Director's preface

One of NordForsk's main goals is to facilitate Nordic research collaboration that makes an impact. Our impact report is a way for us to showcase the extent of how NordForsk funded research contributes to impact.

In this year's report, we are pleased to announce a significant increase in the number of projects that have submitted their reports, contributing to the substantial rise in most reported figures compared to previous years. One notable methodological change in our current edition is our choice to focus exclusively on active projects. Typically, impact often materialises sometime after the conclusion of a project, and in some instances, years later. This poses a recognised challenge in capturing the full scope of impacts once the projects have ceased their reporting to NordForsk.

Research impact measurement is diverse, with no uniform approach across the board. Our findings, presented in a recently published NordForsk-report, highlight this by identifying that national research funders in the Nordic countries each utilise distinct systems for recording and reporting impacts. Nevertheless, there is a shared recognition that moving towards greater standardisation and harmonisation is desirable.

For the first time, we have enriched our report with a selection of impact stories. While quantitative data in the form of figures and tables provides valuable insights, it does not fully encapsulate the outcomes of research. We have therefore included qualitative narratives to complement our data. We have chosen to present projects with high impact and high Nordic added value.

Lastly, I wish to draw attention to the figure showing how successfully our funded projects have secured new research grants. This underscores the capacity of NordForsk-funded projects to create excellent research and sustainable researcher networks.

We trust that this report will offer valuable insights and inspire continued excellence and collaboration in Nordic research.

Arne Flåøyen, Director of NordForsk
Insights on impact

In this year's impact report, we review the reported outcomes and impact indicators of our active portfolio. This year, out of 125 active projects expected to report, we were pleased to receive submissions from 114, landing on a record high 91.2 % response rate. As such, we consider this report a representative cross-section of the outcomes, output, and impact of our active portfolio.

Overall, our work with measuring the impact of our projects, as well as impact as a concept, took great leaps in 2023. We have managed to establish fluent workflows with our data, establishing a database that feeds directly into our analytical tools, allowing for efficient analysis of key indicators and their internal relationships. These are presented in our open access impact dashboard, which was published in early 2024.

Furthermore, we conducted a study on how Nordic research councils work with impact. The results from this interview based study were published in a report entitled "Nordic Perspectives on Research Impact", and contributes a qualitative perspective to the ongoing discussion on impact.

Considering the future, we are committed to driving meaningful development in this field, further enhancing and understanding the impact of our research initiatives, and share what we learn in the process.

You are welcome to follow our progress through our website, where we gather tools, such as our impact dashboard, and share knowledge, like our publications, articles and webinars on impact.

*Simon Jernroth, Analytics Officer*
Key Figures 2024

- 125 Active projects
- 2,829 Publications
- 2,605 Dissemination Activities
573 Collaborations and Partnerships
301 Awards and Recognition
244 Further Funding
193 Influence on Policy, Patients, Practice, and the Public
Impact stories

Impact stories are a short format we use to provide an overview of the research process from results and outputs, to outcomes and impact. These are constructed to swiftly communicate the significance of projects we have chosen to highlight.
Discovering Blautia's role in maintaining intestinal health

Researchers at Umeå University made a breakthrough discovery regarding gut health in collaboration with researchers in Germany and Finland. They found that the bacterium Blautia plays a crucial role in maintaining the integrity of the intestinal mucus barrier in individuals consuming a low-fibre Western diet.

This finding was detailed in a study published by the team, showcasing the protective effects of Blautia against gut barrier degradation. The study received attention from the medical community, facilitating further research into dietary recommendations and treatments for gut-related diseases.

This adds to the evidence base of dietary guidelines, emphasising the importance of dietary fibres and beneficial gut bacteria, to enhance gut health and prevent diseases like ulcerative colitis.
Nordic research shapes European guidelines on rheumatoid arthritis treatment

Researchers led by Merete Lund Hetland at the University of Copenhagen conducted the world’s largest trial of its kind, the NordStar project, to determine the most effective initial treatments for rheumatoid arthritis, comparing three biological drugs and one conventional medicine.

Their findings, which showed high remission rates with the biological treatments, were published in the British Medical Journal, and incorporated into European guidelines for rheumatoid arthritis treatment. This research received international acclaim, influencing the standard of care provided to patients across Europe.

