Assessment Information

[CoreTrustSeal Requirements 2017–2019](#)

Repository:	AUSSDA - The Austrian Social Science Data Archive
Website:	https://aussda.at/
Certification Date:	28 July 2020

This repository is owned by: **Universität Wien**

AUSSDA - The Austrian Social Science Data Archive

Notes Before Completing the Application

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

True

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

Brief Description of Repository

AUSSDA is a domain-based repository with a focus on research data from the social sciences.

AUSSDA – The Austrian Social Science Data Archive [1] is a core social science research infrastructure in Austria, offering research data and archiving services. It is located at the Universities of Vienna, Graz, and Linz. At the University of Vienna, AUSSDA is established as a core facility and part of the Vienna University Library and Archive Services. At the University of Graz and the University of Linz, AUSSDA is part of the Centre for Social Research and the Institute for Sociology, respectively.

The subject of this self-assessment is the AUSSDA Dataverse (AUSSDA's main repository) [2], the network storage virtual machine where we store our Data Packages (the Submission Information Package (SIP), the Archival Information Package (AIP) and the Dissemination Information Package (DIP)), and supporting processes.

Brief Description of the Repository's Designated Community.

The primary beneficiaries of AUSSDA's services are social science researchers. Secondary user communities include students, educators, media representatives and the general public (addressed in AUSSDA's mission statement [3]).

Accept

Level of Curation Performed. Select all relevant types from:

B. Basic curation – e.g. brief checking; addition of basic metadata or documentation, C. Enhanced curation – e.g. conversion to new formats; enhancement of documentation, D. Data-level curation – as in C above; but with additional editing of deposited data for accuracy

Comments

AUSSDA adds value to the data deposited in the archive. Different levels of curation are applied to different datasets, depending on the licence agreement between depositor and archive as well as the appraisal of the data performed by AUSSDA staff. To ensure data integrity, we store all incoming content in a Submission Information Package (SIP). Usually, the SIP contains data files, metadata information and additional documentation, e.g. method reports. Content relevant for the next steps is then transferred to an Archival Information Package (AIP), where different stages of curation are conducted. AUSSDA serves as replication data provider for several journals, such as SWS Rundschau, MedienJournal and Survey Methods: Insights from the Field, for which the level of curation is B - basic curation. Data, metadata and documentation are checked by a single data processor, focusing on comprehension and completeness, and ensuring that no direct personal identifiers such as names etc. appear in the data files.

Enhanced curation (level of curation C) includes the checks mentioned above (comprehension and completeness) and adds further quality measures such as plausibility checks. In addition, documentation is compared to the data to ensure that documentation accurately describes the data. Before publishing data, several data formats used by the designated community are generated to increase the content's accessibility. If needed, documentation, e.g. a codebook, is generated for the depositor. In some cases, we curate the data even further (level of curation D - data-level curation) by altering the data (in accordance with the signed licence) to publish it for our users.

Outsource Partners. If applicable, please list them.

In legal issues, AUSSDA is advised by two law firms, with one of them also acting as the data protection officer of the University of Vienna.

AUSSDA is supported by different units within the University of Vienna. AUSSDA is part of the Vienna Library and Archive Services and its IT personnel is responsible for the office workplace (hardware and software). The Vienna University Computer Center (ZID) provides servicing for technical infrastructure at the University of Vienna, such as e-mail, data network, storage, web server, telephone, SSL certificates, delivery of large files and IT security. Furthermore, AUSSDA receives support from the University of Vienna's Research Services Department and Corporate Communications.

The service level agreement (SLA) with ZID describes details about the virtual server housing including contract partners, costs, access to resources, installation, storage space, backups and disaster recovery, software, licences, security, maintenance, support, termination of contract, contact information and help desk service.

For collaborations with entities outside of the university, e.g. the law firm consulting AUSSDA, there are service contracts in place. General legal advice is currently provided in-house by the universities DPO and the department of research services. Legal advice on more specific topics, such as copyright, or licenses for research data, is provided by the external law firm.

Other Relevant Information.

- AUSSDA provides access to several important repeated national surveys such as the microcensus, AUTNES (also delivering data to CSES) and SSÖ (also delivering data to ISSP), making it a core social science infrastructure in Austria.
- AUSSDA is Austria's official service provider within CESSDA ERIC (Consortium of European Social Science Data Archives) [4].
- Among other registries, AUSSDA is registered in re3data (Registry of Research Data Repositories) [5] and OpenDOAR (Directory of Open Access Repositories) [6]. AUSSDA's data archive can be searched for and found via third-party services such as the CESSDA ERIC Data Catalogue [7] and general search engines, e.g. Google.
- The AUSSDA staff consists of 11 members [8].
- The AUSSDA Dataverse currently hosts 151 studies. By June 2020, more than 23,000 downloads were counted since the launch of the AUSSDA Dataverse in November 2017.
- Additional data of about 530 studies can be retrieved through AUSSDA's legacy archiving software, the NESSTAR server [9], which is not the subject of this self-assessment. That data is currently being migrated to the AUSSDA Dataverse.
- The performance agreements between the Austrian Federal Ministry of Education, Science and Research (BMBWF) and

the Universities of Vienna, Graz and Linz, which contain plans and goals to be realised by the universities within the period of three years, guarantee AUSSDA's continuity.

- Google Scholar has listed more than 30 articles referencing "AUSSDA" since 2017, the year of its public launch [10]. AUSSDA data are frequently used for media coverage by major national news outlets.

Links:

[1] AUSSDA Website: https://aussda.at/en

[2] AUSSDA Dataverse: https://data.aussda.at/

[3] AUSSDA Mission statement: https://aussda.at/en/about-aussda/mission/

[4] CESSDA ERIC: https://www.cessda.eu/About/Consortium/CESSDA-Countries/CESSDA-Members/Austria

BMBWF:

https://www.bmbwf.gv.at/Themen/Forschung/Forschung-in-der-EU/Europ%C3%A4ische-Forschungsinfrastrukturen.html

[5] Re3data: https://www.re3data.org/repository/r3d100010483

[6] OpenDOAR: http://v2.sherpa.ac.uk/id/repository/4177

[7] CESSDA Eric Data Catalogue: https://datacatalogue.cessda.eu/?publisher.publisher[0]=AUSSDA%20Dataverse&publisher.publisher[1]=AUSSDA&sort=date-ascending

[8] AUSSDA Team: https://aussda.at/en/about-aussda/team/

[9] NESSTAR Server: http://finddata.aussda.at/webview/

[10] Google Scholar references:

https://scholar.google.com/scholar?hl=en&as_sdt=0%2C5&as_ylo=2017&q=%22AUSSDA%22&btnG

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

ORGANIZATIONAL INFRASTRUCTURE

I. 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

Response:

AUSSDA's main objective, which is available on its website and in promotion materials, states: "We make social science data accessible, creating opportunities for research and data reuse, benefitting science and society." [1]

The mission statement begins with the main objective and continues as follows: "The Austrian Social Science Data Archive (AUSSDA) is a core social science research infrastructure in Austria, offering research data and archiving services. It is located at the Universities of Vienna, Graz, and Linz. AUSSDA strives to become the leading research infrastructure for the social sciences in Austria, offering high quality, sustainable, and easy-to-use solutions for archiving digital data, along with world-wide access to it. The archive follows international standards in order to make deposited social science data and documentation findable, accessible, interoperable and reusable. AUSSDA is active in a growing network of national and international partners, promoting high archiving standards and contributing to archive solutions of the future. Our collection covers all social science data. We support the open data movement and work towards maximizing the potential for data use within our user group. The primary beneficiaries of our services are researchers, while our online services can also be used by students, educational institutions as well as media representatives and the public. We stand for integrity in data archiving and promote ethical research principles." [2]

The mission statement was approved by AUSSDA's governing board ("working group") and presented to AUSSDA's National and International Advisory Boards. The governing board consists of members of the AUSSDA consortium universities based in Vienna, Graz, and Linz, and a representative of the Austrian Federal Ministry of Education, Science and Research as well as the head of the Vienna Library and Archive Services. (See also R5: organisational infrastructure and R6: expert guidance for an overview of the organisational structure).

