



Implementation of the CoreTrustSeal

The CoreTrustSeal board hereby confirms that the Trusted Digital repository DARIS complies with the guidelines version 2017-2019 set by the CoreTrustSeal Board.

The afore-mentioned repository has therefore acquired the CoreTrustSeal of 2016 on March 20, 2018.

The Trusted Digital repository is allowed to place an image of the CoreTrustSeal logo corresponding to the guidelines version date on their website. This image must link to this file which is hosted on the CoreTrustSeal website.

Yours sincerely,

The CoreTrustSeal Board

Assessment Information

Guidelines Version: 2017-2019 | November 10, 2016
Guidelines Information Booklet: [DSA-booklet_2017-2019.pdf](#)
All Guidelines Documentation: [Documentation](#)

Repository: DARIS
Seal Acquiry Date: Mar. 20, 2018

For the latest version of the awarded DSA for this repository please visit our website: <http://assessment.coretrustseal.org/seals/>

Previously Acquired Seals: None

This repository is owned by: **FORS**

Lausanne
Switzerland

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W <http://forscenter.ch/en/>

Assessment

0. Context

Applicant Entry

Self-assessment statement:

R0: Context

Repository type:

FORS, the Swiss Centre of Expertise in the Social Sciences, is a national research infrastructure mandated and financed by the Secretariat for Education, Research and Innovation SERI. FORS integrates infrastructures and research projects like among others the Swiss Household Panel (SHP), the Swiss Electoral Studies (Selects), and DARIS, the Data and Research Information Services. It is DARIS that archives, disseminates and promotes quantitative and qualitative data and therefore complies with the requirements of the CoreTrustSeal and more broadly the CESSDA requirements. The CTS is hence sought for DARIS only.

DARIS is at the same time a domain or subject-based repository (social sciences), a research project repository (Research Inventory) and a national social science data repository. FORSbase is an OAIS compliant web-based platform for researchers in the social sciences that accompanies them during the entire data life cycle, and provides them with a personal workspace to document and publish their research projects. It is also a working environment for DARIS collaborators and provides for deposit, storage and access. FORSbase was first released in February 2016; **the current version is 3.1.3**. FORSbase uses Fedora Commons (Flexible Extensible Digital Object Repository Architecture) for file storage. Fedora is an open-source underlying architecture for a digital repository

Designated community:

The designated community of DARIS consists essentially of quantitative and qualitative social science researchers and students affiliated with a Swiss institution of higher learning, government offices, as well as researchers and students affiliated with an institution of higher learning abroad.

We carry out a range of promotional activities as outlined in our Mission Statement. The communication with our designated community is carried out through different channels such as promotional activities (see link in R I, Mission/Scope), training courses (on topics such as data management), electronic bulletins, targeted presentations,

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and social networking on Twitter and Facebook.

Level of curation:

Though FORSbase is geared towards self-archiving, DARIS adds value to the content of the repository by performing quality assurance routine checks on the deposited data (SIP), by the creation of new formats, and the addition of basic metadata and documentation, if applicable.

Outsource partners:

In order to guarantee the physical security of our archival holdings, storage infrastructure, data recovery provisions and backup strategies are handled by the IT centre of the University of Lausanne, the host institution of FORS. There are Service Level Agreements in place (see R 3, Continuity of access, R 9, Documented storage procedures and R 15, Technical infrastructure).

[DARIS](#)

<http://forscenter.ch/en/data-and-research-information-services/>

[FORS Organizational Chart](#)

http://forscenter.ch/wp-content/uploads/2013/11/Organizational-chart-_20151.pdf

[State Secretariat for Education, Research and Innovation](#)

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<https://www.sbf.admin.ch/sbfi/en/home.html>

[Centre informatique of the Université de Lausanne](#) (only available in French)

<http://www.unil.ch/ci/fr/home.html>

[FORS Twitter](#)

<https://twitter.com/FORSresearch>

[FORS Facebook](#)

<https://www.facebook.com/FORS-Swiss-Centre-of-Expertise-in-the-Social-Sciences-186492838048730/>

[FORSbase](#)

<https://forsbase.unil.ch/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

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1. Mission/Scope

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

I Mission/Scope

The State Secretariat for Education, Research and Innovation SERI of the Swiss Confederation has given FORS the triple mandate to produce and distribute (national and international) research data, to preserve and disseminate the research data produced by other sources, and to provide services for social science researchers active in Switzerland. DARIS is tasked with the preservation and dissemination of research data (for public evidence of the SERI mandate see the links below).

The DARIS Mission Statement outlines our long-term commitment to the preservation, management, and dissemination of research data, with respect to a set of strategies. Our Preservation Policy describes in more detail strategies and principles of DARIS, as well as the responsibilities and procedures involved in ensuring adequate preservation of and access to the data held within the repository. Our website describes how the Mission Statement is implemented in our various activities (see link to annual reports and to our website below).

The Mission Statement has been approved and released by the director of FORS, Prof. Dr. Georg Lutz.

