

Sierra Leone

JOINT CILSS/FAO/FEWS NET PRE-HARVEST ASSESSMENT MISSION OF THE 2009/2010 CROPPING SEASON in Sierra Leone

**Mr Joseph S. BANGOURA, PEMSD/MAFFS, Freetown
Mr Mohamed A. Sheriff, PEMSD/MAFFS, Freetown
Mr Momodou KAMARA, National Consultant**

Freetown, October 2009

TABLE OF CONTENTS

I. INTRODUCTION	2
II. PROGRESS OF THE 2009/2010 CROPPING SEASON	3
2.1 RAINFALL SITUATION	3
2.2 HYDROLOGY SITUATION	3
2.4 PHYTOSANITARY SITUATION	3
III. THE 2009/2010 CEREAL AND OTHERS FOOD PRODUCTS FORECAST	4
3.1. REMINDER OF THE METHODOLOGY	4
3.2. CEREAL AND OTHER CROPS PRODUCTION ESTIMATE	5
IV. FOOD SITUATION AND RISK ZONES.....	5
4.1 FOOD SITUATION	5
4.2 MARKET SITUATION (PRICE TRENDS).....	5
4.3 NUTRITION SITUATION	6
V. IDENTIFICATION OF RISK ZONES.....	7
5.1 SITUATION IN TERMS OF FLOODING AND OTHER DAMAGE	7
5.2 AREAS AFFECTED	7
VII CONCLUSION AND RECOMMANDATION	11
APPENDIX	ERREUR ! SIGNET NON DEFINI.

1.0 Introduction

The joint CILSS/FAO/FEWS NET pre-harvest assessment mission of the 2009/2010 cropping season went to Sierra Leone from October, 19 to 23 2009. Members of the mission were:

- Amadou Bocar BAL, Entomologist at AGRHYMET Regional Centre, Niamey;
- Ibnou DIENG, Statistician at AGRHYMET Regional Center, Niamey;
- Joseph S. Bangura, PEMSD/MAFFS, Freetown;
- Mohamed A. Sheriff, PEMSD/MAFFS, Freetown;
- Momodu Kamara, National Consultant, Freetown.

The mission paid first visits to the Hon. Minister of Agriculture Forestry and Food Security of Sierra Leone, Dr. Joseph Sam Sesay and to the Director General of Agriculture, Francis A. R. Sankoh. There after, some visits were made to partner agencies (WFP, FAO); technical divisions of the Ministry and Statistics Sierra Leone in order to inform them of the presence of the mission and to invite them to a technical meeting scheduled for the second day. The program of activities of the mission is in Appendix 1 and the list of participants to the technical meeting is on Appendix 2.

The mission made a field visit in the rural district of Freetown (station of Newton, Kobla) to assess the crops performance and harvest prospects both in demonstration and farmers fields. During the visit, the mission held discussion with frontline extension staff of MAFFS and farmers on yield potential of both local and improved varieties (Nerica) of rice, groundnut,

maize, cassava, etc. In addition, the mission also investigated the occurrence of pest during the raining season.

At the end of its stay, the mission reported its principal conclusions to the Deputy Minister II in charge of farm mechanization Hon. Lovel Thomas.

2.0 Progress of the 2009/2010 cropping season

2.1 Rainfall situation

The rain fall situation in Sierra Leone falls under three climatic belts: Coast to 80 km inland, rainfall greater than 3,300 mm per annum; 80 to 190 Km inland, rainfall between 2,500 and 3,300 mm of mean annual rainfall; 190 km to border areas, 1,900 mm and 2,500 mm mean rainfall.

For all the country, there are only two (02) operational meteorological stations (Lungi and Freetown). The on-set of the rains for 2009 was late all over the country but not too much in the Eastern region. In the Coastal region (North west) like wise the southern and Northern regions, the total amount of rain in 2009 was as good as in 2008. The the total amount of rain in 2009 was however higher than in 2008, and intensity and duration of the rain was regularly too high. Definitely, it came out that the rain started late in 2009 in comparison with 2008. In some locations the intensity and the duration of the rain was higher than normal.

2.2 Hydrology Situation

Sierra Leone has plenty of water resources including nine river systems and streams. These water resources have made the country blessed with abundance of irrigable land. The ministry has identified an estimated 241,600 ha for rice irrigation in five sites against 2015. Over half of the irrigable lowland rice ecology is located in the South (Toma Bum - Bonthe district and Gbondapi - Pujehun district). The hydrological situation during 2009 was not available to the mission. So the comparison with the one of previous year was not possible.

2.3 Cropping situation

At the on-set of the rains, planting started much earlier in the eastern region (may for rice and millet) whereas these crops were sown in June or July in the other regions. Groundnut was sown in April/May in all regions.

After the installation of the rains, rain water was generally abundant. However, a drought spell occurred during groundnut pegging. Such drought spell at such stage will probably lead to reduction in groundnut yield.

2.4 Phytosanitary situation

The phytosanitary situation during 2009 was as indicated in table 1. Fruit flies were the most important constraints and the most serious one.

Table 1 : Phytosanitary situation durin the cropping season

CROP	PESTS & DISEASES	DEGREE OF INFESTATION	INTERVENTIONS
Rice	Rice Gall Midge	moderate	Surveillance
Cassava	Cassava Mealy bug Green mite Grass hopper	High	Surveillance
Maize	Stem borer (<i>Sesamia calamistis</i>) Cob borer	Very high	Spraying
Cocoa and Coffee	Blach pod (<i>Phytophthora palmivora</i>) Capsid (<i>Sahlbergela singularis</i>)	moderate	surveillance
Fruits	Fruit fly (<i>Bactocera invadens</i>)	Very high	Surveillance and trapping

2.5 Pasture and livestock situation

There are few feed industries for pigs and poultry. Therefore their feed is scarce and expensive.

For ruminants, the pastoral ecology was suitable. Large area of pastoral land occurs in the Northern and Eastern Districts.

The rainfall was suitable all year round. Many river systems remain normal and the soil was well drained. All this led to reduction of foot rot disease of cattle. Nevertheless, major livestock diseases include bacterial diseases (anthrax, black leg, & HS for ruminants), Viral diseases as PPR for small ruminants; Helminths (for all ruminants; pigs and poultry) and Metabolic diseases (vitamins and mineral deficiencies).

3.0 The 2009/2010 cereal and others food products forecast

3.1. Reminder of the methodology

MAFFS in collaboration with Statistics Sierra Leone (SSL) and the Jameel Poverty Action Lab (J-PAL- Massachusetts Institute of Technology) is currently conducting the 2009/2010 National Agricultural Sample Survey.

The survey is conducted on a nationally representative basis covering all the diverse rice ecological zones distributed in the country. A multi stage sampling method will be used. This sample frame is drawn from the 2004 national population and housing census. Sierra Leone is divided into four Political Regions (North, South, East & West), 13 Agricultural Districts, and 19 Local /District Councils which are subdivided into Wards. The smallest geographical unit is the Enumeration Area (EAs). This was used in the 2004 Sierra Leone Population and Housing Census. There are nearly 9,700 EAs in the country. In order that the Survey is representative at the District level, at least 600 EAS would be covered. Ten households will be interviewed per EA. A sampling frame of roughly 920 EAs would provide the Statistical power to detect moderate

change indicators such as quantity of rice harvested, the percentage of farmers selling the possible surplus, etc.

Within the key agricultural crop areas, localities were listed to serve as sampling frame. Two localities were selected for the establishment of the yield plots in each chiefdom/ward. In each of the selected localities, farm households cultivating the selected crops will be listed to serve as sampling frame. One farm household was selected for establishment and management of the yield plot.

The selection of yield plots was carried out as follows: Taking into consideration the top five key crops per chiefdom/ward in all the 155 chiefdoms/wards; i.e. (155 x 5 crops x 2 plots) = 1,550 yield plots were required. An average of 100 yield plots was selected per agricultural district. Four field personnel were engaged per district for establishment and management of the yield plots.

3.2. Cereal and other crops production estimate

Despite the lateness of the rains, production during the cropping season 2009/2010 promises to be good. Indeed, even though the climatic condition was is less favourable than usual, could lead to reduction in yield for the majority of the crops. Cultivated crop areas have markedly increased. So, the total production of 2009/2010 would be higher than that of 2008/2009. This increase concerns rice, cassava and sweet potato. On the other hand, groundnut production for 2009 /2010 could be less than the 2008/2009. The result of the current agricultural sample survey will not be available before 2010, although a tool for crop production forecast is not included in this investigation.

4.0 Food situation and risk zones

4.1 Food situation

On the average, the general food situation is relatively stable within the country. The supply of rice which is the staple food, is very challenging in terms of meeting national requirements. However, there has been a steady increase in the domestic production of rice since the end of the war. It is estimated that the proportion of households with adequate food consumption has increased after the war as well as the level of rice self-sufficiency in the country. The deficit is made up with increase in rice imports which is consumed primarily in the capital city and head quarters towns in the provinces; where 30% of the population is resident. The production of roots and tubers (mainly cassava and sweet potato) is currently far in excess of the national requirements for fresh, which is the main form of consumption.

4.2 Market situation (price trends)

Steep rise in food prices of particularly cereals such as rice and wheat, pose significant challenges for Sierra Leone which is a net importer of grains. In the past two years, the prices of basic food commodities such as rice, palm oil, vegetables, fish etc. have risen sharply. The year on year food price index rose by 17% in December 2007 and 23% by October 2008. This food price increase trend is expected to be the same in December 2009. The price for local rice is increasing above that of imported rice. The retail cost of 1kg rice (4 butter cups) now stands at Le 3,000.00, approximately US \$ 1.0, compared to Le1600.00 (\$ 0.53) in October 2008. The cost of 50.0kg bag of rice now goes for closely Le 120,000.00 (US \$40.00).

This cost of Le 120,000.00 (US \$ 40.0) per bag in itself, is far above the minimum wage of workers in Sierra Leone. Rural farm households that spend the highest proportion of their incomes on food are the worst affected.

The factors affecting the price increase are:

High energy prices which are also influencing agricultural commodity prices by raising the prices of production inputs,

ii) High exchange rate of the US\$ especially July- September 2009, which has contributed to the upwards driving prices of food commodities. Consumers are therefore responding by reducing the quantity they eat and are shifting to lower –costs/ lower quality foods.

On-going Agricultural commodity concentration and market price survey 2009 is currently being carried out in two daily and two periodic markets identified in each of the 13 agricultural Districts. Field Enumerators visit those markets every two weeks to collect information on the selected agricultural commodities. For the farm gate prices, markets are targeted based on the existing agricultural commodity that will be tracked at the farm gate level during time of price data collection. In order to capture cross border trade, samples were selected from border chiefdoms in Kambia, Kailahun, Koinadugu, Kono and Pujehun Districts.

4. 3 Nutrition situation

Based on high exchange rate of the US\$, consumers are responding by reducing the quantity of food they eat and are shifting to lower–costs/ lower quality food stuff. This means that the minimum daily nutritional requirement of 27,000 calories per equivalent adult would hardly be met due to the decline in the purchasing power of their incomes. This in turn will significantly contribute to the rise in mal-nutrition in the country.

4.3.1 Nutrition monitoring data

i. Stunting

36 percent of children nation wide are stunted

39 percent of rural children are stunted and 30 percent of urban children stunted.

The Western Region has 27 percent stunting and 40 percent in the Northern Region.

Moyamba has 46 percent of stunted children and Port Loko 44 percent

ii. Wastage

10 percent of Sierra Leonean children are wasted, with 4 percent severely wasted.

Wasting levels are highest at ages below 6 months and at 9-11 months (15 percent, each)

Wasting is more common in the Southern Region than elsewhere.

Children living in Bo, Kambia and Bonthe are more likely to be thin than children from other districts.

iii. Overweight

8 percent of children in Sierra Leone are overweight.

The highest proportion of overweight children is in the age group below 9 months; 12 percent of children in this age group are overweight.

The regional patterns, of overweight children range from 6 percent in the Northern Region to 12 percent each in the Eastern and Southern Regions.

At the district level, obesity is highest among children living in Moyamba (30 percent), Kono (21 percent) and Bonthe (17 percent).

iv. Underweight

Almost one-fifth of Sierra Leonean children are underweight, with 7 percent classified as severely underweight. 23 percent of Children living in rural areas and 16 percent of urban children are underweight.

The proportion of underweight children ranges from 14 percent in the Western Region to 24 percent in each in the Northern and Southern Regions.

About 30 percent of children in Bonthe, Kambia and Koinadugu districts are under weight.

4.3.2 The Micronutrient indicators (Micronutrient Deficiency)

i. Anaemia

Overall, 76 percent of children ages 6-59 months in Sierra Leone have some level of anaemia, 28 percent of children are mildly anaemic, 44 percent are moderately anaemic, and 4 percent of children with severe anaemia.

46 percent of women in Sierra Leone have some level of anaemia

34 percent of women are mildly anaemic, while 11 percent are moderately anaemic, and less than 1 percent are severely anaemic.

Prevalence of anaemia in women is highest in the Western Region (51 percent). In all other regions the level of any anaemia lies within the 43-46 percent range.

ii. Vitamin A deficiency

Vitamin 'A' coverage among children is 52 %

Early initiation of breast feeding is 51.4%

Exclusive Breast feeding is 36.6%

5.0 Identification of risk zones

5.1 Situation in terms of flooding and other damage

An assessment of reported flood situation in several parts of the country was carried out in the months of August and September. The result is reported in table 2.

5.2 Areas affected: Kambia and Kailahun District were the most affected districts due to flood in these areas.

i. Kambia District

On 10th August 2009, flood disaster was reported about Mambolo chiefdom in Kambia District.

Drainage structures which were dug decades ago became shallow and were no longer capable to block the high tidal flows from spilling over to coastal settlements and crop fields along the Little Scarcies River. Assessment was carried on 7th September 2009.

Level of Destruction-29 villages (settlements) affected.

- 215 households directly affected but did not migrate**
- 4 houses collapsed and household members were displaced**
- Personal effects were damaged;**
- Rice, cassava and sweet potato field, and livestock units were affected.**
- Household utensils and food stuff were drifted away and destroyed.**

- 30 fishing and transport boats were drifted.
- Water points were contaminated.
- 1,156.5 Acres of rice fields were flooded

People Affected

- 499 farm families affected
- 2150 dependants
- 60 (25 males & 35 females) were displaced
- 683 rice fields affect.
- 101 sheep and goats were drowned.
- 225 poultry estimated drowned transport

Copping Strategies

Extreme hunger and ill health were the hazards suffered. Indicative community response was to manually gather local materials to reconstruct the drainages. Community coping mechanism to sustain themselves included.

ii. Kailahun District

On 17-18th October 2009 flood disaster was reported about Daru and surrounding villages in two chiefdom on in Kailahun District

(1) Jawie chiefdom, Sowa Section, Daru Town ,Buima zone 3 & Nyanwama zone 4

(2) Nyaluahun chiefdom, Upper Nyawa section, Sannoh Town & Massila/Malema Town .Affected houses were mostly build of mud bricks

Level of Destruction

Flood height was 2 1/2 feet (two days after).

- Houses were still in water.
- Over crowding in the surrounding settlements.
- Assets were drifted away, and eventually stolen by unknown persons.
- Open drinking points were contaminated
- All toilets and kitchens collapsed

People Affected

823 people were displaced; 144 houses affected; 28 houses collapsed.

Copping Strategies

People were at agricultural risk and were seen eating bush yam as coping mechanism.

Table 2 : Flood situation according to Chiefdoms

CHIEFDOM	SECTION	VILLAGE	ECOLOGY	NO. OF FARM FAMILIES AFFECTED	TOTAL ACREAGE	
Mambolo	Mambolo	Mambolo	Mangrove	46	85.5	
	Rowollon	Makoth		31	70.5	
	Robis	Robis	Robis	Asso.Mangrove	20	45
		Mando	Mando		126	276.5
		Rokethegbeh	Rokethegbeh		20	48.5
	Rotain	Rotain	Rotain	Mangrove	35	72
		Tombo-walla	Tombo-walla		40	92.5
	Tombo-walla	Makribo	Makribo		7	26
		Robali	Robali		9	25
		Kalainkay	Kalainkay		11	46
		Royal-Kakonkon	Royal-Kakonkon		6	32
					4	9
TOTAL		12			355	837.5
Magbema	Kagbulor	Gbonko-maria	Mangrove		17	47
		Mapaigbo			2	4
		Rokainhen			2	4
		Makasa			2	4
		Kabaya		4	11	
		Gbonko-maparay		6	17	
		Mayanah		2	6	
TOTAL		7		35	91	
Bramaia	Kuluna	Kukuma	Boli	2	25	
	Konomaka	Kufuru		5	16	
	Kukuna	Teneba-Bramaia	IVS	1	2	
		Bobalia		1	3	
	Konimaka	Kabaya		3	11	
TOTAL		5		12	57	
Tonko Limba	Madina	Madina	Boli	5	8	
		Banekeh		4	5	
		Kasumleh		11	14	
		Petifu	IVS	15	22	
		Kamasasa	Boli	51	111	
		Yakanbor	IVS	11	20	
TOTAL		6		97	180	
G/TOTAL		30		499	1156.5	

6.0 conclusion and Recommendations

From all indications of the weather condition, the prospects for increased harvests are good for all crops, especially in the upland fields. For this reason, adequate and timely measures should be taken in order to avoid high post harvest losses. Although a multidisciplinary group exists to follow the cropping season, this is not yet operational. Lack of adequate and timely information was noticed. It is therefore recommended that Government and partner institutions should reinforce and support the multi-disciplinary working group to generate the necessary data and information for early warning.

