Sampling Techniques Project

Project Deliverables

You will be required to provide the following deliverables.

- A word document with a sampling plan.

Instructions

Background Information

Your goal for this project will be to create a sampling plan for a research question that you will formulate. This project will help you think critically about the data collection/sampling methodologies that you've learned.

Problem Statement

Your expected sampling plan will contain the following sections:

1. Sampling Strategy

Objectives and Reliability Requirements

- A description of the sampling effort, the time frame, and the estimated parameter value(s). For example, the objective is determining the mean monthly value of parameter X during the crediting period.

Target Population

- A definition of the target population.
- A description of any particular features associated with the target population.

Sampling Method

- A selection and description of the sampling method e.g. simple random sampling, stratified sampling, cluster sampling, etc.

- Strata or clusters need to be clearly identified if sampling other than simple random sampling is to be used.

Sample Size

- Addressing and justifying the target number of units/pieces of equipment, solar cookers, buildings, motors, log-books, etc. which are to be studied (i.e. the sample size).
- Justification shall include the parameter of interest, the value it is expected to take, and an estimate of the variance associated with the data.

Sampling Frame

- Identification or description of the sampling frame to be used.
- This shall agree with the information about the target population and sampling design above. For instance, if cluster sampling is to be used in a study of equipment in buildings, then the frame should be a listing of the buildings from which the sample will be selected.

2. Data

Field Measurements

- Identification of all the variables to be measured, and the timing and frequency of the measurements. Methods of measurement shall be described as appropriate.

Quality Assurance / Quality Control

- Description of how to achieve good quality data, e.g. describing the procedures for conducting the data collection and/or field measurements including training of field personnel, provisions for maximizing response rates, documenting out-of-population cases, refusals, and other sources of non-response, and related issues.
- Overall quality control and assurance strategy shall be documented in the plan. This shall include a procedure for defining outliers and under what circumstances measurements may be excluded and/or replaced.

Analysis

- Description of how the data will be used.
- Role of normality within the worked on data.

3. Implementation

Implementation Plan

- Definition of the schedule for implementing the sampling effort and identify who will conduct the actual data collection and the analyses.
- Inclusion of qualifications, experience, and any potential conflicts of interest of those involved in the data collection and analyses.

Note that you will not be required to perform any implementation within the scope of this project.