

OA TO SCIENTIFIC PUBLICATIONS AND RESEARCH DATA IN HORIZON 2020

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Abstract

Open Access to scientific information, which means to scientific publications and research data, is related to broader concept of Open Science. The aim of Open Science is to allow anybody, which means university researchers, business sector as well as society, to access some types of publicly funded R&I project results free of charge and on-line. EU framework programme for supporting research, development and innovation titled Horizon 2020 has taken a lead on this issue at the European level. Horizon 2020 grant beneficiaries are obliged to allow open access to their peer-review scientific articles. This obligation is in some case extended to underlying data as well as other non-published data.

Keywords

Open Access, Scientific Publications, Research Data

Introduction

Open access ("OA") to scientific information through non-binding documents issued by the European Commission ("EC"), defined as the provision of free on-line access to scientific

information to end users, is closely related to the obligation of the beneficiaries of Horizon 2020 grants (“H2020”)¹ to disseminate the results of projects using suitable means as soon as it is possible, if this is not at odds with their legitimate interests. As ensues from the definition above, however, OA only concerns a specific category of project results, meaning scientific information, specifically scientific publications and research data, as explained below. The obligation to provide OA access to scientific publications only arises in the situation that the H2020 grant beneficiary chooses publication as the means of disseminating the project results, which is a question of setting plans in a successful project proposal. This changes nothing of the fact that any H2020 grant beneficiary that decides to disseminate project results in the form of scientific publications must do so within the regime of OA without the opportunity to extricate itself from this obligation.

The above therefore differs considerably from the FP7, in which OA to scientific publications only concerned certain beneficiaries of FP7 grants and was moreover regulated as a “best effort” obligation. Consequently, there was considerable room here for not publishing within the regime of OA without actually being in breach of the grant agreement.² The obligation to provide OA to research data that H2020 introduces for certain areas did not exist at all in the FP7. The subchapters below therefore look in detail at the rules of providing OA to scientific publications and to research data.

Open Access to scientific publication

As stated above, all H2020 grant beneficiaries must ensure OA to peer-reviewed scientific publications relating to their project results. Specifically-speaking, grant beneficiaries must ensure that the relevant publication can at least be read on-line, downloaded and printed out. As far as the term reviewed scientific publication itself is concerned, this assumes open access to reviewed scientific articles. Grant beneficiaries are nonetheless called upon to provide open access to other types of publication which relate to the project results, whether already having been reviewed or not; for example, books, reports and papers from conferences.

Open access to scientific publications is regulated by Article 29.2 of the model grant agreement, based on which the H2020 project is undertaken and from which it can be inferred how to achieve OA to scientific publications.

The first step in discharging this obligation is to deposit the reviewed scientific article in a repository in the form of a machine-readable, published version of the article or a version accepted for publication after review procedure (“post-print”). The publication in question must be deposited not later than at the time of publication. The grant beneficiary is not limited in terms of the repository in which it may deposit the relevant publication, meaning that it might decide to use its own institutional repository. If the institution does not have its own repository, the scientific article may be deposited in a thematic or central repository. A list of different repositories can be found at, for example, <http://roar.eprints.org> (Registry of Open Access Repositories) or <http://www.opendoar.org/> (Directory of Open Access Repositories). The storage of reviewed scientific articles in a repository is tied to the obligation to make efforts

¹ Horizon 2020 is the largest and most significant funding programme in European-level science, research and innovation between 2014-2020; Horizon 2020 was preceded by the 7th Framework Program (“FP7”), which ran from 2007 to 2013.

² The grant agreement lays down the rights and obligations of the grant provider (the EC or its executive agencies) and the grant beneficiary, inter alia, the OA obligation, as described in detail in this paper.

to deposit the research data required to verify the results presented in the relevant publication (“underlying data”), ideally in a repository intended for research data.

The next step after storage is to make the relevant publication accessible, to “open” it. Access is provided either by auto-archiving, meaning “green OA”, or by way of publication in OA journals, meaning “gold OA”. In the second case, the article is made accessible at the moment of publication in such openly-accessible journals since the costs relating to publication in an open journal are covered by the author (or employer or grant provider) and the reader consequently has immediate, free access to the relevant article without any payment being required of him.