By demonstrating the effectiveness of certain biological drugs, the study has paved the way for more informed treatment decisions that could significantly improve patient outcomes and quality of life, thus advancing treatment protocols.
Reducing water usage and preventing weight loss in salmon

Researchers at Chalmers University of Technology, spearheaded by Professor Oskar Modin in collaboration with Tampere University and the Danish Technology Institute, have been tackling the persistent problem of poor taste and odour in salmon from land-based aquaculture systems, which is often described tasting like "muddy soil".

The team identified specific bacteria responsible for these undesirable flavours and explored innovative bioelectrochemical systems to eliminate odour-causing compounds. Additionally, they initiated the development of a sensor capable of detecting taste and odour compounds directly in the water. This research garnered attention from industry partners and has potential implications for more sustainable aquaculture practices.

Implementing these new technologies could improve fish farming by reducing water usage and preventing the weight loss in salmon during detox periods, thereby making the industry more environmentally friendly and economically viable.
Pioneering sustainable textiles in the Nordic region

Nordic researchers, led by Jaana Vapaavuori from Aalto University, have developed innovative prototypes for sustainable textiles using materials like lupin yarn and potato starch.

These results were showcased in a series of exhibitions across the Nordic region and a major conference in London. The exhibitions not only demonstrated the potential of these eco-friendly materials to the public and industry stakeholders but also influenced educational practices, as showcased by the inclusion of these materials in needlework curriculums in Finnish schools.

This project contributes to reducing the environmental impact of the global textile industry, aligning with the European Commission’s new sustainability criteria, while paving the way for a more sustainable textile production paradigm.
How mathematical modelling can guide public health decisions

Nordic researchers, led by Professor Tom Britton from Stockholm University, utilised mathematical modelling to analyse the spread of diseases during pandemics, identifying the most significant sources of infection spread.

Their findings were documented and shared with public health officials and policymakers. This research influenced public health policies, particularly advising against crowded environments like public transport and workplaces during the COVID-19 pandemic.

As a result, more targeted measures can be implemented to control crowd sizes in these areas, effectively reducing the rate of infection spread and informing future pandemic management strategies.
Nordic added value

NordForsk funded projects create Nordic added value in a number of ways. For example, by enhancing the scientific quality and building critical expertise at the Nordic level.

We have decided our own definition of Nordic added value to be used when developing research areas, designing calls for proposals, assessing grant applications and reporting impact.

In all, we have 11 categories reflective of our strategic goals on how research creates Nordic added value. Our projects create Nordic added value within all the different categories.

The Nordic added value reported here is based on project data from their whole funding periods.

Read more about Nordic added value at nordforsk.org.
Nordic added value in active NordForsk projects

Total number of projects having reported Nordic added value: 112
Publications

Research outcome can be presented in various ways. Of the many different outcome types the funded NordForsk projects can register in Researchfish, publications are among the most commonly reported.

The researchers can choose among 16 different publication types, such as book chapters, monographs, technical reports and conference papers. Publications are results in of themselves, but can also be considered mediators between research and its dissemination, and thus a proxy indicator of any effect.

2,829
Original publications

72.66%
Projects reporting at least one publication

30.41
Average number of publications for projects reporting at least one publication
<table>
<thead>
<tr>
<th>Type</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal Article</td>
<td>1820</td>
</tr>
<tr>
<td>Book Chapter</td>
<td>338</td>
</tr>
<tr>
<td>Other</td>
<td>288</td>
</tr>
<tr>
<td>Conference Proceeding Abstract</td>
<td>223</td>
</tr>
<tr>
<td>Book</td>
<td>84</td>
</tr>
<tr>
<td>Thesis</td>
<td>76</td>
</tr>
</tbody>
</table>
Funding

When projects successfully receive new research grants and other funding, this is an indicator of the excellence of the research consortium, of added value and of sustainability of the research collaboration.

NordForsk funded projects report further funding to quite a large extent. The most frequent further funding purpose are general research grants, including intramural ones.

Further funding by type

- **Research grant**: 516 MNOK
- **Studentship**: 196 MNOK
- **Capital/infrastructure**: 34 MNOK
- **Fellowship**: 18 MNOK
- **Travel**: 0.6 MNOK

**Total instances of further funding**: 244
Funding value (NOK) of NordForsk grants by research area

- Health and welfare
- Co-operation and network
- Interdisciplinary
- Migration and integration
- Green growth
- Societal security
- Aquaculture
- Digitalisation
- Bioeconomy
- Humanities and social science
- Future working life
- Urban
- Neutron
- Education
- Arctic
- University co-operation

[Bar chart showing funding values ranging from 0 to 800M]
Policy influence

Influence on policymaking processes and decisions is a concrete example of societal impact. Thus, we ask the projects to report on policy influence, more specifically the amount of instances and what kind of influence, as well as reported outcomes.

We expect this quantification of policy influence to be an indicator of the scope, character, and impact of the influence that the research and researchers have had. The reported outcomes may give some indication of effect.

46
Projects reporting at least one policy influence

193
Unique policy influences

Top five influencers by quantity

1. Karolinska Institute, Sweden
2. University of Helsinki, Finland
3. University of Oslo, Norway
4. University of Copenhagen, Denmark
5. University of Edinburgh, United Kingdom
Policy influence by type

- Influenced training of practitioners or researchers: 66
- Contribution to a national consultation or review: 27
- Participation in an advisory or guidance committee: 25
- Membership of a guideline committee: 24
- Contribution to new or improved professional practice: 22
- Implementation of a policy advice letter etc.: 15
- Citation in other policy documents: 5
- Citation in clinical guidelines: 4
- Citation in systematic reviews: 3
- Citation in clinical reviews: 2
Policy influence by reported impact

- Improved educational and skill level of workforce: 54
- Improved regulatory environment: 8
- Improved accessibility of public services: 7
- Improved environmental sustainability: 7
- Effective solutions to societal problems: 6
- Economic impacts: 3
Policy influence by geographic reach

81
International

77
National

35
Local/Regional
Dissemination

Researchers communicate beyond journals, books and other scientific publications. They tell the public what they do, why, and what results they produce. Communicating research may build support for and understanding of science. It can promote understanding of the wider relevance of research to society, and encourage more informed decision-making.

All our projects produce a communication plan, and all projects report on how they communicate. This quantification includes the type of communication, the main target groups that have been engaged, outcome, and extent. In contrast to policy influence, this measure focuses on the broader public audience.

86 Projects reporting at least one dissemination

2605 Unique disseminations

30.29 Average number of disseminations for projects reporting at least one dissemination
Dissemination activities by type

- A talk or presentation: 1066
- Participation in an activity, workshop or similar: 534
- Press release, press conference or response to a media enquiry: 444
- Broadcast e.g. TV/radio/film/podcast: 159
- Engagement focused website, blog or social media channel: 148
- A magazine, newsletter or online publication: 126
- A formal working group, expert panel or dialogue: 180
- Participation in an open day visit at a research institution: 20
# Dissemination activities by primary audience

<table>
<thead>
<tr>
<th>Audience</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>The public or other large audiences</td>
<td>656</td>
</tr>
<tr>
<td>Professional practitioners</td>
<td>545</td>
</tr>
<tr>
<td>Other audiences</td>
<td>453</td>
</tr>
<tr>
<td>Postgraduate students</td>
<td>321</td>
</tr>
<tr>
<td>Media as a channel to the public</td>
<td>180</td>
</tr>
<tr>
<td>Policymakers and politicians</td>
<td>152</td>
</tr>
<tr>
<td>Study participants or study members</td>
<td>102</td>
</tr>
<tr>
<td>Schools</td>
<td>84</td>
</tr>
<tr>
<td>Undergraduate students</td>
<td>41</td>
</tr>
<tr>
<td>Industry and business</td>
<td>40</td>
</tr>
<tr>
<td>Patients, carers or patient groups</td>
<td>15</td>
</tr>
<tr>
<td>Third sector organisations</td>
<td>13</td>
</tr>
<tr>
<td>Supporters</td>
<td>3</td>
</tr>
</tbody>
</table>
Disseminations by reported outcomes

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plans made for future related activity</td>
<td>369</td>
</tr>
<tr>
<td>Increase in requests for further information</td>
<td>275</td>
</tr>
<tr>
<td>Increase in requests about further participation or involvement</td>
<td>253</td>
</tr>
<tr>
<td>Audience reported change in views, opinions or behaviours</td>
<td>250</td>
</tr>
<tr>
<td>Decision made or influenced</td>
<td>85</td>
</tr>
<tr>
<td>Colleague reported change in views</td>
<td>32</td>
</tr>
</tbody>
</table>
Disseminations by geographic reach

- **International**: 1314
- **National**: 933
- **Regional**: 168
- **Local**: 190