



Data Archive for Social Sciences in Bosnia and Herzegovina

Notes Before Completing the Application

We have read and understood the notes concerning our application submission.

True

Reviewer Entry

Reviewer 1

Comments:

Reviewer 2

Comments:

CORE TRUSTWORTHY DATA REPOSITORIES REQUIREMENTS

Background & General Guidance

Glossary of Terms

BACKGROUND INFORMATION

Context

R0. Please provide context for your repository.

Repository Type. Select all relevant types from:

Domain or subject-based repository, Institutional repository, National repository system; including governmental

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Brief Description of Repository

DASS-BiH (Data Archive for Social Sciences in Bosnia and Herzegovina) (<https://dass.credi.ba/>) is the national service with a role to ensure long-term preservation and dissemination of social science research data in Bosnia and Herzegovina (BiH). It is an organisational unit of the Centre for Development Evaluation and Social Science Research – CREDI (<https://crediba.ba/en/>). The data archive aims to provide a vital research data resource for researchers, teachers, students, and all other interested users. In addition to long-term preservation, the DASS-BiH performs data-level curation, including brief checking, basic metadata and/or documentation, creating new formats, and enhancing documentation; it also edits the deposited data for accuracy.

Repository Type: DASS-BiH can be seen as a domain or subject-based repository, institutional repository, and national repository system. It is a subject-based repository for the long-term preservation of data collected from social science research in the following fields: economy, education, employment and labour, political science, psychology, sociology, society and culture, and social welfare policy. As its managing institution is in social science research, data collected within CREDI's projects are preserved in DASS-BiH, which is therefore seen as an institutional repository as well.

Currently, it is the only social science data archive in the country, listed by the CESSDA-ERIC (<https://www.cessda.eu/>) as a partner for Bosnia and Herzegovina. We are in the process of obtaining official recognition of our status as a national data archive, issued by the state Ministry of civil affairs (<http://www.mcp.gov.ba/?lang=en>), which is in the mandate for science and education in the country.

Brief Description of Repository: The scope of the collection in DASS-BiH includes any quantitative and qualitative data that fulfill conditions covered under CTS Requirement #8 Appraisal. Currently, traditional-scale data are being processed; however, DASS-BiH remains open for collaboration with different stakeholders and owners of large-scale or "big-data".

More about the description of data can be found in the Preservation policy, section 2.3

(<https://dass.credi.ba/wp-content/uploads/2021/05/Preservation-policy-DASS-BiH-version-2.pdf>).

Based on the CREDI's statute, it acts as a parent institution of DASS-BiH. As part of the CREDI, DASS-BiH is managed in the governance structure of the centre (<https://dass.credi.ba/governance-structure/>). The Head of the data archive is directly responsible to the Director of the centre and the Scientific Board (<https://dass.credi.ba/partner-universities/>), which supervises activities of the data archive. Besides the Director and the Scientific Board, the work of the DASS-BiH is evaluated in the scope of activities connected to the Academic Advisory Board of CREDI

(<https://crediba.ba/en/academic-advisory-board/>) and the CREDI Research Ethics Committee

(<https://crediba.ba/en/research-ethics-committee/>). The Scientific Board members are mainly representatives of respective universities, ministry of education and science on national and entity level, the statistical office of BiH, FBiH and RS,

independent researchers. The Board representatives advise upon the future direction of DASS-BiH development in their two regular sessions per year.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Accept

Brief Description of the Repository's Designated Community.

Currently, primary users of DASS-BiH services are university researchers and teachers, university students (doctoral, master, bachelor) and researchers from other public research institutions (e.g., scientific institutes, government organisations). Researchers from NGOs and private research companies, secondary school teachers and students, journalists, businesses, professional organisations, etc., are a community of users of data archive services. DASS-BiH services are free of charge for all users for non-profit use, but fees may be applied for commercial use. Provision of data archive services to its end users is defined under CREDI Open Access Policy, under Section 4 (<https://credi.ba/en/wp-content/uploads/2020/11/CREDI-Policy-for-Open-Access-to-RI-public-version-web.pdf>). The archive stores mainly quantitative data but can accept qualitative data as well. As an organisational unit of the CREDI, DASS-BiH is involved in technical support to research projects in parts related to data management. Its involvement starts from the research planning, training to the young career researchers, guidance through the research project implementation and at the end, storing and keeping data for future use by other researchers. This support allows the data archive to communicate actively with its designated community. Active participation in the whole research project life-cycle gives us the possibility to intervene in the early stage of research project development to ensure the appropriateness of the data for long-term preservation. The support provided to researchers in planning and implementation of research projects is limited only to studies implemented in Bosnia and Herzegovina, while the data stored in DASS-BiH are provided to all researchers worldwide.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Accept

Level of Curation Performed. Select all relevant types from:

C. Enhanced curation – e.g. conversion to new formats; enhancement of documentation

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Comments

DASS-BiH is entitled to provide the following services for its depositors and users: collection, validation, data conversion, distribution of data collections; administration of network/system specialised in collecting, storing, and distributing data; assuring quality and safety of data collections within data management activities; permanent monitoring of international standards in data management systems and improving infrastructure when needed; mediation between the demand of data users and supply of data providers (contracts for deposit and distribution of data, admission requirements, testing, etc.); customer support; activities related to web portal development and maintenance; providing of services to third parties and user training. DASS-BiH provides enhanced curation for the deposited datasets at our current level of development, including preparation of metadata files and necessary activities related to data anonymization, conversion of data formats to those suitable for long-term preservation, as well as activities related to maintaining accessibility and findability of data.

Reviewer Entry

Reviewer 1

Comments:

Thank you for the update to "C. Enhanced curation"

Reviewer 2

Comments:

Insource/Outsource Partners. If applicable, please list them.

To maintain functional operations, DASS-BIH outsourced IT support and website design and maintenance to WEBFabrika (<https://www.webfabrika.ba/>). The services include the regular maintenance of the IT equipment, both for its staffs' and repository hardware (servers and associated equipment) and, when needed, tasked to check or update installed software. The company in charge of maintenance is in a contractual relationship with CREDI, defined under a non-disclosure agreement. Based on the contract, the company provides services following ethical procedures prescribed by CREDI's Research Ethics Committee, which determined that any third party is not allowed to enter, transfer or change the data stored at any piece of equipment.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Summary of Significant Changes Since Last Application (if applicable).

Reviewer Entry

Reviewer 1

Comments:

Reviewer 2

Comments:

Other Relevant Information.

