



National Development Plan

MACEDONIA

November 2017



Introduction

This first plan for establishing a national data service for the social sciences in Macedonia has been developed by staff from the Institute for Sociological, Political and Juridical Research (ISPJR) at Ss. Cyril and Methodius University in Skopje, who took part in the South East European Data Services (SEEDS) project, funded by the Swiss National Science Foundation. The plan should be further developed by all the relevant stakeholders, organizations and individuals whose jobs and interests are related to developing research infrastructures in Macedonia, primarily policy-making and funding institutions.

The plan was created according to the Guide for the elaboration of national data service development plans, produced for the CESSDA SaW project, and some parts of the text are taken directly from the Guide. The plan is divided into three main sections, 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.

The benefits of establishing a national data service

Empirical research in the social sciences is often extremely extensive and financially demanding, especially if it aims for analysis of complex phenomena on a representative sample. During such research, large amounts of data are collected that cannot be reproduced because phenomena that are studied by the social sciences are changing over time. Because data are often not appropriately preserved by researchers, they are lost or become unusable over time. This represents a loss of potential knowledge and cultural heritage. The data service, through appropriate procedures, policies, tools and infrastructures, ensures long-term preservation of data and their dissemination.

From a research policy perspective there are benefits of national data services to scientific communities that justify the needed investments. First, through their core activities - data preservation and dissemination - data services make possible long-term access to and wider and more effective use of existing data. This means that publicly-funded data are used more fully beyond their original purposes, and that research funders can concentrate on financing fewer new data collections. Indeed, data gathered for original research can be further exploited



by “secondary” users for new insights and scientific contributions. Recent work by Beagrie et al.¹ demonstrates the economic benefits of national data services.

Second, data services strengthen research practice and quality by rendering research more transparent and open for replicability. By making data and related documentation available for scrutiny, original research can be tested and evaluated, a key pillar of the scientific method. Also, knowing in advance that the data could be used by others in the future is a way to ensure better quality in methods.

Third, more and more funders and journals are requiring that data be deposited and available to researchers for secondary use and replication - having archives and repositories as places to store and disseminate data makes possible these requirements.

Finally, the easy availability of secondary data brings value to university teachers and students, who benefit from having data to train and illustrate methods and concepts in their courses and projects.

The aims of this plan

This plan aims to lay down the larger strategic considerations in conceiving and establishing a national social science data archive. This document will help ISPJR's efforts for this idea to be taken more seriously by the Ministry of Education and Science of the R. Macedonia, which is the main funding body in the country, and to check with the potential hosting institution (ISPJR and Ss. Cyril and Methodius University) what is already possible and what should be further developed. This plan will also help to map the basic resources needed and types of activities that should be financed by the funding body.

The plan builds up on the previous activities undertaken only recently in this area in Macedonia. This includes participation in two international projects – the SEEDS project (2015-2017, funded by the Swiss National Science Foundation and coordinated by FORS, <http://seedsproject.ch/>) and the RRPP data rescue project (funded by the Regional Research Promotion Programme for the Western Balkans of the Swiss government, also coordinated by FORS) – in which ISPJR was the Macedonian partner. Within the SEEDS project the participating institutions from the Western Balkans region gained extensive training in the principles and practices of data archiving provided by the long established Swiss and Slovenian national data services (respectively FORS

¹ Beagrie Neil, John Houghton, Anna Palaiologk, and Peter Williams. (2012). Economic Impact Evaluation of the Economic and Social Data Service. Available <http://www.esrc.ac.uk/files/research/research-and-impact-evaluation/economic-impact-evaluation-of-the-economic-and-social-data-service/>



and ADP). In the framework of the RRPP data rescue project the participating institutions worked with real data collected through projects financed by the RRPP programme. As a result of this project, 72 national and multinational projects are now documented and archived in SEEDSbase (<https://seedsdata.unil.ch/>), an online database created and maintained by FORS specifically for this purpose.

Mission

The Macedonian Social Science Data Archive (MK DASS), hosted by the Institute for Sociological, Political and Juridical Research at Ss. Cyril and Methodius University in Skopje, will be a national infrastructure and public service that provides long-term preservation and distribution of research data in the social sciences. The data service will serve the research community, including researchers, teachers and students, as well as the broader public interested in social science outputs.

MK DASS's mission will be to:

- » acquire, properly document, preserve and disseminate research data in the social sciences produced by researchers in Macedonia;
- » advance social science research by making the collected data available for secondary analysis; and
- » bring social science outputs to the targeted audiences by providing searchable inventory of projects, and related publications and datasets.

