Terms of Reference

Knowledge Attitude and Practice study

WASH and IYCF

1. Background

Reducing malnutrition and improving access to water, sanitation and hygiene are key development targets as set in the SDGs 2.2, 6.1 and 6.2. Growing evidence has accumulated the positive impact that improved behaviors on sanitation and hygiene have on reducing stunting.

In Mozambique, nutrition, hygiene and sanitation are lagging behind. The national figures show that 43% of the under-fives are stunted. It is estimated that 47% of the rural population practises open defecation and only 8% have access to a functional handwashing station with water and soap. This national figure is even worse in certain provinces, and in Zambezia province open defecation in the rural area is estimated at 72.1%.

Government of Mozambique has programs on water, sanitation, hygiene and nutrition aiming to improve the access to services and the adoption of improved practices. The rural water and sanitation programme (PRONOSAR), has set explicit targets for sanitation, including the elimination of the practice of open defecation by 2024. Subsequent investments in promotion activities with the use of Community Led Total Sanitation (CLTS) method have been made. Since 2008 the Government is certifying Open Defecation Free (ODF) communities in an incremental manner and a total of 4,989 communities have been declared open defecation free.

Despite these investments made, the current reduction rate of open defecation only stands at 1.4 percent points a year and at current trendline it would thus take another 24 years to eliminate open defecation. To meet international commitments of the Sustainable Development Goal (SDG) 6.2 by 2025, and acceleration is required. From a decentralized perspective this need for acceleration is even greater, as there is a large variation between provinces. At current pace the worse performing province Zambezia is only expected to meet this SDG by 2070.

The UNICEF in collaboration with the EU and the Government of Mozambique have launched a project, targeting reduce undernutrition of children under five in the provinces on Zambezia (41%) and Nampula (49%) to 35%. The project targets the two provinces, but activities are focused in 7 districts(Zambezia: Gurue, Lugela, Pebane and Molumbo districts, Nampula: Ribaue, Monapo, Nacalha Velha districts). Activitirs in these three districts cover; improved service delivery on water supply and health services and by promoting behavioral change. The behavioral change component aims to increase of sanitation coverage by 8 percent points, handwashing by 30 percent points, and increase exclusive breastfeeding for infants under six months and increase the proportion of children receiving a minimum diverse diet diversity by 7 percent points.

This behavior change is to be achieved by social behavioral change communication (SBCC). The effectiveness of this SBCC depends on its alignment with the current knowledge, attitude and practice (KAP) of these rural communities. Understanding the drivers and bottlenecks for the uptake of improved

behaviors, mapping the communication channels that communities have access to and investigating the strength and trust people place in these communication channels will further inform these SBCC messages.

There are some studies available on this subject to give some insights on this subject.

(1) **Baseline study on Social and Behaviour Change Communication** (SBCC) in Manica in 2017 by WFP[i] covering quantitative and qualitative aspects of knowledge and practice on handwashing, sanitation.
(2) **Social Norms study on open defecation** by UNICEF in 2016[ii] gives some quantitative information on the social norms on sanitation in declared ODF communities in four districts in Zambezia and Tete and maps the key influencers.
(3) **Knowledge, Attitude and Practice study** by MCSP Mozambique covering Nampula and Sofala in 2017[iii] provides quantitative information on nutrition and water treatment practices and access to handwashing and sanitation.
(4) **Qualitative study on norms, attitudes and practices in small towns** in Inhambane, Tete and Manica commenced by UNICEF in 2015 [iv], provides qualitative information on the perception and practices on sanitation and hygiene by households specific to these towns.
(5) **Qualitative Knowledge Attitudes and Practice study on parenting** in three provinces of Zambezia, Tete and Nampula, UNICEF 2018[v]. The study covering one district per province, being qualitative, gives few inputs on the current sanitation and hygiene practices of families with under 2 year old children. The study does not cover knowledge and attitudes on sanitation and hygiene.
(6) **Stunting baseline study and behavioral drivers** in Nampula province by BigWin 2018, collecting qualitative data on nutrition practices, including sanitation access and practices[vi].

The above studies give some insights in the current practice and access levels on hygiene and sanitation from selected locations. Access to household sanitation is typically available from large surveys like IOF 218. However, less is known about attitudes and knowledge levels. Studies typically collected from few key informants. Quantitative data on knowledge and attitudes is minimal and is not representative. Bottlenecks and drivers on behavioral change related to sanitation and hygiene are not documented. Social norms studies have only been studies in ODF communities and not been investigated in the more typical communities where open defecation is widely practiced.

Understanding and quantifying the knowledge levels and attitudes on sanitation and hygiene at the household level is foundational for any SBCC strategy and messages, and should actually be conducted on a regular basis to understand the changes SBCC activities are having, and monitor the progress on the behavioral change ladder. Understanding the drivers and bottlenecks will allow messages to, go beyond knowledge transfer, and provoke action and move people on the behavioral change ladder. Understanding the current social norms of rural communities on open defecation will further strengthen changing these norms in order to achieve and sustain open defecation free communities.

The stunting reduction project by UNICEF and EU does has strong monitoring component and three surveys will be conducted to understand the baseline, midline and endline. These surveys are to be undertaken by vanderBilt University, and will focus on measuring the progress in access to services and to some extent the behaviors of households with children under five in these two provinces overall and specifically in the 7 focus districts. The survey does not cover knowledge and attitudes questions in the

households survey, excludes households without children under five, and excludes focal group discussions.

Hence there is a need to undertake a comprehensive study on the knowledge, attitudes and practices in the provinces of Nampula and Zambezi, to quantify the current knowledge, attitudes and practices. This study should include identifying the drivers and bottlenecks associated with the behaviors, and should also include a mapping and analysis of communication channels.

2. Aim and objectives

The aim of this study is:

> *To understand the current knowledge, attitude, practice, driver, bottlenecks and communication channels on water, sanitation, hygiene and nutrition behaviors in the rural area in Zambezia and Nampula to inform improved behavioral change communication contributing to a stunting reduction.*

This aim can be achieved by meeting the following study objectives:

1. Quantify the current knowledge levels and attitudes of people in the rural areas on water, sanitation, hygiene and nutrition
2. Quantify the current practices on water, sanitation, hygiene and nutrition
3. Quantify and describe the current social norms associated with open defecation
4. Map and quantify the strength the drivers and bottlenecks to adopt the improved behaviors and access services specific to hygiene, sanitation and nutrition
5. Map and quantify the strength of information channels available to households in the peri-urban and rural

3. Research scope

The research is to give the information disaggregated rural areas for the provinces of Zambezia and Nampula. The research includes a literature review, development of a research protocol, including ethical clearance, primary data collection from households in these two provinces and data analysis and report writing.

4. Research questions

To meet the research objectives, the following research questions are defined:

- What are the knowledge levels of households on water, sanitation, hygiene and nutrition?
- What are the attitudes of households on water, sanitation, hygiene and nutrition?
- What are the current practices of households on water, sanitation, hygiene and nutrition?
- What are the current social norms around open defecation?
- What are motivational factors to take up improved behaviors on water, sanitation, hygiene and nutrition, and how strong hare these?
- What are constraints to take up improved behaviors on water, sanitation, hygiene and nutrition, and how strong are these?

- What is the ability and willingness of communities to invest into improved access to services?
- What information channels do households rely on?
- What is the trust that people have in these information channels?

A detailed list of research questions is provided in Annex II Detailed list of preliminary research questions.

5. Unit of inquiry

The unit of inquiry is “households” with some aspects covering the community level. While most questions apply to all households. Nutrition and some sanitation and hygiene questions are specific to household with children under 5 years.

6. Methodology

The consultants are expected to use the following methods to undertake this study

6.1 Desk review and interviews

The consultants are expected to analyze the current government strategies on water, sanitation, hygiene and nutrition and map the behaviors to be changed. Peer reviewed articles and existing KAP studies in Mozambique (and neighboring countries) covering these subjects are to be reviewed. A literature list is provided but review should not be limited to this list. Preliminary findings (if available) from the baseline study by the household survey conducted by vanderbilt University is to be reviewed.

Interviews are to be held with sector stakeholders at the national level and at the two provinces with government counterparts, UN agencies, researchers and NGOs active in the field of water, sanitation and hygiene and nutrition to further define the current knowledge gaps and evidence the sector is in search of. Provincial consultations will also support the provincial ownership of the study and findings.

Based on the existing studies and the stakeholder interviews, available evidence and sectoral needs can be mapped. Based on the analysis, the research framework will be further defined.

