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In accordance with Articles 40 and 41 of the Scientific Research and Innovation Activities Act (Official Gazette of the Republic of Slovenia *[Uradni list RS*], Nos 186/21 and 40/23), the Government of the Republic of Slovenia issues the following

DECREE

on the implementation of scientific research work in accordance with the principles of open science

I. GENERAL PROVISIONS

Article 1

(Content of the Decree and definition of research results)

(1) This Decree lays down the implementation of scientific research activities in accordance with the principles of open science with regard to:

- open access to the results of research in the context of research co-funded by public resources to a level of at least 50%;
- involvement of the interested public in scientific research work;
- evaluation and assessment of researchers, research organisations, research programmes and projects in accordance with the principles of open science;
- open science infrastructure.

(2) Scientific publications (e.g. scientific articles published in scientific journals and on scientific publishing platforms), scientific monographs and other types of peer-reviewed publications, research data, software produced as a result of research, and other types of research results in digital form shall be considered research results referred to in the first indent of the preceding paragraph.

II. OPEN ACCESS TO SCIENTIFIC PUBLICATIONS

Article 2

(Requirements)

The Slovenian Research and Innovation Agency (hereinafter: ARIS) and other funders of scientific research activities from public sources referred to in paragraphs four and five of Article 6 of the Scientific Research and Innovation Activities Act (Official Gazette of the Republic of Slovenia, Nos 186/21 and 40/23) (hereinafter: funders) shall require, as part of the conditions for co-funding, where co-funding is at a level of at least 50%, that providers of scientific research activities (hereinafter: research providers) provide open access to digital versions of scientific publications and other research results discussed in these publications that are necessary for the replication of the research or for the reuse of the research results in other research.

Article 3 (Implementation)

(1) Research providers shall, as soon as feasible and at the latest on publication of a scientific publication, make that scientific publication available in open access in accordance with the preceding Article, together with the associated research data and other research results. Open access shall be implemented as follows:

- a machine-readable digital format of scientific publication (Version of Record, VoR) or the Author Accepted Manuscript (AAM) accepted for publication shall be deposited in a trusted repository for scientific publications;
- immediate open access to the scientific publication stored in the repository referred to in the preceding indent shall be made available.

(2) The criteria for the definition of trusted repositories for scientific publications shall be defined by ARIS, taking into account common solutions in the European Research Area (e.g. in the EU Framework Programme for Research and Innovation).

III. OPEN ACCESS TO RESEARCH DATA AND OTHER RESEARCH RESULTS IN DIGITAL FORM

Article 4

(Requirements)

(1) Under the conditions of co-funding from public sources to a level of at least 50%, and in addition to the open access to scientific publications referred to in Article 2 of this Decree, funders shall require, and scientific research providers shall provide:

- preparation and regular updating of a Research Data Management Plan (hereinafter: DMP);
- management of research data and other research results generated in the framework of publicly co-funded research, in accordance with the principles that make research data and other research results findable, accessible, interoperable and reusable (hereinafter: FAIR principles);
- open access to research data and other research results from co-funded research, in accordance with the principle of "as open as possible, as closed as necessary".

(2) The preparation and regular updating of the DMP referred to in the first indent of the preceding paragraph shall be necessary where the scientific research activity is expected to produce research results in the form of research data or other research results and relates to a completed research content (e.g. a research project, a research programme, an infrastructure activity, etc.).

(3) Exceptions to fully open access to research data and other research results shall be permitted in justified cases where fully open access is prevented by the protection of intellectual property, protection of personal data, security of persons or of the state or other legal constraints. The justification for the exception shall be explained in the DMP.

(4) In the case of justified exceptions referred to in the preceding paragraph, research data and other research results shall, where possible, be made openly accessible in anonymised form or in controlled restricted form.

(5) Where research data and other research results cannot be made openly accessible due to the justified exceptions referred to in paragraph three of this Article and there are no legal constraints that would render the associated metadata not openly accessible, at least the metadata shall be made openly accessible.