The key activities of MK DASS will include:

- » preservation and dissemination of quantitative and qualitative data;
- » provision of access and support for both users and data providers including mediation between the demands of data users and data providers;
- » permanent monitoring of compliance with the international standards in the field of data management and preservation;
- » collaboration with the wider scientific community in the field of collecting and distributing data; and
- » promotion of Open Access initiatives.

Wide and heterogeneous groups will benefit from our work, such as: academic researchers, teachers and students; government institutions and policy makers; and the non-governmental sector, including think tanks, the business community, media and research journalists, and the



broadest public. At the same time, it should be stressed that we curate and hold data, but the real owners are universities and research institutions, NGOs and think tanks, and independent researchers.

General features of the data service

Definition of organisation

The Macedonian Social Science Data Archive (MK DASS) will be a national research infrastructure and public service providing long-term preservation and distribution of research data in the social sciences in the Republic of Macedonia. MK DASS will serve the research community, including researchers, teachers and students, as well as the broad public interested in social science research outputs. MK DASS's main aim will be to provide curation of research data produced by the research community in the country, and access to these data to the research community and the broader public.

MK DASS will be organized as a separate unit of the Institute for Sociological, Political and Juridical Research (ISPJR) at Ss. Cyril and Methodius University in Skopje, one of the oldest public university research institutions in the social sciences in the Republic of Macedonia. The main activities of the Institute are conducting research projects and organization of master and doctoral studies.

Since MK DASS will be a unit of ISPJR, the Archive's legal status and legal responsibilities are subject to the internal legal acts of ISPJR and Ss. Cyril and Methodius University, which in turn comply with the 2008 Law on Higher Education, the 2008 Law on Scientific and Research Activities, and various bylaws.

Scope of collection

Our collection scope aims to encompass quantitative and qualitative research data in various disciplines including anthropology, sociology, political science, communication science, psychology, law, education science, economics, business and management, demography, and related social science disciplines.

Specificities on data acquisition

Regardless of the discipline, in order to be accepted the research has to provide:

- » greater evidence and understanding of contemporary society, especially the Macedonian society or parts of it;



- » comparative or continuous research data (e.g. panel data, longitudinal surveys, and time series that allow examination of trends) as well as cross-sectional data and other datasets;
- » good or excellent methodological quality; and
- » general interest for social science research (quality and exemplary studies with analytic potential).

In parallel, there are three additional reasons why certain data can be accepted:

- » because they possess potential value for secondary use and analysis for research;
- » because they may serve teaching and learning purposes; or
- » for validation reasons - to make possible the replication of research for important studies.

MK DASS reserves the right to refuse data under the following conditions:

- » Data do not match the criteria of the collection development policy and would be better dealt with at another institution (also legal conditions);
- » Insufficient or poor quality of the documentation;
- » The depositor and MK DASS do not agree on access and dissemination conditions;
- » The nature or volume of the data make it difficult or impossible to process given the resources, staff, facilities, or capacities of MK DASS.

Services and activities

The key activities of MK DASS will include:

- » preservation and dissemination of quantitative and qualitative research data;
- » provision of access and support for both data users and data providers including mediation between the demands of data users and data providers;
- » permanent monitoring of compliance with international standards in the field of data management and preservation; and
- » collaboration with the wider scientific community in the field of collecting and distributing data.

Our additional services and activities include:

- » training in data management and methodology of scientific research for researchers;
- » open access promotion; and
- » international cooperation through participation in joint projects in the field of data archiving.



Beneficiaries

MK DASS' designated community consists of on the one hand producers and depositors of research data in social sciences in Macedonia, and data users on the other.

Eligible depositors at MK DASS are researchers, members of research institutions, think-tanks, NGOs, government departments, the State statistical office, 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.

More specifically the data producers consist of:

- » the higher education and research institutions of public and private universities;
- » other public and private research institutions;
- » individual researchers;
- » public institutions such as the State statistical office; and
- » private institutions such as non-governmental organizations and think tanks.

The data users are registered researchers, teachers and students from the country and abroad, and other interested parties, such as public institutions, policy makers or journalists for which the data service may reserve the right to decide on a case-by-case basis. They will sign a user contract in order to access and use the data.

