Republic of Serbia
MINISTRY OF EDUCATION, SCIENCE
AND TECHNOLOGICAL DEVELOPMENT
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# OPEN SCIENCE PLATFORM

The platform rests on fundamental principles of open science as defined by the European Commission[1], which are also incorporated in the Action Plan for the Implementation of the Strategy for Scientific and Technological Development of the Republic of Serbia in 2016-2020 - Research for Innovation.

The platform is intended for all participants in scientific and research activity and it applies to the outputs of research projects and programmes funded fully or in part from the national budget of the Republic of Serbia, i.e. by the Ministry of Education, Science and Technological Development (hereinafter: The Ministry).

Open science involves the realization of four goals: (1) an open-access approach to scholarly literature; (2) access to the data collected in scientific research; (3) the transparency of scholarly communication and methodologies, and (4) the development of a digital infrastructure that enables the achievement of these three goals. The realization of these goals should contribute to the greater visibility of research outputs and a stronger connection between science and economy, i.e. between science and society as a whole, as well as to the development of new research projects. The goals of open science are realized with full respect for ethical norms, copyright and intellectual property rights.

Open science is principally achieved through (1) open access to scientific publications and (2) open access to primary data.

**Open access to scientific publications**

Open access to scientific publications implies the right of every Internet user to read, download, save, print and use the digital content of scholarly publications free of charge, provided that the source of information is duly cited and the content is used in accordance with the terms and conditions of the assigned license. Scientific publications include articles published in scholarly journals, chapters in edited volumes, conference papers and conference abstracts, PhD theses, monographs, etc.

The Ministry stipulates that open access must be provided to an electronic copy of the final, published version (if allowed by the publisher's policy) or the peer-reviewed version (accepted for publication) of every scientific publication. The metadata describing scientific publications must be deposited immediately after the publication in an appropriate

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[1] Guidelines to the Rules on Open Access  Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020,
http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilotguide_en.pdf;

institutional/subject-based/national repository, in accordance with the requirements set out in Annex 1. The obligation to deposit in a repository also applies to scientific publications published in journals, monographs, proceedings, etc., already available in the Open Access (Gold Open Access).

The Ministry stipulates that open access to the integral (full) text of the published research outputs shall be enabled immediately, if possible, and certainly no later than 12 months after the date of publication in case of physical and medical sciences, and engineering, or no later than 18 months in case of social sciences and humanities. The Ministry primarily supports Green Open Access, i.e. depositing published research outputs in digital repositories with full respect to copyright and rights granted to publishers.

## Open Access to Primary Data

Open access to primary data implies the right of every Internet user to download, save and distribute research data free of charge, as well as to use, modify and upgrade them without asking permission from their creators or owners, provided that the source of information is duly cited and the data are used in accordance with the terms and conditions of the assigned licence. Open access to primary data does not imply data labelled as confidential by the scientific and research organization, as well as the data considered to be a trade secret or used in the procedures for the protection of intellectual property.

The purpose of archiving primary data is to ensure their permanent preservation, and make them accessible within an interoperable digital platform and available for further verification or reuse in other research projects or for some other purpose. Depending on legal restrictions and ethical standards that apply in some research areas, the archived primary data may be (1) closed, (2) accessible solely to the members of a defined group of researchers in a given research area, or (3) publicly available.

Primary data sets, as well as the metadata describing them, should be deposited in an appropriate institutional / subject-based / national repository, in accordance with the requirements set out in Annex 2.

The Ministry recommends that open access to primary data collected during the research should be enabled immediately after publishing the results based on them in a publication, whenever there are no legal and/or ethical limitations.

## Final Provisions

Universities and scientific and research institutes which are not the part of the University shall define and adopt their open science platforms within six months, in compliance with this Platform.

The Ministry will regularly monitor the compliance with the principles set forth in this Platform and the monitoring results will be used in the evaluation of project impacts, future funding applications, and other activities of the Ministry aimed at improving scientific and research activities in Serbia.

**Annex 1**

**Depositing publications in repositories**

A digital repository is a system of electronic services that enable archiving, permanent storage, public presentation and dissemination of various types of research outputs. The system rests upon a digital database containing full-text documents created as results of the research process (monographs, journal articles, chapters in edited volumes, primary data, audio and video materials, etc.) and bibliographic metadata that describe them (titles, authors, editors, year and place of publication, volume, tome, pagination, international standard identifiers such as ISBN and ISSN, persistent identifiers such as DOI, ORCID iD, etc.). The set of metadata entered into the database depends on the type of scientific work that is deposited. Metadata are publicly available, whereas access to full-text documents may be restricted due to copyright or other legal restrictions.

Repositories rest on digital platforms that must meet the minimum technical standards in order to ensure interoperability, i.e. the integration of repositories into the existing international infrastructure. These are the following:

- the compliance with the international metadata harvesting protocol OAI-PMH (Open Archive Initiative Protocol for Metadata Harvesting)
- structured metadata in compliance with the Dublin Core format.[2]

The Ministry primarily supports Green Open Access, i.e. depositing scientific works in digital repositories with full respect for copyright and the rights granted to the publishers. Participants in projects funded by the Ministry must deposit in a digital repository: (1) the published version of the publication and the corresponding metadata; open access to the full text will be enabled if there are no restrictions in terms of copyright and rights granted to the publishers; and/or (2) the post-print, i.e. the peer-reviewed manuscript (accepted for publication) and the associated metadata; open access to the full text will be enabled after the expiration of the publisher's embargo. If the full text of the published version is already available in open access in the repository, it is not necessary to deposit the peer-reviewed manuscript.

The Ministry will recognize Article Processing Charges (APCs) and Book Processing Charges (BPCs) foreseen in the project budget as eligible costs, in compliance with available funds. The Ministry will not accept individual requests to pay or reimburse publication costs (APCs and BPCs).

The Ministry stipulates that all research outputs available in open access must be assigned machine readable Creative Commons (CC) licenses.

All research outputs published in Gold Open Access must be published under a Creative Commons (CC) licences. It is recommended that papers for which an APC was paid be published under a free culture license (CC BY or CC BY-SA).

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[2] DCMI Specifications, http://dublincore.org/specifications/

**Explanation of terms**

**Gold Open Access** implies direct publishing of publications in the open access regime by the author himself. In order to cover the publishing costs, the publisher charges a fee directly from the author, or, more often, indirectly from the institution that hired the author or from the funder of the project in which the author is engaged. Gold Open Access also refers to the practice of direct publishing in open access by the publisher, even when the publishing costs are charged neither from the author, nor from institutions / research funders.

**Green Open Access** implies depositing of post-print or pre-print manuscript of a published work in the open access repository. Commercial publishers, who condition the access to published contents by subscription payment, usually do not allow the published version to be publicly available, but they often allow post-print and/or pre-print manuscripts of published works to be deposited in the open access repository after some time (embargo). Data on the version of the published work that can be deposited in the open access repository, as well as the data on the duration of embargo period, can be found on publishers` websites, as well as on the portal SHERPA/RoMEO.[3]

*Creative Common* **licence** (https://creativecommons.org/share-your-work/) are standardized free licences by which the author grants the right to exploitation of his or her copyright work to the publisher. Licences define the conditions under which it is allowed to use the published work, without the copyright violation. By choosing one of the seven licences, authors define the way and the scope of exploiting their work by users. This licence system was developed by a non-profit organization *Creative Commons,* and it is nowadays used as the standard in digital repositories and in open access publishing.

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[3] http://www.sherpa.ac.uk/romeo/index.php

## Instructions for Archiving Primary Data

In the context of primary data, openness during the research must be based on ethical principles and full respect for the legal framework.

Primary data sets should be accessible in appropriate repositories that meet international interoperability standards, i.e. (1) OAI-PMH, as an international standard for metadata exchange and (2) structured metadata.

The repositories for primary data should allow the assignment of unique persistent identifiers, which will facilitate discovery of the deposited content. Deposited primary data must be accompanied with appropriate metadata.

Primary data available in open access must be assigned a standard machine-readable licence (preferably CC0, CC-BY or CC BY-SA) and must be linked with the publications where the results obtained from these data are published.

The Ministry recommends that a Research Data Management Plan be an integral part of the program of each research within the scientific and research projects. The plan should define the following:

- methods and procedures for collecting data (measurements, estimates, surveys, field research, etc.);
- types of expected primary data and a rough estimate of their scope and volume;
- methods that will be used to archive primary data (where they will be stored and in which formats; which metadata will be used to describe them, etc.)
- access to research data and terms and conditions of access and use (i.e. the individuals, institutions or groups that can access research data and use them, and under what terms and conditions)
- roles and responsibilities (who is the owner of primary data, who is in charge of archiving and storage, who should allow access etc.).