SCIENTIFIC PLAN

DEFINITIONS

Data Access Unit (DAU): a function at a university that assists researchers to provide access to data at the end of a project or at publication. Their exact duties and how they are organised will depend on their institutional context. May require resources from library, archive, grants and innovations office, and researchers. DAUs are not part of, but work in close contact with, SND 2.0.

Domain: area defined by the particular skills, methods, and/or knowledge required of researchers and data professionals working with data from this area. These domain-specific requirements can be related to for instance scientific, analytical, ethical/legal, or process-related factors.

Metadata: structured information about (research) data that describes their various properties with the main purpose of making the data findable and reusable.

Repository: "a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution" (Lynch, 2003: 2). In this sense, a repository does not include the actual storage infrastructure itself, nor is it an archive as defined by the Swedish Archive Act (1990:782).

ABBREVIATIONS

CESSDA	Consortium of European Social Science Data Archives
CLARIN	Common Language Resources and Technology Infrastructure
COHORTS.SE	The Swedish Cohort Consortium
DAU	Data Access Unit
DiVA	Digitala Vetenskapliga Arkivet
ECDS	Environment Climate Data Sweden
EISCAT	European Incoherent SCATter Scientific Association
ERIC	European Research Infrastructure Consortium
ESFRI	European Strategy Forum on Research Infrastructures
ETF	Evaluation Through Follow-up
FAIR	Findable, Accessible, Interoperable, Reusable
FTP	File Transfer Protocol
GU	University of Gothenburg
ICOS	Integrated Carbon Observation System
ICPSR	Inter-university Consortium of Political and Social Research
KI	Karolinska Institutet
LU	Lund University
NEAR	Towards a National E-Infrastructure for Aging Research in Sweden
NeIC	Nordic e-Infrastructure Collaboration
NGO	Non-Governmental Organisation
OAIS	Open Archival Information System
OECD	Organisation for Economic Co-operation and Development
PID	Persistent Identifier
RDA	Research Data Alliance
RDM	Research Data Management
RDNL	Research Data Netherlands
REWHARD	Co-ordination to establish a national infrastructure for research about relations, work and health across the life course
SciLifeLab	Science for Life Laboratory
SLU	The Swedish University of Agricultural Sciences
SND	Svensk Nationell Datatjänst/Swedish National Data Service
SNIC	Swedish National Infrastructure for Computing
S-NICE	Swedish National Infrastructure for Climate and Earth System Research Data
SOM	Samhälle Opinion Medier/Society Opinion Media
SSD	Svensk Samhällsvetenskaplig Datatjänst/Swedish Social Science Data Service
SU	Stockholm University
Sunet	Swedish University computer Network
SwedPop	Swedish population databases for research
SWEEP	The Swedish Survey Program
Swepub	Academic publications at Swedish universities
UmU	Umeå University
UU	Uppsala University
VR	Vetenskapsrådet/The Swedish Research Council

1 Scientific Motivation and Overview

1.1 SND 2.0: A Trusted Digital Repository of National Interest

"This is the future of science: a global data commons, a virtual science library spanning the globe."
(RDA Europe 2014:5)

Researchers in Sweden are facing a growing demand for data publication. At the same time, technical, political and legal barriers are major challenges for preserving and providing access to research data. The lack of high quality solutions often forces researchers to use data-publication solutions that fail to meet requirements necessary for long-term accessibility.

The mission of the Swedish National Data Service consortium is to address these challenges and facilitate preservation of and access to high-quality research data. The SND 2.0 consortium members are key actors in the national strategy for providing access to Swedish and international research data and are part of a globally interoperable and accessible infrastructure. The enlarged and remodelled SND 2.0 will provide a system for the Swedish research community to describe and deposit research data; share data with Swedish and international researchers; and find data published by others, all within the framework of existing legislation. SND 2.0 will provide advanced technical infrastructure, training, user support and standardised development of metadata[1].

As the national infrastructure for data-sharing, SND 2.0 will be essential to Swedish research. The roles of SND 2.0 will be to promote interdisciplinary research, efficiently allocate resources, and lay the foundations for scientific advances. The SND 2.0 consortium has the competence to successfully coordinate access to research data within a wide spectrum of scientific domains. Coordinated data access – whether open or controlled – has proven to be more successful and more transparent than dispersed data access structures (VR 2015a).

