

National Development Plan

SERBIA

November 2017



Introduction

This first plan for establishing a national data service for the social sciences in Serbia has been developed by staff from the Institute for Economic Sciences Belgrade who took part in the SERSCIDA project, funded by the EC within the FP7 project frame - Aleksandra Bradić-Martinović (abmartinovic@ien.bg.ac.rs) and Aleksandar Zdravković (aleksandar.zdravkovic@ien.bg.ac.rs). It should be further developed by all the relevant stakeholders, organizations and individuals whose jobs and interests are related to developing research infrastructures in Serbia, primarily policy-making and funding institutions.

The plan is divided into three main sections (Mission statement, General feature of the data service and Description of resources and challenges), which address larger strategic considerations in conceiving and establishing a national data service. In the first two sections we develop a “concept” for a future national data service, that is the model and key features that are to be put into place. In the third section, the previously developed concept is evaluated in relation to realities on the ground, including probable resources and challenges for setting up and maintaining a viable data service over time.

Mission

The mission of the **Serbian Data Center in Social Sciences (SER-DAC)** is to support high-quality research, teaching and learning in the social sciences, by acquiring, developing and managing data and related digital resources, and by promoting and disseminating these resources as widely and effectively as possible.

General features of the data service

Definition of organisation

The Serbian Data Center in Social Sciences (SER-DAC) is an organizational unit of the Institute of Economic Sciences Belgrade (IES). IES, as a scientific and research institution, is engaged in research in macroeconomics, microeconomics, regional economic development, development studies of domestic and world markets, as well as in the activities of consulting, training and education related to modern business economics, management, marketing, entrepreneurship, finance, banking, and others. It has five centers: Center for Macroeconomic Research, Center for Strategic Research and Public Policies, Center for International Research and Cooperation, Center for Consulting and Center for Digital Resources. SER-DAC is a part of the Center for Digital



Resources which covers research in the field of business informatics, management information systems, e-banking and payment systems and also has two infrastructure parts, a data archive and institutional repository (www.ebooks.ien.bg.ac.rs).

The SER-DAC was formally established in March, 2014, but it is still in the beginning phase supported from 2012 by international funds through the SEEDS project (<http://seedsproject.ch/>) and the HORIZON2020 CESSDA SaW project (<http://cessdasaw.eu/>). Currently SER-DAC can preserve and disseminate all types of data, both quantitative and qualitative through the FORS data portal SEEDSbase (<https://seedsdata.unil.ch/>). The data scope covers all disciplines in the social sciences and humanities. Also, from april 2017 SER-DAC started to test Dataverse platform (<http://dataverse-serbia.ien.bg.ac.rs>) within CESSDA SaW task 4.4., subtask: Technical support for Dataverse (own installation) as a pilot for ADP¹ & IES to evaluate remote technical assistance with the support of DANS².

The SER-DAC collects and preserves data for potential secondary use - analysis for research, teaching and learning, and confirmatory analysis based on the principle of Open data access. It will also store sensitive data, which will be forbidden for use without proper security procedures (researcher/teacher accreditation, safe room, etc.) and user-licenses according to the The Personal Data Protection Law of Republic of Serbia. SER-DAC will organize trainings for the research and teaching community, as well as round tables and conferences. IES will be responsible for data solicitation, trainings, and promotion in cooperation with specialists in the specific fields. Within a regional framework IES developed specific knowledge and skills regarding the collection and preservation of economic data. In that matter IES will be support for regional partners.

The SER-DAC will follow the international standard Open Archival Information System (OAIS) Reference Model (Reference Model for an Open Archival Information System (OAIS); CCSDS 650.0-M-2; Consultative Committee for Space Data Systems: Washington, DC, 2002.) and all the phases of the DCC Curation Lifecycle Model (DCC Curation Lifecycle Model: <http://www.dcc.ac.uk/resources/curation-lifecycle-model>) Also, it will be compliant with the Data Documentation Initiative (DDI) metadata specification, version 2.5 or higher (Data Documentation Initiative (DDI): <http://www.ddialliance.org/>).

Scope of collection

SER-DAC collects data and information across the range of social science disciplines: Economics;

1 ADP - Arhiv družboslovnih podatkov, Ljubljana, Slovenia (<http://www.adp.fdv.uni-lj.si/>).

2 DANS - Data Archiving and Network Services, Den Haag, Netherlands (<https://dans.knaw.nl/en>).



Education; Employment and Labour; Environment, Conservation and Land Use; Health; History; Industry and Management; Law, Crime and Legal Systems; Media, Communication and Language; Political Science; Psychology; Sociology, Society and Culture; Social Welfare Policy and Systems. This includes quantitative and qualitative data that fulfill most of the following conditions:

- » research that gives evidence and greater understanding of Serbian society or parts of it (including international surveys);
- » research data where Serbian researchers are involved;
- » comparative or continuous research (panel data, longitudinal surveys, and time series that allow examination of trends);
- » data produced with methodological excellence;
- » works of general interest for social science research (quality and exemplary studies with analytic potential).

Time series and panel data are of particular interest. The deposited data will be retained for the long-term, unless otherwise specified by the depositor, funding agencies, or by government regulations. SER-DAC will accept data and documentation in paper form only under exceptional circumstances.

Eligible depositors are researchers, members of research institutions, government departments, offices of national statistics, and public and commercial sector sources (e.g., marketing research firms). Depositors may only deposit their own work and will be expected to sign a data deposit agreement

Services and activities

General activities in SER-DAC are:

- » activities related to the collection, validation and data conversion, creation of metadata, storage, and distribution of data collections;
- » creating and improving the classification scheme of data types;
- » administration of network/system specialized in collecting, storing, and distributing data;
- » implementation of systems aimed to improve the quality and safety of using specialized infrastructure designed for data management and preservation;
- » design and implementation of new database software, and preparing reports on the use of software tools and the database management system;
- » permanent monitoring of compliance with the international standards in the field of data management and preservation;

- » mediation between the demands of data users and data providers (contracts for deposit and distribution of data, admission requirements, testing, etc.);
- » providing of services to third parties and user trainings;
- » customer support;
- » activities related to web portal development and maintenance.

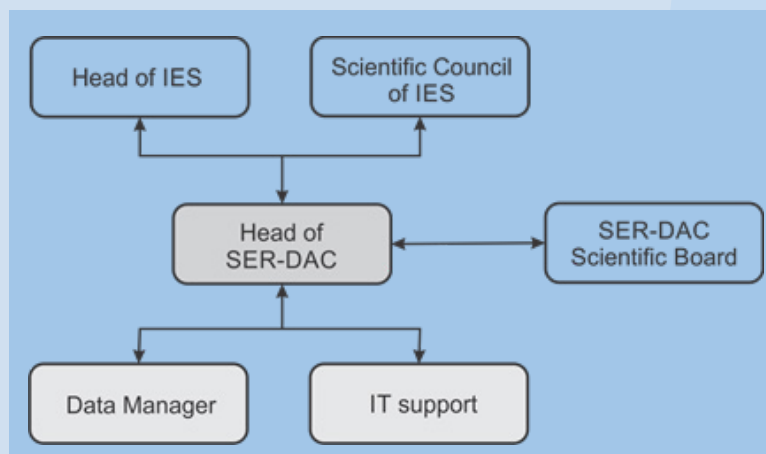
Beneficiaries

In the initial phase, SER-DAC intends to provide services to the academic community: university researchers and teachers, university students (doctoral, master, and/or bachelor) and researchers from other public institutions (e.g. scientific institutes, government agencies). Later we intend to expand our services to researchers from other institutions (NGOs, private research companies, newspapers, businesses, associations, etc.), the general public, policymakers, and journalists.

Governance structure

SER-DAC is organized as a separate unit managed by a Head, who is responsible to the IES Director, the IES Scientific Council, and the SER-DAC Scientific Board.

Figure 1: SER-DAC's governance and internal structure



Beside the Director and the IES Scientific Council, the work of SER-DAC will be evaluated in the scope of activities connected to data services by the SER-DAC Scientific Board. The Scientific Board members are mainly representatives of Belgrade University, National Library of Serbia, the Statistical Office of Republic of Serbia, institutes of social sciences, and the Institute of Economic Sciences, as well as other stakeholders. The SER-DAC Scientific Board has eleven representatives



from the Ministry of Education, Science and Technological Development (one representative), the Institute of Economic Sciences (two), the National Library of Serbia (one), the Statistical Office of Republic of Serbia (one), institutes of social sciences (three), universities (two), and the Head of the SER-DAC. The SER-DAC Scientific Board has two regular sessions a year.

Financing schemes

According to our experience and previous efforts to establish a fully operationable data service we came to the conclusion that the most suitable financing schemes for funding SER-DAC would be based on three funding sources. These sources include:

- » The Ministry of Education, Science and Technological Development should finance the staff personnel costs, required software and local promotional activities;
- » The IES, as a host institution, could provide premises, human resources and maintain the system;
- » CESSDA ERIC and international projects may be used as a potential funding source for the educational and international promotional activities.

The funding from the Ministry and IES should cover long term financing needs to assure sustainability of the SER-DAC. For example, the Ministry of Education, Science and Technological Development of Republic of Serbia announces competitions for technological development projects every 3-5 years, which is a potentially suitable programme framework for co-financing SER-DAC.

Resources and challenges

Host institution of the future data service

Having the IES as a hosting institution brings many advantages:

- » IES is public non-profit research institution involved in data-oriented social science research;
- » IES has developed technical capacities to support the functioning of the SER-DAC (hardware, software, servers, network and telecommunications), even some components of the technical infrastructure for data archiving (developed during the SERSCIDA project);
- » IES already has available staff, with an administrative service;
- » IES is well-integrated into the national research and service network, including links to universities, research institutes, national statistical institutes, and researchers in different disciplines. Also, it has positive relations with national ministries or research councils;
- » IES already shows commitment to development of a data center through participation in projects



- related to data archiving (SERSCIDA, SEEDS, RRPP Data Rescue and CESSDA SaW);
- » IES is familiar with data archiving issues and has staff with data management skills.

We also identified some weaknesses of IES as SER-DAC hosting institution:

- » Commitment of the IES to SER-DAC support may potentially diminish if some of the further IES management boards do not recognize the importance of data archiving;
- » Current and projected internal funding resources of the IES to financially support SER-DAC are limited;
- » IES does not have a back-up plan for substituting potential leave of the personal with appropriate knowledge of data management and preservation.

Human resources and internal structure

SER-DAC is composed of a Head, a Data Manager and IT support. SER-DAC organizational chart is presented above in Figure 1. Regarding the proposed structure and current human resources, the internal HR capacities of IES match the positions of the SER-DAC head and data specialist. An identified gap is related to proper IT support, which needs to be addressed by outsourcing.

The **SER-DAC Head** is appointed by the Scientific Council, on a proposal of IES Management, for a four-year period.

The tasks of SER-DAC management are as follows:

- » proposing basic business policy, long-term (strategic) development plan, and the annual work and development program and taking all measures for successfully implementing policy;
- » organizing, coordinating, and monitoring the work of the Center and the fulfillment of objectives;
- » preparing and taking care of the budget and financial plans;
- » reporting on all activities to the director and Scientific Council of the Institute of Economic Sciences;
- » fulfillment all the obligations based on membership in the Scientific Council of the SER-DAC;
- » ensuring cooperation with stakeholders and partner institutions;
- » initiating and coordinating the implementation of international cooperation and professional training of staff in the SER-DAC;
- » taking care of promotional activities, including promotional meetings and events;
- » initiating and managing the application process for international/national projects in the field of data management and data preservation;
- » monitoring and coordinating the work of the SER-DAC according to international standards in the field of data management and data preservation.



Required Skills

- » PhD in the field of economics or other social science disciplines;
- » scientific or teaching position in the area of economics or other social science disciplines;
- » specific knowledge in the field of data management and data preservation;
- » experience of working in international projects;
- » English language proficiency;
- » references in the field of data management.

The position of the **Data Manager** includes the following activities:

- » providing support to researchers (depositors) in the process of depositing the data and creating metadata,
- » data and metadata quality control;
- » preparing data for secondary use (performing data conversion into accessible formats compatible for use within statistical software);
- » management and control of the access to the data collections;
- » mediation between data users and data providers;
- » provision of services to third parties and training users.

Required Skills

- » high school education, oriented to informatics;
- » knowledge of statistics and statistical software packages and tools;
- » knowledge of server and network protocols;
- » English language proficiency;
- » skills in rapid adaptation to new and different technologies.

The IT support includes network/system administration related data collection, preservation, and dissemination.

Partner support and cooperation

At this stage of development SER-DAC has a close relationship and support of FFZG from Croatia, FORS from Switzerland, ADP from Slovenia, and CESSDA-ERIC. In the future the main stakeholders will be the Ministry of Education, Science and Technology Development of the Republic of Serbia,



the National library; the Statistical Office of the Republic of Serbia; research institutes in social science disciplines; faculties in the social sciences; and the Serbian National Labour Service.

This network will connect key persons in each partner and stakeholder institution with IES representatives. Formally IES as legal representative of SER-DAS will sign a memorandum of understanding with each stakeholder. It will be important to set up lines of communication with key stakeholders and partners so that they are kept informed about the development and direction of the new data service. Key representatives from each stakeholder institution will be identified and contacted to obtain their consent to participate as representatives on behalf of their institution. Representatives will be included in a contact database that will be used for communicating information about the data service. Also, the representatives of main stakeholders will be members of the Scientific Board.



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