Recommendations for the Implementation of Article 37 of the Spanish Science, Technology and Innovation Act: Open Access Dissemination

SUMMARY

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1. Introduction

The Spanish Science, Technology and Innovation Act, published June 2011[1], establishes in its Article 37 the main aspects to take into account when disseminating in open access the results of publicly funded research which has been accepted for publication in research journals. However, the doubts that have arisen in the different implementation areas have motivated a reflection exercise that will allow the establishment of the steps the different involved stakeholders should take to successfully comply with the legal framework and facilitate the correct implementation of the article on "open access dissemination".

The goal of this document is to put forward a practical guide that describes the main aspects of the national policy on open access and clears the way to all concerned stakeholders, by specifying the new roles that should be adopted and drafting a series of guidelines for all the groups involved in the production and market management of scientific information.

What is open access?

The first definition of open access is included in the Budapest Open Access Initiative (February 2002) and the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (October 2003).

When talking about "open access" to scientific literature we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.

By removing legal, commercial and technological barriers to access of scientific information the research process becomes more efficient and research results more visible. Furthermore, open access prevents duplication, fosters knowledge and technological transfer and promotes innovation.

[1] Act 14/2011, of 1 June on Science, Technology and Innovation

2. Recommendations on open access for involved stakeholders

Open access policies concern mainly four types of stakeholders.

Firstly, R&D public funding agencies who draft the guidelines on open access to science and establish the terms under which these should be fulfilled.

Secondly, universities and research centres which apply these mandates, put forward their own institutional policies on open access and maintain the technical infrastructures required to comply with them: institutional and subject repositories. Universities and research centres can also launch open access publication projects.

Thirdly, researchers who have to incorporate new actions and processes to their research work.

Lastly, institutional subscribers to scientific journals, as open access mandates modify the pillars on which the business model of publishers, who publish and do business with scientific contents, is based on.

2.1. Recommendations for R&D public funding agencies

To complete the requirement of the Science Act regarding open access deposit, the Spanish Ministry of Economy and Competiveness should adopt the following measures:

a) **Include an acceptance clause:** The document of acceptance of any public grant to research should include a clause explicitly indicating that the main researcher (and/or the researchers of the team) will observe the obligation to disseminate in open access the outputs of the scientific work financed with the obtained public funds, in agreement with article 37 of the Science Act.

b) **Extend the monitoring report model:** The monitoring reports and the final reports of projects financed with National Research Plans should incorporate a section which includes the publications resulting from public funding that have been disseminated in open access.

c) **Establish an indicator measuring fulfilment:** The Ministry should develop an indicator measuring open access fulfilment, taking into account the possible exceptions to open access.

d) **Create a Monitoring Commission:** It should also create a monitoring mechanism that safeguards the correct implementation of the requirement of open access deposit.

2.2. Recommendations for universities and research centres

Universities and research centres play an essential role in the implementation of the open access national policy. On the one hand, they are in charge of setting up and maintaining the institutional repositories where the output of researchers will be preserved, whilst on the other, research organisations can promote their own open access policies as established in article 37 of the Science Act.

A correct public policy of access at a national level should promote the following aspects in universities and research centres:

a) **Open access institutional policies:** Universities and research centres should also have open access institutional policies and requirements that guarantee the deposit in the institutional repository of the scientific publications of their research staff. These policies should be coherent with the national policy.

b) **Assessment services:** Universities and research centres should give their researchers information and assess them on publishers' policies and authors' rights and should promote the green route (self-archiving) and the gold route (publishing in open access journals) in their policies.

c) **Infrastructures:** Universities and research centres should lead the setting up and maintenance of institutional repositories for the deposition of scientific publications in open access. These repositories will have to be a part of the national network of repositories of the RECOLECTA platform (http://recolecta.fecyt.es), complying in this way with the national and international interoperability standards.

d) **Identifiers:** Universities and research centres should adopt unique author, institution and article identifiers.

e) **Financing:** Universities and research centres should provide financing to cover the costs of publishing in open access journals (gold route) and to negotiate the deposit in open access repositories with publishers that do not allow to do so.

2.3. Recommendations for researchers

As far as researchers are concerned, it is important to answer the most common questions regarding open access to all publications that are the output of a research project of the National Scientific, Technical and Innovation Research Plan 2013-2016, as required by the Science Act.

a) **What should be deposited in open access repositories?** The Act requires the deposit of a copy in electronic format and legible by machine of the contributions accepted by research journals that are the output of the financed project. Normally this will be the final document in PDF format, or otherwise, the revised manuscript accepted for publication before adapting it to the final format of the publisher (the so called post-print or accepted author manuscript).

b) **Who is required to deposit in open access repositories?** All researchers receiving public funding from the National Scientific, Technical and Innovation Research Plans that have decided to disseminate the results of their research in research journals.

