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OA MANDATES AND THE NORDIC COUNTRIES

Sólveig Thorsteinsdóttir

Introduction

The open access movement is about making all peer-reviewed scientific and scholarly literature open to all on the internet. Open access is only possible if barriers, such as copyright and licensing restrictions are removed, and the material is made freely available without restrictions.

There are two ways to make peer-reviewed scientific and scholarly communication freely accessible on the internet. These two different methods are called the "Golden Road" (open access journals) and the "Green Road" (open access repositories). This article focuses on the “Green Road” and the need for mandates for the two repositories in Iceland; Skemman and Hirslan.

Open access repositories (OA repositories) and open access mandate (OA mandate)

Many institutions and departments host open access repositories. Funding agencies such as the National Institutes of Health require that researchers receiving funds from NIH deposit their research output in the National Library of Medicine's open online archive, PubMed Central.

The Nordic countries host about 77 repositories.(1) The objective of most repositories is to archive scientific and scholarly literature from their institutions or departments. Besides open access, preservation is also an important objective of the repositories. The repositories do not perform peer reviews but most of them host post-prints approved by peer review. The Berlin Declaration recommends that the repository archiving policies require researchers to deposit their work immediately in open access repositories.

An Open access mandate (OA mandate) means that OA is required. The term OA-policy is broader and can mean either a mandate or a recommendation that can be more or less strong. In this article the focus is on the OA mandate.

Most institutions, departments and funding agencies have either an OA mandate or a policy that recommends that its faculty members or researchers who receive public funds will deposit their research output in the repository. In the last two years there has been a rapid growth of OA mandates associated with repositories.(2) OA mandates are grouped into institutional mandates, department mandates, school mandates and funder mandates.

The repositories have been in operation for some years, but most have only been able to host between 5 to 20% of the material they had aimed for.(3) Faculties have deposited only a fraction of the literature expected in the repositories. The reaction to this disinterest has been new OA mandates and that older policies have been changed into mandates, e.g. the revised mandate of the National Institutes of Health (NIH) in April 2008.(4)

The effect is clear. As of May 2009, according to the NIH, compliance has jumped from 19% to 49%.(3) The change from the earlier mandate of 2005 is that researchers now are required, (instead of requested) to deposit their work in open access repositories. The drawback of the NIH policy is, that it accepts an embargo period of up to a 12 months before the articles derived from the NIH grants are accessible in the National Library of Medicine's online archive, PubMed Central.

Other mandates limit the embargo to six months, e.g. the Canadian Institutes of Health Research mandate. (5) The mandate from the Queensland University of Technology (QUT), Brisbane, Australia, wants searchers to make their material available at the time of publication. Requests for embargos of more than 12 months must be referred to the Deputy Vice-Chancellor of Technology, Information and Learning Support).(6)

Most mandates regulate also what kind of literature should be deposited. This normally includes peer reviewed journal articles, conference proceedings, and theses, and is usually effective from the date of the implementation of the mandate. Researchers are often recommended to deposit also material prior to this date as well as other material such as books, book chapters and data sets.

The copyright issue is important. To be able to comply with OA, copyright holders are advised not to waive all their rights. The Creative Common licenses

Table 1.
Institutional and funders mandate

Countries	Total Mandates	Mandates		Date
Finland	28			
		Institutional	University of Helsinki	01.01.2010
		Institutional	University of Tampere	01.01.2011
		Institutional	The 26 universities of Applied Sciences	01.01.2010
Denmark	2			
		Institutional	Copenhagen Business School	26.08.2009
		Institutional	Roskilde University	
Norway	3			
		Institutional	University of Bergen	01.01.2010
		Funder	Norwegian Research Council NRC	28.01.2009
		Funder	Nor. Knowledge Centre Health Services	25.11.2008
Sweden	3			
		Funder	Swedish Research Council	01.01.2010
		Funder	Formas, Swedish Res. Council Environm. Agricult. Scienc. Spatial Plan	01.01.2010
		Institutional	Chalmers University of Technology	01.01.2010
Total	36			

or other open content licenses or amendments are often used. The mandates state the relationship with publishers and many do respect the publisher's embargo and policy but the NIH takes a strong stand regarding publishers.

An important change in the 2008 revised mandate from the earlier NIH mandate is that if a publisher refuses to accommodate the NIH policy, then the author must look for another publisher. (4)

Rapid recent growth in OA mandates in the Nordic countries

There has been a rapid growth of OA mandates in the Nordic countries. Prior to 2010 there were only 3 mandates in the Nordic countries. In January 2010, 32 mandates took effect and the 33rd mandate will take effect in 2011.

According to the *Registry of Open Access Repository Material Archiving Policies* (ROARMAP) (2) there are 218 OA mandates worldwide.(7) Of these 218 mandates on the ROARMAP list there are 36 mandates from the Nordic countries (Table 1).

Of these 36 mandates from the Nordic countries, two are not yet listed in ROARMAP; the mandate from the Swedish Research Council Formas for Environment, Agricultural Sciences and Spatial Planning, and the mandate from Roskilde University, Denmark. In the Nordic countries Denmark has two mandates, Finland 28, and Norway and Sweden have three each.

Of these 36 mandates there are 32 institutional mandates; 6 from universities in Denmark, Finland, Norway and Sweden and 26 from the Universities of Applied Sciences in Finland.(8) The are four funder mandates. Two from Norway; the Norwegian Research Council, and the Norwegian Knowledge Centre for Health Services and two from Sweden; The Swedish Research Council, and Formas, Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Table 1).

Embargo

Only three mandates from 2010 address the issue of embargo. None of the mandates require immediate open access to the material. Of the mandates that address the issue of embargo, the shortest is a six month embargo and four mandates respect the publisher's embargo (Table 2).

Table 2.
Institutional and funder mandates in the Nordic countries

Institution/funder	Date	Embargo
University of Helsinki	01.01.2010	
University of Tampere	01.01.2011	*Publishers
The universities of Applied Sciences	01.01.2010	
Copenhagen Business School	26.08.2009	*Publishers
Roskilde University		
University of Bergen	01.01.2010	*Publishers
Norwegian Research Council NRC	28.01.2009	
Nor. Knowledge Centre Health Services	25.11.2008	*Publishers
Swedish Research Council	01.01.2010	6 months
Formas, Swedish Res. Council, Environm. Agricult. Scienc. Spatial Plan	01.01.2010	6 months
Chalmers University of Technology	01.01.2010	6-12 months

**according to publisher's request*

The situation in Iceland

There are no OA mandates yet in Iceland. The first repository started in 2006, *Hirslan,* the Landspitali University Hospital Library repository. The second started in 2008, *Skemman,* the repository of the University of Iceland, University of Akureyri, University of Bifröst and the Iceland Academy of the Arts. The lack of mandates in Iceland might have had the effect that only a low percentage of submitted research literature is deposited in the repositories. Hirslan is a subject repository for health sciences and the deposit rate for Icelandic research material published in Icelandic journals in the health sciences is around 100%. The publishers of Icelandic health science journals have agreed to allow all the articles from Icelandic health science journals to be hosted in Hirslan. The deposit rate for articles written in other languages than Icelandic and published in journals outside Iceland is only around 2% from 2006 – 2010 and 0% for the year 2009. If a mandate would be implemented this situation might change. If an article from Landspitali is not hosted in Hirslan a link is made to the article at the publisher site or to other repository where the article is hosted.

Of the 141 articles published in foreign journals there are 18 articles in OA. PubMed Central hosts 14 of these 18 OA articles and 4 are in OA journals where funder or authors have paid for OA publishing.
Of the articles published in foreign journals, 39 articles are published by Icelandic scientists. The other 102 articles are published by Icelandic scientists in collaboration with authors from different countries. These 102 articles may very well be archived in several repositories. Some funders demand that articles funded by them should be in a specific archive, such as the Wellcome Trust and NIH in PubMed Central. If an article from Landspitali is OA in another repository such as PubMed Central, Hirslan does not host these articles but links to the article instead. In 2009, there were links to 14 such articles in PubMed Central.

If an Icelandic researcher co-authors with an author who has a contract with a funder or a university other than Landspitali University Hospital and is required to deposit the article in another repository, the other authors, e.g. Icelandic co-authors are not under the same obligation to deposit. A mandate is needed for Hirslan, requiring researchers without other requirements from a funder or a university to deposit their work in Hirslan. This was the case with the 39 articles published in 2009 by Icelanders only and not made open access. The Icelandic OA mandate could be a funder mandate that could be from RANNÍS, the Icelandic Centre for Research, or an institutional mandate either from the University of Iceland or Landspitali University Hospital, since some authors at Landspitali University hospital receive funds from these three funder/institutions.

Skemman hosts only student and faculty theses, but only a few of those who deposit their work in the repository allow open access. In Finland the Ministry of Education has published a policy for academic

Table 3.
Total peer-reviewed scientific articles hosted or linked to in the repository Hirslan

	Total	In Icelandic journals	In Foreign journals
All articles published 2009	206	65	141
OA articles of the total published	83	65	18
% OA	40%	100%	13%

theses, restricting the use of trade secrets in theses and forcing public access to them. A strong mandate and a support from the Ministry of Iceland might change the access to the theses. It is also a practice of students in Icelandic universities to sell their theses, and if they allowed open access, they might find it difficult to sell them.

Summary

After the first mandate was implemented in Australia in 2004 there has been a slow increase in mandates. The revision of the NIH mandate in 2008 seems to have had a great impact on the rapid recent growth of mandates, not only in the Nordic countries but all over the world.

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Solveig Thorsteinsdottir is the Director of the Medical and Health Information Centre, Landspitali University Hospital, Iceland www.landspitali.is/bokasafn E-mail: solveig@lsh.is