

# Archived data set (according to the current DDI standard)

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a knowledge base for intermodal  
passenger travel in europe

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## Archived data set (according to then current DDI standard)

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## Abbreviations

MEST – Methods for European Surveys of Travel Behaviour

INVERMO - Intermodale Vernetzung

DATELINE – Design and Application of a Survey for European Long-Distance Trips Based on a International Network of Expertise

KITE - A Knowledge Base for Intermodal Passenger Travel in Europe

CATI - Computer Assisted Telephone Interview

SP - Stated Preference

IVT - Institut für Verkehrsplanung und Transportsysteme der ETH Zürich

ETHTDA - ETH Travel Data Archive

NESSTAR - Networked social sciences tools and resources

DDI - Data Documentation Initiative

ETHTDA - Eidgenössische Technische Hochschule Travel Data Archive

## Summary

The KITE survey data is archived with the Nesstar software according the DDI standard (see <http://www.icpsr.umich.edu/DDI/>). The data structure follows the survey structure and contains of the following groups of variables: Household, Person, Journey roster, Vehicles, Regular trips, non-regular journeys and SP-Dataset.

Further it is described how to access the archived data and how to handle the WebView interface which allows browsing the data itself, the metadata and calculate and create first statistics of the data. The archived dataset can be downloaded in several data format, which makes it very easy to process and analyse the data the user's known environment.

The dataset will be available for everybody, after requesting an account for the ETHTDA. The ETHTDA server allocates travel data since 2002 and will host the data also in the future.

# 1 Introduction and background

Work package 3 of the KITE project tested in a pilot survey a suitable survey methodology that intends to close remaining information gaps about long-distance travel behaviour. Long-distance travel is only in rare cases a part of daily mobility (e.g. salesmen or ambassadors). Therefore, such movements are reported with low frequencies in surveys of daily mobility. However national travel surveys (NTS) dedicated to daily mobility are the only source for long-distance travel in many European countries (e.g. in Denmark or Netherlands). The problem in these surveys is the difficulty of obtaining representative statistics of long-distance travel even with relatively big samples. Therefore in most national travel surveys modules are dedicated to long-distance travel with the exceptions mentioned above. The most common format in these surveys is that respondents are asked to report their long-distance journeys in addition to their mobility on a given day, but for a longer reporting period (e.g. Great Britain NTS (2002-2004), French NTS (1993-1994), Swiss Microcensus on Travel Behavior (2005), and Swedish RES (2005/2006)). A further, but less frequent source of data for long-distance travel are surveys exclusively dedicated to long-distance travel. But past surveys show very different amounts of long-distance travel demand for the same countries, which make that those numbers hard to trust (see Dateline dataset with its consistently lower value for the number of trips per person and year).

The KITE pilot surveys were carried out in Switzerland, the Czech Republic and Portugal.

A main objective of this pilot survey was to test a survey methodology in different countries in Europe and to assess the quality of information that can be obtained from it. In addition, a stated preference survey was designed to gather information about market potentials and user requirements.

The focus of this deliverable is to present how the dataset is archived and how it is possible in the future for other users to get access to the surveyed data including meta-data, which makes it possible to understand the data and perform desired analysis.

The software used to archive the data on the servers of the IVT allows sophisticated data browsing tools which is seamlessly integrated into the users' desktop. It is fully based on Web technology. The data structure used for the achieved data is built upon the use of interoperability standards, including the XML syntax and the DDI standard (see <http://www.icpsr.umich.edu/DDI/> for further information).

A further feature of the archived is the ability to browse data interactively, thereby opening valuable data resources to a wider community. The generic data browser operates on the Web.

## 1.1 NESSTAR

The used software for the data archiving is called NESSTAR (see Norwegian Social Science Data Services, 2009). The Nesstar software suite is an integrated suite of

products aimed at facilitating the locating and use of socio-economic, and similarly structured, data. It has been developed by the UK Data Archive at the University of Essex and by the Norwegian Social Science Data Services in Bergen building upon the R&D of the EC funded NESSTAR and FASTER projects. It allows users to browse distributed data catalogues over the Web, examine detailed information about the data (metadata), carry out simple data analysis (e.g. tabulations and graphical displays) and then download data, in whole or part, in one of a number of popular formats. The system contains registration and authentication facilities to filter access to data as necessary and a suite of data publishing and server management tools.

## 1.2 ETHDA

ETHDA (<http://tda.ethz.ch/>) is a virtual platform for the travel data, which is available at the Institute for Transport planning and Systems (IVT) since May 2002. ETHDA allows the end users to browse the archived travel data over the web and enables simple statistical analysis. ETHDA provides comprehensive information on the travel data that has been developed or analysed at the IVT. The information includes details of the corresponding travel survey from which the database was derived. ETHDA is one of the early travel data archives under Data Documentation Initiative (DDI) standards. The archive is build around the NESSTAR system.

## 2 Archived dataset

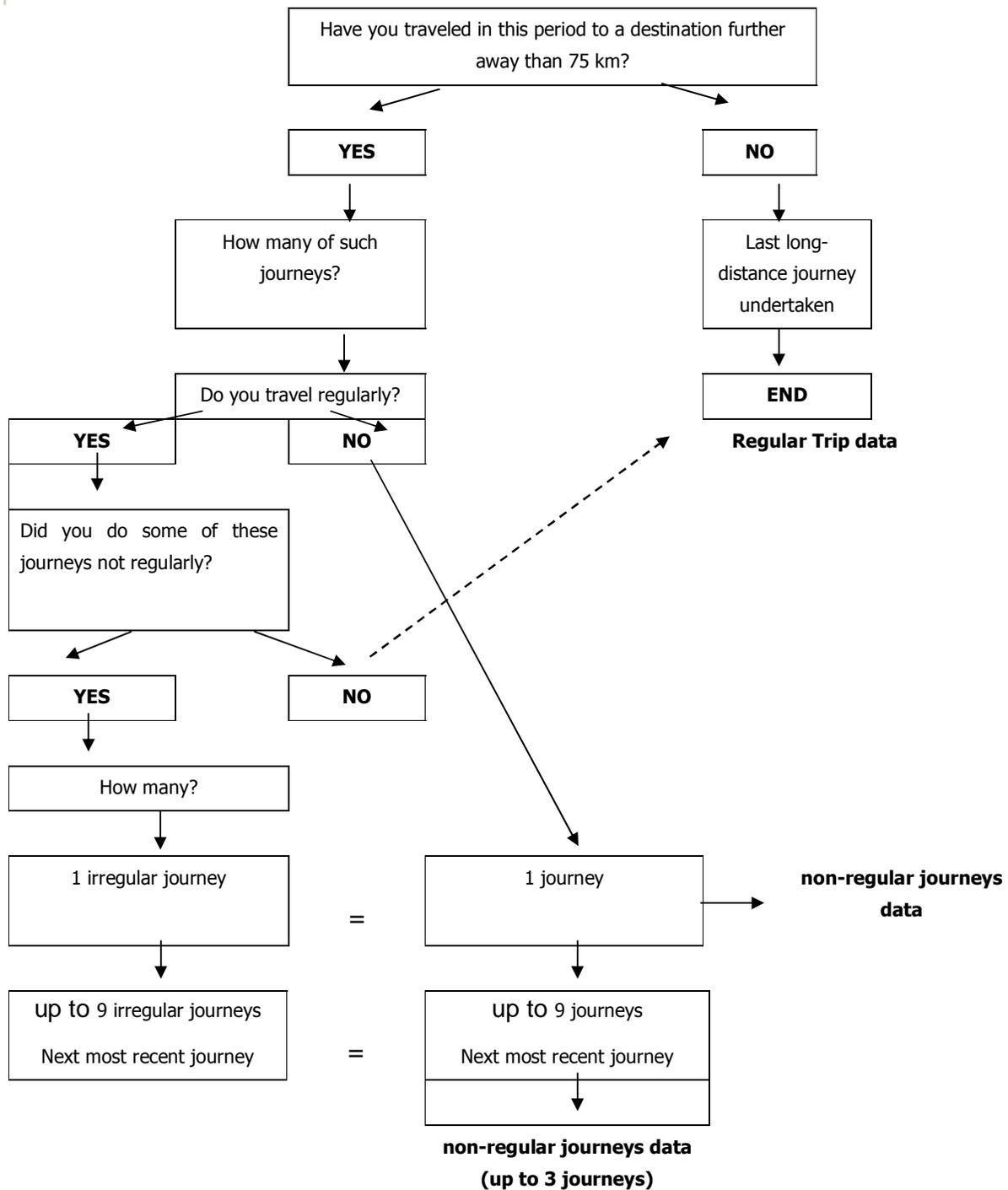
### 2.1 Description of the dataset

This KITE dataset consists of four parts: The first part is a dataset conducted with a CATI in Switzerland and Portugal and with a face-to-face interview in the Czech Republic contains the relevant sociodemographic information; the second part consists of data about the basic statistics of long-distance travel in terms of a long-distance journey roster (i.e. number of long-distance journeys and if they are regular or irregular ones), which were conducted again with a CATI in Switzerland and Portugal and respectively as a face-to-face interview in the Czech Republic; and the third part of the data is a detailed travel diary conducted with a CATI respectively a face-to-face interview with the relevant information on stage based level for intermodal long distance journeys. The fourth part is a follow up SP dataset, conducted as a postal survey, which contains stated preference data from mode and route choice experiments.

### 2.2 Structure of the dataset

The structure of the dataset follows the screening which was used. The first two parts of the survey were the same for the whole sample, whereas the last part is different for regular long-distance travelers, persons with non-regular long-distance journeys during the last 8 weeks and persons with no long-distance journeys during the past 8 weeks.

The structure follows the following structure:



## 3 How to access and use the archived KITE dataset

### 3.1 Introduction

This guide provides a brief introduction to Nesstar WebView and how to access and download the archived KITE dataset.

The WebView of Nesstar enables users to:

- View survey and tabular data
- Browse metadata
- Create cross-tabulations of variables
- Run correlation and regression analyses
- Produce graphical representations of data
- Create new variables
- Recode existing variables
- Download the data in 7 formats

### 3.2 Authentication

The ETHHTDA is accessible with a normal Web browser by the address: <http://tda.ethz.ch/>. The start page is illustrated in Figure 1.

Figure 1 Start page of the ETHHTDA

ETH  
Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zürich

INSTITUTE FOR TRANSPORT PLANNING AND SYSTEMS  
Archived datasets (Overview) | Travel Survey Metadata Series  
Nesstar WebView

ETH Zürich - Welcome to the Institute for Transport Planning and Systems (IVT) - ETHHTDA Home

INSTITUTE FOR TRANSPORT PLANNING AND SYSTEMS  
Archived datasets (Overview) | Travel Survey Metadata Series  
Nesstar WebView

Welcome to ETH Travel Data Archive (ETHHTDA)

ETH Travel Data Archive (ETHHTDA) is a virtual platform for the travel data, which was established at Institute for Transport Planning and Systems (IVT) in May 2002. ETHHTDA allows the end users to access the metadata over the web and enables simple statistical analysis of the disaggregated data. ETHHTDA provides comprehensive information on the datasets that has been produced or analysed at the IVT. The information includes details of the travel survey from which the database was derived. ETHHTDA is one of the early Data Documentation Initiative (DDI) compliant travel data archives.

Following NESSTAR data archiving tools were used to

- Nesstar Server: Hosts all the archived data. Offer web browser.
- Nesstar Publisher: A DDI compliant data management facilitates the data archivists to mount the archive.
- Nesstar WebView: An integral component of the Nesstar Server with nesstar Publisher via a Nesstar Server.

All the interested users are requested to contact Nesstar for more information about acquisition of the above archiving tools.

User accounts for the ETH Travel Data Archive: [Andreas Horni](#)

All the interested users are requested to contact Nesstar for more information about acquisition of the above archiving tools.

User accounts for the ETH Travel Data Archive: [Andreas Horni](#)

Metropolitan Travel Survey Archive, University of Minnesota  
ICPSR  
Inter-university Consortium for Political and Social science Research  
UKDA  
UK Data Archive, University of Essex  
DDA  
Danish Data Archive  
NSD  
Norwegian Social science Data services  
SSD  
Swedish Social science Data service  
Steinmetz  
ETH Social science Data

To access the Nesstar WebView a user account with a password is needed. To get a user account, a request has to be sent to the Nesstar administrator.

With a password and a user name, the Nesstar web view can be accessed with the link in the upper menu of the ETHTDA's start page (see Figure 1 for the illustration of the link).

If you followed the Nesstar WebView link, you will access the start page of the Nesstar WebView (see Figure 2).

Figure 2 Start page of the Nesstar WebView



The screenshot shows the start page of the Nesstar web interface. At the top, there is a blue header with a world map on the left and the 'nesstar' logo on the right. Below the header, the text 'ETH\_Travel\_Data\_Archive Access Control' is displayed. Underneath, there are two sections: 'Registered Users' and 'Unregistered Users'. The 'Registered Users' section contains a 'User name:' field with the value 'freindr', a 'Password:' field with masked characters, and a 'Login' button. The 'Unregistered Users' section contains a message: 'To access a restricted resource, you need to register with the organisation hosting the resource.' Below this, there is a link for 'User accounts ETH Travel Data Archive: [Andreas Horn](#)' and a 'Cancel' button.

### 3.3 Using Nesstar WebView

The following information describes how to navigate around the Nesstar system. The data and metadata published to the ETHTDA Nesstar Server are available within WebView, the interface to the Nesstar Server.

Survey data, tabular data or other resources, e.g. reports, can be accessed by the ETHTDA Nesstar server. Published datasets and resources are associated with catalogues.

The left side of the screen contains the 'browse list'. This contains a list of all catalogues and published resources available within the ETHTDA (see Figure 3 a)).

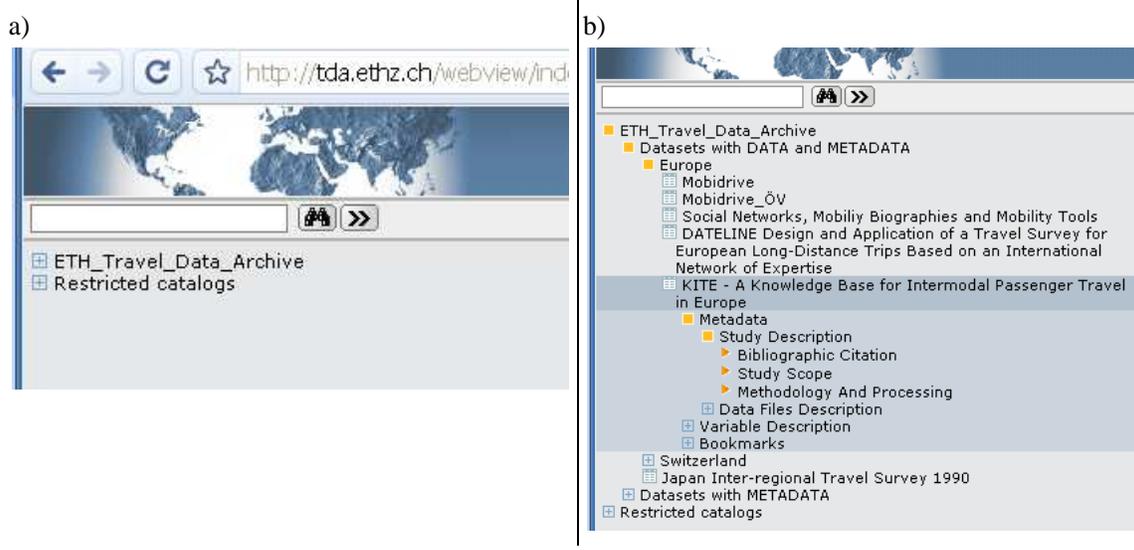
A  represents a Nesstar catalogue in the browse list. - Click on  to expand the catalogue. The Catalogues hold the different datasets which are published at the ETHTDA.

Clicking on a title will display the abstract text on the right side of the screen (see see Figure 3 b)). Click on the dataset icon  to display further information about that dataset. Clicking again on  will open further levels of information.

The KITE data is archived under:

ETH\_Travel\_Data\_Archive → Datasets with DATA and METADATA  
 → Europe → KITE - A Knowledge Base for Intermodal Passenger Travel in Europe (see Figure 3 b)).

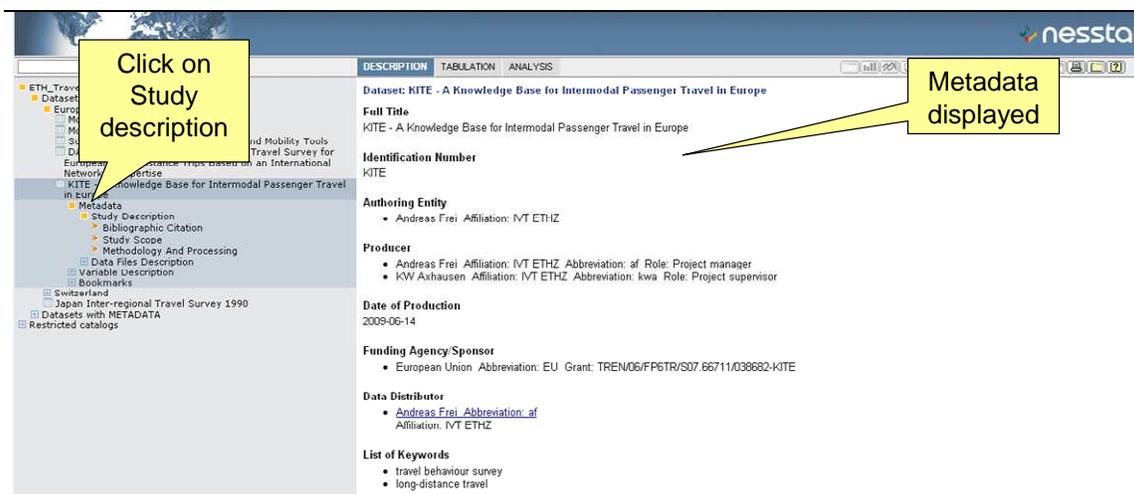
Figure 3 ETHTDA Nesstar catalogue



### 3.3.1 Metadata

Metadata relating to the chosen resource can be viewed in this section. Information selected in the browse list will display corresponding information in the main frame on the right, see Figure 4.

Figure 4 ETHTDA Nesstar Metadata displayed



To view information about published data:

1. Click on a dataset title to view its associated abstract.
2. Select the dataset icon to open a list of directories associated with that dataset.

3. Click on Metadata and the following options will be:

- Study Description
- Data Files Description

### 3.3.2 Variable Description

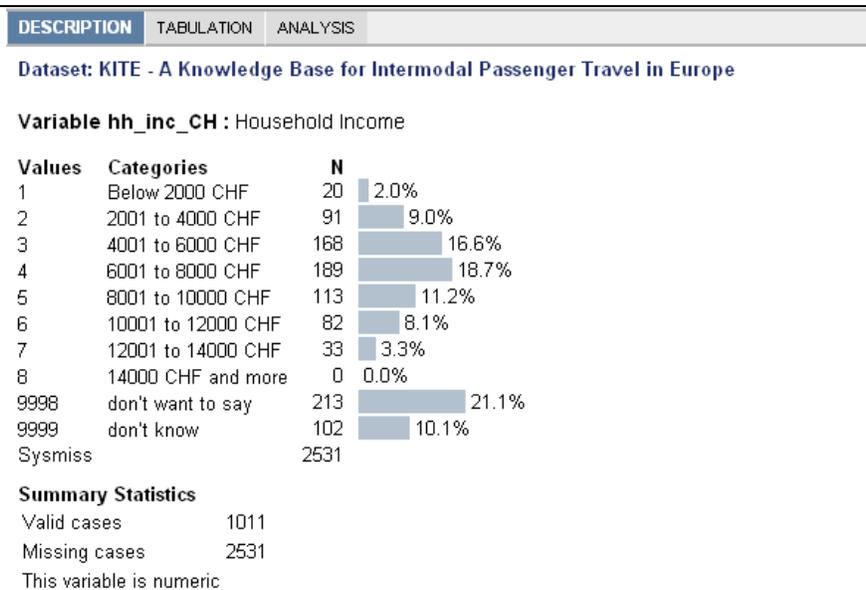
All the variables contained in a dataset will be found in this folder. The KITE data variables are grouped into different sections:

- Household,
- Person,
- Journey roster,
- Vehicles,
- Regular trips,
- non-regular journeys and
- SP-Dataset.

Each section contains an ID variable which connects the different groups with each other.

The description section displays descriptive text about the data. Select a variable from the browse list to display information about that variable in the right frame. The data displays value listings, categories and the number of responses for the selected variable (see Figure 5). Note that income is country-specific and the Sysmiss here are the data from Portugal and Czech Republic.

Figure 5 ETHTDA Nesstar summary statistics of Income in Switzerland



### 3.4 Tabulation

DESCRIPTION   TABULATION   ANALYSIS

The Tabulation and Analysis tabs will only be available once a dataset is opened. The active selection has a blue background and white font.

The option tabulation enables you to create a frequency distribution for one variable, or cross-tabulations for multiple variables.

To create a table containing one or more of the variables from a survey dataset:

1. Click on the Tabulation tab.
2. Select a variable from the browse list on the left. A list of variables is available once you open a survey by clicking on the study icon and selecting Variable Description.
3. Click on the variable name and select one of the four options that will then become available.
4. Repeat this process to select other variables that you wish to add to the table.

### 3.5 Analysis

This tab enables a correlation or regression analysis to be performed. Once selected following the instructions on the screen to add variables.

### 3.6 Additional Functionality

There are a number of icons in the top right-hand corner of the screen. Depending on the characteristics of the dataset that is currently open, certain icons will be available.

### 3.7 Download

To download a dataset (see Figure 6 for illustration):

1. Select a study from the browse list.
2. Click on the 'Download' icon.
3. Select the format of the dataset in the drop-down menu. The options are: SPSS, SPSS portable, NSDStat, Statistica, StatA, DIF, Dbase and SAS.
4. Click on 'download' and choose to save.

Figure 6 ETHTDA Nesstar summary statistics of Income in Switzerland

The figure consists of two screenshots from the Nesstar web application. The left screenshot shows a tree view of datasets under 'ETH\_Travel\_Data\_Archive'. The dataset 'KITE - A Knowledge Base for Intermodal Passenger Travel in Europe' is selected and circled in red, with a red '1.' next to it. Below the tree, the 'Download' section is visible, showing a 'Select Data Format' dropdown menu circled in red with a red '3.' next to it. The right screenshot shows the 'nesstar' logo at the top, with a red '2.' next to it. Below the logo, there is a 'Download' button circled in red with a red '4.' next to it. The right screenshot also shows a 'Download the documentation' section with a 'Download' button circled in red.

### 3.7.1 To download documentation

- Follow the steps above.
- Select the format of the documentation (html or xml)
- Click on 'Download'.

### 3.7.2 Export PDF

Tables and charts can now be exported to PDF format. When the required information is displayed in the right hand frame, click on the 'Export to pdf' icon. A 'File download' window will then be displayed from which you can select to 'Save' the file to a selected directory.

## References

Norwegian Social Science Data Services (2009) NESSTAR - Networked social sciences tools and resources, <http://www.nesstar.com/index.html>, Bergen, Norway.