



## Assessment Information

[CoreTrustSeal Requirements 2017–2019](#)

Repository: DHS Data Access  
Website: [www.dhsdata.nl](http://www.dhsdata.nl)  
Certification Date: 27 October 2020

This repository is owned by: **CentERdata**



# DHS Data Access

## Notes Before Completing the Application

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

True

*Reviewer Entry*

**Reviewer 1**

Comments:

**Reviewer 2**

Comments:

## CORE TRUSTWORTHY DATA REPOSITORIES REQUIREMENTS

### Background & General Guidance

### Glossary of Terms

## BACKGROUND INFORMATION

### Context

*R0. Please provide context for your repository.*

*Repository Type. Select all relevant types from:*

Research project repository

*Reviewer Entry*

**Reviewer 1**

Comments:  
Accept

**Reviewer 2**

Comments:  
Accept

***Brief Description of Repository***

Since 1993, CentERdata annually collects economic data through a panel that consists of about two thousand households. The purpose of this DNB Household Survey (formerly known as CentER Savings Survey) is to study the economic and psychological determinants of the financial saving behavior of households.

The collected data are stored within the DHS data access repository. The repository is available at:  
<https://www.dhsdata.nl>.

The DNB Household Survey and its data repository are administered by CentERdata. CentERdata is a scientific, non-profit research institute for data collection and research. The institute was founded in 1996 and has supported and contributed to research that is relevant to science, society and policy since then. CentERdata is an independent research institute located on the Tilburg University (TiU) campus.

Partners of CentERdata include, among others, Tilburg University, Data Archiving and Networked Services (DANS) and Statistics Netherlands. CentERdata is also a member of the Dutch ODISSEI - Open Data Infrastructure for Social Science and Economic Innovations. <https://www.centerdata.nl/en>.

*Reviewer Entry*

**Reviewer 1**

Comments:  
Accept

**Reviewer 2**

Comments:  
Accept.

***Brief Description of the Repository's Designated Community.***

The DHS Data Access repository is available to academic researchers, both in the Netherlands and abroad.

*Reviewer Entry*

**Reviewer 1**

Comments:

Accept

**Reviewer 2**

Comments:

Accept

***Level of Curation Performed. Select all relevant types from:***

D. Data-level curation – as in C above; but with additional editing of deposited data for accuracy

*Reviewer Entry*

**Reviewer 1**

Comments:

Accept

**Reviewer 2**

Comments:

Accept

***Comments***

*Reviewer Entry*

**Reviewer 1**

Comments:

**Reviewer 2**

Comments:

***Outsource Partners. If applicable, please list them.***

Combell (server hosting): An ISO 27001 certified hosting partner which provides their server park for data storage.

CentERdata has a Service Level Agreement (SLA) for the servers with Combell as well as a Data Protection Agreement (DPA).

Data Archiving and Networked Services (DANS): CentERdata stores the data of the study also at DANS to ensure long-term preservation / back up of all datasets. CentERdata has a data deposit contract with DANS.

*Reviewer Entry*

**Reviewer 1**

Comments:

Accept

**Reviewer 2**

Comments:

Accept

### ***Other Relevant Information.***

This is an update of the Data Seal of Approval, received for 2014-2017.

#### ***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

#### ***Reviewer Entry***

##### **Reviewer 1**

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

##### **Reviewer 2**

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

#### ***Response:***

The DNB Household Survey (DHS) provides unique longitudinal data for the international academic community, with a focus on the psychological and economic aspects of financial behavior. The aim is to serve researchers by offering easy access to the data and metadata and reliable long-term preservation of the study. This mission statement can be found in the Data Management and Preservation Policy of DNB Household Survey (DHS) published at <https://www.dhsdata.nl/>.

The data are made available online for all scientific researchers via the DHS Data Access website (see [www.dhsdata.nl](http://www.dhsdata.nl)). The aim is to provide reliable and easily accessible information, including data and metadata, on the DHS. Use of the data is free of charge for scientific purposes.

#### *Reviewer Entry*

##### **Reviewer 1**

Comments:  
Accept

##### **Reviewer 2**

Comments:  
Accept

## **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:***

The data can be accessed by agreeing to the rules and conditions for the use of data. This is declared by signing a data user statement: CSS DHS Data Statement. Completed statements are checked by a dedicated CentERdata employee before granting the access rights to the data user.

The conditions of use are:

- Under no circumstances is the data to be used for other than purely scientific purposes.
- Users have to sign a statement confirming that information about individual persons, households, etc. will not be released to others. Data will only be made available after a signed statement has been received through [statements.centerdata.nl](http://statements.centerdata.nl).

A dedicated CentERdata employee decides about granting access rights. If access is granted, one will receive a password that allows data download.

-Whenever a paper is being written using the data, the author is expected to send a copy to CentERdata by email. In addition, an acknowledgement has to be included in the following form: "In this paper use is made of data of the DNB Household Survey."

-Data users should not make copies of the data available to others. Anyone wanting to use the data has to individually contact CentERdata directly to request access to the data. We can then keep track of who the users are and inform the users on developments with regard to the data.

-Users of the data will be included in the DHS user list.

-Students are also allowed to use the data for scientific purposes. However, the password given will become inactive after a period of two years, but can be renewed if need be.

-In case of doubt whether or not the data are used for scientific research, the board of CentERdata will decide if a password is granted.

These conditions and the procedure for applying for access rights can also be viewed at:

<https://www.centerdata.nl/en/databank/dhs-data-access>

The statement is available at: <https://statements.centerdata.nl/css-dhs-data-statement>

If the data user does not comply with the regulations as stated in the DHS statement, then CentERdata can withdraw his/her access rights to the further use of data as the data are only available via a password protected login onto the DHS Data Access system. Would the user's manner of DHS data usage appear to violate the Dutch Code of Conduct for the use of personal data in scientific research, Dutch Personal Data Protection Act or other national legislation, CentERdata may contact the data user upon the issue. If need be, CentERdata may take further actions to contact the disciplinary or legal authorities.

#### *Reviewer Entry*

##### **Reviewer 1**

Comments:

Accept

##### **Reviewer 2**

Comments:

Accept

### **III. Continuity of access**

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

***Compliance Level:***

4 – The guideline has been fully implemented in the repository

*Reviewer Entry*

**Reviewer 1**

Comments:

4 – The guideline has been fully implemented in the repository

**Reviewer 2**

Comments:

4 – The guideline has been fully implemented in the repository

***Response:***

The DHS project receives biannual funding, but CentERdata guarantees the preservation of the data also on the mid and long term, independent of the project funding. Besides in its own system, CentERdata archives the published data files and codebooks in the EASY system of DANS. The metadata deposited in the EASY system are defined on study level.

While these data files are currently accessible to Data Users via the DHS Data Access website only, CentERdata has implemented a Statement of Intent with DANS to grant access via the EASY system, in case the DHS Data Access service should ever cease to exist. While the primary goal is to guarantee long-term preservation through good management of the DHS Data Access website, this additional measure serves to create maximum trust in long-term preservation. DANS creates persistent identifiers, URNs and DOIs, for the studies which are ingested by the EASY system. These can be viewed on the website of the EASY system. The URN of the DHS is also presented on the DHS Data Access website (see DHS description at <https://www.dhsdata.nl>).

*Reviewer Entry*

**Reviewer 1**

Comments:

Accept

**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

### *Reviewer Entry*

#### **Reviewer 1**

Comments:

4 – The guideline has been fully implemented in the repository

#### **Reviewer 2**

Comments:

4 – The guideline has been fully implemented in the repository

### *Response:*

The DHS Data Access system only archives the data collected by CentERdata within the DNB Household Survey (DHS) and therefore does not deal with external depositors of data. DHS is one of the studies administered to the CentERpanel and for an additional sample, the LISS panel. Both panels are administered by CentERdata. Extended historical information on the DNB Household Survey recruitment and methodology can be read in the report 'The CentERpanel and the DNB Household Survey: Methodological Aspects', available at:

[http://www.dnb.nl/binaries/DNB\\_OS\\_1004\\_BIN\\_WEB\\_tcm46-277691.pdf](http://www.dnb.nl/binaries/DNB_OS_1004_BIN_WEB_tcm46-277691.pdf)

As the DNB Household Survey is administered in the CentERpanel and LISS panel of CentERdata, a formal consent procedure is required. The panel members consent via a multi-stage agreement including the initial recruitment as well as the activation of an account (after login only) in the panel environment. Since the introduction of the Dutch GDPR (Algemene Verordening Gegevensbescherming) in 2018, panel members who already participated and newly recruited panel members have been asked to give an explicit informed consent via a web form to (continue) taking part in research projects in the panel, among which the DNB Household Survey. Only respondents who complied were allowed to continue to participate in the panels.

High quality data and scientifically sound research methods are important to CentERdata. CentERdata's management team governs over the data collection, archiving and dissemination of the DHS.

The DHS project leader is responsible for the correct data collection and processing of the raw data. After completion of the fieldwork of the survey, the DHS data are processed to be entered into the DHS Data Access system. During this process, the data are cleaned from any privacy-sensitive information, which could be included for example in open answers of the survey. To prepare the data archiving, a procedure is followed which is documented in the form of a checklist, containing data and metadata requirements and quality checks. For each dataset, there is also a second-reader check, during which a second person checks for, among others, the cleaning of any privacy-sensitive information.

Regarding legal and ethical norms, CentERdata, the owner of the DHS Data Access website, at all times complies with applicable laws and regulations including the GDPR. Furthermore, CentERdata uses working methods that meet the guidelines developed by the Association of Universities in the Netherlands (VSNU) as set out in the Code of Conduct for

Research Integrity (VSNU, 2018). The CentERpanel, in which the DHS study is administered, is registered with the Dutch Data Protection Authority (Autoriteit Persoonsgegevens) under number m1274900. CentERdata is registered at the Tilburg Chamber of Commerce under number 41098659.

The abovementioned information can be found in Chapters 3 and 6.1 of the Data Management and Preservation Policy of DNB Household Survey (DHS) published at <https://www.dhsdata.nl/>.

#### *Reviewer Entry*

##### **Reviewer 1**

Comments:  
Accept

##### **Reviewer 2**

Comments:  
Accept

## **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

#### *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:***

CentERdata (<http://www.centerdata.nl>) is a scientific, non-profit research institute located at the campus of Tilburg University in the Netherlands. The institute carries out the data collection and archiving of the DNB Household Survey (DHS). CentERdata is a well-established organization, internationally known for survey research. The DHS receives funding from the Dutch Central Bank (De Nederlandsche Bank, DNB) and the Tilburg School of Economics and Management (TiSEM, Tilburg University). The funders from DNB decide every 1-2 years about the prolongation of the

project. In case the DNB Household Survey ceases to be funded, CentERdata will provide a four-year period of user support which will be covered by funds from CentERdata's financial reserves. The support consists of maintaining the website <https://www.dhsdata.nl/> and answering questions from end users on an "as-is" basis. The financial support and active participation of the Dutch Central Bank since 2003 emphasizes the DHS's societal importance, as does use of the DHS data by organizations such as the Netherlands Bureau for Economic Policy Analysis (CPB), the Netherlands Institute for Social Research (SCP), and the National Institute for Family Finance Information (NIBUD).

To ensure long-term preservation, CentERdata deposits the data also at DANS. For more information on this, please see Chapter 6.6 of the Data Management and Preservation Policy of DNB Household Survey (DHS) published at <https://www.dhsdata.nl/>.

The Core Management Team governs the data collection, archiving and dissemination. In addition, an external Scientific Advisory Board oversees and advises the CentERdata management team. A number of employees at CentERdata is involved with the archiving of DHS data: the project manager, the daily project leader, database manager, system administrator, and the data access coordinator. Co-workers at the Survey Research department are involved with quality checks. In general, employees work under permanent employment contracts, ensuring continuity as their employment is not reliant on the funding of the project. CentERdata has an internal academy for courses and training and the employer stimulates participation in external courses and training to support professional development. A description of the organization is available in the repository's data preservation policy at: <https://www.dhsdata.nl/>.

#### *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:***

The Scientific Advisory Board (SAB) advises on the design of the facility and provides feedback on newly planned investments, makes recommendations for changes and additions, and reviews both the scientific and societal contribution of the facility. The SAB meets at least once a year to discuss the content of the questionnaires and to respond to requests and suggestions for additions from the CentERdata Core Management Team. The SAB consists of scientific researchers from DNB, academic experts from several universities and CentERdata researchers.

The director of CentERdata makes the final decisions concerning the DHS study, but is obliged to solicit the SAB's advice. He will only deviate in exceptional cases and if doing so, will provide a motivation to the SAB. The director of CentERdata has the final responsibility for safeguarding the data.

A description of the organization is available in Chapter 4 of the repository's Data Management and Preservation Policy of DNB Household Survey (DHS) at: <https://www.dhsdata.nl>.

***Reviewer Entry*****Reviewer 1**

Comments:

Accept

**Reviewer 2**

Comments:

Accept

**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

## *Reviewer Entry*

### **Reviewer 1**

Comments:

4 – The guideline has been fully implemented in the repository

### **Reviewer 2**

Comments:

4 – The guideline has been fully implemented in the repository

## ***Response:***

The DHS Project Leader is responsible for the correct data collection and processing of the raw data. After completing the fieldwork, the data are processed into a Submission Information Package (SIP) to be ingested by the DHS Data Access system. All data processing steps are documented in and run using an SPSS syntax file to ensure an audit-trail to the original data file and a reconstruction of the data processing.

In addition, the following procedures are formalized. For each SIP, there is an internal second-reader check. Before the SIP is converted into an Archival Information Package (AIP) and accepted into the DHS Data Access system, the second reader follows a Data Entry Checklist, which defines the required checks on the submitted data and metadata.

Moreover, the data-entry interface that is used to enter (meta)data into the DHS Data Access system contains systematic checks to prevent the entry of incorrect or duplicate (meta)data.

In order to control the integrity of data files, MD5 and SHA1 checksums of all uploaded files (data files, codebooks, images etc.) are calculated as the files are uploaded to the server. It is possible to check the integrity of another copy of the data file by calculating the checksum of the data file and comparing its value with the checksum which was created during upload of the published file. For example, Data Users can use the checksum to verify the integrity of the copy of the data file which they have downloaded in comparison with the version on the DHS Data Access website. The checksums are displayed alongside the files.

If the metadata or data of the AIP need to be altered, the following procedure applies: The original SIP is modified by the DHS Project Member. Before starting to process the data file, the Project Leader compares the checksums of the published version and the copy which he/she will use for the new version. The DHS Project Leader then uses the same documentation procedure as for the first version, i.e. a syntax file is used for the data file including the modifications of the data file. A new version number is allocated to the file. If the content of a data variable needs to be changed, the variable receives a new name as the interpretation of the data variable might have changed. The changes to the content are documented in the related codebook, which is saved in the internal directory of the SIP. After a check, the Project Member enters the new version of the file into the DHS Data Access system and enters information on the modifications into a specified AIP field which is visible for the Data Users. Old versions of (data) files remain stored (but not visible for users) in the database.

The abovementioned information is available in the repository's data preservation policy (Paragraph 6.4) at:

<https://www.dhsdata.nl>.

*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

*Reviewer Entry*

**Reviewer 1**

Comments:

4 – The guideline has been fully implemented in the repository

**Reviewer 2**

Comments:

4 – The guideline has been fully implemented in the repository

### *Response:*

The DHS Data Access system only archives the data collected within the DNB Household Survey (DHS), administered by CentERdata, and therefore does not deal with external depositors of data. The DHS data are stored and disseminated as SPSS and STATA files. The files are first checked for their content and data quality. Secondly, during the internal procedure to create an Archival Information Package (AIP), the files are checked for their format. For example, are the respondent ID's encrypted, are they sorted ascendingly, do the file names have the right format, are the files saved in the right format, do they open well and include the right variables.

The study description and variable metadata are included in documentation files (codebooks) which are provided as PDF files.

The abovementioned formats are in compliance with the organization's file format standards for delivering survey data and documentation.

The abovementioned information is available in the repository's data preservation policy (Chapter 6) at:

<https://www.dhsdata.nl>.

*Reviewer Entry*

**Reviewer 1**

Comments:

Accept

**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:*

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:*

CentERdata has documented its processes for managing the data storage of DHS data in a policy report, namely the Data Management and Preservation Policy of DNB Household Survey (DHS). The processes are described based on the Open Archival Information System (OAIS) model in Chapter 6 of that document. This policy can be found at: [www.dhsdata.nl](http://www.dhsdata.nl).

*Reviewer Entry*

**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:*

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:*

An ISO 27001 certified hosting partner is responsible for the operational management of the server park and takes care of the tasks of the administration functional entity. The hosting partner also performs the updates of the software packages. Preservation ('planning functional entity') is secured further by backing up the data. A reconstructive back-up of the data of the DHS Data Access application and the underlying database is made daily. The daily backups are stored for a month.

Besides in its own system, CentERdata archives the published data files and codebooks in the EASY system of DANS. The metadata deposited in the EASY system are defined on study level. While these data files are currently accessible to Data Users via the DHS Data Access website only, CentERdata has implemented a Statement of Intent with DANS to grant access via the EASY system, in case the DHS Data Access service should ever cease to exist. While the primary goal is to guarantee long-term preservation through good management of the DHS Data Access website, this additional measure serves to create maximum trust in long-term preservation.

DANS creates persistent identifiers, in this case URNs, for the studies which are ingested by the EASY system. These can be viewed on the website of the EASY system. The persistent identifier of the DHS is also presented on the DHS Data Access website (see DHS description at <https://www.dhsdata.nl>).

Information on the long-term preservation strategy can be found in the repository's data preservation policy (Paragraph 6.6) at: <https://www.dhsdata.nl>.



To address the threat of file format obsolescence, CentERdata monitors the development of the used software packages SPSS and STATA, and also stores a copy of the data as .csv files. Data processing is stored in script files. In addition, the source code of the surveys, including metadata for labels, is stored in txt-based files.

*Reviewer Entry*

**Reviewer 1**

Comments:

Accept

**Reviewer 2**

Comments:

Accept

## **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

*Reviewer Entry*

**Reviewer 1**

Comments:

4 – The guideline has been fully implemented in the repository

**Reviewer 2**

Comments:

4 – The guideline has been fully implemented in the repository

### ***Response:***

The metadata and data are made available by CentERdata to scientific researchers through the website:

<https://www.dhsdata.nl>.

Metadata on each wave of the DHS study are freely accessible to the public on this website, including information on the study objectives, fieldwork and metadata on the data file and individual variables. This information is included at the start of the codebooks per wave.

The DHS Project Leader is responsible for the correct data collection and processing of the raw data. After completing the fieldwork, the data are labelled, cleaned from privacy sensitive information (e.g. open answers) and the respondents' answers are checked for plausibility and outliers. This work is conducted by experienced survey researchers, accustomed to process and control survey data. The data processing steps are documented in (SPSS) syntax files/scripts. This ensures an audit-trail to the original data file. By running these scripts, the data are processed into a Submission Information Package (SIP) to be ingested by the DHS Data Access system.

In addition, the following procedures are formalized. For each SIP, there is an internal second-reader check. After this check, the SIP is entered into the repository and enriched with metadata. This Archival Information Package (AIP) is reviewed by a second reader. This second reader follows a Data Entry Checklist, which defines which information needs to be included (and in which format) on the submitted data and metadata.

To enable meta crawlers to harvest the metadata of the DHS, the system supports the OAI-PMH protocol (base-url is <http://www.dhsdata.nl/oai/oai2.php>). Dublin Core metadata information about published study units can be harvested here. The DHS metadata can also be searched by Google.

To increase visibility of the DHS data, the repository can be found through National Academic Research and Collaborations Information System (NARCIS), <https://www.narcis.nl/> ("The gateway to scholarly information in the Netherlands"). NARCIS is the main national portal for scientific information.

#### *Reviewer Entry*

##### **Reviewer 1**

Comments:  
Accept

##### **Reviewer 2**

Comments:  
Accept

## **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

#### *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:***

From data production until archiving, documented workflows are followed throughout the process. The details of these workflows have been described at Requirement 7.

In the DHS Data Access system, administrative information on database requests (data downloads) are logged and can be used to verify past events. To access the system, one must be uniquely logged in. External Data Users who are logged in gain limited rights to operate within the system, to download the published datasets. Internally, CentERdata staff members also need to register to access the system. Depending on the tasks, a role is allocated to a specific staff member. The access rights within the system are dependent on this role. The data that are stored in and disseminated via the DHS Data Access system, are also deposited in the EASY online archiving system of DANS. These data are systematically entered into the EASY system.

The abovementioned information is available in the repository's data preservation policy (Chapter 6) at:

<https://www.dhsdata.nl>.

***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 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:*

Access to the DHS Data Access website is open to every academic researcher, both in the Netherlands and abroad. The metadata and data are made available by CentERdata to scientific researchers through the website:

<https://www.dhsdata.nl>.

Metadata on each wave of the DHS study are freely accessible to the public on this website, including information on the study objectives, fieldwork and metadata on the data file and individual variables. This information is included at the start of the codebooks per wave. The website also offers a free keyword search facility to find out whether specific questions or terms occur in the questionnaires.

While access to metadata is unrestricted, users must register in order to download actual data files. The Data User is required to sign and comply with the rules of the CSS DHS data statement, available at

<https://statements.centerdata.nl/css-dhs-data-statement>.

The signed statement is verified by the Data User Contract Coordinator, who sends the login information by email after access approval. The Data User can then download all published datasets within the database.

To enable meta crawlers to harvest the metadata of the DHS, the system supports the OAI-PMH protocol (base-url is <http://www.dhsdata.nl/oai/oai2.php>). Dublin Core metadata information about published study units can be harvested here. The DHS metadata can also be searched by Google.

To increase visibility of the DHS data, the repository can be accessed through the National Academic Research and Collaborations Information System (NARCIS), <https://www.narcis.nl/> ("The gateway to scholarly information in the Netherlands"). NARCIS is the main national portal for scientific information.

The repository's unique persistent identifiers are:

DOI: 10.17026/dans-xzu-sp9h

URN: urn:nbn:nl:ui:13-msz-kxe

### *Reviewer Entry*

#### **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 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:***

Metadata on each wave of the DHS study include information on the study objectives, fieldwork and information on the data file and the content of individual variables. This information is included in codebooks which are created per study wave. The codebooks are freely available on the DHS Data Access website (<https://www.dhsdata.nl>).

The data are offered as SPSS and STATA files, which belong to the most commonly used statistical packages in the social sciences. CentERdata monitors the developments in the usage of data packages in social sciences to ensure it provides the data in the most common data formats.

Dublin Core metadata fields are used for study descriptions which are saved in the DHS Data Access system and are provided for harvesting purposes. The system supports the main Dublin Core fields: Title, Creator, Subject, Description, Publisher, Contributor, Date, Type, Format, Identifier, Source, Language\_id, Relation, Coverage, Rights.

The data which are ingested into the DHS Data Access system are also deposited in the online archiving system EASY of Data Archiving and Networked Services (DANS). Data Users have access to the metadata via the EASY system, but are referred to the DHS website for accessing the actual data files. The metadata fields in the EASY system follow the specifications of Qualified Dublin Core (see <http://dublincore.org/documents/dcmi-terms/>). Obligatory fields include: Title,

Creator, Date created, Description, Access rights, Date available, Audience (the latter only in Standard).

*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:***

CentERdata has developed its own system for the storage and dissemination of the DHS data, called DHS Data Access. This system is the technical basis of the DHS Data Access website and all surveys of the study are disseminated via this system. DHS Data Access is a web application built using a PHP framework that uses a relational database to store data. The DHS Data Access server is harvestable using an OAI-PMH implementation.

The public metadata of the studies in the DHS Data Access system support the main Dublin Core fields (Title, Creator,

Subject, Description, Publisher, Contributor, Date, Type, Format, Identifier, Source, Language\_id, Relation, Coverage, Rights), used i.e. by the Data Documentation Initiative (DDI) standard.

The abovementioned information is available in the repository's data preservation policy (Paragraph 6.3) at: <https://www.dhsdata.nl>.

The repository runs on a server of CentERdata's partner Combell, which is an ISO 27001 certified server provider. An incremental backup of the DHS Data Access application (including data) is made daily to the back-up storage. The CentERdata application servers are protected by firewalls, protected against DDOS attacks and measures have been taken to detect any irregularities on the network.

CentERdata's IT department is also preparing its application for receiving its own ISO 27001 certificate, More detailed information on the data safeguarding of the DHS data can be found in Chapter 7 of the repository's data preservation policy at: <https://www.dhsdata.nl>.

#### *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:***

To store the data, CentERdata uses the services of hosting provider Combell. The data centers of Combell are fully ISO 27001 certified, redundant and physically located within the European economic area. CentERdata has its own protected part, to which third parties have no access.

Access to the server rooms of Combell is limited by physical and organizational access measures, and the space is provided with fire protection and continuity guarantees for energy supply. The servers are protected against DDOS attacks. The CentERdata application servers are protected by firewalls and measures have been taken to detect any irregularities on the network. Functional access to the system is limited to the relevant system administrators.

Concerning logical access security, the system is logically / organizationally protected by passwords and IP restrictions. Account passwords are always hashed in the database after the first login. At CentERdata, access to the DHS Data Access application is based on role-specific authorization and only dedicated IT employees can access the database of the DHS Data Access service.

Concerning programmable security measures, the configurations and log files of the servers and applications used by CentERdata are periodically checked where necessary. CentERdata keeps track of an incident registration. A reconstructive back-up of the data of the DHS Data Access application and underlying database is made daily. The daily backups are stored for a month.

Information on the repository's data safeguarding is available in the data preservation policy (Chapter 7) at: <https://www.dhsdata.nl>.

### ***Reviewer Entry***

#### **Reviewer 1**

Comments:  
Accept

#### **Reviewer 2**

Comments:  
Accept

## **APPLICANT FEEDBACK**

### **Comments/feedback**

***These requirements are not seen as final, and we value your input to improve the 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: