



# Evaluation of NordForsk



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# Evaluation of NordForsk



**Tender prepared for:**

The Nordic Council of Ministers

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## 1. Executive summary

The overall objective of NordForsk is to support research collaboration of high quality and significance for society, with clear Nordic added value. Further, NordForsk facilitates the development and funding of research programmes. In 2018, the Nordic Council of Ministers for Education and Research (MR-U) adopted six important principles for Nordic research cooperation which have led to reformulating the strategy and the operational procedures for NordForsk.

The objective of the evaluation is to provide information and new knowledge which serve to maintain and improve the level of Nordic research cooperation and hereby a significant input in generating the Strategic mandate for NordForsk from 2023 onward.

The main conclusion is that NordForsk's organisational performance has been excellent since 2018 and has developed to a relevant and useful platform for Nordic collaboration on initiating Nordic research collaboration. NordForsk has complied with the principles adopted by the Nordic Council of Ministers for Education and Research by:

- Renewing its portfolio, making funding instruments more flexible and adapting its operations even more to the countries' priorities through the Open Invitation mechanism.
- Becoming more agile and flexible and thus more relevant for the Nordic countries.
- Meeting the research funders' expectations by increased flexibility in both financing of and instrumentation in programmes.
- Taking measures to a more cost-effective organisation through administrative collaboration with Nordic Innovation and Nordic Energy Research.

These new principles for Nordic research cooperation were intended to further develop, focus and reform NordForsk's activities and the organisation, rather than replacing or transforming current operations. In 2018, the following main actions have been taken by NordForsk:

- NORDHORCS (Nordic Heads of Research Councils) was granted an advisory role to the NordForsk Board. Even though NORDHORCS is not a part of the formal steering model of NordForsk, it gives advice and recommendations and provides funding which normally results in new research programmes to be implemented by NordForsk.
- The Open Invitation mechanism was introduced and has since then been the main mechanism for identifying and prioritising new areas for NordForsk programmes and calls.
- NordForsk has implemented a more flexible funding (real common pot funding and virtual pot funding) and changed its focus on research projects instead of Nordic Centres of Excellence. By applying the financing models real common pot and virtual common pot, NordForsk must be able to meet different political positions and legislative frameworks of the research funders. Further, the virtual common pot has stimulated the development of co-operation between Nordic and non-Nordic countries, as well as contributed to involving innovation funders such as Business Finland, Innovation Fund Denmark and Vinnova.
- NordForsk has streamlined its organisation and professionalised the funding agency role. This development is partly due to the decision by MR-U in 2018 of removing the policy advisory role of NordForsk. Measures have also been taken for a more cost-effective organisation through administrative collaboration with Nordic Innovation and Nordic Energy Research.

However, there are still *challenges* concerning NordForsk's *governance model and portfolio steering, use of Nordic value added and impact assessment and strategic communication.*

## Clarifications in NordForsk's governance model and active portfolio steering

All in all, the Strategic mandate works as an excellent foundation for governing of NordForsk, however, *we recommend* that the Strategic mandate

- Clarifies that the NordForsk Board has the full responsibility for NordForsk, and that the NordForsk Board's strategic role is central for achieving Nordic added value. NORDHORCS' advisory role needs to be explicitly stated in the Strategic mandate.

Since 2018, NORDHORCS' advisory role for NordForsk has provided further legitimacy to Nordic research co-operation and NordForsk as an organisation, as well as providing valuable advice at an overall level for NordForsk. However, roles and responsibilities of NORDHORCS and the NordForsk Board has been unclarified.

- Specifies that NordForsk-funded research should contribute to the implementation of the Nordic Vision 2030 and to Nordic value added as a Nordic institution of the Nordic Council of Ministers.

NordForsk's priorities are mainly the same as stated in political vision and strategies by the Nordic Council of Ministers; there is a need to ensure alignment between the goals of the Nordic Council of Ministers Vision 2030 and NordForsk's Strategic mandate and the forthcoming NordForsk strategy, stressing how Nordic research can contribute to fulfilling the Nordic political visions and goals.

NordForsk's Open Invitation mechanism has been an appropriate model for the identification and implementation of nine Nordic research programmes. However, the Open Invitation mechanism is not a strategic mechanism for prioritising NordForsk's entire operation. *We recommend* that

- NordForsk Board, in the initial phase of the Open Invitation, has a more active role regarding strategic portfolio management by pointing out/giving advice on possible research funding organisations outside NORDHORCS, especially a challenge in Denmark and Finland, and by indicating what might be desirable outcomes of the programmes in terms of Nordic added value and the Nordic Council of Ministers Vision 2030.

The strength of the Open Invitation mechanism is that it brings a focus to Nordic added value at the research policy and funding level and ensures that NordForsk is an attractive facilitator for Nordic research collaboration among the national research councils. However, Open Invitation is to a large extent rooted in the research priorities of the national research councils without a strategic portfolio management in NordForsk in terms of Nordic added value, including research subjects and a balance between basic research/strategic research/innovation.

In strategic portfolio management, NordForsk should also act to increase the overall funding, both from the Nordic Council of Ministers and through funds directly from the Nordic countries and those that require only little or no Nordic co-financing. A tentative goal could be to establish 25% Nordic co-financing from NordForsk instead of 33%. The national financiers must then increase their share slightly. However, national financiers will probably hesitate to fund a larger program and especially a

more short-term research assignment. Open Invitation is unlikely to be an effective model for the establishment of such initiatives but should be complemented by other instruments. There for *we recommend* that NordForsk positions itself in new ways as a significant contributor of research relevant to the Nordic countries by:

- Establishing a research service together with the Nordic Council of Ministers' secretariat, where the Nordic Council of Ministers can request research-based papers that provide an objective presentation of issues of political interest.
- Establishing an experiment for funding for (Nordic) research topics that are too complex and wide-ranging for a single country to address on its own and where well-functioning research infrastructure is a major driver of research cooperation.

### Build systematic knowledge on impact and Nordic value added

Nordic added value is a guiding principle as well as a principle to maximise Nordic benefits of the funded projects, but Nordic added value is a somewhat unclear and anecdotal concept. *We recommend:*

- To carry out more systematic studies/evaluations of the programmes and projects regarding more in-depth understanding of Nordic added value. Further, it should lead to a redefinition of Nordic added value, where Nordic added value is specified according to the process of implementing research programmes and projects. Nordic added value would then be seen:
  - as preconditions for initiated Nordic funded research, e.g., regarding the research team and the subjects to be addressed.
  - as results (e.g., highest international quality), outcomes and benefits to the development of the Nordic research environment and the Nordic countries including the Nordic Vision 2030.

This would also contribute to NordForsk's strategic communication about what results are achieved and highlight the impact.

### Raise the level of ambition in strategic communication

Communication is a key component of NordForsk's strategy and activities, and, since 2018, NordForsk's overall communication activities have improved, but *we recommend* that:

- NordForsk raise the level of ambition in strategic communication in relation to the Nordic Council of Ministers and the Nordic Council by involving NORDHORCS and the Board.

At present, there is no strategic portfolio management or major steering from a political level. But the programmes and the funded projects are still highly politically and socially relevant. Therefore, it is important to have strategic communication from NordForsk, which explains and emphasises that good results are achieved, especially targeting the Nordic Council of Ministers and Nordic Council. There are potential improvements in combining systematic communication on NordForsk's contribution to Nordic added value and impact, with 'storytelling', stories about research activities that create Nordic added value. To strengthening the 'storytelling', all completed projects (programmes) are recommended to prepare a short perspectival note highlighting the project's contribution to Nordic added value and how the results can move forward in the realisation of the Nordic Vision 2030.



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These challenges need to be addressed for NordForsk to remain relevant and effective in the new (Nordic) R&D policy landscape. By addressing these challenges, it is important to acknowledge that NordForsk has a positive impact encouraging Nordic research collaboration. Further, Nordic ambition on behalf of NordForsk should be based on Nordic added value to develop a NordForsk in its own right as a unique Nordic research funding initiative and hereby to avoid financial marginalisation, as the research resources at national but also on European level are extensive.

The above proposed initiatives could also simulate and even strength a Nordic discussion on research. Further, NORDHORCS is also a resource in this context, as pointed out at a meeting about Nordic research collaboration among Nordic stakeholders with research.

## 2. Introduction

*NordForsk aims at creating research collaborations of high quality and significance for society with clear Nordic added value. In 2018, the operational strategy for NordForsk was reformulated. The objective of the evaluation is to assess the impact of the new strategy and serve as a significant input in generating the Strategic mandate for NordForsk from 2023 onward.*

*Methodologically, the evaluation is based on desk research (policy documents, strategy documents and data/information on the performance of NordForsk) and 41 interviews with NordForsk and stakeholders representing the Nordic research councils and the Nordic research environment.*

### 2.1. Objective of the evaluation

NordForsk was established in 2005. In 2018, the Nordic Council of Ministers for Education and Research adopted 6 principles for the future Nordic research collaboration,<sup>1</sup> which included a decision for an ongoing evaluation of NordForsk to be executed in 2021-2022.

The Senior Officials Committee for Education and Research (EK-U) has prepared the mandate for the evaluation. The evaluation will focus on the period of 2018 and following, where the overall target picture is established in relevant governing documents with the aim of creating research collaborations of high quality and significance for society with clear Nordic added value.

The overall objective of the evaluation is to provide information and new knowledge which serve to maintain and improve the level of Nordic research cooperation. Consequently, the evaluation will serve as a significant input in generating the Strategic mandate for NordForsk from 2023 onward.

The Nordic e-Infrastructure Collaboration (NeIC) and the four Nordic cooperative bodies (Nordiska samarbetsorgan) currently funded by NordForsk are not included in the evaluation.

### 2.2. Evaluation approach and methodology

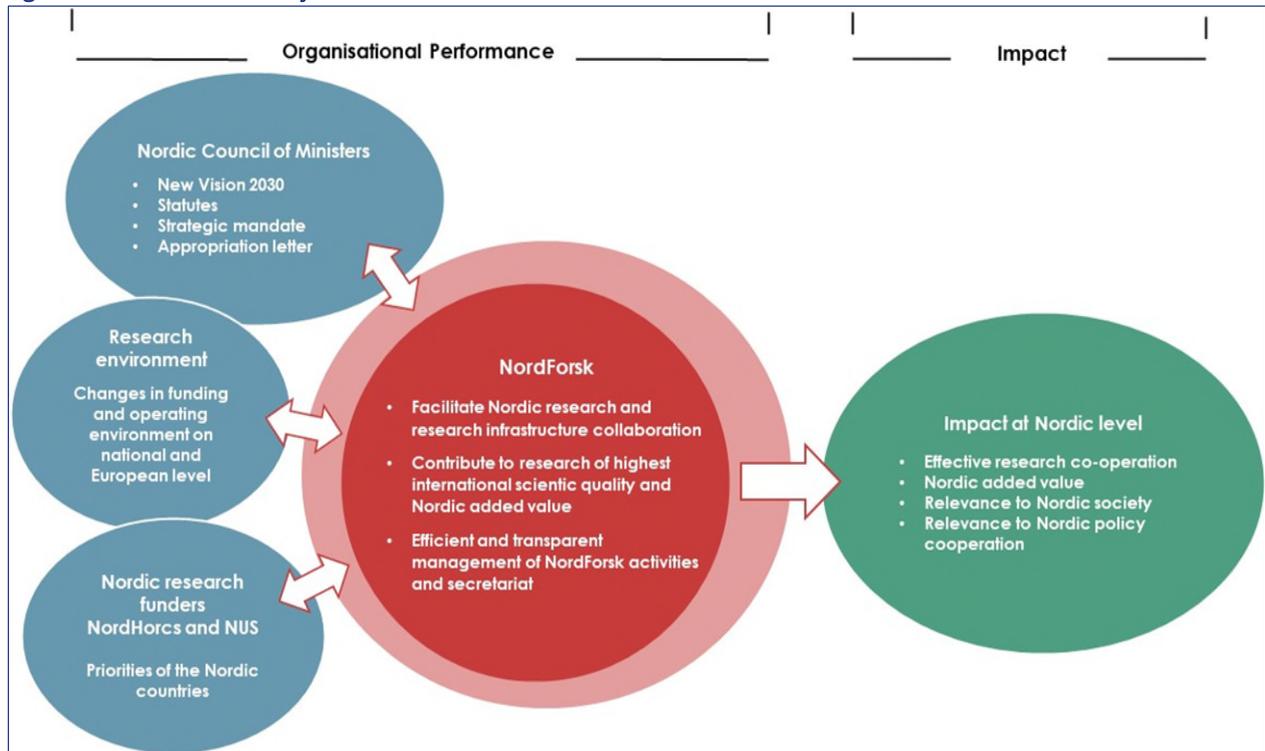
To meet the objective of the evaluation, we have designed an analytical framework for evaluation, addressing both NordForsk's organisational performance and its impact on the Nordic research system. Recognising the role of NordForsk as a facilitator for the national research funding organisations on the Nordic level, and as a Nordic institution under the Nordic Council of Ministers, it pays special attention to changes in the external and the internal drivers of NordForsk's performance and impacts, particularly its contributions to Nordic added value. Figure 2.1 illustrates, at a high level, the 'system' in which NordForsk operates. External change drivers interacting with NordForsk include:

- Steering of the Nordic Council of Ministers
- Contextual changes such as the growing policy importance of societal challenges
- Priorities of Nordic research funders, NORDHORCS and NUS

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<sup>1</sup> Minutes of the meeting MR-U 01/18, issue 06/18.

Figure 2.1: NordForsk in a systemic context



The analytical framework addresses all the issues of special interest to understand the performance and impact of NordForsk, see Appendix A:

- Political relevance
- Relevance for national research funders/NORDHORCS and NUS
- Relevance for end-users/researchers in the Nordic region
- Focus on quality and efficiency in administration
- Achieved results, outcome and Nordic added value
- Impact of NordForsk-funded research on Nordic and international society

The framework is inspired partly by **organisational assessment models**.<sup>2</sup> It also integrates an impact evaluation approach using a **Theory of Change**<sup>3</sup> – an explanation of how an intervention such as funding research and innovation leads to the production of outputs such as knowledge, which in turn trigger outcomes such as innovations or better-informed policies, eventually contributing to impact in society.

### 2.3. Method for performing the assignment

The evaluation must establish new insight on NordForsk related to the dynamics of organisational performance and system impact to provide input to the upcoming Strategic mandate for NordForsk. In

<sup>2</sup> Lusthaus, C., Adrien, M.-H., Anderson, G., Carden, F., & Montalván, G. P. (2002). *Organisational Performance: A Framework for Improving Performance*. Washington and Ottawa: Inter-American Development and IDRC.

<sup>3</sup> Applying Evaluation Criteria Thoughtfully", OECD, 2021.

this light, the methodologic approach for the evaluation is mainly to be qualitative and, therefore, apply the following methods:

**Table 2.1: Applied methods**

Method	Approach
Desk research	<ul style="list-style-type: none"> <li>Review policy documents, key reports from NordForsk on performance and impact</li> <li>Review the Nordic priorities for national research funders</li> <li>Review international policy/academic literature on trends in research policy and funding</li> </ul>
Self-assessment report	A self-assessment report prepared by NordForsk providing the evaluation with insight and knowledge (quantitative and qualitative data) on NordForsk performance and how they have achieved or fulfilled their strategy and mandate.
Qualitative interviews	<p>41 key stakeholders have been interviewed representing (see list of participating organisations in Appendix B):</p> <ul style="list-style-type: none"> <li>The Senior Officials Committee for Education and Research (EK-U)</li> <li>The secretariat of Nordic Council of Ministers</li> <li>NORDHORCS (Nordic Heads of Research Councils)<sup>4</sup></li> <li>NUS (The Association of Nordic University Rectors Conferences; a Nordic University Co-operation)<sup>5</sup></li> <li>Funding partners in the Baltic countries</li> <li>NordForsk and members of the Board</li> <li>Researchers managing projects funding by NordForsk</li> </ul> <p>The method for conducting qualitative interviews is semi-structured with open-ended questions to thoroughly cover the framework conditions for NordForsk, the performance of NordForsk and the achieved impact on Nordic research and to be able to thoroughly understand the challenges associated with the role of NordForsk in the coming years.</p>
Workshop	Validation workshop with stakeholders representing the Nordic Council of Ministers/EK-U, NordForsk, NORDHORCS and NUS discussing the outcomes of the evaluation such as key findings and challenges that NordForsk is facing in the years to come. See the list of participating organisations in Appendix C.

By applying different methods (methodological triangulation), the evaluation has gathered different types of information and data to reply to the overall objective of the evaluation as well as to different evaluation questions. In this way, the evaluation will be based on several types of information and data which are crucial for the quality and validity of the evaluation.

<sup>4</sup> <https://www.nordforsk.org/nordhorcs-nordic-heads-research-councils>

<sup>5</sup> <https://dkuni.dk/om-os/internationalt/nus/>

### 3. NordForsk at a glance

*The fundamental basis of the evaluation, as presented below, is the political and formal framework and the strategy for NordForsk as well as the organisation and operational changes made in 2018.*

#### 3.1. 2018 as a turning point

NordForsk was established by the Nordic Council of Ministers in 2005 as a Nordic institution under MR-U. During NordForsk's 15+ years there have been a few important changes in the mission, governance and activities:

In 2012, The Nordic e-Infrastructure Collaboration (NeIC) was established and hosted by NordForsk. NeIC's key objective is to stimulate development and sustainability of Nordic research e-infrastructures and to enhance the productivity of researchers in the Nordic region beyond national efforts through new services, pooling competencies and sharing the resources of national e-infrastructure providers. An important factor for the establishment of NeIC was the task to coordinate the operations of the Nordic distributed Worldwide Large Hadron Collider Computing Grid (WLCG) Tier-1 facility (NT1), which provides computing and storage for CERN (Conseil Européen pour la Recherche Nucléaire) to be used by high energy physicists worldwide.

In 2014, the NordForsk Statutes<sup>6</sup> were revised, which resulted in a smaller board, mainly governed by the national research funders. The purpose was to make the board's operations more efficient. NordForsk's main tasks only changed marginally. However, the coordination and funding function of NordForsk was prioritised through the research funders' enhanced role, while the policy advisory function was toned down. NordForsk was allowed to retain the exemption from the Council of Ministers' Normal Statutes – and its board – while other Nordic institutions lost their boards and were governed by the secretariat of the Nordic Council of Ministers.<sup>7</sup>

In 2018, the Nordic Council of Ministers for Education and Research (MR-U) adopted six important principles for Nordic research cooperation:<sup>8</sup>

1. A clearer vision and broader research policy co-operation
2. A clearer focus on Nordic added value based on the priorities of the Nordic countries
3. A clearer focus on quality goals for NordForsk
4. Increased flexibility in financing operations of NordForsk
5. A more cost-effective NordForsk
6. An ongoing evaluation of NordForsk

The principles were intended to further develop, focus and reform NordForsk activities and the organisation, rather than replacing or transforming current operations.

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<sup>6</sup> The statutes date from 13 January 2014, following decisions in the Committee of Senior Officials for Research and Education (EK-U), the Nordic Council of Ministers for Research and Education (MR-U) and the Nordic Council of Ministers for Co-operation (MR-SAM).

<sup>7</sup> Nordiska ministerrådet. (2014). *Nyt Norden: Afrapportering på generalsekretærens moderniseringsopdrag*. Köpenhamn: Nordiska ministerrådet.

<sup>8</sup> Minutes of the meeting MR-U 01/18, item 06/18.

In the autumn 2017, NORDHORCS was granted an advisory role to the NordForsk Board. Even though NORDHORCS is not a part of the formal steering model of NordForsk, it gives advice and recommendations which often are implemented by NordForsk.

In 2018, the Open Invitation mechanism was introduced and has since then been the main mechanism for identifying and prioritising new areas for NordForsk programmes and calls. The Open Invitation mechanism was developed in response to the dissatisfaction of the national research funders that the initiatives to NordForsk's programmes and calls were not in alignment with national needs or priorities.

Since 2018, the focus of NordForsk on real common pot funding and Nordic Centres of Excellence has been replaced by more flexible funding (real common pot funding and virtual pot funding) and a focus on research projects instead of Nordic Centres of Excellence.

Since 2018, NordForsk has streamlined its organisation and professionalised the funding agency role. This development is partly due to the decision by MR-U in 2018 of removing the policy advisory role of NordForsk. Measures have also been taken for a more cost-effective organisation through administrative collaboration with Nordic Innovation and Nordic Energy Research.<sup>9</sup>

However, there are still some challenges concerning NordForsk's governance model, portfolio steering, impact and Nordic value added.

## 3.2. The political and formal framework for NordForsk

### 3.2.1. Objective of NordForsk

NordForsk's mission and objective are outlined in four main documents: NordForsk's Statutes, the Co-operation Programme for the Nordic Council of Ministers for Education and Research (MR-U), the Strategic mandate and the Nordic Council of Ministers Vision 2030.

Outlined in the Statutes from 2014<sup>10</sup>, NordForsk's overall goal is to promote effective cooperation between the Nordic countries in conducting research of the highest international quality (paragraph 1.2). NordForsk shall primarily design the initiatives based on the priorities of the national research funding bodies (paragraph 2.1). Furthermore, all NordForsk activities must contribute to Nordic added value<sup>11</sup> (paragraphs 1.1 and 1.4.).

In the recent years, additional strategic points of orientation have been outlined.

The MR-U co-operation programme (November 2019 until December 2024) states that MR-U aspires for the Nordic region to be a leading global knowledge region, focusing on:

- Supporting multidisciplinary and inter-sectoral research co-operation between national and Nordic research funding bodies.

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<sup>9</sup> NordForsk self-assessment report, Appendix 11.

<sup>10</sup> <https://www.nordforsk.org/nordforsk-statutes>

<sup>11</sup> <https://www.nordforsk.org/how-does-research-cooperation-lead-nordic-added-value>

- Promoting research co-operation in potential fields of excellence, including strategically important areas in which a joint Nordic approach is necessary to build research and educational competencies of international quality and strength.
- Promoting co-operation on and joint use of research infrastructure in the Nordic region.
- Contributing to greater mobility, researcher training and networks, including for young researchers.

The Strategic mandate (approved in January 2017)<sup>12</sup> is a part of the MR-U co-operation programme and confirms that NordForsk must fund research that has the highest international quality and contribute to Nordic added value. It also confirms the ambition that the Nordic region should be globally leading in research and innovation. The mandate stipulates how NordForsk should develop programmes and calls in close collaboration with national research funding organisations in the Nordic region. Furthermore, it sets the principle that NordForsk can contribute with a maximum 1/3 of the budget in new programmes and calls. A minimum of 2/3 of all Nordic grants must come from national funders of research and innovation. This is to ensure the relevance of NordForsk calls and results. To utilize the full potential of the collaboration, NordForsk is expected to work in close dialogue with the Nordic Council of Ministers, in particular the Council of Ministers for Education and Research (MR-U).

In addition, NordForsk is expected to align its activities with the three strategic priorities of the Nordic co-operation – a green Nordic Region, a competitive Nordic Region and a socially sustainable Nordic Region – in the Nordic Council of Ministers Vision 2030. In the Vision 2030 Action Plan there are 12 specific objectives, where NordForsk is expected to contribute to making the Nordic Region a world leader in research and innovation.

### 3.2.2. Governance model

NordForsk has an exemption from the Nordic Council of Ministers' standard Statutes for Nordic institutions.<sup>13</sup> The board is accountable to the Nordic Council of Ministers and has the overall responsibility for NordForsk's budget and operations. The NordForsk Board is appointed by the Nordic Council of Ministers (MR-U/EK-U).

The board has six members: one member nominated from each country representing the national research councils (also members of NORDHORCS), one nominated by NUS (The Association of Nordic University Rectors Conferences), and four observers nominated by the Faroe Islands, Greenland, Åland and the Nordic Council of Ministers' secretariat (NCMs).

The board has employer responsibility for all employees except for employment and dismissal of the Managing Director. The board is responsible for developing instructions for the Managing Director and to follow-up on them. The Managing Director is responsible for the preparation of items submitted to the board and for the enforcement of the board's decisions. The Managing Director is responsible for NordForsk's ongoing activities.

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<sup>12</sup> The Strategic mandate was approved by EK-U 7 December 2016 and by MR-U 20 January 2017.

<sup>13</sup> Nordiska ministerrådet. (2014). *Nyt Norden: Afrapportering på generalsekretærens moderniseringsopdrag*. Köpenhamn: Nordiska ministerrådet.

Since the MR-U's 2018 decision, NORDHORCS has an advisory role to NordForsk, but this is not explicitly outlined in the steering documents of NordForsk. NORDHORCS is an informal network with no formal authority over NordForsk, but the advice and recommendations given by them is still of high relevance according to the self-assessment.

### 3.2.3. Open Invitation mechanism and the funding models

The Statutes stipulate (paragraph 2.3) that NordForsk's initiatives should normally presuppose binding financial participation from at least two Nordic countries and a third country outside the Nordic region, or Greenland, the Faroe Islands or Åland. Purely bilateral investments shall not be supported by NordForsk.

Since 2018, the Open Invitation mechanism<sup>14</sup> has been the main mechanism for identifying new areas for NordForsk programmes and calls where the national funders of research are invited to develop programmes in line with their research priorities. The national funders of research (members of NORDHORCS) submit Expressions of Interest for new programmes within the Open Invitation mechanism to be adopted by the NordForsk Board.

All projects funded until 2018 were funded via a real common pot model. In the case of a real common pot, all resources are pooled and used to fund the best projects independently of nationality. Since 2018, NordForsk has used both the real common pot model and the virtual common pot model. There is a commitment among the national funders to contribute with (at least) 2/3 of the funding in new calls. The Open Invitation mechanism has led to the inclusion of new national funders in the Nordics, e.g., Innovation Fund Denmark, Vinnova and Business Finland, that have contributed with funding to NordForsk programmes and calls after 2018.

The trend has, over the last years, shifted from funding of large centres (Nordic Centres of Excellence), each receiving typically 20–30 MNOK per year over 5–6 years, to researcher projects, typically receiving 7–15 MNOK over 3–4 years. Another trend is including non-Nordic research funders in programmes and calls, such as national funders in the Baltic countries, the Netherlands or the United Kingdom.

There has been an increased collaboration between the Nordic funders and the national funders in the Baltic countries. Estonia and Latvia are already part of several programmes, and Lithuania will be part of the upcoming calls within Sustainable agriculture and Future working life.

NordForsk-collaboration with countries outside the Nordic Region focuses on results in high scientific quality and Nordic added value. Partners from countries outside the Nordic Region can participate in programmes and calls on equal terms as Nordic funding partners. The NordForsk Action Plan for collaboration with countries outside the Nordic Region states that there should be no limitations regarding themes or topics for possible collaborations: "However, research underpinning the vision of the Nordic Council of ministers; a greener Nordic Region, a more competitive region and social sustainable region, should be prioritised."<sup>15</sup>

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<sup>14</sup> About NordForsk Open Invitation: <https://www.nordforsk.org/sites/default/files/inline-images/fgEKVb0bmos-dlCcrj8RtB6CjULS41VeZ8LRk7QoaWWhxCvtWg0.pdf>

<sup>15</sup> NordForsk Action Plan for collaboration with countries outside the Nordic. NordForsk self-assessment Appendix 9.

### 3.3. The strategy of NordForsk

The current NordForsk Strategy<sup>16</sup> (2019 to 2022) builds on the Statutes of NordForsk, the Strategic mandate and the 2018 Principles for NordForsk. The vision in the strategy – “Making the Nordic region globally leading in research and innovation” – is from the Strategic mandate. The main goal in the strategy states that “NordForsk shall facilitate effective and trustful research cooperation in the Nordic Region and ensure that NordForsk funded research has the highest international quality and realises Nordic added value,” and also reflects the ambitions of the Strategic mandate. The main goal is operationalised through three subgoals (Textbox 3.1). The strategy for 2019–2022 is divided in three areas: Operational activities, Communication activities and Administration. A new four-year strategy for NordForsk will be approved by the NordForsk Board in 2022.

#### Textbox 3.1: NordForsk Strategy 2019-2022 - subgoals

***Subgoal 1: Facilitate Nordic research and research infrastructure collaboration NordForsk to:***

- develop programmes and calls in close collaboration with national research funding organisations in the Nordic region
- fund high quality research, research infrastructure and research-based innovation in different sectors of society and select projects for funding based on scientific quality and expected Nordic added value
- further promote open science and open access
- require that research activities have appropriate systems for ensuring compliance with national and international ethical standards and commonly accepted professional codes and norms
- ensure that programmes and projects comply with the NordForsk gender policy.

***Subgoal 2: Enhance the impact of Nordic research and research infrastructure collaboration NordForsk to:***

- ensure that NordForsk is well known as a facilitator for Nordic research and research infrastructure collaboration
- communicate the Nordic added value of the NordForsk activities
- strengthen the communication and interaction with Nordic University Rectors Conferences (NUS)
- support activities disseminating results from and impact of NordForsk funded projects and programmes.

***Subgoal 3: Ensure efficient and transparent management of NordForsk activities and secretariat NordForsk to:***

- commit to work in an open, transparent and accountable way
- actively work to ensure that its operations and management of research funding are cost-efficient and effective.

Source: NordForsk strategy 2019–2022, <https://www.nordforsk.org/strategy>.

<sup>16</sup> <http://norden.diva-portal.org/smash/get/diva2:1307001/FULLTEXT01.pdf>

### 3.4. Expected outcome and impact – Nordic added value

All NordForsk activities must contribute to Nordic added value (Statutes, paragraph 1.1.) The term is also used in the Strategic mandate and other steering documents. The term originates from the mid-1990's when Nordic cooperation was in a crisis (due to Sweden's and Finland's membership in the European Union) and needed to be streamlined. There is no clear definition of Nordic added value, but since 2018, NordForsk has operationalised and implemented the term in its governing documents, strategies, action plans and call texts.<sup>17</sup> The Nordic added value is evaluated and assessed by the experts during the peer review process and by the programme committee after the peer review is completed. Nordic added value is also one of the indicators the research projects must report in Researchfish. Nordic added value indicators are specifically made by Researchfish for NordForsk and only used by NordForsk.

NordForsk defines two main categories of Nordic added value:

1. Added value generated because the research collaboration is taking place in the Nordic region
2. Added value generated because the research can only be carried out in the Nordic region.

In Table 3.1, the specific Nordic added value of research activities is elaborated upon.

**Table 3.1: Nordic added value as defined by NordForsk**

<b>Added value generated because the research collaboration is taking place in the Nordic region</b> This category of added value is produced when research activities:	<b>Added value generated because the research can only be carried out in the Nordic region</b> This added value is produced when research activities:
<ul style="list-style-type: none"> <li>• help to build critical mass and/or expertise at the Nordic level in important disciplines or research areas;</li> </ul>	<ul style="list-style-type: none"> <li>• build on particular strengths of Nordic researchers, and when the research is carried out by groups with unique expertise;</li> </ul>
<ul style="list-style-type: none"> <li>• enhance cost-effectiveness by sharing infrastructure or data or harmonising systems for utilising data and other resources in the Nordic region;</li> </ul>	<ul style="list-style-type: none"> <li>• address needs that are unique to the Nordic countries in light of our similar social structures, institutions and institutional culture and shared cultural heritage;</li> </ul>
<ul style="list-style-type: none"> <li>• lead to regional mobility and networking among the Nordic countries;</li> </ul>	<ul style="list-style-type: none"> <li>• focus on, e.g., geographical, climatic, cultural, linguistic or social phenomena in the Nordic region;</li> </ul>
<ul style="list-style-type: none"> <li>• enhance scientific quality and expand the number of high-quality scientific publications through Nordic cooperation;</li> </ul>	<ul style="list-style-type: none"> <li>• utilise data from uniquely Nordic registries.</li> </ul>
<ul style="list-style-type: none"> <li>• increase the chances of success for Nordic researchers in EU research activities or other international research cooperation;</li> </ul>	
<ul style="list-style-type: none"> <li>• lead to more results and stronger, quality-assured conclusions as a basis for shaping the statutory framework or rationalising and improving the public administration;</li> </ul>	
<ul style="list-style-type: none"> <li>• promote the creation of innovations, patents or other solutions that help to enhance industrial development and cooperation in the Nordic region.</li> </ul>	

Source: <https://www.nordforsk.org/how-does-research-cooperation-lead-nordic-added-value>

<sup>17</sup> <https://www.nordforsk.org/how-does-research-cooperation-lead-nordic-added-value>

### 3.5. Assessment of the mission and governance model

Interviews with key stakeholders of Nordic research cooperation, e.g., NORDHORCS, NordForsk Board and EK-U, show that there is consensus on the overall mission of NordForsk and the focus on funding of Nordic research.

In NordForsk's self-assessment, they report that the institution is satisfied with the steering documents and the autonomy authorised to the institution. Interviews with NORDHORCS and the Senior Officials Committee for Education and Research EK-U give the same picture, but the secretariat of the Nordic Council of Ministers expresses concern about the Nordic institutions' (not just NordForsk) ability to contribute to the Vision 2030 and how the Nordic institutions can be guided by the common goals of the Nordic Council of Ministers.

The evaluation judges NordForsk's mission and governance model as quite complex, though it continues to work well. There is alignment in the mission in NordForsk's Statutes, Strategic mandate, the Co-operation Programme for the Nordic Council of Ministers for Education and Research (MR-U) and NordForsk's own strategy. However, there is less alignment with the Nordic Council of Ministers Vision 2030 and the 3 strategic priorities due to the Vision is from 2030 while NordForsk's mission and governance model have been developed in 2018.

The same goes for the governance model, where NordForsk has well-functioning relations with MR-U/EK-U and the national research funders but less well-functioning relations with the secretariat of the Nordic Council of Ministers. This is due to NordForsk's facilitating rather than having supportive role in the implementation of the Nordic Council of Ministers Vision 2030. This indicates that the Strategic mandate and the forthcoming NordForsk strategy need to be better aligned with the Nordic Council of Ministers Vision 2030, stressing NordForsk's supporting role in the implementation of the Vision 2030 but still focusing on the general facilitating role.

## 4. NordForsk – the operational practice of funding of Nordic research

*This section aims at evaluating how NordForsk has implemented the political and formal framework in operational structures and how it works in developing and implementing research programmes.*

### 4.1. The portfolio of research programmes

Since 2018, NordForsk has introduced a new strategic approach for developing and funding new research programmes (Section 3). However, many research programmes are active for many years, and several programmes can be characterised as ‘framework programmes’ with several calls for research projects within specific subjects related to the overall research theme. Consequently, the entire portfolio has gradually changed since 2018. However, most of the active research programmes are planned to end by 2022 or no later than 2024, as seen in Figure 4.1 on next page.

The coming strategy for NordForsk to be implemented from 2023 has an outstanding opportunity to streamline or align the research programme portfolio to Nordic and national research strategies as well as NordForsk’s role and procedures for developing and implementing research programmes/projects.

### 4.2. From R&D-priorities to research of Nordic relevance

#### 4.2.1. National and Nordic policy priorities

According to the current strategy, NordForsk will develop programmes and calls in close collaboration with national research funding organisations in the Nordic region which have been institutionalised in the Open Invitation mechanism.

Through interviews with Nordic research stakeholders, the overall statement is that NordForsk is promoting research reflecting Nordic research priorities and hereby contributing to Nordic added value. However, different types of stakeholders contributed in various ways to this statement.

All in all, representatives from **NORDHORCS** stated that the Open Invitation mechanism has led to research programmes that reflect Nordic R&D-priorities as the new research programmes must reflect national research funding organisations’ research objectives and strategies. As Open Invitation invites national research funding organisations with different objectives and strategies ranging from basic research to innovation, the programme portfolio tends to be more oriented toward applied research and innovation and toward humanity and social science (Figure 4.2). Consequently, NordForsk will, to a large extent, align with the national research funding organisations and their interest in co-funding research programmes with very little or no opportunity for an active portfolio management. In general, the representatives from NORDHORCS do not consider the missing portfolio management a fundamental problem as they find that there is an overall coherence between national and Nordic research objectives and strategies.

Figure 4.1: The research program portfolio of NordForsk. RED = initiated through an Open Invitation process



Source: NordForsk, <https://www.nordforsk.org/what-we-fund>

NORDHORCS representatives have elaborated their viewpoint which also has given rise to some concerns. NordForsk's mission and objective are outlined in four governmental documents (Section 3) and the funding mechanism, as well as a limited budget for funding Nordic research. Within this frame, the management of the programme portfolio is dominated by ad hoc decisions which mainly reflect the national research priorities. Consequently, a challenge for NordForsk is to include all the Nordic countries, as the national research funding organisations, especially Denmark and Finland, do not represent all types of research (Figure 4.2) and, additionally, to establish a balance between basic research and

innovation while Nordic political priorities are seen to be second to the development of research programmes.

