RuLIS User Guide

June 2020

Contents

List of figures

1 Introduction

1.1 About RuLIS

The Rural Livelihoods Information System (RuLIS) is an initiative aimed at facilitating access to cross-country comparable data and information on income, livelihoods and their evolution at the sub national level. The system uses household-based surveys from which there are microdata available to compute indicators and variables at the household and individual level.

Data processing in RuLIS is organized in two steps. In the first step, a set of scripts and procedures are applied to the survey data to obtain clean microdata variables. Those are vectors of n observations, one for each household or individual, which are assembled in a .csv file. Scripts and procedures in the first step are survey-specific. In the second step, variables are combined to obtain indicators. The team responsible for RuLIS uses Stata software to generate the variables. The do files used to compute variables are currently partly made available to users via the platform under *Technical documentation (for surveys carried out in 2014, 2015 and 2016)*. Currently, the indicators are computed using R software, starting from variables obtained from the survey's raw microdata.

To date, RuLIS provides information on 116 ready-made indicators computed from 57 household-based surveys from 38 countries around the world. In addition, it includes 15 relevant time-series national-level indicators extracted from international data repositories, primarily the World Bank and FAOSTAT. When raw data from household surveys are publicly disseminated, RuLIS also disseminates a set of 277 harmonized variables computed at the household (199 variables), individual (55 variables) and community levels (23 variables).

The indicators covered in RuLIS are organized in ten clusters:

1. Income and productivity;
2. Poverty and inequality;
3. Employment and education;
4. Social protection;
5. Land;
6. Livestock;
7. Inputs, credits and technology;
8. Infrastructure and services;
9. Shocks and migration;
10. Sample characteristics.

Whenever possible, indicators are computed at the sub-national level using a fixed set of cross-tabulation variables, which are labeled as "qualifiers". Those are as follows.

a. Rural and urban, based on the national definition used in the surveys;
b. Small-scale food producers vs. non-small-scale food producers;
c. Gender: At the household level, the households are classified as "including only female adults", "including only male adults" and "including both male and female adults" whereas at the individual level, the data is tabulated for males and females;
d. Expenditure quintiles 1, 2, 3, 4, and 5, based on the consumption expenditure;
e. More than or equal to 30 percent of total income from agriculture, less than 30 percent of total income from agriculture, no income from agriculture

Due to data availability, some indicators are only cross-tabulated with a limited set of qualifiers. This reduced cluster of qualifiers encompasses the following three qualifiers: share of income from agriculture, small-scale vs. non-small-scale food producers and urban and rural areas.

1.2   RuLIS platform

To access the RuLIS platform, please visit the RuLIS webpage under http://www.fao.org/in-action/rural-livelihoods-dataset-rulis and click on "Data application" (Figure 1). The platform allows you to browse the indicators, to download indicators in either the .csv or .xlsx format, to create customized indicators and to access the technical documentation that includes datasets and documentation folders.

Figure 1. Accessing the RuLIS Portal
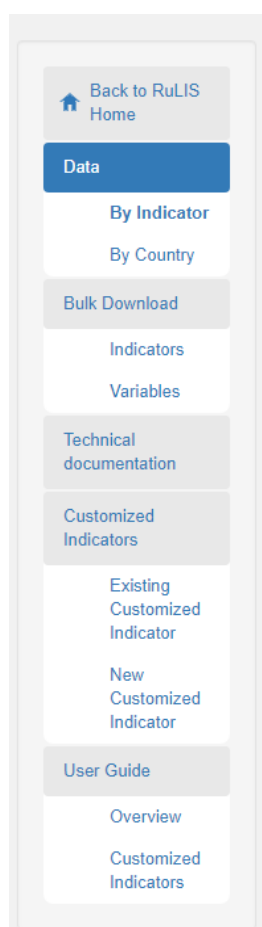
When the data application is opened, access to the different functionalities of the platform is provided on the left-hand side panel (Figure 2). The following is a list of the tabs on the platform:

- "Data" tab, which contains the ready-made indicators computed from household surveys and those at the time series national level indicators;
- "Bulk Download" tab, which provides easy access to the full set of RuLIS indicators and variables;
- "Technical documentation" tab, which allows downloading country specific documentation folders and – where available – also Do-files.
- "Customized Indicators" tab, which presents a specially designed online tool for computing quickly and easily indicators not provided in the ready-made list of indicators (See Annex 2 of the Methodological Notes).
- "User Guide" tab, which provides links for downloading the user guides containing brief instructions on how to access data and main functionalities of the web page.

2   Accessing data

2.1   Selecting indicators

Under the data tab, data can be accessed by indicator(s) or by country (Figure 3).

To access data by indicators, please select the whole cluster(s) or only desired indicator(s) from one or more clusters. To select all the indicators under a specific cluster, click the shaded area ( ) that is placed in front of the cluster name. When selected, it becomes blue ☑ and a drop down menu for that cluster opens automatically, enabling the user to view the indicators available for that clusters.
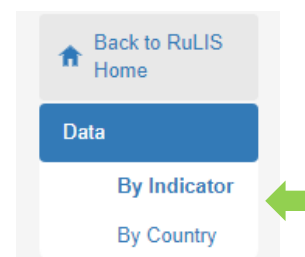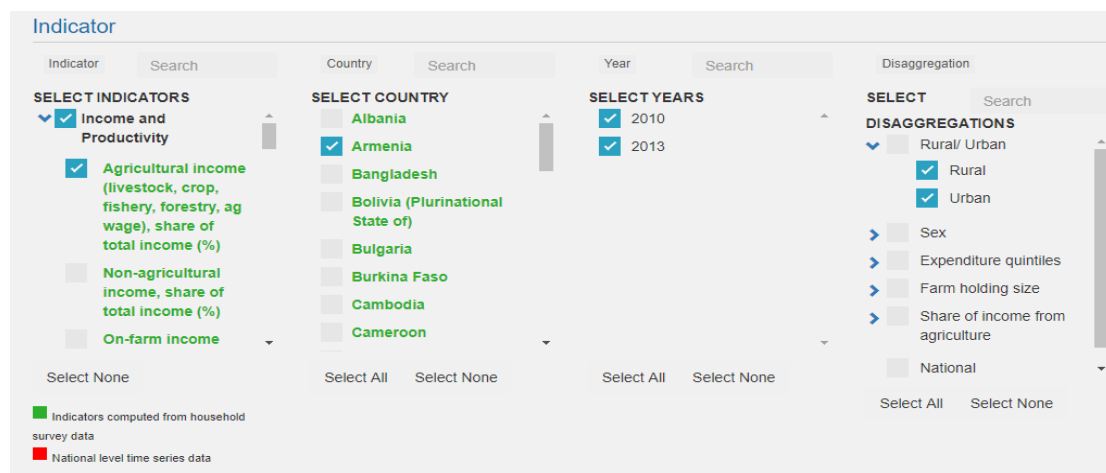
To select one or more indicators from different clusters, click ❯, which is in front of the cluster name, to attain the list of indicators for the different clusters. From that list, single out the specific indicators of interest. This process can be repeated for other clusters. To unselect all, click on "Select None".

Figure 4. Selecting data by indicator

When selecting indicators, it is possible to choose a whole cluster or just one or several indicators. After choosing the indicator(s) of interest, a panel containing a list of countries with available data on the indicator pops up (Figure 4). After choosing the country, the years from the list in the next column can be selected. From the list, select the year desired for that indicator and choose to view it at the national or disaggregated level. You can also select all countries, years and qualifiers at once, if you click on "Select All" in the respective section. Equivalently, you can unselect all by clicking on "Select None".

Similarly, to obtain the indicators available for a specific country, make country-level browsing the default so that the specified country is selected first. After having chosen the country of your preference, you can select the indicator(s), year(s) and qualifier(s) (Figure 5).

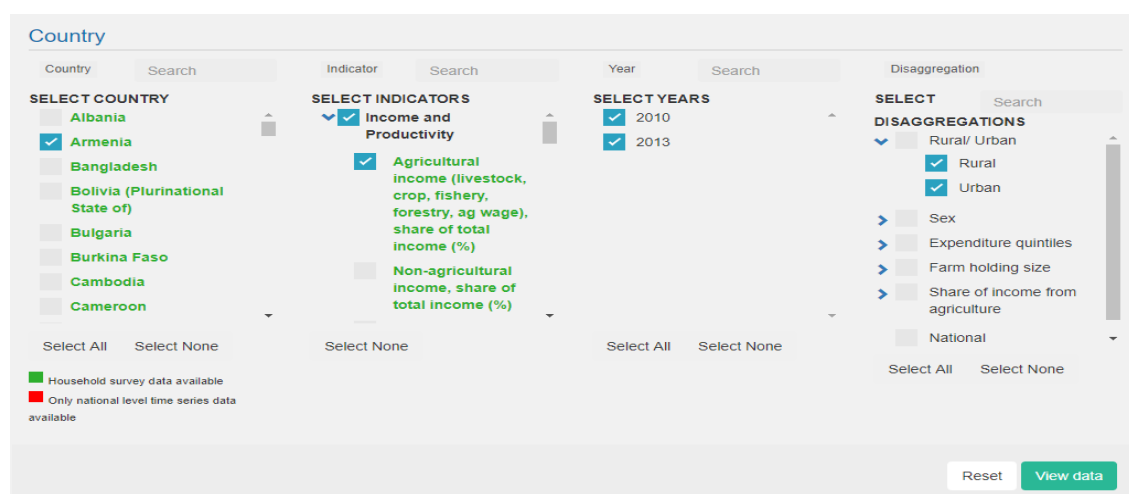*Figure 5. Selecting data by country*

Figure 6. Two types of indicators

Under each cluster, if available, at the bottom of the list starting with the "National…", a list of external indicators is provided. Information on external indicators are usually available for a greater range of years (for example 2000-2015), while indicators computed from household surveys usually are available for a single year in a country or in some cases, there is a short panel of three to four years, such as for Uganda. Indicators that are computed from household survey data are marked in green and macro indicators form external data repositories in red (Figure 6).

2.2   Disaggregation by qualifiers

For each indicator, it is necessary to select the disaggregation level, i.e. qualifiers. All indicators are available at the national level, while RuLIS household-based ready-made indicators are also disaggregated by the qualifiers presented in section 1.1 (see also Figure 7).
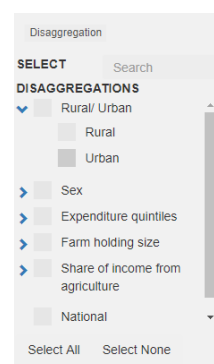
Similar to selecting indicators, all qualifiers or only some of them can be selected. For example, for the qualifier "Sex", by checking the box in front of the disaggregation name ( ), all disaggregation levels are automatically selected (only male adults in the household, only female adults in the household and male and female adults in the household).

Figure 7. Combining several different qualifier levels

Figure 8. Combining several different qualifier levels
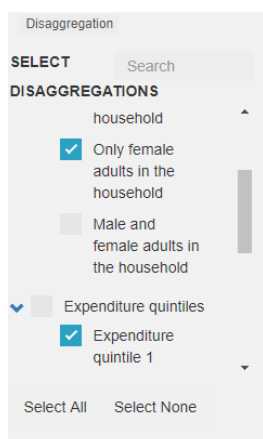
If only one qualifier level is desired, for example "Only female adults in the household", after opening the qualifier level by clicking the arrow in front of it and leaving the box next to unselected, the drop down menu of qualifiers opens and just one or a few sub qualifier levels can be selected. The combination of more than one qualifier is not supported in the RuLIS platform, as may easily lead to computing indicators with a small number of observations

5

2.3   Viewing and saving data

After selecting the indicators of interest, by clicking the "View data" button at the lower right corner (Figure 9), the table of results appears at the bottom of the page (Figure 10).

By default, the data provide the source type, indicating the microdata level from which the indicators were computed (household, individual or community), the number of observations based on which indicators were computed, the standard deviation – where applicable, and the value of the indicators.
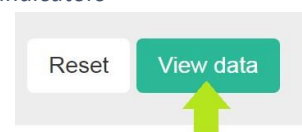
Figure 9. View selected indicators

Figure 10. Results table

The data portal displays the data in the default shape, as in Figure 10. The shape of the results table can be modified by dragging the boxes in the top two rows placed above the results table up and down (Figure 11), interactively changing shape to the desired form.

Figure 11. Changing the shape of the table
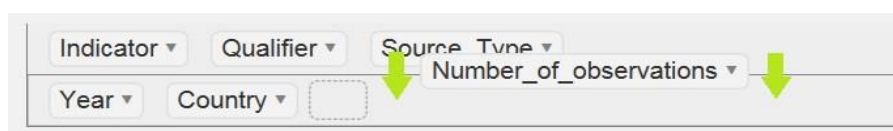
Data can be exported in Excel or CSV formats by clicking the corresponding button at the top of the table button (Figure 12). Additionally, data can be viewed in tab separated value format (TSV) from where by selecting and copying all to excel user can export exact shape of the table as in the table viewer.

Figure 12. Exporting options

2.4 Indicators metadata

The indicators' metadata are available by clicking on the link (Metadata) in the results table (Figure 10) next to the name of the respective indicator.

Metadata can be viewed directly from the Metadata Viewer window (Figure 13).

Figure 13. Metadata Viewer window

Field name	Value
Resource Identification	IP.H.SAI.PCT
Title	Agricultural income (livestock, crop, fishery, forestry, ag wage), share of total income (%)
Creation Date	17-Dec-18
Language(s)	English
Language details	
Character-set	
Used Metadata standard	FAOSTAT
Version of metadata standard	
Language(s) used for metadata	
Value assigned to No-data	

Metadata Viewer for : **IP.H.SAI.PCT**

Show 10 ▼ entries   Search: Search records

Showing 1 to 10 of 117 entries   Previous 1 2 3 4 5 … 12 Next

Close

3   Bulk download

At the left panel in the section "Bulk download", users can choose the data to be downloaded in bulk. The bulk download function can be used to download:

- Indicators;
- Variables from survey datasets at the household, individual and community levels (for surveys whose raw data is publicly disseminated).

3.1   Bulk download of indicators

The bulk download of indicators allows users to obtain datasets containing indicators in CSV formats easily and quickly. This can be done by choosing the tab "Indicators" from the "Bulk download" panel, as shown in Figure 14.

Figure 14. Bulk download of indicators

On the bulk data download page, the user is requested to select a country and at least one year from the drop down menu. One, several or all the countries or years can be selected. Indicators are automatically downloaded in CSV format by clicking the "Download" button. The datasets contain the following information: A country's GAUL code; indicators' codes and names; a topic code, qualifier codes; the years for which the indicators are computed; the source code of the data from which indicators are computed; the value of the indicators; the number of observations based on which indicators are computed; the unit of measure; and the standard deviation, when applicable.

3.2   Bulk download of variables

To download harmonized microdata, click the tab "Variables" (Figure 15). The survey for which microdata is requested, can be selected from the drop down menu. By clicking the "Download" button, zipped folders of microdata containing household-level and individual-level datasets can be downloaded. The folders may also contain community datasets comprised of community information used in the survey from which the variables are created.

Figure 15. Bulk download of variables

Microdata are available in CSV format, and follow the same structure, meaning that the number type or number of the variables stored in different countries and years is always the same.

4   Download of technical documentation
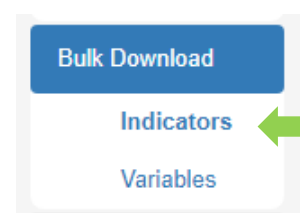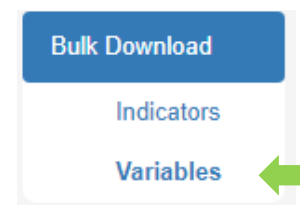
The download of the available technical documentation, such as survey questionnaires, and other relevant survey documents used to obtain the micro datasets from raw survey data, can be carried out under the "Technical documentation" tab. While the documents are available for download in bulk, as one zip, it is also possible to download each file individually. Before downloading, users can explore the content of the folders and download individual files by clicking on the download icon next to the requested file (Figure 16).

Figure 16. Download of Technical documentation

5   Customized Indicators

In the data portal, micro datasets can be used without downloading them, through an application under the "Customized Indicators" tab on the left panel of the web page. The built in application allows to construct "customized" indicators and export the results in CSV and XSL formats. For more detailed information on the customized indicators, please see the RuLIS User's Guide on Cusotmized Indicators.