Links:

[1] Promotion material that includes objective in German: https://aussda.at/aussda-folder/

[2] AUSSDA mission statement: https://aussda.at/en/about-aussda/mission/

II. 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

Response:

AUSSDA has agreements and contracts in place for both data deposits (various licence contracts) and data usage (terms of service and access policy). These agreements comply with the respective EU and national law (General Data Protection Regulation - GDPR, Datenschutzgesetz - DSG [Austrian Data Protection Act] and Forschungsorganisationsgesetz - FOG [Austrian Research Organisation Act]) and respect the general code of conduct of scientific research. Information on available licence models [1], the terms of service [2] and our access policy [3] are accessible on the AUSSDA website.

Licence Agreements and Access Conditions

Currently, AUSSDA offers three different standard contract models: Open Access, Open Access with delayed publication (embargo period) and Scientific Use (incl. optional embargo period). Since the protection of personal data – regarding both legal and ethical standards and restrictions – is of utmost importance to AUSSDA, AUSSDA makes access to data as open as possible, but as restricted as necessary. The open access contract is based on the Creative Commons licence "Creative Commons Attribution 4.0 International" [4]. The embargo version of the open access contract also includes the option to delay publication for up to 6 months after the licence contract was signed. Depositors who publish data under a Creative Commons licence and place the data in AUSSDA for sharing must make sure that the data is anonymised. In addition to the standard contracts, AUSSDA also hosts data with individual licence contracts (for example to implement special protection needs).

Due to special provisions regulated in the GDPR and national law (DSG and FOG) in the areas of science, research and for archiving purposes, AUSSDA is also allowed to host non-anonymised data and offer access to pseudonymised data to users that are allowed to process pseudonymised data. For this purpose, the repository offers licences for scientific use only. With this licence, datasets can contain pseudonymised as well as anonymised data. Metadata to the datasets are always published under a CC0 1.0 Universal (CC0 1.0) Public Domain Dedication [5].

Access to datasets is granted on different levels according to their sensitivity and need for restriction. AUSSDA offers access as (a) open access without restriction, (b) with the requirement to log in with an account or institutional login, and (c) with required login and upon request (on demand).

Each dataset states the applicable access conditions in the AUSSDA Dataverse under the heading "Terms". To ensure compliance with intellectual property rights, the depositor must declare that she or he holds the required rights to the data or has the necessary permissions from all rights holders to issue the licences specified in the transfer and licence agreements signed with AUSSDA.

Conditions of Use

The conditions of use concerning the data available in the AUSSDA Dataverse are specified in our terms of service. These terms are publicly accessible on the AUSSDA website and are linked to the AUSSDA Dataverse. The users of the repository must agree to these terms before access to data is granted, either when logging in (with Shibboleth or by creating an account during the registration procedure) or when downloading publicly available data. Within these terms, rights as well as obligations that apply when using the repository's services are communicated, including information on licences, use and access conditions, warranty and liability, lawful conduct and possible consequences in case of non-compliance with these terms of service.

Non-Compliance

In case users do not comply with the aforementioned conditions of use as well as the general AUSSDA Terms of Service, the archive reserves the right to apply the terms and conditions stated in the Non-compliance Policy [6], which is publicly available on the AUSSDA website as well as included in the Terms of Service. This policy includes information on the sanctions the repository can impose on the user as well as the possible legal penalties that can be imposed.

Links:
[1] Available licence models: https://www.aussda.at/en/licenses/
[2] Terms of Service. https://aussda.at/en/terms-of-service/
[3] Access Policy: https://aussda.at/aussda-access-policy
[4] Creative Commons Attribution 4.0 International Licence: https://creativecommons.org/licenses/by/4.0/deed.en
[5] Public Domain Dedication: https://creativecommons.org/publicdomain/zero/1.0/deed.en
[6] Non-compliance Policy: https://aussda.at/aussda-non-compliance-policy

III. Continuity of access

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

Compliance Level:

3 – The repository is in the implementation phase

Response:

AUSSDA has committed itself to ensuring ongoing access and preservation as stated in the transfer and licence agreements [1]. The contracts do not include a guaranteed preservation period. The University of Vienna signed an agreement with the Austrian Federal Ministry of Education, Science and Research (BMBWF), which includes a commitment to the obligations as a CESSDA ERIC service provider [2]. The University of Graz and the University of Linz have an agreement in place with the University of Vienna stating their commitment as members of AUSSDA.

The medium-term plan (2016-2021) has been to move AUSSDA from its project-based funding into the global budget of the universities forming the AUSSDA consortium. This has been solved through the inclusion of AUSSDA in the performance agreements between the Austrian Federal Ministry of Education, Science and Research (BMBWF) and the Universities of Vienna, Graz and Linz [3]. The performance agreements 2019-2021 have already been signed by all three universities, thus guaranteeing AUSSDA's continuity and sustainable funding.

The long-term plan (> 5 years) ensures that AUSSDA will be part of the University of Vienna's obligations towards the BMBWF, as the ministry has made AUSSDA the CESSDA ERIC service provider for Austria. Furthermore, AUSSDA is included in the Development Plans of the University of Vienna (2025), the University of Graz (2019-2024) and the

University of Linz (2019-2024) [4].

Should AUSSDA be closed down, the Vienna Library and Archive Services, which have existed for centuries, will prepare and execute a project to keep the AUSSDA Dataverse online for a transition period that will be used to develop a workflow to transfer the data to a suitable repository. The repository could then be either part of the library or an external institution. The collection could be transferred to the existing institutional repository in case of unexpected withdrawal of funding to ensure long-term preservation. The transfer and licence agreements [1] have taken precautions for such an unlikely event: "§3 (6) In order to be able to store and make the transferred Archive materials and metadata available on a long-term basis, AUSSDA is entitled to conclude contracts and take measures for this purpose. The Licensor agrees that the rights under this Agreement may be transferred at any time for this purpose. This applies in particular in the event that AUSSDA is dissolved or can no longer pursue its original purpose. AUSSDA reserves the right to engage third parties with the provision of the Archive materials and metadata."

To establish an additional safety net, CESSDA ERIC is reviewing options to ensure continuity of access in case a service provider ceases to function.

AUSSDA currently has no agreements with other archives to transfer the data in case of its cessation.

Links:

[1] Transfer and licence agreements. https://www.aussda.at/en/licenses/

[2] Link CESSDA ERIC service provider for the country:

https://www.cessda.eu/About/Consortium/CESSDA-Countries/CESSDA-Members/Austria

[3] Performance agreements:

University of Vienna: https://mtbl.univie.ac.at/storage/media/mtbl02/2018_2019/2018_2019_25.pdf

University of Graz: https://static.uni-graz.at/fileadmin/Lqm/Dokumente/Leistungsvereinbarung_2019-2021.pdf

University of Linz: https://ix.jku.at/jku/?qs_servlet=downloadIxServlet&rq_RecId=30384138393046373343413737304344 41333331413632434645324344314643384336343423535&qs_fileId=FF83E8D2E9FF1944EFD099EF05ACE8149893F ED9&qs_lastModified=1547037214000&qs_fileDataRange=81EADC85C692C0795E9C9E0BCD72DF9934FCF9EB

[4] Development Plans:

University of Vienna: https://www.univie.ac.at/fileadmin/user_upload/startseite/Dokumente/Entwicklungsplan2025_EN.pdf

University of Graz: https://static.uni-graz.at/fileadmin/Lqm/Dokumente/Entwicklungsplan_2019-2024.pdf

University of Linz: https://www.jku.at/fileadmin/gruppen/90/Downloads/JKU_Entwicklungsplan_final_web.pdf

Reviewer Entry

Reviewer 1

Comments:
To reach Compliance Level 4, a written agreement is needed with another organization willing to take over the responsibility for the holdings of AUSSDA in case the repository ceases to exist. This could be the CESSDA consortium or any other organization.