Eligible costs in H2020 project and gold OA publishing. The costs of publication of one article through gold OA might reach EUR 1,500 and are eligible costs in H2020 projects, if incurred within the period of duration of the grant. Should there be a publication issued after the H2020 project is over, the publication author cannot rely on grant budget to cover APC (Article Processing Charges – costs related to publishing in gold OA, see e.g. above mentioned 1,500 EUR). This situation is at least partly solved for FP7 projects by launching *FP7 post-grant Open Access publishing funds pilot* (<https://www.openaire.eu/postgrantoapilot>).

If a 7th FP grant beneficiary wants to publish project results after the end of the project, it can obtain the resources required for publication within the regime of gold OA from the above-mentioned fund. The costs of gold OA can be paid from the fund for a maximum of three scientific publications from one FP7 project on the condition that publication comes not later than within two years of the end of the project. It can be expected that similar instrument may be launched for H2020 grants provided the said pilot will be successful.

Embargo period in case of green OA including types of openly accessible publications. In the case of green OA, the relevant article can be made accessible not later than within a time limit of six months, or twelve months in the case of social sciences and humanities. This time limit (*embargo period*), i.e. the delay between storing an article in a repository and this article becoming accessible, might prove to be a complication for the grant beneficiary. The grant beneficiary is consequently bound on the one hand by the terms and conditions of the grant agreement, which lays down an *embargo period* of 6/12 months, and is frequently bound on the other by the terms and conditions of a licence contract signed with the publisher of a “paid/commercial/not OA” journal (a journal that is traditionally based on obtaining money from payments by readers for access to the articles published there and consequently, in contrast to open/gold OA journals, does not offer readers free access to the article), which might allow it free access to an article published in a paid journal after the passing of another embargo period, frequently longer than 6/12 months. Another possible problem might lie in which version of the relevant article the publisher allows the grant beneficiary to make accessible in the repository – as specified above, the model grant agreement requires the storage and accessibility of the post-print, the final, published scientific article. In the contract, the publisher might only allow the grant beneficiary to deposit the pre-print version of the article in the repository and make it accessible, meaning the version before review procedure. This, however, does not comply with the conditions laid down in the grant agreement and would represent failure to discharge the obligation to provide OA to reviewed scientific articles. It is therefore up to the grant beneficiary to monitor accord between the licencing conditions of the publisher and the terms and conditions of its grant agreement. The SherpaRomeo (<http://www.sherpa.ac.uk/romeo/>) website can be used to this end; i.e.

to find a clearly-arranged description of the licensing policies of different publishers and compare them with the terms and conditions of the model grant agreement.

The final step in complying with the OA obligation is storage and ensuring open access to bibliographic metadata, the aim of which is to allow and simplify searching for and identifying an article concerning the results of an H2020 grant and to monitor, generate statistics and evaluate the impact of H2020. Article 29.2.c) of the model grant agreement describes in detail the sort of metadata that is to be deposited and made accessible. What is more, it must be remembered that the obligation to deposit such articles in a repository with the aim of their long-term storage remains for both green as well as gold OA.

The technical level of OA to scientific publications described above is accompanied by the legal level, which consists of a suitably chosen licensing tool for making scientific publications accessible so that the obligation to provide OA is discharged; i.e. the opportunity to at least read a publication free online, download it and print it out. To this end the EC makes reference to the existence of Creative Commons (<http://creativecommons.org/licenses/>) licences and mainly suggests considering the use of CC:BY or CC:0 licences.

Open access to research data

Open access to research data is new in comparison with the FP7. This is also one of the reasons why the obligation to provide open access to research data emanating from an H2020 grant does not apply to all H2020 grant beneficiaries and currently takes the form of “pilot projects”. Of course, the rules of Horizon 2020 allow those H2020 grant beneficiaries that do not have the obligation laid down in the work programme to provide open access to the research data created to voluntarily take part in pilot projects regarding OA to research data. The aim of these pilots is to allow everyone free access to digital research data according to the terms and conditions laid down in the model grant agreement, to subsequently exploit, mine, reproduce it and disseminate it. The guide to providing OA to scientific publications and research data in Horizon 2020 defines research data as “information, specifically facts or numbers, collected with the aim of examination. For example statistics, the results of measurements, observation or experiments within the context of research. Research data should be accessible in digital format”.