Reviewer Entry

Reviewer 1

Comments:

Reviewer 2

Comments:

ORGANIZATIONAL INFRASTRUCTURE

1. Mission/Scope

R1. The repository has an explicit mission to provide access to and preserve data in its domain.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Accept

Response:

The mission of the DASS-BiH is to ensure the long-term preservation of the data in social sciences in BiH for their reuse in the future (<https://dass.credi.ba/about-dass-bih/>). Data collected are the ones from social science research in the following fields: economy, education, employment and labour, political science, psychology, sociology, society and culture, and social welfare policy. Other disciplines can be included as well, as far as they produce data by using methodologies of the social sciences and cover issues on society and economy.

The main functions of DASS-BiH are:

- Acquiring essential research data from research projects that offer evidence and improved understanding of BiH society or parts of it (including international surveys). It also includes the data from research projects where researchers from Bosnia and Herzegovina are involved.
- Appraisal of submitted research data and their selection for deposit. Data are selected based on the general interest for social science research (quality and exemplary studies with analytic potential), especially data from comparative or continuous research (panel data, longitudinal surveys, and time series that allow examination of trends). The data accepted should be produced with methodological excellence, ensuring the balance between investments undertaken in dealing with research data and their benefits of further usage.
- Ingesting and processing data and other documentation that are part of the Submission Information Package (SIP), including brief checks of data anonymization and data consistency, preparation of metadata files, the transformation of data/data files in formats for long-term preservation and preparation of Dissemination Information Package (DIP).
- Long-term digital preservation. - All data files are saved in delimited .csv format using ASCII, while all documentation is in PDF format
- Enabling data to be found by providing a unique ID study number and used respecting category of the level of access.
- Providing training to researchers on planning, collecting and preparing data for SIP and DIP.
- Actively promoting the secondary usage of research data through training of users, organisation, and participation in events to encourage data usage and active communication with our designated community.

Policies and procedures are subject to regular evaluation and review to ensure the continued relevance of the DASS-BiH processes and to detect any changes needed. Therefore, they go under periodic review every two years. Employees at the DASS-BiH are responsible for monitoring the data archive community and technological development and updating the policies when needed. The latest version of the relevant policies aimed at external users is published on the DASS-BiH website. Procedures aimed only for internal uses, such as management procedures, are communicated to employees regularly. Data management plans are an integral part of broader organisational practices in CREDI, under which DASS-BiH operates.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

2. Licenses

R2. The repository maintains all applicable licenses covering data access and use and monitors compliance.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Accept

Response:

DASS-BiH is not a legal entity itself; CREDI is its managing organisation. CREDI complies with all regulations relevant to research organisations and/or foundations at different administrative levels in BiH. According to the administrative division of BiH, it consists of three units, namely the Federation of Bosnia and Herzegovina (FBiH), Republic Srpska (RS) and Brčko District. In addition, there are ten cantons in the FBiH. Therefore, different types of legislation are made at the national, entity and cantonal levels. Moreover, the operations and procedures in DASS-BiH are in line with the relevant regulations related to the preservation of its datasets and providing access to them, as follows:

- The Law on Copyright and Related Rights of BiH (Official gazette BiH 63/09) - <https://www.wipo.int/edocs/lexdocs/laws/en/ba/ba004en.pdf>
- The Law on Protection of Personal Data of BiH (Official gazette BiH 49/06, 76/11 and 89/11) - <https://www.refworld.org/pdfid/4d2ee2b72.pdf>
- A Framework Law on Scientific Research Activities and the Coordination of Internal and International Scientific Co-operation in BiH (2009) - <https://wbc-rti.info/object/document/7413>
- Strategy for Development of Education and Science of Canton Sarajevo for 2017-2022 (2017) - http://zpr.ks.gov.ba/sites/zpr.ks.gov.ba/files/strategija_razvoja_ks_2021-2027._strateska_platforma_nacrt_prosirena_verzija_0.pdf
- The specified legal relation between depositors, users and other third parties
- Regulation of international donors related to social science research projects.

The relationship between the depositor and the DASS-BiH is based on the deposit agreement

(<https://dass.credi.ba/wp-content/uploads/2021/03/Depositor-licence-agreement.pdf>), along with the General Terms and Conditions of Use (GTCU -

<https://dass.credi.ba/wp-content/uploads/2020/06/General-Terms-and-Contitions-of-Use-web.pdf>) that are part of the deposit agreement. Depositors may only deposit their own work and will be expected to sign the data deposit agreement.

The agreement:

- confirms the rights and obligations of both parties;
- specifies that DASS-BiH shall ensure through its resources that a deposited dataset is archived sustainably and remains accessible;
- determines that DASS-BiH has the right to modify the format and functionality of datasets if this is needed for long-term preservation;
- specifies conditions under which a dataset is provided to third parties;
- stipulates that the depositor has cleared all permissions and the possible unresolved rights of third parties.

The relationship with users of the datasets is based on the GTCU, which are related to:

- the use of data;
- the special restrictions applied to datasets with personal data according to The Law on Protection of Personal Data of BiH;
- the required bibliographic reference to the dataset;
- the disclaimer about “No content liability by DASS-BiH”.

Based on legal grounds prescribed by applicable laws in the country and research ethics, deposit and access management is managed using procedures described in GTCU, which is a policy describing procedures during and after usage of the data and liabilities and responsibilities of DASS-BiH and related parties.

According to GTCU, the user is obliged to accept terms and conditions of use before accessing the data. If he/she refuses to accept terms and conditions, access to data is not provided. The permission provided to the user is limited only to him/her and thus cannot be transferred to another person/institution. It is provided only for the purpose given in the user request form (https://dass.credi.ba/wp-content/uploads/2021/03/User-request-form_memorandum.pdf). If he/she wants to use data for another purpose, he/she has to complete the user request form again claiming the new purpose which goes under the approval procedure. The user needs to assure that data are protected from the access and use of third parties. The data user is obliged to use data only for the use indicated in the user request form and is obliged to securely delete the data file after use. The user is expected to respect professional and institutional ethical codes of conduct and will in the event of uncertainty consult with the DASS-BiH. DASS-BiH reserves the right to disable access of a data user if it can prove that a user has violated the terms and conditions of use. In the case of non-compliance with the agreement or GTCU, the opinion of the CREDI Research Ethics Committee is asked and the user is blacklisted for the amount of time defined under the decision. In the case of criminal conduct or violation of the applicable laws, the provisions of CREDI Open Access to Research Infrastructure Policy (<https://credi.ba/en/wp-content/uploads/2020/11/CREDI-Policy-for-Open-Access-to-RI-public-version-web.pdf>) under Section 9 Dispute Settlement are applicable.

