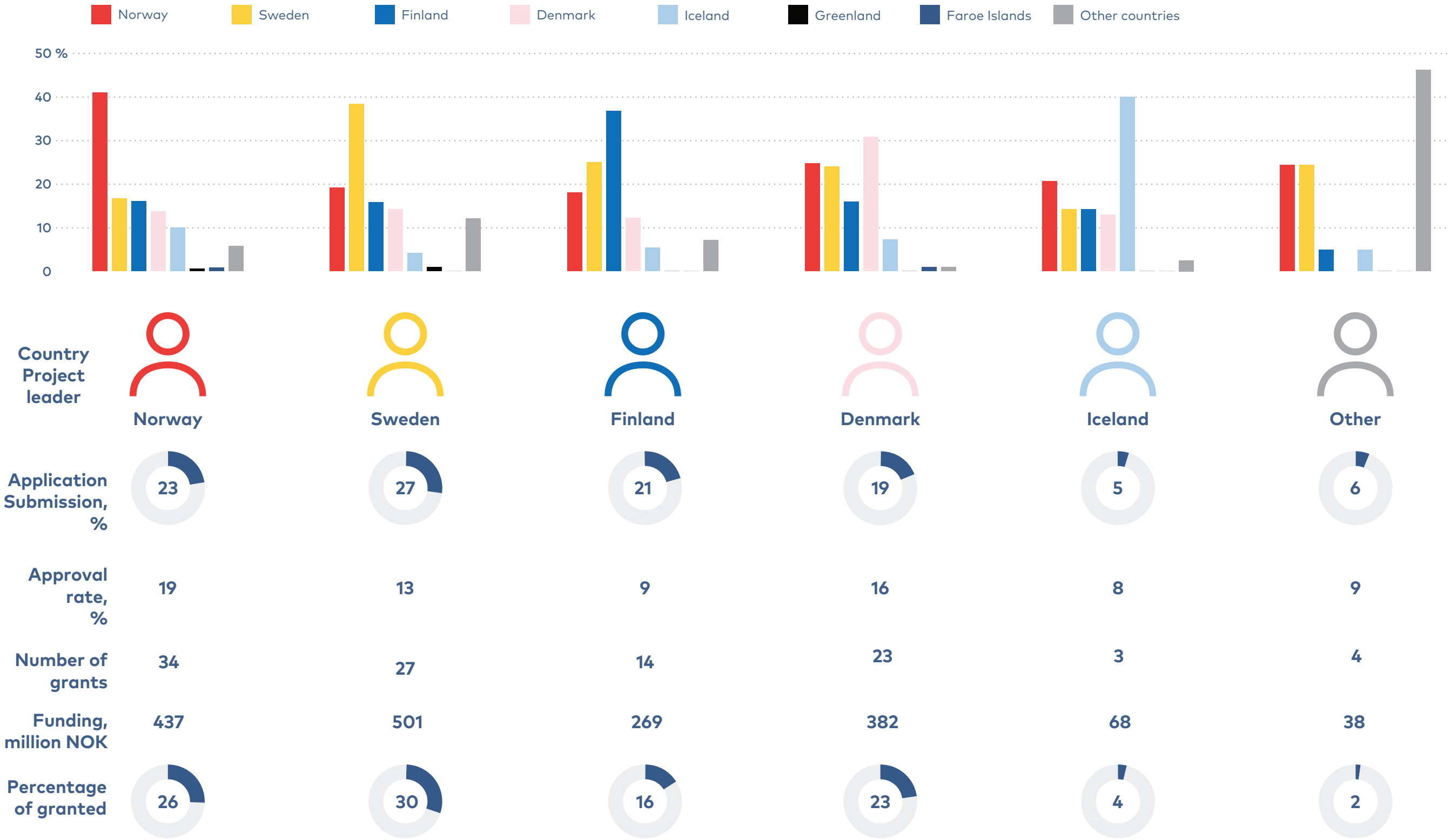
Female project leaders lead more equal groups

Gender of participating researchers per gender of project leader in Project Grants, Nordic Centres of Excellence and Nordic University Hubs 2010-2018.



Distribution of participating researchers by country and country of project leader

Funded Project Grants, Nordic Centres of Excellence and Nordic University Hubs 2010–2018



Funding to Nordic University Hubs is divided according to actual project budget, not to country project leader.

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

The NordForsk portfolio for research funded since 2013 encompasses all of the seventeen Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development to some degree. The information has been mapped via a survey in which project leaders could indicate up to three goals addressed by their research. The funding has been distributed evenly among all the goals indicated.