Figure 4.2: Nordic national research funding organisations working with NordForsk and their funding focus



Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

NORDHORCS’s representatives point to some further dilemmas related to the overall governance model.

- The overall management of the programme portfolio is missing or at least unclear as NordForsk is operating on behalf of some overall political priorities and some funding principles. When the national research funding organisations (NORDHORCS) at the same time significantly are influencing which research programme to initiated, the role of the Board of NordForsk becomes unclear or even overlapping with the role of the national research funding organisations.
- However, NordForsk is – and will to a larger extent – rely on external funding, and as long as NordForsk can attract external funding, NordForsk will also be able to encourage research of relevance to the Nordic countries.
- When NordForsk must fund research aiming at providing the society with concrete results, it might be at the expense of encouraging Nordic research of highest international quality.
- Some prefer research initiated by the researchers (freedom of research) but it is not necessarily contradictive to research of high (political) relevance.
- Calling for concrete research-based knowledge might be subject for special tendering procedure as it will be out of the scope for several research councils/research funding organisations.

Having a political perspective on NordForsk, the interviews with representatives from **EK-U and the Secretary of the Nordic Council of Ministers** stress that NordForsk all in all is funding research that encourages research of relevance to the Nordic countries as the funded programmes represent an intersection of the national research priorities. Further, a common viewpoint is that NordForsk does manage to capture what is of Nordic political interest/relevance in the design of new research programmes. Hereby, NordForsk is able to adapt the research programme to the Nordic political visions

as presented in NCM's Vision 2030, e.g., focusing on the Nordic region as a green, competitive and socially sustainable region. As the MCN vision 2030 is relatively broad in its formulation, NordForsk manage in a broader sense to balance political priorities and the aim of encouraging research of the highest international quality.

Among the political stakeholders, we observe some concern on NordForsk's ability to be relevant, not only for the Nordic research environment (research politics), but also for other sectors and their needs for research (new knowledge) to develop/transform the Nordic countries. This concern has also been expressed in a statement as NORDHORCS has too much influence on what research NordForsk is funding.

The outcome of this concern is a request to NordForsk to be more anchored to all the Nordic political-administrative sectors by a closer dialogue and interaction with EK-U but also NCM (sector and MR-SAM "samordningsministerne"). NordForsk's effort to communicate and be in dialogue with several policy areas is recognised, but more must be done in realising that the political-administrative system also must be an active part in this process.

This concern of (political) relevant research has been taken a step further, as NCM (MR-SAM "Samordningsministerne") allocates funds to research targeting specific political prioritised areas/subjects, and NORDHORCS is reluctant to co-fund such projects. The political stakeholders discuss how NordForsk could develop procedures or instruments to facilitate and implement research programmes/projects exclusively funded by NCM and to the benefit of developing and implementing the Nordic Vision with the timeframe of the vision. In other words, it is a request for speed and efficiency as well as more political 'customised' research programmes.

When it comes to the funded research projects, there is a common view among the interviewed **researchers** (project managers) that NordForsk's calls to a high degree reflect the priorities of the Nordic countries. Some state that their view on this is merely based on their specific field of research and calls related to this field.

In the Self-assessment report, **NordForsk** recognises these challenges related to the governance model and has given some additional explanations, as seen in Textbox 4.1.

#### Textbox 4.1: NordForsk about challenges related to the governance model

"The members of the board represent a direct link between the national funders of research contributing with 2/3 of the funding in all calls and NordForsk. In this way, the national funders of research can see NordForsk as "their" instrument to realise Nordic research collaboration. The governing model motivates the national funders to collaborate across the Nordics and develop joint calls. It is a key factor explaining the success of NordForsk and an indicator to the relevance of NordForsk.

Although NORDHORCS is an informal network and has no formal authority over NordForsk, the NORDHORCS group share experiences, initiate joint activities related to the research funding systems as well as discussing the development of NordForsk. Since NORDHORCS consists of the top leaders of the national funding organisation responsible for 2/3 of the financial contribution to NordForsk's programmes and calls, it is a powerful group within the Nordic collaboration on research. Therefore, it is of importance to NordForsk to work closely with NORDHORCS and to be open to advice and recommendations given by them. The support given to NORDHORCS creates Nordic added value.

The working relationship between the NCMS Department for Knowledge and Welfare and NordForsk is open, constructive and based on mutual trust. The formal dialogue carried out via the letters of grant, the two dialogue meetings, the annual meeting with EK-U and the two reports submitted each year is satisfactory.

The priorities made by NordForsk, primarily via the Open Invitation mechanism, are often in line with the priorities of the NCM. NordForsk funds research and innovation in line with the goals of the NCM's vision and the Action plan for the years 2021-2024.... This is hardly surprising as the priorities of the national research funders are in accordance with the priorities of the NCM... NordForsk does not see the need to interfere or suggest changes in the governing model to ensure good accordance between the priorities of the NCM, the national funders of research and the NordForsk Board.

There is however a challenge to ensure financial support to political initiatives taken by the NCM. Some of the topics prioritised by the NCM may be too narrow in its scope or too specific for the national funders to support them. Often, the budget is available from the NCM but too limited to open a call for research. The national funders will only commit with funding if the initiative from the NCM is in line with the priorities of the national funding agencies. Moreover, national funders normally prioritise open calls for free bottom-up initiated research over calls on specific topics."

"The NCM emphasises more cross-sectoral collaboration in the Action plan for 2021-2024. Moreover, the NCM wants to improve coordination and collaboration across the sectors within the NCM. The NCM prioritises and decides activities it expects the institutions will support, follow up and carry out. This can be challenging for NordForsk. NordForsk must, according to the Strategic mandate, ensure 2/3 co-funding from sources outside the NCM structure in all calls. The 2/3 contribution comes from the national funders of research and innovation in the Nordic Region. The national funders' priorities are not always in line with the priorities of the NCM, and they are therefore not always willing to contribute with funding to activities prioritised by the NCM.

NordForsk has the tools, experience, infrastructure and capacity to organise calls and manage projects on behalf of all departments of the NCM. NordForsk has, until recently, been reluctant to organise smaller calls and manage smaller projects. Rightly or wrongly, NordForsk has the reputation for being difficult to work with for the other parts of the NCM. Some will perhaps claim it is because of the unique governing model of NordForsk. But it could also be argued that NordForsk is a professional project funding organisation and as such needs to follow more rigid procedures when advertising calls, evaluation proposals and selecting projects for funding. This rigidity might not be so well understood if your focus is on policy development, but it ensures quality and impartiality".

Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

#### 4.2.2. Nordic added value

NordForsk must facilitate Nordic research which generates Nordic added value and, consequently, the term is incorporated in NordForsk's governing documents, strategies, action plans and call texts, reflecting that Nordic added value is a founding principle for Nordic collaboration. However, there is no official and clear definition of Nordic added value. As a response to a missing official definition, NordForsk has developed their own definition of Nordic added value in research collaborations (Section 3.4).

Nordic added value is applied in a number of situations, from development of research programmes, implementing of the research programme (communications, calls and evaluation of projects) and to measuring the outcome and impact of the funding research projects. Upon review of some of the governing documents of NordForsk,<sup>18</sup> Nordic added value is generated when:

<sup>18</sup> <https://www.nordforsk.org/how-does-research-cooperation-lead-nordic-added-value>

- The research collaboration has taken place in the Nordic countries to develop or strength the Nordic research environment, and
- The research only can be carried out in the Nordic region, as the research builds on Nordic strengths within research or addresses needs unique to the Nordic counties.

In the guideline for funding research, it is emphasised that Nordic added value must have the potential to create benefits for Nordic research and the potential to create benefits to the Nordic societies.<sup>19</sup>

**NordForsk** recognises that the definition is somewhat unclear when it comes to how Nordic added value can be a precondition for funding research or an outcome to the benefits of the Nordic countries. Further, NordForsk states that the concept of Nordic added value is not widely known among the researchers and therefore not easily addressed in the applications. Moreover, the researchers do not find it easy to report Nordic added value created in the projects. NordForsk is aware that this indicator needs to be further developed. When it comes to mapping and analysis of Nordic needs for research, NordForsk states they had previously done such an analysis, but since the Open Invitation mechanism has been introduced, no initiatives have been taken to map or analyse research needs in the Nordics as the prioritisation of new programmes are in the hands of the national funders of research.<sup>20</sup> To develop a more clear definition of Nordic added value, NordForsk has recently signed a contract with the University Hub (ReNEW project) 'to provide an in-depth analysis on how Nordic added value is conceptualised within different sectors of research and on different national levels exploring their similarities and differences.'<sup>21</sup>

The overall viewpoint among the interviewed stakeholders is that Nordic added value is a crucial concept to guide the funding of Nordic research in relation to design research programmes, to evaluate the research projects and to indicate the expected outcome and potential benefits to the Nordics. Even though Nordic added value is a crucial concept, it is recognised that the conceptualisation of Nordic added value is unclear.

Among the **NORDHORCS** representatives, different viewpoints on Nordic added value are seen. To them, Nordic added value is about common preconditions and challenges for the Nordics, forming an argument – a rationale – for Nordic collaboration and hereby for (additional) Nordic funding of research. Additionally, to identify what is common to the Nordics can also be seen as Nordic added value. However, different perspectives have been presented:

- Nordic added value is a way of systems of thinking that can only be applied on the community level, not on the individual projects.

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<sup>19</sup> NordForsk (2021): NordForsk research funding guidelines .

<sup>20</sup> NordForsk (2022) Self-assessment report 2022. (unpublished).

<sup>21</sup> [Reimagining Norden in an Evolving World \(ReNEW\): An Excellence Hub in Research, Education and Public Outreach | NordForsk](#). See also Section 6 for a short presentation of ReNEW.

- Nordic added value is to create new knowledge, insight and results (solutions) in the cross field between technology and society based on Nordic research competences, the Nordic culture and the social model of the Nordics.

Among **EK-U and the Secretary of the Nordic Council of Ministers**, a common view is that Nordic added value is about strengthening the Nordic research environment (building networks, common funding of research infrastructure, etc.) as well as research results to the benefits of the Nordics. In other words, Nordic added value is somewhat a generic concept of political relevance but also of relevance to the design of research programmes. In a specific Nordic context, the strategic target of Nordic added value could be:

- A common understanding of societal challenges/policy goals and thus what we need to spend money on, e.g., the green transition, the digital development, the Arctic area
- A shared culture – same understanding of governance, collaboration
- A common expectation for higher quality research and for research of high value for the society when the best researchers are collaborating (providing opportunities that lie beyond the national research environments by becoming connected and aligned), and
- Linked to the political system especially by illustrating how Nordic added value can be seen as a stepstone to realise the Nordic Vision 2030.

Most of the interviewed **researchers** (project managers of research projects funded by NordForsk) stress that Nordic added value, especially, is described as shared cultural, social and institutional structures as essential for the research projects. Nordic added value is described as both prerequisites for certain research topics as well as a factor that contributes to more efficient implementation of research projects. Many of the projects address research topics of interest and relevance to the Nordic countries (Section 6).

### 4.3. Development of research programmes

This section will focus on the Open Invitation mechanism as this mechanism has been applied in 2018 and the following years. The funding of the research programmes will also be examined as the Open Invitation mechanism also changed the funding structure.

#### 4.3.1. Open Invitation mechanisms

The Open Invitation mechanism has been established to give the national research funding organisation as well as other research funding organisations an opportunity to take an active part in proposing new Nordic research programmes or extensions of existing programmes. 2/3 of the programmes must be funded by external organisations, typically funding from those organisations being involved in developing new research programmes. The outcome of the Open Invitation should be an Expression of Interest with commitment of at least 20 MNOK from a minimum of three national research funding organisations. The Expression of Interest will be presented for the NordForsk Board for funding

decision (see Section 3.2.3).<sup>22</sup> After a research programme has been approved by the NordForsk Board, NordForsk prepares the programme to be launched.

In the Open Invitation process, NordForsk's role is to, at the request of any of the Nordic national research funding organisations or programme committees, assist in any way possible in the development of Expressions of Interest. This includes, for example, acting as a "broker" and facilitating contact between relevant contact persons in the various organisations, organising meetings at the request of the organisations, organising and hosting seminars/workshops/conferences on particular themes if needed and commissioning feasibility studies or the like on behalf of the organisations. The expected time frame for the process is 0,5–1 year.<sup>23</sup>

NordForsk finds that the Open Invitation mechanism ensures that research funding by NordForsk is anchored in the national research priorities. Further, NordForsk experiences that the Open Invitation mechanism works better for funders responsible for funding applied and strategic research and research closer to innovation than for funders normally funding basic research and free bottom-up initiated research. Furthermore, the model works better for funders with decision procedures enabling senior managers or directors to commit funding than for funders where funding commitments are made by elected research councils consisting of academicians and university professors.<sup>24</sup> According to NordForsk, Innovation Fund Denmark, Rannís, the Research Council of Norway, Formas and Forte are characterised by the features enabling them to commit relatively easily to new Open Invitation initiatives while The Independent Research Fund Denmark, The Academy of Finland and the Swedish Research Council find it more difficult.

All in all, the interviewed representatives from **NORDHORCS** find that the Open Invitation mechanism is working very well, giving the national research funding organisation, in a flexible way, an opportunity to influence the Nordic research agenda by proposing new research programmes in-line with their own research priorities.

In general, **NORDHORCS** recognises that such an invitation obliges **NORDHORCS** to actively take part in the process developing new research programmes. The Open Invitation becomes a very flexible process. As stressed by one of the interviewees, national research funding organisations have a decisive impact on the amount of funding available for Nordic research and if Nordic research is considered relevant. However, a response from another interviewee is that the Open Invitation is a platform for dialogue about needs/demands for Nordic research based on insight on national policies and research environments.

The Open Invitation process, as experienced by many of the interviewed member of **NORDHORCS**, is a challenging process based on trust as well as one needing to invest will and ambition to be active in the process of developing a new programme and resources in terms of time and money.

Another challenge is that national research funding organisations work on a different strategic and legal foundation, which is decisive for which kind of research, what they can fund (basic research vs.

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<sup>22</sup> About NordForsk Open Invitation: <https://www.nordforsk.org/sites/default/files/inline-images/fgEKVb0bmosdIC-crj8RtB6CjULS41VeZ8LRk7QoaWVhxCVtWg0.pdf>

<sup>23</sup> NordForsk (2022). Self-assessment report 2022 (unpublished).

<sup>24</sup> NordForsk (2022) Self-assessment report 2022. (unpublished).

innovation), how they can fund research (real vs. virtual common pot) and whether their decision-making process is aligned with the decision-making process in NordForsk and other funding organisations.

As said by several of the interviewees, to run this process you must be tireless!

Overall, NORDHORCS acknowledges the Open Invitation as a bottom-up process, but at the same time they observe a tendency to be a more institutionalised and structured process initiated by NordForsk. One interviewee commented that the Open Invitation must be based on some standard procedures and/or dialog-platforms for developing new programmes. On the other hand, some of the interviewees do not see any need to change the Open Invitation procedures as they will avoid having too many formalities or bureaucracy.

Representatives for **EK-U and the Secretary of the Nordic Council of Ministers** recognise the value of the Open Invitation mechanism. However, they do not consider themselves part of the Open Invitation as they do not have the insight and resources to participate. Consequently, they do not really comment on the Open Invitation process as such, but the process is capable of engaging national research funding organisations and creating some alignment in designing new research programmes. Having the above presented challenges by NORDHORCS in mind, there is a general awareness of and wish to develop the Open Invitation mechanism, e.g., by a more effective and smooth process for presenting new research programmes. Among some of the interviewees, there is a request for an alternative mechanism to handle research requests from the Nordic Councils of Ministers to support the realisation or implementation of the Nordic Vision 2030.

Primo 2022's nine Expressions of Interest have been presented to the NordForsk Board, and all have been adopted for funding.<sup>25</sup> However, the Nordic countries are, to a great extent, representing different funding profiles, which presumably reflect different strategic approaches to fund research among the national funding organisations (Table 4.1).

On the one hand, Norway and Sweden, and to a large extent also Finland, have contributed financially to all new programmes, though often with a minor contribution. On the other hand, Denmark especially, but also Iceland, has prioritised research programmes in line with the strategic focus of the funding organisations. In the case of Denmark, 2/3 of the funding have been allocated to two research programmes.

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<sup>25</sup> The Research Council of Norway took the initiative with four programmes as follows: Innovation Fund Denmark presented one alone and one in collaboration with the Icelandic Centre for Research and Ministry of Industries and Innovation; Independent Research Fund Denmark presented one, Forte presented one and the Swedish Research Council one. The Nordic Council of Ministers has presented one as well (Societal security beyond COVID-19).

Table 4.1: Research program established through the Open Invitation process 2018-2021 and the achieved funding in MNOK from the Nordic countries, Denmark, Finland, Iceland, Norway and Sweden

	DK	FI	IS	NO	SE	Total funding MNOK
COVID-19 Health	4%	10%	15%	3%	8%	35,0
Sustainable aquaculture	17%	10%	18%	12%	7%	63,0
Interdisciplinary Research	35%	10%	12%	17%	34%	137,0
Digitalisation of the Public Sector	9%	10%		7%	3%	50,0
Sustainable Urban Development and Smart Cities		10%		7%	10%	35,0
Nordic societal security in light of the emerging global and regional trends		17%	3%	7%	5%	30,0
Nordic PerMed	34%	16%	47%	27%	18%	129,0
Sustainable Agriculture		18%		10%	8%	41,0
Future Working Life			6%	10%	8%	34,1
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>-</b>
<b>Total MNOK</b>	<b>114,5</b>	<b>50,5</b>	<b>17</b>	<b>146,5</b>	<b>194</b>	<b>-</b>
<b>Share of funding allocated to the two calls recived the higset funding</b>	<b>69%</b>	<b>35%</b>	<b>65%</b>	<b>44%</b>	<b>52%</b>	<b>-</b>

Source: NordForsk.

### 4.3.2. Funding mechanism

The funding mechanism is mainly based on shared funding where NordForsk funds up to 1/3 and the national research funding organisations 2/3 or more. In some cases, the Nordic Council of Ministers is funding 100% of the research programme, and a few programmes request co-funding by the participating research institutions.