Reviewer Entry

Reviewer 1

Comments:

Accept. Thank you for updating with more information about legal penalties in the case of significant noncompliance.

Reviewer 2

Comments:

Accept

3. Continuity of access

R3. The repository has a continuity plan to ensure ongoing access to and preservation of its holdings.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Accept

Response:

As an integral part of CREDI, DASS-BiH receives structural lump-sum financing from CREDI, based on the procedure described under section 6 in the CREDI Open Access Policy document (<https://credi.ba/en/wp-content/uploads/2020/11/CREDI-Policy-for-Open-Access-to-RI-public-version-web.pdf>). CREDI will take over responsibility for the data files archived in DASS-BiH and store them elsewhere in the case of discontinuity of DASS-BiH, as stated in the Preservation policy, under section 2.6 (<https://dass.credi.ba/wp-content/uploads/2021/05/Preservation-policy-DASS-BiH-version-2.pdf>). In such a circumstance, CREDI's responsibility is to ensure that data and metadata are stored in the most responsible manner possible and under identical conditions.

Access is assured using appropriate local equipment and procedures for long-term digital storage, including the backup process. In the storage phase, datasets are stored on two separate external storage units to provide duplicate versions. One of the storage units represents the original version of the SIP, and the second one is used for the backup procedure. Besides staff members who manage the continuity of access by daily monitoring all implemented technical infrastructure pieces, the contracted IT company is in charge of the monthly check-up and maintenance of hardware and software. Following the contractual obligations, it can be tasked in emergencies to allow access to the webpage and some basic services (search and filtering the catalogue content) related to Data Catalogue.

All equipment, including hardware and software used for DASS-BiH activities, is secured within CREDI's risk disaster management plan (available only internally). The plan includes defined procedures in the case of fire, flood, earthquake or any case that can cause damage on equipment installed in CREDI's premises.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:

4. Confidentiality/Ethics

R4. The repository ensures, to the extent possible, that data are created, curated, accessed, and used in compliance with disciplinary and ethical norms.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:
4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:
4 – The guideline has been fully implemented in the repository

Response:

Researchers in social sciences often deal with personal or other sensitive data that could be subject to the confidentiality of their research subjects. DASS-BiH follows all relevant codes of ethics of the social science research community (<https://dass.credi.ba/legal-and-ethical-procedures/>). They can find the legal ground for protecting research subjects in The Law on Protection of Personal Data of BiH (Official gazette BiH 49/06, 76/11 and 89/11) - <https://www.refworld.org/pdfid/4d2ee2b72.pdf>.

The CREDI's Research Ethics Committee tracks whether all practices implemented in DASS-BiH comply with legal and ethical principles (<https://credi.ba/en/research-ethics-committee/>). A member of the Research Ethics Committee, tasked to oversee procedures in DASS-BiH, is a person with legal background with at least five years of experience in social science research. The inspection of the compliance with legal and ethical norms is done before the acceptance of the study. When needed, an opinion of the Ethics Committee is asked, and the study cannot be accepted if the argument about the legal and ethical norms is not favourable. The data depositor's responsibility is to ensure that all the study participants are protected against unnecessary damage, appropriate consent is collected for all participants, and that all methodological standards are applied.

According to the data deposit agreement, it is the liability of the data provider to assure that research data are collected

with confidentiality and protected against disclosure risks during the study. Since DASS-BiH follows OAIS (Open Archival Information System - <http://www.oais.info/>) model with the pre-ingest phase, if involved, we can intervene in the early stage of a research project to ensure that all legal and ethical procedures are followed in terms of acceptance of data sets for long-term preservation in DASS-BiH. The protection of confidentiality in DASS-BiH is performed in two ways:

1. anonymization of data – we only accept data that are anonymised and briefly check this in the ingest phase; if data don't meet these criteria, we offer training in data anonymization to data depositor, or if requested, we perform data anonymization and assure that all links with real subjects are destroyed
2. managing access to various types of data for different types of users. There are two general categories for data access:
 - a. Unrestricted access: Users may freely access the catalogue (<https://dass.credi.ba/data-catalogue/>) at the DASS-BiH webpage and read basic information about the data collections without any registration. Next to the name of each data collection, the notification about the access category is provided (F – free access; R – restricted access). To download the data collection in the unrestricted access category, you will have to accept terms and conditions and fill in and send the user declaration form to DASS-BiH.

- b. Restricted access: Some data collections are accessible only under particular conditions. To get access to these data collections, the user needs to fill in the request form. Then the user request goes under approval procedure, and after signing the user agreement between the user and the DASS-BiH, the dataset is transferred to the user. Suppose the user requests data sets that include sensitive data. In that case, he/she may be obliged to access data only in the DASS-BiH, within the Data Lab. The user can only take the results produced after data usage and inspection by the DASS-BiH staff, as described in the Data Lab Access Procedures (available internally) (<https://dass.credi.ba/data-lab/>). The DASS-BiH will notify the user that the request is received and respond no later than seven working days. If the prior approval of the original author needs to be acquired, the DASS-BiH communicates with the original author to seek permission. Employees in DASS-BiH are trained to provide these services. All employees are required to sign a Confidentiality statement (available internally) before being able to work with data. The statement includes a description of measures that are in place if confidentiality and ethical procedures are breached, including termination of employment contract and, if needed initiating legal actions.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

5. Organizational infrastructure

R5. The repository has adequate funding and sufficient numbers of qualified staff managed through a clear system of governance to effectively carry out the mission.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

DASS-BiH is an integral part of CREDI and not a legal entity itself. Based on the CREDI's statute, it acts as the parent institution of DASS-BiH. As part of the CREDI, DASS-BiH is managed in the governance structure of the centre (<https://dass.credi.ba/governance-structure/>). The Head of the data archive is directly responsible to the Director of the centre and the DASS-BiH Scientific Board, which supervises activities of the data archive (<https://dass.credi.ba/partner-universities/>). The DASS-BiH Scientific Board members are mainly representatives of respective universities, ministry of education and science on national and entity level, the statistical office of BiH, FBiH and RS, independent researchers. The DASS-BiH Scientific Board has an odd number of representatives who have two regular sessions a year. Besides the CREDI Director and the DASS-BiH Scientific Board, the work of the DASS-BiH is evaluated in the scope of activities connected to the CREDI Academic Advisory Board (<https://credi.ba/en/academic-advisory-board/>) and the CREDI Research Ethics Committee (<https://credi.ba/en/research-ethics-committee/>).

Currently, it is the only social science data archive in the country, listed by the CESSDA-ERIC as a partner for Bosnia and Herzegovina (<https://www.cessda.eu/>). We are in the process of obtaining official recognition of our status as a national data archive, issued by the state Ministry of civil affairs, which has the mandate for science and education in the country. Recognising the archive as a national archive provides an opportunity for long-term financing and sustainability. Despite the smallness of the organisation, there are sufficient staff to fulfil the mission and working tasks of DASS-BiH, given the current number of datasets received (one dataset per month on average) and dataset requested (less than one dataset per month on average). Currently, the staff of DASS-BiH includes two full-time positions and two part-time positions. The roles and the term position of individual staff members are the following:

- Head of DASS-BiH, full-time
- Head of Training, part-time
- Data manager, full-time
- Archivist (SIP)/ Archivist (DIP), part-time

The roles and responsibilities of our team members are described in Preservation policy, Section 2.7 (<https://dass.credi.ba/wp-content/uploads/2021/05/Preservation-policy-DASS-BiH-version-2.pdf>). DASS-BiH staff is involved in training on the national and international levels. Our team is included in training provided both by the

CESSDA-ERIC network and members of the network. In this way, appropriate technical and professional digital data storage and data management practices are assured to follow current international standards.

The current and new staff in DASS-BiH have to reach certain conditions to work in the archive. These requirements in terms of knowledge and qualifications are asked and developed internally during training provided by more experienced staff members. Following qualifications have to be obtained:

- knowledge of digital preservation in general,
- expertise in specific formats,
- basic (or advanced) IT and statistical capabilities (depending on the work role),
- communication and organisational skills for cooperation between internal staff members, depositors and end-users,
- executive and management skills for overall planning (strategy, resources) and the coordination of the different archival functions.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

6. Expert guidance

R6. The repository adopts mechanism(s) to secure ongoing expert guidance and feedback (either inhouse or external, including scientific guidance, if relevant).

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:
4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:
4 – The guideline has been fully implemented in the repository

Response:

As a data archive in social sciences, DASS-BiH is included in the broader national and international community of data archives. It actively follows global developments in the field and tries to introduce them into the national context. As an archive oriented to its designated community, we actively promote secondary data usage by organising different events, workshops, roundtables, training and webinars. These events are intended for various participants of the scientific research community, researchers, heads of institutions, policymakers, international donors and others.

As the only social science data archive in the country, we are representing BiH in CESSDA-ERIC which stands for Consortium of European Social Science Data Archives – European Research Infrastructure Consortium (<https://www.cessda.eu/>). Membership in CESSDA-ERIC enables professional development and monitoring of recent technological improvements in the discipline. As a member of CESSDA-ERIC, the archive can obtain necessary information about technical advancements and communicate with other archives in social sciences to maintain a high level of services to its end-users. Current and new staff employed in the archive are entitled to participate in training provided by CESSDA-ERIC or CESSDA-ERIC members. We are also a regular member of OpenAIRE (<https://www.openaire.eu/>), enabling us to join the initiative for open data access which we promote in our country. For the outsourced services, which are currently related only to the IT services described under CTS Requirement #0 Context, DASS-BiH communicates with the professionals in their respective discipline to ensure the application of the most relevant solutions for its designated community.

DASS-BiH regularly communicates with its designated community of researchers. As part of the communication, we ask for feedback on our service, including a periodic users' satisfaction survey. Findings from regular contact and the conducted surveys improve our services towards different target users to fulfil their needs.

Adopted practice in the organisation of training in DASS-BiH is to ask the users at the point of registration for the training/event/workshop about their existing knowledge in the form of a pre-test. We tailor the training to the individual needs of a group of participants and test them in the form of a post-test. Then, we compare answers from these two tests and use feedback from participants to plan future training. In addition, participants at training are asked to fill in the evaluation form with questions about the organisation, venue, lecturers and logistical preparation. We use this information for making plans for training.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Accept

DIGITAL OBJECT MANAGEMENT

7. Data integrity and authenticity

R7. The repository guarantees the integrity and authenticity of the data.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

Following the mission of DASS-BiH to preserve data for the long-term, protection of data integrity and authenticity are at the core of all processes and procedures in the archive. Ensuring that archived data is protected against unauthorised access and representing the original data collector's content is the responsibility of all staff employed in the repository. All operations in DASS-BiH are in line with the OAIS model (<http://www.oais.info/>), wherein in the ingest phase, we check the depositor and the submitted dataset and documentation. According to the General Terms and Conditions of Use, the DASS-BiH can deny the deposit of a proposed study if it finds that some of the prescribed GTCU rules are breached (<https://dass.credi.ba/wp-content/uploads/2020/06/General-Terms-and-Contitions-of-Use-web.pdf>). This denial may also include the opinion of the CREDI Research Ethics Committee (<https://credi.ba/en/research-ethics-committee/>). Data depositors and data producers are interlinked with their respective institutions (in the metadata of the SIP). We maintain a record of where data originate (provenance) by assigning a reference number to each study/research project and dataset, both permanent and unique. If available, we also collect ORCID (Open Researcher and Contributor ID - <https://orcid.org/>) for identifying researchers. Metadata files contain these data and are communicated to the users.

At the point of deposit, we perform a basic check which is documented using logs, which can be delivered to users upon request. We perform these checks using STATA and compare results obtained within this procedure with the descriptive statistics attached to the SIP. Logs created during this procedure are then saved within the same study folder. For the qualitative studies, the Data manager enters the submitted files and checks whether the content in the files are those described under the List of Deposited Materials, which is part of the Deposit Agreement (<https://dass.credi.ba/wp-content/uploads/2021/03/Depositor-licence-agreement.pdf>). Data check procedures are described in the Workflow procedures (available only internally). After the study is submitted and receives its unique study ID number, all revisions to the study are then made based on the Internal handbook on versioning (available only internally). If the small change is applied, this is noted as revision; the more significant transformations are marked as versions reflected in the study name. The latest version of the study is available under the Data Catalogue study description and in the metadata file.

We always preserve the original file as received from the data depositor. All changes are documented at the level of data files. For the quantitative data, we are using logs in STATA for the changes related to the content of the dataset, while for any changes related to qualitative data and the study description or metadata file, we are using the format in which the original file is submitted and highlight the changes by indicating the version of the document. Following the Workflows

procedure, it is possible to trace these changes back to the original version of the data file in each step. The changes in documentation, study description or any other additional materials are noted down and made visible under the version name of the individual files. Data users are given access to the latest version of the dataset; they have to apply for the earlier versions.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Accept

8. Appraisal

R8. The repository accepts data and metadata based on defined criteria to ensure relevance and understandability for data users.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

DASS-BiH is the social science data archive and preserves data in social sciences, including economy, education, employment and labour, political science, psychology, sociology, society and culture, and social welfare policy. Other disciplines can be included as well, as far as they produce data by using methodologies of the social sciences and cover issues on society and economy.

To be deposited in the DASS-BiH, any quantitative and qualitative data need to fulfil some or all of the following conditions:

- the data are from a research project that offers evidence and improved understanding of BIH society or parts of it (including international surveys),

- the data are of general interest for social science research (quality and exemplary studies with analytic potential),
- the data are from a research project where researchers from Bosnia and Herzegovina are involved,
- the data are from comparative or continuous research (panel data, longitudinal surveys, and time series that allow examination of trends),
- the data are produced with methodological excellence.

Currently, traditional-scale data are being processed; however, DASS-BiH remains open for collaboration with different stakeholders and owners of large-scale or "big-data". Eligible depositors are researchers, research institutions, government departments, offices of national statistics, and public and commercial sector sources. The collections policy (<https://dass.credi.ba/wp-content/uploads/2021/05/Archival-Acquisition-Policy-DASS-BiH-v1.pdf>) indicates the principles and criteria by which the archive develops its data collection to serve the designated community. The policy is flexible and responds to future developments and shifting requirements that will influence the archive's data collections (technology, scientific standards, thematic focus, etc.).

At the point of the deposit, we collect the following information: Completed Survey Description Form; Instrument used in the study; Technical characteristics of the deposited dataset; Codebook and metadata file (table); Frequency statistics for all variables; Research report. At least metadata should be available online respecting all FAIR principles if the dataset is in the restricted access category. If not available at the deposit point, a depositor is asked to provide it, offered training or asked to consent to the DASS-BiH to produce a metadata file. If the depositor still does not comply with this, the deposit is refused.

Data producers are adhering to the preferred data formats defined under Archival Acquisition Policy (<https://dass.credi.ba/wp-content/uploads/2021/05/Archival-Acquisition-Policy-DASS-BiH-v1.pdf>). If the dataset at the point of submission is not in the preferred data format, the data depositor is directed toward transforming the dataset into the preferred format. If possible, DASS-BiH can intervene and transform the dataset into the preferred format. In addition, DASS-BiH transforms datasets into the format for long-term preservation (for example in .csv format).

If we change the access category of objects in our collection, metadata remains available and the study description is updated with the information that the object is no longer available to the users in the unrestricted access category. This change can be imposed only based on the data depositor request, where he/she asks for a temporary embargo on data published in the unrestricted access category for a specified amount of time or is asking to change the original Depositor Licence Agreement related to articles specifying the access category (i.e. changing the access from unrestricted to restricted access). The reasons for changing the access category has to be explained in the request for change of the original licence agreement. After receiving a request from the data depositor, objects are temporarily moved from one access category to another. The relevant field in the study description is updated to denote the change. After resolving the request, the access is changed after the specified amount of time expires (in cases of the temporary embargo) or the study description is changed to reflect the change (in cases where the access category is changed for the infinite period). In addition to the data depositor, a change of the access category can be made based on the decision of the CREDI Research Ethics Committee if subsequent inspection reveals that the study breaches ethical conduct. The change imposed by CREDI Research Ethics Committee (<https://credi.ba/en/research-ethics-committee/>) may include only a change of access category, i.e. removing the files from the open access to the restricted access category and the data users are informed about the change in the relevant field of study description and the opinion of CREDI Research Ethics Committee is communicated towards data users together with transferred objects.

Reviewer Entry

Reviewer 1

Comments:

Accept. Thank you for posting your collection development policy to the public site.

Reviewer 2

Comments:

Accept

9. Documented storage procedures

R9. The repository applies documented processes and procedures in managing archival storage of the data.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

Archiving procedures in DASS-BiH are documented in all stages, starting from ingest to dissemination. The procedures are described in the Workflow procedures (available only internally). In the ingest phase, the SIP is kept as a local copy on the Data archives PC and at the one backup external storage unit. The dataset can be provided by a data depositor on the external storage unit or at the shared drive, or by e-mail if this is the case with the data transfer option. After the basic checks are done, the Data Archivist will create the study folder and assign the study ID. The study folder is then kept at the server storage unit (dedicated storage disc unit) which is mirrored to another storage unit (second disc in the same server) representing internal backup copy. The server database is backed up daily following the scheduled maintenance period. The access to the storage server is password protected and access to it is allowed only to the DASS-BiH employees (full-time staff). Additionally, SIP, AIP and DIP are kept on one external hard drive which is password protected and which content is updated when needed and periodically checked (at least monthly) to ensure consistency with the content placed at the server storage unit. The access to the external hard drive is provided only to the DASS-BiH employees and the drive is kept in the premises of the Data Lab which are protected against unauthorised access (alarm and video surveillance). The content of the study folder includes, but is not limited to: dataset, metadata file, depositor

licence agreement, study description, brief check logs, codebooks, publications (if available). The DIP is created based on the access category, contacting at least metadata file and study description.

External unauthorised access to the folder content saved on storage units is regulated within our practices related to the ingest and dissemination. Access to DIP datasets is allowed only to users that fill in the Users' declaration form or Users' request form. For the unrestricted category of datasets, users are only asked to fill in the Users' declaration form (https://dass.credi.ba/wp-content/uploads/2021/03/User-declaration-form_online.pdf) and then are directed towards the download of the dataset. For the restricted access category, users are asked to fill in the Users' request form (https://dass.credi.ba/wp-content/uploads/2021/03/User-request-form_memorandum.pdf) in which they state the reasons that they are seeking the dataset. The request is processed to the data archivist, and every request is assessed separately. Access to the dataset is then allowed through a safe connection environment. If we cannot send the database directly to the user, he/she can visit the archive premises and access the dataset. In this situation, a user can take only the results produced using the dataset, according to the Data Lab Access Policy (available only internally).

In addition to procedures that apply to data users, similar procedures are developed for data depositors. Staff members should ensure that each data depositor receives an e-mail about notification of the decision on acceptance of the study. Staff members are trained to communicate with data depositors if missing documents or datasets need to be transformed into the preferred formats. Suppose data depositors are not able to convert the data into the preferred format. In that case, DASS-BiH is assisting by asking him/her to be included in the list of training opportunities provided by DASS-BiH and are notified about them in advance or we change the format by ourselves.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

10. Preservation plan

R10. The repository assumes responsibility for long-term preservation and manages this function in a planned and documented way.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:
4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

DASS-BiH has developed a system for digital preservation and describes it in the Preservation policy (<https://dass.credi.ba/wp-content/uploads/2021/05/Preservation-policy-DASS-BiH-version-2.pdf>). The requirements of the OAIS (<http://www.oais.info/>) model are followed to ensure that users can understand digital content without needing assistance from the experts who created it. In addition to the study description describing the content and aims of the study, metadata files at the level of the dataset and, where applicable, at the level of objects included in the study (for example, focus group transcripts) are available. Data users are offered assistance by the DASS-BiH staff if they don't understand the content, both by online support (<https://dass.credi.ba/contact/>) and supervision, the support provided within Data Lab premises (<https://dass.credi.ba/data-lab/>).

The scope of preservation policy is limited only to the DASS-BiH, and it deals with all aspects of preservation and applies to all digital resources within the archive. This plan does not consider preserving other materials such as CREDI and DASS-BiH web pages or internal documents. The preservation plan follows various external guidelines and standards for digital preservation, such as OAIS (<http://www.oais.info/>), the FAIR principles (https://ec.europa.eu/info/sites/info/files/turning_fair_into_reality_0.pdf), GDPR (<https://gdpr-info.eu/>), and CESSDA-ERIC (<https://www.cessda.eu/Training/Training-Resources/Library/Data-Management-Expert-Guide>) recommendations.

The basic strategy of digital preservation in the DASS-BiH is normalization at ingest. For this purpose, the DASS-BiH has set rules of appropriate formats of data files that are being accepted from data providers, as well as from them arising formats for long-term digital preservation

(<https://dass.credi.ba/wp-content/uploads/2021/05/Archival-Acquisition-Policy-DASS-BiH-v1.pdf>)

Our preservation strategy is based on the main aims of digital data archive that are:

- Preserving data integrity: ensuring that the archived data are protected against unauthorised alteration.
- Preserving authenticity: ensuring that the digital objects come from a documented originator and that they are what they purport to be.
- Completeness: it is clear that no parts of the digital object are missing by checking the content of the SIP in the ingest phase.
- Preserving usability: it is possible to show and interpret at least the most recent version of a digital information object at any time. In this context, it is essential to provide up-to-date information about the version of the dataset provided to end-users, and if applicable, which formats occur for each version.
- Preserving locatability: by assigning a unique Study ID.
- Preserving confidentiality: taking into consideration relevant legal rules, ethical and disciplinary standards.

Preservation policy is subject to regular evaluation every two years, which content is discussed by the Scientific Board (<https://dass.credi.ba/partner-universities/>) and considers recommendations from CREDI Academic Advisory Board (<https://credi.ba/en/academic-advisory-board/>) and CREDI Research Ethics Committee (<https://credi.ba/en/research-ethics-committee/>).

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

11. Data quality

R11. The repository has appropriate expertise to address technical data and metadata quality and ensures that sufficient information is available for end users to make quality-related evaluations.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:
4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:
4 – The guideline has been fully implemented in the repository

Response:

During curation for quality, the DASS-BiH ensures maintaining formats for long-term preservation, that metadata is available online, with persistent identifiers for datasets, continuously checking whether our resources are findable and accessible. Before reviewing its policies, members of our designated community are asked to fill in the questionnaires asking for information about the reuse of data provided in the DASS-BiH Data catalogue (<https://dass.credi.ba/data-catalogue/>). As many of the deposited datasets are from our research (note that DASS-BiH is part of the CREDI, which is a research institute), and through active collaboration with universities, we advocate for reusing the datasets. The usage of CREDI resources by internal staff and external users is defined under CREDI Open Access Policy, which applies to the DASS-BiH services (<https://credi.ba/en/wp-content/uploads/2020/11/CREDI-Policy-for-Open-Access-to-RI-public-version-web.pdf>). The DASS-BiH staff responsibility is to check if datasets in the Data catalogue are findable, accessible, process information about interoperability and reuse, and continuously follow improvements in the field, ensuring long-term FAIRness of our resources.

DASS-BiH follows the FAIR principles in its operations

(https://ec.europa.eu/info/sites/info/files/turning_fair_into_reality_0.pdf). In this way, we ensure that data quality is maintained for all digital objects in the repository. In terms of FAIR principles: DASS-BiH uses a unique study ID as a persistent identifier for its digital objects at the level of datasets. All datasets are provided with the unique study ID before they are available in the Data Catalogue. The data catalogue is available online and can be searched using keywords. Metadata use DDI Codebook 2.5 metadata standard and comply with CESSDA-ERIC recommendations (<https://www.cessda.eu/>). There are no digital objects available in a resource discovery system without at least basic information about the dataset and metadata file if the dataset is not available for download.

Data depositors and data producers are interlinked with their respective institutions for the studies deposited directly to DASS-BiH, while for the transferred datasets from other data archives where the information was available. We maintain a record of where data originate (provenance) by assigning a reference number to each study/research project and dataset, both permanent and unique. Following CESSDA-ERIC recommendations, we use CESSDA Topic Classification, which includes CESSDA Mandatory and recommended elements as metadata standard in social sciences (<https://vocabularies.cessda.eu/vocabulary/TopicClassification?lang=en>). As many of our datasets are transferred from other archives (for example, FORS), some of the metadata are created using ELSST (The European Language Social Science Thesaurus) controlled vocabulary (<https://elsst.cessda.eu/#:-:text=The%20European%20Language%20Social%20Science,and%20its%20national%20Service%20Providers>). In this way, links between data and metadata are maintained and aligned with FAIR principles (https://ec.europa.eu/info/sites/info/files/turning_fair_into_reality_0.pdf).

The term reusable in DASS-BiH is understood as the potential to access all necessary information about the study before the user request. Metadata files are communicated to the end-users on the CC0 license with the applied DDI Codebook 2.5 metadata standard. Metadata standards used are based on CESSDA-ERIC recommendations. Current versioning strategy implemented in DASS-BiH guides users to the new versions when the data or metadata are changed, indicating the version in the relevant field of the metadata file. In the ingest phase, based on the Workflow procedures (available only internally), data depositors are asked to fill in the table which is later used for the creation of metadata files. In addition to the table, data depositors are provided with short guidance on how to fill in the table, and if needed one-to-one support is provided. If the data depositor is still lacking the knowledge to create the table, a file is created by DASS-BiH staff and communicated back to the data depositor to ask for approval before including information into the DIP. Then the DASS-BiH staff is converting the table into the preferred metadata format (XML file). Since some of our datasets are transferred from other data archives, metadata files are made available in the received format (e.g. JSON file). We plan to migrate to DataVerse Data Catalogue which enables the creation of different formats of metadata automatically. In the pre-ingest phase, we are also regularly organising training on metadata creation and how to understand the content of the metadata files for all interested researchers.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

12. Workflows

R12. Archiving takes place according to defined workflows from ingest to dissemination.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

Workflows in DASS-BiH are defined in the document Workflow procedures (available only internally) that describe each step following the OAIS Reference Model (<http://www.oais.info/>). Data preservation within the DASS-BiH follows a broader OAIS model with the pre-ingest function. This function is not always part of the OAIS model. Still, it is considered necessary for BiH at this stage, given the current level of skills and experience in data preservation of researchers in BiH. In the pre-ingest phase, DASS-BiH offers guidance and help for data producers wishing to deposit data. This is done by providing training in data management to researchers and providing them technical support and participation in the research design. Data depositors are provided clear instructions about the minimum requirements for a dataset to be deposited and clear instructions on preparing the dataset and documentation properly.

In the ingest phase, datasets that comply with the requirements stated in Section 2.3 of the Preservation policy are collected (<https://dass.credi.ba/wp-content/uploads/2021/05/Preservation-policy-DASS-BiH-version-2.pdf>). The datasets are transferred to DASS-BiH in their original format (if possible, DASS-BiH intervenes in the pre-ingest phase to ensure that the data format is appropriate). If not supported in the pre-ingest phase, researchers in the ingest phase submit the data transformed into preferred formats according to the Archival Acquisition Policy (<https://dass.credi.ba/wp-content/uploads/2021/05/Archival-Acquisition-Policy-DASS-BiH-v1.pdf>). These data are then stored together with the original dataset format. The SIP (Submission Information Package) includes the original dataset, compressed dataset, metadata file, description of the research project/study, the questionnaire or other documentation, and files related to labelling variables (notepad + statistical software version).

In the storage phase, datasets are stored on two separate external storage units to provide duplicate versions. One of the storage units represents the original version of the SIP, and the second one is used for the backup procedure.

DASS-BiH guarantees that its digital resources are identifiable and traceable through its data catalogue and the website. The access phase is regulated with the dissemination information package (DIP). DIP includes datasets – original or small-scale datasets (the ones that ensure the protection of personal data), accompanied by metadata and other

supporting documentation of the dataset. Access rules are regulated within the terms and conditions and agreement between DASS-BiH and the data user.

Reviewer Entry

Reviewer 1

Comments:

Accept

Reviewer 2

Comments:

Accept

13. Data discovery and identification

R13. The repository enables users to discover the data and refer to them in a persistent way through proper citation.

Compliance Level:

3 – The repository is in the implementation phase

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

The data catalogue published at the DASS-BiH website includes all study descriptions of datasets available either for download or for the requested access. Currently, all datasets are in the restricted access category according to the contracts made with data depositors, but features to support a download of datasets that are in the non-restricted access category are developed. Procedures for accessing datasets are described in guidelines for access at the main Data Catalogue page (<https://dass.credi.ba/data-catalogue>). All individual study descriptions include proper navigation towards procedure description, template format for user declaration/request form as well as contact details needed for access approval.

DASS-BiH uses a unique ID study as a persistent identifier for its digital objects at the level of datasets. The data catalogue is available online and can be searched using keywords. Metadata use DDI Codebook 2.5 metadata standard and comply with CESSDA-ERIC recommendations

(https://www.ddialliance.org/Specification/DDI-Codebook/2.5/detailed_changes_to_ddi-2.pdf). Since some of our datasets are transferred from other data archives (for example FORS), original metadata files as received from the prior data depositing repository are made available. There are no digital objects available in a resource discovery system without basic information about the dataset and metadata file at the level of the dataset if the dataset is not available online. The access category is denoted in the description, and the appropriate navigation is applied. The access category is also included in the relevant field of the metadata file (an example of the study description in the catalogue: <https://dass.credi.ba/2020/10/06/to-consume-or-to-self-employ-evidence-from-remittances-use-in-macedonia-bosnia-and-herzegovina-and-kosovo-with-emphasis-on-crisis-gender-and-ethnicity-role/>).

Various formats of data files are available, including for example .csv, STATA (.dta), SPSS (.sav) for quantitative datasets. A user can obtain the list of available formats within the study description. After implementation of the DataVerse Data Catalogue application, we will explore options to enable direct dataset download options, conversation options and online analysis tools.

Users are obliged to cite the study and DASS-BiH as the data source in all publications and presentations that include our data. This refers to the citation in the text, under tables, figures and images and in the list of resources. Recommended citations are provided within the study description, while the obligation is specified under the General Terms and Conditions of Use (<https://dass.credi.ba/wp-content/uploads/2020/06/General-Terms-and-Contitions-of-Use-web.pdf>) Users are obliged to notify the DASS-BiH about any publication or presentation in which the requested dataset is used.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

14. Data reuse

R14. The repository enables reuse of the data over time, ensuring that appropriate metadata are available to support the understanding and use of the data.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:

4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:

4 – The guideline has been fully implemented in the repository

Response:

The term reusable in DASS-BiH is understood as the potential to access all necessary information about the study before the user request. Study descriptions, as well as metadata files, are available online in the Data Catalogue (<https://dass.credi.ba/data-catalogue/>). Metadata files are communicated to the end-users on the CC0 license with the applied DDI Codebook 2.5 metadata standard for those objects that are deposited directly into DASS-BiH (https://www.ddialliance.org/Specification/DDI-Codebook/2.5/detailed_changes_to_ddi-2.pdf). For transferred datasets, metadata files are made available as received from prior depositing institutions. Metadata standards used are based on CESSDA-ERIC recommendations.

Current versioning strategy implemented in DASS-BiH guides users to the new versions when the data or metadata are changed, indicating the version in the relevant field of the metadata file. By default, the latest version of the dataset is available to users. We can deliver prior versions of a dataset to users upon request.

The formats used in DASS-BiH enable long-term preservation. Currently, all metadata files are in XML/JSON format and are available for preview in the browser and download. We periodically check files to ensure they are still functioning. Our versioning strategy is described in the Internal handbook on versioning (available only internally). If the small change is applied, this is noted as revision; the more significant transformations are marked as versions reflected in the study name. Preferred formats for data files and metadata files are prescribed and available online for users. Employees in the archive are trained to transform datasets into preferred formats for long-term preservation. We always keep the original file as received from the data depositor, as well as documentation (e.g. logs) explaining data transformation from SIP to DIP. We also provide training in data preparation and transformation for long-term preservation to our users.

Reviewer Entry

Reviewer 1

Comments:

Accept. Thank you for updating your compliance rating from a 3 to a 4.

Reviewer 2

Comments:

Accept

TECHNOLOGY

15. Technical infrastructure

R15. The repository functions on well-supported operating systems and other core infrastructural software and is using hardware and software

technologies appropriate to the services it provides to its Designated Community.

Compliance Level:

3 – The repository is in the implementation phase

Reviewer Entry

Reviewer 1

Comments:

3 – The repository is in the implementation phase

Reviewer 2

Comments:

3 – The repository is in the implementation phase

Response:

In providing its services, DASS-BiH relies on developed technical infrastructure that supports daily activities within the archive and is suitable to its designated community. Based on users' satisfaction survey responses, the infrastructure is advanced and updated to follow the needs of our users.

The DASS-BiH employees regularly trace new advancements in hardware and software by joining training and following discussions and meetings organised at the level of CESSDA-ERIC, OpenAire and other related infrastructures. When necessary, we apply them in updating and upgrading current technical infrastructure. Currently, our storage is managed on our own storage server unit (Dell Power Edge R720), with the RAID-5 configuration which enables mirroring functionality and regular backup procedures. Additionally, one external hard drive is used for backup procedures. Our Data Catalogue is currently based on the basic web-page application (a WordPress web page) and we are in the process of DataVerse system installation, which should be available to our users before the end of 2022 (<https://dataverse.org/>). Besides internal staff which is regularly tasked to check the accessibility of our resources, maintenance of equipment and software is entrusted to the outsourced IT company. The relationship between the archive and IT company is based on a contract that includes a non-disclosure agreement. In the following development step, we plan to employ an IT expert, which role will be to maintain the system running.

DASS-BiH regularly invests in developing technical infrastructure and continuously test different solutions to better support its users. Our Data Catalogue is currently based on a basic webpage application that is, according to our users, sufficient to support their needs. We provide only access to Data Catalogue (<https://dass.credi.ba/data-catalogue/>) through the webpage application, while the data storage is managed through the procedures described in the Workflow procedures. In the following period, we will explore opportunities of using options in the DataVerse system and the development of an online tool for data analysis.

Since DASS-BiH developed a Data Lab (<https://dass.credi.ba/data-lab/>) internally, with the support of the CREDI Training unit (<https://inquire.ba/>), we offer training, equipment and support for data analysis to our users. We initiated the development of Data Lab based on our users' survey responses, who have struggled to analyse and interpret data. The

need for expert support and mentorship was also recorded. Currently, this service is available only in the CREDI/DASS-BiH premises. We plan to develop online training and support for our users using Moodle platform (<https://moodle.org/?lang=en>).

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

16. Security

R16. The technical infrastructure of the repository provides for protection of the facility and its data, products, services, and users.

Compliance Level:

4 – The guideline has been fully implemented in the repository

Reviewer Entry

Reviewer 1

Comments:
4 – The guideline has been fully implemented in the repository

Reviewer 2

Comments:
4 – The guideline has been fully implemented in the repository

Response:

In terms of security, major data archive concerns are archived datasets. These are secured against at least two known risks: against unauthorised access for data in the restricted access category and physical destruction caused by the action of a force majeure.

The unauthorised access for data in the restricted access category is secured by separating the original SIP from the DIP and producing different database copies for various users' needs. Access to these files is enabled only to users that receive approval on request. When needed Research Ethics Committee is consulted for approval of access to sensitive data stored in the data archive (<https://credi.ba/en/research-ethics-committee/>). Access to sensitive data is granted only in DASS-BiH premises in a secured environment. The access to secured Data Lab (<https://dass.credi.ba/data-lab/>) is available only on request and with well and in-detail explained reasons for data usage. Within the secured Data Lab, data

sets could not be transferred or taken with; the access is granted under the surveillance of staff members and is recorded. Only printed results of the analysis are allowed to be taken out of the DASS-BiH premises after inspection by a staff member. The user is asked before the entrance to Data Lab safe room to sign Terms and conditions of use, that breaches of rules will lead to users being blacklisted. Depending on the severity of the breach and base on the Data Lab Access Policy (available only internally), the user would lose the access indefinitely or for a specified amount of time.

All equipment, including hardware and software used for DASS-BiH activities, is secured within CREDIs' risk disaster management plan (available only internally). The plan includes defined procedures in the case of fire, flood, earthquake or any issue that can cause damage on equipment installed in CREDIs premises.

Also, to assure the security of unauthorised access to equipment and datasets, access is granted only to staff members and provided to external staff (representatives of IT company) or users only under surveillance of staff members. Access to system files is allowed only to staff members. At least two persons have all passwords for access to protected files, which are periodically changed, but also after the staff member terminates employment relationship with DASS-BiH.

An installed firewall secures external access to datasets via the download option, and a proper authentication method is applied. This is related only to datasets in the unrestricted access category. A user cannot approach data files in the restricted access category externally. Only metadata files for these datasets are available online.

As there is a growing need to allow self-archiving function, we plan to develop this using the options of DataVerse (<https://dataverse.org/>). The plan is to keep DataVerse Catalogue for self-archiving separately from the Data Catalogue, so the users can distinguish between them.

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

APPLICANT FEEDBACK

Comments/feedback

These Requirements are not seen as final, and we value your input to improve the CoreTrustSeal certification procedure. Any comments on the quality of the Requirements, their relevance to your organization, or any other contribution, will be considered as part of future iterations.

Response:

Reviewer Entry

Reviewer 1

Comments:

Thank you for the updates. Recommending to accept.

Reviewer 2

Comments:

Good changes and clearer! I hope the dataverse migration goes well.