In addition to the Mission Statement, we have published on our website the “DARIS Vision 2020”. In this document we highlight the most important goals that we foresee in the mid-term, and we emphasise our key mission, that is, to offer an ever richer body of well-documented quantitative and qualitative data to researchers free of charge and more easily.

Mission Statement

http://forscenter.ch/wp-content/uploads/2015/09/Mission-statement_EN_v5.pdf

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[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

[DARIS Vision 2020](#)

<http://forscenter.ch/wp-content/uploads/2013/11/DARIS-vision-20201.pdf>

DARIS

<http://forscenter.ch/en/data-and-research-information-services/>

[Annual report 2015](#) (pp. 17-24)

<http://forscenter.ch/wp-content/uploads/2013/10/Annual-Report-2015.pdf>

[Mandate FORS](#)

<http://forscenter.ch/en/about-us-2/mandate/>

[State Secretariat for Education, Research and Innovation SERI](#)

<https://www.sbf.admin.ch/sbfi/en/home.html>

[Mandate by State Secretariat for Education, Research and Innovation SERI](#)

[in the “Appréciation des requêtes 2017-2020 au titre de l’art. 15 LERI](#) (no English version available)

http://www.swir.ch/images/stories/pdf/fr/2016_11_15_Rapport_CSSI_Art_15_LERI_publ_def_CORR.pdf

[List of institutions funded by the SERI in the period 2017-2020](#) (no English version available):

https://www.sbf.admin.ch/sbfi/fr/home/themes/la-recherche-et-linnovation-en-suisse/instruments-d_encouragement/etablisements-de-re
(FR)

<https://www.sbf.admin.ch/sbfi/de/home/themen/forschung-und-innovation-in-der-schweiz/foerderinstrumente/forschungseinrichtungen-v>
(DE)

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

2. Licenses

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

II Licences

The deposit contract, an agreement between the repository and the data owner, defines the rights and obligations of the parties to the contract. It grants the non-exclusive right to the repository to archive and disseminate the data while the data owner maintains the copyright of the data and is entitled to being informed regularly of the reuse of the data by third parties. The contract specifies conditions of legal access to the data, confirms that the data have been anonymized and collected and treated in conformity with existing legal and ethical criteria in Switzerland (Federal Act on Data Protection and Federal Act on the Promotion of Research and Innovation, see below).

The user contract is based upon principles of open access and relevant national legislation. It limits the use of the data to scientific research and/or academic teaching, commits the user to use the data with respect to Swiss federal law and standard norms of data protection, to not identify any individual cases, to respect confidentiality and scientific ethical rules, to store it without third party access, to destroy the data after the expiration of the contract, and to inform the repository of all publications based on the data. There are some special user contracts containing a particular long form citation for multi-wave and cohort studies or requiring the user to inform the repository and the data owner of all presentations or working papers based on the use of the data.

Some datasets require the prior agreement of the data producer for data access, which is indicated in the FORSbase catalogue, while other datasets, in particular sensitive data, are precluded from teaching purposes.

Access to data is granted only to members of our designated community, (see R 0 Context). The data are accessible for scientific research and/or academic teaching. Users are authenticated by name and institutional email address before being validated as users in FORSbase, which enables them to deposit and access data in FORSbase.

The stipulations of the user contract (e.g. the destruction of the data after the expiration of the contract, the compliance with the confidentiality and ethics regulations, and the obligation to inform the repository of all publications based on the disseminated data, etc.) are monitored and in cases of non-compliance the FORSbase

account of the user will be temporarily or permanently blocked. Thus for example if the data user does not confirm that the data have been destroyed upon expiry of the contract her or his FORSbase user account will be blocked until we have confirmation of the compliance with the agreed upon terms of the contract.

[Federal Act on Data Protection \(FADP\) of 19 June 1992](#) (Status as of 1 January 2014)

<https://www.admin.ch/opc/en/classified-compilation/19920153/index.html>

[Federal Act on the Promotion of Research and Innovation, 14 December 2012](#) (Status as of 1 January 2017)

<https://www.admin.ch/opc/en/classified-compilation/20091419/index.html>

[DARIS Deposit contract](#)

https://forsbase.unil.ch/media/general_documentation/en/deposit_contract_FORS_en.pdf

[DARIS User contract](#)

http://forscenter.ch/wp-content/uploads/2013/11/User_Agreement_E.pdf

[Open Data Policy](#)

<http://forscenter.ch/en/about-us-2/philosophy/open-data-policy-at-fors/>

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Accept or send back to applicant for modification:

Accept

Comments:

3. Continuity of access

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

III. Continuity of access

DARIS guarantees long-term preservation, usability and documentation of its repository's data.

FORS has a triple financial framework that guarantees a stable financial foundation, ensures medium-term stability and viability of FORS and DARIS, and highlights the importance of FORS as the largest and most important infrastructure for the social sciences in Switzerland. DARIS is principally funded by the SERI which makes funding reliable and therefore sustainable currently and in the medium-term planning (see R 5 Organisational infrastructure).