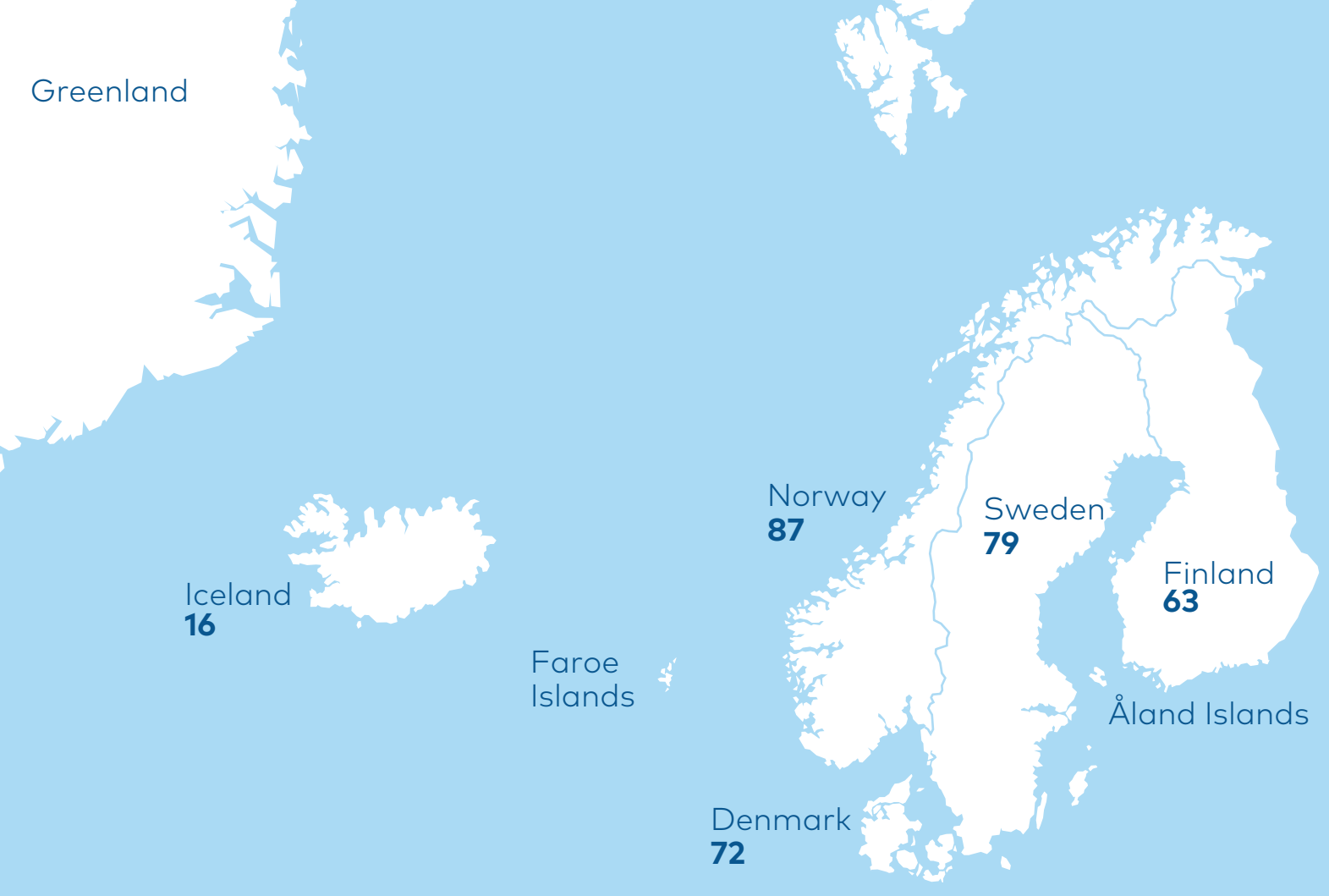
SDG 3, Good health and well-being, is being addressed by research with a funding proportion of over NOK 416 million, distributed over 45 grants where it was indicated. This is the only SDG that has a clear focus on medicine and health, while many of the other goals can be considered scientifically more multi- or interdisciplinary, as well as more thematically specific. Nonetheless, this goal is addressed by research within for example the programmes Societal Security and Neutron Science, in addition to Health and Welfare. As further evidence of the interdisciplinarity and breadth of both the SDGs and the NordForsk programmes, the second and third most common SDGs addressed within the programme Health and Welfare are 10, Reducing inequalities, and 5, Gender equality. There is a broad representation of different SDGs being addressed within each of the NordForsk programmes.

All UN Sustainable Development Goals are addressed by granted funding

Total funding (million NOK) granted 2013–2018 to Project Grants, Nordic Centres of Excellence and Nordic University Hubs relevant to each of the UN Sustainable Development Goals.



See sustainabledevelopment.un.org/sdgs for more information.



Country of project leaders of funded research 2009–2018. All NordForsk funded research cooperation involves researchers from at least three Nordic countries.

MOBILITY

Funding to Nordic research cooperation brings together national research groups and promotes research activities of the highest scientific quality. In much of funded research, mobility of the researchers involved is highlighted specially in the budget. This accounted for close to NOK 70 million specifically for mobility in the research funded over the past nine years. While Nordic Centres of Excellence and Project Grants set aside roughly the same percentages for mobility, Nordic University Hubs set aside double the amount in relation to the total budget for mobility efforts (7 per cent).

The funding highlighted in the budget is either Mobility or Mobility and Networking. Meetings and travel are not included as they are separate budget posts in almost all calls. Calls where it was not possible to separate mobility in the budget are not included.

Salaries paid out to researchers taking part in mobility activities are not included in this amount, but are a contribution to the total funding towards mobility in research. The same is the case for funding that the universities themselves put into these activities, which is expected for all funded research.

THE NORDIC E-INFRASTRUCTURE COLLABORATION (NeIC)

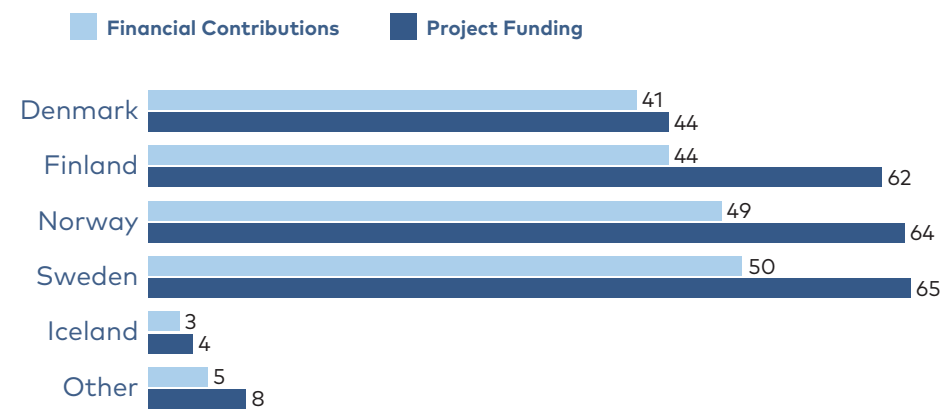
The Nordic e-Infrastructure Collaboration (NeIC) facilitates the development of advanced IT tools and services in areas of importance to Nordic researchers and is NordForsk's main tool for implementing the Nordic eScience Action Plan 2.0. NeIC is a distributed organisation consisting of technical experts from academic institutions across the Nordic countries (here called personnel). NordForsk has served as the host organisation for NeIC since 2012.

In addition to the five member countries Denmark, Finland, Iceland, Norway and Sweden, NeIC collaborates with project partners in Estonia.

In total, NOK 247 million of direct project funding and in-kind resources have been

Financial contributions and project funding distributed per country 2012–2018

Financial contribution to NeIC and the distribution of that funding for personnel, meetings, travels etc in each country.



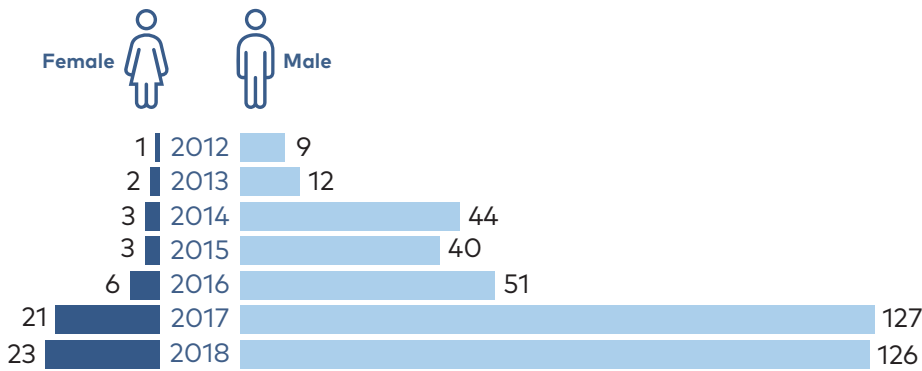
Not included in this graph is the funding of NOK 94 million from NordForsk, which covers administration but also goes into project funding.

invested in e-infrastructure provider organisations and other project partners in the Nordic countries from 2012 to 2018. All countries have received more in funding from NeIC than they have contributed to the budget.

The amount of funding distributed to each country is largely determined by the aggregated personnel resources the respective countries contribute to NeIC. The mechanism for receiving NeIC funding is mainly based on provision of available personnel to participate in or assume leadership of projects (project managers and executive team) which receive between 50–100 per cent of their funding from NeIC. Thus, project funding to the various countries reflects their involvement in and capacity for Nordic collaboration. Finland, Norway and Sweden receive the

NeIC personnel gender balance 2012–2018

Development of personnel with salary from NeIC 2012–2018, total numbers per year in all countries (Nordic and Non-Nordic).



highest returns because these countries have the highest participation in NeIC activities. These countries have contributed several personnel members to the leadership team at NeIC (both executive team as well as project managers).