Deliverable: inception report

6.2 Development and facilitate approval on research protocol

Based on the literature review the consultants are expected to define a research protocol, that includes a sampling methodology and size, household survey questionnaire, and group discussion checklist, including training materials. for field teams etc) and a plan for the household interviews and focus group discussions. The consultants are expected to facilitate ethical and research clearance with the relevant authorities. UNICEF can support ethical clearance by facilitating introductions to relevant government authorities and supporting endorsement letters.

Deliverables:

- Draft research protocol and tools
- Approved research protocol by ethics committee

6.3 **Primary Data collection**

Data collection will be collected at three levels; household level survey, focus group discussion at community level, interviews with key informants with implementers and local leaders.

Deliverables:

- Data collection report
- Raw data of household survey, and interview/ group discussion transcripts

6.3.1 Preparation of enumerators and testing of tools

Enumerators are to be trained on the HH survey and the The developed HH survey is expected to be tested in a non-sampled community.

6.3.2 **Household survey**

Primary data collection at the community level, in the rural level. This will focus on qualitative information of the current knowledge, attitudes, practices, social norms, drivers and mapping information channels. Unit of enquiry is here all households, while the nutrition questions will only be applicable for household with children under five years old.

Results of the household survey should be representative for each of the two provinces of Nampula and Zambezia. Estimated sample size is 200 households per province, hence 400 households in total.

6.3.3 **Focus group discussions**:

Focus group discussions (FDG) will be held to complement the quantitative data with qualitative information on of the current knowledge, attitudes, practices, drivers on water, sanitation, hygiene and nutrition, social norms and information channels. The FGDs will be held in 5 communities per provinces, hence 10 communities in total. These 5 communities can be taken from the communities of the sampled households. Health committees or water committees could be used for these FDGs.

6.3.4 Interviews with key informants

Interviews with local leader and practitioners in the field of water, sanitation, hygiene and nutrition will complement the study to understand the current interactions and messages with the community level. The implementers consisting of, but is not limited to; health staff responsible for hygiene and sanitation promotion, nutritionists, community health workers (APEs), PEC supervisors and animators, NGO extension staff, community radio staff and other community outreach staff. The local leaders can include religious leader, traditional leaders, chefe do posto and localidade.

These key informants will be able to provide a first-hand feedback of the current messages used and the community response. It will further give insights into understanding of the drivers and bottlenecks at the community level to adopt new practices. It can further compliment understanding the current social norms at the community level.

6.4 **Data analysis and report drafting**

The quantitative household survey data is to be analyzed using statistical methods. Data is to be checked on representatives compared to census or other recent large survey data. Statistical analysis is to be conducted on statistical significance of findings and correlations are to be determined. Data is to be displayed in both table forms as in graphs, and interpretations to be provided and analytical statements made.

Qualitative data from focused group discussions and key stakeholder interviews are to be compiled and analyzed and key findings to be distilled. Triangulation of qualitative and quantitative data is to be completed and analysis made. Findings are to be compared with literature and other research studies.

Preliminary findings are expected to be presented to the UNICEF team. Conclusions and recommendations are to be developed in consultation with UNICEF. Finalization of the final draft is expected to be an interactive process.

Deliverable:

- First Draft Study report, including presentation of preliminary findings

6.5 **Validation and Presentation of findings**:

The draft report is to be presented at the two provinces and at the national level. A workshop is to be organized in Zambezia and Nampula to present and discuss the findings and recommendations. Inputs made are to be addressed in the final draft report. The content of the workshop will be the responsibility of the consultants, while UNICEF will facilitate the workshop venue and facilitate the invitations and participation.

After the provincial consultation, a national level sharing workshop is to be organized. The content of the workshop will be the responsibility of the consultants, while UNICEF will facilitate the workshop venue and facilitate the invitations and participation.

Final report will be released after completion of the two provincial and the national level workshop. The consultant are also expected to develop a popular version of the full report of no more than 20 pages. Co-authorization of research paper together with UNICEF can be requested.

Deliverables:

- 3x workshop reports, including presentations and feedback
- Final Study report
- Popular study report (max 20 pages)

In the annex a sample of the chaptalization is given of the final study report.

7. Sampling Framework

The sampling framework is to be developed by the consultants and findings should be representative for the two different provinces.

7.1 Sample size

Sample size the household survey has been estimated 200 per provinces, so 400 in total.

The equation to used estimate the sample size used was:

$$n = \frac{z^2 * r(1-r)D}{e^2}$$

Where:

- *n* is the required sample size
- z is statistical level of confidence; 95% (1.96)
- *r* is the estimated value of the parameter of interest (estimated 0.5)
- *D* is the design effect (estimated 2)
- *e* is the error (estimated at 10%)

The consultants are expected to validate this number, in order to assure that findings are representative for each province, while taking into account the guidelines of the UN handbook "Designing household survey samples; practical guidelines".

https://unstats.un.org/unsd/demographic/sources/surveys/Handbook23June05.pdf

7.2 Sampling method

The proposed sampling method is three staged sampling method; sampling Districts, sampling Enumeration Areas (EA) within the districts, followed by sampling households within the enumeration area;

	Nampula	Zambezia	Total
Total population	6.102.867	5.110.787	11,213654
Total number of districts	22	18	40
Total number of enumeration areas	14.125	13.708	27,833
Sample Districts	8	8	16
Sample # EAs per district	5	5	10
Total sample # EAs	40	40	80
# hh per EA	5	5	10
Total # hh sampled	200	200	400

In this proposal a total of 16 out of 40 districts are to be sampled. Within these 16 districts, 80 EAs in Zambezia and Nampula are to be sampled. A sample of 5 households per EA is expected to be sampled from the EA.

The consultants are expected to validate this sampling method, and can propose an improved methodology.

A sample of 5 communities per province is expected to be sufficient for the FGD.

The method is to be discussed with the national statistics institute (INE). INE will be requested to support the sampling of districts, EAs and of households using the 2017 census database.

8. Geographic Locations

The initial stages of the research is to be done in Maputo to ensure national level stakeholders are interviewed and includes a trip to the two provinces to discuss the works with provincial counterparts.

Literature review, development of research protocol and tools can be done in Maputo or other locations.

Primary data collection will be in Nampula and Zamebzia in the sampled enumeration areas, communities and households.

Data analysis and reporting writing can be done in Maputo or other locations. Sharing discussing of preliminary findings needs to take place in Maputo, thought video conferencing can be permitted.

Sharing of findings needs to take place at the two provinces at Nampula and Zambezia as well as in Maputo.

9. Deliverables

Deliverable	Timeframe
Inception report	1 month after signing the contract
Draft Research protocol	2 months after inception report
Approved research protocol	TBC
Data collection report including Raw data of household survey, and interview/ group discussion transcripts	3 months after approval
First Draft Study report, including presentation of preliminary findings	2 months after data collections
3x workshop reports, including presentations and feedback Final Study report Popular study report (max 20 pages)	1 month after approval first draft

10. Budget

Estimated budget for this research is 200,000 USD. The costs was estimated based on the following breakdown;

	Units	unit cost	cost
Subtotal Professional Fees			145,200
Literature review and interviews			14,800
Sr	8	600	4,800
Med	10	400	4,000

Jr	20	300	6,000
Development of research protocol			37,000
Sr	15	600	9,000
Med	40	400	16,000
Jr	40	300	12,000
Data collection			45,000
Sr	5	600	3,000
Med	10	400	4,000
Jr	60	300	18,000
Enumerators	200	100	20,000
Data analysis and report writing			38,000
Sr	20	600	12,000
Med	35	400	14,000
Jr	40	300	12,000
Validation and Presentation of results			10,400
Sr	7	600	4,200
Med	8	400	3,200
Jr	10	300	3,000
Subtotal operational costs			45,220
Domestic travel	500	12	6,000
International travel	1000	4	4,000
Local logistics (car hire)	120	100	12,000
DSA	237	60	14,220
Materials	9	1000	9,000
Sub total			190,420
Management overhead	5%		9,521
Total			199,941

Assumptions:

1. Consultancy team consists of 2 international experts and one national expert. Expats are visiting Mozambique twice.
2. Consultancy fees are estimated based on international rates

11. Payment schedule

Payment schedule is deliverable based on the UNICEF approval of the submitted deliverables

Deliverable	**Payment**
Inception report	10%
Approved research protocol	10%

Data collection report including: Raw data of household survey, and interview/ group discussion transcripts	30%
First Draft Study report, including presentation of preliminary findings	20%
3x workshop reports, including presentations and feedback Final Study report Popular study report (max 20 pages)	30%

12. Roles and responsibilities

Stakeholder	Responsibility
Consultants	- Conduct literature review - Conduct interviews - Develop research protocol and facilitate ethical clearance, and comply with ethical standards - Training of enumerators - Collect primary data with HH survey - Submit deliverables per per ToR
UNICEF	- Facilitate introductions to government counterparts - Facilitate support letters with government counterparts - Timely review deliverables and give qualitative feedback - Support national and provincial governments to organize sharing workshops
National level Government: DNAAS / SETSAN /MISAU	- Endorse the research with support letter - Provide information on ongoing activities and priorities - Facilitate national level sharing workshop
INE	- Support sampling of districts, enumerator areas and households
Provincial level government: DPOPH / DPS	- Endorse the research with support letter - Provide information on ongoing activities and priorities - Facilitate provincial level sharing workshop
District level Government: SDPI/ SDSMAS	- Endorse the research with support letter - Provide information on ongoing activities and priorities - Participation of government staff extension workers in FDG and key stakeholder interviews

13. Team composition and capacities

The team of consultants should bring together the following skills:

- Extensive experience in qualitative and quantitative data collection in rural areas in Africa, including the training of enumerators
- Extensive experience on measuring social behaviors, knowledge, attitudes in a rural context
- Expertise in the field of Water, Sanitation, Hygiene, public health and nutrition
- Extensive Statistic data analysis, display and interpretation skills
- Extensive publications in the field of knowledge, attitude and practices
- Excellent report writing skills
- Ability to present ideas and concepts to various audiences

- English and Portuguese language skills
- Past working experience with UN agencies and government

14. Evaluation criteria

The proposals will be evaluated on a 70% technical and 30% financials. The technical part will be evaluated based on:

- Experience of the consultancy company (10%)
- Quality of the proposal (20%)
- Team composition (40%)

15. Management and oversight

The project will be managed by the SBCC technical working group, chaired by the Sanitation and Nutrition specialists. This working group reports to Stunting National Working group, chaired by the chiefs of WASH and Health and Nutrition.

Day to day management and oversight is delegated to the Sanitation Specialist based in Maputo.

16. Sourcing recommendations

Consultancy is expected to attract potential firms internationally and nationally. Likely shortlisted proposals will be a combination of national and international company. Assignment is to be advertised using digital media like devex and relief web, and disseminated using UNICEF networks.

Annex I; literature list

(1) Social and Behaviour Change Communication (SBCC) project in Manica, Mozambique:Baseline survey report May 2017 IPC-IG research team: Mario Gyori, Tatiana Martinez, Jessica Baier,Maria Hernandez, Sofie Olsson, Alexis Lefevre

(2) Estudo Sobre Normas Sociais Que Contribuem Para O Fecalismo Ao Céu Aberto Nos Distritos de Angónia, Changara, Gilé e Gúruè, Grupo de Pesquisa Saúde e Sociedade (GPSS) Maputo, Moçambique, Maio de 2016

(3) MCSP Mozambique: KAPC- Baseline: Major Findings and Proposed Actions

(4) Pesquisa qualitativa sobre normas sociais, práticas de higiene, preferências de consumidores e vontade e capacidade de pagar por serviços de água e saneamento nas pequenas vilas de Inhambane, Tete e Manica RELATORIO FINAL

(5) Estudo Qualitativo sobre Conhecimentos, Atitudes e Práticas Relacionadas às Interações entre Cuidadores e Crianças do 0-2 anos em Moçambique

(6) Stunting baseline study, behavioral change drivers, BigWin 2018.