In the unexpected case of cessation of funding, or the funding and continuity being jeopardized, we would be notified well in advance, and would plan the transition of the data and the continuity of the collection. FORSbase allows the export of all SIPs, AIPs and DIPs to another system. However, to ensure long-term access to our data and to guarantee the preservation of our holdings in the case of institutional cessation, we are currently in discussion with the State Secretariat for Education, Research and Innovation SERI, the principal funder of FORS, for an agreement on continuity of access. The agreement or letter of intent by the SERI is expected in the course of 2018.

[Funding FORS](#)

<http://forscenter.ch/en/about-us-2/foundation/funding/>

[State Secretariat for Education, Research and Innovation SERI](#)

<https://www.sbf.admin.ch/sbf/en/home.html>

[List of institutions funded by the SERI in the period 2017-2020](#) (no English version available):

<https://www.sbf.admin.ch/sbf/fr/home/themes/la-recherche-et-linnovation-en-suisse/instruments-d-encouragement/etablissements-de-re>
(FR)

<https://www.sbf.admin.ch/sbf/de/home/themen/forschung-und-innovation-in-der-schweiz/foerderinstrumente/forschungseinrichtungen-v>
(DE)

[Swiss National Science Foundation](#)

<http://www.snf.ch/en>

[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

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4. Confidentiality/Ethics

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

IV. Confidentiality/Ethics

While providing open and easy access to data, DARIS is at the same time committed to protecting the confidentiality of research participants and the rights of the data depositors.

As a way of ensuring confidentiality, DARIS relies on a combination of anonymization, access eligibility criteria, informed consent among study participants, and user contract conditions which bar users from identifying cases (see also R 2, Licences). Some of the most frequently distributed datasets are made available on NESSTAR without the postal code and on FORSbase, which has more stringent access conditions, with postal codes.

Our practices are in accordance with Swiss federal data protection laws (see main legislations below). The deposit contract also stipulates that the depositor has collected and treated the data in conformity with existing national legislation on data protection, and confirms that the data have been anonymized.

DARIS provides guidance on the responsible use of data with disclosure risk (consultancy in the pre-ingest phase and guidelines on our website). The deposited data are furthermore screened by staff for disclosure risk and, where appropriate, returned to the depositor with the request to fully anonymize the data.

Data with disclosure risk, such as non-fully anonymized qualitative data (audio, video, images, and transcriptions) can only be released with an informed consent by study participants and can only be used for research, and not for teaching purposes.

The publication of our new information system FORSbase in February 2016 has caused considerable changes in our workflow and necessitated the composition of new data management processes covering each step of the

archiving of data from the submission of the data (SIP) by the researchers to its distribution (DIP) representing the full workflow. These written processes are internal. There are, however, several guidelines on deposit and data preparation online on our website.

The stipulations of the user contract (e.g. the destruction of the data after the expiration of the contract, the compliance with the confidentiality and ethics regulations, and the obligation to inform the repository of all publications based on the disseminated data, etc.) are monitored and in cases of non-compliance the FORSbase account of the user will be temporarily blocked until the user complies with the contract or, absent this case, permanently blocked. (For measures in case of non-compliance see also R 2, Licences).

[Federal Act on Data Protection \(FADP\) of 19 June 1992](#) (Status as of 1 January 2014)

<https://www.admin.ch/opc/en/classified-compilation/19920153/index.html>

[Federal Act on the Promotion of Research and Innovation, 14 December 2012](#) (Status as of 1 January 2017)

<https://www.admin.ch/opc/en/classified-compilation/20091419/index.html>

[Data protection](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/data-protection/>

[Guidelines for deposit](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/>

[Quantitative data preparation](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/quantitative-data-preparation/>

[Qualitative data preparation](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/qualitative-data-preparation-4/>

[Policy on Archiving Qualitative Data](#)

http://forscenter.ch/wp-content/uploads/2015/05/FORS-policy-and-procedures-on-qualitative-data_20_04_2016.pdf

[FORSbase](#)

<https://forsbase.unil.ch/project/study-public-list/>

[NESSTAR](#)

<http://fors-getdata.unil.ch/webview/>

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Accept

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5. Organizational infrastructure

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

V. Organizational infrastructure

FORS is a national foundation, established on 1.1.2008 in the terms of the Swiss Civil Code. It is a research infrastructure in the social sciences serving researchers from Switzerland and abroad. The Foundation Board is the supreme governing body of the Foundation. The Scientific Board supports both the Foundation Board and the Executive Board (comprising the heads of the units of FORS and the director) on all scientific matters connected with the activities of FORS as well as overseeing its research activities. The Scientific Board is made up of leaders of international standing in the world of the social sciences.