Reviewer 2

Comments:
Accept

IV. 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

Response:

AUSSDA has a thorough understanding of the importance of confidentiality and ethics, and regarding the management of personal data in the social sciences, especially when dealing with sensitive and potentially disclosive data. Therefore, the repository requests confirmation that data collection or creation was carried out in accordance with legal criteria and ethical standards while considering differing standards in different disciplinary norms. This confirmation is obtained for each dataset during the acquisition process when signing the transfer and licence agreement, specified in §2 (5) and (6): "The Licensor assures that she/he has taken into account all requirements arising from data protection laws when collecting or creating the Archive materials. In particular, she/he assures that she/he collected and used all the data with the consent of the persons concerned, informed them about the purpose of the data collection and, if necessary, anonymised personal data. (6) The Licensor warrants that the Archive materials have been collected or have been produced in accordance with the principles of good scientific practice and in accordance with ethical principles."

Our commitment to integrity with regard to data archiving and the promotion of ethical research principles is also mirrored in our mission statement, which states that "we stand for integrity in data archiving and promote ethical research principles" [1], and is further implemented in our organisational structure, as there is a separate unit solely dealing with issues of data protection, security and anonymisation. The unit is tasked to integrate data protection on several levels.

- Concerning the repositories' data storage – including data with disclosure risk – AUSSDA ensures that its data is stored on secure servers hosted by the Vienna University Computer Center (ZID) and is only accessible by AUSSDA staff on site within the university compound. Furthermore, different authorisation levels ensure secure data management within the repository's staff.
- Regarding data deposited at the repository, AUSSDA established a number of procedures to identify data with disclosure risks and to further ensure that necessary steps are taken to anonymise or pseudonymise data and provide secure

access. These procedures include, for instance, the checks with a list of predefined, potentially problematic variables and how to handle them for the different access options, a general four-eyes principle for data checks (e.g. regarding the absolute frequencies of categories of variables in a dataset), and for unresolved cases a decision by a third person with in-depth knowledge of data protection in Austria.

- The distribution of data that is considered to have a disclosure risk is regulated in accordance with the access policy [2].

- The specific access conditions are agreed upon between the depositor and the repository.

- Certain measures are in place to tackle situations in which conditions for managing sensitive data, or data with disclosure risk, are not complied with.

-- If such conditions are not met by the depositor, an indication of disclosure risk is given to the depositor by AUSSDA's staff, including possible measures of anonymisation. The repository is in contact with the depositors during the data processing and archiving process, and gives advice concerning potential risks of personal data disclosure and provides guidance on the responsible use of data. If the risks are deemed unmanageable, the repository reserves the right to decline publication and return the data to the depositor (this is specified in the licence agreements). For every dataset, at least two staff members perform checks of disclosure risks to ensure mutual control conditions between staff members when processing data.

-- If conditions are not met by users, the non-compliance policy [3] and the measures specified in the Terms of Service [4] come into effect.

- All staff members are trained in data management with disclosure risk. All staff members undergo training in the areas of data protection, security and data protection laws, with a focus on the GDPR. This ensures a good general awareness of issues surrounding the dealings with personal data and concerning data disclosure risk amongst staff. Internal protocols are in place to enable the workflow and controlled routine to ensure all measures for the management of sensitive data are met in the process of data processing, archiving and granting access [5].

Links:

(Note: Annex A was shared with the CoreTrustSeal reviewers and Board. It is not public since it contains sensitive information.)

[1] AUSSDA mission statement: https://aussda.at/en/about-aussda/mission/

[2] Access Policy: https://aussda.at/aussda-access-policy

[3] Non-compliance policy: https://aussda.at/aussda-non-compliance-policy

[4] Terms of Service: https://aussda.at/en/terms-of-service/

[5] Annex A: AUSSDA Wiki, Ingest & Data Processing: Description of the Workflow

V. 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

Response:

Stability and Sustainability

AUSSDA is hosted by the University of Vienna, the oldest and largest university in the German-speaking world, and one of the largest in Europe [1]. Within the university, AUSSDA is part of the Vienna University Library, which provides access to more than 7.4 million books, 400,000 e-books, 45,000 e-journals, 7,400 print journals and more than 1,200 databases. AUSSDA is an established core facility of the University of Vienna. Core facilities are central institutions that provide research infrastructure required by several research groups and departments. Other core facilities at the University of Vienna include the Mass Spectrometry Centre and the Botanical Garden. The Sociology Departments at the University of Graz and the University of Linz each assigned staff to AUSSDA [2]. Like the University of Vienna, the Universities of Graz and Linz have been renowned, stable and sustainable institutions for decades, and in the case of Vienna and Graz, even centuries.

In order to reach its designated communities (social science researchers, students, educators, media representatives, general public; see also R0: Context) AUSSDA receives institutional support from several units of the University of Vienna such as Corporate Communications, the Vienna University Computer Center (ZID), and Vienna University Library and Archive Services.

Funding

The repository is sufficiently funded, including staff resources, IT resources, and a budget for attending meetings when necessary. The Republic of Austria has been a member of CESSDA ERIC since 1991 and AUSSDA is the national

service provider [3]. AUSSDA's funding is guaranteed through the performance agreements between the Ministry of Education, Science and Research and the Universities of Vienna, Graz, and Linz [4, 5, 6]. All current performance agreements, which have binding character, mention AUSSDA as an integral part of the respective universities. The current funding period is three years (2019-2021). Furthermore, AUSSDA is included in the Development Plans of the University of Vienna (2025) [7], the University of Graz (2019-2024) [8] and the University of Linz (2019-2024) [9]. Also, AUSSDA has been acquiring substantial additional funding through projects (H2020, CESSDA ERIC).

Training and Professional Development of Staff

Staff members regularly attend training courses and have extensive expertise in relevant domains. New AUSSDA team members undergo introductory training tailored to their position. Furthermore, seminars and workshops are organised for AUSSDA staff with the aim of further improving the organisational setup and knowledge. Examples include training courses on data protection regulations and the reference model for an Open Archival Information System (OAIS). As employees of the Universities of Vienna, Graz and Linz, all team members have (usually) free access to many seminars and training programmes of the institutions [10]. Within the annual staff appraisal talk, team members agree with the AUSSDA head on individual training and qualification measures corresponding to individual needs. Furthermore, AUSSDA staff participate in training sessions offered by CESSDA ERIC and other institutions – online and offline.

Range and Depth of Expertise of Both the Organisation and its Staff

AUSSDA staff have expertise in multiple social sciences and beyond (political science, sociology, communication science, economics, psychology, law, computational social science, international development, global studies, German studies, Slavic studies, geography) [11]. Four team members hold a doctorate degree, most have a master's degree or equivalent, and two have a technical background. AUSSDA is involved in national and international exchange through scientific publications, its International Advisory Board, its European projects, and is part of several associations (CESSDA ERIC, RDA - Research Data Alliance, RepManNet - Network for Repository Managers, Open Science Network Austria, see also R6: expert guidance).