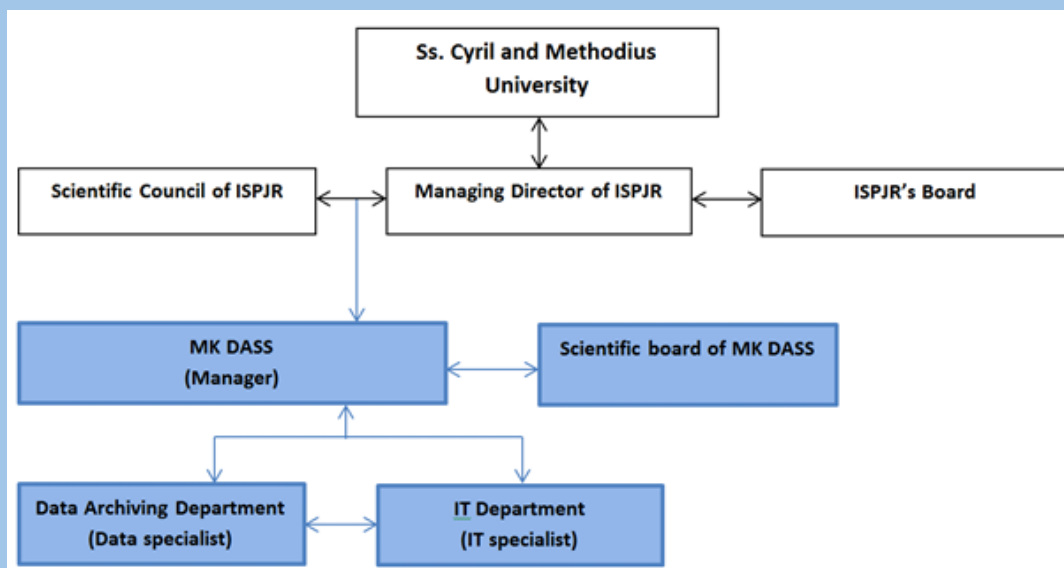
Governance structure

Similar to other units of ISPJR, the establishment and the activities performed by MK DASS will be subject to decisions and monitoring of the Scientific council of ISPJR. As is the case with all the other units of Ss. Cyril and Methodius University in Skopje, the Scientific council of ISPJR is constituted of the staff of ISPJR who possess a scientific degree. It decides about the strategic, developmental, financial and operational aspects of ISPJR's work. Its decisions are implemented by the executive bodies of the ISPJR, i.e. the Director and the ISPJR's Board.

The Scientific board of MK DASS on the other hand, in addition to members from ISPJR, will be composed of representatives of the other higher education and research institutions in the country, as well as other national stakeholders. Having in mind that MK DASS will perform national level activity, an external body that will monitor its work will be necessary to ensure the quality of the services and compliance of the national data archive with the ethical principles and practices of scientific activity.



Figure 2: MK DASS's governance and internal structure

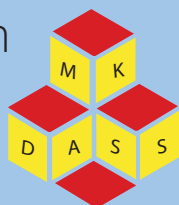


Financing schemes

In order for this type of national service to function properly, the funding is usually secured through the relevant Ministry, or existing funding bodies in the scientific sector of a given country. In the case of Macedonia, the relevant funding agency is the Ministry of Education and Science of the Republic of Macedonia, because currently other types of national funding bodies do not exist. The start of the work of the archive will be conditioned by the decision of the Ministry to invest in this kind of infrastructure in Macedonia. In this sense, this plan will help to map the needed basic resources and types of activities that should be financed by the funding body.

The hosting institution (ISPJR) will provide premises and basic office facilities but will have to seek additional funding for hardware and software equipment and also for remuneration for the work done for archiving research data in MK DASS.

As the number of domestic donor organisations is extremely small, one possible solution will be project applications to international donors present in the country (foreign embassies, USAID, EU-IPA2 funds), but also abroad. In addition to this we do hope that through collaboration with members of the Consortium of European Social Science Data Archives (CESSDA) in the implementation of specific projects, we could secure some additional funding, especially when it comes to continuous training of our staff in the various aspects of data archiving.



Resources and challenges

Host institution of the future data service

ISPJR is one of the oldest public university research institutions in the social sciences in the Republic of Macedonia, founded in 1965. It is part of the oldest and biggest university in the country- Ss. Cyril and Methodius University in Skopje. The main activities of the Institute have been the realization of scientific research projects and organization of postgraduate (master and doctoral) studies. At present, ISPJR consists of the Department of Sociology, the Department of Political Science, and six other centres including a Centre for documentation of scientific research. Currently there are 25 permanent employees and two additional staff, among them 16 PhD- Research Fellows, two Research Assistants with MA degrees, and nine support staff.