The organizational chart depicts the structure of FORS. DARIS is the Data and Research Information Services department of FORS, and is mandated to collect research data in the social sciences, to preserve these, and make them accessible and usable for the long term. It consists of 1) the data repository, 2) the Research Inventory, and 3) the data promotion team.

FORS is hosted by the University of Lausanne, the university of the Canton of Vaud which has been charged in the Federal Act on the Promotion of Research and Innovation with providing a host institution for FORS. Its contribution to FORS – both financial and material (administration, HR applications and salaries, infrastructure, some computer/network maintenance, etc.) – is substantial. It also provides an academic environment that helps guarantee scientific excellence.

FORS and DARIS maintain close ties with the host institution, and have established academic contacts and institutional partnerships with other Swiss universities and the Swiss Federal Statistical Office.

FORS is involved in projects and collaborations within Switzerland and on an international scale, guaranteeing professional development. FORS staff members are members or have mandates in the following international bodies: European Social Survey (ESS), European Value Survey, International Social Survey Program (ISSP), Luxembourg Income Study (LIS), Comparative Candidate Survey (CCS), Comparative Study of Electoral Systems (CSES), European Strategy Forum on Research Infrastructures (ESFRI), Inter-University Consortium for Political and Social Research (ICPSR), International Federation of Data Organizations (IFDO), and Survey of Health Aging and Retirement in Europe (SHARE). The head of DARIS represents Switzerland in the CESSDA Service Providers Forum and is a LIS ASBL board member.

FORS is jointly funded on a four-year basis by the Swiss Confederation (State Secretariat for Education, Research and Innovation SERI), the Swiss National Science Foundation (SNSF), and the University of Lausanne. The service-level agreement with the SERI has been renewed for another four-year-period 2017-2020. Third-party projects represent additional funding sources. DARIS is principally funded by the SERI which makes funding reliable, and ensures long-term stability and viability (see R 3, Continuity of access).

With currently eight mostly part-time staff members employed in the repository and the Research Inventory (6 FTE) and another six mostly part-time staff members (4,5 FTE) within the data promotion team (including three staff members paid from third party funds for 2,1 FTE), there are sufficient staff resources. DARIS staff attends conferences, workshops and seminars, and participates in training on data management, metadata, long-term preservation, and other relevant domains.

The IT group of FORS, with currently four staff members (3,5 FTE), works in close collaboration with DARIS and supports DARIS in its storage and preservation activities.

[Organizational Chart FORS](#)

<http://forscenter.ch/wp-content/uploads/2013/11/Organizational-chart-20151.pdf>

[Foundation and Scientific Board Members](#)

http://forscenter.ch/wp-content/uploads/2013/11/FORS-Boards_Members1.pdf

[DARIS](#)

<http://forscenter.ch/en/data-and-research-information-services/>

[Université de Lausanne](#)

<http://www.unil.ch/index.html>

[FORS funding](#)

<http://forscenter.ch/en/about-us-2/foundation/funding/>

[Federal Act on the Promotion of Research and Innovation, 14 December 2012](#) (Status as of 1 January 2017)

<https://www.admin.ch/opc/en/classified-compilation/20091419/index.html>

[List of institutions funded by the SERI in the period 2017-2020](#) (no English version available):

https://www.sbf.admin.ch/sbf/fr/home/themes/la-recherche-et-linnovation-en-suisse/instruments-d_encouragement/etablisements-de-re
(FR)

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

6. Expert guidance

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

VI. Expert guidance

Our technical in-house advisers consist of the IT group of FORS (see R 5, Organizational infrastructure) and the IT centre of the University of Lausanne, with both of which we closely collaborate (see R 9, Documented storage procedures). For some programming and technical tasks (e.g. partly the programming of FORSbase, to harvest the content of NESSTAR) FORS and DARIS have consulted some external IT companies as well (see links below).

The Scientific Board supports both the Foundation Board and the Executive Board on all scientific and disciplinary matters connected with the activities of FORS and DARIS as well as overseeing its research activities. Regular evaluations of the scientific quality of the products and services that FORS offers are also incumbent on this body.

In 2014 FORS was evaluated by the Swiss Science and Innovation Council (SSIC). The SSIC's internal report concluded that FORS has fully met the objectives set by the SERI at the inception of FORS and that FORS/DARIS render invaluable service to the scientific community. It recommends to the Swiss Confederation that FORS/DARIS' sustainability be guaranteed, since the principal tasks of FORS, among them the archiving of data, are in the public interest.

There is a biannual DARIS survey to evaluate whether our services meet the needs of our designated community (see below for the link to the latest survey). FORS as well as DARIS release regular bulletins to the designated community containing general news as well as lists of the new datasets in the repository. We also invite feedback within FORSbase, on our website, and by e-mail or telephone.