Denmark and Iceland have not been able to dedicate the same degree of personnel resources to NeIC management or project personnel, which means that these countries receive a smaller amount of total funding compared to the other three. However, the figures for rate of return for Denmark are showing a higher pace of increase than the other countries, which may mean that Denmark will catch up to Finland, Norway and Sweden over time. These figures do not take into account that Denmark will receive funding for the project manager of the EOSC-Nordic (European Open Science Cloud) project from 2019- 2022, which is funded by the European Commission and coordinated by NeIC.

The gender balance in the Nordic e-Infrastructure Collaboration is uneven. There are more men working for NeIC than women. This is due to the lower proportion of women working with IT tools and services. NeIC has, nevertheless, always had female representation in its management team and has had up to 50 per cent female representation in its executive team.

INFORMATION AND DISCLAIMERS

Abbreviations and definitions

NOK - Norwegian kroner

OECD - the Organisation for Economic Cooperation and Development. This report uses *OECD frameworks and definitions for research and development* established in the Frascati Manual.

SDG - *The Sustainable Development Goals*, set by 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015.

Project leader is the researcher who submits an application to NordForsk. It is the person who, on behalf of the Project Owner, is responsible for the progress, implementation and completion of the Project in accordance with the Contract. The research-performing organisation (i.e. university) of the project leader is considered the project owner.

Participating researchers can be collaborating partners or contributing researchers in funded research. For the purpose of this report, all types of academic participants are included under participating researchers.

Programmes are created around an area of research, with a Programme committee of national research funders. One programme can encompass one or several calls. From 2017 the programmes are established on the basis of Expressions of Interest in the Open invitation to national research councils and other research-funding bodies.

Total number of applications and grants

Only applications that have been reviewed are included in the total number of applications. Applications that are dismissed or withdrawn, at any stage of the process, or have not been reviewed for other reasons, are not included in the statistics. Pre-proposals that are followed by full proposals in a second phase are not included in the statistics. If the information on e.g. project leader gender or country changes between phase 1 and 2, the full proposal of phase 2 is decisive.

LINKS IN PUBLICATION

sustainabledevelopment.un.org/sdgs

oecd-ilibrary.org/science-and-technology/frascati-manual-2015_9789264239012-en

oecd.org/sti/inno/38235147.pdf

Scope and delimitations

The main data are based on information from applications submitted to NordForsk, with information on the research teams, the research and the decision on the application.

The statistics do not include applications in calls that are open – only applications with a final decision are included.

Information on participating researchers (gender, country, role) as well as budget data on mobility has been collected manually to create a data base, connected to the main data base.

Information on research area, interdisciplinarity, Sustainable Development Goals and research activity has been collected during the summer 2019 via a survey sent to all project leaders of active and recently active funding. Ninety out of 92 have been classified, with minor lapses in submitted surveys, making the total sum different for each type of classification.

The division of research areas is based on the *OECD Fields of science and technology classification* of the Frascati manual.

The main data shows decisions from 2009 to 2018, including all types of grants – both approved and rejected proposals. The classification survey data is limited to the decision years 2013–2018 to create a period of complete information for the portfolio.

The data for participating researchers is limited to Project Grants, Nordic Centres of Excellence and Nordic University Hubs, and cover the years 2010–2018, the period when the grant types have been used.

NordForsk calls are commonly opened one year, but funding decisions are taken the next year. For the purpose of this report, decision year has been created based on the date of funding decision. If individual applications have different decision dates, or if the two phases of a call are decided on different years, this has been adjusted so that one call always belongs to one year.

All funding in the statistics is in Norwegian kroner (NOK). For calls where the funding currency is Euro, the amount has been converted into NOK based on the approximate date of contract signing.

Research activity definitions

The definitions for the breadth of research activities are based on the definitions of the [OECD Frascati Manual](#) and the Australian and New Zealand Standard Research Classification, with a highlighted distinction between Pure and Strategic (Oriented in Frascati Manual) Basic Research.

Pure Basic Research is carried out for the advancement of knowledge, without seeking economic or social benefits or making an active effort to apply the results to practical problems or to transfer the results to sectors responsible for their application.

Strategic Basic Research is carried out with the expectation that it will produce a broad base of knowledge likely to form the basis of the solution to recognised or expected current or future problems or possibilities.

Applied Research is original work undertaken primarily to acquire new knowledge with a specific application in view. It is undertaken either to determine possible uses for the findings of basic research or to determine new methods or ways of achieving specific and predetermined objectives.

Experimental Development is systematic work, using existing knowledge gained from research or practical experience, that is directed to producing new materials, products or devices, to installing new processes, systems and services, or to improving substantially those already produced or installed.