

TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS - LONG-TERM AGREEMENT

Individual Consultancy Services: Long Term Agreement (LTA) for MICS Consultants to support surveys in the LAC region, data management, data warehousing, visualization and analysis

Duty Station: Home-based consultancy contracts

Duration of LTA: Three years

Closing Date: tbc

1. BACKGROUND / RATIONALE

UNICEF provides technical assistance to countries in collecting and analysing data in order to fill data gaps for monitoring the situation of children and women and to respond and track the progress toward the Sustainable Development Goals Agenda 2030. Within this framework, technical assistance is required to a) support LACRO in various aspects of the implementation of the new round of the Multiple Indicator Cluster Surveys (MICS7) in LAC countries, and b) support LAC RO in its work to monitor the situation of children in the region.

Since 1995, UNICEF has supported the implementation of the Multiple Indicator Cluster Surveys (MICS), assisting governments in generating high quality data on the situation of children and women. In 2023, the seventh round of MICS surveys (MICS7) has been launched with the objective of supporting countries to produce statistically sound and internationally comparable estimates in the areas of health, education and child protection, including a number of Sustainable Development Goals (SDG) indicators. The MICS tools generate information for over 30 SDG indicators and will be, along with other nationally representative household surveys important for the SDG reporting and tracking other national goals and priorities. This data is essential for developing evidence-based policies and programmes, as well as for monitoring countries' progress toward national goals and global commitments. Currently over 10 countries will be conducting a MICS in the region, with potentially a few more joining by 2025.

Since 2020, UNICEF also started supporting countries to design and implement MICS Plus (telephone household surveys) to improve on near real-time data collection and reporting. In normal conditions, MICS Plus data collection is carried on a bi-monthly basis, and countries implementing MICS Plus need to be supported on a regular basis.

To respond to the increasing demands for technical support on the described initiatives, the Latin America and Caribbean Regional Office (LAC RO) requires consultants to work with its Monitoring & Evaluation team and support Country Offices across the various stages from survey design, training, implementation, data analysis and dissemination. The concrete support includes review of survey tools like questionnaires and reports, organizing the pre-test, supporting training activities, fieldwork monitoring, data analysis and writing of reports. The Household Survey Consultant will be providing support to the above-mentioned stages of the household survey implementation.

This consultancy is part of the Regional Office strategy for providing technical support and quality assurance to Country Offices undertaking MICS and supporting countries' efforts to monitor the situation of children.

2. PURPOSE OF ASSIGNMENT

Under the direct supervision of the Data and Monitoring Manager/Regional MICS Coordinator in LACRO, the MICS consultant will support countries implementing MICS to ensure comparability, standardization of methods and adherence to MICS protocols. This will lead to data harmonization and elimination of data gaps on the situation of children in LAC countries by supporting the implementation of sixth round of MICS in selected countries in LAC. The consultant will also support the regional offices efforts to measure the situation of children in LAC through other surveys, further analysis of existing data, support to regional statistics groups, and other duties as needed.

3. OBJECTIVE(S)

The overall objective is to set up a Long-Term Agreement to facilitate and expedite the process by which UNICEF LACRO provides technical support to country offices implementing MICS surveys during years 2023-2026 to ensure comparability, standardization of methods and adherence to MICS protocols

4. MAJOR TASKS TO BE ACCOMPLISHED

The consultants will have the responsibility for supporting the preparation, implementation, and completion of MICS in implementing countries under the guidance of the Data and Monitoring Manager/Regional MICS Coordinator in LACRO. The work will be carried out for assigned activities during survey planning, questionnaire design, sampling, training, data collection, data processing, data analysis, dissemination, and support sampling and data processing experts when needed, ensuring that MICS protocols and recommendations are always followed, and participate in developing/improving methodology and tools used for MICS surveys. Tasks include, but are not limited to:

Category 1: Household survey support – direct country support

Support the Regional MICS Coordinator in providing technical assistance and oversight for MICS in implementing countries. This will include providing support for the preparation, review, and finalisation of the products/activities in each stage of the survey implementation. This function commonly includes travel to countries implementing MICS: Survey design, pre-test, training, data collection, analysis, and dissemination.

Expected deliverable 1: Country documents are reviewed and comments shared with regional MICS coordinator

Delivery schedule: 2023-2025, depending on the timeline of the specific survey

Category 2: Sampling expert

Provide direct country support on the design of the survey sampling including the following activities: review of sampling frame(s) available, sample design, including calculation of sample size, sample selection, calculation of sampling weights and review once finalized, evaluation of sample implementation and assistance during the entire, implementation process with problems resolution and produce report to document the sample design and the calculation of sampling weights and estimates. Also conduct country training in the use of the MICS sampling tools and participate in and facilitate trainings as requested.

Expected deliverable 1: Report to document the sample design and the calculation of sampling weights and estimates. Country visits are usually part of the technical assistance

Delivery schedule: 2023-2025, depending on the timeline of the specific survey

Category 3: Data analysis and visualization

Support on data analysis and data visualization

Expected deliverable 1: Specific data analysis and data visualization products are finalized and delivered. This includes secondary data analysis using microdata sets from household surveys, primarily MICS and other household surveys. Support in the conceptualization and development of data analysis plans to answer specific research questions.

Delivery schedule: 2023-2025, depending on the timeline of the specific products

Category 4. Data warehouse developer (Data Ingestion and Analytics)

Expected deliverables: Data Ingestion and ETL Programming, development of dashboards and visualizations, updating and maintaining the master file that will serve as a basis for the evolution of the ECA CRM framework indicators, documentation and replicable methodology, data product enhancement and innovation.

The consultant will be responsible for maintaining and developing the ETL process, including reviewing existing data sources, generating error reports, harmonizing diverse data sources, and applying specific data transformation and validation processes. The consultant will play a pivotal role in developing an external facing process of the data warehouse for LACRO, including country profiles. Proficiency in web development skills, particularly using Plotly and Dash, will be essential to create

Delivery schedule: 2023-2025, depending on the timeline of the specific products

Responsibilities of the Consultant:

- i. The consultant will work in close collaboration with the Regional Data and Monitoring Specialist, UNICEF Country Office Focal person, survey implementing agencies (normally NSOs), other experts involved in a specific survey.
- ii. Conduct country visits where the consultant is expected to implement to support country specific activities in regards to the design, implementation of the survey as well as related to data analysis as needed, with the implementing partner as required and organised by the UNICEF Country Office.
- iii. The consultants will use their own equipment: laptops, microphones, software and other accessories that may be required for these tasks.
- iv. The consultants will not give the content/material, or any part thereof, to any third party without the written permission of UNICEF. All components will be the property of UNICEF, and the consultant will not share the same with anyone else.
- v. The consultant will prepare a monthly report on activities undertaken and completed against the deliverables. A separate report needs to be prepared and submitted to the UNICEF supervisor for each travel/mission.
- vi. The consultants will not put their name, logo/emblem on the content / any final product.

Responsibilities of UNICEF:

- i. UNICEF will provide all details pertaining to the activities and the requirements
- ii. UNICEF will orient the consultant on UNICEF's MICS best practices and acceptable quality standards
- iii. UNICEF will facilitate information and any other supplementary material required to carry out the assigned tasks.

Consultants may be required to work on Saturdays and Sundays based on the requirements of the assignment.

5. DELIVERABLES

Consultant will be paid by deliverable per task agreed with the Supervisor (Regional Monitoring Specialist).

Expected deliverables for this consultancy are:

S.No.	Services/Category	Deliverable	Specific delivery date/deadline for completion of deliverable	Estimated travel required for completion of deliverable
1.	Category 1: Household survey support – direct country support	<p>Survey design</p> <ul style="list-style-type: none"> • Preparation and reviews of survey tools and materials with feedback and suggestions: <ul style="list-style-type: none"> – Survey plan (including timetable, budget training plans for the pilot and monitoring plan) – Indicator list and tabulation plan – Questionnaire and manual for Interviewers – Questionnaire pre-test report <p>Data collection</p> <ul style="list-style-type: none"> • Preparation and a review with feedback and suggestions for each wave of the data collection on: <ul style="list-style-type: none"> – Agenda, methodology, and resources of the main data collection training – Pilot data collection – Systematic review with feedback and recommendations of the Field Check Tables – Participate in and provide support in the facilitation of the main fieldwork training • Country visit reports after every trip including technical details, decisions made and status of activities <p>Data results and dissemination</p> <ul style="list-style-type: none"> • Review and provide feedback on the preliminary results (tables) • Review and provide feedback on final products including Survey Finding reports, SnapShots, press releases, etc 	within 7 days after request from LACRO or as discussed with manager	Travel needed to provide direct country support (1-2 times per survey cycle)

2.	Category 2: Sampling Expert	<ul style="list-style-type: none"> • Summary report with advice to countries on appropriate sample design, following direct country support including the following activities: review of sampling frame(s) available, sample design, including calculation of sample size, sample selection, calculation of sampling weights and review once finalized, evaluation of sample implementation and assistance during the entire, implementation process with problems resolution and produce report to document the sample design and the calculation of sampling weights and estimates. • Conduct country training in the use of the MICS sampling tools and participate in and facilitate trainings as requested. 	within 7 days after request from LACRO or as discussed with manager	Travel needed to provide direct country support (one time per survey cycle)
3.	Category 3: Data Analysis	<p>Analysis and dissemination</p> <ul style="list-style-type: none"> • Development of analysis plans to conduct secondary data analysis using microdata set from surveys to address specific research questions • Clean and well-documented code for the analysis of microdata • Conduct data analysis and provide results and interpretation • Participate in and facilitate data analysis trainings • Data management for datasets for warehousing purposes • Data visualization products for various data products (survey and non-survey related) 	within 7 days after request from LACRO or as discussed with manager	Travel may be needed for specific trainings
4	Category 4: Data warehouse developer (Data Ingestion and Analytics)	<p>Data Ingestion and ETL Programming: ETL process, including reviewing and updating existing data sources, connecting with existing data warehouse workloads, generating error reports, harmonizing diverse data sources, and applying specific data transformation and validation processes. Clear documentation of the ETL process for review and reproducibility is required.</p> <p>Development of Dashboards and Visualizations: Interactive and visually</p>	within 7 days after request from LACRO or as discussed with manager	Travel may be needed

		<p>appealing dashboard and data representations for the website that provide valuable insights to internal and external users.</p> <p>Documentation and Replicable Methodology: Rigorous documentation of the Python-driven ETL process including code and SoPs to allow for review and reproducibility</p>		
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6. DUTY STATION:

Anywhere, as projects will be completed from home.

7. OFFICIAL TRAVEL INVOLVED: (ITINERARY AND DURATION)

The consultants might be required to travel outside their duty station for specific events (e.g. if in-person training or meetings are required by UNICEF, government or partners), in which case the payment of travel costs, including tickets, lodging, etc. should be agreed upon, between the supervisor and the consultant prior to travel and will be reimbursed on actuals.

8. ESTIMATED DURATION OF LTA

The Long-Term Agreement will be for a duration of three years. The initial period would be for two years with an option for renewal for a subsequent 1 year on the same rates, terms and conditions, subject to satisfactory performance evaluation and continuing need for the service. The services of the consultant(s) selected under the LTA would be under controlled use and managed by the Data Collection Unit in Data and Analytics/DAPM/HQ.

9. QUALIFICATIONS / SPECIALIZED KNOWLEDGE / EXPERIENCE/ LANGUAGE SKILLS REQUIRED (Please use as applicable)

Category 1: Survey design and implementation

- Bachelor’s degree in Social Sciences, Demography, Statistics, or other related technical fields with significant measurement or analysis component
- At least five (5) years of experience in working with quantitative household surveys
- Experience in statistical analyses (familiarity with data processing and data analysis software)
- Excellent knowledge of MS Office is necessary
- Prior MICS/DHS experience is desired
- Experience in survey report writing and reviewing.
- Experience in working with developing countries
- Fluency in English and Spanish is a requirement.
- Demonstrated ability to work in a multicultural environment and establish harmonious and effective relationships with national partners
- Excellent communication and interpersonal skills

Category 2: Sampling

- At least 10 years of experience in designing samples for household surveys
- Must be familiar with the sampling methodology of MICS and/or DHS

- Knowledge and experience in different weighting procedures (propensity scores adjustment calculation desirable)
- Demonstrated training experience
- Experience working in developing countries
- Fluency in English and Spanish is required. Knowledge of another UN language (e.g., French) or Portuguese is desirable.
- Demonstrated ability to work in a multicultural environment and establish harmonious and effective relationships with national partners
- Excellent communication and interpersonal skills

Category 3: Data Analysis

- Bachelor's or Master's degree in Statistics, Programming, Mathematics, Social Sciences, Demography, Data Science, Epidemiology, Public Health or another related technical field with significant statistics and data analysis component is required
- At least five (5) years of experience in working with quantitative data from household surveys
- Proven expertise in statistical analyses and software packages (eg R, Stata, SPSS)
- Proven expertise in data visualization packages (eg Power Bi, Python, Shiny, Tableau)
- Fluency in English is required. Knowledge of another UN language (e.g., French, Spanish) is desirable.
- Excellent communication and interpersonal skills

Category 4 – data warehouse developer

- Bachelor's or Master's degree in Statistics, Programming, Mathematics, Software Engineer, Data Science, or another related technical field with significant programming and data management experience.
- At least five (5) years of relevant working experience, required.
- Proven proficiency as a Python Developer, leveraging extensive expertise in data analytics and visualization - Dash, Tableau and Power BI, required.
- Established track record of designing, developing, and maintaining complex ETL processes, ensuring the precision and comprehensiveness of integrated data, required.
- Fluency in English is required. Knowledge of another UN language (e.g., French, Spanish) is desirable.
- Excellent written and verbal communication skills to facilitate seamless collaboration, reporting, and documentation, required
- Demonstrated web-based frameworks, particularly Plotly and Dash, for crafting interactive and visually engaging data dashboards, desirable.
- Keen problem-solving acumen, coupled with the ability to work independently and remotely on intricate technical projects, desirable

Note: Candidates are free to apply to any category of expertise based on their qualifications and experience. They can also apply for multiple categories. UNICEF will award LTA to top ranked 2-5 candidates under each category. A candidate may be awarded LTA for one or more than one category.

10. TECHNICAL EVALUATION CRITERIA (WITH WEIGHTS FOR EACH CRITERIA)

The selection of consultants for the LTA will be based on technical evaluation and financial offers in the ratio of 80:20. The criteria for technical evaluation will be as follows:

Criteria	Marks	
	Min	Max
1. Minimum qualification of the candidate	5	15
a. Education	2	5
b. General experience	3	10
2. Prior experience with household surveys	10	20
3. Expertise in direct country support (cat 1), sampling design (cat 2) data analysis and visualization (cat 3)	5	10
a. Direct country support (category 1)	5	10
b. Sampling design (category 2)	5	10
c. Data analysis and visualization with work sample (category 3)	5	10
d. Example of data product in suggested languages (category 4)	5	10
4. Cover Letter – Explaining the motivation for applying and explaining how the qualifications and skill set of the candidate are suitable for this position.	5	10
Sub-Total: Candidates will be shortlisted for the interview based on the review of sub-criteria 1, 2, 3 and 4 as listed above. Candidates who score overall 25 marks and above and achieve the minimum score in each of the above four sub-criteria will be shortlisted for a technical assessment.	25	55
5. An interview with shortlisted candidates	10	25
TOTAL TECHNICAL SCORE The minimum overall qualifying score is 35. Only those candidates who meet or exceed this overall qualifying mark and score the minimum in each of the above sub-criteria, including the interview, will be considered technically responsive, and their financial proposals will be opened.	35	80
Financial Score The selection of the consultant(s) will be on the basis of technical evaluation & financial offer in the ratio of 80:20	10	20
TOTAL	45	100

The total amount of points to be allocated for the financial evaluation is 20. The maximum number of points (20) will be allotted to the lowest fees proposal of a technically qualified offer. Points for other offers will be calculated as follows: $\text{points} = (\text{lowest offer} / \text{offer } x) * 20$.

11. PAYMENT SCHEDULE

Each LTA to be signed will have a fixed fee rate for three years. However, UNICEF does not warrant that any quantity of services will be purchased during the term of the LTA as this will depend on forthcoming needs.

Upon receipt of confirmation of availability and interest in the assignment, a contract will be issued with the prices/fees agreed in the LTA. The consultant must sign the contract prior to the commencement of work.

Payment will be made after the completion of deliverables and submission of invoices for the actual work completed, subject to satisfactory performance.

12. FINANCIAL PROPOSAL: The Financial Proposal template must be used for submission as a separate document is in the document attached.

HOW TO APPLY:

The application to be submitted through the online portal should contain 4 separate attachments:

- i. A Cover letter explaining the motivation for applying and explaining how the qualifications and skillset of the candidate **(to be uploaded online under “Cover Letter” tab)**
- ii. Curriculum Vitae (CV) **(to be uploaded online under the “Resume” tab)**
- iii. A financial proposal (for the categories applied) per the attached template. Please do not forget to specify your name in the file while saving **(to be uploaded online under “Financial Proposal” tab).**
- iv. Supporting documentation evidencing expertise in direct country support (Category 1), sampling design (Category 2), data analysis & visualization with work sample (Category 3), example of web-based data product (Category 4). **(to be uploaded online under writing sample or list of publication or portfolio of you works that is in line with the assignment described in TOR/Vacancy Announcement**

Important Note: Please do not indicate financials anywhere else in the online application form; please mark "n/a or 00" under the fee-related questions in the online application form.

Without all the above four documents your application will be considered incomplete and invalid and will not be considered further.

- Any attempt to unduly influence UNICEF’s selection process will lead to automatic disqualification of the applicant.
- Joint applications of two or more individuals are not accepted.
- Please note, UNICEF does not charge any fee during any stage of the process.
- UNICEF is committed to diversity and inclusion and encourages qualified candidates from all backgrounds, including persons living with disabilities, to apply.
- General Terms and Conditions for the Consultancy Contract are attached for your reference.
- Individuals engaged under a consultancy or individual contract will not be considered “staff members” under the Staff Regulations and Rules of the United Nations and UNICEF’s policies and procedures and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.