**TERMS OF REFERENCE**



**CONSULTANCY TO UNDERTAKE A REGIONAL TRAINING WORKSHOP ON ADVANCED SAMPLING METHODS FOR HOUSEHOLD SURVEYS IN SADC REGION AS A RESOURCE PERSON**

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BACKGROUND INFORMATION

* 1. Background

The Southern African Development Community (SADC) is a Regional Economic Community comprising 16 Member States, namely, Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia, Zimbabwe. Established in 1992, SADC is committed to Regional Integration and poverty eradication within Southern Africa through economic development and ensuring peace and security.

Article 14 of the SADC Treaty establishes the SADC Secretariat as the principal executive institution of SADC. The Secretariat performs its mandate and functions within the policy, strategic and programme provisions outlined in the Regional Indicative Strategic Development Plan (RISDP).

Demand for quality and harmonized statistics has been on the rise to monitor progress in developmental agendas at national, regional, continental and global level. The scope of data demand cuts across economic, social and also on emerging issues such as climate change, disaster-risk, environment and others related. Sampling methods for household surveys are critical to generate necessary timely information of sufficient quality and accuracy and at a relatively low cost. Advances in sampling theory and techniques along with the rapid development in information and communications technology ensure that the results based on sample surveys supplemented by prior information are statistically reliable. Similarly, reducing or controlling non-sampling errors is crucial for the quality and reliability of the data collected. Structured processes, policies, and practices are available to address issues before they occur rather than waiting to implement often costly and imperfect post-data collection correction methods.

* 1. Current situation in the sector

Secretariat is prioritizing statistical capacity building as part of its implementation plan guided by its strategy, the Regional Strategy for Development of Statistics (RSDS) 2020-30. Capacity building is earmarked to be rolled out in an effective way to ensure there is impactful results at Member States level in development and harmonization of statistics. Household surveys are important sources of information as they support policy and decision making for a wide range of national and regional programs. The uses of household survey data include amongst others the monitoring of well-being of the population and effectiveness of programs and conduct micro-assessments of various economic events and policy measures. Therefore, good quality data is essential to support national and regional objectives. The benefits of survey data depend on the quality of the survey itself and good quality survey data is attained through sound sampling and weighting strategies which are implemented during the design stage. The application of sampling techniques provides a tool to collect information about the population without the need to examine the population in its entirety. A good sampling design complemented with a robust quality assurance system ensures that both sampling and non-sampling errors are appropriately minimized. Furthermore, the use of advanced sampling methods improve the efficiency and accuracy of statistical analysis by selecting a more representative subset of the population. They also help reduce bias, enhance precision, and allow for more focused investigations into specific subpopulations.

Currently, Secretariat is implementing a capacity building project and one of its core components is on enhancing data collection survey methodologies with latest technologies. This has the distinct advantage of producing and releasing survey results with a short turnaround time in support of growing and evolving data needs. It is within this context that Secretariat convened a regional workshop to capacitate Member States on sampling methods for household surveys in March 2025. Following several requests from Member States for training on advanced sampling methods, Secretariat is looking to recruit a resource person to perform tasks as explained in this TOR below.

OBJECTIVES OF THE ASSIGNMENT AND EXPECTED RESULTS

* 1. Overall objective

The overall objective of this exercise is to capacitate Member States on advanced survey methodology techniques for conduct of household surveys.

* 1. Specific objectives

The specific objective of the assignment is to service a regional training workshop on advanced sampling methods for household surveys as a resource person for beginners. The training sessions will involve practical sessions with the participants and cover advanced sample design for household surveys specifically for household expenditure surveys, labour force surveys and multi-purpose household surveys; advanced sampling techniques in general, advanced weighting and calibration, advanced error mitigation, sampling methods using specialized statistical software such as STATA, R and Python, surveys in conflict zones and remote data collection, Geographical Information System (GIS) integration for sampling and the role of Artificial Intelligence (AI) in sampling amongst others.

* 1. Expected results

The consultant is expected to achieve the following result:

1. Strengthened technical capacity of Member States National Statistics Office in advanced sampling methods for household surveys;
2. Strengthened technical capacity of Member States National Statistics Office in the use of statistical software on sampling; and

SCOPE OF WORK

* 1. Scope of work

This assignment primarily consists of providing training in a regional workshop as a resource person on advanced sampling methods employed in household surveys specifically in household expenditure surveys, labour force surveys and multi-purpose household surveys for beginners. The preparatory work is a one-off work that consists of drafting a concept note and training materials for use during the training. The training shall be done during 5 working days in a week with an audience that consists mainly of sampling experts from National Statistical Offices.

The workshop must provide for theoretical and practical explanation in line with international guidelines on advanced sampling design for household surveys and cater for effective practical exercises in the process, especially on:

1. Introduction to advanced sampling techniques:

* Review of basic sampling concepts; and
* The need for advanced techniques

1. Advanced Sampling Techniques:

* Complex survey design;
* Handling imperfect frames; and
* Rare or hard to reach populations.

1. Advanced Weighting and Calibration:

* Variance Estimation for Complex Designs

1. Advanced Error Mitigation:

* Total Survey Error (TSE) Framework; and
* Non-Response Adjustments:

1. Specialized Applications:

* Longitudinal/Panel Surveys; and
* Surveys in Fragile Settings (conflict zones and remote data collection)

1. Software and Computational Tools:

* Advanced STATA/ R/ Python;
* GIS Integration (e.g spatial sampling); and
* The role of AI and machine learning in sampling.
  1. Geographical area to be covered

The assignment will be carried out in a conference venue within SADC region.

* 1. Target groups

The target group is statisticians and survey managers from the National Statistics Office of all SADC Member States, in particular, statisticians involved in the sampling design of household expenditure surveys, labour force surveys and multi-purpose household surveys and staffs in charges of surveys.

* 1. Specific work

The assignment will be carried out primarily through the following tasks.

In particular, the consultant will be required to:

1. Produce a Concept Note demonstrating how the training will be organised and its effectiveness towards impactful results. It should have a structured agenda and programme to cater for theoretical training and practical training.
2. Produce a Workshop Report that should include the following:

* Technical summary of topics covered during training week for use;
* Pre- and Post-Training Surveys assessment of participants knowledge and identifying areas of improvement; and

- Training Materials as annexes for use by Member States and sharing to non-participants.

QUALIFICATION AND EXPERIENCE REQUIREMENTS

This assignment is expected to be carried out by an individual consultant as the Master Trainer and there should be evidence of in-depth knowledge covering sampling concepts and techniques for household surveys. The specific profile is provided below:

**Qualifications and Skills**

* + At least a Master’s Degree or equivalent in Survey Sampling or Statistics with special expertise in survey sampling.
  + Written and oral fluency in the English language is essential. Knowledge of French and Portuguese would be an asset.
  + Excellent oral and written communication, analytical, presentation and report writing skills in English Language.
  + Excellent time management and organizational skills to prioritize workload and deliver needful during the training week.
  + Excellent communication and interpersonal skills

**General Professional Experience**

* + The Expert Must have at least ten (10) years of experience in survey methodology design for surveys pertaining to Official Statistics

**Specific Professional Experience**

* + At least ten (10) years experience in design of sampling methodology for conduct of household surveys for Official Statistics;
  + Experience in as a resource person in delivering training on sampling and quality assurance for at least 5 household surveys at national/regional/international stages.
  + Experience in undertaking technical assistance in sampling design and quality assurance for household surveys in at least three (3) developing countries;
  + Demonstrated experience in use of specialized statistical software such as STATA, R or similar in survey methodology activities at national level or as a resource person for training/technical assistance;.

The expert must be independent and free from conflicts of interest in the responsibilities they take on.

Note that civil servants and other staff of the public administration, of the partner country or of international/regional organizations based in the country, shall only be approved to work as experts if well justified. The justification should be submitted with the tender and shall include information on the added value the expert will bring as well as proof that the expert is seconded or on personal leave.

REPORTING REQUIREMENTS AND TIME SCHEDULED FOR DELIVERABLES

* 1. Reporting requirements

The consultant shall operate under the guidance of the Senior Officer – Research & Statistics and direct supervision of Officer – Research and Statistics responsible for agricultural statistics.

All the deliverables shall be delivered to the Officer – Research and Statistics who shall assess and review the deliverables in line with the requirement of the Terms of the Reference; and approved by the Senior Officer- Research and Statistics.

All reports shall be in electronic format in MS Word, Excel or PowerPoint as the case may be. The Expert shall work with the Secretariat up to the end of the assignment, shall have delivered the following in electronic format as mentioned in the table below:

|  |  |  |
| --- | --- | --- |
| **Name of report** | **Content** | **Time of submission** |
| Concept Note | The CN should demonstrate how the training will be organised and its effectiveness towards impactful results. It should a structured agenda and programme to cater for theoretical training and practical training. | No later than 7 calendar days after the signing of the contract. |
| Workshop report | The report should cover:  - Technical summary of topics covered during training week for use;  - Pre- and Post-Training Surveys assessment of participants knowledge and identifying areas of improvement; and  - Training Materials as annexes for use by Member States and sharing to non-participants. | No later than 7 calendar days after the completion of the regional training workshop. |

* 1. Submission and approval of report

The reports referred to above must be submitted to the project manager identified in the contract. The reports must be written in English. The project manager is responsible for approving the reports.

* 1. Project management

Overall responsibility for supervision of the Consultancy will lie with the Officer – Research and Statistics. The Consultant shall be responsible for the operational day-to-day management and coordination of the consultancy work.

* 1. Management structure

The Consultant shall report to the Officer – Research and Statistics and perform the assigned tasks.

LOGISTICS AND START DATE

* 1. Location

The assignment will involve traveling to the conference venue.

* 1. Office accommodation

None required

* 1. Facilities to be provided by the contracting authority

For the expert working on this consultancy, the Contracting Authority shall facilitate for visa entry in the conference venue, if required.

* 1. Facilities to be provided by the contractor

The contractor must ensure he/she is adequately prepared and equipped for delivery of the training and drafting of deliverables. Moreover, the Consultant is expected to be fully self- sufficient in terms of international travel associated expenses in the conference venue, laptop and related device connectivity for projector for this consultancy.

* 1. Equipment

No equipment is to be purchased on behalf of the contracting authority / procuring entity as part of this service contract or transferred to the contracting authority / procuring entity at the end of this contract. Any equipment related to this contract that is to be acquired by the procuring entity must be purchased by means of a separate supply tender procedure.

* 1. Start date and period of implementation

The intended start date is as soon as both parties have signed the contract agreement and the period of implementation of the contract will be within 3 months from the date of signing the agreement.

MONITORING AND EVALUATION

* 1. Definition of indicators

The indicators to be used are timeliness, technical coverage and analytical quality of the Report as detailed in the section 5 above. In addition, assessment of the effectiveness of the training to be done using pre and post-test surveys with recipients of the capacity building activity.

* 1. Special requirements

The Consultant must declare any potential conflict of interest between the provision of the requested services, and other activities in which, a member of their consortium of group (s), or any expert proposed in their offer is engaged.

ASSUMPTIONS AND RISKS

* 1. Assumptions underlying the project

The intended start date is as soon as both parties have signed the contract agreement and the period of implementation of the contract will be within 3 months from the date of signing the agreement.

* 1. Risks

The nature of the assignment presents negligible risks associated with the consultancy. Some of the foreseen risks are the following:

| Possible risks | Risk Level | Mitigation Measures |
| --- | --- | --- |
| Unavailability of key stakeholders to provide relevant information due to change in the working environment | Medium | Plan and communicate ahead with key stakeholders; have more than one communication means |

**FINANCIAL PROPOSAL**

**9.1 Financial proposal**

The financial proposal should include all consultancy fees and all costs .

**9.2 Schedule of payment**

Payments for the assignment shall be related to the reports and their approval as follows:

**20%** of the contract price shall be paid upon submission and approval of the Concept Note

**80%** of the contract price shall be paid upon submission and approval of the Workshop Report