

SMART

NORTHERN MOZAMBIQUE
SMART SURVEYS DRAFT
FINAL REPORT
FOR 10 DISTRICTS

June 2023



SMART



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ACRONYMS

AAH	Action Against Hunger
BSU	Basic Sampling Unit
CI	Confidence Interval
CMAM	Community Based Management of Acute Malnutrition
DEFF	Design Effect
EA	Enumeration Area
ENA	Emergency Nutrition Assessment
EPI	Expanded Program on Immunization
FSL	Food Security and Livelihood
GAM	Global Acute Malnutrition
HH	Household
HAZ	Height for Age Z-Score
HRP	Humanitarian Response Plan
IDP	Internally Displaced Population
INE	National Institute of Statistics Mozambique
IPC	Integrated Food Security Phase Classification
IYCF	Infant and Young Child Feeding Practices
MAM	Moderate Acute Malnutrition
MDD-W	Minimum Dietary Diversity Women

MoH	Ministry of Health
MUAC	Mid Upper Arm Circumference
PLW	Pregnant and Lactating Women
PPE	Personal Protective Equipment
PPS	Probability Proportional to Size
PSU	Primary Sampling Unit
RC	Reserve Cluster
SAM	Severe Acute Malnutrition
SD	Standard Deviation
SETSAN	Technical Secretariat for Food and Nutrition Security
SMART	Standardized Monitoring and Assessment of Relief and Transitions
TSFP	Targeted Supplementary Feeding Program
U5	Under 5 years children
UNICEF	United Nations Children Fund
WAZ	Weight for Age Z-Score
WHO	World Health Organization
WHZ	Weight for Height Z-Score
WRA	Women of Reproductive Age

ACKNOWLEDGEMENT

The 2023 nutrition SMART surveys in Cabo Delgado and Nampula provinces of Mozambique were successfully completed owing to the efforts and participation of many individuals, institutions and agencies at various levels.

Sincere gratitude is expressed to the Government of Mozambique, particularly the Technical Secretariat for Food Security and Nutrition (SETSAN), the National Institute of Statistics (INE) and their counterparts at Provincial and District levels for their support in the implementation of the surveys. Further, appreciation is extended to the local authorities for supporting fieldwork and giving permission to visit the selected villages.

Special recognition goes to the funding agencies mainly UNICEF and Action Against Hunger Mozambique for covering the cost of the survey, providing logistical support, as well as supplying anthropometric tools. Also, special gratitude is expressed to all the survey implementing partners including Action Against Hunger (Canada and Mozambique missions), the Technical Secretariat for Food Security and Nutrition (SETSAN), National Institute of Statistics (INE), International Organization for Migration (IOM), World Food Program (WFP), Famine Early Warning Systems Network (FEWSNET Mozambique) among others.

Sincere appreciation goes to the technical and operational teams for their immense contribution to the success of the north Mozambique SMART surveys including the team at Action Against Hunger Canada (Hassan Ali Ahmed, Hailu

Wondim, and Morris Chui), the ACF Mozambique team (Segolen Guillaumat, Michele Torti, and Mihiret Alemu), the UNICEF Mozambique team (Fanceni Balde, Isabel Periquito, Joana Abraao, and Roberto Nhambire), Save the children International for logistic support, SETSAN and INE teams (Antonio Pacheco, Big Office, Jose Vilanculo, Monica Alberto and Daniel Waissone Selemene) for supporting survey planning, providing technical input and overall coordination.

Deepest appreciation goes to the SMART surveys core team (Hailu Wondim, Morris Chui, Roberto Nhambire, Joana Abraao, Big Office, Mihiret Alemu, and Mirta Killian) for their technical inputs in the development of the survey protocol and tools, overseeing the technical training of survey teams, overall supervision of field data collection, daily data review and giving feedback to the teams, data management, analysis, results validation, and dissemination.

A profound thank you goes to the survey teams including field supervisors, team leaders, and enumerators for successfully collecting data despite facing numerous challenges in the field. Their dedication and commitment are highly appreciated.

Finally, the children and their families who participated in the survey are highly acknowledged for generously giving their time and ardently providing information to the survey teams.

EXECUTIVE SUMMARY

The ongoing insurgency in North Mozambique has resulted in the deaths and displacement of large numbers of people, creating a dire humanitarian situation. The affected communities face high levels of food insecurity due to the combined effects of conflict, recurrent natural hazards, and the rising inflation that has led to increase in food prices and other socioeconomic vulnerabilities.

The main objective of the SMART surveys was to assess the nutritional status of children aged 6-59 months, and pregnant and lactating women. Additionally, the surveys investigated the morbidity status and health seeking behaviours, coverage of health programs (immunization, micronutrient supplementation and deworming), infant and young child feeding practices, as well as the food security and livelihoods situation. A total of ten SMART surveys were conducted in nine districts of Cabo Delgado province and one district in Nampula province.

The Standardized Monitoring and Assessment of Relief and Transitions (SMART) methodology was used. A cross-sectional study design with two stage cluster sampling was applied. Stage one involved the random selection of clusters in every district, while stage two involved the selection of households using simple random sampling. A household was the basic sampling unit.

The prevalence of global acute malnutrition (GAM) based on $WHZ < -2$ was below 5% in all the surveyed districts, and is considered acceptable as per the WHO acute

malnutrition threshold. Although GAM levels were low, several cases of severe acute malnutrition were observed in Mecufi, Mueda, Metuge and Erati districts as well as one case of edema in Erati.

The GAM prevalence based on $MUAC < 125\text{mm}$ and/or edema shows several districts having medium levels of acute malnutrition ($< 10\%$) including Chiure, Mecufi, Balama, Namuno and Erati. The difference in GAM results by MUAC may partly be attributed to measurement errors. However, studies have demonstrated discrepancies between MUAC and WHZ measurements, and it is recommended that these two criteria be used independently to diagnose acute malnutrition.

The prevalence of underweight in most of the districts was below 20%, except in the districts of Balama, Namuno, and Erati. There were minor differences in underweight by age group (6-23 months and 24-59 months), but these differences are not statistically significant in most of the districts ($p > 0.05$). Very high stunting levels were observed across all districts and exceeded the 30% WHO threshold for very high stunting. A comparison of stunting between the age groups (6-23 months and 24-59 months) showed some differences, but the differences were not statistically significant in nearly all the districts except Namuno ($p = 0.021$).

According to the findings, the most common illnesses were fever and cough, with rates exceeding 30% in seven

of the ten surveyed districts. Diarrhea incidence varied between the districts, and affected about one-quarter of the children in Balama, Namuno, and Erati. Health seeking during illness was slightly above average.

Only half of the districts reached the SPHERE recommended $\geq 80\%$ coverage for measles vaccine in the districts of Pemba, Ancuabe, Mecufi, Mueda, and Metuge. Vitamin A coverage at 6 months (first dose) was lower than the recommended target of $\geq 80\%$ in seven of the ten districts, except Pemba, Mueda, and Metuge. The coverage of vitamin A at 12 months (second dose) was much lower, with none of the districts reaching the recommended target of 80% or more. Deworming coverage in the last 12 months (one dose) was low in all the districts except in Mueda. Similarly, the rate of deworming in the last 12 months (two doses) was lower than the recommended target of $\geq 80\%$ in all the districts. Mosquito net coverage was above average, with six of the ten surveyed districts reaching the desired $\geq 80\%$.

Infant and young child feeding indicators were assessed using the final anthropometry sample sizes calculated for each district. IYCF results should be interpreted cautiously due to the small sample sizes. A greater majority of the children under 2 years were breastfed at some point, averaging 96% in almost all the districts except in Mueda. Initiation to breastfeeding in the first hour of birth was

lower than the recommended $\geq 80\%$ in most of the districts apart from Pemba, Balama, and Montepuez. Exclusive breastfeeding was also low, with only four of the ten districts (Pemba city, Ancuabe, Montepuez, and Metuge) reaching $\geq 80\%$. As for the timely introduction of solid, semi-solid and soft foods at 6 months, only the four districts of Pemba, Balama, Chiure, and Mueda achieved the recommended 80% or more. Regarding the minimum dietary diversity (at least four food groups), none of the districts achieved the $\geq 80\%$ target. The minimum meal frequency was low in all the districts except in Ancuabe. The minimum acceptable diet had the lowest rates in all the districts.

The prevalence of acute malnutrition among PLWs using MUAC was low in the survey areas. Metuge district had the lowest prevalence of moderate wasting (3.0%), while Namuno (18.3%) and Erati (18.2%) had relatively higher rates. Severe wasting among PLWs was very low in nearly all the districts except Namuno where several cases were reported (3.8%).

The dietary diversity of women of reproductive age (WRA) was low in the target districts. Results indicate that these women consumed less than the required 5 food groups in nearly all the districts except Balama (84.8%).

Table 1: Summary of the survey results

Index	Indicator	Pemba	Ancuabe	Balama	Chiure	Mecufi	Montepuez	Mueda	Namuno	Metuge	Erati
	Acute malnutrition (WHZ)	N = 228	N = 228	N = 215	N = 198	N = 326	N = 189	N = 220	N = 228	N = 243	N = 232
WHZ- scores	Prevalence of global acute malnutrition (<-2 z-score and/or oedema)	(5) 2.2 (1.0 - 4.9)	(4) 1.7 (0.4 - 6.8)	(6) 2.8 (1.3 - 6.0)	(4) 2.0 (0.7 - 5.4)	(15) 4.6 (3.0 - 7.0)	(2) 1.1 (0.3 - 3.8)	(10) 4.5 (1.8 - 10.8)	(5) 2.2 (0.8 - 5.7)	(5) 2.1 (0.8 - 5.1)	(7) 3.0 (1.4 - 6.6)
	Prevalence of moderate malnutrition (<-2 z-score and >=3 z-score and/or oedema)	(5) 2.2 (1.0 - 4.9)	(4) 1.7 (0.4 - 6.8)	(6) 2.8 (1.3 - 6.0)	(4) 2.0 (0.7 - 5.4)	(14) 4.3 (3.0 - 6.2)	(2) 1.1 (0.3 - 3.8)	(8) 3.6 (1.6 - 8.0)	(5) 2.2 (0.8 - 5.7)	(4) 1.6 (0.7 - 4.0)	(6) 2.6 (1.0 - 6.3)
	Prevalence of severe malnutrition (<-3 z-score and/or oedema)	(0) 0.0 (0.0- 0.0)	(0) 0.0 (0.0- 0.0)	(0) 0.0 (0.0- 0.0)	(0) 0.0 (0.0- 0.0)	(1) 0.3 (0.0 - 2.4)	(0) 0.0 (0.0- 0.0)	(2) 0.9 (0.2 - 3.7)	(0) 0.0 (0.0- 0.0)	(1) 0.4 (0.1 - 2.9)	(1) 0.4 (0.1 - 3.2)
	Acute malnutrition (MUAC)	N = 231	N=230	N=215	N=201	N=332	N = 196	N = 228	N = 230	N = 244	N = 237
MUAC	Prevalence of global acute malnutrition (< 125 mm and/or oedema)	(5) 3.6 (1.4 - 9.0)	(4) 1.7 (0.7 - 4.4)	(14) 6.5 (3.9 - 10.5)	(10) 5.0 (2.7 - 9.0)	(21) 6.3 (4.3 - 9.1)	(6) .1 (1.4 - 6.5)	(5) 2.2 (0.8 - 5.7)	(17) 7.4 (4.7 - 11.5)	(3) 1.2 (0.3 - 5.1)	(21) 8.9 (5.4 - 14.1)
	Prevalence of moderate acute malnutrition (< 125 mm and >= 110 mm and/or oedema)	(4) 1.7 (0.7 - 4.3)	(4) 1.7 (0.7 - 4.4)	(9) 4.1 (2.2 - 7.7)	(7) 3.5 (2.0 - 6.1)	(18) 5.4 (3.6 - 8.2)	(5) 2.6 (1.1 - 5.8)	(5) 2.2 (0.8 - 5.7)	(15) 6.5 (4.2 - 10.0)	(3) 1.2 (0.3 - 5.1)	(12) 5.1 (3.3 - 7.7)
	Prevalence of severe acute malnutrition (< 115 mm and/or oedema)	(1) 0.4 (0.1 - 3.3)	(0) 0 (0.0-0.0)	(5) 2.3 (1.0 - 5.3)	(3) 1.5 (0.3 - 6.7)	(3) 0.9 (0.3 - 2.9)	(1) 0.5 (0.1 - 2.8)	(0) 0.0 (0.0- 0.0)	(2) 0.9 (0.2 - 3.6)	(0) 0.0 (0.0- 0.0)	(9) 3.8 (1.5 - 9.0)
	Underweight	N=228	N=230	N=215	N=197	N=331	N = 193	N = 225	N = 228	N = 243	N = 233
WAZ-scores	Prevalence of underweight (<-2 z-score)	(27) 11.8 (7.3 - 18.7)	(33) 14.3 (11.1 - 18.4)	(43) 20.0 (15.2 - 25.9)	(34) 17.3 (13.0 - 22.6)	(55) 16.6 (12.9 - 21.1)	(32) 16.6 (12.0 - 22.5)	(31) 13.8 (8.2 - 22.2)	(46) 20.2 (14.9 - 26.7)	(34) 14.0 (10.1 - 19.0)	(50) 21.5 (15.6 - 28.8)
	Prevalence of moderate underweight (<-2 z-score and >=3 z-score)	(23) 10.1 (6.6 - 15.1)	(28) 12.2 (8.8 - 16.6)	(31) 14.4 (10.3 - 19.7)	(27) 13.7 (10.1 - 18.3)	(46) 13.9 (10.5 - 18.2)	(29) 15.0 (10.7 - 20.7)	(26) 11.6 (6.8 - 19.1)	(34) 14.9 (10.2 - 21.3)	(28) 11.5 (7.6 - 17.1)	(35) 15.0 (11.1 - 20.1)
	Prevalence of severe underweight (<-3 z-score)	(4) 1.8 (0.4 - 7.8)	(5) 2.2 (0.8 - 5.9)	(12) 5.6 (3.2 - 9.5)	(7) 3.6 (1.6 - 7.6)	(9) 2.7 (1.4 - 5.2)	(3) 1.6 (0.5 - 4.5)	(5) 2.2 (0.8 - 5.9)	(12) 5.3 (3.3 - 8.3)	(6) 2.5 (1.1 - 5.5)	(15) 6.4 (3.4 - 11.9)
	Stunting	N=222	N=228	N=212	N=199	N=324	N = 181	N = 220	N = 226	N = 240	N = 229

Index	Indicator	Pemba	Ancuabe	Balama	Chiure	Mecufi	Montepuez	Mueda	Namuno	Metuge	Erati
HAZ-scores	Prevalence of stunting (<-2 z-score)	(73) 32.9 (27.6 - 38.6)	(108)47.4 (40.8 - 54.0)	(145)68.4 (61.9 - 74.3)	(126) 63.3 (55.7 - 70.3)	(126) 38.9 (32.2 - 46.0)	58.5 reported with a SD of 1	(85) 38.6 (28.5 - 49.9)	(164) 72.6 (65.5 - 78.6)	(91) 37.9 (29.7 - 46.9)	(134) 58.5 (51.6 - 65.1)
	Prevalence of moderate stunting (<-2 z-score and >=-3 z-score)	(55) 24.8 (20.7 - 29.4)	(79) 34.6 (28.7 - 41.1)	(91)42.9 (36.4 - 49.7)	(67) 33.7 (28.2 - 39.6)	(85) 26.2 (21.3 - 31.9)	0	(53) 24.1 (16.7 - 33.5)	(84) 37.2 (30.7 - 44.1)	(65) 27.1 (21.4 - 33.6)	(76) 33.2 (27.2 - 39.8)
	Prevalence of severe stunting (<-3 z-score)	(18) 8.1 (4.5 - 14.2)	(29)12.7 (7.8 - 20.2)	(54)25.5 (20.1 - 31.7)	(59) 29.6 (23.5 - 36.6)	(41) 12.7 (10.0 - 16.0)	0	(32) 14.5 (9.4 - 21.7)	(80) 13.4 (6.7 - 25.0)	(26) 13.3 (7.5 - 22.7)	(58) 25.3 (18.1 - 34.2)
	Morbidity and health seeking	N=231	N=232	N=217	N=202	N=332	N = 196	N = 228	N = 232	N = 246	N = 239
Morbidity and health seeking	Diarrhea	(10) 4.3 (1.7 - 7.4)	(44) 19.0 (13.8 - 24.6)	(55) 25.3 (19.8 - 30.9)	(30) 14.9 (9.9 - 19.8)	(41) 12.3 (8.7 - 16.0)	(24) 12.2 (7.7 - 17.3)	(3) 1.3 (0.0 - 3.1)	(71) 30.6 (25.0 - 37.1)	(4) 1.6 (0.4 - 3.3)	(59) 24.7 (19.2 - 30.5)
	Acute watery diarrhea	(4) 1.7 (0.4 - 3.5)	(8) 3.4 (1.3 - 6.0)	(38) 17.5 (12.4 - 22.6)	(14) 6.9 (4.0 - 10.4)	(19) 5.7 (3.3 - 8.4)	(14) 7.1 (4.1 - 10.7)	(5) 2.2 (0.4 - 4.4)	(43)18.5 (13.8 - 24.1)	(5) 2.0 (0.4 - 4.1)	(23) 9.6 (5.9 - 13.8)
	Dysentery	(1) 0.4 (0.0 - 1.3)	(14) 6.0 (3.0 - 9.1)	(3) 1.4 (0.0 - 3.2)	(13) 6.4 (3.0 - 9.9)	(3) 0.9 (0.0 - 2.1)	(15) 7.7 (4.1 - 11.2)	0	(23) 9.9 (6.0 - 13.8)	(4) 1.6 (0.4 - 3.3)	(8) 3.3 (1.3 - 5.9)
	Fever	(31) 13.4 (9.1 - 17.7)	(100) 43.1 (36.6 - 49.1)	(89) 41.0 (34.6 - 47.5)	(109) 54.0 (47.0 - 60.9)	(111) 33.4 (28.3 - 38.3)	(88) 44.9 (37.3 - 52.0)	(9) 3.9 (1.8 - 6.6)	(145) 62.5 (56.0 - 68.5)	(27)11.0 (7.3 - 15.0)	(121) 50.6 (44.4 - 57.3)
	Cough	(28) 12.1 (8.2 - 16.9)	(93) 40.1 (33.6 - 46.6)	(110) 50.7 (43.8 - 57.6)	(85) 42.1 (34.7 - 49.0)	(101) 30.4 (25.0 - 35.2)	(89) 45.4 (38.3 - 52.6)	(12) 5.3 (2.6 - 8.3)	(95) 40.5 (34.5 - 47.4)	(29) 11.8 (8.1 - 15.9)	(105) 43.9 (37.7 - 50.2)
	Health seeking	N=54 (39) 72.2 (59.3 - 85.1)	N=126 (81) 64.3 (55.6 - 73.0)	N=133 (65) 48.9 (39.8 - 57.9)	N=131 (45) 34.4 (26.7 - 42.0)	N=155 (96) 61.9 (54.2 - 69.0)	N=119 (62) 52.1 (42.9 - 60.5)	N=22 (11) 50.0 (27.3 - 72.7)	N=166 (77) 46.4 (39.2 - 54.8)	N=46 (35) 76.1 (63.0 - 87.0)	N=168 (78) 46.4 (39.9 - 54.2)
	Measles vaccination	N=220	N=223	N=193	N=188	N=321	N=189	N=218	N=217	N=231	N=224
Measles	Measles vaccination (9-59 months)	(207) 94.1 (90.9 - 96.8)	(184) 82.5 (77.6 - 87.4)	(86) 44.6 (36.8 - 51.3)	(128) 68.1 (61.2 - 75.0)	(299) 93.1 (90.3 - 96.0)	(146) 77.2 (70.9 - 83.1)	(196) 89.9 (85.8 - 93.6)	(131) 60.4 (53.9 - 66.8)	(202) 87.4 (83.1 - 91.3)	(140) 62.5 (55.8 - 68.8)
	Vitamin A first dose	N=231	N=232	N=217	N=202	N=332	N=196	N=228	N=232	N=246	N=239
Vitamin A first dose	Vitamin A (6-59 months)	(185) 80.1 (75.3 - 85.3)	(106) 45.7 (39.7 - 52.2)	(75) 34.6 (28.6 - 41.0)	(105) 52.0 (45.0 - 58.9)	(168) 50.6 (45.5 - 55.7)	(121) 61.7 (54.6 - 68.4)	(203) 89.0 (84.6 - 93.0)	(136) 58.6 (52.6 - 64.7)	(205) 83.3 (78.5 - 88.2)	(88) 36.8 (30.5 - 43.1)
	Vitamin A second dose	N=203	N=211	N=183	N=174	N=296	N=172	N=202	N=205	N=211	N=212
Vitamin A second dose	Vitamin A (12-59 months)	(89) 43.8 (37.4 - 51.2)	(50) 23.7 (18.0 - 29.4)	(37) 20.2 (14.8 - 26.2)	(53) 30.5 (24.1 - 37.9)	(83) 28.0 (23.0 - 33.8)	(78) 45.3 (37.2 - 52.3)	(157) 77.7 (71.8 - 83.2)	(68) 33.2 (26.8 - 39.5)	(132) 62.6 (55.9 - 69.2)	(34) 16.0 (11.3 - 21.2)

Index	Indicator	Pemba	Ancuabe	Balama	Chiure	Mecufi	Montepuez	Mueda	Namuno	Metuge	Erati
	Deworming first dose	N=203	N=211	N=183	N=174	N=296	N=172	N=202	N=205	N=211	N=212
Deworming first dose	Deworming in the last 12 months (one dose)	(147) 72.4 (66.0 - 78.3)	(60) 28.4 (22.3 - 34.1)	(37) 20.2 (14.8 - 25.7)	(80) 46.0 (38.5 - 54.6)	(97) 32.8 (27.0 - 38.8)	(80) 46.5 (39.0 - 54.6)	(167) 82.7 (76.7 - 88.1)	(48) 23.4 (17.6 - 29.3)	(133) 63.0 (55.9 - 69.7)	(44) 20.8 (15.6 - 26.4)
	Deworming second dose	N=203	N=211	N=183	N=174	N=296	N=172	N=202	N=205	N=211	N=212
Deworming second dose	Deworming in the last 12 months (two doses)	(66) 32.5 (26.1 - 39.9)	(29) 13.7 (9.0 - 18.5)	(30) 16.4 (11.9 - 21.9)	(31) 17.8 (12.6 - 24.1)	(46) 15.5 (11.5 - 19.9)	(60) 34.9 (27.3 - 42.4)	(148) 73.3 (67.3 - 78.7)	(45) 22.0 (16.6 - 27.8)	(89) 42.2 (35.1 - 48.8)	(16) 7.5 (4.2 - 11.3)
	Mosquito net use	N=231	N=232	N=217	N=202	N=332	N=196	N=228	N=232	N=246	N=239
Mosquito net coverage	Mosquito net usage	(210) 90.9 (87.0 - 94.4)	(169) 72.8 (67.2 - 78.4)	(190) 87.6 (82.9 - 91.7)	(152) 75.2 (69.3 - 81.2)	(309) 93.1 (90.4 - 95.8)	(178) 90.8 (86.7 - 94.4)	(147) 64.5 (57.9 - 70.6)	(219) 94.4 (91.4 - 97.0)	(202) 82.1 (77.2 - 86.6)	(179) 74.9 (69.5 - 80.3)
	Infant and young child feeding										
IYCF	Children ever breastfed (0-23.9 months)	N=102	N=71	N=119	N=79	N=62	N=55	N=85	N=132	N=125	N=70
		(99) 97.1 (93.1 - 100.0)	(67) 94.4 (88.7 - 98.6)	(118) 99.2 (97.5 - 100.0)	(79) 100	(61) 98.4 (95.2 - 100.0)	(55) 100	0	(117) 88.6 (83.3 - 93.9)	(115) 92.0 (87.2 - 96.8)	(70) 100
	Early initiation of breast-feeding (0-23.9 months)	N=102	N=71	N=119	N=79	N=62	N=55	N=85	N=132	N=125	N=70
		(98) 96.1 (92.2 - 99.0)	(54) 76.1 (66.2 - 85.9)	(119) 100	(56) 70.9 (60.8 - 79.7)	(38) 61.3 (50.0 - 74.2)	(51) 92.7 (85.5 - 98.2)	0	(39) 29.5 (22.0 - 37.9)	(69) 55.2 (46.4 - 63.2)	(47) 67.1 (57.1 - 78.6)
	Exclusive breastfeeding (0-5.9 months)	N=14	N=33	N=21	N=12	N=14	N=21	N=0	N=36	N=30	N=42
		(14) 100	(28) 84.8 (69.7 - 97.0)	(8) 38.1 (19.0 - 57.1)	(9) 75.0 (50.0 - 100.0)	(10) 71.4 (42.9 - 92.9)	(17) 81.0 (61.9 - 95.2)	0	(27) 75 (61.1 - 88.9)	(28) 93.3 (83.3 - 100.0)	(31) 72.1 (58.1 - 83.7)
	Introduction of solid, semi-solid or soft foods (6-8.9 months)	N=12	N=3	N=24	N=12	N=7	N=1	N=10	N=14	N=15	N=9
(11) 91.7 (75.0 - 100.0)		(2) .7 (0.0 - 100.0)	(22) 91.7 (79.0 - 100.0)	(11) 91.7 (75.0 - 100.0)	(1) 28.6 (0.0 - 57.1)	(1) 100	(9) 90.0 (70.0 - 100.0)	(7) 50.0 (21.4 - 71.4)	(11) 73.3 (46.7 - 93.3)	(4) 44.4 (11.1 - 77.8)	
Minimum dietary diversity (6-23.9 months)	N=88	N=38	N=98	N=67	N=48	N=34	N=85	N=96	N=95	N=27	
	(12) 13.6 (6.8 - 21.6)	(2) 5.3 (0.0 - 13.2)	(44) 44.9 (35.7 - 55.1)	(3) 4.5 (0.0 - 10.4)	(1) 2.1 (0.0 - 6.3)	0	0	0	0	(5) 18.5 (3.7 - 33.3)	
Minimum meal frequency for both breastfed and non-breastfed (6-23.9 months)	N=88	N=38	N=98	N=67	N=48	N=34	N=85	N=96	N=95	N=27	
	(23) 26.1 (17.0 - 35.2)	(31) 81.6 (68.4 - 92.1)	(8) 8.2 (3.1 - 14.3)	(15) 22.4 (12.0 - 34.3)	(6) 12.5 (4.2 - 20.8)	(15) 44.1 (29.4 - 61.8)	(18) 21.2 (12.9 - 29.4)	(0) 0	(12) 21.2 (12.9 - 29.4)	(4) 14.8 (3.7 - 29.6)	
Minimum acceptable diet (6-23.9)	N=88	N=38	N=98	N=67	N=48	N=34	N=85	N=96	N=95	N=27	
	(12.3 (0.0 - 5.7)	(0) 0	(0) 0	(1) 1.5 (0.0 - 4.5)	(0) 0	(0) 0	(0) 0	(0) 0	(0) 0	(1) 3.7 (0.0 - 11.1)	

Index	Indicator	Pemba	Ancuabe	Balama	Chiure	Mecufi	Montepuez	Mueda	Namuno	Metuge	Erati
	Maternal nutrition	N=23	N=89	N=47	N=62	N=158	N=81	N=56	N=131	N=66	N=88
PLW MUAC	MUAC <210mm	(0) 0	(0) 0	(1) 2.1 (0.0 - 6.4)	(0) 0	(0) 0	(1) 1.2 (0.0 - 3.7)	(0) 0	(5) 3.8 (0.8 - 7.6)	(0) 0	(1) 1.1 (0.0 - 3.4)
	MUAC ≥21 and <230mm	(1) 4.3 (0.0 - 13.0)	(9) 10.1 (4.5 - 16.9)	(2) 4.3 (0.0 - 10.3)	(5) 8.1 (1.6 - 14.5)	(19) 12.0 (7.0 - 17.7)	(6) 7.4 (2.5 - 13.6)	(8) 14.3 (5.4 - 23.2)	(24) 18.3 (12.2 - 25.2)	(2) 3.0 (0.0 - 7.6)	(16) 18.2 (11.4 - 26.1)
	MUAC ≥230mm	(22) 95.7 (87.0 - 100.0)	(80) 89.9 (83.1 - 95.5)	(44) 93.6 (87.2 - 100.0)	(57) 91.9 (83.9 - 98.4)	(139) 88.0 (82.3 - 92.4)	(74) 91.4 (85.2 - 97.5)	(48) 85.7 (76.8 - 94.6)	(102) 77.9 (70.2 - 85.5)	(64) 97 (90.9 - 100.0)	(71) 80.7 (71.6 - 88.6)
	Minimum dietary diversity - women	N=101	N=292	N=211	N=231	N=379	N=308	N=300	N=297	N=282	N=278
MDD-W	Women of reproductive age 15-49 consuming <5 food groups	(64) 63.4 (52.5 - 72.3)	(255) 87.3 (83.6 - 91.1)	(32) 15.2 (10.4 - 19.9)	(220) 95.2 (92.2 - 97.8)	(360) 95.0 (92.9 - 97.1)	(203) 65.9 (60.4 - 71.4)	(163) 54.3 (49.0 - 60.3)	(297) 100	(273) 96.8 (94.7 - 98.6)	(202) 72.7 (66.9 - 77.7)
	Women of reproductive age 15-49 consuming ≥5 food groups	(37) 36.6 (26.7 - 46.5)	(37) 12.7 (8.9 - 16.4)	(179) 84.8 (80.1 - 89.1)	(11) 4.8 (2.2 - 7.8)	(19) 5.0 (2.9 - 7.7)	(105) 34.1 (28.6 - 39.6)	(137) 45.7 (39.7 - 51.3)	(0) 0	(9) 3.2 (1.4 - 5.3)	(76) 27.3 (22.3 - 33.1)

Specific recommendations are outlined below:

- Although acute malnutrition levels were low, implementation of the existing nutrition programs should continue in order to maintain these low levels. Due to widespread insecurity and displacement, inflation, climate related shocks and food insecurity, the population in Cabo Delgado remains vulnerable to acute malnutrition.
- Very high levels of stunting were revealed by the survey. More efforts and resources are required for stunting prevention through different multi-sectoral interventions combining mother's nutrition, infant and young child feeding, water, sanitation and hygiene practices, as well as other nutrition related interventions such as the provision of basic health services, improving food security, among other interventions.
- There is need to maintain and strengthen the provision of basic health services to curb the high morbidity rates. In addition, mobile health outreach should be regularly organized in the areas affected by insecurity to reach children who need treatment services. Continuous health education for mothers/caregivers is necessary to sensitize them on the benefits of health seeking.
- Increase health campaigns to improve measles vaccination, vitamin A supplementation and deworming in the less accessible areas affected

by insecurity. Further, strengthen community sensitization on importance of measles immunization, vitamin A supplementation and deworming.

- Continue the promotion of appropriate IYCF practices by organizing nutrition education sessions in hard to reach areas using appropriate behavior change communication interventions such as demonstrations and appropriate IEC materials. In addition, strengthen the training of community health workers and support them to reach mothers in areas affected by insecurity to ensure continued sensitization of mothers to adopt appropriate IYCF practices. Also, improve coverage of the nutrition education sessions focusing on breastfeeding and complementary feeding among the displaced, as well as the host communities.
- Strengthen screening of acute malnutrition among pregnant and lactating women and refer them for nutritional rehabilitation. Conduct maternal nutrition education sessions through peer support groups and other community gatherings to raise awareness on the importance of maternal nutrition.
- Link mothers and vulnerable women to programs providing livelihood support and economic empowerment to improve access to household income thereby improving access to and utilization of diversified diets.

SMART



1 INTRODUCTION

1.1 Background

Geography and demography

The Republic of Mozambique is a Southern East African low-income country, with an estimated population of 30.8 million in 2021, ranked among the poorest countries in the world with persistent poverty, inequalities and discrimination. At 799,380 km¹, Mozambique is bordered by the Indian Ocean to the east, Tanzania to the north, Malawi and Zambia to the northwest, Zimbabwe to the west, and Eswatini and South Africa to the southwest. The sovereign state is separated from the Comoros, Mayotte and Madagascar by the Mozambique channel to the east. The country has a young population with about two-thirds being under the age of 25. Females make up 52% of the population, while 63% live and work in rural areas. Portuguese is the official language, spoken by approximately 50% of the population¹. Mozambique has eleven provinces, including the capital city of Maputo. The country's southern region comprises Maputo City, Maputo province, Gaza, and Inhambane. The central region comprises Manica, Sofala, Tete, and Zambézia provinces, and the northern region includes Nampula, Cabo Delgado, and Niassa provinces².

Humanitarian situation

Mozambique is currently grappling with a military insurgency in parts of the gas-rich province of Cabo-Delgado. The four-year conflict has caused an estimated 4,000 deaths and displaced nearly one million people. About four million people are likely to face high levels of food insecurity as a result of the combined effects of climate shocks and the conflict³. The humanitarian situation in Mozambique remains challenging as a result of protracted conflict and recurrent natural hazards, including cyclones, droughts, and disease outbreaks. The situation is further compounded by increased food prices and socioeconomic vulnerabilities⁴. According to the humanitarian response plan (HRP) of June 2022, at least 1.5 million people in northern Mozambique need life-saving and life-sustaining humanitarian assistance and protection as a result of the

1 UN Mozambique Common Country Analysis August 2021

2 Cambaza, E. Mozambique: Country Profile. Encyclopedia 2023, 3, 143-167.

3 <https://www.worldbank.org/en/country/mozambique/overview>

4 UNICEF Humanitarian Action for Children

52%

Females make up 52% of the population, while 63% live and work in rural areas. Portuguese is the official language, spoken by approximately 50% of the population. Mozambique has eleven provinces, including the capital city of Maputo. The country's southern region comprises Maputo City, Maputo province, Gaza, and Inhambane.

23,0000

Attacks by the insurgents across eastern Cabo Delgado, including previously conflict-free areas of Ancuabe and Chiúre districts displaced over 23,000 people according to IOM's Displacement Tracking Matrix. Most IDPs remain dependent on emergency humanitarian assistance to fill food consumption gaps.

continued impact of armed conflict, violence and insecurity in Cabo Delgado Province. In 2021, the crisis in Cabo Delgado deepened the needs of both the displaced people and host communities. While some returns of people to areas recaptured by the Government and allied forces was anticipated in 2022, the situation remains volatile. More than 735,000 people were estimated to be internally displaced in Mozambique due to the conflict in Cabo Delgado by November 2021—including 663,276 people in Cabo Delgado, 68,951 in Nampula, and 1,604 in Niassa—according to IOM's Displacement Tracking Matrix (DTM) Baseline Assessment Round 14. Children accounted for 59 per cent of displaced people, while more than half (52 per cent) of displaced people were women and girls. There were more than 7,700 elderly people, nearly 4,200 pregnant women, more than 3,000 unaccompanied children and more than 2,500 people with disabilities among those displaced. Around 73 per cent of displaced people were staying with family and friends in host communities' whose already meagre resources were strained tremendously by the growing influxes. Pemba city now hosts more than 150,000 displaced people, on top of the original population of around 224,000 people, putting the city's health and education services under immense pressure. In Metuge District, the number of displaced people (114,905) is higher than the original population (101,339)⁵.

Food security situation

According to the Mozambique food security outlook update in June 2022, Cabo Delgado had Crisis (IPC Phase 3) and Stressed (IPC Phase 2) outcomes mainly driven by conflict since late 2017 and exacerbated by recent attacks in areas previously considered safe, such as the Ancuabe district. However, the regular distribution of humanitarian food assistance (HFA) in some areas of Cabo Delgado supports Stressed (IPC Phase 2) outcomes. However, the ongoing conflict continues to displace households and disrupt access to income and food. Attacks by the insurgents across eastern Cabo Delgado, including previously conflict-free areas of Ancuabe and Chiúre districts displaced over 23,000 people according to IOM's Displacement Tracking Matrix. Most IDPs remain dependent on emergency humanitarian assistance to fill food consumption gaps. Some IDPs living in the resettlement/accommodation centers also earn income from selling gifts/aid, and from limited skilled and casual work opportunities. If displaced households can earn income, most are spending it to purchase food. In areas where humanitarian food assistance (HFA) is regular and supports at least one in five households with 25 percent of food needs, Stressed! (IPC Phase 2) outcomes are present. In Nampula's coastal and intermediate areas severely affected by tropical cyclone Gombe and two tropical storms, Crisis (IPC Phase 3) outcomes are likely emerging among the poorest households as household food

⁵ UNOCHA Mozambique Humanitarian Response Plan June 2022

stocks diminish. The poorest households also have limited access to income for market purchases to fill food consumption gaps due to the loss of livelihood assets and limited job opportunities as the area recovers. In addition, the depletion of food reserves in Nampula much earlier than usual and the reduction of the capacity for mutual support could result in more districts facing Crisis (IPC Phase 3) outcomes. Compounding food insecurity in northern Mozambique is the rising Inflation—projected to continue to increase due to the impact of rising fuel and wheat prices internationally. This will limit very poor household purchasing power, particularly in urban and peri-urban areas, forcing them to continue readjusting their expenses and reducing access to certain non-food items in favor of staple foods.

Health and nutrition situation

The nutrition situation in Mozambique is extremely fragile due to compounded vulnerabilities in the country including the ongoing conflict in the north, climate shocks (cyclones and tropical storms in the central and northern regions and drought in the south), residual impacts of Covid-19, and the impact of global food prices and essential nutrition commodities due in part to the war in Ukraine⁶. The health sector has benefitted from important investments over the years, but capacities remain weak, and access to health services remains a challenge for many Mozambicans. The Covid-19 pandemic has further strained health service provision, which already lacked sufficient skilled health workers, drugs and supplies. Extremely high levels of chronic malnutrition (43%) in Mozambique affect almost one in every two children under 5. Although chronic malnutrition is a national challenge, it is more pronounced amongst children living in the northern provinces of Nampula, Cabo Delgado, Niassa and Zambézia, where the prevalence is double that of the southern province of Maputo⁷.

1.2 Survey justification

The ongoing conflict and population displacement in Cabo Delgado and parts of Nampula provinces continues to create an urgent need for humanitarian assistance particularly among vulnerable children aged 6–59 months, and pregnant and lactating women. The situation is further compounded by food insecurity in the affected areas which is projected to deteriorate if the conflict continues. The surveys were therefore necessary to assess the current nutrition situation of the affected population in order to inform

⁶ Global Nutrition Cluster, UNICEF & WFP – A call to Action for Urgent Scale-up of Coordinated Nutrition Action in Mozambique

⁷ UN Mozambique Common Country Analysis August 2021

43%

Extremely high levels of chronic malnutrition (43%) in Mozambique affect almost one in every two children under 5. Although chronic malnutrition is a national challenge, it is more pronounced amongst children living in the northern provinces of Nampula, Cabo Delgado, Niassa and Zambézia, where the prevalence is double that of the southern province of Maputo.

6-59

The surveys in northern Mozambique provided updated information on the current nutritional status of children aged 6 to 59 months and PLWs, the morbidity status of children under the age of five, the food security status, and established the infant and young child feeding practices in children aged below 2 years.

the emergency response. Further, the surveys in northern Mozambique provided updated information on the current nutritional status of children aged 6 to 59 months and PLWs, the morbidity status of children under the age of five, the food security status, and established the infant and young child feeding practices in children aged below 2 years.

1.3 Main objective

The overall objective of the SMART surveys in northern Mozambique was to assess the current nutrition situation among children aged 6-59 months and PLWs residing in conflict affected areas of Cabo Delgado and Nampula provinces.

1.3.1 Specific objectives

1. To determine prevalence of malnutrition (Stunting, Wasting, and Underweight) among children aged 6-59 months.
2. To assess the current household food security situation in Cabo Delgado and Nampula north provinces.
3. To determine the general morbidity (Diarrhoea, ARI & Fever) among children under 5 based on a two week recall period.
4. To estimate the coverage of measles vaccination among children 9-59 months.
5. To assess Vitamin A supplementation in children 6-59 months in the last 6 months.
6. To determine deworming among children 12-59 months in the last 6 months.
7. To assess the nutritional status of pregnant and lactating women by MUAC.
8. To determine the core infant and young child feeding practices among children aged 0-23 months.
9. To recommend appropriate health and nutrition interventions based on survey findings.

2 METHODOLOGY

2.1 Survey design

The SMART surveys adopted a cross-sectional study design using the two-stage cluster sampling based on the SMART methodology. Clusters were selected using probability proportional to population size (PPS). Stage one sampling involved sampling of clusters to be included in the survey while the second stage sampling involved the selection of households from the sampled clusters.

2.2 Target groups, inclusion and exclusion criteria

The target population for the anthropometric survey was children aged 6-59 months, and pregnant and lactating women. Mothers or caregivers were interviewed to obtain information on childhood morbidity and health seeking behaviours, measles vaccination, vitamin A supplementation, and infant and young child feeding practices.

The SMART surveys adopted a cross-sectional study design using the two-stage cluster sampling based on the SMART methodology.

Table 2: Survey indicators and target groups

	Key Indicators	Survey Target
Nutrition status		
1.	Prevalence of wasting, stunting, and underweight	Children 6 – 59 months
2.	Pregnant and Lactating Women nutritional status by MUAC	Pregnant and Lactating Women
3.	Minimum dietary diversity women	Women 15-49 years
Health		
4.	Child morbidity (e.g. Fever, ARI, Diarrhoea)	Children 6 – 59 months
5.	Measles vaccination	Children 9 – 59 months
6.	Vitamin A supplementation coverage	Children 6 – 59 months
7.	Deworming coverage	Children 6-12 months
IYCF		
8.	Early initiation of breastfeeding	Children 0-23 months
9.	Exclusive breastfeeding	Children 0-5 months
10.	Introduction of solid, semi-solid or soft foods	Children 6-8 months
11.	Minimum dietary diversity	Children 6-23 months
12.	Minimum meal frequency	Children 6-23 months
13.	Minimum acceptable diet	Children 6-23 months

2.3 Cut offs for nutrition indices and malnutrition classification

Table 3: Cut-offs for the indices of WHZ, HAZ, WAZ, and MUAC

Malnutrition Status	Malnutrition Status Classification			
	Acute Malnutrition (WHZ)		Chronic malnutrition (HAZ)	Underweight (WAZ)
	Weight/ Height [WHZ]	MUAC	Height/Age [HAZ]	Weight/Age [WAZ]
Global	WHZ < -2 SD and/or Oedema	MUAC < 125 mm and /or Oedema	HAZ < -2 SD	WAZ < -2 SD
Moderate	WHZ < -2SD to ≥ -3 SD	115 mm ≤ MUAC < 125 mm	HAZ < -2SD to ≥ -3 SD	WAZ < -2SD to ≥ -3 SD
Severe	WHZ < -3 SD and/or Oedema	MUAC < 115 mm and /or Oedema	HAZ < -3 SD	WAZ < -3 SD

Table 4: WHO/UNICEF Classification for the severity of malnutrition by prevalence

	Prevalence Thresholds Level [%] ⁸				
	Very high	High	Medium	Low	Very low
Wasting [WHZ]	≥ 15	10 - <15	5 - <10	2.5- <5	<2.5
Overweight [WHZ]	≥ 15	10 - <15	5 - <10	2.5- <5	<2.5
Stunting [HAZ]	≥ 30	20 - <30	10 - <20	2.5- <10	<2.5

2.4 Indicator Measurements

Nutrition Data

- **Age:** Children 6-59 months from the selected households will be considered eligible for the survey. Age will be obtained from official written documents such as vaccination or birth registration cards. If documentation is unavailable, a local calendar of events will be used to estimate age.
- **Sex:** This will be recorded as either 'f' for female or 'm' for male.
- **Weight:** Standardized SECA scales will be used for weight measurement for children between 6

⁸ WHO/UNICEF latest public health emergency thresholds for the prevalence of wasting, overweight and stunting in children under 5 years, August 2018

to 59 months. The weight will be recorded to the nearest 100g (0.1 kg). Direct weighing option will be used for older children who can easily stand while the double weighing option will be applied for younger children or children who cannot stand.

- **Height:** Standard, height boards will be used for taking length and height of children. Children less than 24 months will be measured lying down, and children greater than or equal to 24 months will be measured in standing position. The precision of the measurement is 0.1 cm
- **Mid Upper Arm Circumference (MUAC):** Will be measured using a flexible non-elastic tape, midway between the tip of the acromion process and the tip of the olecranon process of the left arm with the arm hanging freely by the child's/PLW side. MUAC measurements will be recorded to the nearest 0.1 cm or 1.0 mm.
- **Bilateral Oedema:** Will be assessed by applying a moderate thumb pressure on BOTH feet for three seconds. If oedema is present, a shallow pit will remain after releasing pressure from the feet. Only children with bilateral oedema (oedema on both feet) are diagnosed positive for nutritional Oedema. The team leader will confirm all cases of oedema and refer the cases for immediate inpatient care.
- **Maternal Nutrition:** The nutritional status of pregnant and lactating women of reproductive age will be assessed using MUAC measurements. The MUAC measurements will be recorded to the nearest 0.1 cm or 1.0 mm.

Morbidity, measles vaccination, vitamin A coverage, and deworming

- **Retrospective morbidity:** Mothers or caregivers will be asked about illnesses that affected their children (6-59 months) in the past two weeks prior to the survey date.
- **Diarrhea:** This will be assessed among children 6-59 months by a two-week recall. Diarrhea is defined as the passage of three or more loose or liquid stools in a day.
- **Cough (with fever):** Will be assessed among children 6-59 months by a two-week recall, defined as cough (with rapid or difficulty breathing) and fever. This indicator will be used as a proxy for suspected ARI or pneumonia.
- **Fever:** (without cough and rash): This will be assessed among children 6-59 months by a two-week recall, defined as fever in the absence of respiratory symptoms (cough).
- **Measles vaccination:** This will be assessed by checking for the measles vaccine on the EPI card if available or by asking the caregiver to recall if no EPI card was available.

24 months

Standard, height boards will be used for taking length and height of children. Children less than 24 months will be measured lying down, and children greater than or equal to 24 months will be measured in standing position. The precision of the measurement is 0.1 cm.

- **Vitamin A supplementation:** This will be assessed among children 6-59 months by checking the EPI card or health card if available or by asking the caregiver to recall if no card is available. A vitamin A capsule image will be shown to the caregiver when asked to recall.
- **Deworming:** This will be assessed among children 12-59 months by asking the caregiver to recall. A deworming tablet will be shown to the caregiver when asked to recall.

2.5 Sample size determination

The District level sample sizes were calculated using ENA for SMART software (January 11th, 2020 version) The sample size was based on the anthropometry module. Several parameters were taken into consideration including the expected GAM prevalence, desired precision, design effect, average household size, percentage of children under 5, and the percentage of nonresponse. The total sample size was expressed both in terms of the number of children and the number of households as shown in table 5 below:

Infant and Young Child Feeding

Infant and young child feeding practices will be assessed based on the standard WHO recommendations (WHO, 2010) as follows:

- **Early initiation of breastfeeding:** Proportion of children born in the last 23 months who are put to the breast within one hour of birth.
Children 0-23 months who were put to the breast within one hour of birth
Children 0-23 months

- **Minimum meal frequency:** Proportion of breastfed and non-breastfed children 6-23 months of age who receive solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more.

Breastfed and non-breastfed children 6-23 months of age who received solid, semi-solid, or soft foods (but also including milk feeds for non-breastfed children) the minimum number of times or more

during the previous day

- Children 6-23 months of age
Minimum dietary diversity: Proportion of children 6-23 months of age who received foods from ≥ 4 food groups during the previous day.

Children 6-23 months of age who received foods from ≥ 4 food groups during the previous day

- Children 6-23 months of age
Minimum acceptable diet: Proportion of children 6-23 months of age who receive a minimum acceptable diet (apart from breast milk).

Breastfed children 6-23 months of age who had at least the minimum dietary diversity and the minimum meal frequency during the previous day

Breastfed children 6-23 months of age and Non-breastfed children 6-23 months of age who received at least 2 milk feedings and had at least the minimum dietary diversity not including milk feeds and the minimum meal frequency during the previous day

Non-breastfed children 6-23 months of age



Table 5: Anthropometry sample size calculation

Parameters for Anthropometry	Districts									
	Pemba city	Ancuabe	Balama	Chiure	Mecufi	Montepuez	Mueda	Namuno	Metuge	Erati
Estimated Prevalence of GAM (%)	3.6	3	4.9	3	4.8	1.9	1.9	4.9	4.8	4.8
± Desired precision	3	2.9	3	2.9	3	2.3	2.3	3	3	3
Design Effect (DEFF)	1.5	1.5	1.2	1.5	1.2	1.5	1.5	1.2	1.2	1.2
Average HH Size	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
% Children under-5	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1	17.1
% Non-response Households	5	5	5	5	5	5	5	5	5	5
Children to be included	242	217	260	217	255	221	221	260	255	255
Households to be included	338	303	363	303	356	309	309	363	356	356
Number of clusters	29	26	31	26	30	26	26	31	30	30

2.5.1 Number of households per cluster

The number of households to be completed in every cluster per day was determined according to the time the team could spend in the field excluding transportation, other procedures and break times. The details below are taken into consideration when performing this calculation based on the given context:

Table 6: Daily working timetable during data collection

Total working time	8:00 AM to 5:00 PM 9 hours = 540 minutes	Field Team Members
Travel to the site (round trip) - 60 min	540 - 60 = 480 minutes	Team Leader, measurers
Initial introduction and HHs selection - 60 min	480 - 60 = 420 minutes	Team Leader, measurers
Lunch break	420 - 60 = 360 minutes	Team Leader, measurers
Average duration of HH interview	25 minutes	Team Leader, measurers
Distance from one HH to another HH	5 minutes	Team Leader, measurers
Average HH coverage per day per cluster by one team	360 / 30 = 12 HHs	Team Leader, measurers

The above gave an average 360 min for administering the survey in each cluster. If on average teams spent 25 minutes in each household and 5 minutes traveling from one household to the next, each team could comfortably reach 12 HHs per day (assuming each team will complete one cluster per day). In some districts the team could not complete one cluster per day and they were allowed to complete in two days.

100

In cases where there were large villages containing more than 100 households, such villages were divided into smaller segments and one or more segments were randomly selected to represent the cluster. Cluster segmentation was done based on existing administrative boundaries, streets or natural landmarks such as a river, road, or public places like markets, schools, and churches/mosques.

The total number of households in the sample was then divided by the number of households to be completed in one day to determine the number of clusters to be included in the survey.

Based on this calculation, the table below shows the total number of children, households, and clusters required from each district.

2.5.2 Sample size for additional indicators

The above number of estimated households per survey District was the final sample size. Sample size calculation for the additional survey indicators (Morbidity, Health, IYCF, PLW MUAC, and MDD-W) were based on the calculated sample size for anthropometry.

2.6 Sampling Methodology

2.6.1 First stage sampling (selection of clusters)

Random selection of clusters (villages) was conducted from a master sampling frame prepared by the National Institute of Statistics Mozambique (INE). An updated list of all villages was used to select the required number of clusters by applying the probability proportional to size method. The list of villages was prepared by INE in consultation with district MoH, EPI programme, UNICEF and NGO partners. Insecure or inaccessible villages were excluded from the final sampling frame. Reserve Clusters (RCs) were also selected. Reserve clusters were only visited if 10% or more clusters or less than 80% of the children under five years were impossible to reach during the survey. All reserve clusters were surveyed in the two districts of Namuno and Erati. In Namuno, the minimum number of children was not met while in Erati teams failed to reach the targeted number of clusters.

In each selected village, a community leader (preferably village chief) was approached and asked to help the survey teams to list down all the households and randomly select the required number of households. In cases where there were large villages containing more than 100 households, such villages were divided into smaller segments and one or more segments were randomly selected to represent the cluster. Cluster segmentation was done based on existing administrative boundaries, streets or natural landmarks such as a river, road, or public places like markets, schools, and churches/mosques.

2.6.2 Second stage sampling (selection of households)

Simple random sampling was used to select 12 households per cluster. In each cluster, the survey team compiled a list of all households with the help of the village chief. The team leader working with the village leader used household enumeration lists that were prepared in advance and provided by INE to randomly select the required 12 households. The teams would start the survey from any convenient household among the randomly selected households by administering the survey questionnaires and taking anthropometric measurements. All the children aged 6 to 59 months living in the selected household were included in the anthropometric survey. If more than one eligible child was found in a household, all the children were included. Children aged 0-23 months in a selected household took part in the IYCF survey. All the selected HHs were asked to respond to questions concerning the other indicators including morbidity status, PLW MUAC and the dietary diversity for women.

The household was the basic sampling unit. The term household was defined as all the people living together and sharing food from the same pot. The teams also worked with the village leader to identify compounds which were listed as a single household if members lived together and shared their meals, while in compounds where members lived together but did not share meals, households were listed separately.

2.7 Referral

All children identified as meeting the case definition for severe acute malnutrition were referred to the nearest outpatient therapeutic feeding program (OTP) or health center. Similarly, children meeting the case definition for moderate acute malnutrition were referred to the nearest targeted supplementary feeding program (TSFP). Pregnant and lactating women that were assessed with MUAC < 210 mm were also referred to the nearest targeted supplementary feeding program (TSFP) or health center.

2.8 Special cases

- a. **No children in the household:** Only the household questionnaire was administered. The survey teams were cautioned not to replace a household with no children.
- b. **Abandoned household:** All abandoned households were removed before household listing and selection.
- c. **Absent household:** The teams skipped absent households and continued to the next household

The term household was defined as all the people living together and sharing food from the same pot. The teams also worked with the village leader to identify compounds which were listed as a single household if members lived together and shared their meals, while in compounds where members lived together but did not share meals, households were listed separately.

Children with disability/
handicap: All data that
was not influenced
by the disability was
collected. The team
determined if it was
possible to measure
all anthropometric
indicators. If it was not
possible to measure
height and weight, the
team gave the child an
ID number and recorded
data as missing and
reported the reason.

according to the sampling procedure. The absent household were revisited before leaving the field. A household was only marked absent after at least two re-visits to the household had been made.

- d. **Absent children:** If a child was absent at the time of the survey, the team collected the other household related data and told the mother that they would return later that day to look for the missing child before departure from the survey area.
- e. **Children with disability/handicap:** All data that was not influenced by the disability was collected. The team determined if it was possible to measure all anthropometric indicators. If it was not possible to measure height and weight, the team gave the child an ID number and recorded data as missing and reported the reason.
- f. **A cluster** control form was used to record the assessment outcome for every selected household.

2.9 Survey team composition, training and supervision

2.9.1 Survey team composition

The survey was implemented by two teams per survey district. Each survey team consisted of the team leader (interviewer), a measurer, an assistant measurer, and the team supervisor. Each team member had designated roles as explained below:

1. **Team Leader:** He/she led the field survey team. The team leader organized a meeting with the village chief and local authorities to conduct cluster mapping and segmentation (if required), ensured complete HHs listing, ensured random HH selection during the second stage of cluster sampling, monitoring and supervising anthropometric measurement, and conducting household interviews while maintaining the supervision checklist and filling the cluster control form.
2. **Lead measurer:** He/she measured weight, height, edema, and MUAC of children and pregnant and lactating women. The lead measurer also took proper care of measuring equipment and assisted the team leader with cluster mapping and other requested assistance.
3. **Assistant measurer:** He/she assisted the lead measurer in taking anthropometric measurements, taking proper care of the measuring equipment and carrying the equipment while in the field.
4. **Field supervisor:** The field supervisors were technical staff drawn from SETSAN, INE, UNICEF and

other partner organizations to provide technical support including ensuring proper procedures were followed during household selection, ensuring interviews were done correctly and consistently in every household and ensuring data was captured accurately and providing feedback to the survey team while in the field.

2.10 Survey team training

The survey team underwent a 6-day SMART survey enumerators training. The training focused on the survey objectives, household selection techniques, demonstration of anthropometric measurements, familiarization with the questionnaire, and a short session on Covid-19 control measures. The training incorporated classroom lectures, discussions and practical sessions.

The quality of anthropometric measurements was assessed through a standardization test. The standardization test included a minimum of 10 healthy children under the age of 5 years. During the standardization test, a team of two enumerators measured each child twice in order to evaluate enumerators accuracy and precision of measurements.

A field test was conducted on the last day of training to assess survey teams' readiness for data collection. Before the pretest, the survey questionnaire was translated into the local language of the survey areas. The team composition was based on performance of a written evaluation (pre and post-test), standardization test, and field test.

2.11 Survey equipment

Weight was measured using SECA electronic scales that allow for double measurement. Weight scales were calibrated every morning before starting data collection. Standard UNICEF height boards were used for measuring height. The mid upper arm circumference of both the children and PLWs were measured using MUAC tapes.

The quality of anthropometric measurements was assessed through a standardization test. The standardization test included a minimum of 10 healthy children under the age of 5 years. During the standardization test, a team of two enumerators measured each child twice in order to evaluate enumerators accuracy and precision of measurements.

Data were collected offline using mobile devices via the Open Data Kit (ODK) application. Everyday when teams returned to base, data was uploaded and sent to a configured server from where it was downloaded for analysis and daily plausibility check so that feedback could be given to the teams.

2.12 Data collection

Data collection in the ten target districts began on April 10, 2023 and continued until May 4, 2023. After a thorough review of the data, it was discovered that teams in Namuno district did not reach the required number of children, while teams in Erati failed to reach the targeted number of clusters. This necessitated data collection in all the reserve clusters in the two affected districts from 15th to 17th May 2023.

2.13 Covid-19 control measures

Considering the risk of Covid-19 transmission during the assessment, the survey teams were trained on Covid-19 control measures and provided with personal protective equipment (PPE) items.

2.14 Data entry and management

Data were collected offline using mobile devices via the Open Data Kit (ODK) application. Everyday when teams returned to base, data was uploaded and sent to a configured server from where it was downloaded for analysis and daily plausibility check so that feedback could be given to the teams.

2.15 Quality Assurance

Several measures were employed to ensure data quality including:

- Using Open Data Kit application for digital data collection to minimize the possibility of errors when recording data.
- A six-day comprehensive training together with standardization test and field pretest.
- Field supervision of the survey teams during data collection.
- Calibration and standardization of the survey equipment.
- Use of the cluster control forms to track the assessment outcome for every household.
- Daily plausibility checks and sharing of feedback with the teams for continuous improvement as data collection continued.

2.16 Data analysis, dissemination and report writing

All Anthropometric data was analyzed using ENA for SMART (January 11th, 2020 version). SMART flags were used to exclude values that were out of range (WHZ values that were ± 3 SD from the observed WHZ mean). Preliminary and final results were shared with stakeholders (SETSAN, UNICEF, INE, and NGO partners) for validation. A Technical Working Group composed of experts from the participating agencies validated the results before dissemination. A preliminary report and datasets were shared with stakeholders within 14 days of completing data collection. Feedback was incorporated and the final report shared within a week after receiving feedback.

2.17 Ethical approval and considerations

Informed consent was obtained from all participants before data collection. Participation in the survey was voluntary. The survey objectives were clearly explained to the respondents before gathering data. Collected data were treated confidentially. Survey approval was sought from the relevant government ministries and institutions, the nutrition cluster technical working group, local authorities, and community leaders.

All Anthropometric data was analyzed using ENA for SMART (January 11th, 2020 version). SMART flags were used to exclude values that were out of range (WHZ values that were ± 3 SD from the observed WHZ mean). Preliminary and final results were shared with stakeholders (SETSAN, UNICEF, INE, and NGO partners) for validation.

3 SURVEY RESULTS

3.1 Anthropometric results (based on WHO standards 2006)

3.1.1 Survey response rates

Nearly all the planned clusters that were selected from the sampling frame across the ten districts were surveyed. However, reserve clusters were activated in two districts (Namuno and Erati) where teams failed to reach the required number of children and clusters respectively.

Table 7: Surveys response rates

Achieved household and children									
District	HHs planned	HHs reached	Response rate (%)	Children planned	Children reached	Response rate (%)	Clusters planned	Clusters reached	Response rate
Pemba city	338	333	98.5%	242	231	95.5%	29	28	96.6%
Ancuabe	303	299	98.7%	217	232	106.9%	26	25	96.2%
Balama	363	360	99.2%	260	217	83.5%	31	30	96.8%
Chiure	303	296	97.7%	217	202	93.1%	26	25	96.2%
Mecufi	356	372	104.5%	255	332	130.2%	30	31	103.3%
Montepuez	309	308	99.7%	221	196	88.7%	26	26	100.0%
Mueda	309	312	101.0%	221	228	103.2%	26	26	100.0%
Namuno	363	377	103.9%	260	232	89.2%	31	31	100.0%
Metuge	356	348	97.8%	255	246	96.5%	30	29	96.7%
Erati	356	336	94.4%	255	239	93.7%	30	28	93.3%

3.1.2 Data quality report

Anthropometry data quality was evaluated in all ten districts. The quality ranged from acceptable to excellent, which is an indication of good data quality across the districts (Table 8).

Table 8: Plausibility report of data quality by district

District	Flagged data	Overall Sex ratio	Age ratio (6-29 vs 30-59)	Dig pref score - weight	Dig pref score - height	Dig pref score - MUJAC	Standard Dev WHZ	Skewness WHZ	Kurtosis WHZ	Poisson dist WHZ-2	Overall Score WHZ	Overall scoring
	Score (% of out of range subjects)	Score (P value of chi square)	Score (P value of chi square)	Score (#)	Score (#)	Score (#)	Score (SD)	Score (#)	Score (#)	Score (P value)	%	
Pemba city (201)	0 (1.3 %)	0 (p=0.469)	4 (p=0.004)	0 (7)	2 (10)	0 (5)	5 (1.11)	3 (0.50)	0 (-0.14)	0 (p=0.706)	14	Good
Ancuabe (202)	0 (1.3 %)	0 (p=0.844)	0 (p=0.986)	0 (5)	2 (10)	0 (7)	0 (0.95)	0 (0.01)	0 (-0.07)	0 (p=0.130)	2	Excellent
Balama (203)	0 (0.5 %)	0 (p=0.378)	4 (p=0.001)	2 (8)	4 (14)	4 (13)	0 (1.03)	1 (-0.21)	0 (-0.17)	0 (p=)	15	Acceptable
Chiure (204)	0 (1.0 %)	0 (p=0.180)	2 (p=0.073)	0 (4)	2 (11)	2 (9)	0 (0.92)	1 (-0.36)	1 (0.35)	0 (p=0.645)	8	Excellent
Mecufi (207)	0 (1.8 %)	0 (p=0.583)	0 (p=0.411)	0 (5)	2 (10)	2 (8)	0 (1.05)	0 (-0.13)	0 (-0.10)	0 (p=0.458)	4	Excellent
Montepuez (210)	5 (3.6 %)	0 (p=0.199)	4 (p=0.046)	2 (9)	2 (9)	2 (9)	0 (1.04)	1 (0.27)	0 (0.06)	0 (p=)	16	Acceptable
Mueda (211)	5 (3.5 %)	0 (p=0.112)	2 (p=0.058)	2 (8)	2 (11)	0 (7)	0 (1.06)	0 (-0.15)	1 (0.32)	3 (p=0.009)	15	Acceptable
Namuno (213)	0 (0.4 %)	0 (p=0.429)	4 (p=0.003)	0 (7)	2 (12)	2 (11)	0 (1.05)	0 (-0.13)	1 (-0.25)	0 (p=0.153)	9	Excellent
Metuge (216)	0 (0.0 %)	0 (p=0.798)	4 (p=0.002)	2 (9)	4 (15)	2 (11)	0 (1.01)	0 (0.13)	1 (-0.26)	0 (p=0.237)	13	Good
Erati (304)	0 (1.7 %)	0 (p=0.559)	0 (p=0.907)	0 (7)	2 (10)	0 (7)	5 (1.11)	0 (0.03)	1 (-0.38)	0 (p=0.248)	8	Excellent

3.1.3 Distribution of the sample by age and sex

Overall, the anthropometric survey reached 2,355 children aged 6-59 months. The age ratio ranged from 1.0 to 1.1 in seven of the ten surveyed districts, indicating that both girls and boys were equally represented in most of the districts except Chiure (1.2) and Mueda (1.2) where boys were slightly overrepresented, while in Montepuez (0.8), the sample had a higher number of girls compared to boys.

Table 9: Distribution of age and sex of the sample

District	Boys						Girls						Boys/girls ratio
	N (%)						N (%)						
	6 - 17 months	18 - 29 months	30 - 41 months	42 - 53 months	54 - 59 months	Total boys	6 - 17 months	18 - 29 months	30 - 41 months	42 - 53 months	54 - 59 months	Total girls	
Pemba city	38 (61.3)	28 (43.9)	22 (40.7)	27 (62.8)	5 (83.3)	121 (52.4)	24 (38.7)	37 (56.1)	32 (59.3)	16 (37.2)	1 (16.7)	110 (47.6)	1.1
Ancuabe	26 (52.0)	34 (60.7)	22 (42.3)	28 (53.8)	7 (33.3)	117 (50.6)	24 (48.0)	22 (39.3)	30 (57.7)	24 (46.2)	14 (66.7)	114 (49.4)	1.0
Balama	37 (51.4)	24 (45.3)	26 (50.0)	25 (69.4)	3 (75.0)	115 (53.0)	35 (48.6)	29 (54.7)	26 (50.0)	11 (30.6)	1 (25.0)	102 (47.0)	1.1
Chiure	21 (42.9)	34 (60.7)	23 (52.3)	25 (56.8)	7 (87.5)	110 (54.7)	28 (57.1)	22 (39.3)	21 (47.7)	19 (43.2)	1 (12.5)	91 (45.3)	1.2
Mecufi	37 (48.1)	42 (50.6)	43 (55.8)	34 (50.0)	15 (55.6)	171 (51.5)	40 (51.9)	41 (49.4)	34 (44.2)	34 (50.0)	12 (44.4)	161 (48.5)	1.1
Montepuez	23 (41.1)	23 (47.9)	27 (51.9)	13 (39.4)	3 (42.9)	89 (45.4)	33 (58.9)	25 (52.1)	25 (48.1)	20 (60.6)	4 (57.1)	107 (54.6)	0.8
Mueda	32 (52.5)	37 (63.8)	26 (48.1)	28 (59.6)	3 (37.5)	126 (55.3)	29 (47.5)	21 (36.2)	28 (51.9)	19 (40.4)	5 (62.5)	102 (44.7)	1.2
Namuno	40 (58.0)	30 (50.8)	28 (44.4)	18 (62.1)	5 (50.0)	121 (52.6)	29 (42.0)	29 (49.2)	35 (55.6)	11 (37.9)	5 (50)	109 (47.4)	1.1
Metuge	36 (50.0)	29 (45.3)	31 (63.3)	19 (43.2)	9 (60.0)	124 (50.8)	36 (50.0)	35 (54.7)	18 (36.7)	25 (56.8)	6 (40.0)	120 (49.2)	1.0
Erati	28 (57.1)	29 (49.2)	38 (52.8)	21 (51.2)	7 (43.8)	123 (51.9)	21 (42.9)	30 (50.8)	34 (47.2)	20 (48.8)	9 (56.3)	114 (48.1)	1.1

The global acute malnutrition (GAM) rates (WHZ<2 and/or oedema) ranged from low (2.5 -<5%) to very low (<2.5).

3.1.4 Prevalence of acute malnutrition based on weight for height and by sex

The global acute malnutrition (GAM) rates (WHZ<2 and/or oedema) ranged from low (2.5 -<5%) to very low (<2.5). Low GAM rates were observed in: Balama (2.8, 95% CI: 1.3 - 6.0), Mecufi (4.6, 95% CI: 3.0 - 7.0), Mueda (4.5, 95% CI: 1.8 - 10.8), and Erati (3.0, 95% CI: 1.4 - 6.6). Very low GAM rates (<2.5%) were found in: Pemba city (2.2, 95% CI 1.0 - 4.9), Ancuabe (1.8, 95% CI 0.5 - 5.7), Chiure (2.0, 95% CI 0.7 - 5.4), Montepuez (1.1, 95% CI 0.3 - 3.8), Namuno (2.2, 95% CI: 0.8 - 5.7), and Metuge (2.1, 95% CI: 0.8 - 5.1). Several cases of severe acute malnutrition were identified in Mecufi (0.3, 95% CI: 0.0 - 2.4), Mueda (0.9, 95% CI: 0.2 - 3.7), Metuge (0.4, 95% CI: 0.1 - 2.9) and Erati (0.4, 95% CI: 0.1 - 3.2). During the assessment, one oedema case was reported in Erati district.

Table 10: Prevalence of GAM, MAM and SAM based on weight-for-height Z-scores and/or oedema by sex

District		Wasting by weight for height z-scores (and/or oedema) and by sex						
		N	Severe		Moderate		GAM	
			n	% (95% CI)	n	% (95% CI)		n
Pemba city	All	228	0	0.0 (0.0-0.0)	5	2.2 (1.0 - 4.9)	5	2.2 (1.0 - 4.9)
	Boys	119	0	0.0 (0.0-0.0)	2	1.7 (0.4 - 6.8)	2	1.7 (0.4 - 6.8)
	Girls	109	0	0.0 (0.0-0.0)	3	2.8 (0.9 - 8.2)	3	2.8 (0.9 - 8.2)
Ancuabe	All	228	0	0.0 (0.0-0.0)	4	1.8 (0.5 - 5.7)	4	1.8 (0.5 - 5.7)
	Boys	116	0	0.0 (0.0-0.0)	1	0.9 (0.1 - 6.3)	1	0.9 (0.1 - 6.3)
	Girls	112	0	0.0 (0.0-0.0)	3	2.7 (0.6 - 11.6)	3	2.7 (0.6 - 11.6)
Balama	All	215	0	0.0 (0.0-0.0)	6	2.8 (1.3 - 6.0)	6	2.8 (1.3 - 6.0)
	Boys	113	0	0.0 (0.0-0.0)	3	2.7 (0.9 - 7.5)	3	2.7 (0.9 - 7.5)
	Girls	102	0	0.0 (0.0-0.0)	3	2.9 (1.0 - 8.3)	3	2.9 (1.0 - 8.3)
Chiure	All	198	0	0.0 (0.0-0.0)	4	2.0 (0.7 - 5.4)	4	2.0 (0.7 - 5.4)
	Boys	107	0	0.0 (0.0-0.0)	3	2.8 (0.9 - 8.7)	3	2.8 (0.9 - 8.7)
	Girls	91	0	0.0 (0.0-0.0)	1	1.1 (0.1 - 8.9)	1	1.1 (0.1 - 8.9)
Mecufi	All	326	1	0.3 (0.0 - 2.4)	14	4.3 (3.0 - 6.2)	15	4.6 (3.0 - 7.0)
	Boys	169	1	0.6 (0.1 - 4.5)	7	4.1 (2.3 - 7.3)	8	4.7 (2.5 - 8.7)
	Girls	157	0	0.0 (0.0-0.0)	7	4.5 (2.6 - 7.4)	7	4.5 (2.6 - 7.4)
Montepuez	All	189	0	0.0 (0.0 - 2.0)	2	1.1 (0.3 - 3.8)	2	1.1 (0.3 - 3.8)
	Boys	83	0	0.0 (0.0 - 4.4)	2	2.4 (0.7 - 8.4)	2	2.4 (0.7 - 8.4)
	Girls	106	0	0.0 (0.0 - 3.5)	0	0.0 (0.0 - 3.5)	0	0.0 (0.0 - 3.5)
Mueda	All	220	2	0.9 (0.2 - 3.7)	8	3.6 (1.6 - 8.0)	10	4.5 (1.8 - 10.8)
	Boys	121	2	1.7 (0.4 - 6.8)	5	4.1 (1.5 - 11.2)	7	5.8 (1.9 - 16.3)
	Girls	99	0	0.0 (0.0-0.0)	3	3.0 (0.9 - 9.5)	3	3.0 (0.9 - 9.5)
Namuno	All	228	0	0.0 (0.0-0.0)	5	2.2 (0.8 - 5.7)	5	2.2 (0.8 - 5.7)
	Boys	119	0	0.0 (0.0-0.0)	4	3.4 (1.4 - 8.1)	4	3.4 (1.4 - 8.1)
	Girls	109	0	0.0 (0.0-0.0)	1	0.9 (0.1 - 6.2)	1	0.9 (0.1 - 6.2)
Metuge	All	243	1	0.4 (0.1 - 2.9)	4	1.6 (0.7 - 4.0)	5	2.1 (0.8 - 5.1)
	Boys	123	1	0.8 (0.1 - 6.0)	2	1.6 (0.4 - 6.3)	3	2.4 (0.6 - 10.0)
	Girls	120	0	0.0 (0.0-0.0)	2	1.7 (0.4 - 6.9)	2	1.7 (0.4 - 6.9)
Erati	All	232	1	0.4 (0.1 - 3.2)	6	2.6 (1.0 - 6.3)	7	3.0 (1.4 - 6.6)
	Boys	120	1	0.8 (0.1 - 6.1)	4	3.3 (1.2 - 9.0)	5	4.2 (1.7 - 9.9)
	Girls	112	0	0.0 (0.0-0.0)	2	1.8 (0.4 - 7.1)	2	1.8 (0.4 - 7.1)

The prevalence of acute malnutrition (WHZ<2 and/or oedema) by age shows only minor differences in the prevalence of acute malnutrition between children aged 6-23 months and those aged 24-59 months, and these differences were statistically insignificant ($p>0.05$).

Table 11: Prevalence of acute malnutrition by age, based on weight-for-height Z scores and/or oedema

District	Age group	WHZ <-3 and/or oedema			WHZ <-2 and ≥-3 and/or oedema			WHZ <-2 and/or oedema		
		N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	6 to 23	228	0	0	228	2	0.9 (0.0 - 2.2)	228	2	0.9 (0.0 - 2.2)
	24 - 59	228	0	0	228	3	1.3 (0.0 - 3.1)	228	3	1.3 (0.0 - 3.1)
Ancuabe	6 to 23	228	0	0	228	3	1.3 (0.0 - 3.1)	228	3	1.3 (0.0 - 3.1)
	24 - 59	228	0	0	228	1	0.4 (0.0 - 1.3)	228	1	0.4 (0.0 - 1.3)
Balama	6 to 23	215	0	0	215	5	2.3 (0.5 - 4.2)	215	5	2.3 (0.5 - 4.2)
	24 - 59	215	0	0	215	1	0.5 (0.0 - 1.4)	215	1	0.5 (0.0 - 1.4)
Chiure	6 to 23	198	0	0	198	3	1.5 (0.0 - 3.5)	198	3	1.5 (0.0 - 3.5)
	24 - 59	198	0	0	198	1	0.5 (0.0 - 1.5)	198	1	0.5 (0.0 - 1.5)
Mecufi	6 to 23	326	0	0	326	7	2.1 (0.6 - 3.7)	326	7	2.1 (0.6 - 3.7)
	24 - 59	326	1	0.3 (0.0 - 0.9)	326	7	2.1 (0.6 - 3.7)	326	8	2.5 (0.9 - 4.3)
Montepuez	6 to 23	189	0	0	189	0	0	189	0	0
	24 - 59	169	0	0	189	2	1.1 (0.0 - 2.6)	189	2	1.1 (0.0 - 2.6)
Mueda	6 to 23	220	1	0.5 (0.0 - 1.4)	220	4	1.8 (0.5 - 3.6)	220	5	2.3 (0.5 - 4.1)
	24 - 59	220	1	0.5 (0.0 - 1.4)	220	4	1.8 (0.5 - 3.6)	220	5	2.3 (0.5 - 4.1)
Namuno	6 to 23	228	0	0	228	4	1.8 (0.4 - 3.5)	228	4	1.8 (0.4 - 3.5)
	24 - 59	228	0	0	228	1	0.4 (0.0 - 1.3)	228	1	0.4 (0.0 - 1.3)
Metuge	6 to 23	243	1	0.4 (0.0 - 1.2)	243	4	1.6 (0.0 - 3.3)	243	5	2.1 (0.4 - 4.1)
	24 - 59	243	0	0	243	0	0	243	0	0
Erati	6 to 23	232	0	0	232	4	1.7 (0.4 - 3.4)	232	5	2.2 (0.4 - .9)
	24 - 59	232	0	0	232	2	0.9 (0.0 - 2.2)	232	2	0.9 (0.0 - 2.2)

3.1.5 Prevalence of acute malnutrition based on MUAC cut off's and/or oedema by sex

The GAM prevalence based on MUAC (<125 mm) and/or oedema for children 6–59 months showed some variation. Several districts had medium levels of acute malnutrition (5–<10%) based on WHO thresholds including Chiure (5.0, 95% CI: 2.7 - 9.0), Mecufi (6.3, 95%CI: 4.3 - 9.1), Balama (6.5, 95% CI: 3.9 - 10.5), Namuno (7.4 95% CI: 4.7 - 11.5), and Erati (8.9, 95%CI: 5.4 - 14.1). The other remaining districts had lower prevalence of acute malnutrition by MUAC (2.5–<5%): Metuge (1.2, 95% CI: 0.3 - 5.1), Ancuabe (1.7, 95% CI: 0.7 - 4.4), Mueda (2.2, 95% CI: 0.8 - 5.7), Montepuez (3.1, 95% CI: 1.4 - 6.5), and Pemba city (3.6, 95% CI: 1.4 - 9.0). The SAM prevalence based on MUAC (<115 mm) and/or oedema showed lower rates in most of the districts except in Balama (2.3, 95% CI: 1.0 - 5.3), and Erati 3.8, 95% CI: 1.5 - 9.0) where rates were slightly above 2%.

Table 12: Prevalence of GAM, MAM, and SAM in children (6-59 months) based on MUAC by sex

District		Wasting by MUAC (and/or edema) and by sex						
		N	Severe		Moderate		GAM	
			n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	All	231	1	0.4 (0.1 - 3.3)	4	1.7 (0.7 - 4.3)	5	3.6 (1.4 - 9.0)
	Boys	121	1	0.8 (0.1 - 6.0)	0	0.0 (0.0 - 0.0)	1	0.8 (0.1 - 6.0)
	Girls	110	0	0.0 (0.0 - 0.0)	4	3.6 (1.4 - 9.0)	4	3.6 (1.4 - 9.0)
Ancuabe	All	230	0	0.0 (0.0 - 0.0)	4	1.7 (0.7 - 4.4)	4	1.7 (0.7 - 4.4)
	Boys	116	0	0.0 (0.0 - 0.0)	2	1.7 (0.4 - 6.9)	2	1.7 (0.4 - 6.9)
	Girls	114	0	0.0 (0.0 - 0.0)	2	1.8 (0.4 - 7.2)	2	1.8 (0.4 - 7.2)
Balama	All	215	5	2.3 (1.0 - 5.3)	9	4.1 (2.2 - 7.7)	14	6.5 (3.9 - 10.5)
	Boys	115	2	1.7 (0.5 - 6.1)	3	2.6 (0.9 - 7.4)	5	4.3 (1.9 - 9.8)
	Girls	102	3	2.9 (1.0 - 8.3)	6	5.9 (2.7 - 12.2)	9	8.8 (4.7 - 15.9)
Chiure	All	201	3	1.5 (0.3 - 6.7)	7	3.5 (2.0 - 6.1)	10	5.0 (2.7 - 9.0)
	Boys	110	3	2.7 (0.6 - 12.0)	2	1.8 (0.4 - 7.4)	5	4.5 (1.6 - 12.5)
	Girls	91	0	0.0 (0.0 - 0.0)	5	5.5 (2.7 - 10.8)	5	5.5 (2.7 - 10.8)
Mecufi	All	332	3	0.9 (0.3 - 2.9)	18	5.4 (3.6 - 8.2)	21	6.3 (4.3 - 9.1)
	Boys	171	1	0.6 (0.1 - 4.7)	4	2.3 (1.0 - 5.4)	5	2.9 (1.4 - 6.0)
	Girls	161	2	1.2 (0.3 - 5.5)	14	8.7 (5.8 - 12.9)	16	9.9 (6.7 - 14.5)
Montepuez	All	196	1	0.5 (0.1 - 2.8)	5	2.6 (1.1 - 5.8)	6	3.1 (1.4 - 6.5)
	Boys	89	0	0.0 (0.0 - 4.1)	3	3.4 (1.2 - 9.4)	3	3.4 (1.2 - 9.4)
	Girls	107	1	0.9 (0.2 - 5.1)	2	1.9 (0.5 - 6.6)	3	2.8 (1.0 - 7.9)
Mueda	All	228	0	0.0 (0.0 - 0.0)	5	2.2 (0.8 - 5.7)	5	2.2 (0.8 - 5.7)
	Boys	126	0	0.0 (0.0 - 0.0)	3	2.4 (0.5 - 9.9)	3	2.4 (0.5 - 9.9)
	Girls	102	0	0.0 (0.0 - 0.0)	2	2.0 (0.5 - 8.0)	2	2.0 (0.5 - 8.0)
Namuno	All	230	2	0.9 (0.2 - 3.6)	15	6.5 (4.2 - 10.0)	17	7.4 (4.7 - 11.5)
	Boys	121	1	0.8 (0.1 - 6.0)	6	5.0 (2.6 - 9.4)	7	5.8 (2.8 - 11.5)
	Girls	109	1	0.9 (0.1 - 6.9)	9	8.3 (4.5 - 14.6)	10	9.2 (4.9 - 16.6)
Metuge	All	244	0	0.0 (0.0 - 0.0)	3	1.2 (0.3 - 5.1)	3	1.2 (0.3 - 5.1)
	Boys	124	0	0.0 (0.0 - 0.0)	1	0.8 (0.1 - 5.9)	1	0.8 (0.1 - 5.9)
	Girls	120	0	0.0 (0.0 - 0.0)	2	1.7 (0.2 - 12.1)	2	1.7 (0.2 - 12.1)
Erati	All	237	9	3.8 (1.5 - 9.0)	12	5.1 (3.3 - 7.7)	21	8.9 (5.4 - 14.1)
	Boys	123	6	4.9 (2.2 - 10.5)	5	4.1 (1.6 - 10.1)	11	8.9 (5.4 - 14.5)
	Girls	114	3	2.6 (0.6 - 11.1)	7	6.1 (3.3 - 11.2)	10	8.8 (4.4 - 16.8)

3.1.6 Prevalence of acute malnutrition based on MUAC cut off's and/or oedema by age

GAM based on MUAC (<125 mm) and/or oedema by age was generally low, with rates that were 2.5% and below in all districts. Similarly, prevalence of severe acute malnutrition based on MUAC and/or oedema was very low across all the districts.

Table 13: Prevalence of acute malnutrition by age, based on MUAC cut offs and/or oedema

District	Age group	WHZ <-3 and/or oedema			WHZ <-2 and ≥-3 and/or oedema			WHZ <-2 and/or oedema		
		N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	6 to 23	228	0	0	228	2	0.9 (0.0 - 2.2)	228	2	0.9 (0.0 - 2.2)
	24 - 59	228	0	0	228	3	1.3 (0.0 - 3.1)	228	3	1.3 (0.0 - 3.1)
Ancuabe	6 to 23	228	0	0	228	3	1.3 (0.0 - 3.1)	228	3	1.3 (0.0 - 3.1)
	24 - 59	228	0	0	228	1	0.4 (0.0 - 1.3)	228	1	0.4 (0.0 - 1.3)
Balama	6 to 23	215	0	0	215	5	2.3 (0.5 - 4.2)	215	5	2.3 (0.5 - 4.2)
	24 - 59	215	0	0	215	1	0.5 (0.0 - 1.4)	215	1	0.5 (0.0 - 1.4)
Chiure	6 to 23	198	0	0	198	3	1.5 (0.0 - 3.5)	198	3	1.5 (0.0 - 3.5)
	24 - 59	198	0	0	198	1	0.5 (0.0 - 1.5)	198	1	0.5 (0.0 - 1.5)
Mecufi	6 to 23	326	0	0	326	7	2.1 (0.6 - 3.7)	326	7	2.1 (0.6 - 3.7)
	24 - 59	326	1	0.3 (0.0 - 0.9)	326	7	2.1 (0.6 - 3.7)	326	8	2.5 (0.9 - 4.3)
Montepuez	6 to 23	189	0	0	189	0	0	189	0	0
	24 - 59	169	0	0	189	2	1.1 (0.0 - 2.6)	189	2	1.1 (0.0 - 2.6)
Mueda	6 to 23	220	1	0.5 (0.0 - 1.4)	220	4	1.8 (0.5 - 3.6)	220	5	2.3 (0.5 - 4.1)
	24 - 59	220	1	0.5 (0.0 - 1.4)	220	4	1.8 (0.5 - 3.6)	220	5	2.3 (0.5 - 4.1)
Namuno	6 to 23	228	0	0	228	4	1.8 (0.4 - 3.5)	228	4	1.8 (0.4 - 3.5)
	24 - 59	228	0	0	228	1	0.4 (0.0 - 1.3)	228	1	0.4 (0.0 - 1.3)
Metuge	6 to 23	243	1	0.4 (0.0 - 1.2)	243	4	1.6 (0.0 - 3.3)	243	5	2.1 (0.4 - 4.1)
	24 - 59	243	0	0	243	0	0	243	0	0
Erati	6 to 23	232	0	0	232	4	1.7 (0.4 - 3.4)	232	5	2.2 (0.4 - .9)
	24 - 59	232	0	0	232	2	0.9 (0.0 - 2.2)	232	2	0.9 (0.0 - 2.2)

3.1.7 Prevalence of combined GAM and SAM based on WHZ and MUAC cut off's (and/or oedema) and by sex

The prevalence of combined Global Acute Malnutrition (cGAM) defined as WHZ<2 and/or MUAC<125 mm and/or oedema revealed low combined GAM in Ancuabe 2.6 (95% CI: 1.0 - 6.9), Montepuez (3.1, 95% CI:1.4 - 6.5), and Pemba city (3.9, 95% CI: 1.8 - 8.2). Higher combined GAM levels were seen in the districts of Mueda (5.7, 95% CI: 2.5 - 12.7), Chiure (6.0, 95% CI: 3.5 - 9.9), Balama (8.3, 95% CI: 5.3 - 12.7), Mecufi (9.3, 95% CI: 6.5 - 13.3), Namuno (8.7, 95% CI: 5.7 - 13.0), and Erati (10.1, 95% CI: 6.5 - 15.5). The combined Severe Acute Malnutrition (cSAM) defined as WHZ<3 and/or MUAC<115 mm and/or oedema showed lower prevalence across the districts ranging from 0.0% in Ancuabe to 3.8% in Erati.

Table 14: Prevalence of combined GAM and SAM based on WHZ and MUAC cut off's by sex per district

District		Combined GAM, MAM & SAM based on WHZ and MUAC						
		N	C-SAM		C-MAM		C-GAM	
			n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	All	231	1	0.4 (0.1 - 3.3)	8	3.5 (1.3 - 5.6)	9	3.9 (1.8 - 8.2)
	Boys	121	1	0.8 (0.1 - 6.0)	2	1.7 (0.0 - 4.1)	3	2.5 (0.6 - 10.4)
	Girls	110	0	0.0 (0.0 - 0.0)	6	5.5 (2.7 - 10.8)	6	5.5 (2.7 - 10.8)
Ancuabe	All	231	0	0.0 (0.0 - 0.0)	6	2.6 (1.0 - 6.9)	6	2.6 (1.0 - 6.9)
	Boys	117	0	0.0 (0.0 - 0.0)	3	2.6 (0.6 - 10.9)	3	2.6 (0.6 - 10.9)
	Girls	114	0	0.0 (0.0 - 0.0)	3	2.6 (0.6 - 11.3)	3	2.6 (0.6 - 11.3)
Balama	All	217	5	2.3 (1.0 - 5.3)	13	6.0 (2.8 - 9.2)	18	8.3 (5.3 - 12.7)
	Boys	115	2	1.7 (0.5 - 6.1)	5	4.3 (0.9 - 8.7)	7	6.1 (3.0 - 12.0)
	Girls	102	3	2.9 (1.0 - 8.3)	8	7.8 (2.9 - 13.7)	11	10.8 (6.1 - 18.3)
Chiure	All	201	3	1.5 (0.3 - 6.7)	9	4.5 (2.0 - 7.5)	12	6.0 (3.5 - 9.9)
	Boys	110	3	2.7 (0.6 - 12.0)	3	2.7 (0.0 - 6.4)	6	5.5 (2.2 - 13.1)
	Girls	91	0	0.0 (0.0 - 0.0)	6	6.6 (3.4 - 12.4)	6	6.6 (3.4 - 12.4)
Mecufi	All	332	4	1.2 (0.3 - 4.1)	27	8.1 (5.1 - 11.1)	31	9.3 (6.5 - 13.3)
	Boys	171	2	1.2 (0.3 - 4.7)	9	5.3 (1.8 - 8.8)	11	6.4 (3.5 - 11.6)
	Girls	161	2	1.2 (0.3 - 5.5)	18	11.2 (6.8 - 16.1)	20	12.4 (8.3 - 18.1)
Montepuez	All	196	1	0.5 (0.1 - 2.8)	5	2.6 (0.5 - 5.1)	6	3.1 (1.4 - 6.5)
	Boys	89	0	0.0 (0.0 - 4.1)	3	3.4 (1.2 - 9.4)	3	3.4 (1.2 - 9.4)
	Girls	107	1	0.9 (0.2 - 5.1)	2	1.9 (0.0 - 4.7)	3	2.8 (1.0 - 7.9)
Mueda	All	228	2	0.9 (0.2 - 3.5)	11	4.8 (2.2 - 7.9)	13	5.7 (2.5 - 12.7)
	Boys	126	2	1.6 (0.4 - 6.4)	6	4.8 (1.6 - 9.5)	8	6.3 (2.1 - 18.0)
	Girls	102	0	0.0 (0.0 - 0.0)	5	4.9 (1.7 - 13.5)	5	4.9 (1.7 - 13.5)
Namuno	All	230	2	0.9 (0.2 - 3.6)	18	7.8 (4.3 - 11.3)	20	8.7 (5.7 - 13.0)
	Boys	121	1	0.8 (0.1 - 6.0)	8	6.6 (2.5 - 11.6)	9	7.4 (4.3 - 12.7)
	Girls	109	1	0.9 (0.1 - 6.9)	10	9.2 (3.7 - 14.7)	11	10.1 (5.5 - 17.8)
Metuge	All	244	1	0.4 (0.1 - 2.8)	5	2.0 (0.4 - 4.1)	6	2.5 (1.0 - 6.1)
	Boys	124	1	0.8 (0.1 - 5.9)	2	1.6 (0.0 - 4.0)	3	2.4 (0.6 - 10.0)
	Girls	120	0	0.0 (0.0 - 0.0)	3	2.5 (0.5 - 10.8)	3	2.5 (0.5 - 10.8)
Erati	All	237	9	3.8 (1.5 - 9.0)	15	6.3 (3.4 - 9.7)	24	10.1 (6.5 - 15.5)
	Boys	123	6	4.9 (2.2 - 10.5)	7	5.7 (1.6 - 9.8)	13	10.6 (6.7 - 16.4)
	Girls	114	3	2.6 (0.6 - 11.1)	8	7.0 (2.6 - 11.4)	11	9.6 (4.9 - 18.3)

3.1.8 Prevalence of underweight based on weight for age Z scores by sex

According to survey results, the level of underweight in most of the districts was below 20%, with the exception of Balama (20%), Namuno (20.2%) and Erati (21.5%) districts. Erati district had the highest rate of severe underweight (6.4%) with Montepuez recording the lowest rate (1.6%).

Table 15: Prevalence of global, moderate and severe underweight in Children (6-59 months) based on WAZ Scores by sex

District		Underweight by weight for age z-scores by sex						
		N	Severe		Moderate		Total underweight	
			n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	All	228	4	1.8 (0.4 - 7.8)	23	10.1 (6.6 - 15.1)	27	11.8 (7.3 - 18.7)
	Boys	118	1	0.8 (0.1 - 6.0)	12	10.2 (5.4 - 18.2)	13	11.0 (6.0 - 19.2)
	Girls	110	3	2.7 (0.6 - 10.9)	11	10.0 (5.8 - 16.6)	14	12.7 (6.8 - 22.7)
Ancuabe	All	230	5	2.2 (0.8 - 5.9)	28	12.2 (8.8 - 16.6)	33	14.3 (11.1 - 18.4)
	Boys	116	0	0.0 (0.0 - 0.0)	16	13.8 (8.7 - 21.3)	16	13.8 (8.7 - 21.3)
	Girls	114	5	4.4 (1.6 - 11.5)	12	10.5 (5.8 - 18.4)	17	14.9 (9.9 - 21.9)
Balama	All	215	12	5.6 (3.2 - 9.5)	31	14.4 (10.3 - 19.7)	43	20.0 (15.2 - 25.9)
	Boys	113	4	3.5 (1.4 - 8.7)	14	12.4 (7.5 - 19.7)	18	15.9 (10.3 - 23.8)
	Girls	102	8	7.8 (4.0 - 14.7)	17	16.7 (10.7 - 25.1)	25	24.5 (17.2 - 33.7)
Chiure	All	197	7	3.6 (1.6 - 7.6)	27	13.7 (10.1 - 18.3)	34	17.3 (13.0 - 22.6)
	Boys	106	4	3.8 (1.1 - 12.4)	16	15.1 (10.1 - 21.9)	20	18.9 (12.9 - 26.8)
	Girls	91	3	3.3 (0.9 - 11.2)	11	12.1 (7.2 - 19.6)	14	15.4 (9.6 - 23.8)
Mecufi	All	331	9	2.7 (1.4 - 5.2)	46	13.9 (10.5 - 18.2)	55	16.6 (12.9 - 21.1)
	Boys	171	5	2.9 (1.0 - 7.9)	23	13.5 (8.0 - 21.8)	28	16.4 (10.3 - 25.0)
	Girls	160	4	2.5 (0.9 - 6.6)	23	14.4 (9.6 - 20.9)	27	16.9 (11.0 - 25.0)
Montepuez	All	193	3	1.6 (0.5 - 4.5)	29	15.0 (10.7 - 20.7)	32	16.6 (12.0 - 22.5)
	Boys	87	2	2.3 (0.6 - 8.0)	12	13.8 (8.1 - 22.6)	14	16.1 (9.8 - 25.2)
	Girls	106	1	0.9 (0.2 - 5.2)	17	16.0 (10.3 - 24.2)	18	17.0 (11.0 - 25.3)
Mueda	All	225	5	2.2 (0.8 - 5.9)	26	11.6 (6.8 - 19.1)	31	13.8 (8.2 - 22.2)
	Boys	123	4	3.3 (1.0 - 10.2)	14	11.4 (6.1 - 20.4)	18	14.6 (8.3 - 24.6)
	Girls	102	1	1.0 (0.1 - 8.1)	12	11.8 (6.1 - 21.6)	13	12.7 (6.4 - 23.7)
Namuno	All	228	12	5.3 (3.3 - 8.3)	34	14.9 (10.2 - 21.3)	46	20.2 (14.9 - 26.7)
	Boys	119	7	5.9 (3.1 - 11.0)	18	15.1 (9.6 - 23.0)	25	21.0 (13.9 - 30.9)
	Girls	109	5	4.6 (2.0 - 10.1)	16	14.7 (9.2 - 22.5)	21	19.3 (13.2 - 27.3)
Metuge	All	243	6	2.5 (1.1 - 5.5)	28	11.5 (7.6 - 17.1)	34	14.0 (10.1 - 19.0)
	Boys	123	5	4.1 (1.5 - 10.5)	13	10.6 (6.2 - 17.5)	18	14.6 (9.4 - 22.0)
	Girls	120	1	0.8 (0.1 - 6.3)	15	12.5 (7.1 - 21.0)	16	13.3 (7.5 - 22.7)
Erati	All	233	15	6.4 (3.4 - 11.9)	35	15.0 (11.1 - 20.1)	50	21.5 (15.6 - 28.8)
	Boys	121	9	7.4 (3.9 - 13.8)	18	14.9 (10.3 - 21.0)	27	22.3 (15.1 - 31.7)
	Girls	112	6	5.4 (2.1 - 13.1)	17	15.2 (9.0 - 24.5)	23	20.5 (12.9 - 31.1)

3.1.9 Prevalence of underweight based on weight for age Z scores by age

The prevalence of underweight by age (WAZ<-2) shows slight differences in underweight by age group, but these differences are not statistically significant in the majority districts ($p>0.05$).

Table 16: Prevalence of global, moderate and severe underweight in children (6-59 months) based on WAZ Scores by age

District	Age group	WAZ <-3			WAZ <-2 and ≥3			WAZ <-2		
		N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	6 to 23	127	2	1.6 (0.0 - 3.9)	127	14	11.0 (5.5 - 16.5)	127	16	12.6 (7.1 - 18.1)
	24 - 59	101	2	2.0 (0.0 - 5.0)	101	9	8.9 (4.0 - 14.9)	101	11	10.9 (5.0 - 16.8)
Ancuabe	6 to 23	105	2	1.9 (0.0 - 4.8)	105	12	11.4 (5.7 - 17.1)	105	14	13.3 (7.6 - 20.0)
	24 - 59	125	3	2.4 (0.0 - 5.6)	125	16	12.8 (7.2 - 19.2)	125	19	15.2 (8.8 - 21.6)
Balama	6 to 23	124	12	9.7 (4.8 - 15.3)	124	19	15.3 (9.7 - 21.8)	124	31	25.0 (17.7 - 32.3)
	24 - 59	91	0	0	91	12	13.2 (6.6 - 19.8)	91	12	13.2 (6.6 - 19.8)
Chiure	6 to 23	102	3	2.9 (0.0 - 6.9)	102	17	16.7 (9.8 - 24.5)	102	20	19.6 (12.7 - 27.5)
	24 - 59	95	4	4.2 (1.1 - 8.4)	95	10	10.5 (5.3 - 17.9)	95	14	14.7 (8.4 - 22.1)
Mecufi	6 to 23	159	6	3.8 (1.3 - 6.9)	159	20	12.6 (7.5 - 18.2)	159	26	16.4 (10.7 - 22.6)
	24 - 59	172	3	1.7 (0.0 - 4.1)	172	26	15.1 (9.9 - 20.3)	172	29	16.9 (11.6 - 22.1)
Montepuez	6 to 23	101	3	3.0 (0.0 - 6.9)	101	18	17.8 (10.9 - 25.7)	101	21	20.8 (12.9 - 28.7)
	24 - 59	92	0	0	92	11	12.0 (5.4 - 18.5)	92	11	12.0 (5.4 - 18.5)
Mueda	6 to 23	118	4	3.4 (0.8 - 6.8)	118	15	12.7 (6.8 - 18.6)	118	19	16.1 (9.3 - 22.9)
	24 - 59	107	1	0.9 (0.0 - 2.8)	107	11	10.3 (4.7 - 16.8)	107	12	11.2 (5.6 - 17.8)
Namuno	6 to 23	127	9	7.1 (3.1 - 11.8)	127	19	15.0 (8.7 - 21.3)	127	28	22.0 (15.0 - 29.1)
	24 - 59	101	3	3.0 (0.0 - 6.9)	101	15	14.9 (8.9 - 21.8)	101	18	17.8 (10.9 - 25.7)
Metuge	6 to 23	136	4	2.9 (0.7 - 6.6)	136	12	8.8 (4.4 - 14.0)	136	16	11.8 (6.6 - 17.6)
	24 - 59	107	2	1.9 (0.0 - 4.7)	107	16	15.0 (8.4 - 21.5)	107	18	16.8 (10.3 - 24.3)
Erati	6 to 23	105	12	11.4 (5.7 - 18.1)	105	18	17.1 (10.5 - 24.8)	105	30	28.6 (20.0 - 37.1)
	24 - 59	128	3	2.3 (0.0 - 5.5)	128	17	13.3 (7.0 - 19.5)	128	20	15.6 (9.4 - 21.9)

3.1.10 Prevalence of stunting based on height for age Z scores by sex

Stunting levels are extremely high across all the districts according to the findings. Stunting levels significantly exceed the 30% threshold in half of the surveyed districts, including Balama (68.4, 95% CI: 61.9 - 74.3), Chiure (63.3, 95% CI: 55.7 - 70.3), Montepuez (58.5 reported with a SD of 1), Namuno (72.6, 95% CI: 65.5 - 78.6), and Erati (58.5, 95%CI: 51.6 - 65.1). Similarly, high levels of severe stunting were recorded in all the districts, with Balama (25.5, 95% CI: 20.1 - 31.7), Chiure (29.6, 95% CI: 23.5 - 36.6), Namuno (35.4, 95% CI: 27.6 - 44.0), and Erati (25.3, 95%CI: 18.1 - 34.2) showing severe stunting levels higher than 20%.

Table 17: Prevalence of global, moderate and severe stunting in children (6-59 months) based on HAZ Scores by sex

District		Stunting by height for age z-scores and by sex						
		N	Severe		Moderate		Total stunting	
			n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	All	222	18	8.1 (4.5 - 14.2)	55	24.8 (20.7 - 29.4)	73	32.9 (27.6 - 38.6)
	Boys	118	8	6.8 (3.4 - 13.1)	33	28.0 (22.3 - 34.5)	41	34.7 (29.2 - 40.7)
	Girls	104	10	9.6 (4.8 - 18.3)	22	21.2 (15.7 - 27.8)	32	30.8 (22.9 - 39.9)
Ancuabe	All	228	29	12.7 (7.8 - 20.2)	79	34.6 (28.7 - 41.1)	108	47.4 (40.8 - 54.0)
	Boys	116	16	13.8 (7.8 - 23.1)	39	33.6 (27.2 - 40.7)	55	47.4 (38.5 - 56.5)
	Girls	112	13	11.6 (6.3 - 20.3)	40	35.7 (27.6 - 44.8)	53	47.3 (39.7 - 55.0)
Balama	All	212	54	25.5 (20.1 - 31.7)	91	42.9 (36.4 - 49.7)	145	68.4 (61.9 - 74.3)
	Boys	114	33	28.9 (21.4 - 37.9)	44	38.6 (30.2 - 47.8)	77	67.5 (58.5 - 75.4)
	Girls	98	21	21.4 (14.5 - 30.5)	47	48.0 (38.3 - 57.7)	68	69.4 (59.7 - 77.6)
Chiure	All	199	59	29.6 (23.5 - 36.6)	67	33.7 (28.2 - 39.6)	126	63.3 (55.7 - 70.3)
	Boys	110	33	30.0 (21.3 - 40.4)	40	36.4 (29.0 - 44.5)	73	66.4 (57.4 - 74.3)
	Girls	89	26	29.2 (21.8 - 38.0)	27	30.3 (23.1 - 38.7)	53	59.6 (49.1 - 69.2)
Mecufi	All	324	41	12.7 (10.0 - 16.0)	85	26.2 (21.3 - 31.9)	126	38.9 (32.2 - 46.0)
	Boys	168	21	12.5 (8.3 - 18.3)	45	26.8 (18.3 - 37.4)	66	39.3 (31.1 - 48.2)
	Girls	156	20	12.8 (7.7 - 20.5)	40	25.6 (18.2 - 34.8)	60	38.5 (30.4 - 47.2)
Montepuez	All	181	0	0	0	0	0	58.5 reported with a SD of 1
	Boys	81	0	0	0	0	0	
	Girls	100	0	0	0	0	0	
Mueda	All	220	32	14.5 (9.4 - 21.7)	53	24.1 (16.7 - 33.5)	85	38.6 (28.5 - 49.9)
	Boys	123	19	15.4 (9.8 - 23.4)	33	26.8 (16.5 - 40.4)	52	42.3 (28.6 - 57.2)
	Girls	97	13	13.4 (6.7 - 25.0)	20	20.6 (13.6 - 29.9)	33	34.0 (24.3 - 45.3)
Namuno	All	226	80	35.4 (27.6 - 44.0)	84	37.2 (30.7 - 44.1)	164	72.6 (65.5 - 78.6)
	Boys	120	49	40.8 (29.5 - 53.3)	41	34.2 (23.7 - 46.4)	90	75.0 (67.4 - 81.3)
	Girls	106	31	29.2 (23.0 - 36.4)	43	40.6 (33.1 - 48.5)	74	69.8 (58.5 - 79.1)
Metuge	All	240	26	13.3 (7.5 - 22.7)	65	27.1 (21.4 - 33.6)	91	37.9 (29.7 - 46.9)
	Boys	120	18	15.0 (7.6 - 27.5)	34	28.3 (17.3 - 42.7)	52	43.3 (30.8 - 56.8)
	Girls	120	8	6.7 (2.7 - 15.4)	31	25.8 (19.2 - 33.8)	39	32.5 (23.4 - 43.2)
Erati	All	229	58	25.3 (18.1 - 34.2)	76	33.2 (27.2 - 39.8)	134	58.5 (51.6 - 65.1)
	Boys	118	30	25.4 (17.3 - 35.7)	45	38.1 (29.6 - 47.5)	75	63.6 (55.9 - 70.6)
	Girls	111	28	25.2 (17.6 - 34.8)	31	27.9 (20.9 - 36.3)	59	53.2 (43.5 - 62.6)

3.2 Other survey results

3.2.1 Children's morbidity and caregivers' health seeking behaviour

Overall, the most commonly reported illnesses were fever and cough in seven of the ten surveyed districts having a prevalence of above 30%. High rates of diarrhoea were reported in the districts of Balama (25.3, 95% CI:19.8 - 30.9), Namuno (30.6, 95% CI: 25.0 - 37.1) and Erati (24.7, 95% CI: 19.2 - 30.5). The prevalence of acute watery diarrhea was generally low in most of the districts except in Balama (17.5, 95% CI: 12.4 - 22.6), and Namuno (18.5, 95% CI:13.8 - 24.1). Some cases of dysentery were also reported which varied from 0% in Mueda to 9.9% in Namuno.

The health seeking behaviour was above average. Rates of 50% and above were reported in six districts including Pemba city (72.2, 95% CI: 59.3 - 85.1), Ancuabe (64.3, 95% CI: 55.6 - 73.0), Mecufi (61.9, 95% CI: 54.2 - 69.0), Montepuez (52.1, 95% CI: 42.9 - 60.5), Mueda (50.0, 95% CI: 27.3 -72.7), and Metuge (76.1, 95% CI: 63.0 - 87.0).

Table 18: Morbidity information among children and the health seeking behavior

District	Diarrhea			Acute watery diarrhea			Dysentery			Fever			Cough			Health seeking		
	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	231	10	4.3 (1.7 - 7.4)	231	4	1.7 (0.4 - 3.5)	231	1	0.4 (0.0 - 1.3)	231	31	13.4 (9.1 - 17.7)	231	28	12.1 (8.2 - 16.9)	54	39	72.2 (59.3 - 85.1)
Ancuabe	232	44	19.0 (13.8 - 24.6)	232	8	3.4 (1.3 - 6.0)	232	14	6.0 (3.0 - 9.1)	232	100	43.1 (36.6 - 49.1)	232	93	40.1 (33.6 - 46.6)	126	81	64.3 (55.6 - 73.0)
Balama	217	55	25.3 (19.8 - 30.9)	217	38	17.5 (12.4 - 22.6)	217	3	1.4 (0.0 - 3.2)	217	89	41.0 (34.6 - 47.5)	217	110	50.7 (43.8 - 57.6)	133	65	48.9 (39.8 - 57.9)
Chiure	202	30	14.9 (9.9 - 19.8)	202	14	6.9 (4.0 - 10.4)	202	13	6.4 (3.0 - 9.9)	202	109	54.0 (47.0 - 60.9)	202	85	42.1 (34.7 - 49.0)	131	45	34.4 (26.7 - 42.0)
Mecufi	332	41	12.3 (8.7 - 16.0)	332	19	5.7 (3.3 - 8.4)	332	3	0.9 (0.0 - 2.1)	332	111	33.4 (28.3 - 38.3)	332	101	30.4 (25.0 - 35.2)	155	96	61.9 (54.2 - 69.0)
Montepuez	196	24	12.2 (7.7 - 17.3)	196	14	7.1 (4.1 - 10.7)	196	15	7.7 (4.1 - 11.2)	196	88	44.9 (37.3 - 52.0)	196	89	45.4 (38.3 - 52.6)	119	62	52.1 (42.9 - 60.5)
Mueda	228	3	1.3 (0.0 - 3.1)	228	5	2.2 (0.4 - 4.4)	228	0	0	228	9	3.9 (1.8 - 6.6)	228	12	5.3 (2.6 - 8.3)	22	11	50.0 (27.3 - 72.7)
Namuno	232	71	30.6 (25.0 - 37.1)	232	43	18.5 (13.8 - 24.1)	228	23	9.9 (6.0 - 13.8)	232	145	62.5 (56.0 - 68.5)	232	95	40.5 (34.5 - 47.4)	166	77	46.4 (39.2 - 54.8)
Metuge	246	4	1.6 (0.4 - 3.3)	246	5	2.0 (0.4 - 4.1)	246	4	1.6 (0.4 - 3.3)	246	27	11.0 (7.3 - 15.0)	246	29	11.8 (8.1 - 15.9)	46	35	76.1 (63.0 - 87.0)
Erati	239	59	24.7 (19.2 - 30.5)	239	23	9.6 (5.9 - 13.8)	239	8	3.3 (1.3 - 5.9)	239	121	50.6 (44.4 - 57.3)	239	105	43.9 (37.7 - 50.2)	168	78	46.4 (39.9 - 54.2)

3.2.2 Measles immunization, vitamin A supplementation, and deworming

Only half of the surveyed districts reached the desired target ($\geq 80\%$) for measles vaccination including Pemba city (94.1, 95% CI: 90.9 - 96.8), Ancuabe (82.5, 95% CI: 77.6 - 87.4), Mecufi (93.1, 95% CI: 90.3 - 96.0), Mueda (89.9, 95% CI: 85.8 - 93.6), and Metuge (87.4, 95%CI: 83.1 - 91.3). Measles vaccination for the majority of children was confirmed from the child's health card.