Links:
[1] The University of Vienna was founded in 1365 by Duke Rudolph IV. Today, more than 100,000 people study, work, teach and conduct research on the premises of the University of Vienna (9,500 employees as of December 2017 and 91,000 students in winter semester 2017/18): https://www.univie.ac.at/en/about-us/at-a-glance/facts-folders/
[2] The employees in Graz and Linz conduct research on AUSSDA-related topics and provide services to the designated communities in the southern and western federal states in Austria.
[3] Statutes of CESSDA ERIC:
https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32017Y0708(01)&qid=1550741515138
[4] Performance agreement with the University of Vienna:
https://mtbl.univie.ac.at/storage/media/mtbl02/2018_2019/2018_2019_25.pdf
[5] University of Graz: https://static.uni-graz.at/fileadmin/Lqm/Dokumente/Leistungsvereinbarung_2019-2021.pdf
[6] University of Linz: https://ix.jku.at/jku/?qs_servlet=downloadIxServlet&rq_RecId=3038413839304637334341137373043

4441333331413632434645324344314643384336343342 3535&qs_fileId=FF83E8D2E9FF1944EFD099EF05ACE814989
3FED9&qs_lastModified=1547037214000&qs_fileDataRange=81EADC85C692C0795E9C9E0BCD72DF9934FCF9EB

[7] Development Plan (University of Vienna):

https://www.univie.ac.at/fileadmin/user_upload/startseite/Dokumente/Entwicklungsplan2025_EN.pdf

[8] Development Plan (University of Graz):

https://static.uni-graz.at/fileadmin/Lqm/Dokumente/Entwicklungsplan_2019-2024.pdf

[9] Development Plan (University of Linz):

https://www.jku.at/fileadmin/gruppen/90/Downloads/JKU_Entwicklungsplan_final_web.pdf

[10] Human resources (University of Vienna)

https://personalwesen.univie.ac.at/en/services-for-employees/human-resources-development/

[11] The AUSSDA team: https://aussda.at/en/about-aussda/team/

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

VI. 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:

Advisory System

AUSSDA has one in-house Advisory Board, and two external advisory committees. [1] The in-house governing board ("working group") directly supports the management of AUSSDA. It advises on questions of short- and medium-term strategy and future developments. The board consists of representatives of the Universities of Vienna, Graz, and Linz, and the Austrian Federal Ministry of Education, Science and Research.

AUSSDA's National Advisory Board provides strategic expertise and support to determine the future direction of the archive, including its mission and goals. Members are drawn from AUSSDA's partnering institutions and serve as communication conduits to their home institutions, raising awareness about AUSSDA services, activities, and initiatives, and sharing feedback gathered from the social sciences community about AUSSDA's priorities and performance. Members include representatives from (A) all Austrian public universities with social science departments, (B) internationally renowned research institutions such as the Austrian Academy of Sciences and the Austrian Institute of Economic Research, (C) Austria's two largest research funding agencies and (D) the Federal Ministry of Education, Science and Research.

AUSSDA's International Advisory Board (IAB) monitors the development of AUSSDA, with a special focus on information management processes, infrastructure, and technology. Members are directors and experts from the national social science data archives from the Czech Republic, Germany, the Netherlands, Norway, Slovenia, Switzerland and the UK.

In addition, AUSSDA participates actively in several professional associations (see also R5: organisational infrastructure). Concerning legal issues, AUSSDA cooperates with two law firms that specialise in data protection, copyright and contract law. Occasionally, international experts are invited to provide feedback on AUSSDA's work (e.g. University of Michigan in the United States and GESIS – Leibniz Institute for the Social Sciences in Germany). AUSSDA is regularly being evaluated. We keep track of international developments through participation in the CESSDA ERIC Technical Working Group, CESSDA ERIC Trust Working Group [5], Dataverse community [6], conferences, and workshops.

Communication with Advisors

Meetings with the working group are usually held every three months. The National Advisory Board and the International Advisory Board each meet once a year for an annual report and to discuss next year's plans. For each board there is a mailing list in place that supports announcements and discussions. On an informal basis, throughout the year, AUSSDA also seeks feedback with the members of the boards.

Communication with the Designated Communities

The designated communities of AUSSDA are asked for feedback through AUSSDA's communication activities and other measures. On our website, news items with calls to action are published regularly, and users are invited to participate. Also, through AUSSDA's Twitter account, users can give feedback [2]. Feedback is also received via the main e-mail address info@aussda.at. Through workshops (mainly on data management plans) and graduate classes, feedback of data users and producers is also collected. In the summer of 2018, a field analysis of Austrian social science institutions identified relevant researchers and their projects [4].

Links:

[1] For a complete overview of the composition of the working group, the National and International Advisory Board, see:

https://aussda.at/en/about-aussda/governance/

[2] AUSSDA website: https://www.aussda.at/en/

[3] AUSSDA on Twitter: https://twitter.com/theAUSSDA

Field analysis 2018:

https://aussda.at/en/news-details/news/where-and-what-do-austrian-social-scientists-work-on-a-field-analysis/

DIGITAL OBJECT MANAGEMENT

VII. 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

Response:

Documentation of the Completeness of the Data and Metadata

To ensure the integrity of the data, the staff follow documented procedures prescribed in a wiki. During ingest, the

metadata sheet and submitted files are checked for completeness.

Data and Metadata Changes

From creating the AIP to publishing the dataset in the AUSSDA Dataverse, one person is responsible for all checks and procedures, and for communicating the various steps to the data producer, while each dataset is checked by two processing specialists. Feedback and additional information about the following steps are sent to the data producer [1]. Internally, the strategy for data changes is documented in the AUSSDA wiki [2]. It states e.g. that the SIP is not to be altered or changed. Alterations to data and/or documentation take place in the AIP and are documented in a history file, a content file (containing all file names, description, and storage place of the files), a Stata do-file (including all checks and changes made to the data by the data processors), the feedback sent to the depositor and a metadata sheet [3].
To guarantee file integrity, the AUSSDA Dataverse uses UNF and MD5 hash sums for fixity checks for data files. For the data packages on our internal network storage, we plan to implement fixity checks of the AIPs stored there in the near future.

Provenance Data and Related Audit Trails

To ensure clear file provenance, AUSSDA stores provenance data: The first ingest step is to assign an archival number to the respective dataset, which is stored along with the title, abstract, licence, the name of the data depositor, etc. In the SIP, all authentic formats we received from a data producer are archived. In the AIP, the signed contract and all processing / processed files for all versions are stored and documented (see above). Lastly, the Dissemination Information Package (DIP) contains all files ready to be published and distributed either via the AUSSDA Dataverse or file transfer on demand.

Version Control Strategy

AUSSDA follows an internal versioning strategy, stating the procedure for major updates (e.g. deletion or insertion of a variable or case) and minor updates (significant minor changes like a variable recoding versus not significant minor changes like typos), with changes additionally being tracked in a history file [4]. Insignificant changes are only modified in files when a significant change is necessary [5]. If necessary, an errata file is uploaded along with a dataset. The AUSSDA Dataverse publicly documents changes made to a published dataset. The changes can be found in the tab "Versions" and in the file description of the changed file.
The version of the dataset and the Digital Object Identifier (DOI) of the study are included in the numeric data files as variables. DOIs are assigned on the dataset level.

Comparison of the Essential Properties of Different Versions of the Same File

Different formats and data files that are saved to be compatible with different statistical software versions are also compared to each other, for example SPSS and Stata. We also ensure that we can identify and trace back all identified changes reported in the check file regarding the following indicators: data dictionaries, attributes, measurement level,

missing values, variable and value labels. Tools used for this comparison are a statistical program and a spreadsheet program.

Links to Metadata and to Other Datasets

Journals, research groups, projects or particularly active data producers can request their own sub-Dataverse within the AUSSDA Dataverse [6] to foster recognisability. Furthermore, a Dataverse field "Study Series" links datasets to each other.
Metadata of datasets are stored in the SIP, the AIP and the AUSSDA Dataverse.

Identity Checks of Depositors

When a data producer contacts AUSSDA, we check the contact details of that person and whether she/he is affiliated with an institution or organisation.

Links:
(Note: Annexes B and C were shared with the CoreTrustSeal reviewers and Board. They are not public since they contain sensitive information.)
[1] Annex C: Feedback about Results of Data Checks to Depositor (Template)
[2] Annex B: AUSSDA Wiki, Preservation: Description of the Workflow
[3] Metadata sheet for depositors: https://aussda.at/aussda-metadata
[4] AUSSDA User Guide – Versioning: https://aussda.at/userguide/
[5] Example dataset: https://data.aussda.at/dataset.xhtml?persistentId=doi:10.11587/QQ7HTL&version=2.0
[6] Examples: AUTNES Dataverse: https://data.aussda.at/dataverse/autnes
PUMA Dataverse: https://data.aussda.at/dataverse/puma

Reviewer Entry
Reviewer 1

Comments:
Accept
Reviewer 2

Comments:
Accept

VIII. 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

Response:

Description of Collection Development Policy that Guides the Selection of Data for Archiving

AUSSDA's data collection policy, outlining the principles determining the collection and the development of the archive, is available on the AUSSDA website [1]. Target disciplines as well as requirements for data depositors, data and documentation, and metadata are listed in the policy.