Since 2018, shared funding has been the preferred model by using both real common pot and virtual common pot as a funding mechanism (Textbox 4.2). The section will focus on the experiences gained since 2018.

#### Textbox 4.2: NordForsk's Description of real common pot and virtual common pot

*The real common pot* funding model is a cross-border funding model that requires the commitment from the funding partners to transfer the funding to NordForsk, who is managing and distributing the common pot. Benefits of the real common pot model are a common administration that ensures efficient operation of the call management and project follow-up. Since the funding decision will only depend on the ranking of the proposals, this ensures that the proposals with the highest quality and strategic value are funded. Under this model, the national funding organisations will potentially be funding researchers in other Nordic countries according to the committed budget.

*The virtual common pot* model does not involve cross-border funding, and all participating national funding organisations will fund their own national applicants often due legal restrictions preventing them from funding a common pot administered outside their country. The evaluation of proposals follows the same process as calls using a real common pot, but the funding decisions are made by the national funders in accordance with their standard rules and procedures. This funding model does not entail funding of researchers outside the funder's own country. The administrative burden and complexity are generally higher under this funding model. Since each national project partner will enter into separate contracts with their national funder and must follow national restrictions, standard rules and procedures will vary between the funders in a project.

Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

The introduction of the virtual common pot has, according to NordForsk, attracted new funding partners to NordForsk, such as the Innovation Fund Denmark and the Baltic research funders and increased the interest in funding Nordic research among several national funders.

NordForsk has also experienced national regulations when applying for Innovation Fund Denmark, Business Finland, Formas and now also the Swedish Research Council, making it difficult or impossible for them to transfer funds to NordForsk for administration of the programmes/projects. Separate funding agreements must be signed between the researchers and the national funders in addition to the funding agreement the researchers must sign with NordForsk. Annual reports must be submitted to each funder every year. This results in increased work and administrative burden both for the national funders and the researchers. Against this, NordForsk finds that real common pot is administratively easier as all parts of the program administration (call, project follow-up, etc.) are managed by NordForsk.

All in all, NordForsk sums up the positive effect of introducing virtual common pot as an increasing interest for participation in Nordic research and innovation collaboration from funders normally not working with NordForsk. Furthermore, the virtual common pot has also been of interest for Business Finland and Vinnova and together with the entrance of Innovation Fund Denmark on the Nordic scene for funding research. The outcome has been an increased focus in applied research and research closer to Innovation. On the negative side, NordForsk emphasises the increased administration, both for the researchers and the national funders.<sup>26</sup>

In general, the interviewed **stakeholders** are not questioning the demand for 2/3 external funding or the requirement for co-funding by the funded researcher. External funding is conditional, which presumably plays an even larger role in the future. The introduction of real and virtual common pot is often appreciated as an increased financial flexibility.

Some of the representatives from **NORDHORCS** have considered the strategic and administrative impact of the two funding models. First, real common pot gives rise to a centralised administration where the national funding organisation will have less or no influence on who is granted, will the grants return to their own country, how have the granted projects been implemented and what is the outcome? Further, real common pot might give preference to large, reputable research centres/environments. Secondly, virtual common pot will provide the national funding organisation to promote (up-coming) national researchers, a flexibility to allocate extra funding to national researchers and to have more hands-on insight on the progress of the funded projects. However, overlapping administration is recognised as a risk.

Since 2018, nine research programmes have been funded (Table 4.2). In this period, real common pot and virtual common pot have been applied almost equally. In spite of positive and negative aspects of the two funding models, both models seem to meet needs among the national funding organisation, as NordForsk is able to attract funding by offering both models for funding.

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<sup>26</sup> NordForsk (2022). Self-assessment report 2022 (unpublished).

Table 4.2: Funding model used for programmes launched since 2018 by applying the Open Invitation process

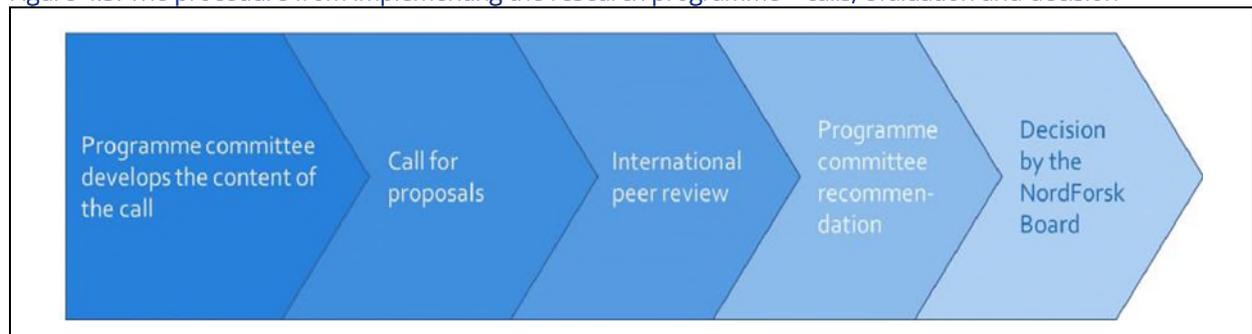
	Programme periode	Real Common Pot	Virtual Common Pot
		Total budget (MNOK)	
Nordic PerMed (within Health and Welfare programme)	2018 - 2023		170
Sustainable Urban Development and Smart Cities	2018 - 2024	52,5	
Interdisciplinary Research	2018 - 2025	177	
Digitalisation of the Public Sector	2019 - 2023		65
Sustainable aquaculture	2019 - 2024		88
COVID-19 Health (within Health and Welfare programme)	2020 - 2022	51	
Nordic societal security in light of the emerging global and regional	2020 - 2024	45	
Sustainable Agriculture	2022 -		62,5
Future Working Life	2022 -		49,6
<b>Total</b>		<b>325,5</b>	<b>435,1</b>

Source: NordForsk.

#### 4.4. Administrative processes implementing the research programmes

When an Expression of Interest has been approved by the NordForsk Board, NordForsk is applying a procedure for developing the research programmes, calling for proposal and evaluation of calls (Figure 4.4) and monitoring the funded projects.<sup>27</sup> The funding guidelines aim at streamlining the programme administration processes and specifying responsibilities. NordForsk states that ‘this streamlining has improved the effectiveness, efficiency and quality of the programme administration and has also ensured that the processes can be adjusted in line with the requirements of different funding organisations. The administrative processes promote that the processes are open, transparent, responsible and cost-efficient, ensure appropriate systems for compliance with national and international ethical standards and commonly accepted professional codes and norms, promote Open Science and Open Access and promote gender equality.’<sup>28</sup>

Figure 4.3: The procedure from implementing the research programme – calls, evaluation and decision



Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

As an element to improve the administrative system’s effectiveness and quality, in 2021, NordForsk, together with Nordic Innovation and Nordic Energy Research, has developed and implemented the same IT-network and systems.

<sup>27</sup> NordForsk (2021): NordForsk research funding guidelines.

<sup>28</sup> NordForsk (2022) Self-assessment report 2022. (unpublished).

All in all, the **national funding organisation as well as EK-U and the Secretary of the Nordic Council of Ministers** are appreciating the effort NordForsk is doing in developing the administrative systems and recognising that the administration is working very well overall.

The **researchers** – the users of funding from NordForsk – state that the administrative processes, from call to application, decision and reporting are well functioning. Call texts are perceived as clear, and the application process as generally forthcoming. Most researchers perceive the decision-making process as transparent, and all seem to be content with the feedback/motivation for the decisions made by NordForsk. Any negative views raised about the funding mechanism concern challenges related to several currencies being involved in each project, with which fluctuations in exchange rates can result in project partners not receiving as much funding as was planned. In general, the interviewees were positive toward the funding mechanism of NordForsk as an important mechanism that facilitates and enables Nordic research collaboration.

#### 4.5. Partners outside the Nordic countries

Partners outside the Nordic countries cannot be funded by financial contributions from the Nordic countries. Consequently, the virtual common pot model is the preferred funding model in programmes involving partners from outside the Nordics.

Eight research programmes have been initiated with partners outside the Nordic region (Table 4.3). In total, the non-Nordic partners have contributed with 17.6 pct. of the total funding of these eight programmes, indicating a significant scientific contribution to the Nordic research environment as well as the non-Nordic countries possibly learning from the Nordic research.

Table 4.3: On-going research programmes since 2018 initiated by NordForsk with non-Nordic partners, in MNOK

	Estonian	Latvia	Lithuania	UK	Japan	Russia	Total Non-Nordic funding	Total funding	Share of non-Nordic funding
COVID-19 Health	1,5						1,5	35,0	4,3%
Sustainable aquaculture	1,5	3					4,5	63,0	7,1%
Digitalisation of the Public Sector	4	4		12			20,0	50,0	40,0%
Sustainable Agriculture	2						2,0	41	4,9%
Future Working Life			3				3,0	34,1	8,8%
Joint Nordic-UK research programme on Migration and Integration				21,5			21,5	91,24	23,6%
Japan-Nordic Frontier Research Projects for Healthy Longevity					6,9		6,9	22,9	30,1%
Nordic-Russian Cooperation Programme in Education and Research						0	0	8	-
<b>Total</b>	<b>9</b>	<b>7</b>	<b>3</b>	<b>33,5</b>	<b>6,9</b>	<b>0</b>	<b>59,4</b>	<b>337,24</b>	<b>17,6%</b>

Source: NordForsk

Among the eight programmes, only in three programmes have the non-Nordic contributions been above 20 pct. of the budget of the programmes, while the financial contributions have been less than 10 pct. for the remaining programmes. More than half of the non-Nordic contributions originate from the UK and are used in funding of two programmes.

The **Baltic countries**, offered great political attention in the Nordic countries, are funding 32 pct. of the non-Nordic funding in the eight programmes. In each of programmes, the Baltic countries are funding

less than ten pct. of budget. However, the number of funded research man-years in the Baltic countries are probably higher than in similar budgets funded in the Nordic countries.

As the Nordic countries offer the Baltic countries great political attention, we have interviewed some research funding organisations in the Baltic countries. Overall, the Baltic countries have a positive attitude toward participation in Nordic research programmes. The interviews point to both benefits and challenges of being part of research programmes initiated by NordForsk:

- Benefits:
  - The research topics addressed reflect common needs for research. However, the topics are very universal in addressing the same great challenges of society.
  - The Nordic-Baltic collaboration is based on a positive attitude as the countries share the same values.
  - The dialog with NordForsk and the administrative processes are smooth and effective, but closing a common decision on funding a programme/project can be troublesome.
- Challenges:
  - The Baltic countries are facing economic constraints as well as the capacity of the local research environment limiting the possibilities to participate.
  - The decision-making process can be troublesome as it involves many stakeholders (funding organisations, researchers, etc.) to achieve support for a proposed research programme due to uncertainty on the benefits and possible outreach by participating.

According to the interviews, the non-Nordic researchers also find it attractive to participate in NordForsk research programmes (projects), and they are welcomed by the Nordic researchers. At present, the benefits and impact of participating are yet to be seen, but they expect that the Baltic research environment will become more international, and the research quality will be improved and hereby increase the general research and innovation capacity.

## 4.6. Cost-efficient

Since 2018, NordForsk has administrated a comprehensive portfolio of research programmes (Figure 4.1), introduced new procedures such as the Open Invitation mechanism, introduced Researchfish as an impact assessment tool and developed and implemented a new communication strategy. From 2018, NordForsk has not had the task to advise NMR about research policy. All in all, NordForsk has been through times of change which is also reflected in the total administrative cost (Table 4.4).

**Table 4.4: Total funding and administrative cost of NordForsk**

	2017	2018	2019	2020	2021
	MNOK				
Total funding of research programmes	298,0	298,8	304,6	290,0	385,5
- Administration related to funding of research programmes	19,7	22,0	23,6	19,0	16,2
- Consultancy and communication	18,9	10,7	10,7	6,8	6,8
- Other administrative cost	7,7	6,5	6,5	7,1	7,1
Total administrative cost	46,3	39,2	40,8	32,9	30,1
Administrative cost as a share for total funding of reserach programmes	16%	13%	13%	11%	8%
NordForsk basic funds	124,3	123,7	124,1	126,6	154,1
Administrative cost as a share for total basic funding	37%	32%	33%	26%	20%

Note: Financial cost not included.

Source: NordForsk.

When examining the financial figures for NordForsk, the main observations are that

- The total administrative cost has been reduced; consequently, in the observed period, the administrative cost represents a reduced share of the total funding of research programmes and of the total basic funding.
- The administrative cost related to funding of research programmes increased in 2018 and 2019, probably due to the introduction of the Open Invitation mechanism, but this cost has since been reduced.
- The cost of consultancy and communication has reduced significantly which cannot be exclusively attributed to the research consultancy task which NordForsk has to give up.

Besides the administrative task indicated in Table 4.4, attention must also be given to another task where NordForsk is functioning as secretariat for ten Nordic networks. NordForsk covers the cost for six of these networks, to which approximately 1/3 of a man-year is allocated. The four remaining networks are externally funded, and in 2022 the workload for NordForsk will be approximately more than 2 man-years.

In general, NordForsk's stakeholders are quite satisfied with the administrative systems and procedures implemented by NordForsk in the recent years and characterise them as more structured, solid, well-functioning and transparent. NordForsk has also become more responsive to the national research funding organisations and the political stakeholders.

However, two main concerns with an economic impact have been addressed. First, the Open Invitation mechanism, including the use of the funding mechanism real and virtual common pot has some administrative implications, as discussed above. Secondly, the communication regarding outcome, results and impact of the funded projects needs improvement, and an increased effort has been requested.

#### **4.7. Assessment of NordForsk's operational practice**

Since 2018, NordForsk has adapted and developed its operational procedures and administration to new political and formal frameworks as presented in Section 3. This transformation has been quite successful, which is widely acknowledged. However, some elements are still subject for discussion.

In general, the view is that NordForsk's rationale reflects R&D-priorities of the Nordic countries and is reasonably responding to specific national priorities. There is also a consensus that NordForsk-calls are addressing relevant research subjects or topics of Nordic relevance and encourage Nordic research collaboration.

EK-U, NORDHORCS and NordForsk argue that NordForsk has the ability to prioritise what is politically relevant and to adapt to the political reality, e.g., Vision 2030 and the 3 strategic priorities. The Open Invitation mechanism is widely accepted as a useful instrument to development new research programmes; however, it has questioned whether the working procedures could be more effective or streamlined. Until now, nine programmes have been initiated through the Open Invitation, which could be an opportunity for a critical assessment on improving this mechanism.

NORDHORCS has expressed that they are happy to continue working with NordForsk and with the Nordic Council of Ministers at policy level, with the vision of a green, competitive and socially sustainable region.<sup>29</sup> However, this view is not completely shared with the secretariat of the Nordic Council of Ministers. Even though the NordForsk priorities and activities are in line with the priorities of the Nordic Council of Ministers Vision and goals, there is a view that NordForsk, due to its facilitating role, might not be fully capable of supporting activities for the implementation of the Nordic Council of Ministers Action plan for the years 2021-2024.

NordForsk acknowledges this challenge in the self-assessment: "There is [...] a challenge to ensure financial support to political initiatives taken by the NCM. Some of the topics prioritised by the NCM may be too narrow in its scope or too specific for the national funders to support them. Often, the budget is available from the NCM, but it is too limited to open a call for research". NordForsk notes that they must ensure 2/3 co-funding from the national funders of research and innovation in the Nordic Region: "The national funders' priorities are not always in line with the priorities of the NCM, and they are therefore not always willing to contribute with funding to activities prioritised by the NCM."

Due to our assessment, NordForsk and the secretariat of the Nordic Council of Ministers should consider developing initiatives that can meet the Nordic Council of Ministers' need for research or research-based knowledge as an add-on to, e.g., the Open Invitation mechanism.

Key stakeholders argue that NordForsk can and should be a Nordic base for non-Nordic cooperation. NordForsk can be an attractive partner for research funders outside the Nordic region. NordForsk can work as a partner for research funders outside the Nordic region. However, a general view is that there is little Nordic added value in adding other European funders to programmes, but in specific research fields/programmes there might be added value in cooperating on issues of Nordic relevance. Research cooperation with the Baltic countries is more or less viewed as Nordic cooperation, and all parties are positive to the increased cooperation with Estonia, Latvia and Lithuania.

Even though the national funders of research have taken a stronger ownership with NordForsk since 2018, roles and responsibilities of NORDHORCS and the NordForsk Board are a bit unclear. This issue has been raised in interviews with several stakeholders. Our assessment is that, in general, the NordForsk Board is very competent and well-functioning. It is also our assessment that NORDHORCS has an important advisory role. However, the NordForsk Board's strategic role is weakened due to NORDHORCS' advisory role. In addition, NordForsk Board's strategic role is also weakened because of the Open Invitation mechanism. This indicates a need to clarify NORDHORCS' role in the Strategic mandate and point out that the NordForsk Board has the full responsibility for NordForsk and is expected to steer the project portfolio for maximum Nordic added value. This also indicates that the forthcoming four-year strategy for NordForsk must be used as a tool for the board's strategic steering of NordForsk.

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<sup>29</sup> Protocol MR-U 1/2021.

## 5. Communication

Since 2018, NordForsk has worked on streamlining their communication activities. In this section, NordForsk's communication is reviewed, and the outcome assessed among others based on interviews with representatives for the key target groups of NordForsk.

### 5.1. Precondition for communication

NordForsk's communication and public relations primarily builds on NordForsk's strategy, subgoal 2: Enhance the impact of Nordic research and research infrastructure collaboration. The strategy emphasises that NordForsk will:

- ensure that NordForsk is well-known as a facilitator for Nordic research and research infrastructure collaboration
- communicate the Nordic added value of the NordForsk activities
- strengthen the communication and interaction with Nordic University Rectors Conferences (NUS)
- support activities disseminating results from and impact of NordForsk funded projects and programmes.<sup>30</sup>

To meet these strategy ambitions for communication, NordForsk stands on top of the overall Nordic communication strategy and has developed its own strategies for communication and public relations and use of digital channels.<sup>31</sup> Further, NordForsk's communication is also based on SWOT-analysis, presenting the preconditions and challenges that NordForsk is facing in communication with (stakeholders in) the Nordic countries, as seen in Figure 5.1.

Figure 5.1: SWOT-analysis for NordForsk and its communication activities

S	W	O	T
Strength	Weakness	Opportunities	Threat
Kompetent personal Nordisk tillhörighet Flexibel organisation Nordiska mervärdet Stabil intäkt Goda relationer till forskningsfinansiärerna	Många olika beslutsfattare Osynlig i länderna Brist i kommunikations(samarbete internt	Ökat samarbete över landsgränserna Ökad synlighet Open invitation Forskningsdriven innovation Samarbete med tredje land (UK, EU, Baltikum, Canada)	Reducerad finansiering från Nordiska ministerrådet Mindre vilja för nordiskt samarbete i länderna Interna brister i kunskapsöverföring Kortsiktighet

Source: NordForsk: Strategy for communication and public relations (unpublished).

<sup>30</sup> <http://norden.diva-portal.org/smash/get/diva2:1307001/FULLTEXT01.pdf>

<sup>31</sup> NordForsk self-assessment. Appendix 5: Strategy for communication and public relations; Appendix, 6: Appendix Kanalstrategi; and Appendix 7: Nordiska Ministerrådets kommunikationsstrategi2020–2024 (<https://www.norden.org/sv/publication/nordiskaministerradets-kommunikationsstrategi-2020-2024>).

## 5.2. Key target groups, channels and content

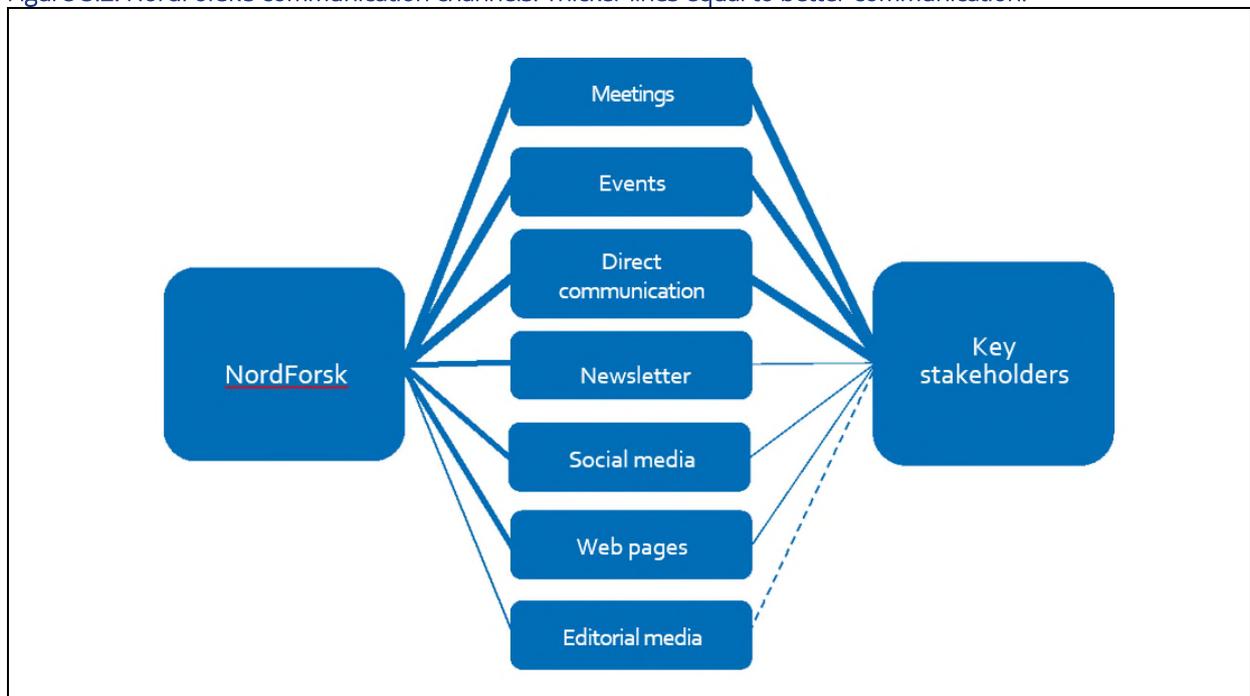
Since 2018, NordForsk has developed its communication activities through a better understanding of the who are the key target groups, which channels are most efficient for NordForsk and what should the content of the communication be.

Based on a stakeholder analysis, NordForsk has identified<sup>32</sup> the following core stakeholders – **target group** – for their communication:

- National research funding organisations (NORDHORCS, members of programme committees) and private research funds
- Decision-makers (research ministers, EK-U, academic councils employed in the Nordic ministries of research and education, ministers for co-operation, parliamentarians in the Nordic Council's Committee for Knowledge and Culture, etc.)
- Nordic partners (NCMS, Secretary General's Staff and Communications Department, Nordic University Co-operation NUS)
- Programme and initiative-specific stakeholders including researchers

Further, NordForsk has identified and makes use of several **channels** for communication, as seen in Figure 5.2.

Figure 5.2: NordForsk's communication channels. Thicker lines equal to better communication.



Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

Most channels are based on one-way communications such a digital communication on new research programmes/calls or on the outcome of the funded research projects. In 2021, the direct results of some of the communication activities were: approximately 70,000 users of <https://www.nordforsk.org/>.

<sup>32</sup> NordForsk (2022) Self-assessment report 2022. (unpublished).

2,000 Linked-in followers and 4,264 newsletter subscribers.<sup>33</sup> An indicator of successful communication is a high number of for applications responding to calls for research projects. Our impression is that each call has many applications and consequently a low success rate for the applications (a typically picture for a research program), though validated figures are not available.

NordForsk also emphasises that two-way, direct communication or dialogue (meetings, telephone, mail, etc.) is of high value, especially when communicating with funding organisations and stakeholders associated with the Nordic political and administrative institutions. In this context, the managing director is very important for NordForsk's communication activities, including building relationships with key stakeholders. This form of communication is a part of the Open Invitation mechanism and the management of NordForsk including communications to the Board and the Nordic Council of Ministers/secretariat of the Nordic Council of Ministers, as addressed in another part of this evaluation.

Further, communication that highlights the **content**, such as outcome and impact, is also prioritised. One central aspect of the overall strategy is that projects/researchers provide results, insights and new knowledge of relevance to the Nordics, whereas NordForsk focuses on highlighting Nordic added value and relevance to the Nordic countries. In 2021, NordForsk has, on the hand, worked 'with the development of the storytelling side of communication, with creating stories about research activities that create Nordic added value.' Several stories can be found on NordForsk website. On the other hand, NordForsk has implemented Researchfish (Section 6) as a tool for gathering systematic information on the funded project to be used in communicating the achieved results and impact including Nordic added value of the funded research projects.<sup>34</sup> In 2022, NordForsk is planning to publish a 'research impact report' based on the findings in Researchfish.

In the **interviews** with national funding organisations, a relatively positive picture emerges of NordForsk's communication. The main viewpoint is that NordForsk, though a small research funding institution, performs well and is visible as questions/issues brought up are timely and relevant in a Nordic context and hereby reach the main targets groups. One points at the Programme for Interdisciplinary Research as good example of excellent orchestrated communication. However, a minor concern has been raised to what extent the communication targeting researchers is able to position NordForsk among researchers.

Interviews with researchers managing research projects funded by NordForsk find that NordForsk communication efforts toward the projects and researchers are well-functioning. Researchers feel that it is easy to communicate with NordForsk and that they receive quick replies. However, NordForsk could do more regarding dissemination of project results and facilitate contact/communication between the projects/researchers and higher institutions, such as the Nordic Council of Ministers.

### 5.3. Assessment of NordForsk's communication activities

Communication is a key component of NordForsk's strategy and activities. Since 2018, NordForsk's framework for communication activities has improved (NordForsk's strategy, communication strategy and strategy for digital channels) and activities are more targeted at stakeholders. The tools for communication have also improved, and now is the time to work more on the content of the

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<sup>33</sup> NordForsk (2022) Self-assessment report 2022. (unpublished)

<sup>34</sup> NordForsk (2022) Self-assessment report 2022. (unpublished).



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communication, communicating the Nordic added value of the NordForsk activities as well as NordForsk's impact on Nordic research and Nordic research cooperation.

Our assessment is that the projects' plans for communication of results are well-developed, and the researchers are committed to implementing the plans.

We agree with the conclusion in NordForsk's self-assessment that communication activities are on the right path (including the digitalisation of communication), but more can be done in providing solid knowledge on Nordic added value and impact to researchers and key stakeholders, such as the Nordic Council of Ministers and Nordic Council. There are potential improvements in systematic communication on NordForsk's contribution to Nordic added value and impact in combining with "storytelling" about research activities that create Nordic added value.

We appreciate NordForsk's plan to publish a 'research impact report', based on the findings in Researchfish. There is a crucial need for systematic information on the outputs, outcomes and impact of the research projects highlighting Nordic added value.

NordForsk's low level of budget and operating costs means that there is little or no scope to add further activities without also adding cost. The present budget therefore effectively excludes improvements such as broader communication with the public and societal stakeholders.

## 6. Outcome and impact of funding Nordic research

*NordForsk is in the process developing and implementing tools that should improve the reporting on the outcome and impact of the funded research projects. As these initiatives are still works in progress, this section will only present some preliminary findings as well as the results of interviewing ten project managers representing some successful projects funded by NordForsk.*

*The reporting on outcome and impact has not been systematic as it is very difficult and challenging to document the impact of research. NordForsk has mainly presented the impact as a characteristic of the funding projects<sup>35</sup> or through its – often interesting – cases. Consequently, the interviewed stakeholders do not have a clear picture of the outcome and impact of the projects funded by NordForsk.*

### 6.1. Return of investment

The outcome and impact of NordForsk-funded research must be assessed in proportion to the size of research investment by NordForsk and the Nordic countries. For the short period of 2018 to 2020, NordForsk has, compared to all the Nordic countries, a rather limited budget for supporting research. Presumably, the outcome and impact must be on a much smaller scale compared to the national funded research or research funded by European Commission.

However, one has to take into consideration that NordForsk, as the main Nordic research funding organisation, is aiming at encouraging research of Nordic relevance while at the same time gearing the investment of the national research funding organisations (Table 6.1). Consequently, NordForsk might be able to achieve research which is beneficial to the Nordic countries.

**Table 6.1: Return of funding by the Nordic countries funding NordForsk, 2018-2020**

	Funding	Grants	Return of funding
	MNOK		
Denmark	114,5	160,4	140%
Faroe Islands	0,5	0,5	100%
Finland	41,5	91,8	221%
Greenland	0,0	5,0	-
Iceland	16,0	16,7	104%
Norway	116,5	160,3	138%
Sweden	164,0	212,9	130%
Total	453	647,6	143%

Note: Based on programmes' funding in the period 2018-2020.

Source: NordForsk.

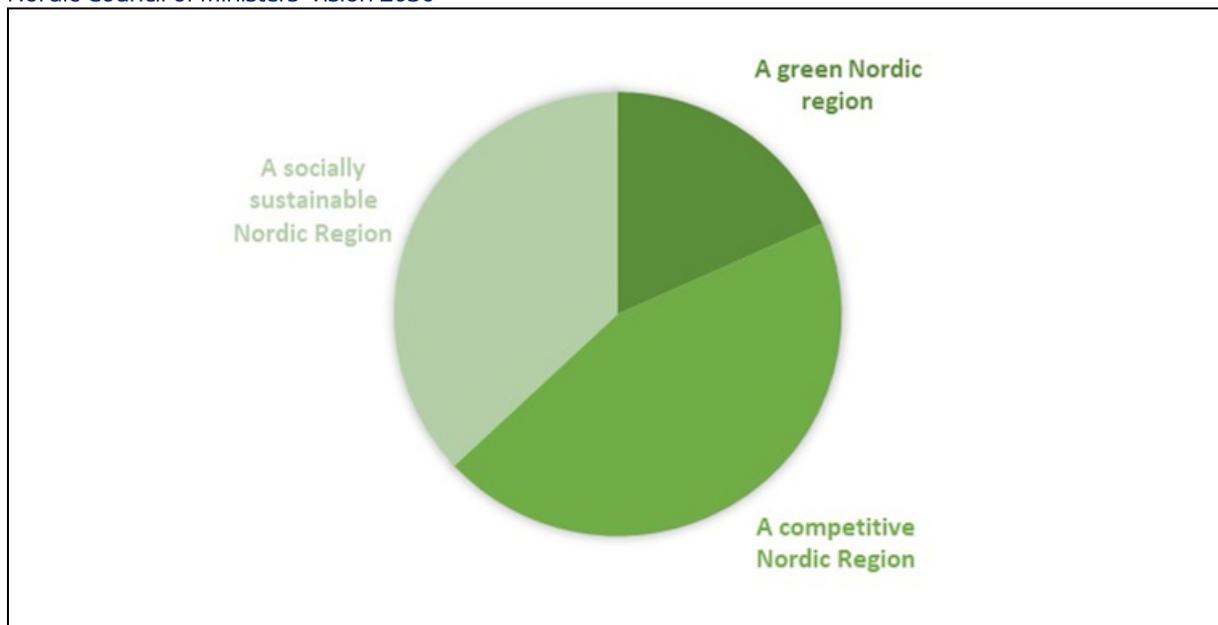
<sup>35</sup> <https://www.nordforsk.org/research-impact>

## 6.2. Targeting political objectives – an indication of outcome

By reviewing the funded project applications, NordForsk has grouped the projects according to the three strategic priorities in the NMR Vision 2030 and the 12 objectives of the Nordic Council of Ministers Action plan for 2021-2024. As NordForsk funds research that is in line with Nordic political priorities (and the priorities of the national research funding organisations) one must expect that the funded research is to take place with subjects in line with the Nordic political priorities.

NordForsk has reviewed all funded projects in the period 2015–2021 and found that ‘most funding has gone to projects relevant for the objectives within A competitive Nordic Region, and specifically, the Action Plans’ (edt.) objective 6 on knowledge and innovation and objective 8 on integration and mobility in the region. These two objectives are most commonly relevant together with objective 9 on welfare for all (Figure 6.1).<sup>36</sup> As discussed in the above section, Figure 6.1 supports the statement that NordForsk funds research that meets Nordic research priorities.

Figure 6.1: Allocation of funding to NordForsk’s projects in the period 2015 -2021 to the three strategic priorities of Nordic Council of Ministers’ Vision 2030



Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

The above applied approach can be a useful (as portfolio management) tool to measure to which extent the funded projects are or might be in line with the overall priorities, but it can also be an indicator to measure the actual outcome and impact. These strategic priorities and objectives are rather broadly formulated. Consequently, all NordForsk-funded research has been within the scope of the three strategic priorities and no outside research. Further, there is no indication whether some priorities are politically more important than others. If the strategic priorities and objectives were to be used by NordForsk, e.g., portfolio management, some kind of adaptation would be appreciated by formulating desirable targets for Nordic research.

<sup>36</sup> NordForsk (2022). Self-assessment report 2022 (unpublished).

### 6.3. Outcome and impact reported by Researchfish

NordForsk has implemented Researchfish as a tool for projects to report outcomes, results and impacts. At present, some preliminary results can be presented, e.g., 60 projects have prepared 1,052 publications, or that some projects have participated in advisory or other kinds of committees.<sup>37</sup> For a more informative presentation, NordForsk will have to do some further analyses of the data.

### 6.4. NordForsk's view on Nordic added value

The Nordic Council of Ministers for Education and Research adopted six principles in 2018 for the future of Nordic research collaboration, of which one states 'a clearer focus on Nordic added value based on the priorities of the Nordic countries.' As NordForsk describes in the self-assessment report, there is no official definition of Nordic added value among research funders, but NordForsk established its definition in 2018 (Section 3.4). NordForsk also states there that the focus on Nordic added value is what makes NordForsk stand out in relation to other research funders. A reference to NordForsk's definition of Nordic added value is included in all call texts, and project applications are partly evaluated based on what Nordic added value they may create (Section 4.2.2). NordForsk has recently increased their communication of Nordic added value created in the projects. In terms of evaluating the Nordic added value created by the funded projects, the project leaders are required to report the type of Nordic added value created in their projects as one indicator in Researchfish.

Although most of the project leaders interviewed in this evaluation have an idea of what sort(s) of Nordic added value is produced within their projects, some state that the definition of Nordic added value is hard to grasp and quite vague. Expressed differently, some state that the definition of Nordic added value is too vague and by extension too broad so that pretty much anything could be reported as Nordic added value. This issue is already recognised by NordForsk. As stated, it is brought up in the self-assessment report, and the topic was also discussed during a workshop held by the evaluation team with participating NordForsk representatives.<sup>38</sup> As previously mentioned (Section 4.2.2), NordForsk has recently signed a contract with the University Hub-project ReNEW 'to provide an in-depth analysis on how Nordic added value is conceptualised within different sectors of research and on different national levels exploring their similarities and differences'<sup>39</sup>, with the purpose of establishing a more precise definition of Nordic added value (Textbox 6.1 on University Hub ReNEW).

One dilemma with the present definition of Nordic added value is that the definition is unclear when it comes to what is uniquely Nordic preconditions or challenges and what is uniquely Nordic results, outcome, or benefit to the Nordic research or to the Nordic societies. In Table 6.2, the original definition of Nordic added value is presented where Nordic added value is a 'precondition' together with a 're-definition' where the indicators are reorganised with a focus on Nordic results, outcome, or benefit to the Nordic research or to the Nordic societies. This 'redefinition' of Nordic added value is just a preliminary attempt to have a distinct definition of Nordic added value, though further work is needed, not only with the overall definition, but also with the indicators.

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<sup>37</sup> NordForsk (2022): Research impact assessment at NordForsk (unpublished).

<sup>38</sup> Workshop at Nordens Hus, Copenhagen, 17 March 2022.

<sup>39</sup> Reimagining Norden in an Evolving World (ReNEW): An Excellence Hub in Research, Education and Public Outreach | NordForsk. See Section 6 for a short presentation of ReNEW.

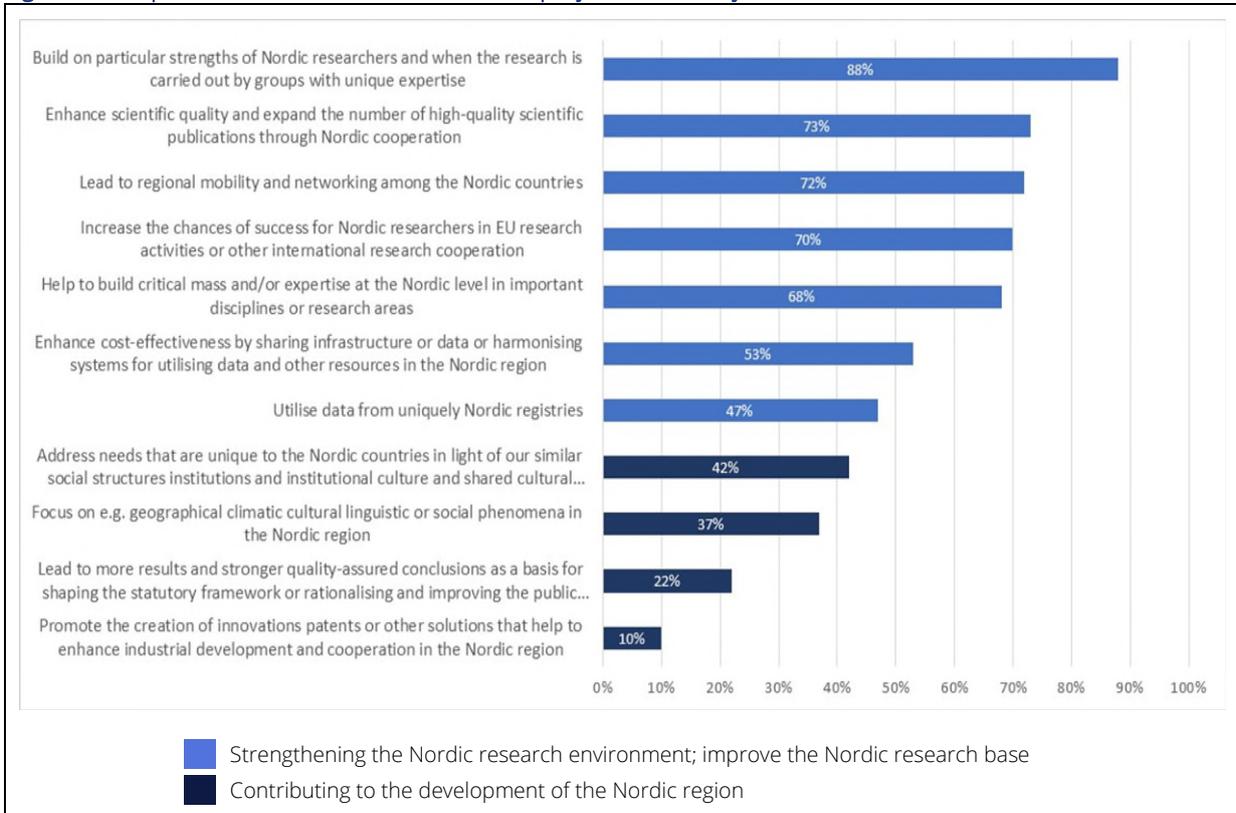
Table 6.2: Nordic added value - a precondition or an outcome/impact of research?

	Main categories of Nordic added value defined by NordForsk with a focus on preconditions for Nordic research		Redefinition of Nordic added value to an outcome or impact	
	Added value generated because the research collaboration is taking place in the Nordic region	Added value generated because the research can only be carried out in the Nordic region	Strengthening the Nordic research environment; improve the Nordic research base	Contributing to the development of the Nordic region
Promote the creation of innovations, patents or other solutions that help to enhance industrial development and cooperation in the Nordic region	x			x
Lead to more results and stronger quality-assured conclusions as a basis for shaping the statutory framework or rationalising and improving the public administration	x			x
Focus on, e.g., geographical, climatic, cultural, linguistic or social phenomena in the Nordic region		x		x
Address needs that are unique to the Nordic countries in light of our similar social structures, institutions and institutional culture and shared cultural heritage		x		x
Utilise data from uniquely Nordic registries		x	x	
Enhance cost-effectiveness by sharing infrastructure or data or harmonising systems for utilising data and other resources in the Nordic region	x		x	
Help to build critical mass and/or expertise at the Nordic level in important disciplines or research areas	x		x	
Increase the chances of success for Nordic researchers in EU research activities or other international research cooperation	x		x	
Lead to regional mobility and networking among the Nordic countries	x		x	
Enhance scientific quality and expand the number of high-quality scientific publications through Nordic cooperation	x		x	
Build on particular strengths of Nordic researchers and when the research is carried out by groups with unique expertise		x	x	

Source: [How does research cooperation lead to Nordic added value?](#) | NordForsk

Figure 6.2 illustrates Nordic added value reported by researchers in Researchfish by using the redefinition of Nordic added value. The lighter blue bars represent Nordic added value that encourages the Nordic research environment and improve the Nordic research base, while the darker blue bars represent Nordic added value that contributes to the development of the Nordic region. At a glance, it is evident that most researchers report that their project contributes to the first type of Nordic added value (encourage the Nordic research environment and improve the Nordic research base). The largest share of researcher projects, 88 percent, report that the conducted research ‘build on particular strengths of Nordic researchers and when the research is carried out by groups with unique expertise’.

Figure 6.2: Reported Nordic added value from 60 projects funded by NordForsk



Note: Based on reported Nordic added value from active project in 2021 funding by NordForsk. Data is extracted from Researchfish in January 2022 and represents 60 of 120 total active projects.

Source: NordForsk (2022). Self-assessment report 2022 (unpublished).

Concerning Nordic added value as contributing to the development of the Nordic region, most researcher projects, 42 percent, report that their project created Nordic added value by addressing 'needs that are unique to the Nordic countries in light of our similar social, cultural and institutional structure'. Only 10 percent of the researcher projects report that their project created Nordic added value through the 'creation of innovations, patents or other solutions that help to enhance industrial development and cooperation in the Nordic region'.

All in all, the funded research seems to have a more significant impact on the Nordic research environment than on (challenges effecting) the Nordic societies.

Researchers of NordForsk funded projects, support this conclusion. However, shared cultural, social and institutional structures have been mentioned by many of the interviewed researchers as both prerequisites for certain research topics as well as contributing factors to more efficient implementation of research projects. In at least two projects, where the evaluation has gained insight from the interviews with researchers, one of which is highlighted below (Textbox 6.2), common cultural and institutional structures between the Nordic countries have been exactly a prerequisite for the research topic. For instance, research of gender equality is described to be both of higher interest and relevance to the Nordic welfare states than in other (European countries), which also entails an opportunity to further advance and extend gender equality research to new social sectors in the Nordic context. One part of Nordic added value created through shared cultural, social and institutional structures, which

provide a common starting point for advancing Nordic research capabilities and research relevant to the Nordics, is the opportunity to compare the success of different cases and processes implemented in the different countries. This provides opportunities to make use of lessons learned, positives and negatives, across Nordic countries, efficiently strengthening the Nordic region both in terms of research and society.

## 6.5. Nordic added value – as strengthening the Nordic research environment

Throughout conducted interviews with researchers that received funding via NordForsk, it is evident that the most prominent form of Nordic added value created in the projects is that of networks, including new partnerships among researchers and institutions as well as fortification of earlier collaborations. These new networks are described by researchers as greatly valuable both from the individual researchers' perspectives and for PhDs and postdocs that are given access to mobility between universities and personal networks. Most networks are created between researchers (and their respective universities) in the participating Nordic countries, but also in several projects (that we have interviewed) where cross-sectoral/interdisciplinary networks have been established as well.

In most interviews, researchers state that they already had established contacts with one or two of the project partners from previous research collaborations and that part of the project constellation builds upon established networks. But in most cases, there is at least one new partner which is included, either because the intended research purpose requires a partner in that particular country or organisation, or because the expertise of that researcher is desired. It can also be based on recommendations from other personal contacts.

The fact that most networks include at least one already established partnership does not reduce the value created from the collaboration within the NordForsk projects. Some collaborations may naturally be temporary or merely a matter of a single project, but it is believed, among the interviewed researchers, that there is potential for long-term collaborations and networks that can reappear in future projects. There is a strong agreement among the interviewed researchers that these sorts of collaborations and subsequent networks would be, if not impossible, at least very difficult to accomplish without NordForsk funding. With other funding, both the project group constellation and the focus of the project would either have been more national or European, depending on the type of funding. The NordForsk funding is thus a great tool to both enable and enhance Nordic cooperation.

All projects had planned physical meetings and visits to each partner country, which naturally have been limited from 2020 to the beginning of 2022 due to the COVID-19 pandemic. This has especially limited the mobility of participating post docs where longer visits at partner universities were planned. Albeit digital cooperation, the created networks have brought great added value for research within the Nordic region.

Through these new networks, Nordic research capabilities and knowledge are strengthened. For example, one interviewed researcher describes how the knowledge of a few within the project group was disseminated to all participating researchers, which then increases the Nordic capabilities in this research field. The expertise of Nordic researchers in this particular research field are described to be rather concentrated to a few, and thus the project is one demonstration of how cooperation may result in increased knowledge and strengthened capabilities.

In textbox 6.1 below, the University Hub-project ReNEW is highlighted as an example of how Nordic added value is created through networks and cooperation among researchers in the Nordic countries.

**Textbox 6.1: Reimagining Norden in an Evolving World (ReNEW): An Excellence Hub in Research, Education and Public Outreach**

The University Hub ReNEW is a consortium uniting six Nordic universities (University of Helsinki, University of Oslo, Södertörn University, Aarhus University, Copenhagen Business School and University of Iceland) in five Nordic Countries (Finland, Norway, Sweden, Denmark and Iceland). ReNEW is funded by NordForsk via the Nordic University Hubs initiative and the participating universities.

ReNEW is a research hub established to enhance cooperation to develop new and path-breaking excellence in research around the Nordic region. The main objective of the hub is to establish a functioning structure for mobility, research training and academic exchange, which will lead to the institutionalisation of top-class research on the Nordic region as a collaborative epistemic community. Recently, ReNEW has been assigned a project in which the definition of Nordic added value and how Nordic added value is conceptualised within different sectors of research and on different national levels exploring their similarities and differences.

ReNEW aims to both facilitate new international research partnerships and provide a focal point for consolidating existing international partnerships and networks. There is also an objective of establishing meeting places between researchers and Nordic decision makers. Many of the paradoxes and research questions for ReNEW have high societal relevance, and therefore it is essential to establish dialogue with decision makers and representatives of the public, private and NGO sectors. ReNEW includes six work packages, where the partner universities hold the main responsibility for one each. ReNEW contributes with funding for conferences, workshops, mobility of researchers and more.

The expected result of ReNEW is *to bring the research together to create a complete research environment on the Nordic region, so that the conversations about Norden will be held on a research-based basis*.

ReNEW is a hub that coordinates and initiates research within several disciplines around the Nordic region. In that sense, it is not a research project in itself but comprises several projects within the hub. The Nordic added value produced mainly concerns enhancing interpersonal relationships within the Nordic research society. Nordic added value is created *by increasing knowledge and awareness of the Nordic region, not only in the field of research, but also to serve policy makers and stakeholders*.

Source: <https://www2.helsinki.fi/en/researchgroups/reimagining-norden-in-an-evolving-world>; <https://www.nordforsk.org/sv/projects/reimagining-norden-evolving-world-renew-excellence-hub-research-education-and-public>; and interview.

## 6.6. Nordic added value as contributing to the development of the Nordic region

Apart from strengthening Nordic research cooperation and networks, NordForsk-funded projects create Nordic added value by conducting research relevant to the Nordic society. The research projects are typically addressing research question or needs for new knowledge unique to the Nordic countries in light of our similar social, cultural and institutional structures and shared cultural heritage, research that focuses on geographical, climatic, cultural, linguistic or social phenomena in the Nordic region as well as data from uniquely Nordic registries.<sup>40</sup>

Common cultural, social, and institutional structures also entail an opportunity to conduct research on specific topics in a wider context – where the differences that nevertheless exist between the Nordic

<sup>40</sup> NordForsk, 2022. How does research cooperation lead to Nordic added value? Available at: <https://www.nordforsk.org/how-does-research-cooperation-lead-nordic-added-value>

countries enable more cases and perspectives to be included yet researched and analysed jointly. The ClicNord project highlighted in textbox 6.2 exemplifies this.

#### Textbox 6.2: Climate Change Resilience in Small Communities in the Nordic Countries (ClicNord)

The partners of the ClicNord project include Denmark (University College Copenhagen), Sweden (RISE and Lund University), Norway (Norwegian University of Science and Technology and Arctic university of Norway) and Iceland (University Centre of the Westfjords).

The project is funded through the Nordic societal security programme of NordForsk.

The overall objective is to build capacity in small communities to cope with the challenges of climate change. The project will be a showcase to illustrate the complexity and diversity in the challenges communities in the Nordic region can expect in the future, and it will shed light on the vulnerabilities of local rural communities to climate change in several highly diverse areas in the Nordic countries. The focus is on small communities since they, due to inadequate resources, have limited options related to climate change adaptation. There are in total eight case studies within the projects, in which the researchers focus on different hazards pertinent to the countries in the project group.

According to the project leader, this project can only be carried out in a Nordic context since the Nordic countries are considered welfare states, where all individuals are entitled to the welfare. In other words, the people living in small communities in more rural areas are entitled to the same services and access to rescue services as people living in more urban areas. Thus, the focus of the project becomes somewhat of a *critical case* in the sense that if people in small communities living in the outskirts in the Nordic countries cannot get adequate access to help, then it is not possible anywhere.

Nordic added value is produced in various ways. First, the Nordic context is described to be a necessity for the purpose and objective of the project, and it would not have been possible to maintain the same focus and project group without the funding from NordForsk. Second, considering impact on Nordic society, the project aims to contribute to strengthened municipalities and individuals' knowledge of potential hazards and capabilities to prevent, prepare, respond to and recover from hazards. This includes the potential to share learning outcomes among the researchers and Nordic countries involved and results that can be disseminated to all communities.

Source: <https://www.clicnord.org>; <https://www.nordforsk.org/sv/projects/climate-change-resilience-small-communities-nordic-countries>; and interview.

The ClicNord project is a good example of how actors beyond the project group are involved and how NordForsk-funded projects can bring value added for the Nordic community. The project seeks to engage communities and people from emergency backgrounds, such as Swedish Civil Contingencies Agency and the Danish Emergency Management Agency, to get a more practical view on the investigated issues from above rather than just having a scientific perspective. With the inclusion of actors, both at the relevant government level and people in the communities, there are opportunities for this project to create Nordic added value that can have a quicker and more receptive effect on the Nordic society.

Another example of when shared social, cultural and institutional structures present unique opportunities for advancing research in a Nordic context is the S-FACTOR project described in the textbox below.

### Textbox 6.3: Facilitation Robotics for Teams Foundational Research of Group Processes in Human-Robot Ensembles with Social Robots (S-FACTOR)

The partners of the project include Denmark (Aarhus University and University of Southern Denmark), Sweden (KTH Royal Institute of Technology) and Finland (University of Helsinki). The project is funded through the Nordic Programme for Interdisciplinary Research.

The project Facilitation Robotics for Teams Foundational Research on Group Processes in Human-Robot Ensembles with Social Robots (S-FACTOR) investigates how human groups perform certain tasks when they are guided by a “social robot”. Previous research suggests that certain robotic designs can be conducive for positive group dynamics. The project is set to conduct a series of experiments to explore whether social robots can facilitate group processes within small teams that enhance the team’s creativity and further “team reasoning,” i.e., rational decision making that benefits the team rather than an individual member of the team. In addition, some of our experiments focus on the role of a robot’s non-verbal behaviour to create trust. The project aims to develop robots that can be part of social contexts. This requires reflection on the “content” of a social robot and concretise how this can be utilised in practice in conversations and interactions with humans. The project builds upon an integrated method of a mixed-matched approach where research integrates various disciplines and development of competences and learning in groups.

The expected outcome of the project is to bring new and increased knowledge to the field of social robots, which includes the potential outcome of a textbook that could show the way to a new paradigm for social robots.

Nordic added value is partly created through the project by its contribution to building a common ground and a form of collaboration based on trust, an important output and a valuable and strengthened knowledge to the Nordic region. In this sense, the project lies upon Nordic tradition. It creates Nordic added value by contributing to the view of social robots as part of the social environment where the robots can contribute to strengthen the social environment and speak independently in the Nordic society that builds upon “hygge” (i.e., a good and nice atmosphere) and through this create social sustainability, transparency, trust and justice in the Nordic society.

Source: <https://www.nordforsk.org/sv/projects/facilitation-robotics-teams-foundational-research-group-processes-human-robot-ensembles>; and interview.

Nordic added value may also be generated through projects that utilise data from uniquely Nordic registries. One example of such a project is the Personalized medicine in RA by combining genomics, biomarkers and clinical and patient-derived data from the Nordic countries, described in the textbox below.

#### Textbox 6.4: Personalised Medicine in Rheumatoid arthritis (RA) by Combining Genomics, Biomarkers and Clinical- and Patent-derived Data from the Nordic Countries

The project includes academic, clinical and private partners from Sweden, Denmark and Norway and is funded through the Nordic Programme on Health and Welfare.

The objective of the project *is to develop a personalized medicine approach to the management of Rheumatoid Arthritis (RA), both by the development of new prediction tools and by digital tools to bring these new insights to patients and to healthcare.*

The project builds upon strong collaboration within Nordic Rheumatology and makes use of data across the Nordic countries. Both public and private partners take part in the project to include all necessary competences and infrastructures. The project presents a novel approach to analysis of rheumatology data by analysing data across different domains that previously have not been analysed jointly. In addition, another innovative perspective is included in the project through not only focusing on producing scientific output but to also develop digital tools to validate and disseminate the new insights into improvement of therapy directly to patients and health care providers.

The project is expected to bring better and earlier treatment of rheumatology as well as the development of products such as diagnostics and digital companion tools that can be used for cost-efficient improvement of treatment results for patients and thus become attractive commercial products as well.

Although the content and the results of the project to a certain extent are universal, conducting this project in a Nordic context brings added value. Not least due to the project constellation where a similar background and understanding of the researchers involved enables quicker achievements than would have been possible with another international line-up. The clinical implementation of the results is also better enabled in the Nordic context with equal access to e-health care. Another distinct added value brought by the Nordic cooperation is that it advances the Nordics as an interesting and valuable actor in the market, which increases the attractiveness of and research funding to Nordic actors and the research matters they address.

NordForsk funding is of great value for the project, while with other public, EU or national funding, the same project constellation would not have formed. It creates an opportunity for a sustainable intellectual Nordic infrastructure within this field, resulting in positive long-term effects.

Source: <https://www.nordforsk.org/projects/personalized-medicine-ra-combining-genomics-biomarkers-clinical-and-patient-derived-data>; and interview.

## 6.7. The international impact of NordForsk-funded research

To what extent NordForsk-funded research has any impact on international society is difficult to assess. Partly since most of the projects the evaluation has encountered through interviews with project leaders are still ongoing, and thus any suggestions of possible international impact from these projects are so far merely assumptions. The funding from NordForsk is also rather scarce, as highlighted by some key stakeholders, and limits to what extent it is reasonable to expect NordForsk funded research to have any real impact on international society.

What is pointed out by some project leaders is that since the research topic and the environment which the research is conducted within is Nordic, the research will principally have an impact on Nordic society. According to some of the interviewed project leaders, impact on international society may be achieved in the longer run. For example, research results may reach the international research society via scientific publications produced in the projects, e.g., documented by citations in other research papers. However, there are certain obstacles, or perhaps better expressed, aspects that may limit to what extent (some of) the research results and impacts may spread to the international context. As

described in Section 6.6, where a few projects are highlighted as good examples of Nordic added value created by the research being conducted in a Nordic context, the Nordic context is just that, the core and a necessity for certain projects. This is especially the case of projects that build upon shared social, cultural and institutional structures that are rather unique to the Nordic society. Based on this, it is quite self-explanatory that an international impact might not be achieved to a large extent. In addition to what is stated about international impact by the project leaders, NordForsk representatives recognise these obstacles as well. Research is, by definition, international, and via publications produced in the projects. Additionally, new project group constellations may be created, where results may reach the international society, although the international impact (so far) seem to be very limited. We return to this discussion in Section 6.8.

As for impact or influence on other Nordic research, it is evident from our interviews with project leaders that NordForsk-funded research contributes to attaining more research funding from other national and European research funders. Concerning the partners included in the project, this effect is manifested because they, through their participation in the NordForsk project(s) experience that they receive funding for new projects from other funders. Most likely it is not a case of them not receiving this other funding without participating in NordForsk projects but rather a case of them increasing their possibilities to receive funding either due to increased competence and capabilities in the specific research area or due to the networks created within NordForsk projects.

## 6.8. Assessment of the outcome and impact of funding Nordic research

For decades evaluation of research or research studies in research have been a key (political) objective. However, with an increased focus on 'return of research investment' there has been significant interest for documenting output and impact, though it is a challenge to measure output and especially impact. As an add-on to traditional evaluation's methods/data (e.g., register data and surveys), several databases have emerged to provide such documentation with new systematic access to data on research publications and patents, also with a possibility to connect research investment (funding) with output (e.g., publications, etc.) and activities related to dissemination of research activities (e.g., Researchfish)<sup>41</sup>, but with scant information on impact on society.

Our assessment is that it is difficult to identify what kind of impact, if any, NordForsk-funded research has on Nordic society. It is impossible to identify the impact of NordForsk-funded research has on international society. However, key stakeholders point out that this cannot be expected from NordForsk since the budget is very limited.

NordForsk-funded research might influence other Nordic research in specific, smaller areas or fields. The evaluation of the Top-level Research Initiative (TRI) – the largest Nordic research and innovation initiative so far – showed that the initiative strengthened national research and innovation systems and ensured the highest quality in research and innovation by combining the strongest Nordic communities: "It can also be argued that the TRI has delivered well on the goal of profiling the Nordic region as a leader within certain areas of the energy and climate sectors." TRI did not, however, fulfil the goals of providing a platform for increased international cooperation both within the EU and beyond, to

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<sup>41</sup> <https://researchfish.com/>. Researchfish is used by public and private funders of research, e.g., Novo Nordisk Foundation; <https://impact.novonordiskfonden.dk/highlights/impact-report-2020/>

enhance Nordic participation in EU programmes and to strengthen Nordic competitiveness by using research and innovation to counter economic downturns.<sup>42</sup>

Key Stakeholders point out that Nordic added value should be a lead star for Nordic cooperation and NordForsk. There is a general view that NordForsk does contribute to Nordic added value but it is quite difficult to say in what way and to what extent.

Nordic added value is implemented in steering and strategy documents, but there is little systematic follow-up on Nordic added value in programmes and funded projects, and this is not effectively communicated to key stakeholders and NCM and NC. In interviews with EK-U, consequently, NordForsk Board and NORDHORCS, respondents find it very difficult to use and to present Nordic added value. A more workable definition of Nordic added value is needed, which might include a distinction in the use of Nordic added value in relation to design/evaluation of research programmes and projects and outcome/impact of the funded projects.

NordForsk has already taken some initiatives. The ReNEW-project (Textbox 6.1) might contribute to elaborating a new definition on Nordic added value. NordForsk has also implemented Researchfish to measure results, outcome and impact, where the assessment is that this tool can be useful but will require a systematic use and investment to obtain a high-quality impact report.

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<sup>42</sup> Evaluation of the Top-level Research Initiative. Technopolis Group 2018.

## 7. Changes affecting NordForsk in the years to come and main challenges

*In this section we give an overview of policy trends and key challenges in the operational environment of NordForsk based on desk research. When looking at the environment, we focus on trends and development in R&I policy and funding with greater emphasis on societal challenges and mission-orientation<sup>43</sup>. This subject has also been addressed in the interviews.*

### 7.1. Changes in R&I policy environment

The rationale of governmental research funding is changing.<sup>44</sup> Research policy is being influenced by the gradual integration of the UN's Sustainable Development Goals (SDGs) into national policies. Consequently, national research policy is influenced by societal challenges in areas such as health, climate change, clean energy, mobility, security, digital, materials and the mission areas in the Horizon Europe Programme, i.e., adaptation to climate change, cancer, healthy oceans, seas, coastal and inland waters, climate-neutral and smart cities, and soil health and food.<sup>45</sup> This has already begun to affect the tasks and operations of NordForsk (for example gradual integration of the UN's Sustainable Development Goals (SDGs)) and will, presumably, affect the way in which NordForsk will need to work in the future.

In the scientific literature on research policy, this change in focus is discussed as a shift to 'third-generation' policy. The first generation of R&I policy focused on basic research, delegating the governance of science to the scientists, whereas the second generation demanded a social return from science through innovation and economic growth. Third-generation governance involves not only a more societal focus in the objectives of research but also the involvement of other societal stakeholders (not academia and industry), more policy experimentation and reflexivity.<sup>46</sup>

Tackling these challenges can involve overturning existing technologies, structures and practices in socio-technical systems. Interventions therefore involve complexity at the same time as they need a wider and more difficult form of governance and collective action more than the challenges posed in innovation system governance. Therefore, the scope of third-generation policies and instruments has become broader than earlier ones, posing a big new challenge in terms of governance and coordination. These trends and developments suggest that the international policy discussion is moving in a transitional or transformative direction. Policies are widening and deepening.<sup>47</sup> Inevitably, this has already spilled over into developing new policies both at the national and EU-level.

Traditionally, research (and innovation) funding organisations have worked mainly in a national policy context and focused on influencing actors and processes within national borders. However,

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<sup>43</sup> Missions include a portfolio of actions such as research projects, policy measures or even legislative initiatives. They are intended to achieve a goal within a set timeframe, with impact for society and policy making as well as relevance for a significant part of the population.

<sup>44</sup> Schot, J., & Steinmuller, W. E. (2018). Three frames for innovation policy: R&D, systems of innovation and transformative change. *Research Policy*, 47, 1554-1567 <https://doi.org/10.1016/j.respol.2018.08.011>.

<sup>45</sup> Mariana Mazzucato, Mission-oriented innovation policies: challenges and opportunities, *Industrial and Corporate Change*, Volume 27, Issue 5, October 2018, Pages 803-815, <https://doi.org/10.1093/icc/dty034>

<sup>46</sup> Weber, RM and Rohracher H.: Legitimizing research, technology and innovation policies for transformative change, in *Research Policy* 41, 2012, p. 1037-1047.

<sup>47</sup> Borrás, S. 2009. "The Widening and Deepening of Innovation Policy: What Conditions Provide for Effective Governance?", CIR-CLE Working Paper 2/2009, 1-28.

international development is increasingly propelling funding agencies to deal with international policy development and linkages. In fact, funding agencies are increasingly forced to coordinate their strategy, policies and funding tools in relation to a European and Global level.<sup>48</sup>

These changes are also apparent in the Nordic context, in terms of the Nordic Council of Ministers' Vision 2030.<sup>49</sup> Since NordForsk is expected to act as a facilitator for Nordic research by being a 'platform' for national research funding organisations in the Nordic region, and a Nordic institution under the Nordic Council of Ministers, these framework changes are of high relevance when preparing the new Strategic mandate for NordForsk.

All Nordic countries are in one way or another integrating societal challenges in R&I policies and research funding. Research Council Norway has structured their programmes in portfolios which are targeted toward societal challenges. In Denmark there is also a focus on societal challenges, addressed in several of the political and strategic endeavours, where the aspect of sustainability is the most common denominator. In Sweden, in the Research Bill for 2021-2024, the focus is on five societal challenges: climate and environment, health and welfare, digitalisation, skills supply and democracy. Within these five societal challenges, several ten-year national research programmes have been created in the areas of: ocean and water; virus and pandemics; psychiatric health; digitalisation; and crime and segregation. Another example is the Swedish Strategic Innovation Programmes funded by the innovation agency Vinnova, the research council Formas and the Swedish Energy Agency. They do research and innovation, in principle aiming to address societal challenges.

The Nordic countries are also exploring ways of implementing a mission-oriented portfolio, but there is so far no experience with real missions in the Nordic countries or Europe yet.<sup>50</sup> The OECD review of innovation policy in Finland concludes that Finland has not fully adopted the current international policy models.<sup>51</sup> In the review of innovation policy in Norway,<sup>52</sup> OECD challenged Norwegian innovation policymakers to take a more transformative approach. The review of Sweden<sup>53</sup> advised Sweden to develop a national strategy regarding societal challenges, integrating these elements with the wider research and innovation strategy and to integrate this strategy with wider policies, such as energy and transport, to enable the needed systemic shifts or transitions in the development and use of technologies. Furthermore, policymakers were asked to acknowledge that the Swedish research and innovation system lack coherence and that individual initiatives hinder the realisation of "whole system" performance improvements. Sweden was advised to devise an effective mechanism for co-ordinating challenge, innovation and research policies across different sectors of the state and society.

Our understanding is that the Nordic countries will go beyond current mainstream approaches in parts of R&I policy, while at the same time maintaining and improving the use of current practices. However,

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<sup>48</sup> Fagerberg, J., Hutschenreiter, G. Coping with Societal Challenges: Lessons for Innovation Policy Governance. *J Ind Compet Trade* 20, 279–305 (2020).

<sup>49</sup> The Nordic Region will become the most sustainable and integrated region in the world: A green, competitive and socially sustainable Nordic Region; The Nordic Region – towards being the most sustainable and integrated region in the world: Action Plan for 2021 to 2024 (diva-portal.org)

<sup>50</sup> Larrue, P. (2021), "Mission-oriented innovation policy in Norway: Challenges, opportunities and future options", OECD Science, Technology and Industry Policy Papers, No. 104, OECD Publishing, Paris, <https://doi.org/10.1787/2e7c30ff-en>.

<sup>51</sup> OECD Reviews of Innovation Policy: Finland 2017, OECD.

<sup>52</sup> OECD reviews of innovation policy: Norway 2017. OECD Publishing, Paris. <https://doi.org/10.1787/9789264277960-en>

<sup>53</sup> OECD (2016) OECD reviews of innovation policy: Sweden 2016. OECD Publishing Paris. <https://doi.org/10.1787/9789264250000-en>; OECD (2017)

the development is not straightforward or fast. The Nordic countries' R&I systems are characterised by inertia. Although the third generation has turned its attention to social challenges, the three generations coexist in today's R&I systems. Since the SDGs and Horizon Europe missions cover a very wide set of issues, prioritisation is important at the national level and for key actors. For example, a recent review of international practice has concluded that funding organisations face conflicting needs of increasing the range of tools to support a growing array of missions and aims, while also ensuring that the range of different funding instruments is comprehensible to applicants and the funder itself.<sup>54</sup> One size will not fit all in the future. R&I funders, including NordForsk, will probably need to be able to run both small and big interventions out of the same pot of money.<sup>55</sup>

This development on a Nordic level was accentuated in the 2021 MR-U meeting with NORDHORCS, where key stakeholders presented a long list of needs and priorities,<sup>56</sup> including:

- Non-thematic, bottom-up calls
- Researcher mobility and scientific networks, especially for PhD-students and younger researchers (e.g., a Nordic Post-doc programme)
- Support Nordic alliances toward Horizon Europe
- Open access to data and sharing of health data, such as the project Nordic Commons
- A mission-oriented approach, such as Sustainable Cities by the Sea
- Research infrastructure

NordForsk so far has worked with funding instruments of the first and second generation, building on peer review to fund research, focusing on Nordic added value and adding societal challenges in its overall communication.

Interviews with representatives from NORDHORCS and EK-U stress that NordForsk must reflect the changing conditions or political demands for funding research which call for a concerted planning and action of research and innovation. However, a general viewpoint is that NordForsk does not have Nordic funding resources to implement a mission-oriented approach, but Nordic added value could be a strategic platform for formulating how NordForsk can contribute to the development of the Nordic countries.

The budget for research cooperation (NordForsk's budget from the Nordic Council of Ministers) has been the same for many years, which actually means that it is stagnating. Even though the Academy of Finland and Research Council Norway recently have seen cuts to research in their budgets, the long-term trend is clearly increased public investment in public research.<sup>57</sup> This is also the case in Sweden and Denmark. In Denmark, domestic foundation and organisations are increasing their founding of public research and do count for a larger share of the total investment than EU and other foreign sources. However, EU and other foreign sources represent an increasing share of the total investment in the Nordic countries.

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<sup>54</sup> Technopolis Group, 2018. UKRI Research and Innovation Funding Service (RIFS) visioning work. Available at: <https://www.technopolis-group.com/wp-content/uploads/2020/02/Support-to-the-generation-of-a-Research-and-Innovation-Funding-Service.pdf>

<sup>55</sup> OECD (2018), OECD Science, Technology and Innovation Outlook 2018: Adapting to Technological and Societal Disruption, OECD Publishing, Paris. [https://doi.org/10.1787/sti\\_in\\_outlook-2018-en](https://doi.org/10.1787/sti_in_outlook-2018-en)

<sup>56</sup> Protocol MR-U 1/2021.

<sup>57</sup> Evaluation of the Academy of Finland. Publications of the Ministry of Education and Culture, Finland 2022:7.

Within the current economic framework of Nordic research cooperation, NordForsk does not have the possibility to address societal challenges in a mission-oriented approach, which requires more resources and innovation and implementation activities. However, an option would be to develop a broader strategic approach in NordForsk's portfolio, to be able to participate with others in programmes spanning research, innovation and implementation. But this depends on how Nordic policy-makers and R&I funders choose to address the societal challenges overall, through missions or not.

## 7.2. Assessment of new framework conditions for NordForsk

Our understanding is that NordForsk needs to adapt to the framework changes in the mid-range between national and EU funding activities and facilitate initiatives or activities that are best and most efficiently carried out in a Nordic context, i.e., activities that create maximum Nordic added value. NordForsk has adapted successfully before – shifting focus from the funding of scientific networks and researcher mobility to Nordic Centres of Excellence and, more recently, the funding of research projects (and sometimes innovation projects) in programmes addressing societal challenges.

NordForsk's main challenge is to remain relevant and effective in the new R&D policy landscape. The second challenge is to avoid financial marginalisation as the research resources at national but also on European level are extensive. Even though NordForsk's budget is limited, the NordForsk project portfolio must probably still be quite diverse in the future – addressing the interests of stakeholder and the three co-existing generations of R&I. Our assessment is that NordForsk will have to work with initiatives related to all three generations of R&I policy and funding.

**The first initiative involves funding of research of the highest international quality, which essentially entrusts the choice of theme and quality control to the scientific community in the hope that innovation and social benefits will eventually appear.** A good example of this kind of initiative is the Programme for Interdisciplinary Research (to promote excellent bottom-up research that combine and integrate skills from multiple disciplines). The initiatives funded by NOS-HS are of this kind. Another example is initiatives to foster high-risk/high-reward research.<sup>58</sup>

NordForsk could probably contribute here, mobilising the Independent Research Fund Denmark, Academy of Finland, Swedish Research Council and NOS-HS. NUS is also an asset here since they advocate more network funding, mobility grants and opportunities for younger researchers. These kinds of initiatives can work in the OI-mechanism but will probably need some high-level support from NORD-HORCS to be realised since they are most often non-thematic and completely bottom-up oriented.

**The second initiative focuses on funding research and innovation to obtain specific social/societal benefits.** Many of NordForsk's former (Nordic Centres of Excellence) and current funding (projects) are in this category. These kinds of initiatives are 'main-stream' among many the research funders and work well to realise within the OI-mechanism.

**The third initiative is grounded in the attention being given to grand or societal challenges and missions.** The extent to which national systems can generate the expected impact at the domestic level is a question that remains open. Certain research topics are too complex and wide-ranging for a single country to address on its own, and well-functioning research infrastructure is a major driver of research

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<sup>58</sup> Effective policies to foster high-risk/high-reward research. OECD science, technology and industry. policy papers, May 2021 no. 112.

cooperation. Such cooperation may create added value in the long term, although this is not always visible from a short-term perspective.

The OI-mechanism is not suitable for establishing such initiatives. Rather, it demands an initiative from NORDHORCS, the political level, or a joint initiative. The initiative Sustainable Cities by the Sea is interesting since this proposed mission has the Horizon Europe programme as a starting point and links to at least three of the five EU missions.<sup>59</sup> The project Nordic Commons is also relevant in this category of initiatives, as well as increased cooperation in research infrastructure.<sup>60</sup>

Even though working with initiatives related to all three generations of R&I policy and funding entails that the project portfolio will still be quite complex, the portfolio should be more clearly guided by Nordic added value. As NordForsk has pointed out, Nordic added value can be created in many ways.<sup>61</sup> However, the portfolio steering should be less ad hoc and more strategic with a focus on achieving the most Nordic added value. The forthcoming NordForsk strategy must be a more useful tool for the board to act more strategically than with the current strategy. The key to adaptation to changes in the policy and funding framework, therefore, does not lie in limiting the range of instruments and areas, but in focusing more on maximum Nordic added value.

