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# EDUCATION, RESEARCH AND OPEN ACCESS IN NORWAY

PASTEUR4OA PROJECT  
CRISTIN  
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# Education, Research and Open Access in Norway

The CRISTin organisation was established in January 2011 under the ownership of the Ministry of Education and Research in cooperation with the Ministry of Health and Care services. CRISTin has three main functions: to manage and further develop the national CRIS system, to coordinate the implementation of Open Access in Norway and to negotiate licence agreements for e-resources on behalf of consortia of research institutions.

## Summary

Norway is a small country with a quite centralised research infrastructure. Building good services for Open Access infrastructure is simplified by having one major research funder, one national CRIS and one key provider of repository services. Politically the Government has expressed in a White paper its commitment to making Norwegian research results openly available. Despite Norwegian research institutions focus on Open Access, institutional policies tend to be vague and based on good intentions. The need for alignment and policy reinforcement is there for evident, and the PASTEUR4OA project provides a great opportunity for this.

## The research and scholarly communication system of the country

Norway with a population of around 5 million, has 8 universities and 48 university colleges. Statistics show that 22% of the population over 16 years of age have a higher education degree at university/college level (4 years or more). The country has seen a steady growth in research education, and in 2013 more than 1500 finished their doctoral theses. In addition, Norway has 61 research institutes being partially publicly funded and 6 university hospitals. The national CRIS, CRISTin, registered around 20 000 academic publications from 160 institutions in 2013.

In the last 10 years, Norway has seen a growth in the number of scientific publications of 89% (increase per research position is 54%). Papers from Norwegian universities rank above the world average when it comes to citations, but they rank below some of the top Swedish and Danish universities. The four oldest universities in Norway (University of Oslo, Norwegian University of Science and Technology in Trondheim, University of Bergen and University of Tromsø) contribute to about 70% of all the university and university college publications.

These publications form part of the research institutions result based funding (RBO), albeit a small one. The Norwegian Publication Indicator is used to distribute around 2 percent of the total funds for the university and university College sector (the overall funding for research is around €290 million from the Norwegian Research Council, and a total budget of about €4.4 billion in 2013). To promote publication in channels with high impact, Norway has adopted a two-tiered classification of publication channels. Level 2 channels are the most important channels within each subject area and constitute at most 20 percent of a subject area's total scientific production. The level 2 channels therefor award more publication points than those at level 1. The register of approved channels contains about 25 000 scientific journals.

A cross-check with DOAJ shows that approximately 2500 of the 25 000 channels are OA journals and, in 2012, 1800 articles were published in Open Access journals, 175 of these in level 2 journals.

In 2012, combined R&D expenses in Norway amounted to about 1.65% of the GNP. This is lower than the other Nordic countries, and below the OECD average. However, compared to population, it is well above average and second only to Finland.

In 2011 Norwegian universities and university colleges represented 26% of all Norwegian R&D efforts, while the independent research institutes contributed about 23%.

The Norwegian Research Council is Norway's main research funding and research strategic agency. It has a total budget of about €1 billion.

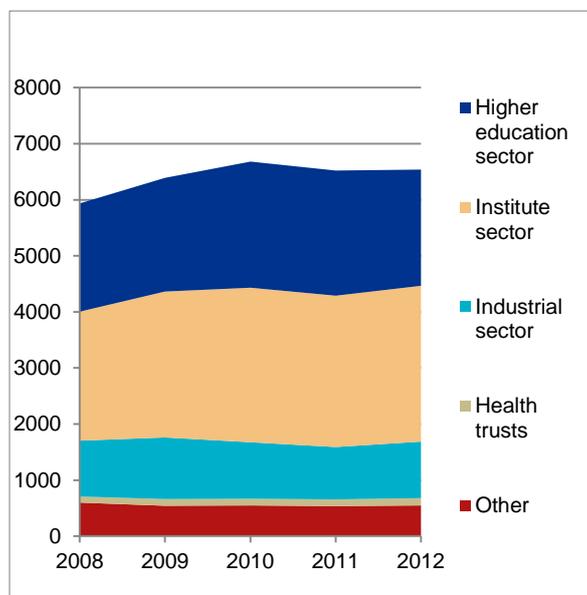


Figure 1 - Allocations from the Research Council, by sector. In NOK million.

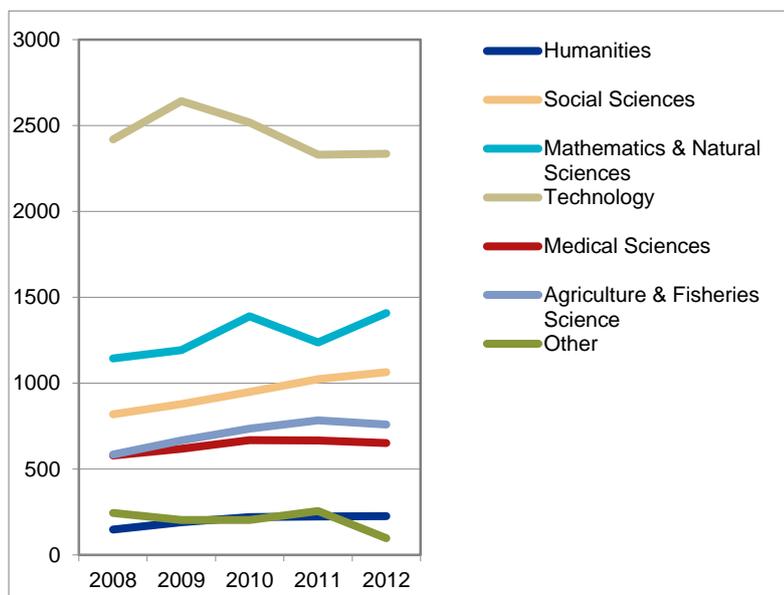


Figure 2 - Allocations from the Research Council, by subject field. In NOK million.

The Norwegian contribution to Horizon2020 is about €2.1 - 2.3 billion. This is a doubling compared to FP7, where Norway contributed about €1 billion. As reported by the Ministry of Education and Research, in the report "Forskningsbarometeret 2014", Norway has collected almost €700 million in funding from FP7 by November 2013. This is a success rate of about 19%, from a total of over 2700 applications.

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## Current Open Access policy landscape

The Government first mentioned Open Access in the White paper on research for 2004-2005. The paper discusses the problems with increased subscription costs of journals, and that an alternative economic model for dissemination, Open Access, is emerging. The paper also mentions the growth of institutional repositories. The Norwegian Open Research Archives (NORA) was established in 2004 as a project, and it helped raise awareness for both green and gold Open Access. In 2011 NORA was established as a service with CRISin, the national CRIS.

In the White paper on research, “Lange linjer” (St.meld. 18, 2012-2013), the Norwegian government demands that all publicly funded research must be published Open Access and/or deposited in a repository. Research institutions are encouraged to, individually or combined, establish APC (article processing fee) funds for covering costs associated with Open Access publishing. In the same paper CRISin is charged with the responsibility of working towards a coordinated Open Access effort on a national and EU basis. CRISin, as the national consortium for license agreements, is also given the task of leading negotiations with scientific publishers to lower APC costs.

The Norwegian Research Council has an Open Access policy that says all research funded by it must be made Open Access. All papers and articles must be deposited in a repository, with a maximum allowed embargo period of 6-12 months. If these conditions are not met, funding can be withheld. In a transition period from 2014 to 2019 the NRC will also help cover APCs. After 2019 it is expected that APC-funding will be part of project funding.

CRISin did a survey of all Norwegian research institutions to map policies, institutional APC-funds and establish contact points for Open Access. The results show that there is a great deal of commitment regarding Open Access, and that it is continually gathering momentum. An effort is being made into making Norwegian research publicly available, however current policies tend to be non-mandatory and express intentions rather than mandates. A link to those institutions who have funds is included at the end.

Norway has a strong infrastructural support for Open Access. With the exception of three universities and a few colleges, the higher education institutions and research institutes are members of BIBSYS Brage, a centralised platform for repository services. Administering almost 60 repositories, the consortium that forms Brage ensures updated technical support and development of the DSpace platform. Norway has a national CRIS which is responsible for the national repository harvester, NORA. Researchers can use the CRIS to upload a copy of the article which is then transferred to the author’s institutional repository. The CRIS can also be used to identify potential articles for the repository by checking records in the CRIS with Sherpa/Romeo and then seeing if an article that could have been self-archived actually has been. A report can be issued for each repository to identify articles that could have been deposited, which they then can use to contact the author. NORA then harvests all repositories and links it back to the CRIS records. A look-up service with DOAJ makes sure all full text content in the CRIS is highly visible.

## Challenges and ongoing developments

The Norwegian Research Council recently published its policy on Open Access to research data. The policy states that research data should be stored securely and be made openly available. The data should be made available no later than the publication date and must be enriched with metadata. Exceptions to the policy can be made for legal, ethical or security reasons.

To encourage scientific publication in Norwegian, the Research Council helps fund 15 Norwegian-language journals in the Humanities and Social Sciences. As of today they are based on a subscription model, but NRC has announced that from 2017 all journals that receive NRC funding must convert to Open Access. A working group is now outlining business models for these journals. A consortium model of Norwegian libraries with subscription costs converted to APCs might be a solution.

## Conclusions

With its national CRIS system and centralised repositories, Norway has established a robust research infrastructure. But even though Norwegian public research funding is subject to a government Open Access policy in line with EU's Horizon2020 policy, the policies of Norwegian research institutions are still generally vague and based on good intentions rather than mandates. However, many, if not most, of the research institutions in Norway have a strong focus on Open Access. This is illustrated by the numerous institutional APC funds that have been established. However, the need for policy alignment and reinforcement is evident. The PASTEUR4OA project provides a great opportunity for Norwegian research institutions to develop effective and coordinated Open Access policies.

## Useful links

- » **List of Norwegian institutions with APC-funds (in Norwegian)** (<http://www.openaccess.no/faq/fond-arkiv-tidsskrift-i-norge/publiseringsfond-ved-norske-uh-institusjoner>)
- » **CRISTin homepage** (<http://www.cristin.no/english>)

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