United Nations Children's Fund (UNICEF)

Phnom Penh, Cambodia

Water, sanitation and hygiene related statistical analysis and publications - individual consultancy

Terms of Reference

1. Background

The development and use of evidence to promote child rights is a key programming approach in UNICEF's global Strategy for Water, Sanitation and Hygiene 2016-2030.

UNICEF Cambodia seeks a consultant to conduct water, sanitation and hygiene related statistical analysis of local datasets and produce publications.

The consultancy will be based in in Phnom Penh Cambodia, and will be supervised by the UNICEF Cambodia WASH Manager.

2. Purpose and Scope of Work

The main purpose of this consultancy is to conduct statistical analysis of UNICEF early childhood longitudinal study data with a focus on WASH indicators. The consultant will perform secondary data analyses on the longitudinal database and the water quality subsample through longitudinal and cross-sectional analyses, and the results will be published in a target of four (4) peer-reviewed articles. The consultant will also support the WASH section in the statistical analyses planning of on-going and up-coming studies, with focus on the Cambodia WASH Accelerating Sanitation and Water for All (ASWA) grant.

3. Work Assignments

1.   Assist the UNICEF WASH team with management of the longitudinal database and the water-quality sub-sample.
2.   Provide appropriate statistical input in the design, execution and analysis of the study.
3.   Research question 1: Investigate the association between water, sanitation and hygiene, as a composite score, with the child's nutritional status in urban and rural Cambodia. The analysis with a cross-sectional design will include water quality data collected for a subsample of c. 800 HH. The analysis will aim to assess the relative contribution of different components of the WASH composite score to nutrition outcomes (stunting, wasting and underweight). The results will be submitted as a journal article.
4.   Research question 2: Analysis of the determinants of microbiological water quality at the point of use. Descriptive analysis on water (including water source type, water treatment method), sanitation (including type of toilet, open defecation) and hygiene conditions (handwashing with use of water and soap) in urban and rural areas of Cambodia. Explore with a case-control analysis the association between area open defecation free status and water quality improvements at point of collection and point of use. Changes in microbiological water quality between point of collection

and point of use will also be investigated as a proxy for household hygiene. The results will be submitted as a journal article.

5.   Research questions 3 and 4: Define two additional research questions after exploring the database. Potential questions could include: Which drinking water sources are more at risk to be contaminated? Is there an association with the presence of animals at the household level? Explore the morbidity database in relation to WASH conditions. Is oral hygiene a proxy for child's personal hygiene? Is oral hygiene associated to diet intake and WASH practices? The results will be submitted as 1-2 journal articles.

6.   Ensure validity, applicability, efficiency and accuracy of the statistical methods and procedures used.

7.   Support the UNICEF WASH team in the development of operations and procedures for the data collection, verification and management of statistical data for on-going and up-coming studies and surveys including the baseline dataset of Cambodia WASH Accelerating Sanitation and Water for All (ASWA) grant.

4.   Qualifications or Specialized Knowledge/Experience Required

Qualifications and Experience

•   Advanced university degree in statistics, public health, epidemiology or related field with quantitative data management training and knowledge on public health

•   Computer skills on data management, validation and analysis of statistics, including use of STATA or R

•   Relevant experience in applying statistical methods in the analysis and interpretation of epidemiological studies especially in longitudinal study datasets, and brining findings to publication

•   Strong analytical and report writing skills

•   Strong communication, coordination and facilitation skills

•   Fluency in English

•   Familiarity with the Cambodian context and advantage

5.   Location

Based in Phnom Penh, Cambodia in the UNICEF Country Office.

6.   Duration

The duration of the assignment will be for 11 months

7.   Deliverables and Reporting requirements

Deliverables
1.   Presentation summarising initial findings of data exploration and further definition of research questions 1 and 2

2. Presentation with detailed data analysis in relation to research question 1
3. Article submitted to a peer-reviewed journal for research question 1, drafted in consultation with UNICEF WASH team
4. Presentation summarising further findings of data exploration and definition of research 2
5. Presentation with detailed data analysis in relation to research question 2
6. Article submitted to a peer-reviewed journal for research question 2, drafted in consultation with UNICEF WASH team
7. Presentation summarising initial findings of data exploration and further definition of research questions 3 and 4; and presentation summarising first descriptive analysis of the cleaned ASWA baseline data (to be determined with the quality of the cleaned dataset)
8. Presentation with detailed data analysis in relation to research questions 3 & 4
9. Two articles submitted to a peer-reviewed journal for research questions 3 and 4, drafted in consultation with UNICEF WASH team
10. Article submitted to a peer-reviewed journal, with descriptive analysis of the cleaned ASWA baseline data

8. Payment Schedule linked to deliverables

The payment will be upon the certification of deliverables by the supervisor

Deliverables	Timeline
1. Presentation for technical UNICEF colleagues and stakeholders summarising initial findings of data exploration and further definition of research questions 1 and 2	20 working days by 15 November 2018
2. Presentation with detailed data analysis in relation to research question 1	20 working days by 15th December 2018
3. Article (5,000 – 10,000 words) submitted to a English language, WASH related peer-reviewed journal for research question 1, drafted in consultation with UNICEF WASH team	30 working days by 31 January 2019

4.	Presentation for technical UNICEF colleagues and stakeholders summarising further findings of data exploration and definition of research 2	20 working days by 28 February 2019
5.	Presentation with detailed data analysis in relation to research question 2	20 working days by 31 March 2019
6.	Article (5,000 – 10,000 words) submitted to a English language, WASH related peer-reviewed journal for research question 2, drafted in consultation with UNICEF WASH team	20 working days by 30 April 2019
7.	Presentation for technical UNICEF colleagues and stakeholders summarising initial findings of data exploration and further definition of research questions 3 and 4; and presentation for technical UNICEF colleagues and stakeholders summarising first descriptive analysis of the cleaned ASWA baseline data (to be determined with the quality of the cleaned dataset)	20 working days by 30 May 2019
8.	Presentation for technical UNICEF colleagues and stakeholders with detailed data analysis in relation to research questions 3 & 4	20 working days by 30 June 2019
9.	Two articles (5,000 – 10,000 words) submitted to a English language, WASH related peer-reviewed journal for research questions 3 and 4, drafted in consultation with UNICEF WASH team	30 working days by 15 August 2019
10.	Article (5,000 – 10,000 words) submitted to a English language, WASH related peer-reviewed journal, with descriptive analysis of the cleaned ASWA baseline data	20 working days by 15 September 2019

9. Administrative Issues

The consultant will have an office desk, and will use UNICEF resources and facilities such as UNICEF laptop, access to printer and office space.

10. Contract supervisor

- WASH Manager, UNICEF Cambodia (in consultation with Chief Child Survival and Development)

11. Nature of 'Penalty Clause' to be Stipulated in Contract

Unsatisfactory performance: In case of unsatisfactory performance the contract will be terminated by notification letter sent five (5) business days prior to the termination date in the case of contracts for a total period of less than two (2) months, and ten (10) business days prior to the termination date in the case of contracts for a longer period

Performance indicators: Consultants' performance will be evaluated against the following criteria: timeliness, quality, and relevance/feasibility of recommendations for UNICEF Cambodia.

12. Submission of applications

Interested candidates are kindly requested to apply and upload the following documents to: http://www.unicef.org/about/employ/

A **Technical Proposal** which should include but not be limited to the following:

• Methodology: Description of methodology/approach detailing how to meet or exceed UNICEF requirements for this assignment.
• Samples: Details of similar assignments undertaken in last three years including the following information:
       o Title of project;
       o Year and duration of project;
       o Scope of project;
       o Outcome of project;
       o Reference / Contact persons.
• CV: to include information related to the qualifications and experience and professional references
• Proposal assumptions.

The **Financial Proposal** should include but not be limited to the following:

•   A lump sum financial proposal, including a breakdown of costs per deliverable

13. Assessment Criteria

Proposals will be evaluated against the two elements: technical and financial.

Cumulative Analysis will be used to evaluate and award proposals. The evaluation criteria associated with this TOR is split between technical and financial as follows:
    • Weightage for Technical Proposal = 70%
    • Weightage for Financial Proposal = 30%
    • Total Score = 100%

a. Technical Proposal:

The technical proposal should address all aspects and criteria outlined in the ToRs

The Technical Proposals will be evaluated against the following criteria:

REF	CATEGORY	POINTS
1	**Overall response:** • Completeness of response • Overall concord between requirements and proposal	5 5
2	**Individual Consultant:** • Samples of previous relevant work • References • Qualifications	10 10 10
3	**Proposed methodology and approach:** • Description of methodology/approach and alignment requirements for this assignment. • Proposal presents a realistic implementation timeline	20 10
Total Technical		**70**

b. **Financial Proposal:**

The total amount of points allocated for the price component is 30. The maximum number of points will be allotted to the lowest price proposal compared to other bidders.