(6) In the framework of co-funding of publishers of scientific journals established in the Republic of Slovenia and abroad, funders shall require that scientific journals, which are at least 50% co-funded from public sources:

 publish rules on the storage in repositories of research data discussed in the articles of these journals and on the accessibility of tools for the analysis of these research data and other research results; require citation of research data and other research results in the reference lists at the end of the articles.

(7) The rules of funders, public research organisations and publicly co-financed scientific journals established in the Republic of Slovenia with regard to the handling of research data shall be in accordance with the recommended practices of the European Research Area.

Article 5 (Implementation)

(1) Research data and other research results shall be stored in repositories and made openly accessible through repositories as soon as possible after their creation and at the latest at the end of the co-funding contract, including the stable funding contract. Research data and other research results supporting a scientific publication, except in the case of justified exceptions referred to in paragraph three of the preceding Article, shall be made openly accessible at the latest on publication of the scientific publication, in which a permanent access point identifier or persistent identifier (hereinafter: PID) shall be cited.

(2) Research data and other research results shall be deposited in trusted repositories for research data or other research results as soon as feasible, preferably in national or international domain-specific data centres. If these are not accessible for a specific scientific field, research data and other research results may be stored and made openly accessible in trusted multi-purpose repositories.

(3) The criteria for the identification of trusted repositories for research data and other research results and multi-purpose repositories shall be defined by ARIS, taking into account common solutions in the European Research Area (e.g. in the EU Framework Programme for Research and Innovation)

(4) Research data and other research results shall be accompanied by metadata, including metadata on the tools and instruments needed for research data validation and reuse. When designing metadata, research providers shall take into account the specifics of scientific fields.

(5) Details of the preparation of the DMP shall be laid down by the funder in a co-funding contract.

IV. MANAGEMENT OF COPYRIGHT IN ACCORDANCE WITH THE PRINCIPLES OF OPEN SCIENCE

Article 6

(Copyright management of scientific publications)

(1) Copyright in scientific publications may only be transferred to third parties on a non-exclusive basis by the authors of the scientific publications or by their employers where the rights are transferred to them.

(2) The authors of scientific publications or their employers, where copyright is transferred to them by law, shall publish scientific publications under an open licence that allows anyone to freely use, modify and share the scientific publication in accordance with the principles of scientific research ethics (e.g. a Creative Commons Attribution (CC BY) licence and Attribution-ShareAlike (CC BY-SA) licence or equivalent).

(3) Funders shall include the requirements referred to in paragraphs one and two of this Article in calls and contracts for the co-funding of scientific research activities.

(4) Monographs and scientific publications of comparable length, if peer-reviewed or if third parties hold any rights in them, may be published under a licence that restricts further commercial use or adaptation of the work (e.g. the Creative Commons Attribution-NonCommercial (CC BY-NC) licence, which restricts further commercial use, and the Creative Commons Attribution NoDerivatives (CC BY-ND) licence, which prohibits derivatives, or their equivalents).

(5) Metadata on research publications shall be made public. If copyright, rights related to copyright or other rights of the author arise in the metadata of research publications under the law governing copyright and related rights, the metadata shall be made available under a licence whereby the authors waive their copyright, related rights and other rights as authors to the fullest extent permitted by law (e.g. the Creative Commons Public Domain Dedication (CC0) licence, or, where this is not possible, under the Creative Commons Attribution (CC BY) licence).

Article 7

(Management of copyright in research data and other research results)

(1) Research data and other research results shall be made publicly accessible and openly accessible in accordance with the requirements set out in Article 4 of this Decree.

(2) Where copyright arises in research data and other research results, the authors or their employers, if the copyright has been assigned to them, may sub-delegate it to third parties only on a non-exclusive basis.

(3) Where copyright, related rights or other rights of the author arise in research data and other research results (e.g. research software or research methods), the authors or their employers shall, if the copyright is vested in them by law, publish it under an open licence that allows anyone to freely use, modify and share the research data and other research results in accordance with the principles of scientific research ethics (for example, the Creative Commons Attribution (CC BY) and Creative Commons Attribution-ShareAlike (CC BY-SA) licences, or their equivalents).

(4) Funders shall include the requirements referred to in paragraphs one and two of this Article in calls and contracts for the co-funding of scientific research activities.

(5) Metadata of research data and other research results shall be made publicly available in accordance with the requirements set out in Article 4 of this Decree. If the metadata of research data and other research results give rise to copyright, related rights or other rights of the author under the law governing copyright and related rights, the metadata shall be made available under a licence whereby the authors waive their copyright, related rights and other rights as authors to the fullest extent permitted by law (e.g. the Creative Commons Public Domain Dedication (CC0) licence, or, where this is not possible, under the Creative Commons Attribution (CC BY) licence).

V. INVOLVEMENT OF THE INTERESTED PUBLIC IN SCIENTIFIC RESEARCH

Article 8

(Consideration of the needs of users, the wider community and citizen science)

(1) Funders shall, where appropriate and where this may lead to an increase in the quality of research (exceptions to this may include for instance pioneering research), encourage the consideration of the needs of end-users or the wider community (for example, civil society in the

chosen research area). Similarly, where appropriate and where this may lead to an increase in the quality of research, funders shall encourage the implementation of citizen science in publicly co-funded research.

(2) The details of the implementation of scientific research work in accordance with the preceding paragraph shall be laid down by the funder in the calls and the co-funding contract.

VI. COSTS OF SCIENTIFIC RESEARCH WORK IN ACCORDANCE WITH THE PRINCIPLES OF OPEN SCIENCE

Article 9 (Eligible costs)

(1) The eligible costs of scientific research activities in accordance with the principles of open science in the context of research co-funded by public resources to a level of at least 50% shall be:

- the costs of open access to scientific publications in open access scientific publishing (where entire scientific journals, publishing platforms and monographs are open access) and the costs of managing the associated research data and other research results;
- the costs of managing and open access to research data and other research results, including the preparation of the DMP;
- costs related to the implementation of citizen science.

(2) The costs referred to in the preceding paragraph shall be covered by the funders or research organisations (e.g. through vouchers for the cost of publishing an open access article (hereinafter referred to as APC vouchers), through dedicated calls to cover the costs of open access, and through contracts concluded between funders and research organisations for the implementation of scientific research).

(3) The costs of publishing open access scientific articles in subscription journals (the so-named hybrid model of scientific publishing) are not eligible costs.

(4) The costs of publishing open access scientific publications shall be proportionate to the publishing services provided for the publication. The structure of these costs shall be transparent so that they can be appropriately limited by funders.

(5) The costs referred to in this Article shall be specified by the funder in the co-funding contract.

VII. EVALUATION AND ASSESSMENT OF RESEARCHERS, RESEARCH ORGANISATIONS, RESEARCH PROGRAMMES AND PROJECTS IN ACCORDANCE WITH THE PRINCIPLES OF OPEN SCIENCE

Article 10

(Evaluation by funders)

In the evaluation of research activities, including the evaluation of research programmes and infrastructure activities in the context of stable funding for scientific research activities and in cofunding decisions, funders shall:

- evaluate the substantive merits of the scientific research work, not the place of publication or its impact factor (or other journal metrics) or the publisher;
- take into account other types of research results and other open science practices in addition to scientific publications. Other types of research results include, for example,

research data and research software developed. Other open science practices include, for example, early and open sharing of research results, participation in open peer review processes, involvement of knowledge actors such as citizens, civil society and end-users in research, etc.;

 evaluate openly accessible research results. Publications, in particular scientific articles, shall be made openly accessible and research data should be FAIR and as open as possible and closed as necessary. Research results shall be accompanied by PIDs where available.

Article 11

(Evaluation in public research organisations)

(1) Research organisations shall encourage researchers to carry out scientific research work in accordance with the principles of open science as defined in the law governing scientific research and this Decree. To this end, they shall align the evaluation of higher education teachers and staff and of scientific workers with the policies of the European Research Area and the European Higher Education Area.

(2) The Slovenian Quality Assurance Agency for Higher Education (hereinafter NAKVIS) shall take into account the preceding Article when setting minimum standards for election to the titles of higher education teachers, research associates and higher education associates, and ARIS when setting minimum standards for research titles at public research institutions, in so far as they relate to the evaluation of scientific research work.

VIII. OPEN SCIENCE INFRASTRUCTURE

Article 12

(National ecosystem for open science)

(1) The national open science infrastructure shall operate in accordance with the recommendations of the European Open Science Cloud (EOSC) and be interoperable with relevant European and international infrastructures. It shall consist of:

- domain-specific and general data centres with trusted repositories;
- trusted repositories of organisations for the preservation of open access scientific publications, research data and other research results;
- open access scientific publishing platforms;
- open access scientific journals;
- other digital services and resources needed or generated by scientific research work in accordance with the principles of open science.

(2) Within the framework of the Open Science Action Plan, the Ministry responsible for science shall propose to the Government of the Republic of Slovenia measures for the establishment and sustainable operation of a national infrastructure for open science, including the necessary specialised experts, such as in particular research data curators, data stewards, data librarians, archivists and maintainers, and developers of infrastructures for open science.

IX. CONTRACTUAL SANCTIONS

Article 13 (Contractual sanctions) Funders shall lay down in co-funding contracts the contractual penalties in the event of failure to carry out scientific research work in accordance with the principles of open science set out in this Decree.

X. TRANSITIONAL AND FINAL PROVISIONS

Article 14

(Transitional justification for temporary unavailability of the content of scientific articles)

Notwithstanding the provisions of Article 3 of this Decree, for a period of two years from the entry into force of this Decree, research providers may, in duly justified cases which they shall justify to the funder, publish scientific articles in subscription journals and make them open access by depositing the author accepted manuscript in a repository, with the content of the author accepted manuscript temporarily inaccessible in the repository for a period of not more than 12 months from the date of the publication of the scientific article in the case of the social sciences and the humanities, or six months in the case of other disciplines.

Article 15

(Transitional eligibility of open access costs in subscription journals, the so-named hybrid model of scientific publishing)

Notwithstanding paragraph three of Article 9 of this Decree, for a maximum period of two years from the entry into force of this Decree, funders of scientific research from public sources may continue to co-finance open access to articles in subscription journals in the following cases:

- in the framework of the transformative agreements established by the cOAlition S with scientific publishers for the reading of journals and open access publishing in these journals (hereinafter: transformative agreements);
- if the public research organisation is not a member of a group of public research organisations (hereinafter: consortium) for transformative agreements;
- if the APC vouchers obtained through transformative contracts run out;
- if subscription journals are not part of the transformative agreements (e.g. where the transformative agreements with the publisher is not concluded due to an insufficient number of publications, where the publisher does not have transformative agreements as part of its business models and therefore the agreement is not possible, where Slovenian consortia do not have a signed agreement for reading with a selected publisher of the subscription journals).

Article 16

(Initiation of evaluation of research results by funders on an open access basis for research results)

The third indent of Article 10 of this Decree shall apply one year after the entry into force of this Decree. An exception to the evaluation on the basis of open access research results may be made for research results published before the entry into force of this Decree or in accordance with Article 14 of this Decree.

Article 17

(Harmonisation of the acts of ARIS, NAKVIS and public research organisations)

(1) ARIS and NAKVIS shall bring their acts into conformity with this Decree no later than one year after the entry into force of this Decree.

(2) Public research organisations shall align the evaluation of higher education teachers and associates and scientific workers with Article 11 of this Decree at the latest within three years of the entry into force of this Decree.

Article 18

(Implementation of contracts already concluded for the performance of scientific research activities)

This Decree shall not apply to the performance of scientific research activities under contracts concluded before the entry into force of this Decree.

Article 19 (Entry into force)

This Decree shall enter into force on the fifteenth day following its publication in the Official Gazette of the Republic of Slovenia.

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> Government of the Republic of Slovenia Robert Golob Prime Minister