Food and Agriculture Organization of the United Nations

Shiny RIMA

GUIDELINES

RESILIENCE INDEX MEASUREMENT AND ANALYSIS II RIMA II

Co-funded by the European Union

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These guidelines are instrumental to the implementation of training sessions on the use of Shiny. They help document the tool for its wide adoption within FAO, including country offices, thus facilitating the mainstreaming of resilience analysis within the Organization, which is a key aspect of the programme priority area (PPA) on Resilient Agrifood Systems for the implementation of the FAO *Strategic Framework 2022–2031*. These guidelines are specifically an output of the of the 2022–2023 work plan of the Agrifood Economics Division (ESA).

Throughout the writing of this document, a great deal of support has been provided by all members of the resilience index measurement and analysis (RIMA) team.

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Executive summary

At the heart of this product is the introduction of Shiny RIMA and its advantages as a tool for the monitoring and measurement of resilience. Particularly, this guidance note focuses on today's relevance of the resilience index measurement and analysis (RIMA), adopted by FAO since 2008, and how Shiny RIMA facilitates resilience analysis. For policymakers and especially for households in risk-prone environments, evaluating resilience and changes over time is deeply meaningful. This document therefore aims at shedding light on the improvements that Shiny RIMA can bring to resilience analysis.

This guidance note is divided into three chapters, each providing an in-depth explanation of how Shiny RIMA works and is interpreted. The first section provides an overall presentation and introduction of the Shiny RIMA tool with emphasis on its advantages. The second section focuses on the effective use of Shiny RIMA, with a concrete step by step guide as well as recommendations to obtain a robust resilience capacity index (RCI) estimation. The third section is centred on final considerations and conclusions.

In short, Shiny RIMA is a useful and accessible tool developed to facilitate resilience analyses and to provide evidence-based recommendations to policy makers and better life for vulnerable households.

1 Introduction to Shiny RIMA

1.1 Resilience index measurement and analysis (RIMA)

Resilience measurement and analyses are critical for formulating evidence-based policy, programmes and investments for food security and resilience building. Since 2008, FAO has been at the forefront of efforts to measure resilience to food insecurity and has pioneered the development and use of the RIMA methodology.[1]

RIMA is a quantitative approach that enables rigorous analysis of how households cope with shocks and stressors. Comparisons can be made between different types of households (for example, male-headed versus female-headed, urban versus rural, etc.) in a given country or area. A resilience analysis using RIMA provides the necessary evidence to more effectively design, deliver, monitor and evaluate assistance to vulnerable populations, based on what they need most.

Currently, FAO applies RIMA in many countries in West, East and sub-Saharan Africa, in the Near East, in Asia and in South America. Central to this work are efforts to build national and regional capacities for resilience analysis. Through decentralized offices, FAO works closely with regional bodies such as the Intergovernmental Authority on Development and the Permanent Interstate Committee for Drought Control in the Sahel, international organizations (including the United Nations Children's Fund [UNICEF], the United Nations Development Programme [UNDP], the World Food Programme [WFP], UN Women, the World Bank), academia and other institutional partners on data collection and analysis (in particular, impact evaluations), with the objective to inform policymakers.

The Short RIMA questionnaire[2] allows collecting the minimum information needed for estimating the RCI. It can be complemented with additional modules relevant to the project/programme's logical framework for monitoring and evaluation purposes.

The indicators needed for estimating RIMA can be grouped into the following four pillars:

1. Access to basic services (ABS)
2. Assets (AST)
3. Social safety nets (SSN)
4. Adaptive capacity (AC)

These four pillars are essential in estimating the RCI. The combination of these elements generates an index of the extent to which indicators under the RIMA pillars contribute to strengthening resilience. As a result, users can utilize RIMA to identify in which aspects resources should be invested to enhance resilience.

1.2 The Shiny RIMA tool

The Shiny RIMA tool is an easy-to-use web-based tool backed by the R environment, which drastically eases the measurement and analysis of resilience through the RIMA methodology. It is accessible to everyone (international organizations, non-governmental organizations, academicians, government officials, etc.). Shiny RIMA takes an interactive approach within everyone's reach, no web development or technical competencies are necessary. Neither huge hardware performance, or licence and particular authorization and constraint on data file format.

This all built in tool developed to facilitate resilience measurement using the RIMA methodology, providing a significant advantage for users who do not have any particular technical skill. Thanks to this innovative instrument, users can upload their dataset and the RCI is calculated automatically. Additionally, Shiny RIMA outputs are user-friendly, downloadable, and intuitive graphics that demonstrate the extent to which various factors contribute to the RCI. Shiny RIMA effectively simplifies the RIMA analysis, thus supporting policymakers and technical operators in understanding better where to operate, how to invest resources in an optimal way, and in constructing project reports. To make the resilience analysis process – from data collection to analysis – more

[1] A technical note on the latest RIMA II methodology can be found in FAO (2016).
[2] More information on the Short RIMA questionnaire and how it can be contextualized can be found in FAO (2020).

accessible and efficient for decentralized offices and FAO's partners, significant efforts have been made to automate and systematize the tool.

It is crucial to note that having properly collected and cleaned the data before uploading it into Shiny is essential. After tailoring the standard Short RIMA questionnaire to the local context, collecting and cleaning the data in a software package of the user's choice, the Shiny RIMA application immediately outputs the estimated RCI And other RIMA methodology outputs. This gives the users ready-to-use information on which pillars and variables have the strongest relationship to the households' resilience capacities. This, in turn, works to inform project design, including validation or adjustment of the project's Theory of change, activity identification, targeting criteria, and identification of gaps that may need to be filled. The data can be further analysed according to the project/programme's needs, but with these important questions answered, the foundation for evidence-based programming is established from the onset and monitoring and evaluation systems can be built to monitor the key variables of resilience and food security accordingly.

2 How to use Shiny RIMA

The first thing the user needs to do is to have an internet connection to access the tool, which is hosted by the FAO Agrifood Economics webpage and accessible to all users at the following link: www.fao.org/agrifood-economics/areas-of-work/rima/shiny

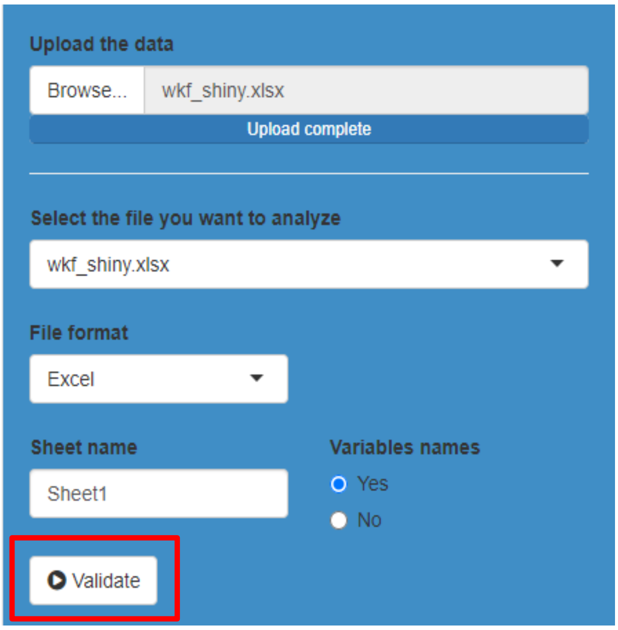
2.1 Uploading the dataset(s)

As reported in the first section of this chapter, it is possible to upload one or more datasets. Should the user want to upload more than one dataset, click browse and then select all the files of interest (press and hold Ctrl while clicking on the file of interest) and click open. If the user uploads more than one dataset, they must specify which one they wish to use for the analysis. If the data has been uploaded correctly, there will appear *upload complete* (see Figure 1). If not, it means that it is not yet uploaded. This can occur when the connection is not properly working or when the file format is not supported.

Then, Shiny asks the user to indicate the *file format* of the dataset choosing between the ones listed above (CST/TXT, SPSS, Stata and Excel). In this example, the format of the dataset is Excel. When selecting this type of layout, Shiny requires specifying the *sheet name* and if the dataset has some *variable names at the top row of each column*. When typing the wrong sheet name, Shiny will not be able to read the dataset. This also occurs with the variable names: if the user selects "no" instead of "yes" (or the other way around), the tool will not validate the data. If the user enters formats other than Excel, some options will no longer be displayed such as options for sheet names and variables names.

Once uploaded, the user can click on *validate* to appropriately upload the dataset. If an error occurs, it means that something went wrong with the loading. This may be the file format, the sheet name, or the variables names.

Figure 1. Uploading the data



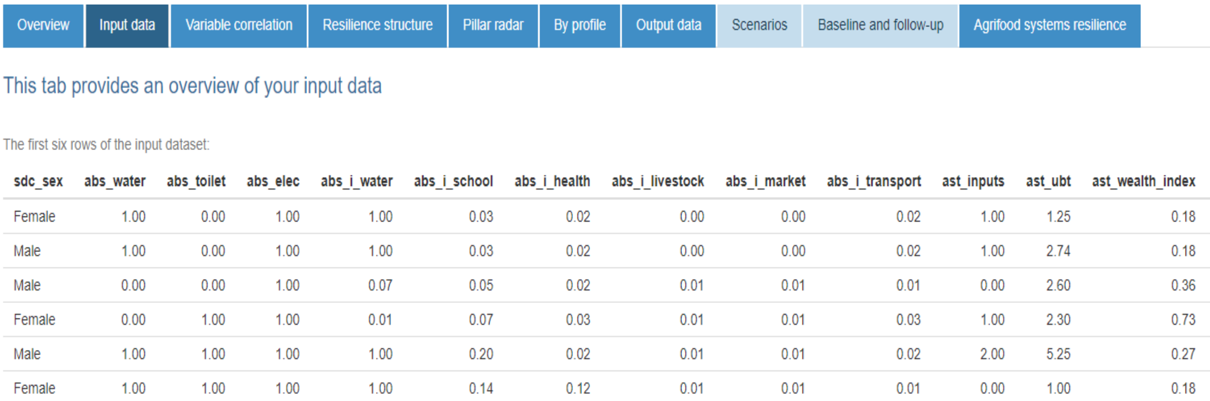
Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

NB. In order to upload the data in Shiny RIMA tool and have the final resilience capacity index (RCI) correctly estimated, the data needs to be cleaned from inaccurate records, inconsistency, misspelled words, improper cases, and outliers.[3]

[3] More information on the data cleaning can be found in the data cleaning manual available at: *www.fao.org/agrifood-economics/areas-of-work/rima*

After this step, it is necessary to ensure that the tool can read the dataset. Hence, to know whether the first steps have been followed in the right way, the user can click on *input data* (see Figure 2), where the first six rows are displayed.

Figure 2. Input data



sdc_sex	abs_water	abs_toilet	abs_elec	abs_i_water	abs_i_school	abs_i_health	abs_i_livestock	abs_i_market	abs_i_transport	ast_inputs	ast_ubt	ast_wealth_index
Female	1.00	0.00	1.00	1.00	0.03	0.02	0.00	0.00	0.02	1.00	1.25	0.18
Male	1.00	0.00	1.00	1.00	0.03	0.02	0.00	0.00	0.02	1.00	2.74	0.18
Male	0.00	0.00	1.00	0.07	0.05	0.02	0.01	0.01	0.01	0.00	2.60	0.36
Female	0.00	1.00	1.00	0.01	0.07	0.03	0.01	0.01	0.03	1.00	2.30	0.73
Male	1.00	1.00	1.00	1.00	0.20	0.02	0.01	0.01	0.02	2.00	5.25	0.27
Female	1.00	1.00	1.00	1.00	0.14	0.12	0.01	0.01	0.01	0.00	1.00	0.18

Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

This is an easy way to find out whether the user can go on with their analysis. If no data pops up, it is necessary to go back to the homepage and make some changes.

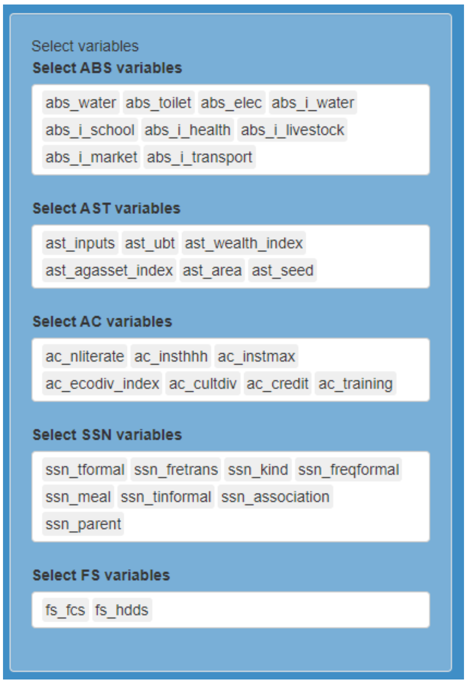
NB. Sometimes, an error message may occur at the end of the page stating "Disconnected from the server. Reload". If this is the case, the user must refresh the page and upload the data again. This error message will also appear if the tool has not been used for more than fifteen/twenty minutes.

If the user has uploaded a Stata file, they must be aware that the way in which the variables are stored may impact the data input/output tabs. For instance, if the variable "Administrative status" has been encoded, then instead of seeing the word "Village" under that column, one would see a number instead. In that case, simply decode the variable in Stata, save, and upload the adjusted dataset.

2.2 Selecting the variables

After that, with the dataset uploaded, the user can now move to the selection of the variables. For each pillar, at least three variables need to be chosen in order to proceed with the analysis. In the end, there should be a minimum of twelve variables for the pillars. The number of variables in each pillar should be balanced (i.e., more or less the same number of variables under each pillar). It is important to put the *relevant* variables for each pillar. For instance, there would be no point in selecting "agricultural input" under ABS, since ABS is about access to basic services. It would instead be useful to analyse, for example, the electricity, as shown in Figure 3. Lastly, the user must upload at least two food security variables, and the tool accepts up to three food security variables. Note that you might receive an error message saying: *"An error has occurred. Check your logs or contact the Shiny tool author for clarification."* This may appear if a variable you have uploaded only takes on one value, meaning there is no variation in the variable and hence this variable's correlation with other variables will not be calculated. Therefore, make sure the variables are properly cleaned before uploading.

Figure 3. Selection of variables



Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

If the user drops one variable under any of the pillars, the results will be immediately updated in all the calculations. To find the variables and accelerate the selection process, the user can type the first letters of the variable they want to put. The variables selected in other pillars will no longer be displayed, meaning that if the user cannot find a particular variable, they might have put it under another pillar by mistake. In fact, the user is not able to select the same variable in two or more different pillars. A general tip is to label the final variables that are to be uploaded to Shiny RIMA with the abbreviation of the pillar under which the variable will belong. For instance, if the user has a cleaned variable on number of social networks the household engages in, this will go under the SSN pillar, so the variable name should be something like this: ssn_networks. This will make it easier to select the variables the user wants under each pillar when uploading to Shiny RIMA.

Under *input data tab,* when scrolling down, there is a statistical summary of the variables selected (see an example in Figure 4). Specifically, the user can see the number of valid observations, the number of nulls, the number of not applicable observations, the minimum, maximum, median, mean, standard error, standard deviation, skewness, and kurtosis. Under the *Scenario* tab, the user will have the option to inspect both a density graph and the histogram to visualize the distribution of the RCI.

Figure 4. Summary statistics

	N_obs	N_null	N_na	Min	Max	Median	Mean	SD	Skewness	Kurtosis
abs_water	839.00	143.00	0.00	0.00	1.00	1.00	0.83	0.38	-1.75	1.06
abs_toilet	839.00	136.00	0.00	0.00	1.00	1.00	0.84	0.37	-1.83	1.35
abs_elec	839.00	39.00	0.00	0.00	1.00	1.00	0.95	0.21	-4.30	16.51
abs_i_water	839.00	0.00	0.00	0.01	1.00	1.00	0.63	0.40	-0.31	-1.69
abs_i_school	839.00	0.00	0.00	0.01	1.00	0.10	0.14	0.14	3.43	17.20
abs_i_health	839.00	0.00	0.00	0.00	1.00	0.05	0.09	0.12	4.17	25.77
abs_i_livestock	839.00	0.00	0.00	0.00	0.50	0.02	0.03	0.06	4.79	29.11
abs_i_market	839.00	0.00	0.00	0.00	0.50	0.02	0.03	0.05	3.99	20.93
abs_i_transport	839.00	0.00	0.00	0.00	1.00	0.04	0.10	0.16	3.69	15.94
ast_inputs	839.00	71.00	0.00	0.00	4.00	2.00	2.03	1.11	0.01	-0.72
ast_ubt	839.00	32.00	0.00	0.00	31.12	1.00	1.66	2.62	5.58	42.77
ast_wealth_index	839.00	27.00	0.00	0.00	1.00	0.18	0.22	0.14	1.92	6.04
ast_agasset_index	839.00	243.00	0.00	0.00	1.00	0.05	0.08	0.10	3.10	14.94
ast_area	839.00	32.00	0.00	0.00	77.00	3.00	3.52	4.88	8.92	112.12
ast_seed	839.00	301.00	0.00	0.00	1.00	1.00	0.64	0.48	-0.59	-1.66
ac_nliterate	839.00	553.00	0.00	0.00	20.00	0.00	1.04	2.14	3.42	17.53
ac_insthhh	839.00	285.00	0.00	0.00	15.00	5.00	3.63	3.01	0.60	1.33
ac_instmax	839.00	143.00	0.00	0.00	15.00	5.00	6.53	4.43	0.31	-0.77
ac_ecodiv_index	839.00	34.00	0.00	0.00	1.00	0.33	0.37	0.19	0.64	1.00
ac_cultdiv	839.00	117.00	0.00	0.00	9.00	3.00	2.42	1.31	-0.31	0.20
ac_credit	839.00	600.00	0.00	0.00	360.00	0.00	22.67	59.88	3.62	14.22
ac_training	839.00	208.00	0.00	0.00	1.00	1.00	0.75	0.43	-1.17	-0.64
ssn_tformal	839.00	509.00	0.00	0.00	3000.00	0.00	30.50	133.36	15.06	302.48
ssn_fretrans	839.00	509.00	0.00	0.00	8.00	0.00	1.34	1.90	1.10	-0.05
ssn_kind	839.00	609.00	0.00	0.00	3000.00	0.00	22.08	123.08	18.53	418.36
ssn_freqformal	839.00	609.00	0.00	0.00	8.00	0.00	0.69	1.46	2.39	5.07
ssn_meal	839.00	233.00	0.00	0.00	95.00	3.00	21.44	34.31	1.30	-0.15
ssn_tinformal	839.00	698.00	0.00	0.00	1800.00	0.00	23.04	120.95	9.60	110.87
ssn_association	839.00	560.00	0.00	0.00	11.00	0.00	0.44	0.82	5.23	53.86
ssn_parent	839.00	313.00	0.00	0.00	20.00	1.00	1.26	1.66	3.71	26.06
fs_fcs	839.00	0.00	0.00	8.00	112.00	57.00	55.40	24.63	0.08	-0.67
fs_hdds	839.00	345.00	0.00	0.00	12.00	1.00	1.97	2.65	1.57	1.61

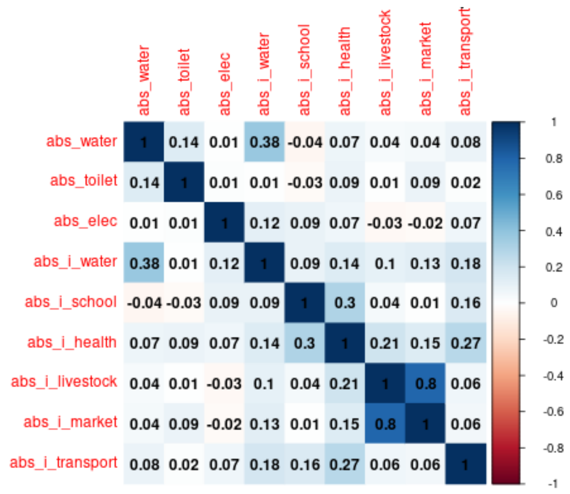
Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

It is important to point out that the analysis may be unbalanced if the user employs variables that differ greatly in their range. For instance, a dummy variable on whether the household has access to electricity will take on values from 0–1, whereas another variable on formal transfers received might take on a value from 0–100 000 depending on the currency. In this case, it is best to rescale the variable, either by converting the currency, normalizing using the max-min approach, logs, or other ways that the user believes to be appropriate, bearing in mind the type of analysis they wish to make. Further, ensure to clean data properly by pinpointing errors and subsequently fixing them or even removing all possible mistakes. Removing duplicates; tabulating the data; verifying outliers, addressing missing values, rescaling relevant variables, etc.

2.3 Variable correlation

When the user selects the variables, they will also be able to see the correlation between them. They can click on the *var correlation* tab to retrieve and download graphs demonstrating the correlation between the variables that are under one pillar. Since there are four pillars, there are four correlation graphs. In Figure 5, we give an example of the correlations of variables under the ABS pillar. The darker the colour, the stronger the correlation. The blue colour indicates a positive correlation, whereas the red shades a negative one. To obtain more robust results, we assume that the variable under one pillar should be positively correlated. If there are negative correlations between pillars and sub-variables, it may be due to the complexity of the analytical context and requires further investigation to select proper and/or suitable variables. Naturally, the user can put what they consider better and see how this might modify the values of these graphs simply by selecting and/or removing other variables.

Figure 5. Variable correlation

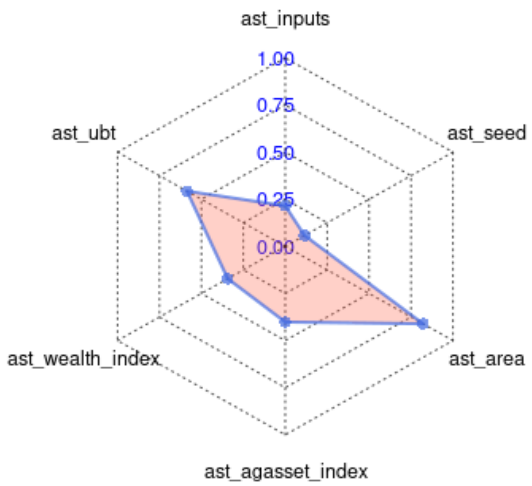


Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

2.4 Pillar radar

Then, Shiny RIMA creates the *pillar radar*, which indicates the variable correlation with the pillar. As for the *var correlation* tab, when the user clicks on this tab, they will get four graphs, one for each pillar, which can also be downloaded. For example, Figure 6 shows the correlation between the variables and the AST pillar. That is to say, the further away the point is from the centre, the higher the correlation. So, the variable which is further from the centre contributes the most to the pillar. On the contrary, when the point is close to zero, the correlation is low. In this example, the variable *ast_area* _ has the highest correlation with AST, while *ast_seed* has the lowest correlation with AST. By referring to the selected variables, the user is now able to effectively find out which of them contributes most to their respective pillar.

Figure 6. Pillar radar

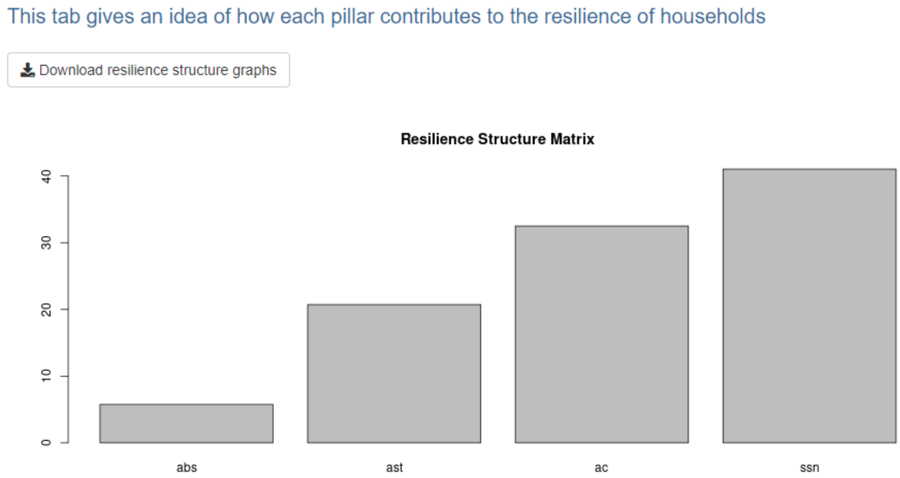


Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

2.5 Resilience structure

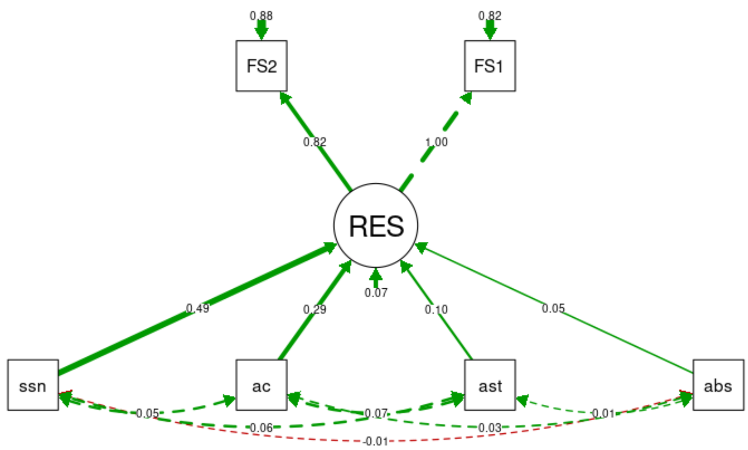
Next, under the "Resilience structure" tab, the user can find two downloadable graphs: one is the Resilience Structure Matrix (RSM) which shows the contribution of each pillar to the RCI, and the other is the path diagram of the Structural Equation Modelling (SEM) which is used to estimate resilience. In other words, the user can see which of the four pillars have more influence on the resilience capacity of the households in the sample. In Figure 8, what emerges is that the Social Safety Nets (SSN) is the pillar that contributes the most to the RCI. On the other hand, the Access to Basic Services (ABS) pillar is the least contributor to the RCI. The graph in Figure 8 is another path diagram that reflects a representation of the Multiple Indicator and Multiple Causes (MIMIC) model with its associated coefficients.[4]

Figure 7. Resilience structure matrix



Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

Figure 8. Path diagram of the Structural Equation Modelling



Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

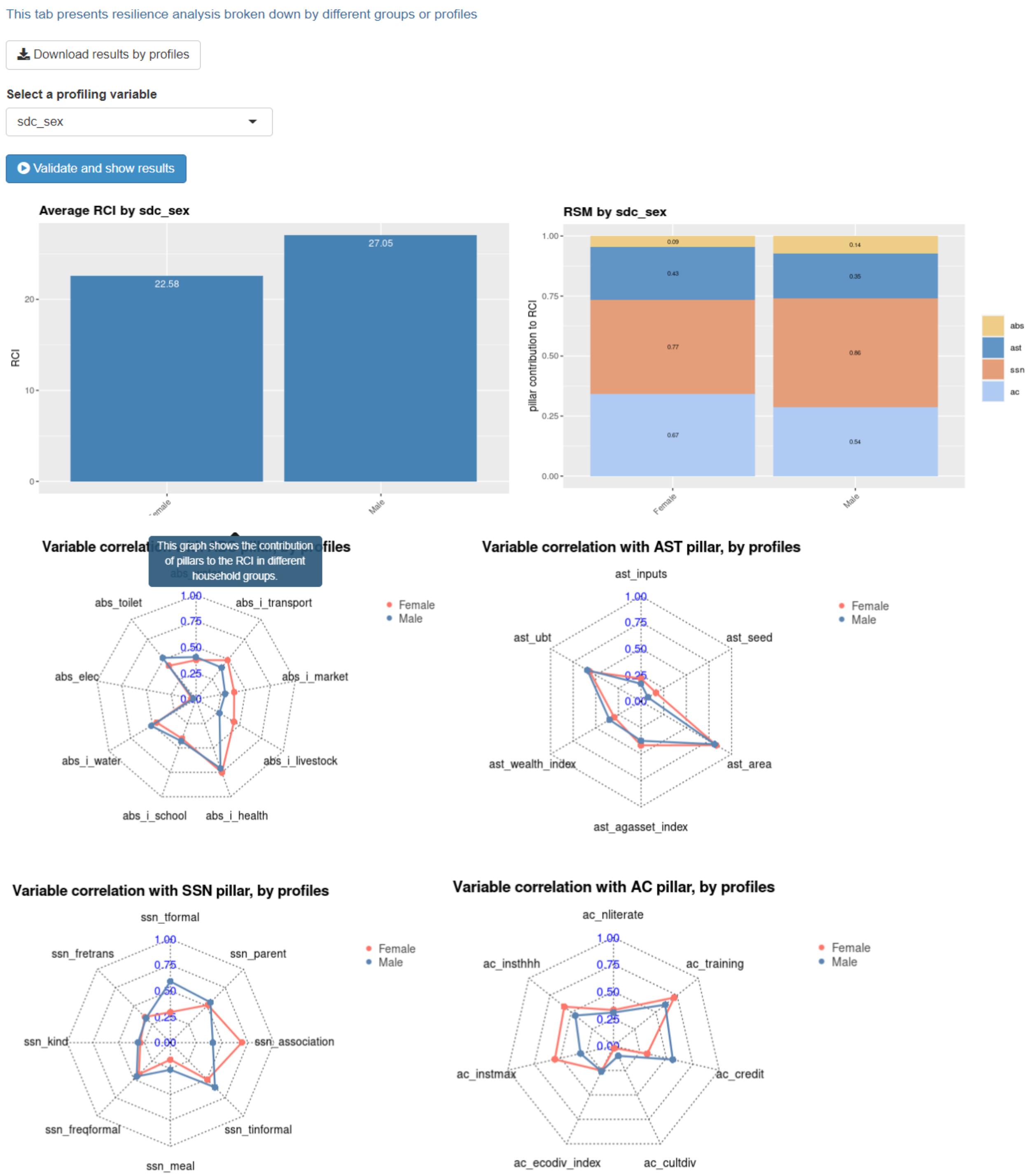
2.6 Profiling

The user may also disaggregate the analysis by various sociodemographic characteristics, such as by zone, livelihood, and gender of the household head. Indeed, they can click on the *RCI profiling* tab, select which profile variables (Figure 3) they want to analyse and then click on validate and show results. The user can also download these graphs. Figure 9 shows an example of the RCI composition by gender of household head. According to the example data, it appears in the left graph that male-headed households are on average more resilient than female-headed households. In the right graph, we see the breakdown of the RCI composition. The user can then assert which pillar is the most important contributor to RCI by gender. In this case, it is notable that the SSN pillar and the ABS pillar contribute more to male-headed households' resilience than to female-headed households' resilience, whereas the AC and AST pillars contribute more to female-headed households' resilience than they do

[4] A more technical explanation can be found on page 23 in the RIMA II Methodology Report (FAO, 2016).

for male-headed households' resilience. As a result, the contribution of pillars can be different from one profile to another, and this is something very relevant if the user wants to provide a recommendation to policymakers. In this regard, policy recommendations for potential operations and assistance will revolve around the key areas which provide a stronger contribution to the RCI, but also on the strengthening of other aspects with a lower contribution. Indeed, banking on factors that have a higher contribution allows to strengthen resilience in the short term. On the other hand, those variables that are less correlated with the RCI are not unimportant, but it takes more time and resources to see a reinforcement of resilience through an investment in these areas. Therefore, the user must be wary of context-specific details.

Figure 9. RCI profiling by gender

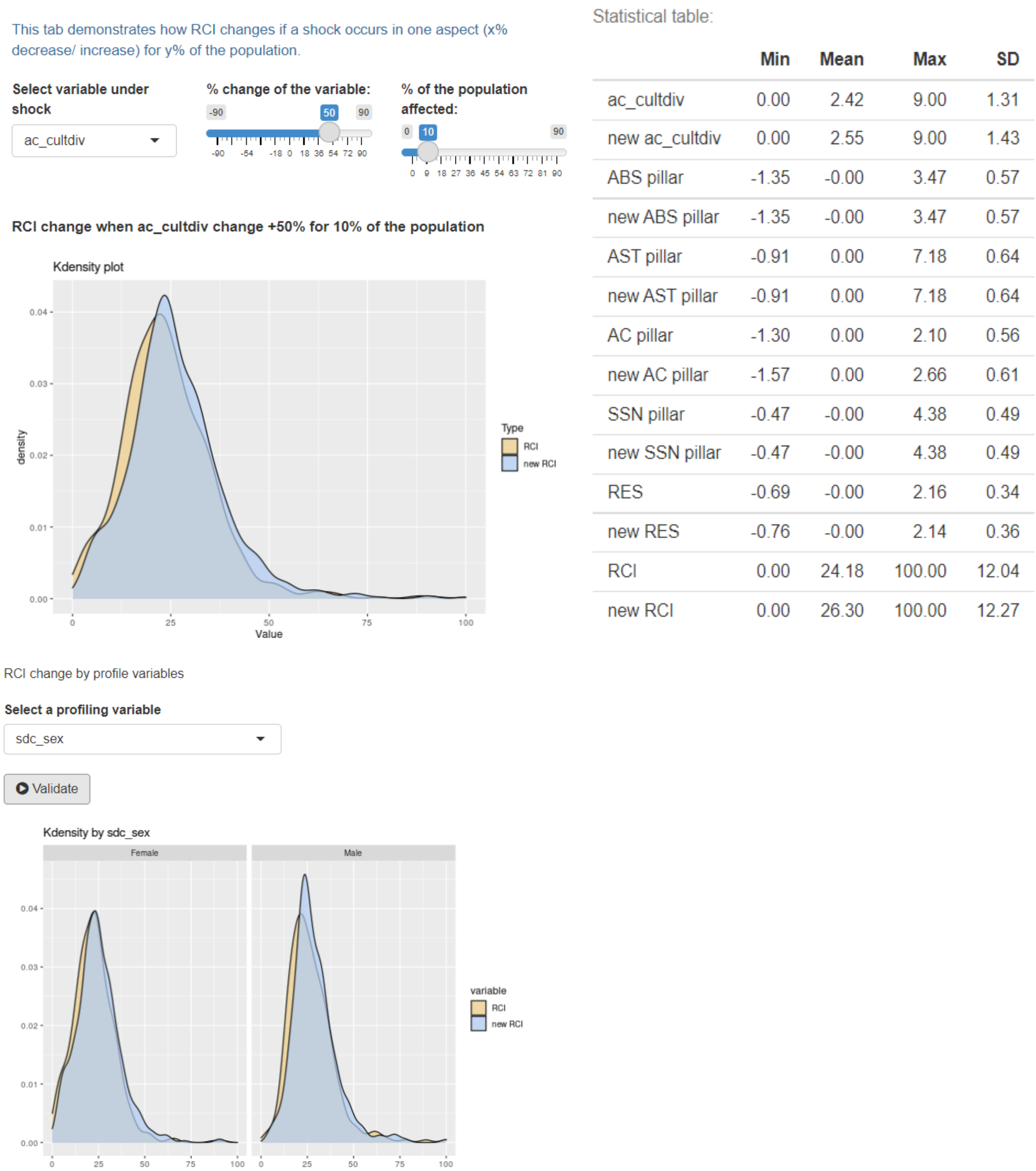


Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

2.7 Scenarios

In the Scenarios tab, the user can examine how an improvement or a deterioration in one aspect and/or a portion of the population might change the overall RCI. For instance, as showed in Figure 10, if one wants to see how a 50 percent increase in crop diversification for 10 percent of the households would impact the RCI, they may simply slide the bar and the results will automatically update in the descriptive statistics table. Note that the changes in RCI may be negligible if the variable overall does not contribute much to the RCI. The below graphs show how the RCI change. To see the RCI distributions by profiles, you can click on validate and show the results. As mentioned previously, seeing the data distribution may help the user assess whether there are any outliers or if the RCI distribution is skewed, which in turn may affect the estimates.

Figure 10. Scenarios



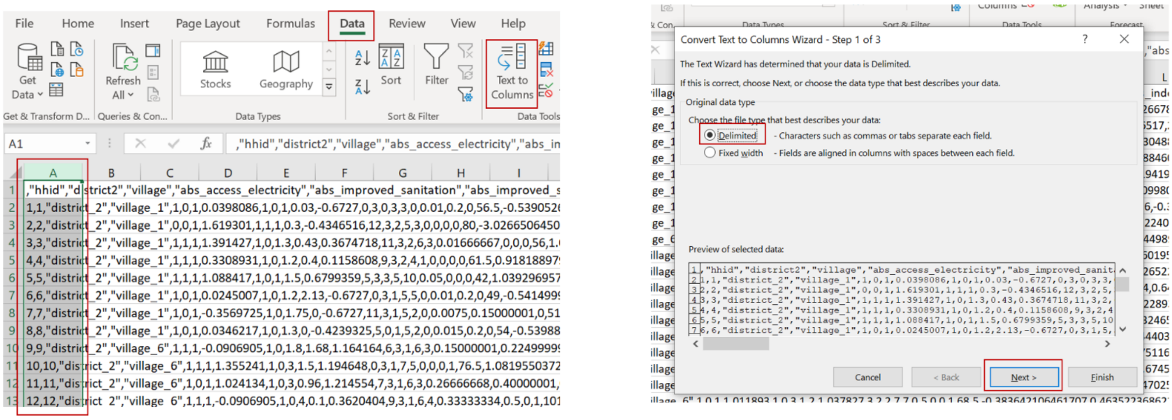
	Min	Mean	Max	SD
ac_cultdiv	0.00	2.42	9.00	1.31
new ac_cultdiv	0.00	2.55	9.00	1.43
ABS pillar	-1.35	-0.00	3.47	0.57
new ABS pillar	-1.35	-0.00	3.47	0.57
AST pillar	-0.91	0.00	7.18	0.64
new AST pillar	-0.91	0.00	7.18	0.64
AC pillar	-1.30	0.00	2.10	0.56
new AC pillar	-1.57	0.00	2.66	0.61
SSN pillar	-0.47	-0.00	4.38	0.49
new SSN pillar	-0.47	-0.00	4.38	0.49
RES	-0.69	-0.00	2.16	0.34
new RES	-0.76	-0.00	2.14	0.36
RCI	0.00	24.18	100.00	12.04
new RCI	0.00	26.30	100.00	12.27

Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

2.8 Downloading the data

Finally, the user can download the output data (with RCI, pillars, and RIMA variables) under the *output data* tab by clicking *Download output dataset.* The purpose of the download is to realize further analysis, particular graphs and possible merging with other data file. Note that the file will be downloaded as a .csv. Depending on the version of Excel one is using, it is possible that the downloaded file appears in compact format. To convert compact csv output files to a more usable excel format, the user should open the csv file, select the first column "*A*", click the "*Data*" tab, then "*Text to columns*". The next step is selecting "*Delimited*" to specify that the CSV file uses commas to separate and group the data and then "*Next*".

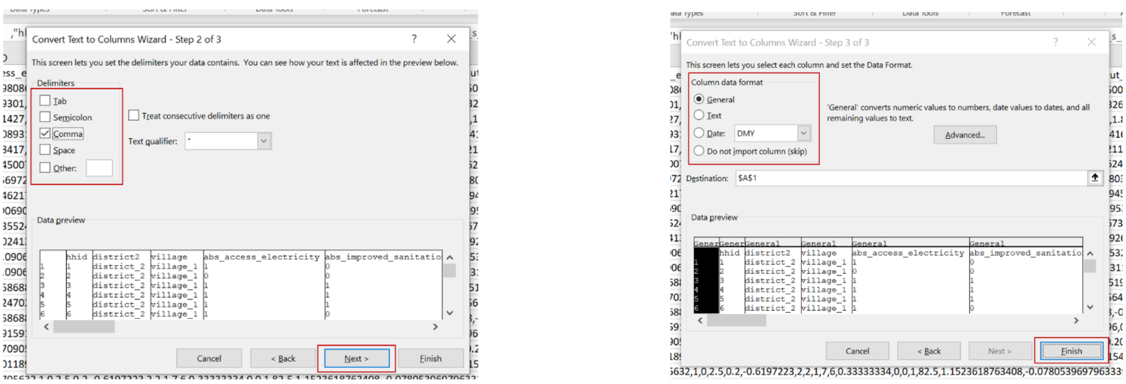
Figure 11. How to convert csv output file first step



Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

Subsequently, by selecting "Comma", the user will see in the "Data preview" that the data is aligned with the intended column header. Following, click "Next" and select "General". It is important not to modify the "Destination" ("A1" ensures the data begins in Row 1, Column A cell of the spreadsheet). Click "Finish". The dataset is now ready for use. This procedure refers to Excel 2016, so if the user is using a different version and is facing issues to convert the file, they can contact: FAO-RIMA@fao.org

Figure 12. How to convert csv output file step two



Source: FAO. 2022. *Shiny RIMA*. Rome. Cited 8 April 2022. www.fao.org/agrifood-economics/areas-of-work/rima/shiny

2.9 Data protection policy

NB. The datasets the user uploads on the Shiny RIMA tool, are completely protected. The creators of the tool indeed, do not have rights on data uploaded and the user has full protection on it.

2 Final considerations

Summing up, Shiny RIMA is an all built in, efficient, useful and easy-to-use tool that can be used to quickly and easily conduct resilience analyses to provide evidence-based recommendations to policymakers.

RIMA, and particularly Shiny RIMA tool, facilitates resilience analysis for policymakers and especially for households in risk-prone environments, evaluating resilience and changes over time. In the context in which humanitarian and development agencies operate, it is necessary to develop programmes and strategies in order to mitigate the negative effects of shocks and to be ready for unforeseen events. With this tool, FAO contributes to support countries in analysing and understanding resilience, and to identify where to invest resources for resilience building. Shiny RIMA successfully simplifies RIMA analysis, assisting policymakers and technical operators in better understanding where to operate, how to invest resources efficiently, and how to create project reports. Significant efforts have been undertaken to automate and systematize the resilience analysis process, from data collection to analysis, in order to make it more accessible and efficient for decentralized offices and FAO partners.

To obtain a digital badge certification, FAO is pleased to inform you that an e-learning platform is now ready to attest the user has achieved these competencies. To be granted the certification, a final online exam needs to be passed. Further instructions may be received by contacting FAO-RIMA@fao.org.

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CONTACTS

Agrifood Economics Division – Economic and Social Development
ESA-Director@fao.org

Resilience index measurement and analysis (RIMA)
FAO-RIMA@fao.org

Food and Agriculture Organization of the United Nations
Rome, Italy

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