An overview of file formats recommended by AUSSDA for depositing and archiving can be found on the archive's website [2]. It describes data types and recommended storage formats. Furthermore, it outlines which formats are accepted by AUSSDA, and what actions depositors can take when they would like to deposit and share data that are out of the scope of the recommended formats.

Quality Control Checks

In an internal wiki [3] we document what data producers must deliver as part of the Submission Information Package (SIP) and what we accept in addition. The mandatory files are communicated to the data producers and - after delivery - are checked during the first steps of ingest and data processing. If the data quality, metadata, plausibility and anonymisation checks identify faults, feedback is sent to the depositor [4]. Changes are then made by either the depositor or by members of the staff (in case the depositor is not available). All processing is documented in a history file [5]. If questions of completeness or understandability cannot be resolved, an errata file is uploaded along with the dataset in the AUSSDA Dataverse.

During the first steps of ingest and data processing, submitted file formats are checked. This detects encoding issues, for example. Data deposited in non-preferred formats are either sent back to the data depositor, with the request to provide a preferred data format, or, if possible, are converted by ingest staff following internal conversion protocols.

Procedures to Determine that the Metadata Can Be Used to Interpret and Use Data

Acquisition staff send interested data depositors a metadata form [6] to be filled out. During the ingest and data processing phase, the primary data processing specialist checks the depositor's completed form and transfers it to an internal metadata sheet, which is used to insert data in the AUSSDA Dataverse. Certain fields require special attention from the

processor (e.g. topics and keywords) as they can be searched to find similar datasets in our data archive. We follow international metadata standards set by CESSDA ERIC (DDI2.5 as part of the CESSDA ERIC Metadata Model) [7, 8]. If metadata is deemed insufficient for long-term preservation, archive staff work on improving it, or ask the depositor to fill in the missing information. Some metadata can be extracted from the documentation and the data itself.

Links:

(Note: Annexes A–C were shared with the CoreTrustSeal reviewers and Board. They are not public since they contain sensitive information.)

[1] Data collection policy: https://aussda.at/aussda-data-collection-policy

[2] Recommended formats: https://aussda.at/en/deposit-data/

[3] Annex A: AUSSDA Wiki, Ingest & Data Processing: Description of the Workflow

[4] Annex C: Feedback about Results of Data Checks to Depositor (Template)

[5] Annex B: AUSSDA Wiki, Preservation: Description of the Workflow

[6] Metadata sheet for depositors: https://aussda.at/aussda-metadata

[7] Data Documentation Initiative, DDI (http://www.ddialliance.org/)

[8] CESSDA ERIC CMM: https://vocabularies.cessda.eu/

Reviewer Entry

Reviewer 1

Comments:
Accept.

For the future, please note that a reference to the guarantees given for acceptable formats is missing. Moroever, most repositories use the term 'preferred' formats, and it may be worth to change the wording to provide clarity.

Reviewer 2

Comments:
Accept

IX. Documented storage procedures

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

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:

Administration

We have started to create a Preservation Policy, a Security Policy and a Backup & Recovery Policy. These policies can be found on the respective wiki pages with detailed information about our workflows.

Storage Locations

Hosting and management of our two data storage locations, the AUSSDA Dataverse virtual machines [1] and the network storage, where we store our Data Packages – the Submission Information Package (SIP), the Archival Information Package (AIP) and the Dissemination Information Package (DIP) – were outsourced to the Vienna University Computer Center (ZID) [2]. The location used for the hardware managed by ZID is protected by advanced access control. Unauthorised personnel do not have access to these areas. Authorised personnel must have a password and a physical key. Logical access is only allowed for the DevOp, the SysAdmin and the head of AUSSDA as a fallback. Necessary passwords are stored in a KeepassX database file [3]. AUSSDA has implemented risk management measures against common threats, such as data corruption, data loss, theft, unauthorised access. The ZID-hosted services are part of their internal project management strategies and documentation, which are developed for highest demands in terms of business continuity, security and liability. We can recover daily backups of the network storage and AUSSDA Dataverse. Both are backed up as virtual machine images and can be restored usually within 24 hours. For long-term backup, a tape recorder is used. Executed recovery processes have proven successful.

The ZID partnership covers storage and deterioration, including regular maintenance of their systems to ensure stability. The service level agreement (SLA) with ZID describes details about the virtual server housing. For more detailed information regarding backup, physical and logical security, recovery and business continuity, please see R15 and R16.

Links:
[1] AUSSDA Dataverse: https://data.aussda.at/
[2] ZID: https://zid.univie.ac.at/
[3] KeypassX: https://www.keepassx.org/

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:

Accept

X. Preservation plan

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

Compliance Level:

3 – The repository is in the implementation phase

Response:

Preservation Plan and Process

The concept of preservation planning is defined within the functional model of the Open Archival Information System (OAIS) and the Data Documentation Initiative (DDI) [1]. AUSSDA processes data for the purposes of long-term preservation. Data preservation includes data curation activities such as data integrity checks, format migrations, and the creation of documentation records. All necessary "Preservation Description Information" (OAIS) is stored.
The processed data is converted to text or stable formats (long-term archive version) for preservation in the Archival Information Package (AIP) using open formats when possible and reasonable. For all data except for replication data, AUSSDA produces an open format, preferably a tab-separated data file. The provided data formats to our designated community are archived versions of proprietary formats such as Stata data formats and SPSS data formats. These data files are encoded (using UTF-8 standard). We offer machine-readable variable identifiers and descriptions. Format migration always includes a migration towards Unicode standard. This holds true for data files as well as for PDF/A files. We hold a list of stable formats and are in the development of a preservation policy [2].

Legal Requirements for Preservation

The contract between depositor and repository, in our case the transfer and licence agreements, provide for all actions necessary to meet the responsibilities for data preservation on a long-term basis, including the rights to copy, transform, and store the items as well as provide access. These rights and the transfer of custody are specified in §3 (3) of the

licence agreements. Furthermore, §3 (6) specifies that "in order to be able to store and make the transferred Archive materials and metadata available on a long-term basis, AUSSDA is entitled to conclude contracts and take measures for this purpose. The Licensor agrees that the rights under this Agreement may be transferred at any time for this purpose. This applies in particular in the event that AUSSDA is dissolved or can no longer pursue its original purpose."

Links:
(Note: Annex D was shared with the CoreTrustSeal reviewers and Board. It is not public since it contains sensitive information.)
[1] DDI: https://www.ddialliance.org/
[2] Annex D: AUSSDA Wiki, Preservation: List of Stable Formats

XI. 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

Response:

Data and Metadata Quality

At AUSSDA, we welcome and encourage researchers from all social science disciplines to store, archive and publish their data in cooperation with us. The archive's staff, therefore, have the knowledge to process content from various disciplines, and to efficiently communicate this knowledge to depositors and users with multidisciplinary backgrounds. This is reflected in AUSSDA's disciplinary background and skill sets [1].

Data that is deposited with AUSSDA is assessed for comprehension, completeness of datasets (values, labels, codes), plausibility and anonymisation. The level of depth of curation depends on factors like the licence agreement and appraisal during the ingest phase. An example of that would be a replication data set: As it is an AUSSDA standard, replication data is provided under a Creative Commons Attribution 4.0 International licence and undergoes less severe curation (Curation level B: Basic curation) due to the small size and non-sensitive content that replication data most likely has. If during ingest the data processor discovers that these assumptions do not prove right, the depositor is contacted and this could lead to a different licence and a different level of curation. In the AUSSDA Dataverse [2], we also provide accompanying documentation with datasets. The AUSSDA Dataverse uses mandatory metadata fields to ensure that all important information must be entered. Before uploading, data and documentation are compared to each other. If we identify discrepancies, we provide the depositors with feedback and develop a strategy to improve data or documentation quality [3]. If needed, documentation (e.g. a codebook) is generated by the archive staff to increase comprehension for users. If quality problems cannot be solved by the depositor and/or the archive, AUSSDA notifies the users in the accompanying documentation or via notes in the AUSSDA Dataverse.