[Itopia, cooperate information technology](#)

<http://itopia.ch/>

[liip, Agile Web development](#)

<https://www.liip.ch/en>

[Organizational Chart FORS](#)

http://forscenter.ch/wp-content/uploads/2013/11/Organizational-chart-_20151.pdf

[Deed of Foundation](#)

http://forscenter.ch/wp-content/uploads/2013/11/Deed_of_foundation.pdf

[Foundation and Scientific Board Members](#)

http://forscenter.ch/wp-content/uploads/2013/11/FORS-Boards_Members1.pdf

[Swiss Science and Innovation Council](#)

<http://www.swir.ch/en/>

[State Secretariat for Education, Research and Innovation SERI](#)

<https://www.sbf.admin.ch/sbf/en/home.html>

[DARIS survey of social science researchers in Switzerland:](#)

<http://forscenter.ch/en/daris-en/across-disciplines-around-80-percent-researchers-generally-consider-sharing-research-data-important/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

7. Data integrity and authenticity

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

VII. Data integrity and authenticity

Integrity

In order to ensure the integrity of our digital holdings, checksums are integrated in FORSbase (Fedora) and are applied not only at ingest (SIP) but also during the archival storage of our digital holdings (AIP). The integrity of the data files downloaded is guaranteed by the addition of a txt. file in the DIP containing the SHA-1 code using the open source tool MD5 & SHA-1 Checksum Utility (done so far for the publications of 2018, 2017 and 2016, retroactive implementation for the publications of prior years until 1997 is planned for April and May 2018 and should be finished at the latest by June 2018) .

Once a SIP is uploaded to FORSbase, quality assurance routine checks are carried out for completeness, integrity and validation of the data files, the submitted documentation and metadata. Any changes to the data files are recorded in SPSS, STATA or R syntax files (see R 11, Data quality and R 12, Workflows) which are added to the AIP.

Our current versioning strategy implemented in FORSbase automatically triggers new versions when the data or metadata are changed (with the exception of some limited and minor fields of metadata). Minor or major changes in metadata, documentation or data files are recorded in FORSbase. We have implemented in FORSbase a system of persistent identifiers (DOIs) provided by da:ra. The versioning, handled so far by FORSbase, follows the best practices of da:ra. At present about 400 of our currently 566 datasets have been assigned an identifier. The complete retroactive assignments of DOIs is planned for the months April and May 2018.

Authenticity

FORSbase is geared towards self-archiving, hence DARIS rarely undertakes changes to the data files, but returns the files, where changes are appropriate, to the data depositor (see R 8, Appraisal and R 12, Workflow). The communication with data depositors is recorded in FORSbase and is linked to the corresponding metadata and data of a study. 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, which are both permanent and unique.

Each data depositor has to be a registered and validated user within our system FORSbase. Only validated users can deposit or download data (see R 2, Licences).

The guidelines on how to deposit data, as well as the applicable deposit forms, are available on our website.

Guidance and instructions on data integrity and authenticity are gathered in an internal document that is aimed for new DARIS staff members and not for public use.

[General guideline for data deposit](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/>

[Guideline for deposit of quantitative data](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/quantitative-data-preparation/>

[Guideline for deposit of qualitative data](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/qualitative-data-preparation-4/>

[FORSbase catalogue](#)

<https://forsbase.unil.ch/project/study-public-list/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

8. Appraisal

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

VIII. Appraisal

The principles and criteria by which the repository develops its data collection and defines the designated community are indicated in our Collections Policy. It details the purpose and scope of the collection, the selection and appraisal criteria, formats, eligible depositors and acquisition strategies. The Collections Policy is flexible and responds to future developments and shifting requirements that will influence the repository's data collections (technology, scientific standards, thematic focus, etc.).

We perform quality assurance routine checks on the data files, metadata and documentation files of the SIP. The extensive metadata record created by depositors is checked for completeness and comprehensibility (see R7, Data integrity and authenticity and R 11, Data quality). If that screening reveals major problems (disclosure risk, completeness, plausibility, etc.), the SIP is usually returned to the depositor with instructions on how to address the standards and to produce another SIP to deposit. In case of minor problems, the metadata, and more rarely the data, are modified by the repository.

Given that FORSbase is geared towards self-archiving, there are ongoing discussions within DARIS on whether to establish a system of evaluation of the completeness and quality of the submitted documentation with quality flags or a scoring system.

Our preferred and accepted formats are communicated transparently in the Collections Policy as well as in the [Policy on Archiving Qualitative Data](#). In all cases we ask the data depositor to convert the data and documentation files into a format accepted by FORSbase. Currently the formats for data files that we receive most often are SPSS and STATA. These are also the dissemination formats most commonly requested by users (see R 14, Data reuse).

[Collections Policy](#)

http://forscenter.ch/wp-content/uploads/2015/05/Collections-Policy_v4.pdf

[FORSbase list of recommended formats](#)

<https://forsbase.unil.ch/supported-file-formats/>

[Admissible formats for qualitative data](#)

http://forscenter.ch/wp-content/uploads/2015/05/FORS-policy-and-procedures-on-qualitative-data_20_04_2016.pdf

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

9. Documented storage procedures

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

IX. Documented storage procedures

The main principles of long-term preservation and permanent storage facilities are outlined in our Preservation Policy (see link below): In FORSbase (**currently version 3.1.3**) data and documentation files are screened for format at ingest, checked on a regular basis for format readability, and migrated into a more recent file format in case of obsolescence. All data files (of the SIPs, AIPs and the DIPs) are stored in our data exchange format (CSV) for the purpose of preservation in Fedora Commons, whereby the uploaded files (SIP) on the one hand and the AIP and DIP on the other hand are stored for security reasons in two different instances/file repositories. Checksums guarantee consistency across the archival workflow.

We store all data and documentation as multiple copies/backups within FORSbase on several local servers which are located at our host institution, the University of Lausanne (**at two different sites, Mouline and Sorge**). Thanks to the synchronous replication of file write operations on the corresponding redundant servers, no data are lost in case of failure (see also R 15, Technical infrastructure).

There are off-site backup measures in place at a branch of the Swiss Federal Institute of Technology (EPFL), located in Neuchâtel (approx. 70 km distance) which guarantee further redundant data storage (see also R 16, Security).

Server maintenance is organised by a Service Level Agreement (SLA): the IT centre of the University of Lausanne is responsible for the basic operating system, and the IT group of FORS maintains application related programs and services (i.e. web services, databases, file store service).

The safety of the data is thus guaranteed by redundant data storage (local and different cities), diversity of storage media and further measures for physical security (for the physical security measures see R 16, Security), and allow for the recovery of the holdings in case of an incident.

Media monitoring and refreshing:

The storage procedures are laid out in an internal guide that describe data management processes covering each step of the archiving of data from the submission of the data (SIP) by the researchers to its distribution (DIP), representing the full workflow.

[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

[Centre informatique of the Université de Lausanne](#) (only available in French)

<http://www.unil.ch/ci/fr/home.html>

[Swiss Federal Institute of Technology \(EPFL\), Neuchâtel](#)

<http://microcity.epfl.ch/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

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10. Preservation plan

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

X. Preservation plan

The deposit contract clearly highlights the responsibilities and the rights of FORS/DARIS and the data producer (see R 2 Licences). The deposit and the user contract, as well as guidelines for deposit, are available on our website and in FORSbase. The transfer of custody of data, the actual deposit in FORSbase, is clearly marked in our system, since the data can only be deposited if the deposit and user contracts are accepted by the data depositor. The institution depositing the data maintains the copyright on the deposited data as well as on the corresponding documentation. FORS has the rights to copy, transform and store the items, as well as to provide access to them according to articles 3-5 of the deposit contract (see R 2, Licences).

In chapter 4.2, 4.3 and 4.4 of our Preservation Policy we describe in more detail our strategy towards preservation planning like monitoring file formats for format obsolescence and the storage media for errors to initiate any passive digital preservation tasks needed to recover data from redundant storage (see R 9, Documented storage procedures).

Our actions regarding data preservation are documented both on our website and in our documentation for data depositors. In our guidelines for deposit we direct the data depositor to our metadata standards, to documenting and preparing quantitative and qualitative data, and to the overall benefits of depositing data.

[DARIS Deposit contract](#)

https://forsbase.unil.ch/media/general_documentation/en/deposit_contract_FORS_en.pdf

[DARIS User contract](#)

http://forscenter.ch/wp-content/uploads/2013/11/User_Agreement_E.pdf

[Guidelines to depositing data](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/>

[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

11. Data quality

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

XI Data quality

Depositors are instructed on how to document and prepare their data before submitting them, and completeness and quality of data and metadata are monitored and assessed in the pre-ingest phase as well as in the ingest phase to guarantee that the data are fully interpretable. We do perform some quality assurance routine checks for completeness and quality, and we screen the data for adequate anonymization (see R8, Appraisal, R7, Data integrity and authenticity and R 12, Workflows).

There are a number of mandatory metadata fields in FORSbase (title, language, authors, principal investigator, data type, time method, media, access conditions, begin/end date of data collection, period concerned, mode of data collection, collection instruments, universe, analysis unit, available documentation, anonymization, etc.) that exceed the Dublin Core requirements, and a field for remarks about the documentation to ensure metadata completeness. In the course of cataloguing and indexing (including CESSDA topic classification) we enhance the metadata, if necessary. Our metadata standard is currently DDI Codebook 2.5 compliant. The depositors must furthermore confirm that their data are anonymized before they accept the deposit and user contract.

Currently only the depositors of data and the staff of the repository have the option of commenting on the quality of the metadata or data in FORSbase, but not other members of the designated community. There is, however, a messaging system integrated in FORSbase which allows for contacts between researchers on the topic of the datasets.

FORSbase provides fields for citing publications, unpublished documents and secondary analysis based on the specific data to be archived and published. Other related research based on a different set of data can be searched via keywords, discipline, topic classification or a free text search in the FORSbase catalogue. A search for related research can also be carried out in FORSbase by groups of thematically interrelated data and by the interlinkage of authors and institutions with their projects and datasets (see R 13, Data discovery and identification).

[Guidelines for deposit](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/>

[Quantitative data preparation](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/quantitative-data-preparation/>

[Qualitative data preparation](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/qualitative-data-preparation-4/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

12. Workflows

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

XII Workflow

The workflow of DARIS is described and illustrated in our Preservation Policy and is documented in internal workflow and processing guides, detailing each step of archival data transformation throughout the workflow. It is oriented towards the OAIS reference model (Ingest, Data management, Access, Archival storage, Administration, Preservation planning). DARIS has added the content and activities of the pre-ingest function to the original OAIS framework in order to ensure the quality of the data and determine problematic issues, such as confidentiality, prior to the official deposit. The pre-Ingest function includes solicitation of data and guidance and technical support for data producers wishing to deposit data.

Data management guidelines provide data depositors with clear instructions on how to properly prepare, document and submit their data (see R11 Data quality). The principles and criteria by which the repository develops its data collection and defines the designated community are indicated in the Collections Policy. Data that do not fall within the mission of our collections profile can be stored in FORSbase, but we do not archive and publish those data (see R 8, Appraisal).

Though the data depositor confirms in the deposit contract and while depositing the SIP in FORbase that the data are fully anonymized, the data submitted are screened for disclosure risks during ingest (see R4, Confidentiality/Ethics).

As of now our workflow is adapted to archiving and disseminating quantitative data, while the impact of an increase in qualitative data on the current workflow established in FORSbase cannot yet be fully estimated.

FORS has evaluated the utility of big data for the designated community and has outlined the ways that FORS will likely handle big data in the near future to benefit the research community that it serves. The impact on our workflow cannot yet be fully assessed.

[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

[Guidelines for deposit, quantitative data](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/quantitative-data-preparation/>

[Guidelines for deposit, qualitative data](#)

<http://forscenter.ch/en/data-and-research-information-services/2221-2/deposit-data/guidelines-for-deposit/qualitative-data-preparation-4>

[FORS' position on "Big Data"](#)

<http://forscenter.ch/de/fors-news-en-de/big-data-social-sciences/>

http://forscenter.ch/wp-content/uploads/2014/06/FORS_WPS_2015-02_Kleiner.pdf

FORSbase

<https://forsbase.unil.ch/>

Reviewer Entry

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Accept or send back to applicant for modification:

Accept

Comments:

13. Data discovery and identification

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

XIII Data discovery and identification

FORS currently provides two concurrently running search facilities and platforms for the discovery and download of research information and data: These are the FORSbase online platform and catalogue, which combines the Research Inventory as well as the actual data catalogue, and the FORS NESSTAR server, which comprises our most frequently distributed datasets. French, German, Italian and English searches are supported by our system. The FORSbase catalogue allows for a simple search of our holdings by mainly descriptive metadata in a free text search (including authors, data collector, data type, methods, etc.) as well as an advanced search function that allows for searches of disciplines, methods (analysis of content, observation, qualitative interview, etc.), funding institution, study type (mandated, thesis, personal research, etc.), end date of the project, and language. The main attributes are indexed by all major search engines. In addition, NESSTAR data are harvestable via the OAI-PMH protocol. The implementation of OAI harvesting for FORSbase is planned.

The research data of DARIS is also represented in the Registry of Research Data Repositories (re3data.org).

Our FORS NESSTAR server fully follows the DDI Codebook 2.5 metadata standard and complies with CESSDA recommendations.

The default data citations are generated automatically by FORSbase based on the metadata record. Alternatively, depositors can partly modify the standard citation as to title, authors (sequence, etc.), and institutions. The data citations are created on the level of the dataset, are recorded in the catalogue and the user contract, and are also distributed with the DIP (in the metadata report that we produce). The user contract commits users to cite the data as recorded therein.

Currently each study, dataset and file is assigned a reference number that is permanent and unique in FORSbase. We have implemented in FORSbase on dataset level a system of persistent identifiers (DOIs), provided by da'ra's DOI registration service, and have so far assigned DOIs to roughly 400 of our 566

archived datasets, , and plan for assigning DOIs for our complete holdings by the end of June 2018 (see also R7, Data integrity and authenticity).

Examples DOI

<https://forsbase.unil.ch/project/study-public-overview/14895/0/>

<https://forsbase.unil.ch/project/study-public-overview/14711/0/>

[FORSbase platform and data catalogue](#)

<https://forsbase.unil.ch/project/study-public-list/>

[FORS NESSTAR](#)

<http://fors-nesstar.unil.ch/webview/>

da'ra

<http://www.da-ra.de/>

[Registry of Research Data Repositories](#)

<http://www.re3data.org/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

14. Data reuse

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

XIV Data reuse

Data depositors create an extensive metadata record in FORSbase while establishing an entry. The current metadata standard is DDI Codebook 2.5 compliant, and exceeds the Dublin core metadata. In addition, we use the CESSDA topic classification (see R 11, Data quality and R 15, Technical infrastructure).

The most commonly used formats for quantitative tabular data which are de facto standard for our designated community are SPSS, STATA, and MS Excel. The most commonly used formats for documentation are PDF and MS Excel. Our lists of preferred and accepted formats (among others in the Collections Policy and the Policy on Archiving Qualitative Data) for FORSbase not only reflect the preferences of the designated community, but also recommendations from CESSDA and other relevant international institutions (see R 8, Appraisal and R 9, Documented storage procedures). Datasets disseminated through the FORS NESSTAR server can be downloaded in all formats supported by NESSTAR, including SPSS, STATA, Data interchange format (DIF), dBase, SAS, CSV (Comma-separated values), etc. For metadata PDF (default) and XML can be selected.

The DARIS team guarantees long-term usability and comprehension of its repository's data. In order to make data readable and accessible DARIS migrates file formats into a preservation format (e.g. SPSS file to CSV) while always maintaining the original manifestation of the data. The migration process is documented with a detailed migration history as part of the metadata associated with the data file.

We are currently finalizing the procedures to migrate the data files for the DIP into CSV and Excel files with an R script. These are then added to the DIP together with SPSS and STATA syntaxes to reconstruct the SPSS and STATA files.

[FORSbase list of recommended formats](#)

<https://forsbase.unil.ch/supported-file-formats/>

[Collections Policy](#)

http://forscenter.ch/wp-content/uploads/2015/05/Collections-Policy_v4.pdf

[Policy on Archiving Qualitative Data](#)

http://forscenter.ch/wp-content/uploads/2015/05/FORS-policy-and-procedures-on-qualitative-data_20_04_2016.pdf

[FORS NESSTAR](#)

<http://fors-nesstar.unil.ch/webview/>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

15. Technical infrastructure

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

XV. Technical infrastructure

The technical infrastructure at DARIS holds a functional and appropriate technical infrastructure and well-supported operating system. In order to guarantee all major services, DARIS relies on the IT centre of the University of Lausanne, which assures a stable, secure and efficient functioning of the information-communication infrastructure. They assure that the e-infrastructure, networking resources and services are carefully managed in accordance with best practices and technological standards.

DARIS' most important tool is FORSbase, a web application implemented in Python and Django. It is using a MYSQL database for storing the data and Fedora commons for file management and storage. All communication with Fedora is implemented via our application. FORSbase is OAI compliant, and it is planned until the end of 2017 to have functional DDI 2.5 and 3.2 imports and exports. FORSbase is running on a LINUX server hosted at the University of Lausanne (see R 9, Documented storage procedures).

The internal IT team at FORS follows current trends in the development of hardware and software. A software inventory is regularly updated and system documentation is maintained.

[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

FORSbase

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<https://forsbase.unil.ch/>

[Centre informatique of the Université de Lausanne](#) (only available in French)

<https://www.unil.ch/ci/fr/home.html>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

16. Security

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

3. In progress: We are in the implementation phase.

Self-assessment statement:

XVI. Security

Data recovery provisions, backup strategies, and risk management techniques are carried out by the IT centre of the University of Lausanne in order to guarantee the physical security of our archival holdings (see Chapter 4.3 of the Preservation Policy). There are fire extinguishers, water pumps, power suppliers (electrical power supply that last up to 30 minutes) and generators (electric generators that last up to one hour) installed in all three data centres of the university.

In addition to that, the IT centre of the University of Lausanne has recently undergone two external audits:

- a) By the cantonal control of finance regarding physical security and IT infrastructure of buildings on the university campus. As a consequence, a second flooring was introduced in one data centre, and there will be physical barriers in front of the buildings installed.

- b) By a local company for IT solutions regarding disaster recovery measures. There are data recovery provisions in place at the University of Lausanne. The IT Centre is working on a data recovery plan and is planning to implement it in 2017.

The IT centre of the University of Lausanne also uses redundant servers at the EPFL Neuchâtel in case of inundation, fire, malicious actions and technical failure (see R 9, Security).

All risk analysis processes and the corresponding documentation are internal documents of the IT centre of the University of Lausanne and not publicly available.

[DARIS Preservation Policy](#)

http://forscenter.ch/wp-content/uploads/2015/09/Preservation-Policy_v3.pdf

[Centre informatique of the Université de Lausanne](#) (only available in French)

<https://www.unil.ch/ci/fr/home.html>

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments:

17. Comments/feedback

Minimum Required Statement of Compliance:

0. N/A: Not Applicable.

Applicant Entry

Statement of Compliance:

4. Implemented: This guideline has been fully implemented for the needs of our repository.

Self-assessment statement:

We have addressed your comments on the questions 0), 3), 5), 7) and 13). **The revised text is marked in bold.** Very few further changes to the originally submitted text have also been marked in bold (some links and the FORSbase version).

Reviewer Entry

Accept or send back to applicant for modification:

Accept

Comments: