

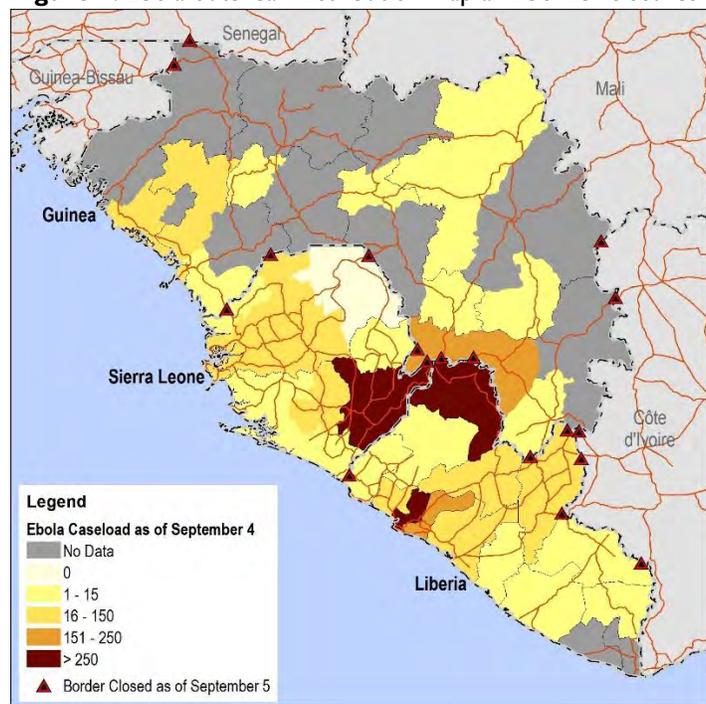
Ebola-related fears disrupt markets and livelihoods; elevated levels of food insecurity expected

Guinea, Liberia, and Sierra Leone are FEWS NET remote monitoring countries. In remote monitoring, a coordinator typically works from a nearby regional office. Relying on partners for data, the coordinator uses scenario development to conduct analysis and produce monthly reports. As less data may be available, remote monitoring reports may have less detail than those from countries with FEWS NET offices. The analysis presented in this report is based on various field information provided by local partners, such as trader organizations, WFP, and OCHA. FEWS NET also participates in an informal working group to exchange information and discuss analysis related to the potential food security impacts of the Ebola outbreak in West Africa. This group, which includes FEWS NET, the [USAID-BEST project](#), the [FANTA project](#), and [WFP](#), has provided valuable information and support for this analysis.

KEY MESSAGES

- More than 3,600 Ebola cases have been reported or are suspected in Liberia, Sierra Leone, and Guinea, with the number of cases expected to rise over the next six months. Official and unofficial restrictions on population movements in affected countries, combined with heightened levels of fear, have led many individuals to avoid leaving their homes or immediate communities. This situation has diminished food availability and income-earning opportunities in some places.
- Due to ongoing harvests, which are expected to be average to above-average, rural farming households will meet the majority of their staple food needs through their own production in the short-term, as they do during a typical year. Market disruptions will have the greatest impact on market-dependent populations, which are mostly concentrated in the urban centers at this time of year.
- Between September 2014 and March 2015, Stressed (IPC Phase 2) food insecurity or higher is expected for at least 20 percent of the population in areas worst affected by Ebola in Sierra Leone and Liberia (Figure 1), with households with ill family members and the urban poor likely to face reductions in the quality and quantity of their diets. A smaller proportion of the population will face illness and market disruptions in worst-affected areas of Guinea and Minimal (IPC Phase 1) acute food insecurity is expected there.
- Market impacts in West Africa beyond the Ebola-affected countries will remain limited to reduced flows of livestock, labor, and other foods (ex. palm oil, vegetables) between Guinea and neighboring southern Senegal and southwestern Mali. No impacts on food security outcomes are expected for these countries.

Figure 1. Ebola outbreak distribution map and border closures



Source: Ministry of Health and Sanitation in Sierra Leone, Ministry of Health and Social Welfare in Liberia, French Embassy in Conakry, Logistics Cluster

TYPICAL MARKET DYNAMICS¹

Key staple foods (rice): Rice is the most commonly consumed staple food in Guinea, Liberia, and Sierra Leone, with approximately 20 to 60 percent of total rice supply imported from international markets (Figure 2).² For locally-produced rice, harvests usually occur between September and December, after which households tend to rely on their own production to meet most of their food needs for several months. Poor, urban consumers typically rely on purchases of relatively cheaper imported rice throughout the entire year.

Key staple foods (cassava, palm oil, others): The second most important staple food is locally-produced cassava. Cassava can be harvested as needed year-round, though many rural households switch to cassava consumption once they deplete their rice stocks. Cassava and *gari* (cassava flour) are also consumed in urban areas, which depend on supplies from the surplus-producing areas of their respective country. Other locally-produced staple foods vary depending on the livelihood zone but can include maize, fonio, sorghum, millet, sweet potatoes, groundnuts, plantains, and cowpeas.³ Palm oil is produced as a cash crop across all three countries. Local and imported palm oil are consumed by urban and rural consumers alike.

Figure 2. Average total annual supply of key commodities with percentage imported

	Rice 1/		Cassava 2/		Vegetable Oil 3/	
	Total Supply (1,000 MT) 4/	Percent Imported	Total Supply (1,000 MT)	Percent Imported	Total Supply (1,000 MT)	Percent Imported
Guinea	1,433	20%	377	0%	98	44%
Liberia	392	56%	168	0%	67	29%
Sierra Leone	912	21%	1,119	0%	77	18%

Source: FEWS NET; Estimated based on FAO STAT and Comtrade data.

1/ Paddy rice converted to milled rice equivalent using a 2/3 conversion factor. Estimated from 2007-2013 data.

2/ Fresh cassava converted to grain equivalent, using a .20 conversion factor. Estimated from 2007-2011 data.

3/ Vegetable oil estimates are based on FAO STAT palm and palm kernel oil, coconut, and soy oil production and import estimates. Groundnuts and groundnut oil are omitted. Estimated from 2007-2011 data.

4/ Total domestic supply includes both local production and imports.

Key cross-border trade: In general, there are few large, cross-border trade flows between Liberia and Sierra Leone and other countries in West Africa. Instead, most staple food trade flows in Liberia and Sierra Leone are internal or oriented toward external global markets. In all three countries, the major seaports (Monrovia, Freetown, Conakry) supply inland markets with rice and locally-produced staples flow from surplus-producing areas to urban centers and other deficit production zones. Trade flows are larger, however, between Guinea, Mali, and Senegal, due to the strong cultural and economic ties. Guinea usually exports *gari*, palm oil, and fruits to Mali and Senegal and imports millet, cowpeas, onions, groundnuts, and livestock.

CURRENT SITUATION

Seasonal progress: Due to favorable rainfall, crops are developing normally in most areas. At this time, most labor-intensive work has been completed and early harvests of maize, groundnuts, potatoes, and rice have begun in many areas.

Border closures: [With the exception of the Malian/Guinean border, all main border crossing points between Guinea, Sierra Leone, Liberia, Cote d'Ivoire, Senegal and Guinea-Bissau have officially closed.](#) Informal trade continues at low levels due to the difficulty of monitoring the borders. Traders in Senegal report that groundnuts from Guinea are still available on Senegalese markets, but those imports are arriving via Mali, whose border is open. Senegalese traders also report that palm oil sourced from Cote d'Ivoire is being transported via Mali, instead of Guinea as in a typical year.

¹ More detailed analyses of how markets typically function in these countries can be found in the following reports: [FEWS NET Guinea Market Flow Map report](#), [Sierra Leone and Liberia Cross-border Trade report](#), [USAID Office of Food for Peace Liberia Bellmon Estimation report](#), and [USAID Office of Food for Peace Sierra Leone Bellmon Estimation](#).

² Production and trade data for all three countries are not particularly reliable, with local production estimates likely overestimated

³ More detailed livelihoods information can be found in the following reports: [Guinea Livelihood Zone Descriptions](#), [Liberia Livelihoods Zoning "Plus"](#), and [Sierra Leone Livelihoods Zoning "Plus"](#)

Functioning of ports handling imported rice: Reports indicate that major seaports (Freetown, Monrovia, and Conakry), are open and functioning normally. Container ships can be offloaded using cranes, requiring little to no in-person interactions between ship crews and local port staff. Despite some concerns by shipping companies, fear has not yet affected port functioning.

Restrictions on internal population movements and trade: To limit the spread of Ebola, the governments of Sierra Leone, Guinea, and Liberia have imposed formal restrictions on movements in areas worst-affected by the outbreak. These restrictions are changing frequently and precise information about the areas affected at a given time is limited. However, reports from partner organizations indicate that the blockades vary considerably from strict restrictions in certain urban centers to looser checkpoints in rural areas where travelers are screened for Ebola symptoms. As of September 4, field reports from Liberia suggest that all blockades, including the West Point neighborhood blockade in Monrovia, have been lifted.

Market functioning: Recent field reports indicate that some rural, weekly markets, such as the Pita market in Guinea, have been closed due to concerns about congregating in large groups. Urban daily markets remain operational.

Staple food prices: The availability of recent price data is limited. As of July, prices across Ebola-affected countries, as well as neighboring countries such as Mali and Senegal, were relatively stable due to good availability of local and imported rice. However, a recent [report](#) by the World Food Program (WFP) indicates that prices rose in some areas of Sierra Leone and Liberia between July and August. For example, WFP reported that in Monrovia, cassava and palm oil prices rose by up to 30 percent while imported rice prices remained relatively stable. However, the relationship between impacts of the Ebola outbreak and the observed price trends is unclear. Prices normally increase at this time of year due to the rainy season—when road transportation is difficult—and increased seasonal demand from households at the end of the lean season.

Livestock prices: The Guinean-Malian border, where cross-border livestock flows are the greatest, is currently open. Livestock trade flows are reportedly normal between the two countries with no major anomalies on livestock prices. In Senegal, atypically low livestock prices for the past several months are more likely due to poor livestock body conditions caused by below-average pasture availability following local rainfall deficits in 2013, not the Ebola outbreak.

Household incomes and purchasing power: Information on current household income levels is limited. Informal reports from partners indicate that non-essential government employees in Liberia were furloughed. It is not clear if they continue to receive wages. The international media is also reporting that the economies in all three countries have slowed, as many major industries scale back operations. Finally, governments have encouraged people to quit eating bush meat as a way to prevent a further spread of the disease. Consequently, demand and incomes from bush meat sales may have contracted. Purchasing power may be affected for households currently earning below-average incomes.

MOST-LIKELY SCENARIO FOR PROJECTED FOOD SECURITY OUTLOOK THROUGH MARCH 2015

Assumptions

The most likely scenario through March 2015 in Guinea, Liberia, and Sierra Leone are based on the following assumptions:

Ebola caseload

- **Ebola outbreak:** The number of Ebola cases in Liberia, Guinea, and Sierra Leone will increase significantly. The World Health Organization (WHO) estimates [20,000 total cases in the region during the next six months](#), with roughly 12,000 in Liberia, 5,500 in Sierra Leone, and 2,500 in Guinea. The WHO also assumes that any spread of the disease to other countries in the region will be controlled within eight weeks.

Local production and food stocks

- **Local production:** Local rice harvests, which occur from September to December, depending on the area, will generally be average to above-average due to favorable rainfall conditions. As most households rely on family or local labor, labor availability will be normal and sufficient to finish remaining cropping activities this year, despite quarantines. Cassava harvests will also continue during the entire outlook period. However, households with members who have died or become ill will likely have below-average harvests due to a loss of a productive household member, quarantines, and/or time taken away from production activities to care for sick family members.

- **Household food stocks:** Households in rural areas will rely on their own production for several months, as in a normal year. The duration of these stocks will vary from one livelihood zone to another, from two to three months in certain rural areas of Liberia to up to five to six months in surplus-producing zones of Guinea. Households in urban areas will be 100 percent dependent on market purchases to meet food needs.

Market dynamics

- **Port functioning:** Major seaports will remain open and operating normally in the short term. However, as the number of Ebola cases rise, large importers of rice and refined palm oil will face reduced incentives to continue operating in these countries, due to additional restrictions on ships entering local ports and fears about contracting Ebola. They will likely slow operations and reduce the levels of rice and palm oil imports from international markets in the medium term (three to six months).
- **Internal trade flows:** Domestic trade flows of imported rice to inland markets will continue but at below-average levels as the number of cases of Ebola grows. Flows of locally produced staple foods (cassava, local rice, and maize), cash crops (palm oil, vegetables) and livestock from rural areas to urban centers will also be below-average. This is due to the combined effects of continued formal restrictions on travel by governments and increasing trader fears to travel to markets. The most severe disruptions will be in areas worst-affected by the outbreak, such as Lofa County in Liberia, Gueckedou Prefecture in Guinea, and Kailahun and Kenema Districts in Sierra Leone. Market disruptions will be present in other areas to a lesser degree, with the lowest levels of disruptions in Guinea due to fewer Ebola cases.
- **Cross-border trade:** All major border crossing points between Guinea, Liberia, and Sierra Leone and neighboring countries will remain closed, with the exception of the Malian border, which will remain open. Cross-border trade will continue at atypically low levels almost entirely via informal trade through unmonitored areas of the borders. Livestock, cash crops, and staple food flows across the Guinea-Mali border will be normal to slightly below-normal.
- **Market functioning:** Certain rural, weekly markets will be closed out of concern over large congregations of people. In urban areas, daily markets will continue to function normally.
- **Market demand:** Market demand from households will be below normal. As most rural households will rely on their own crop production to meet food consumption needs during the outlook period, no atypical increases in demand are anticipated. However, reduced household incomes and purchasing power will cause below-average demand from urban households.
- **Migration:** Cross-border migration patterns will be below average this year. The low levels of cross-border movements of pastoralists with their livestock herds, which usually occur from Mali and Côte d'Ivoire to Guinea, will be disrupted as these populations choose not to cross the border. Fewer Malian laborers will travel to Guinea for mining work during the dry season, reducing incomes from this source for affected migrant households in Mali.
- **Prices:** Food price trends will be varied. In surplus production areas, the prices of local commodities will experience significant declines during the harvest period due to a low transfer of products to structurally deficit and consumption areas. Meanwhile, prices in urban centers will likely increase atypically due to poor supply levels of both imported and local food commodities. Prices will remain above last year's levels and the five-year average during the entire scenario period, with the highest increases expected in Sierra Leone and Liberia.

Food and income sources

- **Meat consumption:** Consumption of bush meat will be below average due to public announcements to avoid this meat. Urban consumers will switch to other protein sources (fish, livestock). Rural consumption will continue at low levels.
- **Economic slowdown and impacts on household incomes:** The general economic slowdown as major industries reduce output will directly or indirectly reduce household incomes from a variety of sources, with the economies of Sierra Leone and Liberia worst-affected due to the higher number of Ebola cases expected in these countries.

- **Marketing of cash crops:** Producers of rubber, vegetable, palm oil, coffee, and cocoa particularly those in areas worst-affected by the Ebola outbreak will likely have difficulties marketing their products, due to trader fears and reduced demand from neighboring countries. This will result in lower producer prices and below-average incomes.
- **Impacts on neighboring countries:** With the exception of labor migration, incomes for households in neighboring countries (Mali, Senegal, and Cote d'Ivoire) will not be significantly impacted, as trade flows are relatively small even in a normal year. In the case of livestock sales in a normal year, aggregate demand in Mali from Guinea, Liberia, and Sierra Leone is considerably less than that of other coastal countries, such as Nigeria, Ghana, and Cote d'Ivoire, so demand from other countries will offset any limited effects from these three countries. This trend will also be observed for other commodities typically sold from Cote d'Ivoire and Senegal to Guinea, Sierra Leone, and Liberia.

Projected food security outlook

For Sierra Leone and Liberia, where the number of Ebola cases is highest, the economic slowdown and market disruptions are expected to be most severe, resulting in the greatest negative impact on local food availability, household incomes, and purchasing power. However, upcoming harvests in rural areas between September and December and the continuation of informal trade will help mitigate these shocks to a certain degree. For these countries, the highest level of food insecurity for a significant area of concern will be Stressed (IPC Phase 2) from September 2014 to March 2015. In Guinea, food insecure populations will exist, particularly in southern regions worst affected by the outbreak, though the number of food insecure people will make up less than 20 percent of the total population in most-affected areas. As a result, the highest level of food insecurity for an area of concern in Guinea will be Minimal (IPC Phase 1). Beyond March 2015, if the Ebola outbreak and market disruptions continue, the population in need of humanitarian assistance and severity of food insecurity will likely grow with the approach of the 2015 lean season (July-August). Additional information about food security outcomes for various populations within each countries is as follows:

- **For households with family members who have died or are ill with Ebola,** emergency humanitarian assistance will be needed as the loss of a productive member(s) will reduce their ability to meet food and income needs. In addition, for some households, physical access to food through other sources, such as markets, will be constrained by the strict quarantines. For this relatively small, geographically-dispersed population, food consumption gaps, equivalent to Crisis (IPC Phase 3) are likely to continue into 2015.
- **For poor, urban households in areas with the highest prevalence of Ebola** (ex. Montserrado (Monrovia), Margibi, and Lofa Counties in Liberia, Kenema and Kailahun Districts in Sierra Leone, and Gueckedou and Macenta Prefectures in Guinea), continued disruptions to market functioning and trade, restricted population movements, below-average incomes, and poor purchasing power will cause an above-average number of households to face difficulties meeting basic food and nonfood needs. While food consumption gaps are not expected, poor, urban households will likely reduce food consumption to minimally adequate levels, and will rely on atypical coping strategies. These areas will be Stressed (IPC Phase 2).
- **Impacts on poor, rural households** will be limited. As the harvest period is just beginning in most rural areas, most households will be able to meet basic food needs for several months through their own production and will be in Minimal (IPC Phase 1) food insecurity. However once household food stocks deplete (between January and May, depending on the zone), households will become more dependent on market purchases. At that time, atypically high prices, along with below-average incomes, will reduce household purchasing power and limit food access. Certain agricultural households in worst-affected areas will then decline into Stressed (IPC Phase 2) food insecurity.
- **In other countries in West Africa,** the Ebola outbreak will have very limited impacts on markets and food security outcomes. While incomes from livestock sales and migration labor typically generated in Guinea will be slightly below average, it will be partially offset by demand transferred from other coastal countries. Similarly, trade flows of food commodities are usually minor. Indications suggest that Senegalese and Malian traders are either finding new sources for these products or transporting these goods informally away from the major, closed borders, with no major impact on local supply levels or prices.

WORST-CASE SCENARIO FOR PROJECTED FOOD SECURITY OUTLOOK

The most-likely scenario is based on the WHO’s estimates that the Ebola case load over the next six months will not exceed 20,000 people. In the event that the actual case load significantly exceeds this estimate and/or if Ebola cases in neighboring countries are not quickly controlled, the food security outlook might change. In this event, restrictions on population movements and trade, additional border closures across West Africa, and the closure of key ports for imported rice could increase. In this event, significant price spikes and poor food availability are likely in Guinea, Liberia, and Sierra Leone, as well as elsewhere in the region. In addition, this scenario would likely cause more generalized economic disruptions, localized political unrest, and significantly below-average household income and purchasing power. Crisis (IPC Phase 3) food insecurity between September 2014 and March 2015 would be possible, particularly among the urban poor. While in the short-term, rural poor households would have access to their fields and own stocks, their food security outcomes would likely deteriorate quickly once their stocks deplete. If the outbreak spread without control to other West African countries, worsening food security outcomes in the new outbreak areas would also be possible.

ADDITIONAL EVENTS THAT MIGHT CHANGE THE OUTLOOK

Figure 3. Possible additional events between September 2014 and March 2015 that could change the most-likely scenario.

Area	Event	Impact on food security outcomes
Guinea, Liberia, and Sierra Leone	<ul style="list-style-type: none"> • An atypically early end to the rainy season prevents full crop development. • Flooding causes significant crop damage. 	<ul style="list-style-type: none"> • Crop yields would be significantly below average. Household food stocks would deplete earlier than normal.
	<ul style="list-style-type: none"> • The Ebola epidemic is controlled quicker than is currently anticipated with significantly less than 20,000 total cases. 	<ul style="list-style-type: none"> • Market functioning, trade, and prices normalize. Household incomes from various activities (such as crop sales) would be higher than currently expected, improving purchasing power and food access for both rural and urban households.
	<ul style="list-style-type: none"> • Increased in-kind emergency humanitarian assistance for worst-affected areas. 	<ul style="list-style-type: none"> • Food access and consumption improves for beneficiaries. • Large imports by humanitarian assistance reduce economic incentives for large rice importers.
	<ul style="list-style-type: none"> • Significant outbreak of political unrest and civil insecurity. 	<ul style="list-style-type: none"> • Increase in IDP populations. Additional disruptions to markets and livelihoods with worse food security outcomes than expected in the most-likely scenario.