c) **When does the open access deposit of research outputs take place?** As soon as possible and no later than 12 months after the online publication of the work. When depositing embargoed documents, the repository will open them automatically when the embargo period elapses.

d) **How to deposit in open access repositories?** Digital items to be archived should include in their registers, besides bibliographic data, the following metadata: name of the funding organisation, name of the project and/or acronym, and reference number published in the Official Bulletin of the State. This allows monitoring of compliance with article 37 of the Science Act on open access.

e) **Embargoes and author's rights:** With the aim of guaranteeing the future of open access to scientific work, researchers are advised to transfer non-exclusively to publishers only the exploitation rights that are necessary for the publication of the accepted papers in journals or other research publications. To this end, it is advised that, if necessary, they

negotiate with publishers the inclusion of an addendum in the publishing contract or license that allows self-archive of the final version in the institutional repository, with the aim of complying with the current Spanish legal framework and the requirements of other funding organisations.

f) **Where does the deposit take place?** Researchers should archive their publications in an open access institutional or subject repository.

There are three types of repositories:

- ***Institutional repositories*** allow institutions to manage, preserve and show their scientific work. Repositories are a useful tool in the scientific information system of the institution and its assessment processes, and offers added value services to the scientific community of the organisation itself. Researchers should take into account that, in many cases, their institution will require archive in their repository and to this end, should follow the procedures established by the institution.
- ***Subject repositories*** gather together the work of certain knowledge areas at an international level. In some thematic fields it is common practice. For example: Arxiv.org, REPEC, PsyDoc, PubMed Central.
- ***Centralised repositories*** gather together the open access scientific work deposited by researchers of different organisations and from different thematic fields. For example Zenodo is the European repository promoted by the European Commission.

In Spain, open access repositories are grouped in the RECOLECTA platform (http://recolecta.fecyt.es). Through RECOLECTA all the work deposited in national open access repositories (institutional, subject and centralised) can be accessed and work can be added in a centralised way. RECOLECTA also guarantees interoperability of all repositories[2] and provides them with added value services such as visit statistics and downloads.

Authors should take into account the intellectual property policies and embargoes imposed by the publisher where their work will be published. They should check what versions can be published in open access. This information can be checked in existing directories, such as Dulcinea (http://www.accesoabierto.net/dulcinea/) for Spanish journals, Héloïse for French

[2] The criteria of RECOLECTA-DRIVER can be checked in the following link (available in Spanish): http://recolecta.fecyt.es/sites/default/files/contenido/documentos/CRITERIOS_RECOLECTA_DRIVER.pdf

journals (http://heloise.ccsd.cnrs.fr/) and Sherpa/Romeo for international journals (www.sherpa.ac.uk/romeo).

It is recommended that deposit or self-archive in the repository takes place immediately after the work is accepted by the journal, assigning its metadata (title, author, affiliation, funding organisation, name of the journal, etc.) so that the information is openly available from the moment of deposit. Access to the full text will be opened automatically once the embargo has ended.

2.4. Recommendations for institutional subscribers to scientific journals

Institutional subscribers to scientific journals (universities and research centres, consortiums, purchasing groups, etc.) are in charge of negotiating with publishers access to scientific contents. As open access modifies how scientific communication functions, a change in the business model is required, which will affect publishers and their products, especially journals, as we know them today. Therefore, universities and research centres, consortiums and other organisations subscribing to scientific journals are advised to introduce in their negotiations with publishers aspects such as the following:

a) **Including self-archive clauses:** Institutional subscribers should try and achieve the inclusion of clauses in the subscription or acquisition contracts favouring the deposit of works published by authors of the institution in their institutional repository.

   Two model self-archive clauses are put forward here as an example:

   - "The authors affiliated to the institutions included in this licence and whose contributions are accepted for publication in any of the journals mentioned in Appendix x [note: list of journals subscribed to with this publisher] will retain the non- exclusive right to use their contributions for academic, research and educational aims, including self-archive or deposit in any type of open access repositories."
   - "The use of the published version of the scientific contributions will preferably be accepted (post-print publisher's version), otherwise, the author's assessed and accepted post-print, and will be openly accessible as soon as possible (with a maximum 12 month embargo after the date of acceptance or the electronic publication of the journal)."

b) **Avoiding non-disclosure clauses:** Institutional subscribers will try to avoid if possible non-disclosure clauses in the user licences of publishers.

c) **The use of metadata:** Institutional subscribers should establish that the identification metadata of the contributions to subscribed journals can be used freely by the contracting institutions, including the use of text/data mining tools.

d) **Avoiding double payment:** Negotiations will include a reduction in the price of the licence that is proportional to the number of articles in open access and the Article Processing Charges paid by the authors. In this way, double payment to publishers ("double dipping") will be avoided. This occurs when researchers have to pay for publishing in certain journals and also their institutions for subscribing to those contents, or when in exchange of reducing the embargo period publishers charge researchers a certain amount.

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