Fighting Hunger Worldwide

WFP/Gabrielle Menezes

Sierra Leone
May 2015: Modest improvements in coping in May

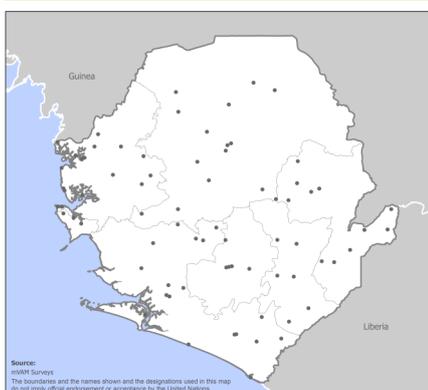*Tracking food security during the Ebola Virus Disease (EVD) outbreak*

Highlights

- **Consistent with past trends, Sierra Leone saw modest but statistically significant improvements in coping in May. Geographically, the biggest improvements were seen in the districts of Kambia and Port Loko in Sierra Leone.**

- **Food prices were stable compared to the previous month and wage rates remain stable in Liberia.**

- **Analysis of food security perceptions shows a favorable trend with more positive responses in April than in May.**

SIERRA LEONE - Reduced Coping Strategies Index (rCSI)
MAY 2015

Guinea

KOINADUGU
BOMBALI
TONKOLILI

Makeni

KAMBIA
PORT LOKO

Sierra
Leone

KAILAHUN
KONO

FREETOWN
WESTERN
AREA
RURAL

BONTHE
PUJEHUN
MOYAMBA

KENEMA

Bo
BO

Kenema

Liberia

APRIL 2015
Spheroid : WGS 1984
Grid :Lat/Long 1 Degree interval

Reduced Coping Strategies Index (rCSI)

	<14.5
	14.5 - 17
	17.1 - 20
	20.1 - 23
	> 23

Source:
mVAM Surveys
The boundaries and the names shown and the designations used in this map do not imply offcial endorsement or acceptance by the United Nations.

Source: WFP mVAM

Guinea

Liberia

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Methodology

May 2015 marked the eighth round of data collection. The data was collected by SMS over one week in mid-May. A total of 1020 questionnaires were collected in Sierra Leone. The map below shows the cellphone towers from which responses were received. Details on methodology are available online.

WFP
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vam
food security analysis

Consistent with past trends, Sierra Leone saw significant improvements in coping in May
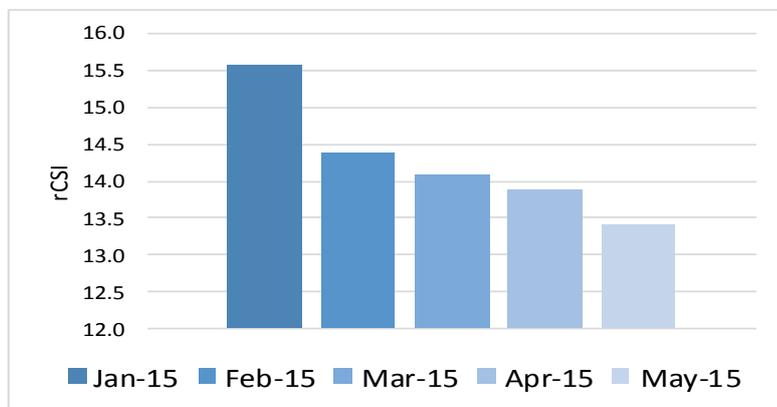
The reduced Coping Strategies Index (rCSI) measures the frequency and severity of the behaviours households engage in when faced with food shortages. A higher score indicates that households are resorting to more frequent or severe negative coping strategies.

In Sierra Leone, the mean rCSI improved from 13.9 to 13.4 and amongst repeat respondents (respondents surveyed in April and May), scores dropped by 1.8.*** [1] The median rCSI did not improve in May, however, indicating that gains were asymmetrically distributed amongst the population.

Modest improvements were seen in rural areas of Sierra Leone, where the most vulnerable populations usually reside. Statistically significant differences are observed only amongst households with a cement pit or private flush toilet. For the former group, mean rCSI decreased from 14.2 to 14.0. Amongst repeat respondents we see a mean drop of 1.8 points.** [1] Prevalence of negative coping strategies amongst repeat respondents for the cement pit latrine group showed a slight but statistically significant increase from 76.7 percent to 77.4 percent.** [2] These results indicate that although we see improvements on a national level, the gains are not even and borderline food-secure households may still be having difficulty in acquiring food.
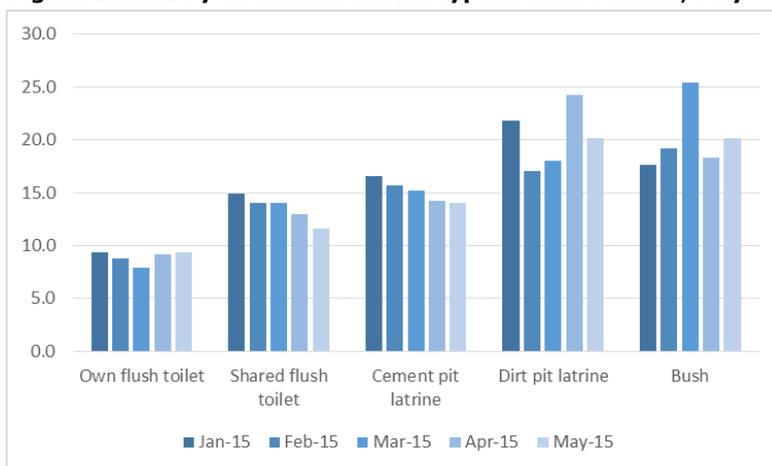
Circumstances improved for households headed by both women and those headed by men. Households headed by women experienced the biggest improvement, by 2.5 points.*** [1] For repeat households headed by men, the average rCSI improved by 1.7 points.** [1]

Figure 1: Negative coping in Sierra Leone, May

Source: WFP mVAM

Figure 2: rCSI by household latrine type in Sierra Leone, May

Source: WFP mVAM

Geographically, the biggest improvements were seen in the districts of Kambia and Port Loko from 15.9 to 14.8, and a definite net improvement for 53 percent of the population. Amongst repeat respondents (those who completed the survey in May and June), the mean reduction was 2.3 points.*** [1] Table 1 shows all statistically significant improvements (p<0.05) by sample domain.

Table 1 : Statistically significant changes in rCSI for May 2015 by sample domain

Country	Governorate	Mean (May)	Mean (April)	Diff. Mean	Avg. Absolute Difference	P-Value (Wilcoxon)
Sierra Leone		13.41	13.88	-0.47	-1.84	0.00
	Bombali, Koinadugu, Tonkolili	14.30	14.91	-0.60	-1.82	0.02
	Kambia, Port Loko	14.85	15.97	-1.13	-2.28	0.01
	Western Rural	12.66	12.77	-0.11	-2.59	0.01

Source: WFP mVAM

National food prices remain stable while wage rates and terms-of-trade rise

In Sierra Leone, the national average prices of local and imported rice and palm oil were relatively stable while local markets showed mixed patterns. Imported rice prices increased in Kenema (+13%) and urban parts of Western Area (+7%). Local rice prices decreased or remained stable in most districts, except in rural parts of Western Area (+5%) and in Freetown (+3%). The price of palm oil decreased throughout the country, except in Kenema where prices remained stable.
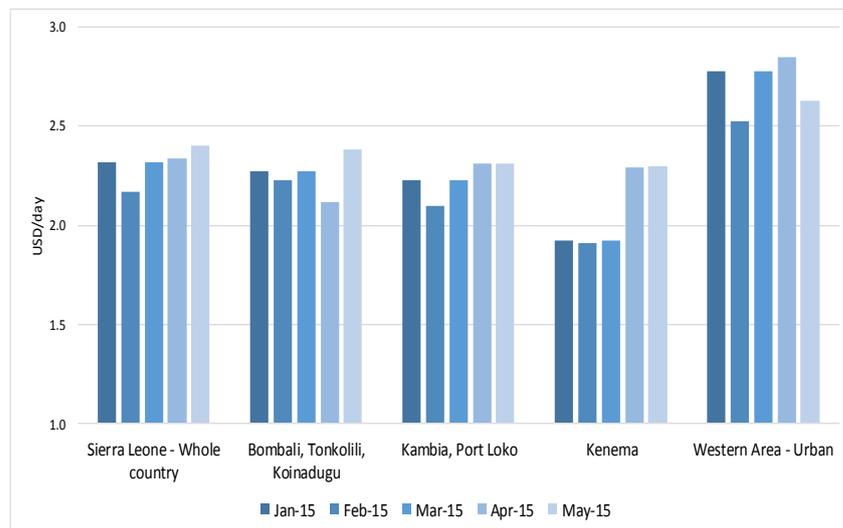
Wage rates rose by 3 percent in May and were noted in most districts, led by Bombali/Tonkolili/Koinadugu (+12%) and Bonthe/Pujehun/Moyamba (+6%). After an increase in April, wage rates fell by 8 percent in urban parts of Western Area. Terms of trade remained stable in May, with two exceptions: as wages rose by 12 percent in Bombali, Tonkolili and Koinadugu, purchasing power rose by 13 percent; conversely, wages fell by 8 percent in urban parts of Western Area, resulting in a 14 percent decrease in purchasing power. The best terms of trade in May were in the counties of Bonthe/ Pujehun/Moyamba, where the daily wage bought 12.8 cups of local rice. The lowest were in the counties of Kailahun/Kono, at 11.1 cups per daily wage.

Table 2: Food price trends

Area	Mar - Apr changes			Apr-May changes		
	Imported rice	Local rice	Palm oil	Imported rice	Local rice	Palm oil
Sierra Leone	-1%	0%	0%	2%	0%	-3%
Kambia/Port Loko	**7%**	4%	-3%	-4%	0%	-1%

Source: WFP mVAM

Figure 3: Daily wage rates for unskilled labour (USD/day)

Source: WFP mVAM

Perceptions of food security in May

To gauge perceptions of food security in May, we used the Pattern sentiment analysis algorithm developed by the Computational Linguistics & Psycholinguistics Centre at University of Antwerp. For a given sentence, the algorithm returns the 'polarity': a measure of how positive/negative the statement is on a scale of -1.0 to +1.0.

In Sierra Leone, slightly more positive responses were received in May compared to April, with a (+0.034) increase in the mean.** [1] The word 'Ebola' was the second most-used word, even if it was mentioned 20 percent less frequently in May than in April. Negative words such as 'difficult,' 'hard,' and 'problem' ranked the highest, while the term 'good' only ranked eleventh. Despite these difficulties, respondents used negative words 17 percent less frequently on May than in April. This supports other trends which indicate slow improvement in coping strategies.

Figure 4: Word Cloud for Sierra Leone, May

In the words of respondents

- "Food situation in my district is very much deplorable as we are currently in the raining reason. As you know most people are on agricultural activities." Male respondent from Kailahun

- "The food situation is very difficult especially for the poor and disable people." Female respondent from Bombali

- "We are lack of food in our community. Due to lack of local market people were been stop to do trading in our community." Male respondent from Kambia

- "Food stuffs are available but very expensive. Some traders deliberately raised the prices of food stuffs and blame it on the Ebola crisis." Female respondent from Port Loko.

Conclusions and Outlook

In May, there were modest but statistically significant improvements in coping levels at a national level. These improvements, however, were not equal across socio-economic groups. Geographically, the biggest improvements were seen in the districts of Kambia and Port Loko in Sierra Leone.

In Sierra Leone food price remains stable at a national level. In June, wage rates and terms of trade rose on a national level while on more localized level the results are mixed.

The lean season is approaching, and PRESAO is forecasting rainfall deficits that could have a negative impact on the agricultural campaign.

Methodological Notes: Reporting statistical tests and significance level

The level of statistical significance and the type of statistical test are reported with the following convention:

Significance Level

p-value	reported symbol
0.10 to 0.05	*
< 0.05 to 0.01	**
< 0.01	***

Statistical Test

1. Wilcoxan
2. Chi-Square test
3. Welch's t-test

For more information, please contact the VAM Food Security Analysis Unit:

Arif Husain
arif.husain@wfp.org

Jean-Martin Bauer
jean-martin.bauer@wfp.org

Simon Renk
simon.renk@wfp.org

To download mVAM data on the Ebola-affected countries, please visit: http://vam.wfp.org/sites/mvam_monitoring/Ebola.html