Providing OA to research data concerns two types of research data – the data required to verify the results presented in a scientific publication (Article 29.3.a.i. of the model grant agreement) and other data (Article 29.3.a.ii. of the model grant agreement). Article 29.3 of the model grant agreement sets out detailed procedure for discharging the obligation to provide OA to research data.

Steps to fulfil OA obligation. The first step is to deposit research data in a repository designated for research data. As in the case of providing OA to scientific publications, it stands here that it is up to the H2020 grant beneficiary which specific repository it chooses. It might therefore decide in favour of its own institutional repository or a thematic or central repository. A useful list of usable repositories can be found at, for example, www.re3data.org. The second step is for the H2020 grant beneficiary to take measures to ensure that third parties have the possibility to access the deposited research data without charge and mine, exploit, reproduce it and disseminate it as soon as this is possible. This is the legal level of the provision

of OA to research data. Even though the EC again suggests considering the use of a Creative Commons licence to ensure OA to research data, specifically the use of a CC:BY or CC:0 licence, and the fourth version of Creative Commons now allows databases to be licensed, it is important to point to the fact that CC:0, for example, need not be without its problems within the context of national legislation and that these issues should not be underestimated. Moreover, the grant beneficiary has the obligation to provide information via the repository about the tools and instruments which it has at its disposal and which are required to verify results. However, the grant beneficiary is not obliged to provide these tools and instruments to the end user. The model grant agreement merely states that it should provide them, if this is possible.

Exceptions to OA obligation. The obligation to provide OA to research data is unlimited and the model grant agreement and guide to providing OA to scientific publications and research data specify cases in which one can be released from this obligation. If the obligation to provide OA to research data is in conflict with the obligation to ensure protection for project results which it is supposed can be used for commercial purposes or is in conflict with the obligation to maintain confidentiality of information or is in conflict with the rules to concern personal data protection, the H2020 grant beneficiary need not provide OA to the relevant research data. The grant beneficiary may also be released from this obligation in the situation in which the provision of OA to research data could jeopardise achievement of planned project objectives, if no research data is generated or collected in the project or if another legitimate reason exists. Nonetheless, grant beneficiaries should count on the fact that the use of this “opt-out” option must be preceded by justification and reference to the actual status of project preparation/implementation. There consequently exists the possibility of being released from this obligation, if the above conditions are met, at the stage of the preparation of a project proposal or at any time during its implementation.

Data Management Plan. Grant beneficiaries will also come across a new document termed the Data Management Plan (“DMP”) in connection with providing OA to research data. A DMP will become compulsory output in H2020 projects to which OA to research data relates, if there has been no release from this obligation, and for projects voluntarily participating in the OA to research data pilot. A DMP can be compiled voluntarily in other projects in which data is generated/collected. It should describe how the generated/collected research data will be handled during and after the H2020 project, which methodology and standards will be used with the aim of disseminating and providing access to this data and how its long-term storage will be ensured. Details regarding the DMP are regulated in the guide to data management in Horizon 2020. A DMP is not a static document; on the contrary, it is expected that it will be updated regularly in connection with the data generated/collected during project implementation. If the grant beneficiary decides not to take part in the OA to research data pilot during the project, it should justify its decision in the DMP. In contrast to the DMP, research data management is a process which concerns projects in which data is generated/collected without such projects voluntarily or mandatorily participating in the OA to research data pilot. If relevant to the project, a description of research data management should be part of the project proposal in the “*Impact*” section and is evaluated together with the subsequent description of the planned impact of the project.

It stands here too that the costs invested in connection with providing access to research data throughout the duration of the project are eligible costs. Moreover, the EC plans to provide technical and methodical support services in this regard.

Conclusion

As is clear from a detailed explanation and description of the rules of OA in H2020, the European Commission has chosen the policy of OA as one of the key areas of the H2020 programme, with other activities at an EU level adapting themselves to this – for example, establishing national reference contacts in all EU countries with the aim of supporting and coordinating the creation of OA policies; the initiatives of the European Research Area Committee (ERAC) relating to monitoring and implementing OA at national levels; financing the series of projects in the FP7 and H2020 relating to OA, etc. It will be interesting to see how the EC evaluates observation of the OA rules of H2020 in the future, most likely in its report on evaluation of H2020 issued after the first half of H2020, and whether the programme that follows on from 2020 chooses a strict obligation to provide open access to research data without exception.

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