

SAMPLING SIMULATIONS IN SHINY

PART OF THE SURVEY SOLUTIONS SPECIAL PURPOSE
APPLICATIONS (SPA) SERIES



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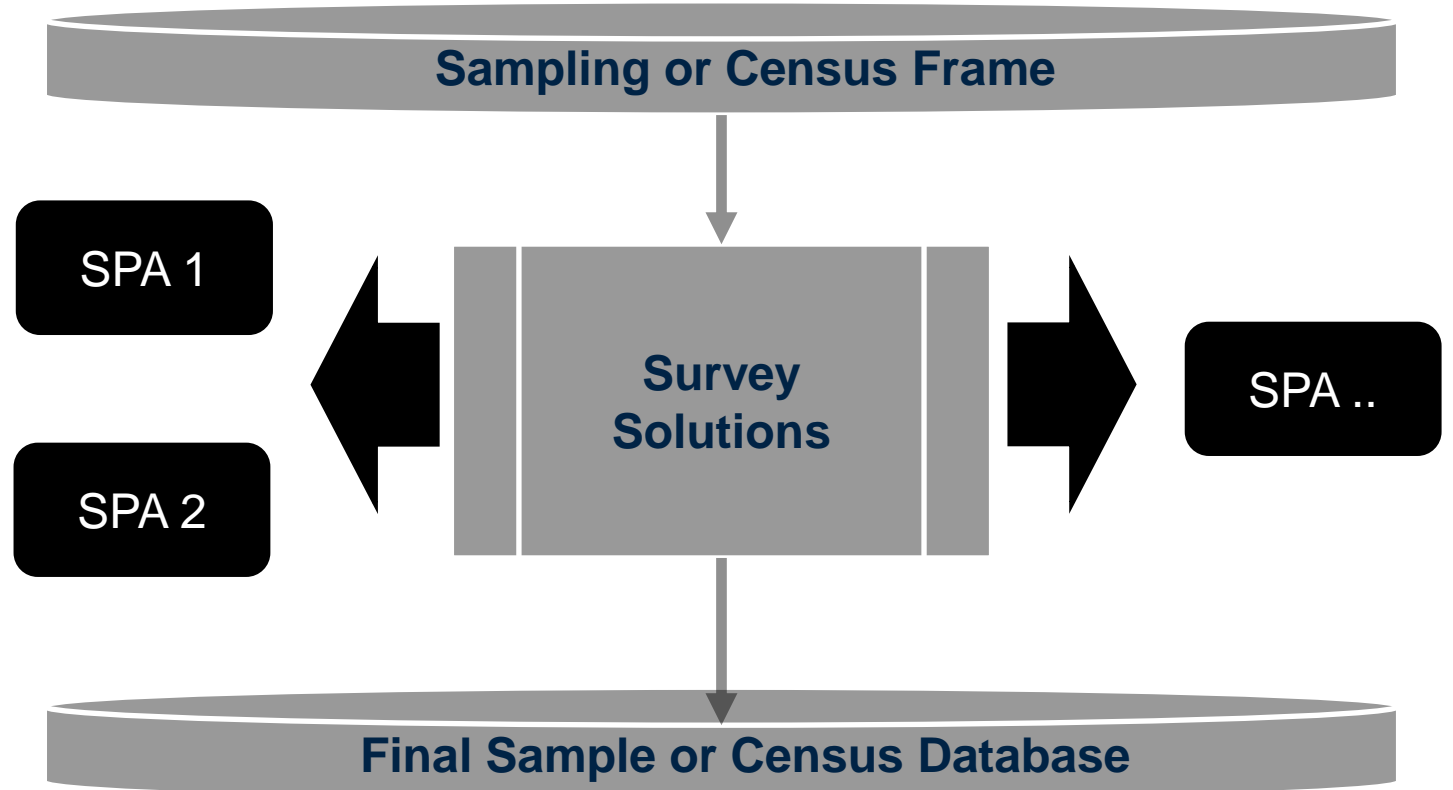
Development Economics • Data

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Main Data Stream and SPAs

- Main operations for data collection are carried inside Survey Solutions
- To support different use cases customization through an Application Programming Interface is possible.
- **S**pecial **P**urpose **A**pplications (SPA) extend Survey Solutions' default functionalities
- SPAs cover areas for the Preparation, the Implementation and Dissemination of census and survey data.
- SPAs aim to bridge skill gaps so users can use advanced methodologies right away with a shiny user interface.



Demonstration Spatial Sampling App

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Spatial Sampling Application Logged in as michaelow Logout

Sample Simulation Admin

Type of Sampling?
 None
 Random Grid
 Random Cluster

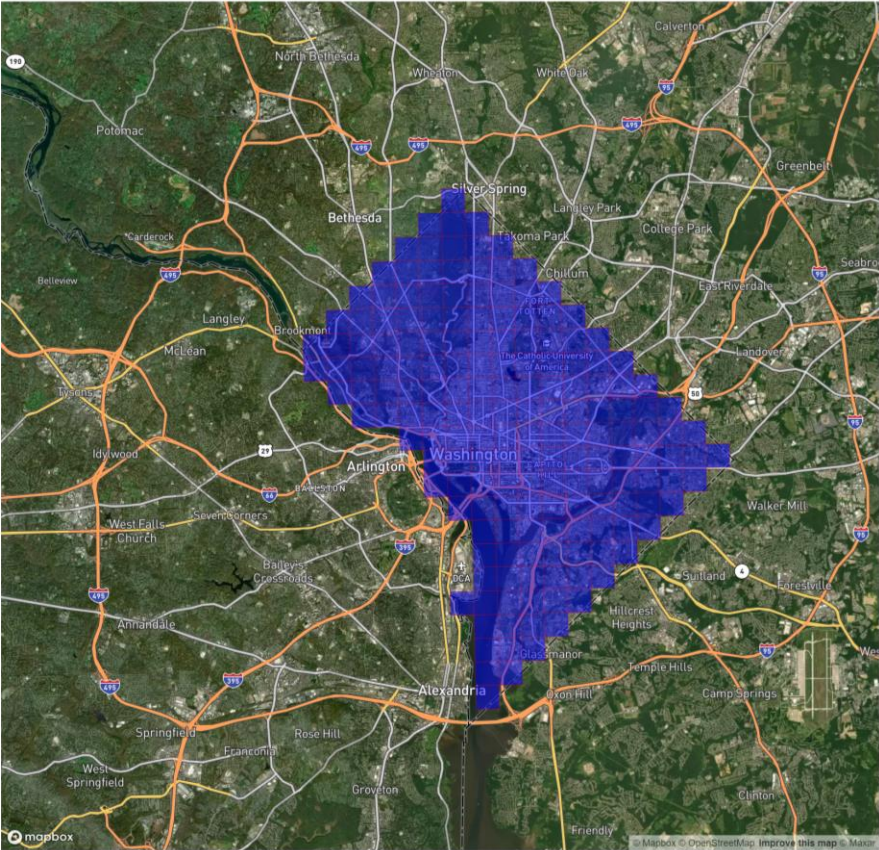
Is the file stratified?
 Yes
 No

Cell size in meters
1000

Upload population data?
 Yes No

Area Boundary files

Country Boundaries: Afghanistan
Upload Shapefile: No file selected



FRAME SAMPLE SURVEY SOLUTIONS

File Type	Grid
Projection	+proj=longlat +datum=WGS84 +no_defs
Total Population	
Number of non-empty Cells	176
Average Population per cell	
Extent (min. lat)	-77.119978
Extent (min. long)	38.797843
Extent (max. lat)	-76.910954
Extent (max. long)	38.995971
Resolution	1000

<https://apps4dev.mysurvey.solutions/SpatialSampling/>

Demonstration Optimal Sampling App

START THE APP FROM YOUR CONSOLE

```
> library(SurveySolutionsCOVID19tools)
```

```
*****
```

This is the Survey Solutions COVID19 toolbox.

It requires the latest version of R, R-Studio, Shiny, and Flexdashboard to be installed.

For MC supported operations it will use

32 cores.

```
*****
```

```
> SurveySolutionsCOVID19tools::suso_covid19_samplingApp()
```

CONTINUE IN LOCAL BROWSER

The screenshot shows a web application titled "Sampling for Phone Survey" by Michael Wild. The interface is divided into several sections:

- Sampling Frame:** A sidebar on the left containing instructions for CSV files, a file upload button, and configuration options for sampling approach (SamplingStrata selected), domain variables, target variables, categorical variables, continuous variables, seed, minimum units/strata, and number of bins for continuous variables.
- Sample Upload:** A central panel with a large empty space for data upload.
- Sample Properties:** A panel on the right for configuring sampling parameters.
- Final Sample:** A panel on the far right for reviewing the final sample.

A "Start Stratified Sampling" button is visible at the bottom right of the interface.

<https://github.com/michael-cw/SurveySolutionsCOVID19tools>

Thank you for your attention!



Michael Wild

Survey Specialist



This page in: English

Michael Wild is a survey and sampling expert in the Survey Unit of the Development Data Group (DEC-DG), at The World Bank. He has joined the unit in 2014, whilst still holding a tenure track position at the Department for Social Statistics and Demography at the University of Southampton, UK. Before that he has worked as an adviser and senior adviser in several statistical agencies in developing and transition countries.

His main research interest is on Data quality in official statistics in developing countries as well as the promotion of evidence based policy making.

Current research focuses on new ways of data collection, the use of Big and Remote Sensing Data in official statistics as well as innovative sampling methods. Besides the applied nature of his research, his emphasize is on making the results of this research available to statisticians in developing countries, by programming SPAs (Special Purpose Applications) mostly in R's shiny framework as well as by long term capacity building initiatives. For any questions on the latter, please feel free to get personally in touch with him.