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<sup>59</sup> Mission Oriented Research and Innovation. Case study of a potential Nordic mission area: Sustainable Cities by the Sea. NordForsk.

<sup>60</sup> <http://norden.diva-portal.org/smash/get/diva2:1594892/FULLTEXT01.pdf>

<sup>61</sup> <https://www.nordforsk.org/nordic-added-value>

## 8. Concluding discussion and recommendations

Our overall conclusion is that NordForsk's organisational performance has been excellent since 2018. NordForsk has complied with the principles adopted by the Nordic Council of Ministers for Education and Research in 2018 by renewing its portfolio, making funding instruments more flexible and adapting its operations even more to the countries' priorities through the Open Invitation mechanism.

NordForsk has become more agile and flexible and thus more relevant for the Nordic countries. Since 2018, NordForsk has to a large extent met the research funders' expectations. We see increased flexibility in both financing of and instrumentation in programmes. The emphasis on projects instead of the Nordic Centres of Excellence is not a strategic choice but follows developments in the Nordic countries. The financing models with a real common pot and a virtual common pot are used alternately to meet different political positions and legislative frameworks of the research funders. The administrative effectiveness of both models has been questioned, but both models work well with their strengths and weakness, respectively. Furthermore, the virtual common pot has stimulated the development of co-operation between Nordic and non-Nordic countries. Virtual common pot has also contributed to involving innovation funders such as Business Finland, Innovation Fund Denmark and Vinnova.

Measures have also been taken for a more cost-effective organisation through administrative collaboration with Nordic Innovation and Nordic Energy Research. At the same time, NordForsk has continued to have high demands on Nordic added value and scientific quality in funded projects, though more systematic knowledge on the concept of Nordic added value will be appreciated.

Since 2018, NordForsk has been assigned important tasks from the Nordic Council of Ministers. For example, The Cooperative bodies (samarbetsorganen), Nordic-Russia cooperation and the project Nordic Commons have been carried out.

The overall stakeholder view is that NordForsk is a relevant and useful platform, and that the institution is meeting sufficient standards. This is also our overall assessment. However, there are still challenges concerning NordForsk's *governance model and portfolio steering, use of Nordic value added and impact and assessment and strategic communication*. These challenges need to be addressed for NordForsk to remain relevant and effective in the new (Nordic) R&D policy landscape. By addressing these challenges, it is important to acknowledge that NordForsk has a positive impact encouraging Nordic research collaboration. Further, Nordic ambition on behalf of NordForsk should be based on Nordic added value to develop a NordForsk in its own right as a unique Nordic research funding initiative and hereby to avoid financial marginalisation as the research resources at national but also on European level are extensive.

### Clarifications in NordForsk's governance model and active portfolio steering

NORDHORCS' advisory role for NordForsk has provided further legitimacy to Nordic research co-operation and NordForsk as an organisation, as well as providing valuable advice at an overall level for NordForsk. However, roles and responsibilities of NORDHORCS and the NordForsk Board needs to be clarified.

*Recommendation:* The Nordic Council of Ministers should clarify in the Strategic mandate that the NordForsk Board has the full responsibility for NordForsk, and that the NordForsk Board's strategic role is central for achieving Nordic added value. NORDHORCS' advisory role needs to be explicitly stated in the Strategic mandate.

Although NordForsk's priorities are mainly the same as stated in political vision and strategies by the Nordic Council of Ministers, there is a need to ensure alignment between the goals of the Nordic Council of Ministers' Vision 2030 and NordForsk's Strategic mandate and the forthcoming NordForsk strategy.

*Recommendation:* In NordForsk's Strategic mandate, MR-U/EK-U should specify that NordForsk-funded research should contribute to the implementation of the Nordic Vision 2030 and to Nordic value added as a Nordic institution of the Nordic Council of Ministers. NordForsk should, in the forthcoming strategy, elaborate on how NordForsk as the Nordic institution contributes to the Nordic Council of Ministers Vision 2030 and Nordic added value.

NordForsk's Open Invitation mechanism is mainly an appropriate model for the identification and implementation of specific Nordic research collaborations in the form of new research programmers. However, the Open Invitation mechanism is not a strategic mechanism for prioritising NordForsk's entire operation. The Open Invitation is only guiding the development of new individual research programmes which are rooted in the research priorities of the national research councils. There is no strategic portfolio management in NordForsk in terms of Nordic added value, including research subjects and a balance between basic research/strategic research/innovation. However, the strength of the model is (or ought to be) that it brings a focus to Nordic added value at the research policy and funding level and ensures that NordForsk is an attractive facilitator for Nordic research collaboration.

*Recommendation:* NORDHORCS and NordForsk's Board of Directors should contribute to consolidating the Open Invitation mechanism and ensure that it is known and applicable within the national research funding organisations. Consequently, in the initial phase of the Open Invitation, the NordForsk Board could have a more active role regarding strategic portfolio management by pointing out/giving advice on possible research funding organisations outside NORDHORCS, especially a challenge in Denmark and Finland, and by indicating what might be desirable outcomes of the programmes in terms of Nordic added value and the Nordic Council of Ministers Vision 2030. NordForsk's secretariat has an important facilitating role in the Open Invitation regarding writing help with Expression of Interest. This supporting role should be made more explicit in how national financiers can receive administrative assistance from NordForsk's secretariat.

In strategic portfolio management, NordForsk should also act to increase the overall funding, both from the Nordic Council of Ministers and through funds directly from the Nordic countries and those that require only little or no Nordic co-financing. A tentative goal could be to establish 25% Nordic co-financing from NordForsk instead of 33%. The national financiers must then increase their share slightly. However, national financiers will probably hesitate to fund larger programmes or especially more short-term research assignments. The Open Invitation is unlikely to be an effective model for the establishment of such initiatives but should be complemented by other instruments.

*Recommendation:* NordForsk should, in addition to the Open Invitation mechanism, position itself in new ways as a significant contributor of research relevant to the Nordic countries as follows:

- NordForsk establishes a research service together with the Nordic Council of Ministers' secretariat, where the Nordic Council of Ministers can request research-based papers that provide an objective presentation of issues of political interest. This service could be facilitated by NordForsk while Nordic researchers are assigned for preparing the papers. This service could be developed with inspiration from the European Parliament.<sup>62</sup>
- NordForsk could be used as an experiment for the national research funding bodies. Certain research topics are too complex and wide-ranging for a single country to address on its own, and well-functioning research infrastructure is a major driver of research cooperation. Such cooperation may create added value in the long term, although this is not always visible from a short-term perspective.

## Build systematic knowledge on impact and Nordic added value

In addition to the above measures to improve the Open Invitation mechanism, NordForsk's Board of Directors should focus more on strategic steering of NordForsk's overall project portfolio by applying Nordic added value as a guiding principle and as a principle to maximise Nordic benefits of the funded projects.

Although Nordic added value has been operationalised in the Open Invitation mechanism, funding and prioritisation processes in programmes and projects, the overview and insight into NordForsk's contribution to Nordic added value is somewhat unclear and anecdotal. Some research has already been initiated on this matter, and Researchfish has been applied as a methodological tool where the individual projects report results, outcome, and impact. However, the effect of these positive initiatives is still to be seen.

*Recommendation:* NordForsk should carry out more systematic studies/evaluations of the programmes and projects regarding more in-depth understanding of Nordic added value. Further, it should lead to a redefinition of Nordic added value, where we recommend that NordForsk, as a minimum, specifies Nordic added value according to the process of implementing research programmes and projects:

- Nordic added value as precondition for initiated Nordic funded research, e.g., regarding the research team and the subjects to be addressed
- Nordic added value as the results (e.g., highest international quality), outcomes and benefits to the development of the Nordic research environment and the Nordic countries including the Nordic Vision 2030.

To assess research of highest international quality in term of results and outcome, we recommend using figures that are comparable (benchmarking) with the performance of other research programmes or the entire Nordic research environment, e.g., by using indicator numbers of publication per researcher, citation indicators, and more.

Overall, this would also contribute to NordForsk's strategic communication about what results are achieved and highlight the impact.

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<sup>62</sup> <https://www.europarl.europa.eu/at-your-service/en/stay-informed/research-and-analysis>

## Raise the level of ambition in strategic communication

In NordForsk, there is no strategic portfolio management or major steering from a political level. But the programmes and the funded projects are still highly politically and socially relevant (UN SDG and the Council of Ministers' vision and goals), as the countries' priorities are set through the Open Invitation mechanism. Therefore, it is important to have strategic communication from NordForsk, which explains and emphasises that good results are achieved. NordForsk's strategic communication, with a focus on results and impact targeting the political and funding organisations and, secondarily, researchers and society in general, is impressive but mainly involves the secretariat.

*Recommendation:* NordForsk's secretariat should raise the level of ambition in strategic communication in relation to the Nordic Council of Ministers and the Nordic Council by involving NORDHORCS and the Board in strategic communication regarding NordForsk's role and what the institution achieves. Further, all completed projects (programmes) are recommended to prepare a short perspectival note highlighting the project's contribution to Nordic added value and how the results can contribute to the realisation of the Nordic Vision 2030.<sup>63</sup>

Finally, according to the MR-U decision in 2018, NordForsk does not have an assignment in research policy co-operation. A possibly unforeseen negative consequence is that it has disappeared in MR-U / EK-U as well, even though the intention was precisely to stimulate that type of exchange of experience. In the long run, NordForsk may be negatively affected if MR-U / EK-U do not have a research policy discussion with a certain continuity. The above proposed initiatives could simulate and even strength a Nordic discussion on research. Further, NORDHORCS is also a resource in this context, as pointed out in a meeting about Nordic research collaboration among Nordic stakeholders with research.<sup>64</sup>

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<sup>63</sup> An example of a research-respond to an issue of relevance to the society; a [www.nordforsk.org/news/how-plan-ukrainian-refugees-arriving-nordic-region](http://www.nordforsk.org/news/how-plan-ukrainian-refugees-arriving-nordic-region)

<sup>64</sup> Secretariat of the Nordic Council of Ministers (2021): Sammanfattning från temadiskussion vid MR-U 01/21 (unpublished).

## Appendix A: Issues of special interest for the Evaluation of NordForsk

The tender document listed the following questions of special interest:

1. Political relevance:
  - How does NordForsk contribute to research with relevance for policy makers?
  - How does NordForsk contribute to the NCM's Vision 2030, the 3 strategic priorities and the action plan as well as relevance for other cross-sectorial co-operation and research interests within specific sectors of the Nordic Council of Ministers?
2. Relevance for national research funders / NordHorcs and NUS:
  - How does NordForsk reflect the priorities of the Nordic countries?
  - Is NordForsk an efficient tool for Nordic co-operation within research and innovation?
  - Should Nordic bilateral research co-operation be allowed, and if so, what would be the role of NordForsk?
  - Is NordForsk an attractive partner for research funders outside the Nordic region?
3. Relevance for end users / researchers in the Nordic region:
  - How does NordForsk best adapt to the framework changes within research and science collaboration we have seen over the last years?
  - Is NordForsk an efficient tool for co-operation within research and innovation?
  - Is there a fair balance between sectors (Humanities, Social Science, Technology, etc.) and type of research (basic, strategic, applied, innovation)?
  - How does the Open Invitation mechanism, infrastructure, network and mobility function?
  - To what extent is NordForsk contributing to Nordic research projects including partners outside the Nordic region?
4. Nordic added value:
  - How is Nordic added value emphasized in the development of programmes and calls?
  - How is Nordic added value emphasized in the selection of projects for funding?
  - Does NordForsk provide added value in relation to national research funding bodies, and what is the experience of the national funding bodies regarding this?
  - How is the Nordic added value of the programmes and projects communicated?
  - To what extent do the NordForsk funded programmes and projects contribute to research with relevance to, and implementation of, the NCM's Vision 2030, and to making the Nordic Region a world leader in research and innovation? This includes programmes and projects resulting in research with relevance for the 3 strategic priorities and the action plan as well as relevance for other cross-sectorial co-operation and topical themes within specific sectors of the Nordic Council of Ministers.
  - What is the Nordic added value as compared to other European research programmes?
5. Impact of NordForsk-funded research on Nordic and international society:
  - What impact does NordForsk-funded research have on Nordic society?
  - What impact does NordForsk-funded research have on international society?
  - How does NordForsk-funded research influence other Nordic research?
  - How is NordForsk-funded research synchronized with other research funding programmes, e.g., Horizon?

6. Focus on quality and efficiency in administration:

- Is NordForsk cost-efficient?
- Are the administrative processes robust, efficient and focused on quality, transparency and flexibility?
- Is the decision-making process from an idea for a potential call to decision on project funding sufficiently time effective?
- How do communication and information activities function, both when it comes to attracting applicants to Calls, and when it comes to communicating results?

## Appendix B: Interviewed organisations

Represented organisations	Title	Name	Institution	Nationality	Member of NordForsk's Board
Senior Officials Committee for Education and Research (EK-U)	Head of Department	Niklas Stenbäck	Department of Education and Culture	AX	
	Head of office	Maria Ulf-Møller	Ministry of Higher Education and Science	DK	
	Senior Adviser / Deputy Director	Una Strand Viðarsdóttir	Ministry of Education, Science and Culture	ISL	
	Project manager	Håkon Halgrimsen	Ministry of Research and Education	NOR	
	Special Advisor	Bente Björk	Ministry of Education and Research	SE	
Nordic Council of Ministers' secretariat (NCMs)	Head of Department	Christina Springfeldt	Nordic Council of Ministers' secretariat	SE	
	Chief of Staff	Jonas Wendel	Nordic Council of Ministers' secretariat	SE	
NORDHORCS (Nordic Heads of Research Councils)	Deputy Director General	Stine Jørgensen	Ministry of Higher Education and Sciences	DK	
	International Investment Officer	Jens Peter Vittrup	Innovation fund Denmark	DK	
	Professor/chairman of the board of directors	Maja Horst	Independent Research Fund Denmark	DK	
	Head of office	Jesper Risom	Independent Research Fund Denmark	DK	
	Secretary general	Hallgrímur Jonasson	Rannis	ISL	
	Rector	Ragnhildur Helgadóttir	Science and Technology Policy Council of Iceland	ISL	x
	Executive Director	Kristin Danielsen	The Research Council of Norway	NOR	x
	Special Advisor	Lillian Baltzrud	The Research Council of Norway	NOR	
	Secretary general	Jonas Björck	The Swedish Research Council Forte	SE	x
	Secretary general	Ingrid Petersson	The Swedish Research Council Formas	SE	
	Secretary general	Sven Stafström	The Swedish Research Council	SE	
	Programme manager	Anna-Karin Florén	The Swedish Research Council Forte	SE	
Director	Jussi Vauhkonen	Academy of Finland	SF	x	
NUS (Nordic University Co-operation)	Office for Research, Advice and Innovation	Claus Henrik Andersen	Technical University of Denmark (DTU) on behalf of Universities Denmark	DK	
	Secretary general	Fridrika Hardardóttir	Icelandic Rectors' Conference	ISL	
	Secretary general	Nina Sandberg	Universities Norway (UHR)	NOR	
	Rector	Leif Haanes Vidar	Norwegian School of Theology	NOR	x
	Secretary general	Marita Hilliges	Association of Swedish Higher Education (SUHF)	SE	
Secretary general	Tanja Risikko	Universities Finland Unifi	SF		
NordForsk	Director	Arne Flåøyen	NordForsk	NOR	
	Senior Adviser / manager of operations	Marianne Aastebøl Minge	NordForsk	NOR	
	Senior Adviser	Lise-Lotte Wallenius	NordForsk	NOR	
Estonia	Coordinator	Katrin Piller	Estonian Research Council	EE	
Latvia	Director of the Department of Higher Education, Science and Innovation	Dmitrijs Stepanovs	The Ministry of Education and Science	LV	

Research project	Title	Name	Institution	Nationality
Climate Change Resilience in Small Communities in the Nordic Countries	Associated professor	Rico Kongsager	University College Copenhagen	DK
Facilitation Robotics for Teams Foundational Research on Group Processes in Human-Robot Ensembles with Social Robots (S-FACTOR)	Professor	Johanna Seibt	Aarhus University	DK
Gender equality, Diversity and Societal Security	Senior researcher	Dag Ellingsen	OsloMet – Oslo Metropolitan University	NOR
Nordic participatory, healthy and people-centred cities	Senior Scientist	Nuria Castell	Norwegian Institute for Air Research	NOR
Personalized medicine in RA by combining genomics, biomarkers, clinical and patient-derived data from the Nordic countries	Professor	Johan Askling	Karolinska Institutet	SE
Data streams and mathematical modelling pipelines to support preparedness and decision making for COVID-19 and future pandemics	Professor	Tom Britton	Stockholm University	SE
SMARTer Greener Cities	Associate professor	Erik Andersson	Stockholm University	SE
Citizens as Pilots of Smart Cities	Professor	Tuomas Ahola	Tampere University	SF
Reimagining Norden in an Evolving World (ReNEW): An Excellence Hub in Research, Education and Public Outreach	Professor	Peter Stadius	University of Helsinki	SF
Migrants and solidarities: Negotiating deservingness in welfare micro publics	Professor	Mette Louise Berg	University College London	UK

## Appendix C: Workshop participants

Participated organisation	Title	Name	Institution	Nationality
Senior Officials Committee for Education and Research (EK-U)	Senior Ministerial Adviser	Saara Vihko	Ministry of Education and Culture	SF
	Senior Adviser / Deputy Director	Una Strand Viðarsdóttir	Ministry of Education, Science and Culture	ISL
NORDHORCS (Nordic Heads of Research Councils)	Head of office	Jesper Risom	Independent Research Fund Denmark	DK
	Director	Jussi Vauhkonen	Academy of Finland	SF
	Secretary general	Jonas Björck	The Swedish Research Council Forte	SE
NUS (Nordic University Co- operation)	Rector	Astrid Söderbergh Widding	Stockholm University	SE
NordForsk	Director	Arne Flåøyen	NordForsk	NOR
Nordic Council of Ministers' secretariat (NCMs)	Head of Department	Christina Springfeldt	Nordic Council of Ministers' secretariat	SE
	Chief of Staff	Jonas Wendel	Nordic Council of Ministers' secretariat	SE
	Senior Adviser	Jonas Waller	Nordic Council of Ministers' secretariat	SF