BANS SUMMARY REPORT

Biannual Nutrition and Health Survey

For Tanqua Abergele, Saesi Tsaeda Emba and Raya Azebo Woredas (Districts) of Tigray Regional State

for

four rounds of Bi-Annual Nutrition Surveys (BANS)

November 2012 - May 2014

UNICEF Mekelle Field Office
Mekelle, Tigray
05 June 2014

1. Introduction

Conducting nutrition surveys bi-annually (in October/November during harvest season considered as period of normalcy and in April/May before the onset of hunger season) has become indispensible to carry out periodic monitoring of nutrition situation in the country. It is aimed to establish nutrition information system or data base at national level to serve as surveillance / monitoring tool and triangulate the data with other early warning indicators to determine nutrition situation and trigger timely response accordingly.

The selection of the survey Woredas, in Tigray, as it was done in other regions, were based on the chronic food insecurity situation as outlined and suggested by Disaster Risk Management and Food Security Sector (DRMFSS). Hence, three survey Woredas namely Raya Azebo (RA), Saesi Tsaeda Emba (STE) and Tanqua Abergele (TAG) were selected from Tigray region using the selection criteria set by the government. These three survey Woredas had been classified as hotspot priority number one for the past consecutive years.

Data collected from this survey will primarily serve for early warning purposes. The result will inform decision makers of the nutrition and health situation on the ground; it will help monitor any unusual changes in the nutritional situation of the given population and help trigger timely appropriate response.

EWRFSS, with the financial and technical support from UNICEF and in collaboration with Woreda Adminstraion, Health, Agriculture and Water Offices, conducted four rounds of bi annual nutrition survey in two years (between November 2012 and May 2014) in the three survey Woredas. Data and reports of the biannual nutrition survey have been reviewed to determine the nutritional status of the community and to see the trends and changes in nutrition situation of the three survey Woredas.

2. Summary of Survey Result

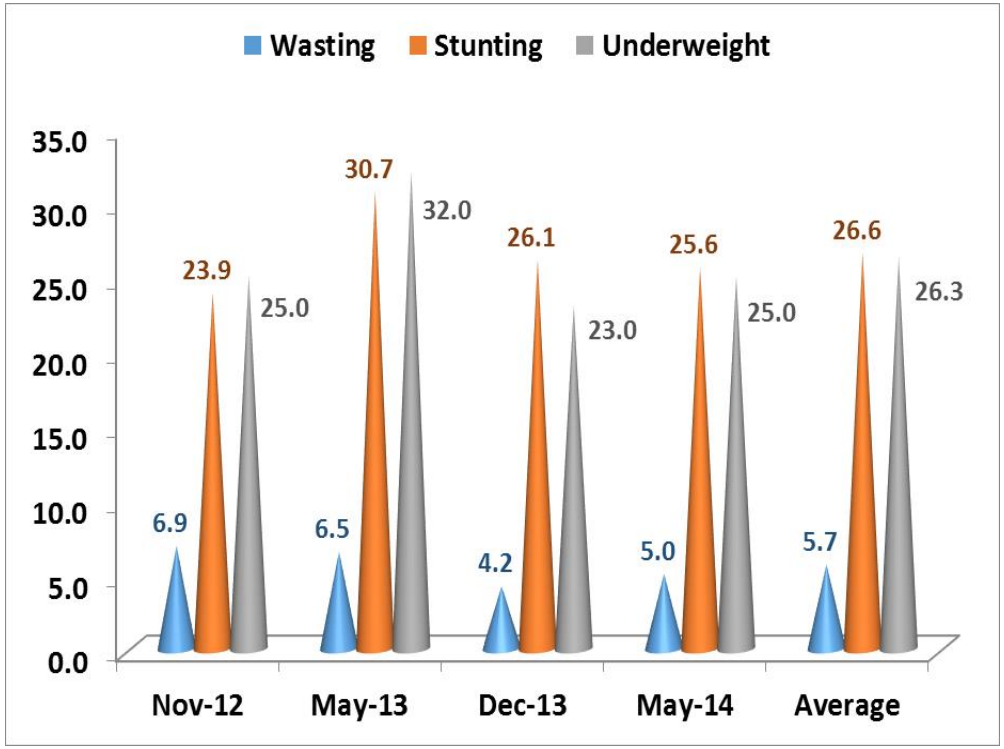
2.1 Raya Azebo Woreda				
Core Indicators	**November 2012**	**May 2013**	**December 2013**	**May 2014**
A. Nutrition				
1. Wasting :	**6.9 %** (5.0 - 9.3 95% C.I.)	**6.5 %** (4.7 – 8.8) (95% C.I.)	**4.2 %** (3.0 – 5.9) (95% C.I.)	**5.0 %** (3.5 - 6.9 95% C.I.)
Moderate	**6.5 %** (4.8 - 9.0 95% C.I.)	**6.0 %** (4.3 – 8.3) (95% C.I.)	**3.9 %** (2.7 – 5.7) (95% C.I.)	**4.8** % (3.4 - 6.7 95% C.I.)
Severe	**0.3 %** (0.1 - 1.3 95% C.I.)	**0.4 %** (0.1 - 1.3) (95% C.I.)	**0.3 %** (0.1 - 1.2) (95% C.I.)	**0.2** % (0.0 - 1.3 95% C.I.)
2. Stunting:	**23.9 %** (20.1 - 28.2 95% C.I.)	**30.7 %** (25.7 – 36.1) (95% C.I.)	**26.1 %** (21.9 – 30.8) (95% C.I.)	**25.6 %** (21.9 - 29.6 95% C.I.)
Moderate	**17.9 %** (14.8 - 21.4 95% C.I.)	**21.9 %** (18.6 – 25.6) (95% C.I.)	**20.7 %** (16.9 –25.1) (95% C.I.)	**19.3** % (16.4 - 22.7 95% C.I.)
Severe	**6.0 %** (4.2 - 8.6 95% C.I.)	**8.7 %** (6.3 – 12.0) (95% C.I.)	**5.4%** (3.8 – 7.7) (95% C.I.)	**6.2** % (4.6 - 8.4 95% C.I.)
3. Underweight	**25.0 %** (20.9 - 29.5 95% C.I.)	**32.0 %** (27.1 – 37.3) (95% C.I.)	**23.1 %** (19.5 – 27.2) (95% C.I.)	**25.0 %** (21.5 - 28.9 95% C.I.)
Moderate	**21.1 %** (17.7 - 25.1 95% C.I.)	**27.4 %** (22.8 – 32.5) (95% C.I.)	**20.1 %** (16.7 –24.0) (95% C.I.)	**21.8** % (18.5 - 25.5 95% C.I.)
Severe	**3.8 %** (2.5 - 5.8 95% C.I.)	**4.5 %** (3.1 – 6.6) (95% C.I.)	**3.0%** (2.1 – 4.3) (95% C.I.)	**3.3** % (2.2 - 4.9 95% C.I.)
B. Mortality : CMR	**0.20** (0.09-0.42)	**0.20** (0.09-0.46) (95% CI)	**0.15** (0.06-0.38) (95% CI)	**0.08** (0.03-0.26) (95% CI)
U5MR	**0.47** (0.15-1.47)	**0.30** (0.07-1.23) (95% CI)	**0.34** (0.08-1.38) (95% CI)	**0.18** (0.02-1.40) (95% CI)
C. Illness of Children U5	**17.4%**	**14.9%**	**14.7%**	**16.0%**
D. Vaccination Coverage				
BCG	**87.8%**	**91.1%**	**79.5%**	**67.6%**
Measles (card + mother recall)	**95.3%**	**94.0%**	**93.1%**	**92.0%**
Vitamin A Supplement	**95.9%**	**97.0%**	**93.6%**	**95.7%**
E. Level of Malnutrition	**"Poor"**	**"Acceptable"**	**"Acceptable"**	**"Acceptable"**

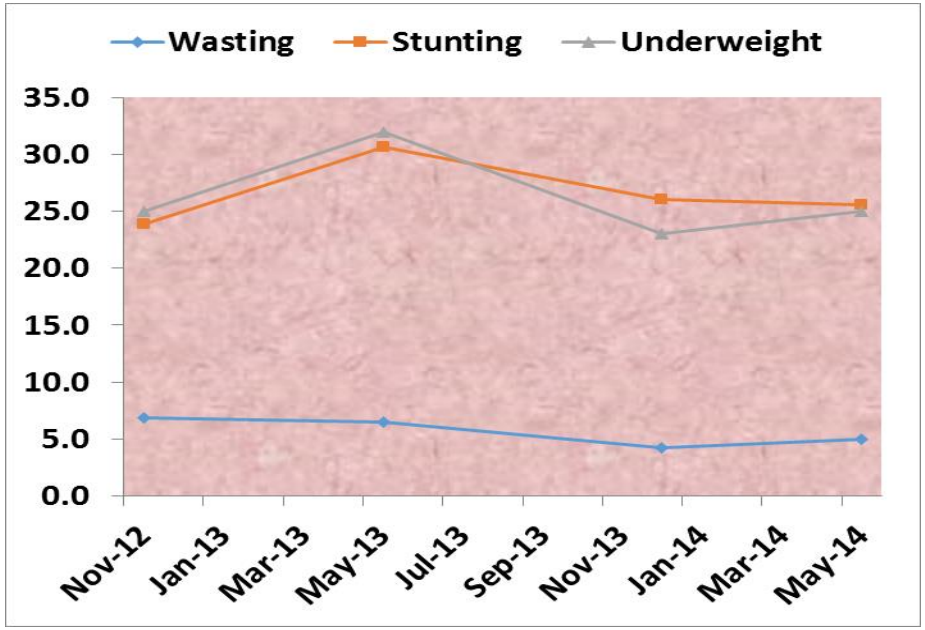
2.2 Saesi Tsaeda Emba				
Core Indicators	**November 2012**	**May 2013**	**December 2013**	**May 2014**
A. Nutrition				
1. Wasting :	**7.5 %** (5.9 - 9.5 95% C.I.)	**8.0 %** (6.0 -10.6) (95% C.I.)	**8.7 %** (6.7 -11.1) (95% C.I.)	**8.8 %** (6.6 - 11.7 95% C.I.)
Moderate	**6.7 %** (5.2 - 8.7 95% C.I.)	**7.2 %** (5.4 – 9.5) (95% C.I.)	**8.7 %** (6.7 – 11.1) (95% C.I.)	**7.9** % (5.8 - 10.7 95% C.I.)
Severe	**0.8 %** (0.3 - 2.0 95% C.I.)	**0.8 %** (0.4 – 1.8) (95% C.I.)	**0.0 %** (0.0 – 0.0) (95% C.I.)	**0.9** % (0.4 - 2.1 95% C.I.)
2. Stunting:	**52.6 %** (48.1 - 57.1 95% C.I.)	**46.1 %** (42.2 – 50.0) (95% C.I.)	**46.4 %** (42.4 – 50.5) (95% C.I.)	**41.9 %** (37.1 - 47.0 95% C.I.)
Moderate	**35.0 %** (31.2 - 39.0 95% C.I.)	**29.5 %** (26.4 – 32.7) (95% C.I.)	**34.4 %** (30.7 – 38.2) (95% C.I.)	**28.1** % (24.5 - 32.1 95% C.I.)
Severe	**17.6 %** (14.3 - 21.4 95% C.I.)	**16.6 %** (13.8 – 19.9) (95% C.I.)	**12.0 %** (9.7 – 14.9) (95% C.I.)	**13.8** % (11.1 - 17.1 95% C.I.)
3. Underweight	**44.0 %** (39.7 - 48.3 95% C.I.)	**46.7 %** (42.3 – 51.1) (95% C.I.)	**41.8 %** (37.8 – 45.9) (95% C.I.)	**41.1 %** (36.2 - 46.1 95% C.I.)
Moderate	**34.8 %** (30.9 - 38.9 95% C.I.)	**38.2 %** (34.5 – 42.1) (95% C.I.)	**34.0 %** (30.5 – 37.7) (95% C.I.)	**33.3** % (28.8 - 38.2 95% C.I.)
Severe	**9.2 %** (7.0 - 11.9 95% C.I.)	**8.4 %** (6.5 – 10.8) (95% C.I.)	**7.8 %** (5.8 – 10.4) (95% C.I.)	**7.7** % (5.5 - 10.7 95% C.I.)
B. Mortality: CMR	**0.11**(0.04 – 0.28)	**0.12** (0.05 – 0.30) 95% CI	**0.15** (0.07 – 0.30) 95% CI	**0.07**(0.02-0.22) (95% CI)
U5MR	**0.20** (0.03 – 1.44)	**0.14**(0.02 – 1.08) (95% CI)	**0.15**(0.02 – 1.11) (95% CI)	**0.00**(0.00-0.00) (95% CI)
C. Illness of Children U5	**11.2%**	**10.5%**	**21.4%**	**7.9%**
D. Vaccination & Vitamin A Coverage				
BCG	**78.0%**	**86.6%**	**94.5%**	**88.8%**
Measles (card + mother recall)	**94.8%**	**94.1%**	**93.1%**	**93.5%**
Vitamin A Supplement	**91.5%**	**94.1%**	**97.2%**	**95.5%**
E. Level of Malnutrition	**"Acceptable"**	**"Acceptable"**	**"Acceptable"**	**"Acceptable"**

2.3 Tanqua Abergele Woreda				
Core Indicators	**November 2012**	**May 2013**	**December 2013**	**May 2014**
A. Nutrition				
1. Wasting :	**12.2 %** (9.2 - 16.0 95% C.I.)	**8.2 %** (6.7 - 10.0) (95% C.I.)	**13.8 %** (11.0 – 17.3) (95% C.I.)	**10.7 %** (8.2 – 13.8) (95% C.I.)
Moderate	**10.4 %** (7.7 - 13.9 95% C.I.)	**7.7 %** (6.3 – 9.4) (95% C.I.)	**12.5 %** (10.0 – 15.4) (95% C.I.)	**9.8 %** (7.7 – 12.5) (95% C.I.)
Severe	**1.8 %** (0.9 - 3.5 95% C.I.)	**0.5 %** (0.2 – 1.2) (95% C.I.)	**1.4 %** (0.7 – 2.6) (95% C.I.)	**0.8 %** (0.4 – 1.9) (95% C.I.)
2. Stunting:	**47.0 %** (42.6 - 51.4 95% C.I.)	**43.2 %** (39.2 – 47.4) (95% C.I.)	**44.1 %** (38.8 – 49.7) (95% C.I.)	**45.3 %** (40.4 – 50.3) (95% C.I.)
Moderate	**31.7 %** (27.9 - 35.8 95% C.I.)	**32.0 %** (28.7 - 35.5) (95% C.I.)	**30.4 %** (26.7 – 34.4) (95% C.I.)	**30.3 %** (26.7 – 34.2) (95% C.I.)
Severe	**15.3 %** (12.2 - 19.0 95% C.I.)	**11.2 %** (8.9 – 14.1) (95% C.I.)	**13.7 %** (11.2 – 16.8) (95% C.I.)	**15.0 %** (11.9 – 18.8) (95% C.I.)
3. Underweight	**47.8 %** (41.5 - 54.1 95% C.I.)	**43.7 %** (40.0 – 47.4) (95% C.I.)	**47.8 %** (43.8 – 51.8) (95% C.I.)	**43.8 %** (38.9 – 48.9) (95% C.I.)
Moderate	**35.4 %** (30.7 - 40.5 95% C.I.)	**36.0 %** (32.9 – 39.2) (95% C.I.)	**36.7 %** (33.5 – 40.1) (95% C.I.)	**33.7 %** (30.0 – 37.5) (95% C.I.)
Severe	**12.3 %** (9.1 - 16.5 95% C.I.)	**7.7 %** (5.7 – 10.3) (95% C.I.)	**11.1 %** (8.7 – 14.0) (95% C.I.)	**10.2 %** (8.0 – 12.9) (95% C.I.)
B. Morbidity and Mortality				
B. Mortality: CMR	**0.18** (0.08 - 0.39)	**0.10** (0.04 - 0.26) (95% CI)	**0.23** (0.13- 0.40) (95% CI)	**0.06** (0.02- 0.19) (95% CI)
U5MR	**0.35** (0.08 – 1.41)	**0.11** (0.02 – 0.82) 95% CI	**0.34** (0.11- 1.06) (95% CI)	**0.12**(0.02- 0.88) (95% CI)
C. Illness of Children U5	**22.4%**	**20.1%**	**23.8%**	**14.0%**
D. Vaccination Coverage				
BCG	**74.0%**	**76.5%**	**83.8%**	**76.3%**
Measles (card + mother recall)	**89.3%**	**91.6%**	**94.5%**	**96.3%**
Vitamin A Supplement	**88.4%**	**89.7%**	**95.6%**	**97.0%**
E. Level of Malnutrition	**"Poor"**	**"Acceptable"**	**"Serious"**	**"Poor"**

2.4 BANS result summarized in Table, Bar and Line Graph depicting trends and changes of malnutrition

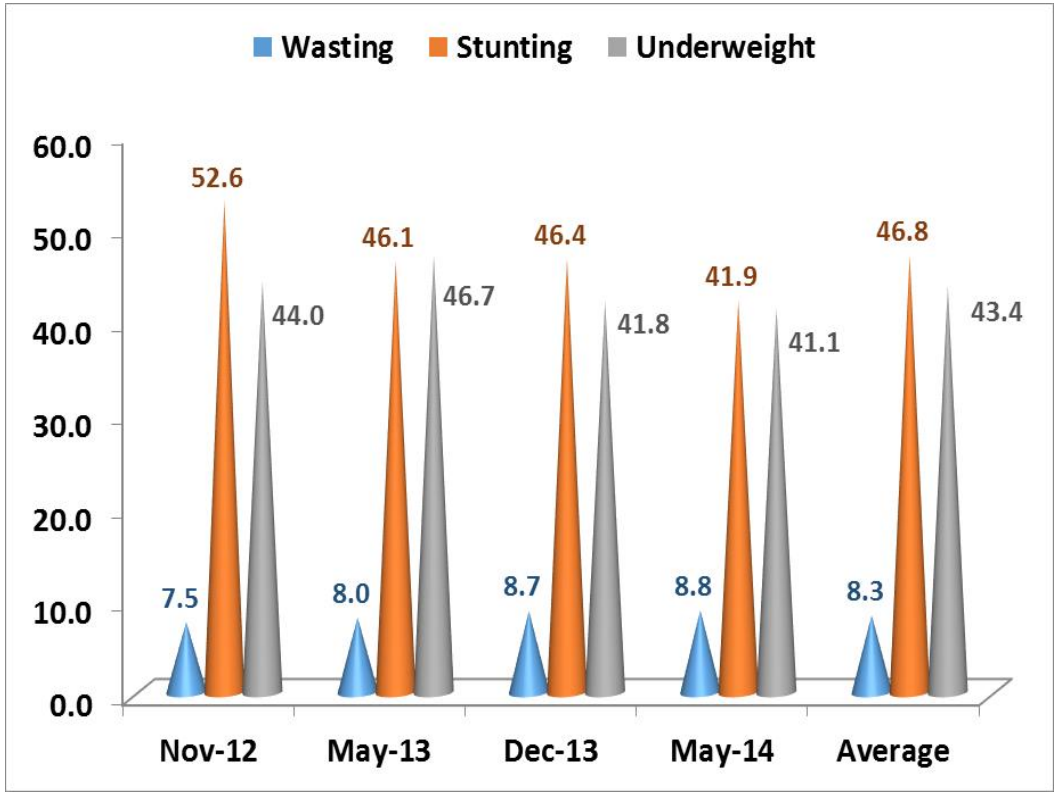
2.4.1 Raya Azebo

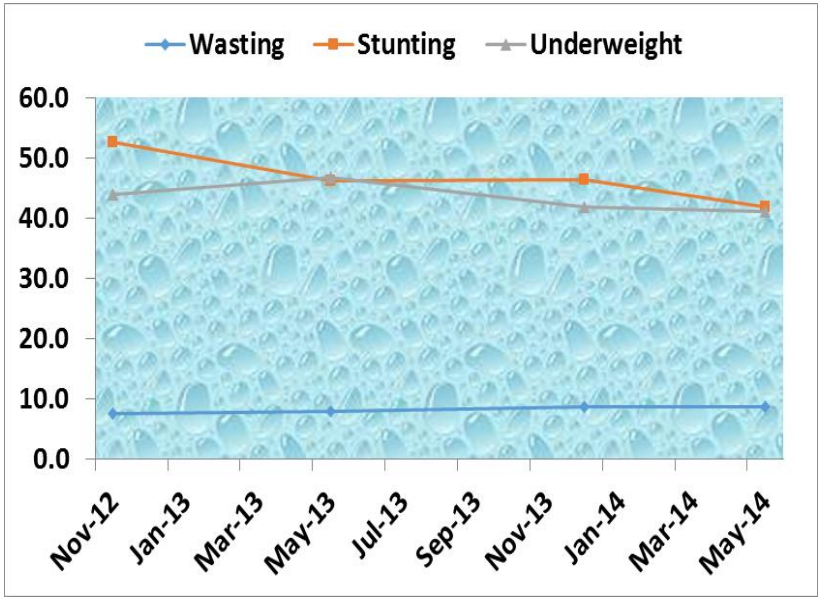




Indicator	Nov-12	May-13	Dec-13	May-14	Average
Wasting	6.9	6.5	4.2	5.0	5.7
Stunting	23.9	30.7	26.1	25.6	26.6
Underweight	25.0	32.0	23.0	25.0	26.3

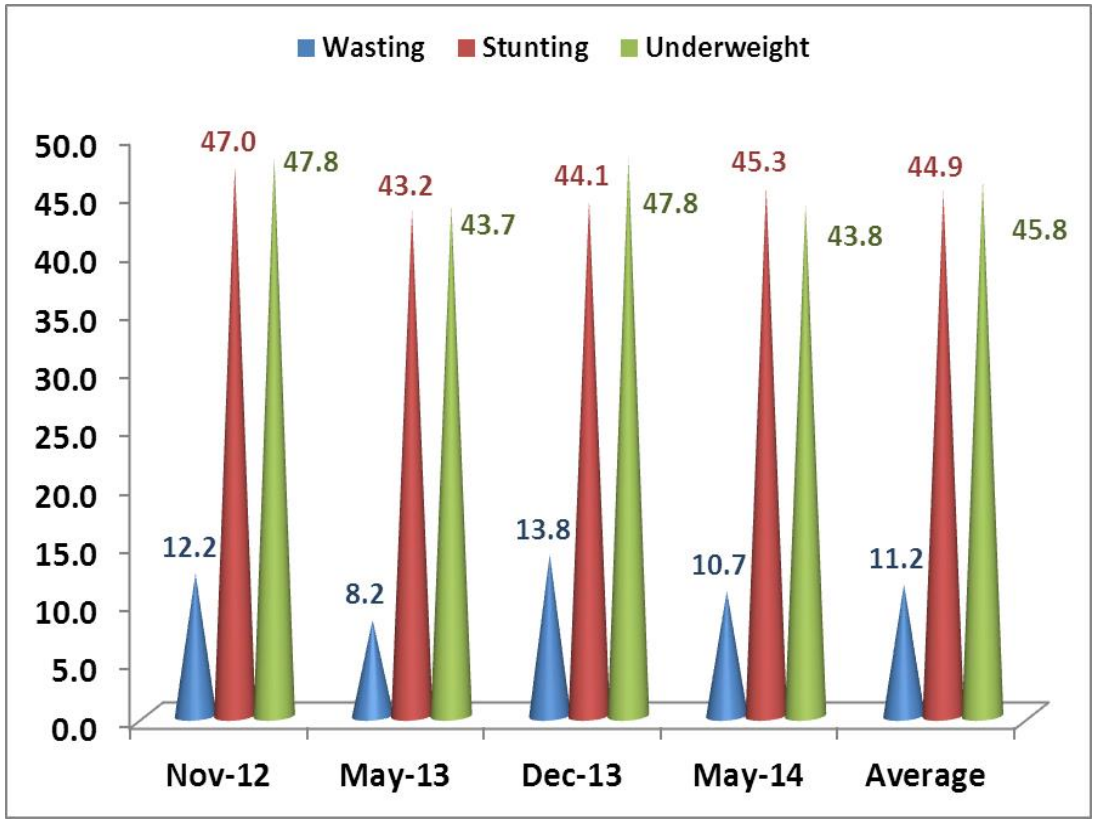
2.4.2 Saesi Tsaeda Emba

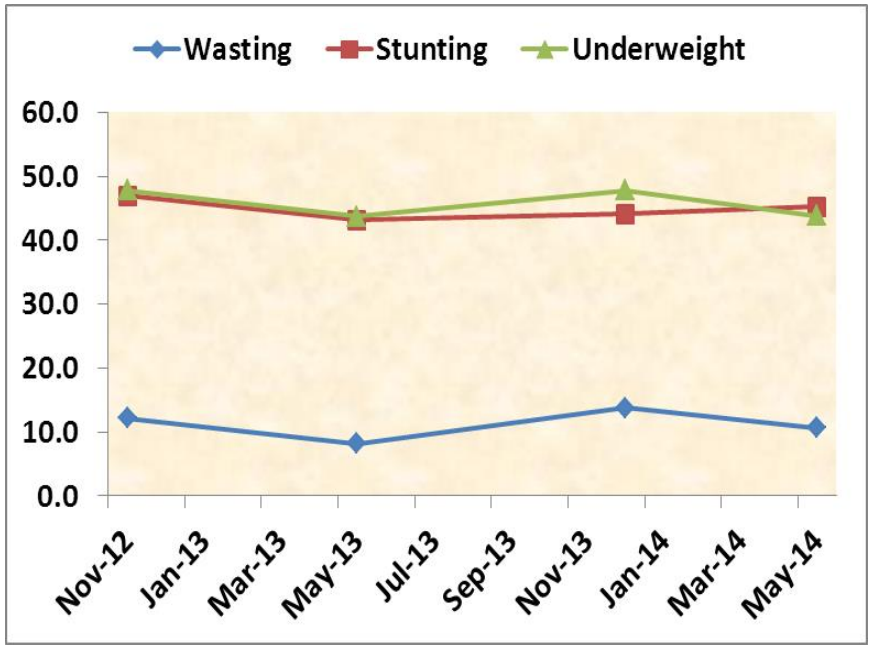




Indicator	Nov-12	May-13	Dec-13	May-14	Average
Wasting	7.5	8.0	8.7	8.8	8.3
Stunting	52.6	46.1	46.4	41.9	46.8
Underweight	44.0	46.7	41.8	41.1	43.4

2.4.3 Tanqua Abergele Woreda

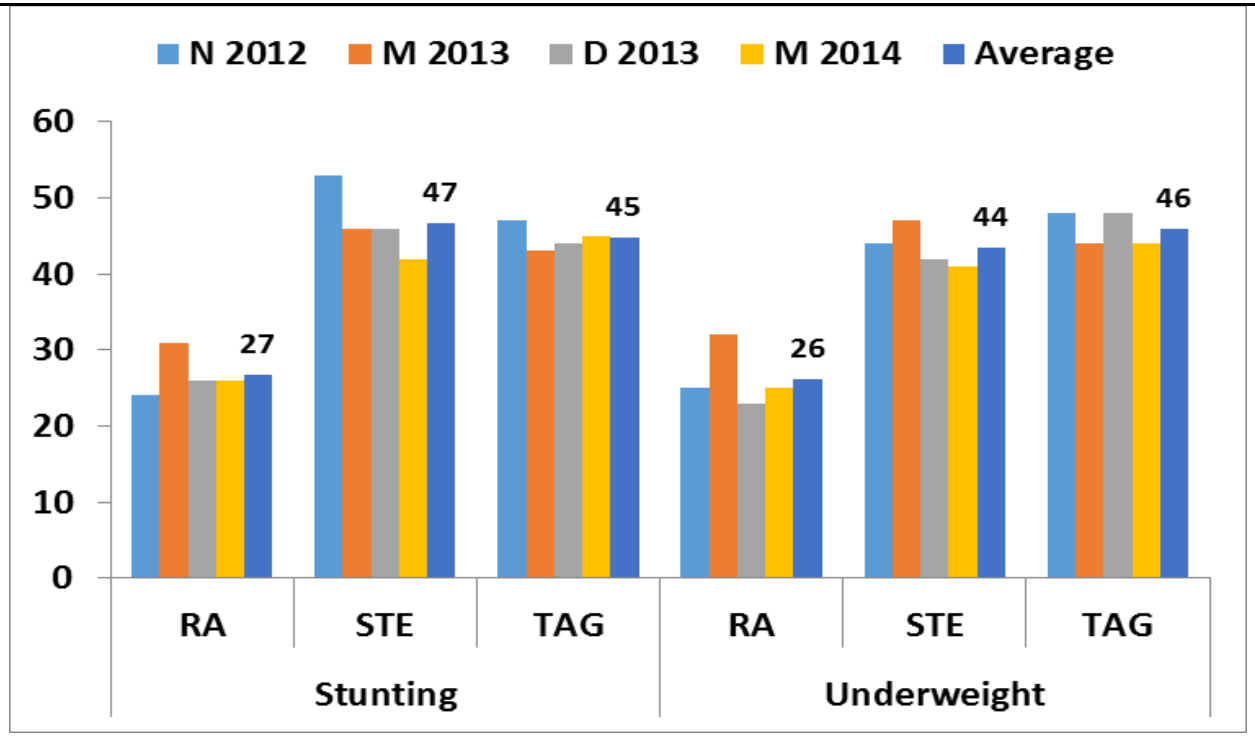




Indicator	Nov-12	May-13	Dec-13	May-14	Average
Wasting	12.2	8.2	13.8	10.7	11.2
Stunting	47.0	43.2	44.1	45.3	44.9
Underweight	47.8	43.7	47.8	43.8	45.8

. Summary of Stunting & Underweight in one Table & Chart

Survey Dates	Stunting			Underweight		
	RA	STE	TAG	RA	STE	TAG
N 2012	24	53	47	25	44	48
M 2013	31	46	43	32	47	44
D 2013	26	46	44	23	42	48
M 2014	26	42	45	25	41	44
Average	27	47	45	26	44	46



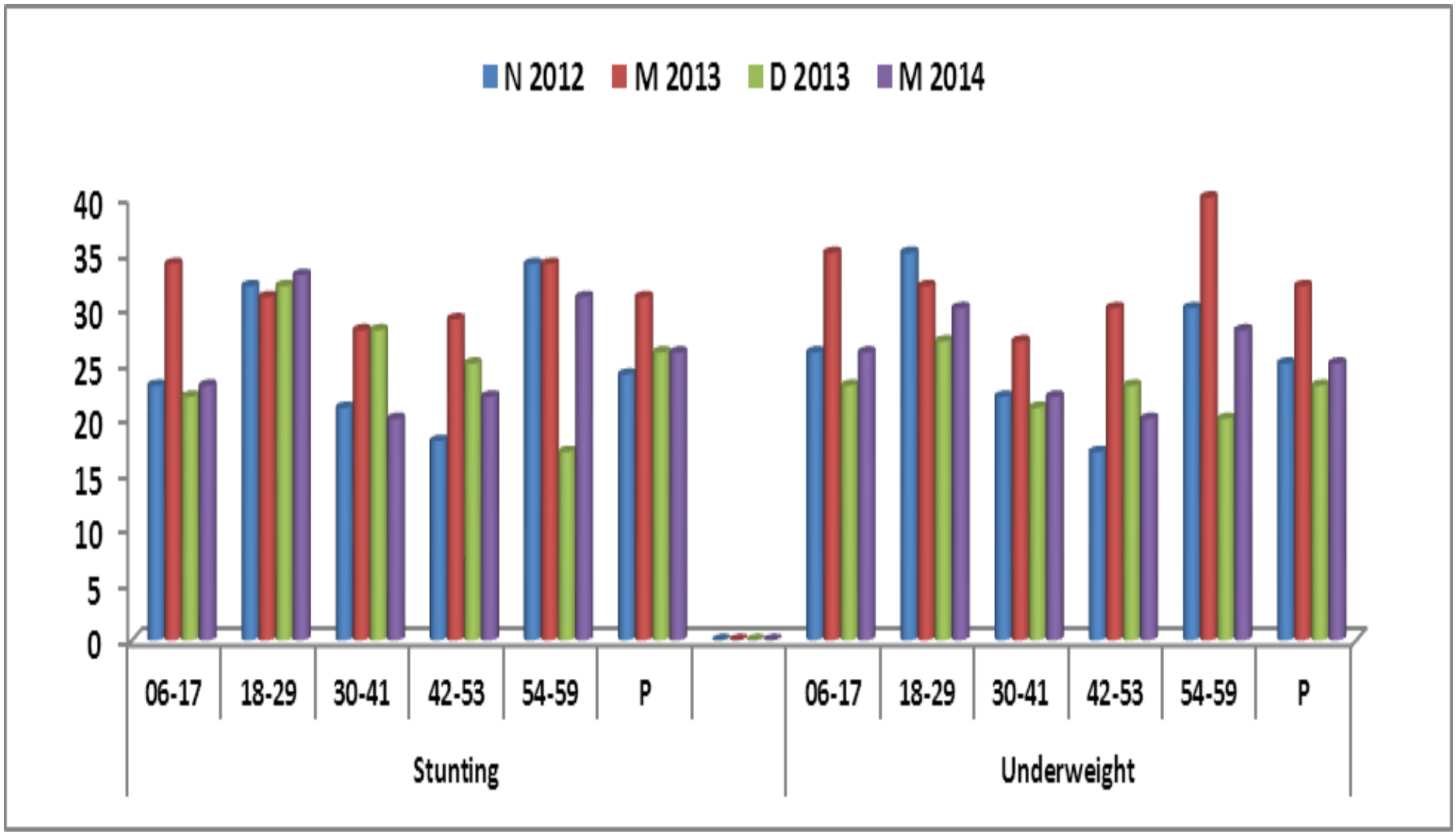
2.5. BANS result disaggregated by age

2.5.1 Raya Azebo Woreda																
Indicators	**Nov-12**				**May-13**				**Dec-14**				**May-14**			
A. Wasting																
Age in months	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**
06-17	151	0.0	10.6	**10.6**	166	0.6	5.4	**6.0**	159	0.6	4.4	**5.0**	144	0.0	6.2	**6.2**
18-29	133	1.5	5.3	**6.8**	177	1.1	7.9	**9.0**	184	0.0	5.4	**5.4**	155	0.0	2.6	**2.6**
30-41	148	0.0	5.4	5.4	171	0.0	2.9	2.9	150	0.7	2.0	2.7	129	0.0	3.1	3.1
42-53	150	0.0	3.3	3.3	152	0.0	7.9	7.9	115	0.0	4.3	4.3	106	0.0	7.5	8.5
54-59	44	0.0	11.4	11.4	62	0.0	6.5	6.5	54	0.0	1.9	1.9	51	0.0	5.9	5.9
Total	**626**	**0.3**	**6.5**	**6.9**	**728**	**0.4**	**6.0**	**6.5**	**662**	**0.3**	**3.9**	**4.2**	**585**	**0.0**	**4.8**	**5.0**
B. Stunting																
Age in months	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**
06-17	148	2.7	20.3	**23.0**	166	11.4	22.3	**33.7**	155	5.2	16.8	**21.9**	144	6.9	16.0	**22.9**
18-29	131	13.7	18.3	**32.1**	167	9.0	21.6	**30.5**	182	7.1	25.3	**32.4**	154	7.8	25.3	**33.1**
30-41	144	8.3	12.5	20.8	169	5.9	22.5	28.4	142	4.9	22.5	27.5	125	5.6	14.4	20.0
42-53	148	2.0	15.5	17.6	147	4.8	23.8	28.6	114	4.4	20.2	24.6	105	3.8	18.1	21.9
54-59	44	0.0	34.1	34.1	62	17.7	16.1	33.9	54	3.7	13	16.7	51	5.9	25.5	31.4
Total	**615**	**6.0**	**17.9**	**23.9**	**711**	**8.7**	**21.9**	**30.7**	**647**	**5.4**	**20.7**	**26.1**	**579**	**6.2**	**19.3**	**25.6**
C. Underweight																
Age in months	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**
06-17	153	5.2	20.9	**26.1**	165	7.3	27.9	**35.2**	159	3.1	19.5	**22.6**	143	4.9	21.0	**25.9**
18-29	132	3.8	31.1	**34.8**	176	7.4	25.0	**32.4**	184	3.8	22.8	**26.6**	155	3.2	26.5	**29.7**
30-41	149	4.0	17.4	21.5	172	2.3	25.0	27.3	150	2.7	18.0	20.7	129	3.9	17.8	21.7
42-53	151	3.3	13.9	17.2	151	2.0	27.8	29.8	114	1.8	21.1	22.8	105	1.9	18.1	20.0
54-59	44	0.0	29.5	29.5	62	1.6	38.7	40.3	55	3.6	16.4	20.0	51	0.0	27.5	27.5
Total	**629**	**3.8**	**12.1**	**25.0**	**726**	**4.5**	**27.4**	**32.0**	**662**	**3.0**	**20.1**	**23.1**	**583**	**3.3**	**21.8**	**25.0**

2.5.2 Saesi Tsaeda Emba Woreda																
Indicator	**Nov-12**				**May-13**				**Dec-13**				**May-14**			
A. Wasting																
Age in months	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**
06-17	131	0.0	11.5	**12.2**	180	2.2	9.4	**12.8**	174	0.0	11.5	**11.5**	140	0.0	7.9	**7.9**
18-29	117	0.0	8.5	**8.5**	153	0.0	7.8	**7.8**	160	0.0	12.5	**12.5**	122	2.5	11.5	**13.9**
30-41	130	0.8	1.5	2.3	156	0.0	3.2	3.2	147	0.0	6.8	6.8	141	0.0	4.3	4.3
42-53	100	1.0	8.0	9.0	166	0.0	7.8	7.8	141	0.0	5.0	5.0	113	0.9	5.3	6.2
54-59	42	2.4	0.0	2.4	68	0.0	5.9	5.9	70	0.0	4.3	4.3	51	2.0	11.8	13.7
Total	**520**	**0.6**	**6.7**	**7.5**	**723**	**0.6**	**7.1**	**8.0**	**692**	**0.0**	**8.7**	**8.7**	**567**	**0.9**	**7.6**	**8.5**
B. Stunting																
Age in months	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**
06-17	127	4.7	31.5	**36.2**	179	10.6	19.6	**30.2**	171	8.8	26.3	**35.1**	141	6.4	21.3	**27.7**
18-29	112	18.8	42.9	**61.6**	152	21.7	32.9	**54.6**	159	11.3	45.3	**56.6**	123	19.5	32.5	**52.0**
30-41	132	20.5	39.4	59.8	155	20.6	32.9	46.5	146	10.3	37.0	47.3	139	15.1	29.5	44.6
42-53	98	25.5	27.6	53.1	162	14.2	32.7	46.9	138	16.7	31.2	47.8	112	14.3	30.4	44.6
54-59	42	26.2	28.6	54.8	68	17.6	32.4	50.0	67	16.4	29.9	46.3	49	16.3	26.5	42.9
Total	**511**	**17.6**	**35.0**	**52.6**	**716**	**16.6**	**29.5**	**46.1**	**681**	**12.0**	**34.4**	**46.4**	**564**	**13.8**	**28.0**	**41.8**
C. Underweight																
Age in months	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**
06-17	132	6.8	30.3	**37.1**	179	11.7	29.6	**41.3**	172	6.4	31.4	**37.8**	139	3.6	26.6	**30.2**
18-29	117	15.4	35.0	**50.4**	153	11.1	39.9	**51.0**	159	12.6	39.6	**52.2**	125	12.0	41.6	**53.6**
30-41	132	8.3	34.8	43.2	156	4.5	42.9	47.4	147	4.8	29.3	34.0	142	7.7	33.8	41.5
42-53	100	7.0	41.0	48.0	166	6.6	38.0	44.6	141	8.5	33.3	41.8	113	6.2	29.2	35.4
54-59	42	7.1	33.3	40.5	68	7.4	47.1	54.4	70	5.7	38.6	44.3	51	11.8	39.2	51.0
Total	**523**	**9.2**	**34.8**	**44.0**	**722**	**8.4**	**38.2**	**46.7**	**689**	**7.8**	**34.0**	**41.8**	**570**	**7.7**	**33.3**	**41.1**

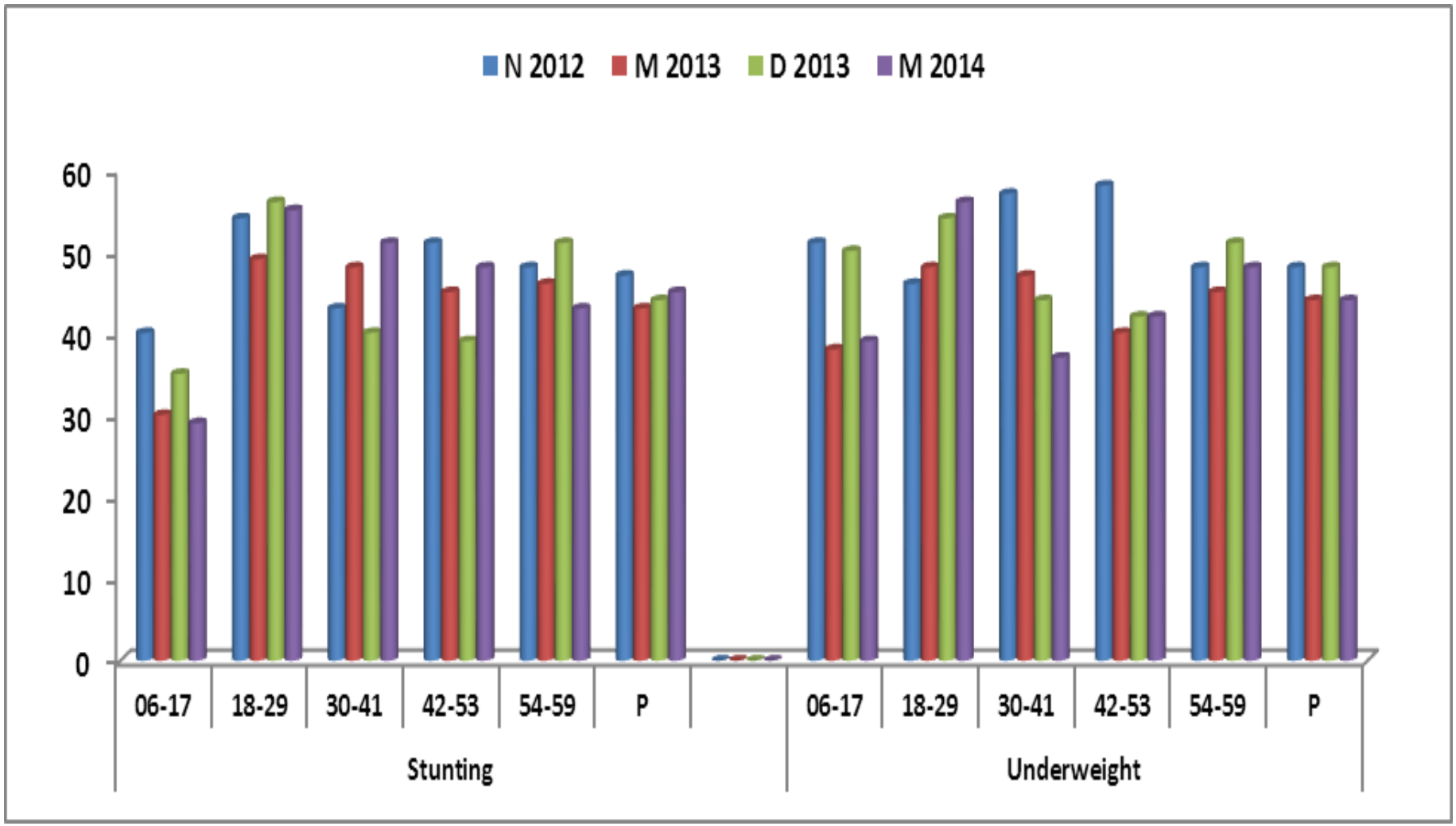
2.5.3 Tanqua Abergele Woreda																
Indicators	**Nov-12**				**May-12**				**Dec-13**				**May-14**			
A. Wasting																
Age in months	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**	**#**	**S**	**M**	**GAM**
06-17	148	1.4	10.8	**12.8**	216	1.4	9.7	**11.1**	163	2.5	16.0	**18.4**	183	1.1	9.8	**10.9**
18-29	132	3.0	11.4	**14.4**	248	0.4	6.5	**6.9**	230	3.0	11.7	**15.2**	190	0.0	17.4	**17.9**
30-41	116	0.0	10.3	10.3	214	0.0	9.3	9.3	207	0.0	11.6	11.6	178	0.6	6.2	6.7
42-53	115	0.9	9.6	10.4	189	0.0	5.3	5.3	191	0.0	11.0	11.0	204	1.0	6.4	7.4
54-59	48	4.2	8.3	12.5	82	1.2	7.3	8.5	76	0.0	13.2	13.2	80	1.3	8.8	10.0
Total	**559**	**1.6**	**10.4**	**12.2**	**949**	**0.5**	**7.7**	**8.2**	**867**	**1.3**	**12.5**	**13.8**	**835**	**0.7**	**9.8**	**10.7**
B. Stunting																
Age in months	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**
06-17	146	6.8	33.6	**40.4**	212	7.5	22.2	**29.7**	156	12.2	22.4	**34.6**	175	9.1	9.1	**29.1**
18-29	130	21.5	32.3	**53.8**	242	12.8	36.0	**48.8**	227	19.4	36.6	**55.9**	185	19.5	19.5	**54.6**
30-41	113	15.0	28.3	43.4	211	13.7	34.1	47.9	203	14.3	26.1	40.4	172	16.3	16.3	50.6
42-53	112	17.0	33.9	50.9	182	9.9	35.2	45.1	185	8.6	30.3	38.9	200	15.5	15.5	47.5
54-59	48	20.8	27.1	47.9	78	12.8	33.3	46.2	74	10.8	40.5	51.4	80	13.8	13.8	42.5
Total	**549**	**15.3**	**31.7**	**47.0**	**925**	**11.2**	**32.0**	**43.2**	**845**	**13.7**	**30.4**	**44.1**	**812**	**15.0**	**15.0**	**45.3**
C. Underweight																
Age in months	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**	**#**	**S**	**M**	**S+M**
06-17	147	11.6	37.4	**51.0**	216	8.3	29.6	**38.0**	162	14.8	35.2	**50.0**	182	7.7	30.8	**38.5**
18-29	133	17.3	36.8	**45.9**	250	8.8	39.2	**48.0**	230	15.2	38.3	**53.5**	189	17.5	38.1	**55.6**
30-41	116	12.1	31.0	56.9	214	7.0	39.7	46.7	206	10.2	34.0	44.2	179	8.4	28.5	36.9
42-53	115	9.6	32.2	58.3	191	5.2	35.1	40.3	191	5.2	36.6	41.9	204	8.8	33.3	42.2
54-59	48	8.3	43.8	47.9	82	9.8	35.4	45.1	77	7.8	42.9	50.6	81	6.2	42.0	48.1
Total	**559**	**12.4**	**35.4**	**47.8**	**953**	**7.7**	**36.0**	**43.7**	**866**	**11.1**	**36.7**	**47.8**	**835**	**10.2**	**33.7**	**43.8**

2.5.4 Stunting and Underweight disaggregated by age: RA



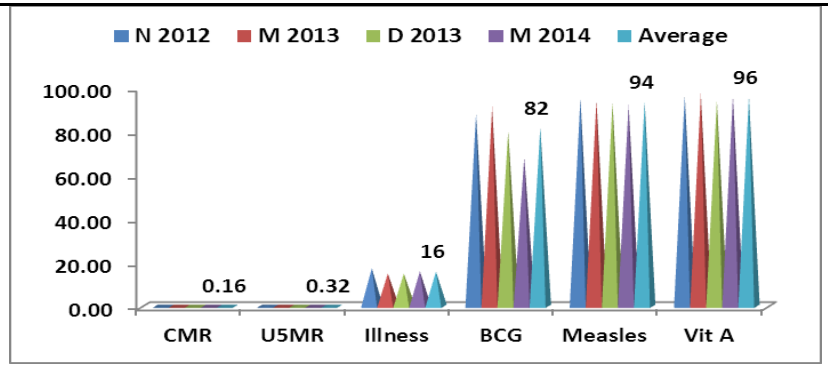
2.5.5 Stunting and Underweight disaggregated by age: STE

2.5.6 Stunting and Underweight disaggregated by age: TAG

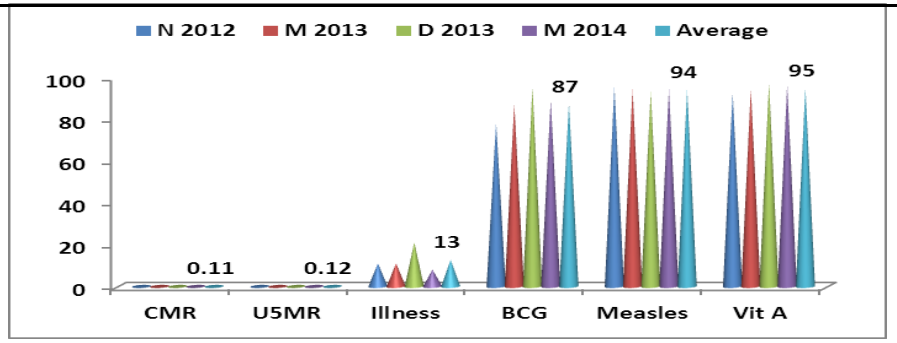


3.0 Mortality, Morbidity, Illness & Vaccination

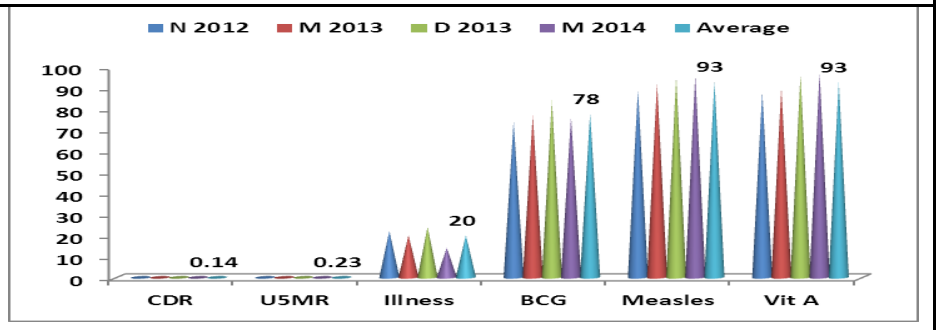
3.1 RA	CMR	U5MR	Illness	BCG	Measles	Vit A
N 2012	0.20	0.47	17	88	95	96
M 2013	0.20	0.30	15	91	94	97
D 2013	0.15	0.34	15	80	93	94
M 2014	0.08	0.18	16	68	92	96
Average	**0.16**	**0.32**	**16**	**82**	**94**	**96**



3.2 STE	CMR	U5MR	Illness	BCG	Measles	Vit A
N 2012	0.11	0.20	11	78	95	92
M 2013	0.12	0.14	11	87	94	94
D 2013	0.15	0.15	21	95	93	97
M 2014	0.07	0.00	8	89	94	96
Average	**0.11**	**0.12**	**13**	**87**	**94**	**95**

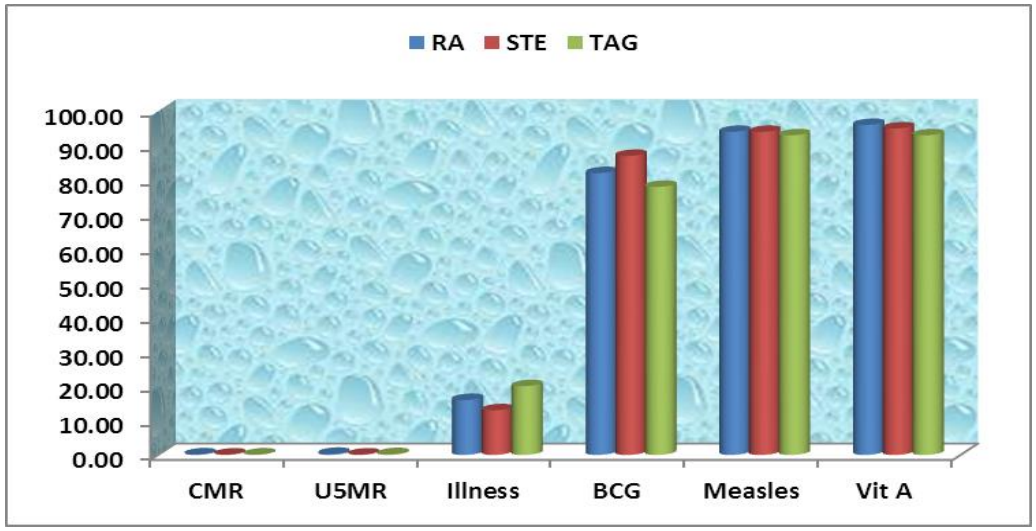


3.3 TAG	CDR	U5MR	Illness	BCG	Measles	Vit A
N 2012	0.18	0.35	22	74	89	88
M 2013	0.10	0.11	20	77	92	90
D 2013	0.23	0.34	24	84	95	96
M 2014	0.06	0.12	14	76	96	97
Average	**0.14**	**0.23**	**20**	**78**	**93**	**93**



3.4 Mortality, Morbidity and Vaccination (Average Results of the four rounds of survey) all in One

	CMR	U5MR	Illness	BCG	Measles	Vit A
RA	0.16	0.32	16	82	94	96
STE	0.11	0.12	13	87	94	95
TAG	0.14	0.23	20	78	93	93



4. Interpretation and Discussions

4.1 Wasting

- As shown from the above Tables and Charts, the prevalence of wasting in the three survey Woredas, as per the national emergency nutrition interim guideline 2008, fell under 'poor' and 'acceptable' levels. Out of the 12 surveys assessment results, 3 (25%) were classified as 'poor' and 9 (75%) were regarded as 'acceptable'.

- The prevalence of wasting in RA was between 5.0 and 6.9% with an average value of 5.7% and the prevalence of wasting in STE was between 7.5 and 8.7% with an average value of 8.3% while the prevalence of wasting in TAG was between 8.2 and 13.8% with an average value of 11.2%. In four consecutive surveys, the wasting level in RA and STE were stable and classified as normal.

- TAG had highest malnutrition rate than the other two Woredas. Out of the four surveys, only one was on 'acceptable' level but the remaining three were classified as 'poor'. The highest wasting prevalence was recorded during harvesting time.

4.2 Stunting

- Stunting in the three survey Woredas were on the higher side. The prevalence of stunting in RA was relatively better than the other two Woredas ranging from 24 to 31% with an average value of 27%. The prevalence of stunting in STE and TAG were very high ranging from 42 to 53% with an average value of 47% for STE and ranging from 43 to 47% with an average value of 45% for TAG. (please refer to the summary presentation in one table and chart)

4.3 Underweight

- Underweight in the three survey Woredas were also on the higher side. The prevalence of underweight in RA was relatively better than the other two Woredas ranging from 23 to 32% with an average value of 26%. The prevalence of stunting in STE and TAG were very high ranging from 41 to 47% with an average value of 43% for STE and ranging from 44 to 47% with an average value of 46% for TAG. (please refer to the summary presentation in one table and chart)

- The total average values of Wasting, Stunting and Underweight for four rounds of survey in the three survey Woredas were 8.4, 39.4 and 38.5 respectively indicating wasting with in the acceptable level but stunting and underweight is a major concern

- Generally speaking, the prevalence of stunting and underweight in STE and TAG is not on acceptable level, besides, it did not show any significant decline from the first to the fourth rounds of assessments, despite all the preventive nutrition and health interventions being implemented by government and its allies in the survey and other rural Woredas of Tigray regional state.

- Trends in malnutrition across four seasonal surveys in this assessment has showed that there had been very little effort exerted in community based nutrition interventions that resulted in bringing greater or maximum impact to improve the life's and livelihoods of the community to bring about significant reduction in malnutrition (stunting and underweight).

- As reflected in Table 2.5.1, 2.5.2 and 2.5.3, further disaggregating of the anthropometric data of children under five in to age categories did not show any significance decline in stunting and wasting, especially with children of the first two age category i.e between 6 -17 and 18 -29 months of age. Finding of this assessment has shown that the impact of CBN program in the three survey Woredas is not promising. At least, with the community based health and nutrition interventions, the prevalence of stunting and wasting in younger children is expected to be better, especially with children of age less than two years, but this is not the case with this study or assessment. This result was evidenced by the low performance of some of the key core CBN program (in terms of coverage and quality) being implemented in the three survey Woredas. (please refer to CBN program assessment report).

4.4 Mortality

- The average Crude and Under Five Mortality Rate (CMR & U5MR) of RA, STE and TAG Woredas were calculated as 0.16 & 0.13, 0.11 & 0.12 and 0.14 & 0.23 per 10000 people per day respectively.

- Findings of the all survey result is far below the assumed baseline 0.44 (0.5) and 1.14 (1.0) and emergency threshold level of CMR < 1.0 and U5MR < 2.0 outlined in the Sphere project and other agencies such as CDC, MSF, WHO and UNHCR.

4.5 Morbidity:

- Prevalence of illness for children under five for the past two weeks prior the survey dates were calculated for RA, STE and TAG Woredas in four rounds of surveys and the average prevalence rate were calculated as 16, 13 and 20 per cent

respectively. Fever, Diarrhea, Acute Respiratory Infection and malaria were the predominant causes of illnesses among children aged 6-59 months.
- The prevalence of illness in TAG was relatively higher than the two Woredas.

4.6 Vaccination & Vitamin A

- The average estimated coverage value of BCG & Measles vaccines for RA, STE and TAG were 82 & 94, 87 & 94 and 78 & 93 respectively.
- The average Measles vaccination coverage value in the three survey Woredas was above the national (56%) & regional (83.7%) value reflected in 2011 EDHS.
- The average BCG vaccination coverage value in the three survey Woredas was above the national (66%) but below the regional (95.9%) value reflected in 2011 EDHS.
- The estimated coverage for Vitamin A supplementation for RA, STE and TAG were 96, 95 and 93 respectively. It is above the minimum standard recommended by sphere standard (> 90%).
- Regular vaccination exercise, vitamin A supplementation and deworming administration for children under five might have contributed to the reduction of morbidity and mortality rates in the survey Woredas.

5.0. Recommendations

The government in collaboration with its key allies should employ the following short and long term recommendations to improve the nutrition situation of the children in the surveyed communities as well as other Woredas of having similar concern:-

- ✓ Health bureau should give more emphasis and take action oriented steps towards strengthening the implementation, monitoring and reporting of core CBN packages at community, Primary Health Care Unit (PHCU) and Woreda and Regional Offices. (e.g. incorporate CBN into joint monitoring and supportive supervision checklist to see the progress and challenges as well as provide on-site technical support)

- ✓ Awareness creation and advocacy for higher level decision making authorities at all level (Tabia to regional) to consider CBN program as one of the top government priority agenda (e.g. maternal delivery at health facilities) which will contribute to the reduction of stunting and underweight prevalence in children.

- ✓ Leverage NNP strategies and speed up the roll out process from region to Woreda extending to Tabia levels and invite key stakeholders to come on board to play their parts.

- ✓ Strengthen coordination and partnership with key allies to plan and implement nutrition specific and nutrition sensitive interventions to work on food and nutrition security issues by addressing immediate and underlying cause of malnutrition using multisectoral approach. e.g Agriculture, Water and Education sectors

- ✓ Strengthen community sensitization and mobilization activities to implement and follow through preventative nutrition and health interventions (e.g. Immunization, deworming, periodic and regular screening of children and pregnant and lactating mothers, promote optimal IYCF and maternal feeding and caring practices) to improve coverage and quality of CBN program.

- ✓ Improve health & nutrition education through Behavior Change Communication (BCC) by identifying and addressing Knowledge, Attitude and Practice (KAP) gap of the household and communities.

- ✓ Build the capacity (competency based trainings focusing on knowledge, skill and motivation) of front-line workers (supervisors, health officers, health extension workers, development agents & community based volunteers)

- ✓ Identify few additional Woredas to conduct further assessment to evaluate nutrition programs and or projects being implemented by the government and key allies, identify key challenges and come up with lasting solutions take collective actions to improve nutrition and health status of the vulnerable communities.