Table 19: Measles vaccine coverage

District	N	Measles vaccination coverage		By card		By mother's recall	
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	220	207	94.1 (90.9 - 96.8)	204	92.7 (89.2 - 95.9)	3	1.4 (0.0 - 3.1)
Ancuabe	223	184	82.5 (77.6 - 87.4)	163	73.1 (67.3 - 78.6)	21	9.4 (5.8 - 13.3)
Balama	193	86	44.6 (36.8 - 51.3)	85	44.0 (37.4 - 51.3)	1	0.5 (0.0 - 2.1)
Chiure	188	128	68.1 (61.2 - 75.0)	118	62.8 (56.0 - 69.5)	10	5.3 (2.6 - 8.9)
Mecufi	321	299	93.1 (90.3 - 96.0)	292	91.0 (87.8 - 94.1)	7	2.2 (0.6 - 4.0)
Montepuez	189	146	77.2 (70.9 - 83.1)	143	75.7 (69.3 - 81.6)	3	1.6 (0.0 - 3.7)
Mueda	218	196	89.9 (85.8 - 93.6)	193	88.5 (84.2 - 92.2)	3	1.4 (0.0 - 3.2)
Namuno	217	131	60.4 (53.9 - 66.8)	117	53.9 (47.1 - 60.1)	14	6.5 (3.4 - 10.0)
Metuge	231	202	87.4 (83.1 - 91.3)	196	84.8 (79.7 - 89.2)	6	2.6 (0.9 - 4.8)
Erati	224	140	62.5 (55.8 - 68.8)	115	51.3 (45.1 - 58.0)	25	11.2 (7.1 - 15.6)

Overall, vitamin A coverage at six months (first dose) was lower in most of the districts except Pemba city (80.1, 95%CI: 75.3 - 85.3), Mueda (89.0, 95% CI: 84.6 - 93.0), and Metuge (83.3, 95% CI: 78.5 - 88.2). Vitamin A supplementation for most of the children was confirmed by checking the child health card.

Table 20: Vitamin A coverage among children 6-59 months

District	N	Vitamin A coverage at 6 months		By card		By showing/ demonstration		By mothers statement/ recall		Other	
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	231	185	80.1 (75.3 - 85.3)	181	78.4 (72.7 - 83.5)	1	0.4 (0.0 - 1.3)	3	1.3 (0.0 - 3.0)	0	0
Ancuabe	232	106	45.7 (39.7 - 52.2)	84	36.2 (30.2 - 42.7)	4	1.7 (0.4 - 3.4)	18	7.8 (4.3 - 11.2)	0	0
Balama	217	75	34.6 (28.6 - 41.0)	75	34.6 (28.1 - 41.5)	0	0	0	0	0	0
Chiure	202	105	52.0 (45.0 - 58.9)	98	48.5 (42.1 - 55.0)	1	0.5 (0.0 - 1.5)	6	3.0 (1.0 - 5.4)	0	0
Mecufi	332	168	50.6 (45.5 - 55.7)	160	48.2 (42.8 - 53.3)	0	0	8	2.4 (0.9 - 4.2)	0	0
Montepuez	196	121	61.7 (54.6 - 68.4)	117	59.7 (52.6 - 66.8)	0	0	4	2.0 (0.5 - 4.1)	0	0
Mueda	228	203	89.0 (84.6 - 93.0)	198	86.8 (82.5 - 90.8)	0	0	5	2.2 (0.4 - 4.4)	0	0
Namuno	232	136	58.6 (52.6 - 64.7)	106	45.7 (39.7 - 52.2)	0	0	22	9.5 (6.0 - 13.4)	8	3.4 (1.3 - 6.0)
Metuge	246	205	83.3 (78.5 - 88.2)	203	82.5 (78.0 - 87.4)	0	0	2	0.8 (0.0 - 2.0)	0	0
Erati	239	88	36.8 (30.5 - 43.1)	75	31.4 (25.5 - 37.6)	0	0	13	5.4 (2.9 - 8.8)	0	0

Findings revealed even lower rates of vitamin A coverage at 12 months (second dose) which ranged from 20.2% in Balama to 77.7% in Mueda district.

Table 21: Vitamin A coverage among children 12-59 months

District	N	Vitamin A coverage at 12 months		By card		By showing/ demonstration		By mothers statement/ recall		Other	
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	203	89	43.8 (37.4 - 51.2)	88	43.3 (36.3 - 50.2)	0	0	1	0.5 (0.0 - 1.5)	0	0
Ancuabe	211	50	23.7 (18.0 - 29.4)	42	19.9 (14.7 - 25.3)	0	0	8	3.8 (1.4 - 6.7)	0	0
Balama	183	37	20.2 (14.8 - 26.2)	37	20.2 (14.1 - 26.4)	0	0	0	0	0	0
Chiure	174	53	30.5 (24.1 - 37.9)	50	28.7 (22.6 - 35.6)	0	0	3	1.7 (0.0 - 3.9)	0	0
Mecufi	296	83	28.0 (23.0 - 33.8)	79	26.7 (21.8 - 31.5)	0	0	4	1.4 (0.3 - 2.7)	0	0
Montepuez	172	78	45.3 (37.2 - 52.3)	77	44.8 (37.5 - 52.1)	0	0	1	0.6 (0.0 - 1.8)	0	0
Mueda	202	157	77.7 (71.8 - 83.2)	155	76.7 (70.5 - 82.4)	0	0	2	1.0 (0.0 - 2.6)	0	0
Namuno	205	68	33.2 (26.8 - 39.5)	53	25.9 (19.8 - 32.0)	0	0	13	6.3 (3.3 - 9.8)	2	1.0 (0.0 - 2.6)
Metuge	211	132	62.6 (55.9 - 69.2)	131	62.1 (55.6 - 68.9)	0	0	1	0.5 (0.0 - 1.5)	0	0
Erati	212	34	16.0 (11.3 - 21.2)	30	14.2 (9.9 - 18.9)	0	0	4	1.9 (0.5 - 3.8)	0	0

According to the surveys, deworming in the last 12 months was generally low ranging from 20.2% in Balama to 82.7% in Mueda. There is considerable variation in vitamin A supplementation across the districts with only Mueda district reaching the SPHERE recommended target of ≥80%.

Table 22: Deworming coverage in the last 12 months (one dose)

District	N	Deworming coverage in the last 12 months (one dose)		By card		By mothers statement/recall	
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	203	147	72.4 (66.0 - 78.3)	143	70.4 (63.9 - 76.5)	4	2.0 (0.5 - 4.3)
Ancuabe	211	60	28.4 (22.3 - 34.1)	52	24.6 (19.0 - 30.1)	8	3.8 (1.4 - 6.5)
Balama	183	37	20.2 (14.8 - 25.7)	37	20.2 (14.5 - 25.7)	0	0
Chiure	174	80	46.0 (38.5 - 54.6)	76	43.7 (36.9 - 51.4)	4	2.3 (0.6 - 4.8)
Mecufi	296	97	32.8 (27.0 - 38.8)	91	30.7 (26.0 - 35.9)	6	2.0 (0.7 - 3.8)
Montepuez	172	80	46.5 (39.0 - 54.6)	79	45.9 (39.0 - 53.4)	1	0.6 (0.0 - 1.8)
Mueda	202	167	82.7 (76.7 - 88.1)	162	80.2 (74.5 - 85.6)	5	2.5 (0.5 - 4.9)
Namuno	205	48	23.4 (17.6 - 29.3)	44	21.5 (16.1 - 27.3)	4	2.0 (0.5 - 3.9)
Metuge	211	133	63.0 (55.9 - 69.7)	130	61.6 (55.2 - 68.2)	3	1.4 (0.0 - 3.0)
Erati	212	44	20.8 (15.6 - 26.4)	36	17.0 (11.8 - 22.2)	8	3.8 (1.4 - 6.6)

Similarly, the proportion of children who received two doses of deworming in the previous 12 months was much lower, with nearly all the districts recording rates below 50%, with the exception of Mueda (73.3%) which also failed to reach the recommended coverage of $\geq 80\%$.

Table 23: Deworming coverage in the last 12 months (two doses)

District	N	Deworming coverage in the last 12 months (two doses)		By card		By mothers statement/recall	
		n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Pemba city	203	66	32.5 (26.1 - 39.9)	65	32.0 (25.3 - 38.4)	1	0.5 (0.0 - 1.5)
Ancuabe	211	29	13.7 (9.0 - 18.5)	26	12.3 (8.2 - 16.8)	3	1.4 (0.0 - 3.3)
Balama	183	30	16.4 (11.9 - 21.9)	30	16.4 (11.0 - 21.9)	0	0
Chiure	174	31	17.8 (12.6 - 24.1)	30	17.2 (12.1 - 22.8)	1	0.6 (0.0 - 2.2)
Mecufi	296	46	15.5 (11.5 - 19.9)	44	14.9 (11.1 - 19.0)	2	0.7 (0.0 - 1.7)
Montepuez	172	60	34.9 (27.3 - 42.4)	60	34.9 (27.7 - 42.7)	0	0
Mueda	202	148	73.3 (67.3 - 78.7)	145	71.8 (65.1 - 77.6)	3	1.5 (0.0 - 3.4)
Namuno	205	45	22.0 (16.6 - 27.8)	43	21.1 (15.8 - 27.1)	2	1.0 (0.0 - 2.5)
Metuge	211	89	42.2 (35.1 - 48.8)	89	42.2 (35.5 - 48.6)	0	0
Erati	212	16	7.5 (4.2 - 11.3)	13	6.1 (3.3 - 9.9)	3	1.4 (0.0 - 3.3)

According to the findings, the majority of the households own a mosquito net with rates averaging 82.6% across all the districts.

Table 24: Mosquito net coverage in the assessed districts

District	N	n	% (95% CI)
Pemba city	231	210	90.9 (87.0 - 94.4)
Ancuabe	232	169	72.8 (67.2 - 78.4)
Balama	217	190	87.6 (82.9 - 91.7)
Chiure	202	152	75.2 (69.3 - 81.2)
Mecufi	332	309	93.1 (90.4 - 95.8)
Montepuez	196	178	90.8 (86.7 - 94.4)
Mueda	228	147	64.5 (57.9 - 70.6)
Namuno	232	219	94.4 (91.4 - 97.0)
Metuge	246	202	82.1 (77.2 - 86.6)
Erati	239	179	74.9 (69.5 - 80.3)

3.2.3 Infant and young child feeding practices

Information on infant and young child feeding practices was obtained based on a 24-hour recall, in line with the WHO guidelines. The survey showed that the proportion of children who had ever been breastfed was high, averaging 96% in almost all districts except Mueda⁹. Timely initiation of breastfeeding within the first hour of birth was highest in Pemba (96.1%), Balama (100%), and Montepuez (92.7%), with Namuno having the lowest rate (29.5%). Exclusive breastfeeding rates varied from 38.1% in Balama to 100% in Pemba city. The introduction of solid, semi-solid and soft foods varied greatly ranging from 28.6% in Mecufi to 91.7% in the districts of Pemba, Balama and Chiure. The proportion of children aged 6-23 months who met the recommended minimum dietary diversity (MDD) was generally low, reaching 44.9% in Balama and none of the children in 3 districts (Mueda, Namuno, and Metuge) met the minimum dietary diversity. The percentage of breastfed and non-breastfed children aged 6-23 months who met the recommended minimum meal frequency averaged 27.1%, with Ancuabe recording the highest rate at 81.6% and in Namuno no child reached the recommended minimum meal frequency. The minimum acceptable diet was extremely low that no child in seven of the ten districts (Ancuabe, Balama, Mecufi, Montepuez, Mueda, Namuno, and Metuge) met the minimum acceptable diet.

96%

The survey showed that the proportion of children who had ever been breastfed was high, averaging 96% in almost all districts except Mueda.

Table 25: Infant and young child feeding practices by district

District	Children ever breastfed (0-23.9 months)			Early initiation of breastfeeding (0-23.9 months)			Exclusive breast-feeding (0-5.9 months)			Introduction of solid, semi-solid, or soft foods (6-8.9 months)			Minimum dietary diversity (6-23.9 months)			Minimum meal frequency for both breastfed and non-breastfed (6-23.9 months)			Minimum acceptable diet (6-23.9)		
	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	102	99	97.1 (93.1 - 100.0)	102	98	96.1 (92.2 - 99.0)	14	14	100	12	11	91.7 (75.0 - 100.0)	88	12	13.6 (6.8 - 21.6)	88	23	26.1 (17.0 - 35.2)	88	2	2.3 (0.0 - 5.7)
Ancuabe	71	67	94.4 (88.7 - 98.6)	71	54	76.1 (66.2 - 85.9)	33	28	84.8 (69.7 - 97.0)	3	2	66.7 (0.0 - 100.0)	38	2	5.3 (0.0 - 13.2)	38	31	81.6 (68.4 - 92.1)	38	0	0

⁹ The survey in Mueda did not collect infant and young feeding practices data for children less than 6 months

District	Children ever breastfed (0-23.9 months)			Early initiation of breastfeeding (0-23.9 months)			Exclusive breastfeeding (0-5.9 months)			Introduction of solid, semi-solid, or soft foods (6-8.9 months)			Minimum dietary diversity (6-23.9 months)			Minimum meal frequency for both breastfed and non-breastfed (6-23.9 months)			Minimum acceptable diet (6-23.9)		
	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Balama	119	118	99.2 (97.5 - 100.0)	119	119	100	21	8	38.1 (19.0 - 57.1)	24	22	91.7 (79.0 - 100.0)	98	44	44.9 (35.7 - 55.1)	98	8	8.2 (3.1 - 14.3)	98	0	0
Chiure	79	79	100	79	56	70.9 (60.8 - 79.7)	12	9	75.0 (50.0 - 100.0)	12	11	91.7 (75.0 - 100.0)	67	3	4.5 (0.0 - 10.4)	67	15	22.4 (12.0 - 34.3)	67	1	1.5 (0.0 - 4.5)
Mecufi	62	61	98.4 (95.2 - 100.0)	62	38	61.3 (50.0 - 74.2)	14	10	71.4 (42.9 - 92.9)	7	2	28.6 (0.0 - 57.1)	48	1	2.1 (0.0 - 6.3)	48	6	12.5 (4.2 - 20.8)	48	0	0
Montepuez	55	55	100	55	51	92.7 (85.5 - 98.2)	21	17	81.0 (61.9 - 95.2)	1	1	100	34	0	0	34	15	44.1 (29.4 - 61.8)	34	0	0
Mueda	0	0	0	0	0		0	0		10	9	90.0 (70.0 - 100.0)	85	0	0	85	18	21.2 (12.9 - 29.4)	85	0	0
Namuno	132	117	88.6 (83.3 - 93.9)	132	39	29.5 (22.0 - 37.9)	36	27	75 (61.1 - 88.9)	14	7	50.0 (21.4 - 71.4)	96	0	0	96	0	0	96	0	0
Metuge	125	115	92.0 (87.2 - 96.8)	125	69	55.2 (46.4 - 63.2)	30	28	93.3 (83.3 - 100.0)	15	11	73.3 (46.7 - 93.3)	95	0	0	95	12	12.6 (6.3 - 20.0)	95	0	0
Erati	70	70	100	70	47	67.1 (57.1 - 78.6)	43	31	72.1 (58.1 - 83.7)	9	4	44.4 (11.1 - 77.8)	27	5	18.5 (3.7 - 33.3)	27	4	14.8 (3.7 - 29.6)	27	1	3.7 (0.0 - 11.1)

3.2.4 Acute malnutrition by MUAC among pregnant and lactating women

The findings indicated low prevalence of acute malnutrition among pregnant and lactating women. Moderate wasting ranged from 4.3% in Pemba city and Balama to 18.3% and 18.2% in Namuno and Erati districts, respectively. In terms of severe acute malnutrition among the PLWs, six of the ten surveyed districts had no cases including Pemba, Ancuabe, Chiure, Mecufi, Mueda and Metuge. Three of the remaining four districts had only one case of severe wasting, while Namuno had five reported cases.

Table 26: Acute malnutrition prevalence among pregnant and lactating women

District	Normal MUAC among PLW (MUAC \geq 230mm)			Acute malnutrition among PLW (MUAC \geq 21 and $<$ 230mm)			Acute malnutrition among PLW (MUAC $<$ 210mm)		
	N	n	% (95% CI)	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	23	22	95.7 (87.0 - 100.0)	23	1	4.3 (0.0 - 13.0)	23	0	0
Ancuabe	89	80	89.9 (83.1 - 95.5)	89	9	10.1 (4.5 - 16.9)	89	0	0
Balama	47	44	93.6 (87.2 - 100.0)	47	2	4.3 (0.0 - 10.3)	47	1	2.1 (0.0 - 6.4)
Chiure	62	57	91.9 (83.9 - 98.4)	62	5	8.1 (1.6 - 14.5)	62	0	0
Mecufi	158	139	88.0 (82.3 - 92.4)	158	19	12.0 (7.0 - 17.7)	158	0	0
Montepuez	81	74	91.4 (85.2 - 97.5)	81	6	7.4 (2.5 - 13.6)	81	1	1.2 (0.0 - 3.7)
Mueda	56	48	85.7 (76.8 - 94.6)	56	8	14.3 (5.4 - 23.2)	56	0	0
Namuno	131	102	77.9 (70.2 - 85.5)	131	24	18.3 (12.2 - 25.2)	131	5	3.8 (0.8 - 7.6)
Metuge	66	64	97 (90.9 - 100.0)	66	2	3.0 (0.0 - 7.6)	66	0	0
Erati	88	71	80.7 (71.6 - 88.6)	88	16	18.2 (11.4 - 26.1)	88	1	1.1 (0.0 - 3.4)

17

To assess the dietary diversity for women, the 17 food groups included in the questionnaire were aggregated to ten main food groups. Results showed that the vast majority of women in the five districts of Ancuabe, Chiure, Mecufi, Metuge and Erati consumed less than five of the required food groups.

3.2.5 Minimum dietary diversity for women

To assess the dietary diversity for women, the 17 food groups included in the questionnaire were aggregated to ten main food groups. Results showed that the vast majority of women in the five districts of Ancuabe, Chiure, Mecufi, Metuge and Erati consumed less than five of the required food groups. About three-fifths of the women in Pemba and Montepuez districts also consumed less than five food groups. In Mueda, slightly more than half of the assessed women consumed less than five food groups, and in Namuno all the interviewed women ate less than five food groups. Balama was the only district reporting consumption of more than five food groups.

Table 27: Minimum dietary diversity for women by district

District	MDD-W women (15-49 yrs) <5 food groups			MDD-W women (15-49 yrs) ≥ 5 food groups		
	N	n	% (95% CI)	N	n	% (95% CI)
Pemba city	101	64	63.4 (52.5 - 72.3)	101	37	36.6 (26.7 - 46.5)
Ancuabe	292	255	87.3 (83.6 - 91.1)	292	37	12.7 (8.9 - 16.4)
Balama	211	32	15.2 (10.4 - 19.9)	211	179	84.8 (80.1 - 89.1)
Chiure	231	220	95.2 (92.2 - 97.8)	231	11	4.8 (2.2 - 7.8)
Mecufi	379	360	95.0 (92.9 - 97.1)	379	19	5.0 (2.9 - 7.7)
Montepuez	308	203	65.9 (60.4 - 71.4)	308	105	34.1 (28.6 - 39.6)
Mueda	300	163	54.3 (49.0 - 60.3)	300	137	45.7 (39.7 - 51.3)
Namuno	297	297	100	297	0	0
Metuge	282	273	96.8 (94.7 - 98.6)	282	9	3.2 (1.4 - 5.3)
Erati	278	202	72.7 (66.9 - 77.7)	278	76	1.3 (22.3 - 33.1)

4 DISCUSSION

4.1 Acute malnutrition

The prevalence of global acute malnutrition rate based on WHZ<2 ranged from very low to low across all the surveyed districts. According to the WHO acute malnutrition classification, results show GAM rates considered acceptable (<5%). Despite the low levels of global acute malnutrition, several cases of severe acute malnutrition were observed in Mecufi, Mueda, Metuge and Erati. Additionally, one case of edema was reported in Erati.

The prevalence of global acute malnutrition based on MUAC<125mm and/or edema shows a number of districts having medium levels of acute malnutrition (<10%) including the districts of Chiure, Mecufi, Balama, Namuno and Erati. The higher rates of acute malnutrition based on MUAC compared to the low levels seen using WHZ is possibly due to measurement errors. However, research has demonstrated discrepancies between MUAC and WHZ measurements, and it's recommended that these two criteria be used independently to diagnose acute malnutrition.¹⁰ The results did not show any significant difference in acute malnutrition by age. The low GAM prevalence observed across the districts are consistent with the lower GAM rates that were expected and used for planning. When the results are compared to previous SMART survey from 2022, findings indicate that the situation has remained the same with the GAM prevalence consistently remaining low.

4.2 Underweight

The findings indicate that the level of underweight in most of the districts was below 20% except in the districts of Balama, Namuno, and Erati. A comparison of the current results with the previous survey which was conducted during the same season last year, reveals comparable levels of underweight with a similar trend in terms of prevalence across the surveyed districts. The prevalence of underweight by age (WAZ<2) shows slight differences in underweight by age group, but these differences are not statistically significant in most of the districts ($p>0.05$).

¹⁰ Grellety, E., Golden, M.H. Weight-for-height and mid-upper-arm circumference should be used independently to diagnose acute malnutrition: policy implications. BMC Nutr 2, 10 (2016). <https://doi.org/10.1186/s40795-016-0049-7>

20%

The findings indicate that the level of underweight in most of the districts was below 20% except in the districts of Balama, Namuno, and Erati. A comparison of the current results with the previous survey which was conducted during the same season last year, reveals comparable levels of underweight with a similar trend in terms of prevalence across the surveyed districts.

30%

The most common illnesses were fever and cough, with rates exceeding 30% in seven of the ten surveyed districts. Diarrhea incidence showed notable variations between the districts, with approximately one-quarter of the children in Balama, Namuno, and Erati having diarrhea. Health seeking during illness was slightly above average

4.3 Stunting

Very high stunting levels were observed across all districts with stunting levels exceeding the 30% WHO threshold for very high stunting. Similarly, all the districts had high levels of severe stunting, with Balama, Chiure, Namuno, and Erati showing severe stunting levels greater than 20%. The results were similar to previous survey findings, indicating that stunting is a sustained health problem in the communities living in Cabo Delgado and Nampula provinces. There were minor differences in stunting between the age groups of 6–23 months and 24–59 months. However, the differences in stunting by age group were not statistically significant in nearly all the districts except Namuno ($p=0.021$).

4.4 Morbidity

The most common illnesses were fever and cough, with rates exceeding 30% in seven of the ten surveyed districts. Diarrhea incidence showed notable variations between the districts, with approximately one-quarter of the children in Balama, Namuno, and Erati having diarrhea. Health seeking during illness was slightly above average. Out of the ten surveyed districts, six had more than 50% of their population seeking treatment during illness.

4.5 Measles vaccination, vitamin A and deworming

Overall, half of the districts achieved the SPHERE recommended $\geq 80\%$ coverage for measles vaccine in the districts of Pemba, Ancuabe, Mecufi, Mueda, and Metuge. Majority of the children were immunized against measles based on verification from the child health cards. Vitamin A coverage at 6 months (first dose) was lower than the recommended target of $\geq 80\%$ in seven districts with the exception of Pemba, Mueda, and Metuge. Coverage of vitamin A at 12 months (second dose) was even lower, with none of the districts reaching the recommended $\geq 80\%$. Deworming coverage in the last 12 months (one dose) was low across all districts except in Mueda. Similarly, the rate of deworming in the last 12 months (two doses) was lower than the recommended target of $\geq 80\%$ in all the districts.

Mosquito net coverage was above average, with six of the ten surveyed districts able to attain the desired $\geq 80\%$.

The coverage of these health programs (measles, vitamin A, deworming and mosquito net) shows a similar trend based on survey results from the previous year.

4.6 Infant and young child feeding practices

Although the surveys assessed IYCF practices, results should be interpreted with caution as the sample sizes per district are too small to draw meaningful conclusions. The vast majority of the children under 2 years were breastfed at some point, averaging 96% in almost all the districts except in Mueda¹¹. This is an indication that breastfeeding is widely practiced. Initiation to breastfeeding within the first hour of birth was lower in most of the districts apart from Pemba, Balama, and Montepuez where rates above 80% were recorded. Exclusive breastfeeding was low, with only four of the ten districts (Pemba city, Ancuabe, Montepuez, and Metuge) reaching the recommended target of ≥80%. Similarly, only four districts achieved a target of ≥80% for introduction of solid, semi-solid and soft foods at 6 months including Pemba, Balama, Chiure, and Mueda. None of the districts reached the recommended minimum dietary diversity (at least four food groups). The minimum meal frequency was low in all the districts except in Ancuabe. The minimum acceptable diet recorded the lowest rates in all the districts. The surveys found that IYCF practices were generally poor across all the districts, which may partly explain the high prevalence of stunting revealed by these surveys.

4.7 Wasting among pregnant and lactating women

The prevalence of acute malnutrition among PLWs using MUAC was low in the survey areas. Metuge district recorded the lowest prevalence of moderate wasting (3.0%), while relatively higher rates were seen in Namuno (18.3%) and Erati (18.2%). Severe wasting among PLWs was very low in nearly all the districts with the exception of Namuno where several cases were reported (3.8%).

4.8 Minimum dietary diversity for women

The dietary diversity of women of reproductive age (15–49 years) was low in the target districts. In almost all the districts, women of reproductive age consumed less than the required 5 food groups. Balama was the only district where these women reported consuming at least five food groups, and in Namuno, none of the interviewed women ate more than the recommended five food groups.

96%

The vast majority of the children under 2 years were breastfed at some point, averaging 96% in almost all the districts except in Mueda. This is an indication that breastfeeding is widely practiced.

¹¹ The ever-breastfed indicator was not calculated in Mueda because data for children 0-5 months was not collected

5 CONCLUSIONS

<5%

The prevalence of global acute malnutrition <5% based on WHZ<2 indicates a normal nutrition situation. However, based on MUAC, acute malnutrition rates were slightly higher (5-<10%). According to the survey findings, the main concern is chronic malnutrition.

The prevalence of global acute malnutrition <5% based on WHZ<2 indicates a normal nutrition situation. However, based on MUAC, acute malnutrition rates were slightly higher (5-<10%). According to the survey findings, the main concern is chronic malnutrition. Stunting rates across all the districts were classified as very high as per the WHO chronic malnutrition threshold.

From a health perspective, the most common illnesses affecting children were fever and cough with high rates being reported in most of the districts. Diarrhea is also a concern in some of the districts. The high morbidity noted by the survey is a major risk factor for both acute and chronic malnutrition.

With regards to the coverage of health programs including measles vaccination, vitamin A, and deworming, the surveys revealed rates below the recommended target of ≥80% in half of the surveyed districts.

Infant and young child feeding practices in the survey areas are below accepted standards and therefore pose increased risk of morbidity and malnutrition among children under the age of five years.

The nutritional status among women of reproductive age in the surveyed camps was to a large extent, normal. However, given the link between maternal nutrition and the nutritional status of children, there is need to maintain current interventions.

The dietary diversity among women of reproductive age was low and this poses a risk to their nutritional status.

6 RECOMMENDATIONS

1. Although acute malnutrition levels were low, implementation of the existing nutrition programs should continue in order to maintain these low levels. Due to widespread insecurity and displacement, inflation, climate related shocks and food insecurity, the population in Cabo Delgado remains vulnerable to acute malnutrition.
2. Very high levels of stunting were revealed by the survey. More efforts and resources are required for stunting prevention through different multi-sectoral interventions combining mother's nutrition, infant and young child feeding, water, sanitation and hygiene practices, as well as other nutrition related interventions such as the provision of basic health services, improving food security, among other interventions.
3. There is need to maintain and strengthen the provision of basic health services to curb the high morbidity rates. In addition, mobile health outreach should be regularly organized in the areas affected by insecurity to reach children who need treatment services. Continuous health education for mothers/caregivers is necessary to sensitize them on the benefits of health seeking.
4. Increase health campaigns to improve measles vaccination, vitamin A supplementation and deworming in the less accessible areas affected by insecurity. Further, strengthen community sensitization on importance of measles immunization, vitamin A supplementation and deworming.
5. Continue the promotion of appropriate IYCF practices by organizing nutrition education sessions in hard to reach areas using appropriate behavior change communication interventions such as demonstrations and appropriate IEC materials. In addition, strengthen the training of community health workers and support them to reach mothers in areas affected by insecurity to ensure continued sensitization of mothers to adopt appropriate IYCF practices. Also, improve coverage of the nutrition education sessions focusing on breastfeeding and complementary feeding among the displaced, as well as the host communities.
6. Strengthen screening of acute malnutrition among pregnant and lactating women and refer them for nutritional rehabilitation. Conduct maternal nutrition education sessions through peer support groups and other community gatherings to raise awareness on the importance of maternal nutrition.
7. Link mothers and vulnerable women to programs providing livelihood support and economic empowerment to improve access to household income thereby improving access to and utilization of diversified diets.

Increase health campaigns to improve measles vaccination, vitamin A supplementation and deworming in the less accessible areas affected by insecurity. Further, strengthen community sensitization on importance of measles immunization, vitamin A supplementation and deworming.

APPENDICES

Appendix 1: Questionnaire (English)



REPÚBLICA DE MOÇAMBIQUE

MINISTÉRIO DA AGRICULTURA E DESENVOLVIMENTO RURAL SECRETARIADO TÉCNICO DE SEGURANÇA ALIMENTAR E NUTRICIONAL

AVALIAÇÃO DE SEGURANÇA ALIMENTAR E NUTRICIONAL, ABRIL DE 2023

QUESTIONÁRIO AO AGREGADO FAMILIAR

Guião de Apresentação do/a inquiridor e o propósito da entrevista:

- Bom dia/tarde meu nome é _____ e estou a fazer este trabalho para o SETSAN, Ministério da Agricultura e Desenvolvimento Rural.
- O propósito da entrevista é de obter informações sobre a situação de segurança alimentar e nutrição dos agregados familiares.
- O inquérito é voluntário e a informação por si prestada é confidencial. Não haverá nenhuma forma de se saber que deu informação.
- Podemos fazer a entrevista?

SECÇÃO A: DADOS DEMOGRÁFICOS

Códigos para o tablet

- 1.1 Província _____ | | | |
- 1.2 Nome do Distrito _____
- 1.3 Código do Distrito | | | |
- 1.4 Nome da aldeia (aglomerado) _____

SECÇÃO B: PONTO DE SITUAÇÃO DAS CULTURAS, PECUÁRIA E AQUACULTURA

SECÇÃO B: PONTO DE SITUAÇÃO DAS CULTURAS, PECUÁRIA E AQUACULTURA		
B1.1	O Seu AF pratica agricultura? <i>Se não, passa para B1.11</i>	1= Sim <input type="checkbox"/> ; 2 = Não <input type="checkbox"/>
B1.2	Fez sementeira na presente campanha?	1= Sim <input type="checkbox"/> ; 2 = Não <input type="checkbox"/>
B1.3	As culturas foram afectadas por choques?	1= Sim <input type="checkbox"/> ; 2 = Não <input type="checkbox"/>
B1.4	Se sim, que culturas foram afectadas?	1.5.1.Milho <input type="checkbox"/> 1.5.2.Arroz <input type="checkbox"/> 1.5.3.Mandioca <input type="checkbox"/> 1.5.4.Batata doce <input type="checkbox"/> 1.5.5. Feijões e amendoim <input type="checkbox"/> 1.5.6.Tomate, cebola e repolho <input type="checkbox"/> 1.5.7.Folhas <input type="checkbox"/> Outras, especifique _____
B1.5	O seu AF perdeu culturas por motivo de choques?	1= Sim <input type="checkbox"/> ; 2 = Não <input type="checkbox"/>
B1.6	Se sim, que culturas o seu AF perdeu?	1.5.1.Milho <input type="checkbox"/> 1.5.2.Arroz <input type="checkbox"/> 1.5.3.Mandioca <input type="checkbox"/> 1.5.4.Batata doce <input type="checkbox"/> 1.5.5. Feijões e amendoim <input type="checkbox"/> 1.5.6.Tomate, cebola e repolho <input type="checkbox"/> 1.5.7.Folhas <input type="checkbox"/> Outras, especifique _____
B1.7	O seu AF colheu na presente campanha?	1= Sim <input type="checkbox"/> ; 2= Não <input type="checkbox"/>
B1.8	Se sim, que culturas colheu/está colher? 1=Sim 2=Não	1.2.1.Milho <input type="checkbox"/> 1.2.2.Arroz <input type="checkbox"/> 1.2.3. Mandioca <input type="checkbox"/> 1.2.4.Batata doce <input type="checkbox"/> 1.2.5. Feijões e amendoim <input type="checkbox"/> 1.2.6.Tomate, cebola e repolho <input type="checkbox"/> 1.2.7.Folhas <input type="checkbox"/> 1.2.8.Outras <input type="checkbox"/>
B1.9	Que culturas espera/vai colher?	1.3.1.Milho <input type="checkbox"/> 1.3.2.Arroz <input type="checkbox"/> 1.3.3. Mandioca <input type="checkbox"/> 1.3.4.Batata doce <input type="checkbox"/> 1.3.5. Feijões e amendoim <input type="checkbox"/> 1.3.6.Tomate, cebola e repolho <input type="checkbox"/> 1.3.7.Folhas <input type="checkbox"/> Outras, especifique _____
B1.10	Se não colheu, porque não colheu?	1=Cheias/inundações <input type="checkbox"/> ; 2=Ciclones/Ventos fortes <input type="checkbox"/> ; 3=Estiagem/Seca <input type="checkbox"/> ; 4=Conflito Homem fauna-bravia <input type="checkbox"/> ; 5=Conflito armado <input type="checkbox"/> ; 6=Pragas e doenças <input type="checkbox"/> ; 7=Tem culturas ainda em campo <input type="checkbox"/> ; 8=Outro indicar <input type="checkbox"/>
B1.11	Tem reservas alimentares? (Se não passa para B1.7)	1= Sim <input type="checkbox"/> ; 2=Não <input type="checkbox"/>
B1.12	Se sim, indique o número de meses que as reservas vão durar?	1.7.1.Milho <input type="checkbox"/> 1.7.2.Arroz <input type="checkbox"/> 1.7.3. Mandioca <input type="checkbox"/> 1.7.4.Batata doce <input type="checkbox"/> 1.7.5. Feijões e amendoim <input type="checkbox"/>
B1.13	O agregado familiar pratica a segunda época?	1= Sim <input type="checkbox"/> ; 2=Não <input type="checkbox"/>
B1.14	Tem alguma reserva de semente das culturas de:	1.9.1.Milho <input type="checkbox"/> 1.13.2.Arroz <input type="checkbox"/> 1.9.3. Mandioca <input type="checkbox"/> 1.9.4.Batata doce <input type="checkbox"/> 1.9.5.Feijões e amendoim <input type="checkbox"/> 1.9.6.Tomate, cebola e repolho <input type="checkbox"/> 1.9.7.Folhas <input type="checkbox"/>
B1.15	Faz o cultivo de culturas de rendimento?	1=Sim <input type="checkbox"/> ; 2=Não <input type="checkbox"/>
B1.16	Se sim, que tipo de culturas pratica?	Algodão <input type="checkbox"/> Cana-de-açúcar <input type="checkbox"/> Gergelim <input type="checkbox"/> Feijão bóer <input type="checkbox"/> Tabaco <input type="checkbox"/> Chá <input type="checkbox"/> Castanha de caju <input type="checkbox"/> Soja <input type="checkbox"/> Girassol <input type="checkbox"/> Paprica <input type="checkbox"/> Outro indicar...
B1.17	O Seu AF pratica a pecuária? <i>Se não passa para C1</i>	1= Sim <input type="checkbox"/> ; 2 = Não <input type="checkbox"/>

B2. PECUÁRIA

B2. PECUÁRIA				
Nº		B2.1	B2.2	B2.3
	Tipo de animal	Que tipo de animais possui? 1=Sim 2=Não	Que quantidade de animais possui actualmente?	Perdeu algum animal nos últimos 3 meses devido a: 1= Sim; 2=Não
	Bovinos	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1=Cheias/inundações _ ;2=Ciclones/Ventos fortes _ ;3=Estiagem/Seca _ ;4=Conflito Homem fauna-bravia _ ;5=Conflito armado _ ; 6=Pragas e doenças _ ; 7=Tem culturas ainda em campo _ ; 8=Outro indicar _____
	Suínos	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1=Cheias/inundações _ ;2=Ciclones/Ventos fortes _ ;3=Estiagem/Seca _ ;4=Conflito Homem fauna-bravia _ ;5=Conflito armado _ ; 6=Pragas e doenças _ ; 7=Tem culturas ainda em campo _ ; 8=Outro indicar _____
	Caprinos/ovinos	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1=Cheias/inundações _ ;2=Ciclones/Ventos fortes _ ;3=Estiagem/Seca _ ;4=Conflito Homem fauna-bravia _ ;5=Conflito armado _ ; 6=Pragas e doenças _ ; 7=Tem culturas ainda em campo _ ; 8=Outro indicar _____
	Aves (Galinhas, patos, gansos, perus)	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	1=Cheias/inundações _ ;2=Ciclones/Ventos fortes _ ;3=Estiagem/Seca _ ;4=Conflito Homem fauna-bravia _ ;5=Conflito armado _ ; 6=Pragas e doenças _ ; 7=Tem culturas ainda em campo _ ; 8=Outro indicar _____
B2.4	Os animais (Bovinos) ainda estão a pastar nas áreas habituais?		1= Sim _ ; 2=Não _	
B2.5	Existe água disponível para o gado nas áreas habituais?		1= Sim _ ; 2=Não _	
B2.6	Transferiu os animais para outros locais devido a:		1=Cheias/inundações _ ;2=Ciclones/Ventos fortes _ ;3=Estiagem/Seca _ Chuvas irregulares _ ;4=Morte do Chefe do AF _ ; Conflito Homem fauna-bravia _ ; Conflito armado _ ; Pragas e doenças.	

B3. AQUACULTURA

B3. AQUACULTURA		
B3.1	O Seu AF pratica a Aquacultura? <i>Se não passa para a Secção C</i>	1= Sim <input type="checkbox"/> ; 2 = Não <input type="checkbox"/>
B3.2	Se sim, fez o povoamento? <i>Se não passa para B3.5</i>	1=Sim <input type="checkbox"/> ; 2=Não <input type="checkbox"/>
B3.3	Se sim, quando é que fez o povoamento?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Ago/ Set /Out/ Nov/ Dez /Jan
B3.4	As suas unidades de produção foram afectadas pelo choque?	1=Sim <input type="checkbox"/> ; 2=Não <input type="checkbox"/>
B3.5	Se sim, qual foi o evento responsável pelo Choque? 1=Sim; 2=Não	1=Cheias/inundações <input type="checkbox"/> ; 2=Ciclones/Ventos fortes <input type="checkbox"/> ; 3=Estiagem/Seca <input type="checkbox"/> Chuvas irregulares <input type="checkbox"/> ; 4=Morte do Chefe do AF <input type="checkbox"/> ; 5=Conflito Homem fauna-bravia <input type="checkbox"/> ; 6=Conflito armado <input type="checkbox"/> ; 8=Pragas e doenças <input type="checkbox"/> ; 9=Outros indique _____
B3.6	Tem reservas de pescado? (Se não passa para C1)	1= Sim <input type="checkbox"/> ; 2=Não <input type="checkbox"/> ;
B3.7	Se sim, indique o número de meses que a reserva do pescado vai durar?	<input type="text"/> <input type="text"/> <input type="text"/> <1 mês; 1-3 mês; 3meses ou +

SECÇÃO C: FONTES DE RENDIMENTO

SECÇÃO C: FONTES DE RENDIMENTO		VIDE CÓDIGO Abaixo
C1	Qual é a principal fonte de rendimento para sustentar o seu AF? (Deixar o entrevistado indicar a fonte)	<input type="checkbox"/>
1= Produção, venda informal de culturas alimentares e animais 2=Trabalho por conta própria (processamento, comércio, garimpo e prestação de serviços) 3=Assistência alimentar/ajuda/remessas/ofertas 4=Ganho-Ganho e Biscato 5=Pesca e aquacultura 6=Salário, pensão e reforma 7=Produção/venda de culturas de rendimento 8=Apanha e venda informal de frutos e vegetais silvestres 9=Produção/ venda informal de lenha/carvão/estacas		

SECÇÃO C: FONTES DE RENDIMENTO

C2	Perdeu a sua principal fonte de renda? Se não passa para secção D	1= Sim _ ; 2=Não _ ;
C3	Se perdeu, qual é a sua actual fonte de renda?	Indicar _____

SECÇÃO D: CONSUMO ALIMENTAR DO AF

SECÇÃO D: CONSUMO ALIMENTAR DO AF

D1	Desde Fevereiro de 2023, houve um período em que o seu AF teve dificuldades de obter comida? (se a resposta for Não passar para D4)	1= Sim, 2= Não	<input type="checkbox"/>
D2	Se sim, pode indicar em que meses isso aconteceu? 1= Sim, 2= Não	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> FEV/MAR/ABR/MAIO/JUN	
D3	Se teve dificuldades mais do que um mês indique qual foi o pior mês? 1= Sim, 2= Não	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> FEV/MAR/ABR/MAIO/JUN	
D4	Quantas refeições tem normalmente os membros deste AF maiores de (18+)? <i>Se não tem membros nesta faixa anote "99"</i>		<input type="checkbox"/>
D5	Quantas refeições tem agora depois do choque?		<input type="checkbox"/>
D6 Nota:	Perguntar para cada tipo de alimento (indicar o número de dias entre 0 a 7)	D6. Ontem, o seu AF comeu os seguintes produtos? 1=Sim 2=Não	D7. Nos últimos 7 dias, quantos dias o seu AF comeu os seguintes produtos/grupos de produtos? (0 a 7)
			D8. Qual foi a principal fonte do produto/alimento? 1 = COMPRA 2 = PRÓPRIA PRODUÇÃO 3= REMESSAS/ OFERTAS 4= ASSISTÊNCIA ALIMENTAR 5= COLECTA DE ALIMENTOS SILVESTRES

SECÇÃO D: CONSUMO ALIMENTAR DO AF			
a) Cereais: Milho em grão, farinha de milho, mexoeira, mapira, arroz, trigo, bolos e papas feitos com estes cereais, pão, massa esparguete, bolachas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Raízes e tubérculos: Mandioca fresca, mandioca seca, batata-doce de polpa branca, inhame, batata reno, outras raízes e tubérculos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Leguminosas secas: Feijões, ervilha, lentilha, Soja, Amendoim e castanha de cajú, Sementes de gergelim, melancia, abóbora, girassol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Vegetais: cenoura, pimenta vermelha, abóbora, tomate, ervilha, beringela, couve, quiabo, moringa, espinafre, folhas de mandioca, de nhemba, de cacana, Outros vegetais	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Frutas: maçã, pera, goiaba, uva, ananás, frutos silvestres, Manga, papaia madura, pêsego, damasco, melancia, abobora, Outras frutas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Carne: vaca, cabrito, ovelha, porco, carne de caça, frangos, pato, pombo, codorniz, ratos, ratazanas, outros roedores, insectos, caracóis, larvas, matumanas, fígado, rins, tripas, dobrados, coração outros	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Ovos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Peixe ou mariscos em geral: Peixe fresco, Peixe seco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i) Lactícínios: leite, queijo, iogurte, outros lactícínios	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Açúcar, doces, jam, chocolate, ou produtos feitos com açúcar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k) Óleos e Gordura/manteiga/margarina/banha/ coco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ESCALA DE FOME DOS AFS (HHS)

ESCALA DE FOME DOS AFS (HHS)			
D9	Nos últimos 30 dias houve falta de comida no seu AF devido a falta de recursos?	1= Sim 2= Não	<input type="checkbox"/>
D10	Se sim, quantos dias houve falta de comida no seu AF nos últimos 30 dias?	1= Raramente (1 a 2 dias) 2 = Algumas vezes (3 a 10 dias) 3 = Frequentemente (mais de 10 dias)	<input type="checkbox"/>
D11	Nos últimos 30 dias, você ou algum membro do seu AF dormiu com fome/sem comer por falta de comida?	1= Sim 2= Não (Saltar para G3)	<input type="checkbox"/>
D12	Se sim, quantos dias dormiu sem comer no seu AF nos últimos 30 dias?	1= Raramente (1 a 2 dias) 2 = Algumas vezes (3 a 10 dias) 3 = Frequentemente (mais de 10 dias)	<input type="checkbox"/>
D13	Nos últimos 30 dias, você ou algum membro do seu AF ficou todo o dia e noite sem comer nada por falta de comida suficiente?	1= Sim 2= Não (Saltar para G3)	<input type="checkbox"/>
D14	Se sim, quantos dias ficou todo o dia sem comer no seu AF nos últimos 30 dias?	1= Raramente (1 a 2 dias) 2 = Algumas vezes (3 a 10 dias) 3 = Frequentemente (mais de 10 dias)	<input type="checkbox"/>

SECÇÃO E: ESTRATÉGIAS DE SOBREVIVÊNCIA REFERENTES AO CONSUMO ALIMENTAR NOS ÚLTIMOS 7 DIAS

SECÇÃO E: ESTRATÉGIAS DE SOBREVIVÊNCIA REFERENTES AO CONSUMO ALIMENTAR NOS ÚLTIMOS 7 DIAS ESTRATEGIAS DE MEIOS DE VIDA

Nos últimos 30 dias, quais foram os mecanismos não alimentares que o seu AF usou/ está a usar para enfrentar a **E2** seca/inundações que afetou o seu agregado familiar?

1. Vender bens domésticos: rádio, TV, geleira, móveis, etc.?
2. Comprar comida a crédito?
3. Alugar/Vender terreno?
4. Pedir dinheiro emprestado?
5. Tirar as crianças da escola?
6. Consumir sementes ou produtos para época seguinte?
7. Pedir comida emprestado?
8. Vender animais fêmeas?
9. Vender mais animais?
10. Migração?

1 = Sim	<input type="checkbox"/>
2= Não, porque ainda não foi necessário usar este mecanismo	<input type="checkbox"/>
3= Não, porque não tivemos situação fora do normal/ choque	<input type="checkbox"/>
4= Não, porque nunca possuí/ não tive acesso	<input type="checkbox"/>
5 = Não, porque já não possuímos/ não temos acesso	<input type="checkbox"/>

ESTRATEGIAS DE MEIOS DE VIDA		
E2	Nos últimos 30 dias, quais foram os mecanismos não alimentares que o seu AF usou/ está a usar para enfrentar a seca/inundações que afetou o seu agregado familiar? (perguntar por cada opção)	1 = Sim 2= Não, porque ainda não foi necessário usar este mecanismo 3= Não, porque não tivemos situação fora do normal/ choque 4= Não, porque nunca possuí/ não tive acesso 5 = Não, porque já não possuímos/ não temos acesso
	1. Vender bens domésticos: rádio, TV, geleira, móveis, etc.?	<input type="checkbox"/>
	2. Comprar comida a crédito?	<input type="checkbox"/>
	3. Alugar/Vender terreno?	<input type="checkbox"/>
	4. Pedir dinheiro emprestado?	<input type="checkbox"/>
	5. Tirar as crianças da escola?	<input type="checkbox"/>
	6. Consumir sementes ou produtos para época seguinte?	<input type="checkbox"/>
	7. Pedir comida emprestado?	<input type="checkbox"/>
	8. Vender animais fêmeas?	<input type="checkbox"/>
	9. Vender mais animais?	<input type="checkbox"/>
	10. Migração?	<input type="checkbox"/>

E1	Nos últimos 7 dias, quantas vezes (em número de dias) o seu AF teve que adoptar as seguintes estratégias por não ter comida suficiente ou dinheiro para comprá-la? LER AS ESTRATEGIAS	Frequência (número de dias de 0 a 7)
	1. Recorrer a alimentos menos caros ou menos preferidos	<input type="checkbox"/>
	2. Pedir emprestado alimentos/ajuda de amigos/familiares	<input type="checkbox"/>
	3. Reduzir o número de refeições por dia	<input type="checkbox"/>
	4. Diminuir quantidades nas refeições	<input type="checkbox"/>
	5. Reduzir o consumo de adultos para as crianças comerem	<input type="checkbox"/>
	6. Aumento do consumo de alimentos silvestres	<input type="checkbox"/>
	7. Mandou um membro do agregado familiar comer noutra lugar	<input type="checkbox"/>

LER AS ESTRATEGIAS

ESTRATEGIAS DE MEIOS DE VIDA		
E2	Nos últimos 30 dias, quais foram os mecanismos não alimentares que o seu AF usou/ está a usar para enfrentar a seca/inundações que afetou o seu agregado familiar? (perguntar por cada opção)	1 = Sim 2= Não, porque ainda não foi necessário usar este mecanismo 3= Não, porque não tivemos situação fora do normal/ choque 4= Não, porque nunca possui/ não tive acesso 5 = Não, porque já não possuímos/ não temos acesso
	1. Vender bens domésticos: rádio, TV, geladeira, móveis, etc.?	<input type="checkbox"/>
	2. Comprar comida a crédito?	<input type="checkbox"/>
	3. Alugar/Vender terreno?	<input type="checkbox"/>
	4. Pedir dinheiro emprestado?	<input type="checkbox"/>
	5. Tirar as crianças da escola?	<input type="checkbox"/>
	6. Consumir sementes ou produtos para época seguinte?	<input type="checkbox"/>
	7. Pedir comida emprestado?	<input type="checkbox"/>
	8. Vender animais fêmeas?	<input type="checkbox"/>
	9. Vender mais animais?	<input type="checkbox"/>
	10. Migração?	<input type="checkbox"/>

SECÇÃO F: ÁGUA E SANEAMENTO

SECÇÃO F: ÁGUA E SANEAMENTO		
F1	Actualmente, qual é a principal fonte de água para beber?	1= Água canalizada (ligações domiciliarias; fontanários públicos) 2 = Poço protegido 3= Poço não protegido 4= Furo com bomba manual 5= Água da chuva 6= Rio / riacho/lago/lagoa 7= Charco 8 = Nascente 9= Camião cisterna 10= Calcira cisterna 11= Água engarrafada/mineral
		<input type="checkbox"/>

F2	As suas fontes de água foram afectadas pelos choques?	1=Cheias 2= inundações 3=Ventos fortes	<input type="checkbox"/>
F3	Trata a água que usa para beber?	1= Sim 2= Não Se não, passa para E4	<input type="checkbox"/>
F4	Se sim, como é que trata a água?	1=Ferver 2=Adicionar lixívia/ cloro/ certeza	<input type="checkbox"/>
		3=Filtrar com um pano 4=Usar filtro de água (cerâmica, areia, composto, etc) 5=Desinfecção solar 6=Deixar repousar e assentar 7= Uso de moringa	
F5	O seu AF tem latrina?	1= Sim;2= Não	<input type="checkbox"/>
F6	Perdeu alguma Latrina por razoes dos choques?	1= Sim;2= Não	<input type="checkbox"/>
F7	Se sim, que tipo de latrina tem?	1=Pia com autoclismo 2=Pia sem autoclismo 3=Latrina melhorada 4=Latrina tradicional não melhorada	<input type="checkbox"/>
F8	Ela é partilhada com outros membros de outras famílias?	1=Sim;2= Não	
F9	Se não, pergunta ao respondente se:	1=Usa do vizinho 2=Fecalismo a céu aberto	
F10	Os membros do seu AF lavam as mãos antes de manusear os alimentos?	1= Sim; 2= Não	<input type="checkbox"/>

SECÇÃO G: NUTRIÇÃO

SECÇÃO G: NUTRIÇÃO			
Data de Entrevista (dd/mm/aaaa)	Área de Enumeração	Agregado Familiar	Número da Equipa
_ _ / _ _ / _ _ _ _	_ _ _	_ _ _	_

Consentimento ç__ ê [1= Sim; 2 = Não; 3 = Ausente]

A. ANTROPOMETRIA PARA TODAS CRIANÇAS COM IDADE DOS 6-59 MESES DO AGREGADO FAMILIAR

A. Antropometria para todas crianças com idade dos 6-59 meses do Agregado Familiar								
1	2	3	4	5	6	7	8	9
ID Criança	Sexo (f/m)	Data de Nascimento* (DD/MM/AAA)	Idade** (meses)	Peso (kg) (00.0)	Altura (cm) (00.0)	Edema bilateral (s/n)	PB (cm) (00,0) Braço esquerdo	Medida C=se a foi avaliada deitada ao invés de altura A= se a criança avaliada de pé
1		/ /						
2		/ /						
3		/ /						
4		/ /						
5		/ /						
6		/ /						
7		/ /						

*A data de nascimento exacta deverá **apenas** ser extraída de um documento oficial com indicação do dia, mês e ano. Nesta coluna, somente deve ser preenchido se tiver algum documento oficial (carta de saúde, cédula pessoal, e outros). **Deixe em branco se não tiver disponível algum documento oficial**

Se não tiver algum documento disponível deverá estimar a idade consultando a mãe e confirmando com os vizinhos (em que momento a criança nasceu: de colheita, fome, chuva, eleição de presidente, entre outros eventos popularmente conhecido) usando um **calendário de eventos. Se tiver alguma documentação oficial disponível, deverá registar a idade da coluna 3. (A mãe tem cartão da criança (pedimos para a mãe mostrar todos os cartões da criança e se tiver o cartão do doente desnutrido)

A criança tem desnutrição aguda (DAG ou DAM)? Sim; Não |_|_|

A criança está ou esteve em algum tratamento nas últimas 8 semanas Sim; Não (se sim pedir uma prova de saqueta de ATPU ou ASPU |_|_|

B. ALIMENTAÇÃO INFANTIL DE CRIANÇAS COM IDADE DOS 0-23 MESES DO AGREGADO FAMILIAR

CRIANÇAS DE 0 – 5 MESES

B. ALIMENTAÇÃO INFANTIL DE CRIANÇAS COM IDADE DOS 0-23 MESES DO AGREGADO FAMILIAR - CRIANÇAS DE 0 – 5 MESES				
2	Sobre práticas de aleitamento materno pergunte...	Criança 1 (ID 1)	Criança 2 (ID 2)	Criança 3 (ID 3)
a)	Ainda está a amamentar a criança?	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
b)	A criança foi amamentada nas últimas 24 horas?	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
c)	A criança foi amamentada exclusivamente, sem dar água ou outra coisa para engolir, fora do leite materno nas últimas 24 horas? <i>Indicar como "Sim" qualquer criança que seja amamentada por uma outra mulher que não seja a mãe, ou que são dados leite maternos por outra mulher com auxílio de uma colher, copo, biberão...</i> 1= SIM; 2=NÃO	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe

CRIANÇAS DE 6 – 23 MESES

CRIANÇAS DE 6 – 23 MESES				
1. Sobre alimentação complementar, pergunte...		Criança 1 (ID 1) (Criança mais nova)	Criança 2 (ID 2)	Criança 3 (ID 3)
1.1. A criança [nome da criança] teria comido um destes alimentos listados?	(a) ...Fórmula infantil como NAN, Lactogen	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
	(b) ...leite enlatado em pó, ou leite fresco	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
	(c) ...iogurte?	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
	(d) ...papinhas?	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
	(e) sopas	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe	<input type="checkbox"/> Sim <input type="checkbox"/> Não <input type="checkbox"/> Não sabe
1.2 Quantas vezes durante o dia ou noite	(a)...Formula infantil como NAN, Lactogen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[Nome da Criança] consumiu? Indique o numero de vezes	(b)...Leite enlatado em po, ou leite fresco	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(c) Iogurte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(d)...papas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	(e)...sopas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Por favor, pode dizer tudo o que [Nome da Criança] comeu ontem, durante o dia ou à noite, seja em casa ou fora de casa?	Criança 1	Criança 2	Criança 3
Número de ordem da criança (Confira na sessão A)	____	____	____

<i>Cada vez que o respondente se lembrar e dizer os alimentos consumidos pela criança escreva o número correspondente no grupo de alimentos correspondentes (linhas a-q abaixo); NS=Não sabe</i>	1=SIM 2=NÃO 3=NÃO SABE	1=SIM 2=NÃO 3=NÃO SABE	1=SIM 2=NÃO 3=NÃO SABE
2.1 Foi alimentado ontem comida sólida, semi-líquida ou mole?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(a) Papas feitas à base de cereais, chima, pão, arroz, esparguete, bolachas, ou outra comida feita de cereais (mapira, mexoeira, marrupi, milho, arroz, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(b) Abóbora, cenoura, ou batata-doce de polpa amarela ou alaranjada	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(c) Batata de polpa branca, inhame branca, mandioca ou qualquer outro tubérculo, batata-reno outros tubérculos locais	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(d) Qualquer verdura de folhas verde-escuro (feijão, folhas de mandioca, couve, folhas de batata doce, Tseke (Nhewe)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(e) Manga madura, papaia madura, goiaba de polpa vermelha ou outras frutas localmente disponíveis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(f) Qualquer outra fruta ou vegetal (banana, maçã, tomate, limão, laranja, tangerina, uvas, couve)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(g) Fígado, rim, coração ou outros órgãos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(h) Qualquer carne, tal como carne de vaca, de porco, de ovelha, de galinha, de cabrito ou pato, rato ou outra carne de caça	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(i) Ovos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(j) Peixe fresco ou seco ou mariscos	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(k) Alguma comida feita com feijões, ervilha, lentilha, soja amêndoas ou sementes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(l) Queijo, iogurte ou outros produtos feitos de leite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(m) Alimentos feitos com óleo, amendoim, gergelim ou manteiga/margarina?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(n) ATPU, ASPU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(o) Micronutrientes em pó	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2 Quantas vezes o [Nome da Criança] foi alimentado ontem comida sólida, semi-líquida ou mole?	<input type="text"/> Vezes	<input type="text"/> Vezes	<input type="text"/> Vezes

C: SAÚDE INFANTIL

C: SAÚDE INFANTIL			
	O/A [<i>Nome da Criança</i>] teve alguma doença durante as últimas duas semanas acompanhadas de?	1=SIM 2=NÃO 3=NÃO SABE	1=SIM 2=NÃO 3=NÃO SABE
	Número de ordem da criança (Confira na sessão A)	<input type="text"/>	<input type="text"/>
a)	Diarreia	<input type="text"/>	<input type="text"/>
b)	Disenteria	<input type="text"/>	<input type="text"/>
c)	Febre	<input type="text"/>	<input type="text"/>
d)	Tosse	<input type="text"/>	<input type="text"/>
e)	A criança dormiu na rede mosquiteira ontem a noite?	<input type="text"/>	<input type="text"/>

D: COMPORTAMENTO DE PROCURA POR SERVIÇOS DE SAÚDE			
		1=SIM 2=NÃO	1=SIM 2=NÃO
a)	Levou a criança doente para um centro de saúde para tratar a doença?	<input type="text"/>	<input type="text"/>

SECÇÃO H - NUTRIÇÃO: DIETA DAS MULHERES DE 15-49 ANOS

	SECÇÃO: DIETA DAS MULHERES DE 15-49 ANOS (MDDW)	Ontem, comeu os seguintes produtos? 1=Sim 2=Não
	<i>Nas últimas 24 horas, você consumiu ... (observe que isso se refere ao seu consumo individual e não ao consumo de outros membros do AF)</i>	
H1. Grãos	Nas últimas 24 horas, as mulheres comeram grãos, raízes brancas, tubérculos e banana (arroz, trigo, sorgo, milho, mapira, mexoeira, marrupi e outros alimentos derivados desses, pão, bananas verdes cozidas, mandioca branca, batatas brancas)?	<input type="text"/>
H2. Leguminosas	Nas últimas 24 horas, as mulheres comeram leguminosas (feijão, lentilha, feijão-nhamba, ervilha, grão de bico)?	<input type="text"/>
H3. Nozes	Nas últimas 24 horas, as mulheres comeram amêndoas (amendoim, nozes, castanha)?	<input type="text"/>
H4. Leite	Nas últimas 24 horas, as mulheres consumiram produtos lácteos (leite isolado ou misturado com outros alimentos ou bebidas: chai e mingau), leite azedo ou iogurte?	<input type="text"/>

H5. Carne	Nas últimas 24 horas, as mulheres comeram carne (cabra, vaca, ovelha), aves (frango), peixe (como peixe de lama ou tilápia), fígado, carne de órgão (intestino, língua)?	<input type="checkbox"/>
H6. Ovo	Nas últimas 24 horas, as mulheres comeram ovos de galinha ou qualquer outra ave?	<input type="checkbox"/>
H7. Folhas	Nas últimas 24 horas, as mulheres comeram espinafre, folhas de feijão-nhamba, folhas de abóbora?	<input type="checkbox"/>
H8. Fonte de Vit. A	Nas últimas 24 horas, as mulheres comeram papaia, manga, cenoura, laranja, batata-doce-de-polpa-alaranjada, abóbora?	<input type="checkbox"/>
H9. Legumes	Nas últimas 24 horas, as mulheres comeram couve, cebola, tomate?	<input type="checkbox"/>
H10. Fonte de Vit. C	Nas últimas 24 horas, as mulheres comeram abacate, banana, laranja, melancia?	<input type="checkbox"/>

Appendix 2: Data quality report

District	Flagged data	Overall Sex ratio	Age ratio (6-29 vs 30-59)	Dig pref score - weight	Dig pref score - height	Dig pref score - MUAC	Standard Dev WHZ	Skewness WHZ	Kurtosis WHZ	Poisson dist WHZ-2	OVER-ALL SCORE WHZ	Overall scoring
	Score (% of out of range subjects)	Score (P value of chi square)	Score (P value of chi square)	Score (#)	Score (#)	Score (#)	Score (SD)	Score (#)	Score (#)	Score (P value)	%	
Pemba city (201)	0 (1.3 %)	0 (p=0.469)	4 (p=0.004)	0 (7)	2 (10)	0 (5)	5 (1.11)	3 (0.50)	0 (-0.14)	0 (p=0.706)	14	Good
Ancuabe (202)	0 (1.3 %)	0 (p=0.844)	0 (p=0.986)	0 (5)	2 (10)	0 (7)	0 (0.95)	0 (0.01)	0 (-0.07)	0 (p=0.130)	2	Excellent
Balama (203)	0 (0.5 %)	0 (p=0.378)	4 (p=0.001)	2 (8)	4 (14)	4 (13)	0 (1.03)	1 (-0.21)	0 (-0.17)	0 (p=)	15	Acceptable
Chiure (204)	0 (1.0 %)	0 (p=0.180)	2 (p=0.073)	0 (4)	2 (11)	2 (9)	0 (0.92)	1 (-0.36)	1 (0.35)	0 (p=0.645)	8	Excellent
Mecufi (207)	0 (1.8 %)	0 (p=0.583)	0 (p=0.411)	0 (5)	2 (10)	2 (8)	0 (1.05)	0 (-0.13)	0 (-0.10)	0 (p=0.458)	4	Excellent
Montepuez (210)	5 (3.6 %)	0 (p=0.199)	4 (p=0.046)	2 (9)	2 (9)	2 (9)	0 (1.04)	1 (0.27)	0 (0.06)	0 (p=)	16	Acceptable
Mueda (211)	5 (3.5 %)	0 (p=0.112)	2 (p=0.058)	2 (8)	2 (11)	0 (7)	0 (1.06)	0 (-0.15)	1 (0.32)	3 (p=0.009)	15	Acceptable
Namuno (213)	0 (0.4 %)	0 (p=0.429)	4 (p=0.003)	0 (7)	2 (12)	2 (11)	0 (1.05)	0 (-0.13)	1 (-0.25)	0 (p=0.153)	9	Excellent
Metuge (216)	0 (0.0 %)	0 (p=0.798)	4 (p=0.002)	2 (9)	4 (15)	2 (11)	0 (1.01)	0 (0.13)	1 (-0.26)	0 (p=0.237)	13	Good
Erati (304)	0 (1.7 %)	0 (p=0.559)	0 (p=0.907)	0 (7)	2 (10)	0 (7)	5 (1.11)	0 (0.03)	1 (-0.38)	0 (p=0.248)	8	Excellent

Appendix 3: Cluster control form

INQUÉRITO NUTRICIONAL SMART – Cabo Delgado e Nampula 2023

Data da pesquisa (dd/mm/AAAA)	Número da Area de Enumeracao	Número da Equipa
_ _ _ / _ _ _ / _2_ _0_ _2_ _3_	_ _ _	_ _

Provincia: _____ Distrito: _____; Posto Administrativo: _____; Aldeia/Comunidade: _____

Nome do líder da equipa: _____

Questionário de Controlo da Area de Enumeracao

(Este formulário será preenchido pelo chefe da equipa. Preencha para cada domicílio* visitado)

1	2	3	4	5	6	6	7	8
Nº de AF	Nº de crianças na casa	Nº de crianças 6-59 meses	Nº de crianças 0-5 meses	Nº de mulheres grávidas ou a amamentar elegíveis (15-49 anos)	Resultado da 1ª visita: 1-Completo 2-Parcialmente 3- Recusa 4-Ausente	A casa precisa ser visitada novamente (S/N)	A casa foi visitada novamente (S/N)	Resultado final 1-Completo 2-Parcialmente 3- Recusa 4-Ausente
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

*Domicilio = Agregado familiar

Nota: Se o agregado familiar, mulher ou criança elegível estiver ausente, a equipa deve visitar o domicílio pelo menos uma vez antes de deixar o cluster.

NOTES



SMART