AUSSDA adheres to metadata standards internationally agreed upon and provided by the Consortium of European Social Science Data Archives (CESSDA ERIC): CMM 1.0 [CESSDA ERIC Metadata Model] [4] which includes the CESSDA ERIC Metadata Model, multilingual controlled vocabularies [ELSST- The European Language Social Science Thesaurus] [5], a renewed version of CESSDA ERIC's topics classification and Data Documentation Initiative's (DDI) controlled vocabularies (DDI2.5) [6].

Automated Assessment of Metadata

In the process of depositing data with AUSSDA, depositors fill out a metadata sheet [7] to the best of their knowledge. Afterwards, data processors run the metadata sheets through a manual check. This ensures that the metadata are compliant with the CESSDA ERIC Metadata Model (CMM). The AUSSDA Dataverse has metadata fields corresponding to the CMM. In addition, Dataverse ensures that all mandatory fields receive an entry before publishing. The AUSSDA Dataverse uses standardised vocabulary (controlled vocabularies).

Involving the Designated Community (Commenting/Rating Data or Metadata)

To date, the designated community cannot rate data or metadata, though we encourage users to provide feedback via mail, phone or AUSSDA Dataverse forms (contact buttons on top level and per dataset). We also use ELSST for keywords (indexing) where people can contribute by suggesting new terms or a change of terms [8].

Citation of Related Works & Links to Citation Indices

Citation of different sources used in scientific works is good scientific practice and AUSSDA as a data archive is aware of difficulties with acknowledgement of data in citations. We try to raise awareness of data sharing and data citation practices. The AUSSDA Dataverse allows for the implementation of the eighth "Joint Declaration of Data Citation Principles". In addition, one can export three different data citation standards (EndNote XML, RIS, BibTex). Related works are also linked to datasets.

Links:

(Note: Annex C was shared with the CoreTrustSeal reviewers and Board. It is not public since it contains sensitive information.)

[1] AUSSDA Team: https://aussda.at/en/about-aussda/team/

[2] AUSSDA Dataverse: https://data.aussda.at/

[3] Annex C: Feedback about Results of Data Checks to Depositor (Template)

[4] CESSDA ERIC Metadata Model: https://vocabularies.cessda.eu/

[5] ELSST – European Language Social Science Thesaurus: https://elsst.ukdataservice.ac.uk/

[6] Data Documentation Initiative (DDI): http://www.ddialliance.org/

[7] Metadata sheet for depositors: https://aussda.at/aussda-metadata

[8] Contributions to ELSST: https://elsst.ukdataservice.ac.uk/elsst-guide/contributing-to-elsst.aspx

XII. 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

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 and Business Processes

In order to organise the archive's daily work, AUSSDA is divided into nine work clusters, which align with the OAIS model: 1. Business development & administration, 2. Data acquisition, 3. Ingest & data processing, 4. Access & use data, 5. Preservation, 6. Data protection & compliance, 7. Customer support & training, 8. Communication, 9. Archival technologies. Each cluster is led by a coordinator, who, among other things, is responsible for documentation and research of recent developments in international best practices. Every core process is covered by at least two team members, one of them being the lead, the other having the role of deputy.

AUSSDA's data workflows follow the logic of the research data lifecycle and align with AUSSDA's organisational clusters: Acquisition, Ingest, Access, and Preservation.

Acquisition and selection of data

The communication with clients and depositors is organised and documented in project management software. The depositor receives a package with a metadata form, the contract, the preferred documents list and the AUSSDA Dataverse User Guide. The returned documents are stored in the SIP.

Data acquisition is guided by AUSSDA's data collection policy, which describes the target disciplines as well as criteria to be fulfilled by data depositors regarding data, documentation and metadata [6].

Ingest

In ingest, actions are taken to ensure that data conforms to requirements outlined by the data collection policy (e.g. data types) and to the recommended formats document. Such actions may involve format transformations, metadata enrichment and data quality checks. Changes to the metadata, data and documentation are documented in data check documentation files (that are also shared with data depositors) and STATA do-files. Data and metadata are stored in SIP on the network storage. The AIP and then, at the end, the DIP are created out of the SIP– each in separate folders. Tasks are managed in our project management software. Different types of data require the application of different workflows within AUSSDA. After the initial appraisal of the data, different factors (e.g. the potential for reuse, the chosen licence, and the file format) determine which processing workflow is applied (e.g. replication data accompanying a journal article versus data for scientific reuse).

Data that do not fit the collection profile are not accepted by AUSSDA. Instead, AUSSDA recommends other data repositories. AUSSDA holds cooperation agreements with the digital humanities infrastructure CLARIN/DARIAH at the Austrian Academy of Sciences and the University of Vienna's institutional repository Phaidra.

Access

The DIP is published in the AUSSDA Dataverse, where the DOI is linked with the dataset. Data access requests for restricted data are documented in a spreadsheet. The documentation includes the contact information about the user, the reason for using the data, and documentation about the process (e.g. time stamps, who processed the request and who granted access). There are two ways of granting access, depending on the type of the requested data, either via the AUSSDA Dataverse or via a file sender service provided by ZID.

Preservation

In terms of long-term archiving, we define all measures necessary in our preservation plan, where requirements and activities are managed. Each data package receives a study number and information about the depositor, licence, the data and the current version are documented. The storage documentation of the data package is established through a history file, where all changes are documented and versioned, and a content file, where the locations of all files with their description are stated, which works as a data inventory [1, 2]. For long-term preservation, the files get transformed into formats suitable for long-term storage [3]. The process of preservation (data transformation processes, checks, and final storage) is described in a document. Finally, the whole data package (SIP, AIP, DIP) gets moved to a separate folder on the network storage, and the access rights for non-preservation employees get restricted to read-only. Also, the depositor is informed with a final report of the work done. The ZID partnership covers storage, including regular maintenance of their systems to ensure stability. For more detailed information regarding backup, physical and logical security, recovery and business continuity, please refer to R15 and R16.

Clear Communication to Depositors and Users about Handling of Data

Depositors receive information about AUSSDA's data management through direct communication (email, telephone, video conference, workshops), printed material and online sources [4]. Before data is archived, depositors consult AUSSDA's acquisition and ingest agents. Depositors also sign the transfer and licence agreement, which, among other things, lays out its data management [5]. For general questions concerning data handling, AUSSDA provides advice and a template for a data management plan [6] and regularly informs about CESSDA's Data Management Expert Guide [7]. Users of data can find orientation in the AUSSDA Dataverse User Guide [8]. In order to download data, users have to agree to the Terms of Use and Terms of Access, which also inform how the data can be handled.

Levels of Security and Impact on Workflows

In order to reduce the risks of breaches of confidentiality, data corruption and data loss, there are specific security measures and regulations in place, which have been implemented in the workflows across all clusters. These measures are adopted from the policies of the University of Vienna and the regulations of the Library and Archive Services, further specified where needed and documented in the wiki. A security policy detailing the aforementioned policies is currently in

development. On a broad level, these measures affect the general conduct of all staff members and therefore impact workflows on all levels, e.g. through the adoption of specific measures ensuring physical or virtual access control to hardware and data. More specific to the archiving process, different security levels impact the workflows from ingest to dissemination, through certain processes to identify and handle data protection issues with information contained in datasets as well as through restrictions regarding the publication of datasets. (See also R9: documented storage procedures, for access and writing permissions.)

Decision Handling within the Workflows

AUSSDA is divided into work clusters. Each cluster has a dedicated coordinator who is responsible for facilitating decision-making within the defined workflows. In cases that cannot be resolved by members of a respective cluster, the staff report to experts with designated roles to resolve specific issues (e.g. curators can contact staff in the data protection and compliance cluster), or to the head of AUSSDA.

