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Response to the public consultation on the Research Infrastructure Development Plan 2011-2020, announced by the Ministry of Higher Education, Science and Technology

Submitted by EIFL and SPARC Europe

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Introductory comments

We would like to thank the Ministry of Higher Education, Science and Technology for presenting the Research Infrastructure Development Plan 2011-2020 and initiating public consultation.

We welcome Chapter 3.4.7 of the Research Infrastructure Development Plan 2011-2020 that anticipates the establishment of a national open data and open publication infrastructure (connected with SICRIS) and suggests mandatory deposition of publicly funded data and publications when the infrastructure is established. There are significant economic, social and educational benefits to making research outputs and data available without financial, legal and technical barriers to access. Open access incorporates national research into interoperable network of global knowledge, increases national research impact, providing new research partnerships, and removes professional isolation. Society as a whole benefits because research is more efficient and more effective, delivering better and faster outcomes for all. Open access strengthens economies through developing a strong and independent national science base. There is growing evidence that countries also benefit because open access increases the impact of the research in which they invest public money and therefore there is a better return on investment.¹

Open access policies in the European Union and their implementation

The Research Infrastructure Development Plan 2011 – 2020 fits in a dynamic and promising global movement towards open knowledge that will be of great benefit for all.

¹ John Houghton, Centre for Strategic Economic Studies, Victoria University, Melbourne (2009): Open Access – What are the economic benefits? A comparison of the United Kingdom, Netherlands and Denmark: <http://www.knowledge-exchange.info/Default.aspx?ID=316>

Chapter 2.5.2. of the **Digital Agenda for Europe** – Driving ICT innovation by exploiting the single market – refers to effectively managed knowledge transfer activities and states that publicly funded research should be widely disseminated through Open Access publication of scientific data and papers. **Europe 2020 Flagship Initiative Innovation Union** has a similar open access clause: the Commission will promote open access to the results of publicly funded research; and it will aim to make open access to publications the general principle for projects funded by the EU research Framework Programmes.

The European Commission is conducting a pilot initiative on open access to peer reviewed research articles in its Seventh Research Framework Programme (FP7): grant recipients in seven research areas are required to deposit peer reviewed research articles or final manuscripts resulting from their FP7 projects into an online repository and make their best efforts to ensure open access to these articles.² The European Commission wants to ensure that the results of the research it funds are disseminated as widely and effectively as possible to guarantee maximum exploitation and impact in the world of researchers and beyond. Open access to research articles helps to increase the impact of the European Union's investment in research and development and to avoid wasting time and valuable resources on duplicative research. With access to a wider selection of literature, researchers can build upon this knowledge to further their own work. Small and medium sized businesses and entrepreneurs can also benefit from improved access to the latest research developments to speed up commercialisation and innovation.

The ERC Scientific Council's Statement on Open Access of December 2006 stressed the fundamental importance of peer-review in ensuring the certification and dissemination of high-quality scientific research, as well as the importance of wide access and efficient dissemination of research results and followed this up with the Guidelines for Open Access³ in December 2007.

A survey of existing open access regulations, initiated among the **European Heads of Research Councils (EUROHORCs)** member organizations (MOs) in December 2007, demonstrated the great variety of open access policies among the EUROHORCs MOs: two thirds have introduced an open access policy. ERC and the European Research Advisory Board (EURAB) have both

² The seven areas are: Energy; Environment (including Climate Change); Health; Information and Communication Technologies (Cognitive Systems, Interaction, Robotics); Research Infrastructures (e-infrastructures); Science in society; and Socio-economic sciences and the humanities. Open access to these publications is to be ensured within six months after publication in the first five areas listed; and twelve months in the last two areas listed.

³ These Guidelines state that:

- The ERC requires that all peer-reviewed publications from ERC-funded research projects be deposited on publication into an appropriate research repository where available, such as PubMed Central, ArXiv or an institutional repository, and subsequently made Open Access within 6 months of publication.
- The ERC considers essential that primary data - which in the life sciences for example could comprise data such as nucleotide/protein sequences, macromolecular atomic coordinates and anonymized epidemiological data - are deposited to the relevant databases as soon as possible, preferably immediately after publication and in any case not later than 6 months after the date of publication.
- The ERC is keenly aware of the desirability to shorten the period between publication and open access beyond the currently accepted standard of 6 months.

issued their own open access policy: ERC has a mandatory rule and EURAB issued a recommendation⁴.

The European University Association that represents and supports higher education institutions in 48 countries provided in March 2008 general open access recommendations and explicitly stated that university institutional policies should require that their researchers deposit (self-archive) their scientific publications in their institutional repository upon acceptance for publication⁵.

National Policies

Governments have begun to take an interest in open access out of a desire to ensure that the research which they fund reaches the largest possible audience, as well as out of a recognition of the waste of public resources which results from the old system in which taxpayers pay once for research and a second time for access to its results. For example, the **U.S. National Institutes of Health (NIH)**, the largest funder of medical research in the U.S, implemented a policy requiring that its grant recipients make articles resulting from NIH funding publicly available within twelve months of publication in a peer-reviewed journal⁶. In 2009 the **Danish Ministry for Science** appointed a committee with participants from universities, agencies and ministries with the primary task of finding out how Denmark might comply with the European Council Conclusions on access to scientific knowledge in the digital age⁷. In the beginning of May 2010 the committee issued their report⁸ and a hearing process that took place from May to July 2010 resulted in 48 answers. Generally there is support behind the principle that there should be unhindered and free access to the results of publicly financed research. The arguments are that open access is important for research as well as the democratic principle of free access for the public when the public pays for the research. Another central point is that it is vital for a small country like Denmark that research results are made visible nationally and internationally. Barriers to access should be broken down and contribute to Denmark remaining an attractive cooperation partner internationally.⁹

Recommendations about the implementation of Chapter 3.4.7 of the Research Infrastructure Development Plan 2011-2020

National funding agencies and institutions are the locus for adopting open access policies. Ideally, policies should require that affiliated authors make their research articles and data

⁴ EUROHORCS' Recommendations on Open Access (OA):

http://www.eurohorcs.org/SiteCollectionDocuments/EUROHORCS_Recommendations_OpenAccess_200805.pdf

⁵http://www.eua.be/fileadmin/user_upload/files/Policy_Positions/Recommendations_Open_Access_adopted_by_the_EUA_Council_on_26th_of_March_2008_final.pdf

⁶ This policy, passed by the U.S. Congress and signed into law by the President, went into effect in April 2008. The open access mandate at the NIH was made permanent by a bill passed by both houses of Congress signed by President Obama.

⁷ Council of the European Union: Council conclusions on scientific information in the digital age: access, dissemination and preservation:

http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/intm/97236.pdf

⁸ Recommendations for implementation of Open Access in Denmark: <http://www.fi.dk/viden-og-politik/strategier-og-handlingsplaner/open-access/recommendations-for-implementation-of-open-access-in-denmark-pdf>

⁹ From Recommendations for implementation of Open Access in Denmark – extraction of comments from the hearing process by Lise Mikkelsen, Sciecom Info 4 (2010):

<http://www.sciecom.org/ojs/index.php/sciecominfo/article/view/4759>

generated by the funded research project freely available through an open access repository within 6 months of publication. Based on the previous experiences of other agencies around the world¹⁰, we believe that open access policies are best designed as follows:

- **Open access to research publications and data.** The open access policy should be based on the Berlin Declaration's definition of open access¹¹ which means briefly that all end users have full online access to the published results of academic research and related data, free of charge, as well as the rights they need to be able to use those outputs to their fullest extent.
- **Policies must be mandatory.** The evidence¹² shows that mandatory policies do bring the high level of self-archiving that provides institutions with the increased visibility and impact that open access promises.
- **Versioning.** Open access policies should require the deposit of the final version of the author's peer-reviewed manuscript (also: post-print or Author Accepted Manuscript). For publishers who worry about circulation of multiple versions of the peer-reviewed text, it could offer the option to replace the author's manuscript in the repository with the published edition. A peer-reviewed manuscript in an open access repository should include a citation and link to the published edition.
- **Data.** Open access policies should require the deposit of data generated by the funded research project (in medicine and the social sciences, where privacy is an issue, open access data could be anonymised). We recommend following the Panton Principles for Open Data in Science¹³.

¹⁰ Open access policy options for funding agencies and universities, The SPARC Open Access Newsletter, issue #130, by Peter Suber: <http://www.earlham.edu/~peters/fos/newsletter/02-02-09.htm>

¹¹ Open Access contributions must satisfy two conditions:

- The author(s) and right holder(s) of such contributions grant(s) to all users a free, irrevocable, worldwide, right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship (community standards, will continue to provide the mechanism for enforcement of proper attribution and responsible use of the published work, as they do now), as well as the right to make small numbers of printed copies for their personal use.
- A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate standard electronic format is deposited (and thus published) in at least one online repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving. (<http://oa.mpg.de/lang/en-uk/berlin-prozess/berliner-erklarung/>)

¹² Effectiveness of university Open Access policies: <http://www.openoasis.org/images/stories/Sale%20study%20summary%20pdf.pdf>

¹³ Science is based on building on, reusing and openly criticizing the published body of scientific knowledge. For science to effectively function, and for society to reap the full benefits from scientific endeavours, it is crucial that science data be made open. By open data in science we mean that it is freely available on the public internet permitting any user to download, copy, analyse, re-process, pass them to software or use them for any other purpose without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. To this end data related to published science should be explicitly placed in the public domain. <http://pantonprinciples.org>

- **Scope of the policy.** For simplicity and enforceability, it's better to follow the example of most funding agencies: to apply the open access policy to research the institution funds "in whole or in part".
- Any embargo is a compromise with the public interest. The shorter they are, the better (no more than six months).
- **Exemptions.** Private notes and records not intended for publication, classified research and royalty-producing books should be exempted from the scope of the open access policy. Patentable discoveries should be either exempted or embargo should be long enough to allow the researcher apply for a patent.
- **Ensuring that repositories of scientific information are sustainable and interoperable.** SICRIS and repositories should meet both national and international requirements in terms of interoperability. It concerns protocols for data exchange (OAI-PMH) and for data formats (DDF-MXD) to be used for e.g. the bibliometric research indicator and the federated portal for the dissemination of Slovenian research results.

Yours sincerely,

On behalf of EIFL and SPARC Europe,

Iryna Kuchma & Astrid van Wesenbeeck

EIFL is an international not-for-profit organization dedicated to enabling access to knowledge for education, learning, research and sustainable community development in more than 45 transition and developing countries in Europe, Asia and Africa. Consortium of Slovene Electronic Collections (COSEC)/Konzorcija Slovenskih knjižnic¹⁴ is an EIFL member. EIFL is also a networking partner in the OpenAIRE project (Open Access Infrastructure for Research in Europe)¹⁵: e-infrastructure and a network of experts to support the researchers towards meeting the demands of the European Commission Open Access Policies¹⁶. In the OpenAIRE project EIFL coordinates activities in 10 Eastern European countries: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia. Learn more <http://www.eifl.net>.

SPARC Europe is an alliance of over 90 Europe's leading academic and research libraries, library organizations and research institutions. SPARC Europe promotes an open scholarly communication system through advocacy, education, partnerships and project initiatives. Learn more www.sparceurope.org.

¹⁴ <http://www.nuk.uni-lj.si/cosec/>

¹⁵ <http://www.openaire.eu>

¹⁶ http://www.openaire.eu/index.php?option=com_content&view=category&id=45&Itemid=15&lang=en