Fully developed, SND 2.0 will allow every researcher to discover and reuse well-documented and curated datasets, for intra- as well as interdisciplinary studies, using a multitude of research methods and data types. As a Trusted Digital Repository[2], SND 2.0 will guarantee well-documented, well-preserved and well-curated research data.

1.2 National Competence Building and Collaboration

Today, all signs – in Sweden and internationally – indicate a future in which publicly funded research data must be made accessible for other researchers – for secondary analysis, interdisciplinary studies, validation – and for use in the private sector. Following the principles and guidelines for access to publicly funded research data (OECD 2007), OECD countries have worked to adapt legal frameworks and implement policy initiatives to encourage greater openness in science. The principle of open access to scientific data is well established in OECD countries (OECD 2015), and the EU research and innovation program Horizon 2020 requires research data to be open from 2017 (European Commission 2016b).[3] The Swedish research and innovation bill declares that publicly funded research data should be made accessible within the next ten years (Prop. 2016/17:50). Large private research funders and scientific journals already require accessible data.

To remain competitive in the new world of open access data, Swedish universities will need local units to support researchers in data management, accessibility, and preservation. These local units must be provided with expertise in data sharing, documentation and standards.

[1] Structured documentation or information about various aspects of data: data about data.
[2] https://assessment.datasealofapproval.org/assessment_207/seal/html/.
[3] There are still some opt-out possibilities (European Commission 2016b:8).

Without a national, coordinated system for disseminating expertise and delivering technical solutions, Swedish research will suffer. Valuable research time will be wasted on duplicated data collation, large syntheses will be more difficult to produce, and valuable insights will be missed. National data-sharing infrastructure is essential for top-quality Swedish research.

Since 1981, SND and its predecessor SSD have accumulated considerable expertise in making data accessible in accordance with the OAIS reference model[4], providing access to social science data for more than three decades, working with data from the humanities and health sciences for nine years, and from 2016 hosting Environmental Climate Data Sweden (ECDS). SND's services have ensured that data are Findable, Accessible, Interoperable and Reusable according to the FAIR Guiding Principles[5] (Wilkinson et al 2016). SND is also certified as a Trusted Digital Repository and has been added to the list of recommended repositories at PLOS Journals[6]. The infrastructure has enabled disciplinary and interdisciplinary searches in a national data catalogue; provided access to and visibility in international data registries; offered fast and efficient dissemination, even when access is restricted; and ensured high quality data and metadata.

This application proposes a remodelled, enlarged SND 2.0 to address the research community's increasing demands for data storage and data dissemination services. SND 2.0 will leverage the expertise from a consortium of major universities to expand SND's service delivery into new research areas. The model also provides a new repository solution that can host personal data as well as large-size data[7]. Briefly, the expanded infrastructure will be organised as follows:

- *Core services*: SND will develop into SND 2.0, a fully multi-disciplinary infrastructure, by providing core services to support open access to research data. SND 2.0 will: 1) manage and develop the Swedish Research Data Repository[8]; 2) manage and develop the Swedish Research Data Discovery Service; 3) support universities with expert knowledge and training and 4) maintain a wide network of national and international exchange of knowledge and expertise regarding data preservation and access.
- *Distributed Domain Expertise:* The consortium of universities co-funding this application will establish local domain specialists with different competencies. The existing SND office at the University of Gothenburg offers expertise in handling social science, humanities, public health and epidemiology data. The GU office will also provide expertise in data curation and management, IT development, legal advice, and general management. From 2018, domain expertise will be provided by Karolinska Institutet (register-based medical research); Lund University (interdisciplinary population-based cohorts linked with registers and biobanks); Stockholm University (spatial data within the humanities and social sciences), the Swedish University of Agricultural Sciences (environmental data), Umeå University (register-based research) and Uppsala University (sensitive data). Additional domain expertise will be developed over the funding period within, for example, engineering and artistic research. This will further broaden coverage of the research areas, data types and methodological approaches supported by SND 2.0.

[4] The OAIS reference model include: Ingest, Storage, Data Management, Administration, Preservation Planning and Access. https://public.ccsds.org/pubs/650x0m2.pdf.
[5] http://www.nature.com/articles/sdata201618.
[6] http://journals.plos.org/plosone/s/data-availability#loc-recommended-repositories.
[7] For more details on sensitive data and data storage, see Description of the Infrastructure and its Activities.
[8] Our concept of a repository does not include the actual storage infrastructure but rather data and metadata streams to and from this storage and the processes that transform these data streams into FAIR research data. Note that a repository is not an archive according to the Archives Act (1990:782).

- *Data Access Units:* The group of collaborating universities supporting this application – eventually including a large majority of the universities producing research data in areas covered by SND 2.0 – will establish one or several Data Access Units (DAUs), depending on the local conditions at the university. The DAUs will be fully-financed by their university[9] and will: 1) support and train researchers in data management and legal issues; 2) provide quality assurance of metadata for data sharing; 3) create and upload persistent data files, either to a local solution or to the Swedish Research Data Repository; and 4) be offered regular training workshops from SND 2.0.

A similar model (DataverseNL) is already in use in the Netherlands (RDNL 2014) and another one is currently being discussed in Norway. During 2016–2017, SND field-tested the model in thirteen Swedish universities.[10] The field test showed that it is entirely possible to build up DAUs to provide local, scalable support to researchers. It also became clear that the particular organisation of a DAU will differ, based on varying needs of different universities and their faculties, but that the DAUs still can take part in a joint national research data system. Building on its broad national and international network, the SND 2.0 consortium will be uniquely situated to provide the training, support, and experience that tomorrow's challenges in the field of data accessibility demand.

Both data production and digital technology develop at breakneck speed. While this means that establishing the processes required for preservation and access to research data has never been more urgent, it also means that much will change between 2018 and 2025. To provide the Swedish scientific community with continuous high-quality data access, SND 2.0 will be structured to benefit from previous development and established networks, while being flexible enough to make the most of inevitable changes, such as the e-archive solutions that will emerge in the near future. It should be stressed, however, that although access to data is predicated on those data being preserved in an accessible way and a reusable format, this should not be confused with archiving of data, nor is a repository (as the term is used here) an archive in the Swedish legal sense. Archiving of data in accordance with the Archive Act (1990:782) is the responsibility of each Swedish university and not subject of this application.

1.3 Scientific Goals for SND 2.0

The development toward open access to research data will continue over the next couple of decades, and SND 2.0 intends to be one of the leading actors in this process. The overarching scientific goal of SND 2.0 is to continue to facilitate preservation of and access to high quality research data according to the FAIR Guiding Principles. SND 2.0 will provide tools for the Swedish research community to deposit research data so that they can be found by and shared with Swedish and international researchers. To achieve the overarching goal during the funding period 2018–2025, SND 2.0 will fulfil the following operative objectives:

- Ensure high quality of Swedish research data and metadata
- Maintain a national research data repository
- Expand service to support all data types
- Maintain and develop a national, cross-disciplinary metadata registry for data stored either through a local solution or in the national repository
- Provide interfaces for data discoverability, accessibility and reusability

[9] The funding of DAUs is not a subject for this application.

[10] University of Gothenburg, Luleå University of Technology, Lund University, Malmö University, Jönköping University; Umeå University, Stockholm University, Blekinge Institute of Technology, Swedish University of Agricultural Sciences, University of Borås, University West, University of Skövde, Dalarna University.

- Create, maintain and provide state-of-the-art research data management (RDM) support and resources
- Facilitate extensive RDM competence among stakeholders
- Enable access to international research data
- Showcase Swedish research data globally
- Be an active part of national and international research data communities
- Provide strategic, scientific and operative management
- Plan for accessibility to research data beyond the funding period

1.4 An overview of the Development towards Accessible Data

Over the past decades, there has been a clear movement both internationally and in Sweden toward greater accessibility and sharing of research data. Open science, where research publications and data are publicly available, is developing rapidly, making high-quality research and innovation possible and assuring civic involvement and public good. A range of stakeholders embrace the FAIR Guiding Principles. Below is a summary of major national and international developments. These indicate the direction in which various stakeholders are moving, and illustrate the future challenges faced by society and the research community.

In the European Union research and innovation program Horizon 2020 a significant part of the calls, corresponding to about 30 per cent of the total budget (VR 2015a:17), are made under an Open Access to Research Data pilot (European Commission 2015:17). In total, nearly one project in five agreed to publish its data in an open repository (European Commission 2016a). From 2017, all research data in Horizon 2020 projects must be open and all calls will require data management plans as compulsory deliverables where relevant (European Commission 2016b).[11] As stated in the European Open Science Cloud Initiative, the European Commission aims to develop a trusted, open environment for the scientific community to store, share and re-use scientific data and results (European Commission 2016c).

Swedish developments in data preservation and access are also influenced by research collaboration with other Nordic countries. The Nordic Council of Ministers coordinates research data initiatives through high-level conferences and NordForsk, a facilitator of inter-Nordic research. In their 2016 report, NordForsk concluded that only Finland is moving rapidly towards open access to research data, while the progress in other Nordic countries has been more moderate (2016:38). NordForsk supports collaborative pan-Nordic efforts to facilitate open access to research data and open science (p. 39).

Initiatives from funding agencies and policy makers in Sweden have modestly accelerated development toward open access to research data. In 2013, the government commissioned the Swedish Research Council to develop a proposal for national guidelines concerning open access to scientific information. The council proposed that, as a rule, research data created in whole or part by public funding should be made openly accessible if legally possible (VR 2015a:17). In 2015, the Swedish Research Council continued to develop detailed and far-sighted recommendations for open access to “scientific information”, including research data, (VR 2015a; b). A key recommendation for the organisation of access to research data is to establish a national coordinator. Another report highlights the need for a coordinated e-infrastructure to

[11] There are still opt-out possibilities if open access to research data is incompatible with the obligation to protect results that can reasonably be expected to be commercially or industrially exploited, the need for confidentiality in connection with security issues, or with rules on protecting personal data. It is also possible to opt-out if open access would mean that the project's main aim might not be achieved, the project will not generate/collect any research data, or there are other legitimate reasons. (European Commission 2016b:8).

support the entire research process, from data collection to long-term preservation and access (Energimyndigheten et al 2015:29).

In the 2016 national budget (Prop. 2015/16:1:166) and in the research and innovation bill 2016/17, the Swedish government stated an overall objective to make all publicly funded research results, including publications and research data, accessible. Open access should be the norm, except when there are good reasons to restrict access due to personal integrity, national safety or intellectual property concerns. (Prop. 2016/17:50)

1.5 Major Challenges for Society and the Research Community

The developments described above represent major challenges for society and the research community, and illustrate the utter importance of national coordination. In Sweden, ownership of and responsibility for publicly-funded research data reside with the originating university (Freedom of the Press Act 1949:105; Public Access and Secrecy Act 2009:400). To provide access to an entire university's body of research data in any meaningful way requires significant investment in both expertise and technology. A university would have to direct substantial funds towards establishing units with the expertise to manage the variety of data types, research fields, publication practices, legal issues and attitudes to data sharing that prevail in each of the university's domains. The greater the number of domains a university covers, the greater the challenge of a university-based repository. Nor are current online storage solutions suitable, as they are often in the hands of commercial actors who may not be able to ensure long-term availability. Furthermore, metadata quality, security and access restrictions are not necessarily given priority.

Universities face big challenges in ensuring that data can reach those who need them for further research, replication or innovation. Ideally, data are disseminated online with open access, immediately downloadable and thoroughly documented. Yet, not all research data are suited to such easy access. Access to large datasets exceeds the technical limitations of web browsers or even FTP clients. Indeed, some research centres create such enormous datasets that moving them elsewhere for preservation and dissemination is inefficient; they must be disseminated from the point of creation. As each new generation of datasets tend to be larger than the previous, the future will place growing demands on data curation proficiency, dissemination resources, and the technical know-how required to provide access to large datasets.

Other challenges in providing access to research data in the future are connected to knowledge resources. In some fields, metadata standards and best practices change quickly; in emerging or cutting-edge research areas, the development of standards is a constant and necessary process. The overall movement from static datasets to dynamic datasets (that expand and develop over time) adds additional challenges. To stay on top of all the changes and maintain sufficient quality, in terms of documentation as well as file formats, is a highly resource-intensive activity.

Finally, to disseminate research data also means taking into account limitations on access. Areas in which humans need to be involved in the access process include secrecy, contracts with private entities, embargos, and personal data. Such involvement requires more resources and expertise in related laws.

1.6 A Coordinated Infrastructure to Promote Research, Innovation and Public Good

With these demands placed on Swedish universities, there is a distinct advantage to using *a coordinated approach* like the one suggested in this application. Research efficiency clearly improves if a researcher only has to look in one research data portal, rather than several, and

can order or download datasets from one service, rather than many. A coordinated quality system for access to and dissemination of research data, along with a national knowledge centre, would create economies of scale, improve efficiency, avoid fragmentation and promote interdisciplinary research and resource allocation. A well-coordinated national infrastructure provides good prospects for the Swedish research community to stay on top when it comes to data curation proficiency, data and metadata quality assurance and technical know-how.

Evidence has begun to accumulate for the importance of national and international research data infrastructures in supporting high-quality research. A user survey evaluating four research data infrastructures[12] showed that the use of data and services from infrastructures increases research efficiency between 28 and 46 per cent (Beagrie et al 2012; Beagrie & Houghton 2013a, b; 2016). An attempt to quantify efficiencies attributable to the British Economic and Social Data Service showed that the return on investment was a 5.4 to 1 benefit/cost ratio (Beagrie et al, 2012). Several studies have also shown that data sharing through a repository or an archive can lead to a greater number of publications based on data deposited (Piwowar et al 2007; Pienta et al 2010; Ember, Hanisch et al 2013).

The SND 2.0 research infrastructure will help Sweden to maintain its position as a successful research and innovation nation, an important goal defined in the Swedish government's research and innovation bill (Prop. 2016/17:125). SND 2.0 will continue to be a key actor in two European Research Infrastructure Consortia: national service provider for CESSDA and a CLARIN centre. These important infrastructures facilitate and increase data availability in the humanities and social sciences, which is also one of the goals in the research and innovation bill. SND 2.0 will provide scientific expertise and research data relevant to several of the societal challenges defined by Horizon 2020, e.g. health, demographic change and wellbeing; sustainable agriculture and forestry; climate action and environment; and inclusive, innovative and reflective societies. SND 2.0 will efficiently pool the universities' resources for development and maintenance of technical solutions, software and, through a close collaboration with SUNET, storage of research data for dissemination[13]. During the funding period, SND 2.0 will establish domain-specific expertise in engineering and artistic data, and also initiate discussions with relevant industrial actors to promote research data sharing for innovation and sustainable development.

1.7 Relations to Other National and International Infrastructures

SND 2.0 will continue to be part of a global, interoperable and accessible infrastructure of open research data repositories. Through memberships in and collaborations with relevant national and international infrastructures, SND 2.0 will maintain and strengthen the networks that are essential for making research data available now and in the future. Researchers in Sweden will have access to national and international datasets for secondary analysis and reuse, and their research data will gain international exposure, leading to a broader awareness and use of Swedish research. Connections with other research infrastructures will also ensure that Swedish research data practices develop within national and international frameworks, so data are harmonised over time and across national borders to enable comparative studies.

Internationally, SND 2.0 will continue to develop and reinforce its European cooperations, mainly by participating in tasks related to the development of a pan-European research infrastructure within the frameworks of the European Open Science Cloud and the European

[12] Economic and Social Data Service; Archaeology Data Service; British Atmospheric Data Centre and European Bioinformatics Institute.

[13] See section 3 in Description of the Infrastructure and its Activities for more details.

Strategy Forum on Research Infrastructures (ESFRI) with CESSDA ERIC[14] and CLARIN ERIC[15]. All parts of the research process are covered through the collaborations, from data access policies, via data management and technical frameworks to PID practices, metadata harvesting and data sharing. Close collaboration with the Nordic data services will continue, and SND 2.0 will actively participate in developing advanced IT tools and services, coordinated by NeIC. Outside Europe, SND 2.0 will continue to be an active member in ICPSR, administering the Swedish membership, providing researchers and students at Swedish universities free access to ICPSR's data collections and the possibility for doctoral students and postdoctoral researchers to obtain scholarships for advanced training courses.

Nationally, SND 2.0 plans to be the unifying link between more specialised research data infrastructures, such as COHORTS.SE, SWEEP, REWHARD, NEAR and SwedPop[16]. SND 2.0 will support these infrastructures with systematic and standardised data portal exposure; data management training and expertise; and legal and technical advice. During the funding period, SND 2.0 will also expand these long-term services to other infrastructures, e.g. S-NICE, ICOS Sweden and ETF. SND 2.0 will deepen the important collaboration with SUNET and the DiVA consortium. As described in section 3 in Description of the Infrastructure and its Activities, SUNET, SNIC and SND are discussing how to build up a national long-term storage for research data. This will host "big data" from SNIC, SciLifeLab, MAX IV, EISCAT etc. but also medium and small datasets. SND is active in these preparations of a pilot, and the storage will be essential for the universities within the SND 2.0 collaboration. There are also ongoing discussions on how to provide the DiVA members access to SND 2.0 via the DiVA interface. Joint metadata standards are to be discussed to enable metadata harvesting. Discussions will also be initiated with Swepub for further metadata exchange.

1.8 Current and Future Users of the Infrastructure

SND has two broad categories of users: data depositors, and researchers who access data. Several research groups in Sweden with internationally renowned scholars use the current SND services to make their primary data available and to use secondary data for new analyses. These include the Swedish National Election Studies (Dahlberg et al. 2012; Lindvall et al. 2013; Lindvall & Rueda 2014), the SOM Institute (Kumlin & Rothstein 2005; Bergström 2015), the Welfare State Survey (Svallfors 2011; Edlund & Johansson Sevä 2013; Edlund & Lindh 2013), the Swedish Level of Living Survey (Kjellsson 2013; Mood 2013; Agahi et al. 2014) and the Quality of Government Institute (Holmberg et al. 2009; Halleröd et al. 2013; Dahlberg & Holmberg 2014).[17] [18]

During the funding period 2018–2025, SND 2.0 will attract a growing number of users, due to the increased collaboration with the universities. There will also be a shift away from separate researchers and research groups depositing research data on a voluntary basis, towards a framework where Data Access Units (the support functions situated at the universities) take care of rising volumes of datasets requiring curation. As described in section 1.2, SND 2.0 will also

[14] SND is the Swedish national service provider in CESSDA. For more details on SND 2.0 commitments in CESSDA, see section 2.4.4 in Description of the Infrastructure and its Activities.
[15] SND 2.0 is co-applicant in the SWE-CLARIN application for funding from the Swedish Research Council 2018–2025.
[16] These five research groups received the Swedish Research Council's two-year coordination phase funding 2015 for infrastructures with databases within medicine and social sciences with focus on individual data.
[17] See Appendix Nyckelreferenser.
[18] http://valforskning.pol.gu.se/english; http://som.gu.se/som_institute; http://www.umu.se/english/research/research-excellence/strong-research/Welfare+studies; http://www.sofi.su.se/english/2.17851/research/three-research-departments/lnu-level-of-living http://qog.pol.gu.se.

continue expanding its services into new research domains. From 2018, SND 2.0 will have domain expertise in social science, humanities, public health and epidemiology (GU); register-based medical research (KI); interdisciplinary population-based cohorts linked with registers and biobanks (LU); spatial data within the humanities and social sciences (SU); environmental data (SLU); register-based research (UmU); and sensitive data (UU). The ambition for the rest of the funding period is to continue expanding services to researchers in Sweden by adding new domains such as engineering and artistic research data.

Regarding support for users who access data, SND currently has 2,711 searchable studies from a variety of research areas. During 2016, SND disseminated 6,101 datasets. A great number of studies are available for direct download. The total number of downloads from the SND website in 2016 was 2,903[19]. Material that is not available for direct download from the SND website can be ordered. In 2016, SND received 521 orders, 492 from academic users and 29 from non-academics. 49 per cent of the orders were made by women and 51 per cent by men. These orders comprised a total of 3,198 datasets. Studies forming part of a series were among the most popular. The two series with by far most orders in 2016 were the National Society Opinion Media (SOM) surveys and the Swedish Election Studies. The Swedish part of the ISSP and Western SOM were also popular. Academics from the University of Gothenburg strongly dominate the user group, followed by users at the University of Borås, Stockholm University, Lund University, Uppsala University and Linnaeus University.[20]

SND statistics concerning non-academic users are limited, since it is not legal to demand information about the purpose of the orders. Since 2006, just over 100 non-academic users have ordered datasets from SND. These users represent a wide variety of organisations such as private companies, media, schools, local and regional public administrations, government authorities, political parties, NGOs, public and private research institutes, labour market organisations, think tanks, libraries and archives.

[19] Downloads are not possible to analyse on the basis of gender. Statistics on the number of downloads from Environment Climate Data Sweden (ECDS) are currently unavailable and are therefore not included.
[20] SND has currently no statistics on academic disciplines among users.

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