

# eScience Information System

## *Register of Researchers and Register of Scientific Research Organizations*

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In the first quarter of 2023, the publicly available eScience<sup>1</sup> information system began to work, displaying current information, i.e. data on accredited scientific research organizations (hereinafter referred to as SRO), researchers and their scientific results. The eScience information system consists of electronic databases that are kept as registers - the Register of Researchers and the Register of Scientific Research Organizations in the Republic of Serbia.

Within the eScience system, data is exchanged between all actors involved in the scientific research work system: researchers, scientific research organizations and the Ministry of Science, Technological Development and Innovation (hereinafter: the Ministry), as well as other important institutions. It is envisaged that the system will maximally automate the data transfer process between all relevant actors, which will significantly increase the efficiency of administration and focus on scientific research activity and its improvement. The existence of such a business-information system enables, in the long term, to raise the quality of scientific research activity, greater visibility and availability of scientific production in accordance with the principles of "Open Science"<sup>2</sup>. Also, the networking and centralization of available digital institutional repositories, ie the scientific production of scientific research organizations, the development of their digital infrastructure, research, professional and library-information staff and the promotion of the principles of open science are encouraged. Raising the visibility of the results of scientific research leads to greater citation of works, better evaluation of researchers, and therefore greater international recognition of domestic scientific production.

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1. eScience, accessed 15.10.2023.

2. Open Science, accessed 15.10.2023.

The Ministry planned and operationally managed the preparation for the implementation of the eScience information system. During this process, it was necessary to harmonize the system with all key legal and planning documents at the national and international level.

The umbrella document that governs the system of science and research in the Republic of Serbia is the Law on Science and Research ("Sl. glasnik RS", No. 49/2019)<sup>3</sup> through planning and realization of general interest in science and research, ensuring the quality and development of scientific research work, legal position of the institute, establishment of the institute and its management, obtaining the title of researcher, institutional financing and financing of other programs of general social interest, keeping records, etc.

Another important planning document mentioned in Article 10 of the mentioned Law was adopted in February 2021: "Strategy of scientific and technological development of the Republic of Serbia for the period from 2021 to 2025 - Power of knowledge"<sup>4</sup> (hereinafter the Strategy). In this planning document, within the Special Objective 1. Provide the necessary conditions for the dynamic development of science, technological development and innovation and Measure 1.4: Development of digital infrastructure, activity 1.4.1 is defined. Establishing a unified national eScience system. Also, the Strategy is in line with the general tendencies of the economic and social development of the Republic of Serbia, as well as other national, regional and European strategies, including the "Strategy of smart specialization in the Republic of Serbia for the period from 2020 to 2027".<sup>5</sup>

According to the Strategy, the main objective of the European Union's policy in the field of science and research is to strengthen the scientific and technological system as one of the key factors of sustainable economic development, which ensures a quality framework for the implementation of scientific research and the development of innovations, while consequently striving to encourage competitiveness and the growth of economic activities. The Republic of Serbia, as a candidate country for membership in the European Union, follows the legal acquis of the EU and implements the necessary reforms and activities in this area in order to join the European Research Area (ERA).<sup>6</sup> The first negotiation chapter that the Republic of

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3. [Закон о науци и истраживањима](#), accessed 15.10.2023.

4. [Strategy of scientific and technological development of the Republic of Serbia for the period from 2021 to 2025 - Power of knowledge](#), accessed 15. 10. 2023

5. [Strategy of smart specialization in the Republic of Serbia for the period from 2020 to 2027](#), accessed 15.10.2023

6. [European research area \(ERA\)](#), accessed 15.10.2023

Serbia opened and temporarily closed was Chapter 25 (science and research), which happened at the Intergovernmental Conference on the accession of the Republic of Serbia to the European Union<sup>7</sup> held in 2016, and indicates the organization and degree of development of the scientific research and innovation system.

Recognizing the importance of the principle of openness in science, as a process that should be implemented as soon as possible in the Republic of Serbia, in 2018 the "Platform for Open Science"<sup>8</sup> was adopted, the National Open Science Portal<sup>9</sup> was created, while all state universities and several scientific institutes adopted open infrastructure policies.

Bearing in mind that in the eScience system, researchers log in to their profile using their personal ORCID credentials, the Ministry, in particular, in order to further develop the national portal, in May 2023 achieved full membership in the ORCID<sup>10</sup> (Open Researcher and Contributor ID) organization, which deals with the development of research data infrastructure based on the researcher identifier. In this way, the scientific research community in the Republic of Serbia has access to additional options that are made possible through membership in our institutions. A large number of researchers in the Republic of Serbia already have registered ORCID profiles, given that it is a mandatory part of the procedure for applying for projects financed by the European Commission, as well as for publishing papers in domestic and foreign journals.

The eScience information system itself is divided into two interconnected segments: administrative and scientific, between which data is exchanged daily.

Within the administrative part, the fully digitized process of accreditation of scientific research organizations, as well as the selection process for scientific positions, is successfully implemented, while the scientific part unites the entire scientific production, on the basis of which the work of institutions and researchers is further evaluated.

In order to avoid multiple entry of the same scientific results from different systems and to ensure bibliographic accuracy, the eScience information system is networked with existing institutional repositories, the number of

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7. Republic of Serbia negotiation position for Intergovernmental Conference on the accession of the Republic of Serbia to the European Union, accessed 15.10.2023

8. Platform for Open Science, accessed 15.10.2023.

9. National Open Science Portal, accessed 15.10.2023.

10. Ministry of Science, Technological Development and Innovation of the Republic of Serbia, accessed 15.10.2023.

which is constantly increasing. The two most important steps in the process of unifying data were realized in cooperation with the "Svetozar Marković" University Library and the National Library of Serbia, eScience has been successfully connected to the COBISS (Co-operative Online Bibliographic System and Services) library system since May 2023, the data is on are downloaded weekly from the Mutual Catalog COBIB.SR<sup>11</sup>, and from mid-October data on the works of our authors are downloaded from the "Ours in Wos"<sup>12</sup> (Web of Science, WoS) service. Continuous work is being done on the development of data download tools, data standardization and their deduplication.

The eScience portal in full capacity was opened on July 3, 2023 for all active researchers in the Republic of Serbia. The Ministry continuously provides previously established professional and technical support to users for the administrative and scientific subsystem of the eScience information system and will continue to introduce good international practices in the exchange of scientific information.

In the coming period, it is planned to upgrade the system in the form of the introduction of new functionalities, both in the digitalization of the evaluation of the results of scientific research work and the enrichment of registers with additional data on scientific research equipment, specialized laboratories, which will certainly contribute to the application of science in the economy, through the transfer of knowledge and technology, i.e. connecting science and economy.

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11. [Mutual Catalog COBIB.SR](#), accessed 15.10.2023.

12. [Ours in Wos](#), accessed 15.10.2023.