There is no formal decision by the Ministry of Education and Science as to who should take on the role of national data centre in the social sciences in Macedonia. In the framework of the SEEDS project it was concluded that the Institute for Sociological, Political and Juridical Research is very suitable for performing this task, keeping in mind that it is the oldest and most experienced institution specializing in social science research in the country. This view was also supported by the representatives of other higher education and research institutions in the country who participated in the final (local) conference of the SEEDS project in Macedonia, which took place on April 4, 2017.

Having the ISPJR as a hosting institution brings many advantages:

- » ISPJR is a public research institution part of the biggest university in the country, which has a tradition of more than 50 years of research work in the social sciences;
- » ISPJR has available and trained staff to perform the activities of data manager and data specialist currently and in the future, with more than 15 employed staff engaged in social science (qualitative and quantitative) research;
- » As part of a University, MK DASS probably can rely for technical support from the University computer center and support from other units/members of the University;
- » ISPJR is well integrated into the national research network, including links to universities, research institutes, the national library, the NGO sector, and researchers in different disciplines. Also, it has a positive relationship with regard to this activity with the national ministry of science;
- » ISPJR already showed commitment to the development of a data service through participation in data archiving projects (SEEDS, RRPP Data Rescue).



We also identified some weaknesses of ISPJR as MK DASS hosting institution:

- » Limited technical knowledge and skills of ISPJR staff related to hardware and software operations for data archiving, as well as uncertainty about who would take on this role in the future: the University computer center, another unit at the University, or a newly employed person at ISPJR.
- » ISPJR current and future internal financial support to MK DASS is limited.

Internal structure and human resources

As a department of ISPJR, the MK DASS management structure will be organized as a flat structure, with two units: Data archiving unit and IT unit, and is characterized by an overall broad span of control with one hierarchical level. All units will report directly to the MK DASS manager. Also, employees will adopt a team-based approach and close collaboration with all other units, departments and centers at ISPJR. The organizational chart below shows the division of units, responsibilities, reporting relationships and hierarchy.

At a minimum MK DASS will have two employees: a data archive manager and one data specialist. An IT specialist will also be needed, but this person will either be part of MK DASS or ISPJR. In the initial operation, the Archive will use the services of an IT specialist through outsourcing.

The **MK DASS manager** will be appointed by the Scientific Council of ISPJR, for a four-year period. S/he will be responsible for the implementation of reliable, adequate and quality data service, and unimpeded functioning of the Archive. The MK DASS Manager should ensure the operation of the Archive to be focused on implementation/execution of its strategic goals, which are predetermined and clearly defined. S/he needs to take care of the continuous development of skills and abilities of employees.

The MK DASS Manager will be also responsible for establishing and maintaining good external relationships with key stakeholders and cooperating institutions. S/he will be responsible for successful presentation of the Archive and its mission outside the organization. The MK DASS Manager should be able to communicate in a positive manner in order to promote the need for open access to research data while emphasizing the benefits that this approach provides, to underline the importance of transparency in scientific research in the social science research community and its importance in a wider social context. S/he should also permanently monitor the compliance with international standards in the field of data management and preservation, and collaborate with the wider scientific community in the field of collecting and distributing data.



The **Data specialist** has duties and responsibilities related to the entire process of data archiving - solicitation, curation, preservation and dissemination of research data. The data specialist will also be engaged in training in data management and methodology of scientific research for researchers, and Open access initiative promotion.

The **IT specialist** is responsible for the overall technical support of the system and ensures appropriate functioning of the Archive in its storage, preservation, and dissemination activities. S/he will also be responsible for maintaining the website of the MK DASS.

Job descriptions

MK DASS manager

Responsibilities and duties:

- » achieves defined strategic mission and goals of the organization;
- » prepares strategic and operational plan for the next three years;
- » assures financial viability: Planning, allocating and controlling financial resources;
- » makes decisions: Organizing, coordinating and supervising daily activities according to international standards for data management and data preservation;
- » develops plan for continuous improvement of the quality of work: Ensures employee training and development through participation at conferences, workshops, seminars, and trainings on data management, metadata documentation, data preservation, and other fields relevant for the work of the MK DASS;
- » permanent monitoring of compliance with the international standards in the field of data management and preservation;
- » reports about MK DASS activities to the Managing Director of ISPJR and to the Scientific Council of ISPJR;
- » establishes relations and collaboration with designated communities, stakeholders and partner institutions/organizations;
- » collaboration with the wider scientific community in the field of collecting and distributing data;
- » open access initiative promotion;
- » initiates and conducts international cooperation;
- » manages the application processes for both national and international projects.



Required knowledge, skills and abilities:

- » PhD in the field of social science;
- » specific knowledge in data preservation and data management;
- » excellent knowledge in international standards in the field of data management and preservation;
- » English language proficiency;
- » experience and knowledge in related international projects and project management;
- » reference in the field of data management and data archiving;
- » good management skills and communication skills, skills for team leader;
- » solid social networking skills;
- » a positive attitude regarding research transparency and a proponent of open data.

The MK DASS Manager:

- » reports to the Managing Director of ISPJR;
- » supervises the Data specialist and IT specialist;
- » works with all Institute sectors, units, centers and labs;
- » role outside the ISPJR: establishing and maintaining good external relations, which means close collaboration with stakeholders and beneficiaries, as well as partnership with other related national and international data services or corresponding regional and international organizations.

Data specialist

Responsibilities and duties:

- » to solicit and acquire quantitative and qualitative data;
- » metadata and data quality control and processing;
- » preparation of data for secondary use; data conversion in different formats if needed;
- » manages and controls access to research data;
- » mediates communication between registered data users and data providers;
- » provision of data services to third parties;
- » provision of training in data management and methodology of scientific research for researchers.



Knowledge, skills and abilities:

- » minimum of bachelor degree in social sciences;
- » excellent knowledge in quantitative and qualitative research methodology and related research data;
- » specific knowledge in data preservation and data management;
- » knowledge of statistics and statistical software packages and tools;
- » English language proficiency;
- » good communication skills;
- » ability to work in a team.

The Data specialist:

- » reports to the MK DASS Manager;
- » works with the IT specialist and all Institute sectors, units, centers and labs;
- » role outside the ISPJR: communication and close collaboration with data depositors and data users.

IT specialist

Responsibilities and duties:

- » manages the servers, hardware and software used for storage and distribution of data;
- » performs regular backup and system recovery;
- » maintains and updates the website of MK DASS.

Knowledge, skills and abilities:

- » Bachelor degree in computer science and engineering;
- » knowledge of server and network protocols;
- » English language proficiency;
- » knowledge and skills in adaptation of new or different technologies;
- » good communication skills;
- » ability to work in a team.

The IT specialist:

- » reports to the MK DASS Manager;
- » works with the Data specialist.



Partner support and cooperation

At this stage of development MK DASS has good relationship and support from FORS from Switzerland, ADP from Slovenia, the Institute of Economic Sciences, Belgrade, FFZG from Croatia, other partners from SEEDS and RRPP data rescue project², and CESSDA. These projects and collaboration with partner institutions significantly increased the capacities of the staff from ISPJR for data curation, as well as contributed to the organizational development for the future role of a national data service.

It is important that we have two main groups of partners: already well-established and developed data archives (FORS, ADP) from which we can learn a lot, and also partners at a similar level of development – in the process of establishing data archive - which provides us with the opportunity to share similar experiences.

At the very beginning, in addition to international partners and research institutions, our key national stakeholders will be the Ministry of Education and Science – a crucial institution in establishing the MK DASS as a part of national scientific infrastructure.

The next group of institutions are the producers and users of data: Macedonian Academy of Arts and Sciences, the Inter-University conference of the R. Macedonia, a long list of faculties and institutes, NGOs and think tanks, which will be most interested in using the services of the Archive. To this group of depositors/users of data, we could add the chambers of commerce, but also offices in R. of Macedonia of some international organisations, like the EU, the World Bank, or different UN agencies.

As a group of special partners with whom we could cooperate and share experiences, we note: the State Statistical Office of the R. Macedonia, the National Archive of the R. Macedonia, and the National and University Library St. Clement of Ohrid- Skopje.

² RRPP Data Rescue Project (May 2016 - January 2017) – RRPP programme (<http://www.rrpp-westernbalkans.net/en/News.html>) was active from 2008 until 2017 and during this period about 100 projects were financed (19 in Macedonia), and most of it gathered primary data. During this project staff from ISPJR did the work of curating and archiving the RRPP data, supported by the long-established national data services in Switzerland (FORS) and Slovenia (ADP).



Afterword

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