(7) Designing Household Survey Samples: Practical Guidelines; https://unstats.un.org/unsd/demographic/sources/surveys/Handbook23June05.pdf

Annex II Detailed list of preliminary research questions

Research Question	Sub question
What are the **knowledge levels** of households on water, sanitation, hygiene and nutrition?	17. Negative impacts of open defecation 18. Causes of diarrhea and spread of deseases 19. How and when to wash hands 20. How to treat water and store water 21. How to build and clean a toilet 22. Safety of child faeces, animal faeces 23. Impacts of geophagy behaviors by toddlers 24. Food storage, handling and reheating 25. Meal frequency, diversity 26. Introduction of solid/semi-solids 27. Early initiation of breastfeeding 28. Exclusive breastfeeding
What are the **attitudes** of households on water, sanitation, hygiene and nutrition?	29. Opinion on handwashing in the community 30. Opinion on water sources 31. Opinion of water treatment 32. Opinion on water storage? 33. Opinion of how to prevent harmful geophagy behaviors by toddlers 34. Opinion on the hazards of baby stool 35. Opinion of handwashing by young children 36. Opinion on young children using toilets 37. Opinion on eating left over food items 38. Opinion on Exclusive breastfeeding 39. Opinion Early initiation of breast feeding
What are the current **practices** of households on water, sanitation, hygiene and nutrition?	40. Handwashing at critical times- both adult and young children 41. Defecation behavior of the individual, family and community 42. Defecation behavior away from home? 43. Type of water source being used for drinking and cooking 44. Water treatment and storage behavior 45. How do mothers monitor geophagy behaviors by toddlers? 46. Method of animal keeping at the household 47. Presence of animal feaces around the household 48. Method of baby and young children stool disposal 49. Method of cleaning young children's bottoms 50. Defecation practice of young children 51. Method of cooking food, storage and handling
What are the current **social norms** around open defecation?	52. What is your opinion of other people defecating in the open? 53. Do people in the community object when a person defecates in open? 54. Where do you think most men/women defecate? 55. Is open defecation a good or bad practice? 56. Is there a penalty in place when someone practices open defecation? 57. In the community, is a house complete without a toilet?
What are **motivational factors** to take up improved behaviors on water, sanitation, hygiene and nutrition?	58. What are challenge associated with open defecation? 59. What are role model characteristics in the community? 60. List of key household priorities and aspirations? 61. What are the benefits of having a toilet? 62. What are the benefits of washing hands? 63. What are the benefits of clean water?
What are **constraints** to take up improved behaviors on water,	64. What problems are faced building a toilet? 65. What problems are faced using, cleaning and maintaining a toilet? 66. What challenges are faced maintaining clean hands/handwashing?

sanitation, hygiene and nutrition?	
What is the **ability** and **willingness** of communities to invest into improved access to services?	67. What is the monthly income of a family? 68. What is the monthly expenses of a family? 69. What is the disposable income of a family? 70. What are the key priorities to investment in within your household? 71. Who is the key decision maker in the household? 72. How are decisions made in the household? 73. How are decisions made in the community?
What are the **information channels** household rely on? What is the **trust** that people have in these information channels?	74. Is the a Health committee or water committee? 75. Has your house been visited by an APEs the last 12/6 monhts? 76. Rank your key source of information beyond your family, neighbor and friends? 77. Score the trust worthy is this source of information? 78. Have you received information on health and hygiene the last 6 months and by whom? 79. What was this information about? 80. To what extend was this information relevant/ useful? 81. How often to you listen to community radio? 82. How trust worthy is this information? 83. Have you attended a performance of the mobile birgade? 84. What information did you receive? 85. Was this relevant/ useful?

Literature Review

[i] Social and Behaviour Change Communication (SBCC) project in Manica, Mozambique:Baseline survey report May 2017 IPC-IG research team: Mario Gyori, Tatiana Martinez, Jessica Baier,Maria Hernandez, Sofie Olsson, Alexis Lefevre

[ii] Estudo Sobre Normas Sociais Que Contribuem Para O Fecalismo Ao Céu Aberto Nos Distritos de Angónia, Changara, Gilé e Gúruè, Grupo de Pesquisa Saúde e Sociedade (GPSS) Maputo, Moçambique, Maio de 2016

[iii] MCSP Mozambique: KAPC- Baseline: Major Findings and Proposed Actions

[iv] Pesquisa qualitativa sobre normas sociais, práticas de higiene, preferências de consumidores e vontade e capacidade de pagar por serviços de água e saneamento nas pequenas vilas de Inhambane, Tete e Manica RELATORIO FINAL

[v] Estudo Qualitativo sobre Conhecimentos, Atitudes e Práticas Relacionadas às Interações entre Cuidadores e Crianças do 0-2 anos em Moçambique

[vi] Stunting baseline study, behavioral change drivers, BigWin 2018.