Change Management of Workflows

The refinement of regular workflows is undertaken in the organisational clusters and documented in the wiki. The development of new workflows is driven by the organisational clusters and requires the approval of the head of AUSSDA. Additional feedback loops may include the working group or Advisory Boards (National Advisory Board, International Advisory Board, see also R6: expert guidance for responsibilities). Changes of data types used by the designated community are monitored and may result in alterations to the AUSSDA workflows.

Links:
(Note: Annexes A, B, and D were shared with the CoreTrustSeal reviewers and Board. They are not public since they contain sensitive information.)
[1] Annex B: AUSSDA Wiki, Preservation: Description of the Workflow
[2] Annex A: AUSSDA Wiki, Ingest & Data Processing: Description of the Workflow
[3] Annex D: AUSSDA Wiki, Preservation: List of Stable Formats
[4] Examples of information for depositors:
https://aussda.at/en/news/news/archiving-made-easy/
https://aussda.at/en/news/news/new-developments-in-aussdas-dataverse-platform/
https://aussda.at/aussda-folder
[5] Transfer and licence agreements: https://www.aussda.at/en/licenses/
[6] DMP Template: https://doi.org/10.5281/zenodo.1291816
[7] Data Management Expert Guide:
https://www.cessda.eu/Training/Training-Resources/Library/Data-Management-Expert-Guide
[8] AUSSDA Dataverse User Guide: https://aussda.at/en/userguide

Reviewer Entry
Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

XIII. 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:

4 – The guideline has been fully implemented in the repository

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 Repository Offers Different Search Facilities

AUSSDA Dataverse offers free text search, faceted search in metadata and supports automated search by means of the RESTful application programming interface (API). Other search engines harvest the AUSSDA Dataverse as well (e.g. Google and the CESSDA Data Catalogue). AUSSDA ensures that data follow the FAIR principles: findable (e.g. by using a unique identifier - DOI), accessible (e.g. by applying metadata that allow the use of a standardised communications protocol and by the AUSSDA Dataverse API), interoperable (e.g. metadata use controlled vocabularies, open file formats), re-usable (e.g. using metadata standards and publishing under precise licences). Datasets are published on the AUSSDA Dataverse [1]. Dissemination of the data is carried out by using the search, requesting and downloading the data. In some cases, data is provided by using a filesender which is hosted by ZID. On our website, information on archiving and downloading data is accessible [2]. [3] Data files are available in various popular file formats (SPSS, Stata), and a tab-separated data file, which is readable with a text editor in case proprietary statistics programs are not available. Additionally, the system offers machine-readable variable identifiers and descriptions.

The Repository Maintains a Searchable Metadata Catalogue to Appropriate (Internationally Agreed) Standards

With the AUSSDA Dataverse, AUSSDA maintains a searchable metadata catalogue adhering to internationally agreed standards (CESSDA ERIC Metadata Model (CMM 1.0))[4], which include the CESSDA ERIC Metadata Model, multilingual controlled vocabularies (European Language Social Science Thesaurus - ELSST) [5] and DDI2.5 controlled vocabulary for sampling procedure, kind of data, and type of time method among others [6], and a renewed version of CESSDA ERIC's topics classification.

The Repository Facilitates Machine Harvesting of the Metadata

Metadata are available to all users of the AUSSDA Dataverse without registration. Adherence to the above-named standards sets the basis for machine harvesting of the metadata. The AUSSDA Dataverse repository software offers several RESTful APIs for different usage scenarios. The Native API offers access to the metadata and the data itself. AUSSDA Dataverse runs a metadata server that is compliant with OAI-PMH (Open Archives Initiative Protocol for Metadata Harvesting).

The Repository Is Included in One or More Disciplinary or Generic Registries of Resources

Among other listings, AUSSDA is registered in re3data (Registry of Research Data Repositories) [7] and OpenDOAR (Directory of Open Access Repositories) [8]. AUSSDA's data holdings can be searched for and found in third-party services such as the CESSDA ERIC Data Catalogue [9] and general search engines, for example Google (see also R0: Context).

The Repository Offers Recommended Data Citations

The AUSSDA Dataverse offers recommended data citations and the possibility to export in three different data citation standards (EndNote XML, RIS, BibTex).

The Repository Offers Persistent Identifiers

The AUSSDA repository assigns a DOI (digital object identifier) to each dataset in the AUSSDA Dataverse registered with DataCite. With a DOI, research data are uniquely and permanently identifiable. AUSSDA allows researchers to reserve a DOI, and thus properly cite their data in publications, before their material is archived.

Links:
[1] AUSSDA Dataverse: https://data.aussda.at/
[2] Archiving and downloading data: https://aussda.at/en/news/news/archiving-made-easy/
[3] New developments in AUSSDA's Dataverse platform:
https://aussda.at/en/news/news/new-developments-in-aussdas-dataverse-platform/
[4] CESSDA ERIC Metadata Model: https://vocabularies.cessda.eu/

[5] ELSST – European Language Social Science Thesaurus: https://elsst.ukdataservice.ac.uk

[6] DDI: http://www.ddialliance.org/controlled-vocabularies

[7] re3data: https://www.re3data.org/repository/r3d100010483

[8] OpenDOAR: http://v2.sherpa.ac.uk/id/repository/4177

[9] CESSDA ERIC Data Catalogue:

https://datacatalogue.cessda.eu/?publisher.publisher[0]=AUSSDA%20Dataverse&sort=date-ascending

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

XIV. 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 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:

Required Metadata

The AUSSDA Dataverse provides metadata under a CC0 1.0 Universal (CC0 1.0) Public Domain Dedication [1] ensuring its interoperability. We use internationally agreed upon metadata standards provided by the Consortium of European

Social Science Data Archives (CESSDA ERIC): The CESSDA ERIC Metadata Model (CMM 1.0) [2], a multilingual standardised vocabulary (The European Language Social Science Thesaurus - ELSST) [3], a renewed version of CESSDA ERIC's topics classification and DDI standardised vocabulary (provided by DDI - Data Documentation Initiative DDI2.5) [4].

Formats Provided to Designated Community

The AUSSDA Dataverse [5] provides standard data files in at least three formats - SPSS, Stata and a tab-separated data file. The two proprietary formats are the main formats used by the designated community, whereas the tab-separated format is more accessible and can be read by humans and machines. For most data files, an R download of the tab-separated files is possible, too. Regarding replication data, the procedure is different in that the data is mostly only provided in the formats used in the publication by the authors of the study to ensure replicability of the analysis.

Measures for Possible Evolution of Formats

Our staff consist of experts educated in various social science disciplines. They regularly attend courses and workshops on new programs and techniques to stay up-to-date on new developments in the designated communities we provide services for [6].
We store data files in proprietary formats and in tab-separated files. Tab-separated format is a simple text format which allows data storage in a tabular structure. Exchanging information between databases is easily possible this way. In case technical evolution proceeds and/or the proprietary statistics programs used by our designated community are no longer deployable, the text files (data and dictionary files, both in preservation format) - stored in the repository's Archival Information Package (AIP) - can be transformed to future formats.

Plans for Future Migrations

If a data migration is necessary (e.g. the migration of data from another archive to the AUSSDA Dataverse), our preservation experts develop a plan. In the AIP, we store data files in preservation format (text files) to support future migration requirements.

Ensure Understandability of the Data

In the AUSSDA Dataverse, new datasets are clearly labelled as open access or scientific use files in the title, the abstract and the terms. The metadata are available to the public with a contact option on every page allowing the users to get in touch with the AUSSDA team should any questions arise. Files have a description and tags added to them. We do not only provide data in proprietary formats, but also upload tab-separated files that can be processed with free software. In addition to the tab-separated data files, we upload variable identifiers and descriptors in a separate tab-separated file so users can really work with the data files. Both files are machine-readable.
The website includes a User Guide, where additional information is provided to improve the AUSSDA Dataverse user experience [7]. Texts about finding and using data can also be found in the news section of the website [8].

Links:

[1] CC0 1.0 Universal (CC0 1.0) Public Domain Dedication: https://creativecommons.org/publicdomain/zero/1.0/deed.en

[2] CESSDA ERIC Metadata Model: https://vocabularies.cessda.eu

[3] ELSST – European Language Social Science Thesaurus: https://elsst.ukdataservice.ac.uk/

[4] Data Documentation Initiative (DDI): http://www.ddialliance.org/

[5] AUSSDA Dataverse: https://data.aussda.at

[6] AUSSDA Team: https://aussda.at/en/about-aussda/team

[7] AUSSDA Dataverse User Guide: https://aussda.at/en/aussda-dataverse-user-guide

[8] AUSSDA Website: https://aussda.at/en/

Reviewer Entry

Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

TECHNOLOGY

XV. 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:

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:

Standards

The data services in AUSSDA comply with well supported operating systems, which are suitable for the data services offered to its designated communities. Hosting and management of our two data storage locations - 1) the network storage virtual machine, where we store our Data Packages (the Submission Information Package (SIP), the Archival Information Package (AIP) and the Dissemination Information Package (DIP)) and 2) the AUSSDA Dataverse virtual machines - have been outsourced to the Vienna University Computer Center (ZID) [1]. The cooperation between AUSSDA and the ZID is based on a service level agreement (SLA) that describes details about the virtual server housing including contract partners, costs, access to resources, installation, storage space, backups and disaster recovery, software, licences, security, maintenance, support, termination of contract, contact information and help desk service. AUSSDA uses a project management software (internally) [2] and GitHub Issues (externally) [3] to create and process tickets that drive workflows, feature requests, bug reports and other issues related to our software, web services and infrastructure.

Dataverse

AUSSDA supports the open source movement. The Dataverse software [4] is being developed at Harvard's Institute for Quantitative Social Science (IQSS), along with many collaborators and contributors worldwide and is published under the Apache Licence, Version 2.0. The open source software is running on more than 60 installations world-wide, relying on other open source software, e.g. Linux distributions, postgreSQL [5], Solr [6] and Glassfish [7]. Our AUSSDA Dataverse runs on a virtual machine. It offers standardised, machine-readable access to its data via a RESTful API and DDI 2.5 compliance [8]. For authentication, we support Shibboleth [9].

Infrastructure Development Plan

Infrastructure planning is done by the DevOp together with the head of AUSSDA and the Sys-Admin and is affected by advice from the AUSSDA working group, the AUSSDA National Advisory Board and the AUSSDA International Advisory Board. AUSSDA has a work plan for the development of archival technologies in place. The work plan includes topics such as data migrations, software upgrades, usability improvements, and performance tests of the infrastructure.

Software Inventory

AUSSDA keeps track of its software through two separate inventories. One focuses on the legal requirements regarding GDPR conformity, and one on the costs and licences. System documentation is maintained by ZID. AUSSDA does not process or provide near real-time data streams.

Links:
[1] Vienna University Computer Center - ZID: https://zid.univie.ac.at/

[2] Teamwork Projects: https://www.teamwork.com/project-management-software/

[3] GitHub issues: https://guides.github.com/features/issues/

[4] Dataverse: http://dataverse.org/

[5] postgreSQL: http://postgresql.org/

[6] Solr: https://lucene.apache.org/solr/

[7] Glassfish: https://javaee.github.io/glassfish

[8] Dataverse Metadata Reference: http://guides.dataverse.org/en/latest/user/appendix.html

[9] Shibboleth: https://www.shibboleth.net/

Reviewer Entry
Reviewer 1

Comments:
Accept

Reviewer 2

Comments:
Accept

XVI. 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:

At the University of Vienna, AUSSDA is responsible for managing the AUSSDA Dataverse [1] as our primary service for data access on the application layer, while the AUSSDA Dataverse hosting and maintenance (on the virtualisation layer), network configuration and firewall setup and also the network storage management are being managed by the Vienna

University Computer Center (ZID) [2]. The network storage and AUSSDA Dataverse are virtualised solutions. The operating systems of the virtual machines, and all layers above, can be determined by AUSSDA. We work closely together with ZID to keep requirements, developments, changes and procedures up to date. The service level agreement (SLA) with ZID describes details about the virtual server housing.

Backup & Recovery

The backup and recovery plan ensures that there are multiple copies of all running virtual machines backed up and that data can usually be recovered within 24 hours. The network storage is backed up every day (Shadow Copy) and stored on another disk. There is also a daily mirror and another daily backup routine for redundancy purposes. For long-term backup, a tape recorder is used to store data on tape. The recovery process has proven successful. The AUSSDA Dataverse virtual machine runs on a RAID-6 [3] system with Citrix virtualisation [4]. It is backed up every day. For long-term storage and physical separation of backups, it gets stored on a hard drive in another location every two weeks. This recovery process has also proven successful.

Security

The location used for the hardware managed by ZID is protected with advanced access control. Unauthorised personnel do not have access to these areas. Authorised personnel must have a password and a key.

As general security measures, access to our offices and to their storage shelves is only possible for employees with a key. Restricted physical materials are stored in locked shelves. KeepassX [5] is used to manage relevant passwords. Workstations have regular access restrictions and are password-protected.
Employees are trained in security-relevant issues on a regular basis, e.g. data anonymisation, General Data Protection Regulation (GDPR) compliance, password management and how to use secure technology for everyday work. Regarding the protection of information on an employee level, the Austrian bargaining agreement includes a non-disclosure agreement for employees by default.

Network security is assured by ZID. ZID provides a firewall between the Internet and the data centre network and enforces strict routing rules. Only incoming HTTPS connections are accepted from external networks, and from the AUSSDA local network only HTTPS and SSH connections are routed.
Data and metadata are stored in the SIP folder on network storages hosted by ZID. The SIP files are used to create the AIP files, followed by the DIP files in the final phase – each file is stored in its own folder to reduce the risk of overwriting existing data, and to separate the respective data processing phases from each other.
The AUSSDA Dataverse virtual machine uses its own firewall accepting only HTTPS and SSH connections.
Authentication methods include local login & password as well as Shibboleth-based federated login (AAI) coupled with the eduGAIN federation [6]. The AUSSDA Dataverse is provided with SSL. Extensive user rights in the AUSSDA Dataverse are restricted to the least persons necessary. Publishing of datasets is limited to the three persons with the ingest role. Administration of the AUSSDA Dataverse is limited to two persons. The head of AUSSDA can gain the necessary rights to execute these functions in an emergency.

Besides the AUSSDA Dataverse, we use Filesender – a piece of software hosted and maintained by ZID – to send files [7]. The software creates secure links (https) that are valid for a set time frame (up to 10 days), in which sensitive and/or restricted data can be shared directly with users. To monitor the uptime/downtime of our web services, we use Uptime Robot [8]. Uptime Robot monitors AUSSDA's web services every 15 minutes (e.g. AUSSDA website, AUSSDA Dataverse) and alerts AUSSDA if a website is confirmed to be down.

Risk Assessments

As a core facility at the University of Vienna, the university's risk protection procedures also apply to AUSSDA. The risk management includes physical and informational security. AUSSDA has implemented risk management measures against common threats, such as data corruption, data loss, theft, and unauthorised access.

Links:

[1] Dataverse: http://dataverse.org/

[2] ZID: https://zid.univie.ac.at/

[3] RAID: https://en.wikipedia.org/wiki/RAID

[4] Citrix Hypervisor: https://xenserver.org/

[5] KeypassX: https://www.keepassx.org/

[6] eduGAIN: https://edugain.org/

[7] Filesender: https://www.aco.net/filesender.html

[8] Uptime Robot: http://uptimerobot.com/

Reviewer Entry

Reviewer 1

Comments:
Accept.

For the future, please provide a reference document concerning the risk management measures implemented by AUSSDA.

Reviewer 2

Comments:
Accept

APPLICANT FEEDBACK

Comments/feedback

These requirements are not seen as final, and we value your input to improve the core certification procedure. To this end, please leave any

comments you wish to make on both the quality of the Catalogue and its relevance to your organization, as well as any other related thoughts.

Response:

Reviewer Entry

Reviewer 1

Comments:

Reviewer 2

Comments: