

# Socio-economic impact of the Ebola Virus Disease in Guinea, Liberia and Sierra Leone



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Cover photo: Congo market, In Freetown, (Photo: Lesley Wright/UNDP)

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*Empowered lives.  
Resilient nations.*



A farm in Faranah, Guinea. The country is a breadbasket in West Africa but some of its regions' agricultural exports have been hard hit by the Ebola crisis (Photo: UNDP).

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A motorcycle driver raising awareness of Ebola in Freetown. (Photo: Lesley Wright/UNDP)

# Overview

The Ebola health crisis has become a complex development challenge for Guinea, Liberia and Sierra Leone. In eight months, the outbreak has caused more cases and deaths than all previous epidemics combined. In the affected countries, weak capacities, human resources and health systems; uncontrolled migration flows; poor social cohesion; and the persistence of traditional beliefs and practices have contributed to the crisis.

Ebola is hurting economies and livelihoods, slashing gross domestic output, threatening food security, reducing opportunities for jobs and livelihoods, and slowing down foreign investment. All of these consequences are robbing people of a well-deserved peace and promising development gains.

Through its impact on prices, the epidemic is reducing people's purchasing power and increasing their vulnerability, even more so in rural areas. The most active and productive segments of the labour force, including women, are being decimated by the virus. Income-generating opportunities are being reduced, especially for those in vulnerable employment. All in all, household incomes in affected countries have suffered, plummeting by around 12 percent in Guinea and 35 percent in Liberia and posing a potential threat to peace and stability.

The crisis is also stressing the fiscal capacity of governments in Guinea, Liberia and Sierra Leone. Overall shortfalls in tax and non-tax revenues resulting from the outbreak are continuing to increase. Fighting the disease is blowing up recurrent expenditures, often at the expense of infrastructure spending, and in the midst of low absorptive capacities. Meanwhile, government financing gaps are widening and increasing public debts.

With the strong commitment of governments, the international community and the private sector, ending the outbreak and resuming growth and development are possible. That effort will require building community resilience, reviving formal and informal loan and microfinance programmes, supporting food production in the next planting season, promoting value chains in export-oriented primary commodities, as well as resuming initiatives to strengthen skills. In addition, containing the disease must go hand in hand with rebuilding and strengthening the health systems in these countries.

UNDP is working on providing concrete evidence that will help to accelerate recovery efforts. Working with the UN Mission for Ebola Emergency Response (UNMEER) which is leading the UN's overall response, UNDP is leading early recovery efforts, and supporting nationally-led efforts to address the crisis. UNDP's response to the crisis is focusing on three priorities: Stronger coordination and service delivery; community mobilization and outreach; socioeconomic impact and recovery.

The international community can help the affected countries limit the socio-economic impact of this crisis. By stepping up recovery efforts even as the immediate response is on-going, these countries will be in a better position to reset their economies and embark on sustainable development paths.



Abdoulaye Mar Dieye  
*UNDP Regional Director for Africa*

*Vol. 1, No. 1, 3 October 2014*



A little girl after washing her hands in the neighborhood of Mabella, Sierra Leone. (Photo: Lesley Wright/UNDP)

# The Economic Impact of the Ebola Virus Disease (EVD) in Guinea, Liberia and Sierra Leone

# EVD is posing serious development challenges in the epicenter countries

West Africa is experiencing the worst-ever outbreak of Ebola Virus Disease (EVD) globally. In less than five months, what looked like a confined outbreak in a remote community in Guinea in March 2014 became a complex development challenge in Guinea, Liberia and Sierra Leone, and a threat to economic activities and public health in the Democratic Republic of the Congo, Nigeria and Senegal. As at 22 September 2014, the total number of confirmed cases and deaths stood at 5,800 and 2,800.<sup>1</sup> Liberia was the worst hit, with 1,698 cases and 871 deaths, followed by Sierra Leone (1,216 cases and 476 deaths) and Guinea (771 cases and 498 deaths). The average EVD fatality ranged from 39.14 percent in Sierra Leone to 64.59 percent in Guinea, and in less than eight months, it surpassed the cumulative sum over 32 years (1976-2008).

The outbreak and the inability to contain it are a reflection of weak institutional and infrastructural capacities, which include, *inter alia*: weak human development outcomes; weak health systems; free migratory patterns of people; the persistence of fragility characterized by weak social infrastructure; and socio-cultural practices such as traditional funerals. Efforts are still ongoing to mobilize experts and resources towards controlling this outbreak from, among others, the United Nations, non-governmental organizations (NGOs) and the United States' Centers for Disease Control and Prevention.

The loss of lives, morbidity, restrictions, panic as well as the risk aversion behaviour of investors have serious economic impacts.

## **Economic impacts cut across loss of gross domestic output, threat to food security, fall in employment and livelihoods, and decline in foreign investment**

The nature of the outbreak imposes serious impacts on the economy. The restrictions on the movement of goods and people have threatened the food chains from production to market access and commerce. Most countries bordering Guinea, Liberia and Sierra Leone have closed their borders – with thousands losing access to their livelihoods and sources of income, including farmers who can no longer harvest their produce. Even banks in Sierra Leone have been closing business at 1.00p.m., thereby restricting access to financial resources for investment and consumption activities. The limited supply of goods and services has started to take its toll on prices: the prices of oil, rice and potatoes doubled in Liberia, and the price of rice was marked up by at least 30 percent in Sierra Leone. In April alone, inflation rose from 6.39 to 7.8 percent in Sierra Leone.<sup>2</sup> Since July and August is the planting season in the region, a food crisis in early 2015 is imminent in these countries and beyond.

Substantial resources devoted to development work are now diverted to addressing public health implications of the outbreak. For instance, most United Nations development resources in these countries have been reprogrammed to address this emergency; the World Bank is also reprogramming along this line.

The risk aversion behaviour of trade, business and tourism partners could exacerbate the risk aversion behaviour of foreign investors, which could result in short- and medium-term economic impacts. British Airways, Emirates Airlines, Kenya Airways and Air Côte d'Ivoire have already halted flights to some affected countries. As tourists can-

cel their bookings and movements within countries, local hotels and restaurants suffer a slump in their business, which results in lay-offs and slowdowns in economic activities of other sectors that depend on the hospitality sector. The popular Lumley Beach in Sierra Leone, known for its expatriate patronage, is now completely deserted.

Some mining companies, the main source of formal employment and government revenues, have closed down part of their operations. The China Union,<sup>3</sup> a firm that ships iron ore in Liberia, Dangote Cement company in Liberia, Vale, the world's largest iron ore producer, operating in Guinea<sup>4</sup> and Marampa iron-ore mine in Sierra Leone have all sent their workers home.<sup>5</sup> Sime Darby, the world's largest palm oil producer, also reduced output in Liberia, and Sifca Group, a Côte d'Ivoire agribusiness, halted rubber production in Liberia.

The close-down or lull in business operations not only results in losses in jobs and profits to companies, but also limited fiscal space of governments. The largest fiscal impact is felt in Liberia US\$93.00 million (4.7% of GDP), followed by US\$79.00 million in for Sierra Leone (1.8% of GDP) and US\$120.00 million for Guinea (1.8% of GDP). This could worsen if the EVD is not quickly contained.<sup>6</sup>

The potential loss in production and short- and medium-term productivity due to slackened **economic activities induced by the EVD has telling effects on the countries' GDPs**. Bloomberg has projected the combined losses in the GDP of Guinea, Liberia and Sierra Leone at around US\$13 billion. The estimates from the World Bank show that the fall in GDP in 2014 could range from 2.1 percent (Guinea) to 3.3 percent (Sierra Leone) and 3.4 percent (Liberia). If the outbreak is not effec-

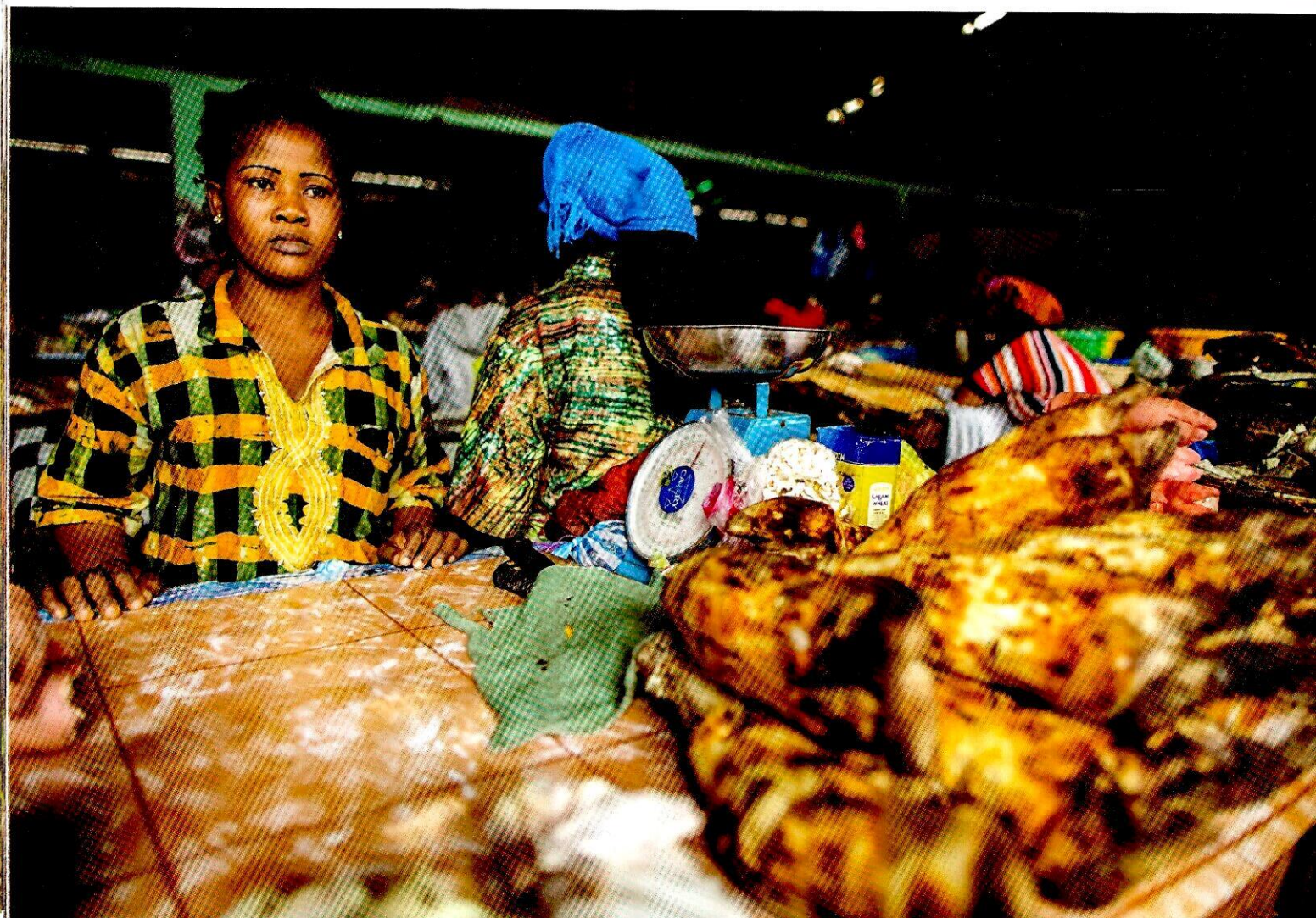
tively contained, the effects on GDP growth could be devastating by 2015, ranging from 2.3 percent in Guinea, 8.9 percent in Sierra Leone, and 11.7 percent in Liberia. This could cause a drop in Liberia's net growth of 6.8 percent to -4.9 percent in 2015.

### **Enhanced and coordinated international community support is critical for containing the disease and reversing economic hardships imposed by EVD**

The economic impacts of the outbreak are strong—from job losses and low revenue to low productivity and low growth. These impacts could reverse the gains achieved on the Millennium Development Goals (MDGs), especially on poverty, food security, and child and maternal health. Greater community engagement in the preparedness and response is imperative. Enhanced and coordinated international community support is critical, with around US\$1 billion estimated as the resource requirement over the next few months. To this end, the United Nations has set up the United Nations Mission for Ebola Emergency Response (UN-MEER), which is aimed at stopping the outbreak, treating the infected, ensuring essential services, preserving stability and preventing further outbreaks. Further, the United Nations has also established the Ebola Multi-Partner Trust Fund to ensure a coherent United Nations system contribution to the overall response. The support should not be restricted to humanitarian response, but rather, it should also include fiscal support, infrastructure support including withdrawal of the economic blockage, and strengthening the surveillance, detection and treatment capacity of the health system.



A business owner from Waterside Market in Monrovia, Liberia (Photo: Carly Learson/UNDP)



Vendors struggle with plummeting sales and rising cost of transporting goods to the market in West Point after the Ebola Outbreak and quarantine took effect in Liberia. (Morgana Wingard/ UNDP)

## The Ebola Virus Disease (EVD) imposes substantial loss in household incomes in Guinea, Liberia and Sierra Leone

# Context

Ebola has become one of the most complex development challenges in Guinea, Liberia and Sierra Leone. As at 22 September 2014, the total number of confirmed cases and death stood at 5,800 and 2,800, respectively,<sup>1</sup> and the trend is rising. Liberia is the worst hit (1,698 cases and 871 deaths) followed by Sierra Leone (1,216 and 476) and Guinea (771 and 498). The average fatality ranged from 39.14 percent in Sierra Leone to 64.59 percent in Guinea, and health personnel are also affected. The EVD fatality in less than eight months surpassed the cumulative sum in 32 years (1976-2008). Overall fatalities were over 54 percent of the confirmed cases in these three countries; interdependence across countries makes containment challenging. EVD is not only confined to these three countries, but has also spread to the Democratic Republic of the Congo, Nigeria, Senegal, Europe and America.

The outbreak and inability to contain it are a reflection of weak institutional and infrastructural

capacities, including weak health systems, free migratory patterns, the persistence of fragility characterized by weak social infrastructure, and socio-cultural practices. Although national and global efforts to tame the disease have increased, EVD is yet to be contained. And it has continued to threaten economic activities, productivity, livelihoods and employment in the three epicentre countries. The loss of lives, morbidity, restrictions, panic, and aversion behaviour of households, market agents and investors have serious effects on households' incomes.

## Loss in households' incomes

The outbreak, if not effectively contained and managed, could reverse much of the economic and social gains achieved (including the Millennium development Goals, or MDGs) over the past decade. The annual growth in these three countries, between 2000 and 2013, averaged 2.79 percent (Guinea), 8.21 percent (Sierra Leone) and 10.18

Figure 1: Correlation between per capita income and Ebola-related deaths

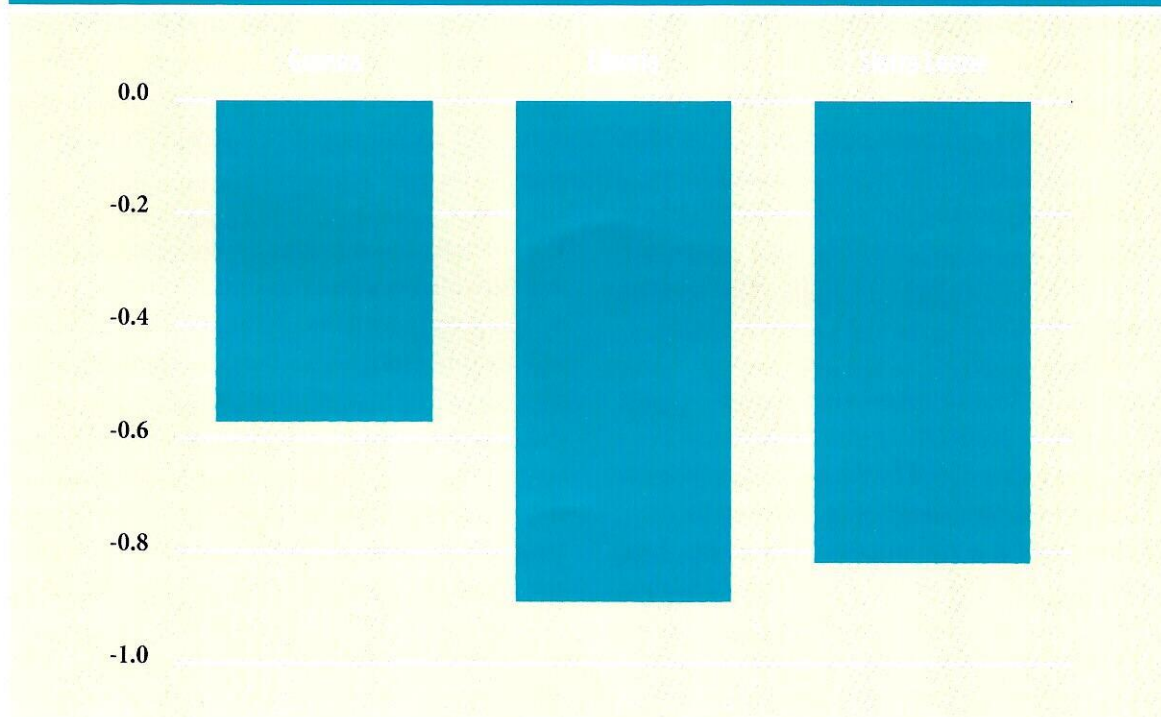
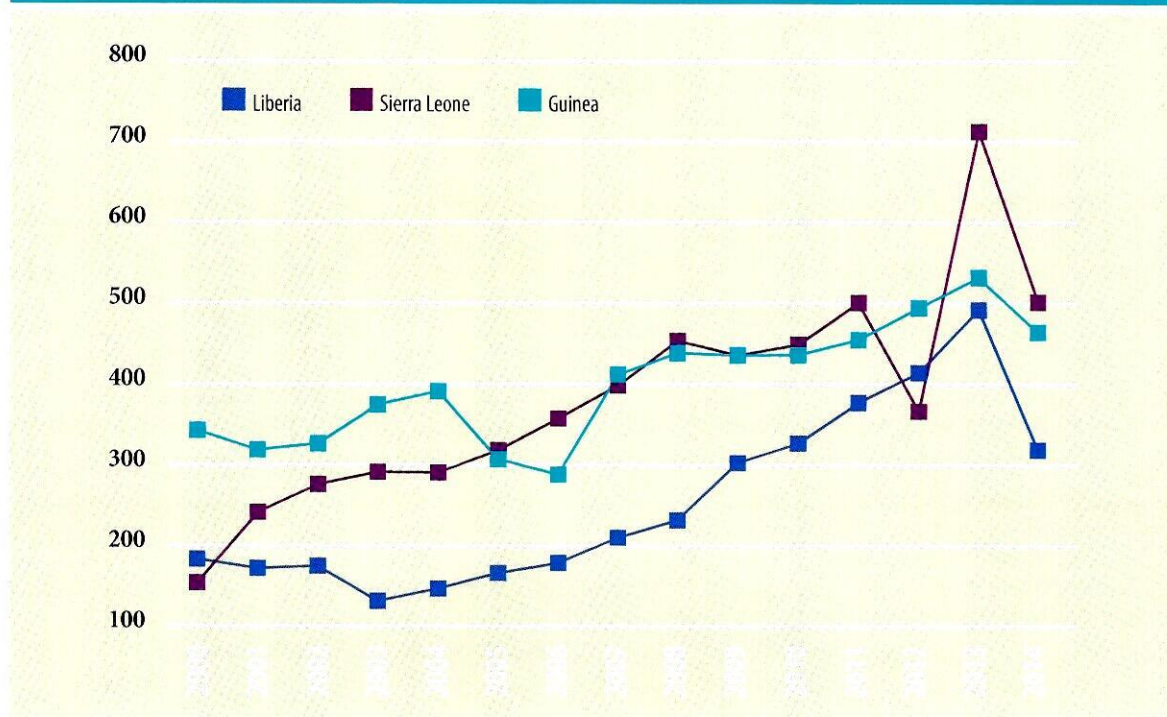


Figure 2: The impact of EVD on household incomes



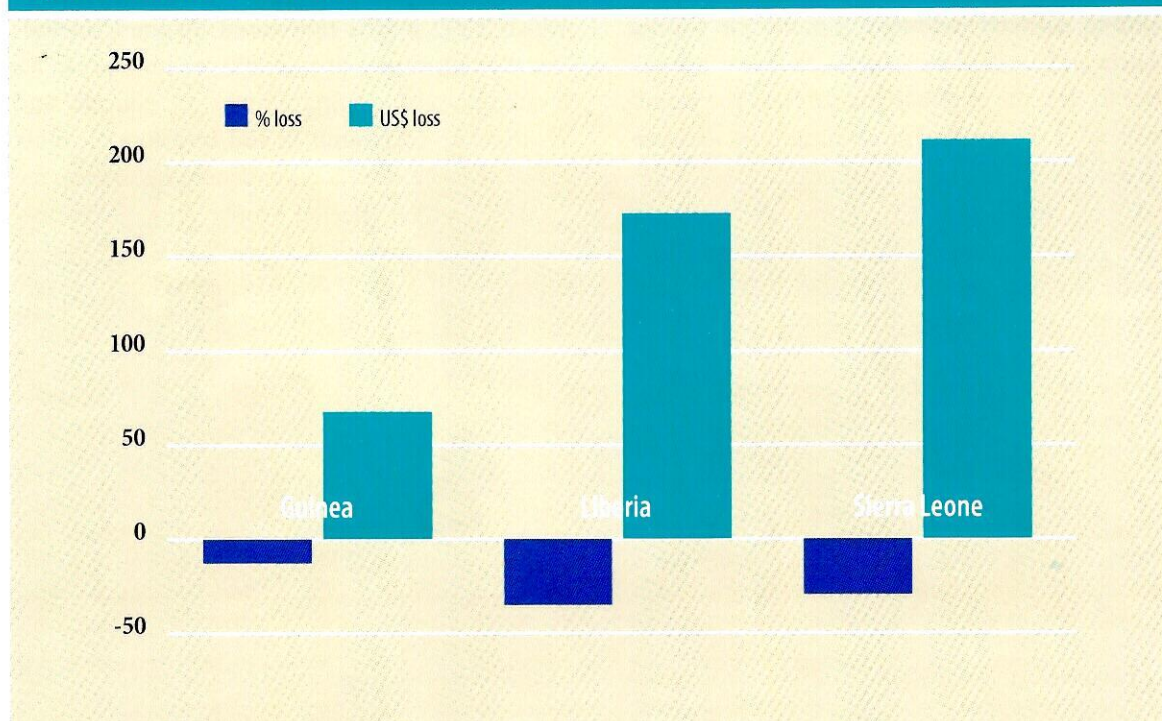
percent (Liberia). They have started to feel the deleterious impact of EVD on economic growth. The short-term impact on gross domestic output has been estimated at 2.1 percentage points in Guinea (reducing growth from 4.5 to 2.4 percent); 3.4 percentage points in Liberia (reducing growth from 5.9 to 2.5 percent); and 3.3 percentage points in Sierra Leone (reducing growth from 11.3 to 8 percent). This forgone output corresponds to US\$359 million in 2014 prices. However, if EVD is not contained, these estimates could rise to US\$809 million in the three countries alone. In Liberia, the hardest hit country, the impact of a high Ebola scenario could reduce output by 11.7 percentage points in 2015 (reducing growth from 6.8 percent to -4.9 percent).<sup>2</sup>

The potential loss in production and short- and medium-term productivity due to slackened economic activities induced by the EVD has telling effects on households' livelihoods, jobs and income. This could pose some negative impact on their health, children's and wards' education attendance and performance as well as the overall poverty and MDG situation. Morbidity and mortality could also pose serious threats to households' incomes,

especially when the 'bread winner' or head of household dies or is seriously sick. This not only leads to loss of productivity, but also breeds a high dependency ratio. This increases the level of vulnerability and could increase the number of people falling below the poverty line. Some indirect effects further compound this reality. Stigmatization in these three countries creates discrimination against households and communities with Ebola: neighbours, drivers and traders avoid them. In turn, to a large extent, this reduces their access to food and basic services.

The strength and direction of the linear relationship between household incomes (using per capita income), and mortality and morbidity associated with EVD is strong across the three countries.<sup>3</sup> The direction of relation in the countries is negative and it is strongest in Liberia; followed by Sierra Leone (Figure 1). High incidence of EVD is associated with a substantial reduction in household incomes. For instance, Lofa Country, one of the heavily affected areas in Liberia, is self-sufficient in rice and produces 20 percent of rice in the country.<sup>4</sup> With the high rate of morbidity, mortality and restrictions of movement, most farmers could not

Figure 3: Household income loss



harvest their produce. This cuts the farmers off from their livelihoods and incomes.

The gains in household income over the past one and a half decades are being destroyed by EVD (Figure 2). Guinea, Liberia and Sierra Leone have consistently experienced an improved level of per capita income since 2001, averaging an annual growth rate of 4.33 percent in Guinea, 8.74 percent in Liberia and 13.50 percent in Sierra Leone. The outbreak of EVD, in just six months, has led to severe loss in household incomes – 35.13 percent (Liberia), -29.67 percent (Sierra Leone) and -12.73 percent (Guinea) (Figure 3).

The shocks to income could make people more vulnerable and could reverse the gains made in poverty reduction in some of these countries. For instance, the reduction in poverty from 92.61 percent in 1991 to 43.31 percent in 2007 in Guinea could be reversed. A similar trend is also observed for Sierra Leone. The impact of loss in per capita income varies from one income group to another; the most severe burden is on people in the lowest quintile. Using the absolute poverty line of US\$1.25 as a benchmark, the 'day equivalent' of

loss in per capita income in the three countries is more revealing. For people already living at the margin of absolute poverty line (\$1.25 per day), this results in not having income for the basics for 54 days (Guinea), 138 days (Liberia) and 169 days (Sierra Leone).

The loss of farm harvest to farmers, reduced passengers for transport operators, temporary and occasional closure of markets, partial operations of banks, total restrictions of movements to artisans, closure of government offices and laying off of workers in mines and other companies all contributed into substantial loss in households' incomes. The rising trend in price movements in these countries also has some telling effects on households' real income arising from weak purchasing power.

### Key Conclusions

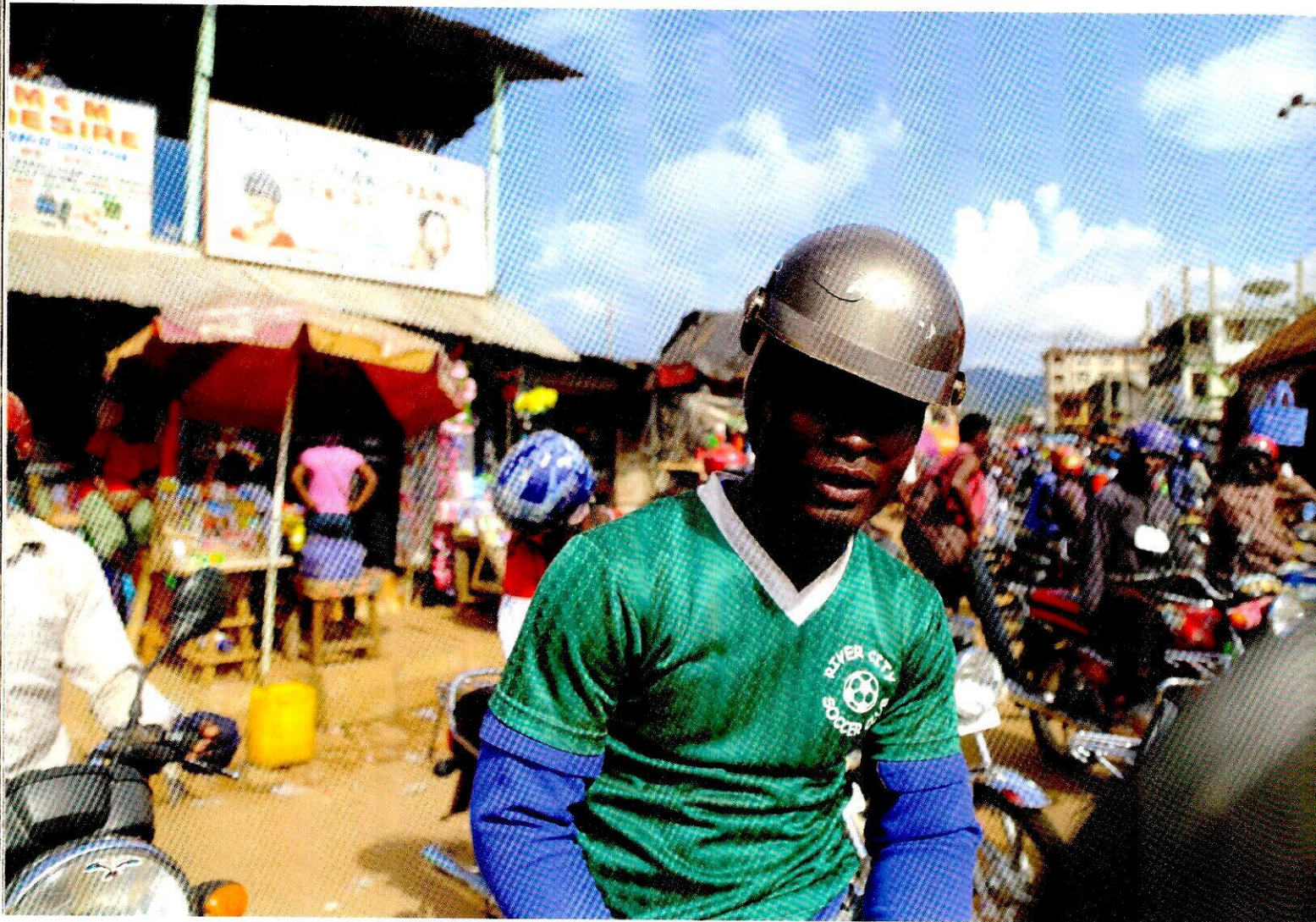
The income effects of EVD is high and could undermine the achievements made on the MDGs over the past decade, especially in poverty, food security, education, child and maternal health. A sharp drop in income, ranging from around 12.00 to 35.00 percent, is a recipe to restiveness, which

could further reverse the progress made in peace building, national building and stability in Guinea, Liberia and Sierra Leone. This calls for urgent actions to stop the outbreak and address the serious hardship it is imposing on communities and people, including loss of income, livelihoods and jobs. Livelihood regeneration, income support and safety net programmes must be institutionalized in seriously affected communities. Government needs

to identify direct and indirect channels through which EVD affects household incomes (including stigmatization) and should institute proactive awareness-raising programmes to educate and re-orientate communities and investors on these issues. This must be complemented with enhanced capacity to treat affected people, provide essential services, and prevent the spread of EVD to other areas.



A former teacher in Monrovia on losing his job after school closures due to the Ebola Virus. (Morgana Wingard/ UNDP)



In Freetown, Okada taxi riders are using their business to raise awareness of the disease (Photo: Lesley Wright/UNDP)

# The Ebola Virus Disease Outbreak (EVD) is overstressing the fiscal capacity of Governments in Guinea, Liberia and Sierra Leone

# Context

The Ebola virus disease (EVD) outbreak in the Mano River Union countries of Guinea, Sierra Leone and Liberia is one of the most complex developmental challenges in recent times. In addition to truncating the appreciable economic growth of the past decade and worsening the unemployment situation in these countries, it is particularly imposing a serious stress on the fiscal capacity of governments.

The new waves of EVD are completely different in scope and in depth, partly because of cultural and institutional interplay, and partly because these countries are socially and economically integrated with their neighbours. There are more cases and associated fatalities in eight months than the combined 20 episodes of EVD outbreak since 1976. What looked like a manageable phenomenon on 25 March (86 cases and 60 deaths and localized in Guinea) has become an issue of monumental proportion (9,062 cases and 4,542 deaths – now spreading beyond borders) as of 12 October, with Guinea, Liberia and Sierra Leone as the epicentres.<sup>1</sup>

The fatality rate ranges from 36.4 per cent in Sierra Leone to around 58.0 percent in Guinea and Liberia. The improved management of the outbreak over the past months has substantially reduced the fatality rate from an average of about 70.0 percent over the past three months. Most of the dead are women and around two-thirds of those infected are in the most economically active age group (15-50 years). The disease has taken a toll on the health system, with four doctors and more than 30 nurses among the dead in Sierra Leone, and 92 health workers in Liberia. As health workers fall ill and die, and the EVD grows exponentially, these countries' capacity to manage the disease becomes overwhelmed.

EVD weakens the ability of governments to manage their revenues, expenditures and public debts

to meet national health, social and development obligations without jeopardizing macro-economic stability. How has the Ebola crisis affected the revenue generation, expenditure expansion, infrastructure spending prioritization, and public debt positions in Guinea, Liberia and Sierra Leone? This Policy Brief looks at the impact of EVD on the fiscal space in these countries.

## How has EVD crisis affected revenue generation, spending priority and public debts?

The Ebola crisis weakens the capacity to optimally generate revenues and puts pressure on public expenditures. It reduces revenue through cuts in economic activities and employment, and a reduction in tax compliance. It also increases expenditure, especially through awareness raising and sensitization, logistics and supplies, sanitation, and incentives to health workers as well as social protection responses from governments. Arising from the widening gap created between declining revenue and rising expenditures, public debt increases and the ability of these countries to grow out of aid is further weakened.

## Capacity to generate tax and non-tax revenues is weakened

The decline in production and related economic activities, the resultant job losses and evacuation of expatriate workers take a substantial toll on the revenue collection of governments through a reduction in personal income tax and company income taxes. The uncertainty created by EVD has further weakened tax compliance in these countries. Government revenues from taxes, tariffs and customs from leading sectors such as tourism, agriculture, manufacturing and mining are threatened by risk aversion behaviour resulting from restrictions on movement of people and goods.

Tourism, an important source of government revenues, has been seriously hit by EVD. In Si-

\$106.1 million) due to an anticipated decline in various taxes and other administrative fees. Several factors contributed to the decline in revenues in these countries: closure of businesses, loss of jobs, evacuation of expatriate staff, reduction in sales of goods and services, restriction of movement and risk aversion behaviour, and a decline in major primary exports.

The epicentre countries depend on official development assistance (ODA) as an important source of revenue. Liberia has the highest dependence on ODA, at 50.0 percent of GDP in 2011 (\$185 per capita), compared to 14.0 per cent (\$71 per capita) in Sierra Leone and 4.0 per cent in Guinea (\$20 per capita). The accelerated economic growth experience of the recent past that could have weaned these countries out of ODA orphanage is being reversed. If not effectively controlled, and given the impact of EVD on long term development, these countries are likely to be further enmeshed in aid-dependency syndrome.

**EVD imposes exponential increase in recurrent expenditure, often at the expense of infrastructure spending, and in the context of low absorptive capacity**

Due to the rising trend of EVD in the epicentre countries, an exponential increase in spending is inevitable. To stop the outbreak, treat infected people, provide essential drugs, increase security and prevent outbreaks in non-affected areas, substantial resources are needed for communication campaigns and awareness raising, facilities and equipment, training of health caregivers, and social protection mechanisms, among others. The main challenge is that these countries are experiencing low absorptive capacity. For instance, cost overrun in Liberia is estimated to be about 20.0 percent<sup>7</sup>. Addressing the absorptive capacity issues remains imperative.

In Guinea, the following were undertaken: three mobile laboratories were set up; two treatment centres were established and are operating; 41 control checkpoints were opened at the borders; and a number of measures were institutionalized at the airport to check the outbreak. The establish-

ment of a response plan in August 2014 included the allocation of \$100 million to contain and provide support to families affected by the epidemic, of which \$34.0 million was set aside for food aid and social protection.

The Sierra Leonean Government also established 169 community holding centres for Ebola patients;<sup>8</sup> and treatment centres with a total of 1,500 beds. The 1,500 additional treatment centre beds will require a 5,250 healthcare staff;<sup>9</sup> equipment and logistics,<sup>10</sup> and more laboratories. At least five additional ones are urgently needed since the current four customized Ebola laboratories can only handle about 150 samples per day.

The Government of Liberia also set up an Ebola task force, established an Incidence Management Centre focusing on epidemiology, and opened a national Ebola Command Centre to oversee coordination and strategic planning, monitoring and evaluation, including tracking of contacted persons. It also put in place an agricultural stimulus (\$30 million) and an unconditional cash transfer (\$30 million) to people affected by EVD. The Ministry of Health and Sanitation also developed a National Response Plan in May 2014 and dedicated \$1.78 million, which was revised to \$25.9 million in July.

Given the expenditure requirements enumerated above, recurrent spending (such as salaries and other running costs) of the three countries have increased – by 6.4 percent in Guinea (around \$70.0 million), by 6.5 per cent in Sierra Leone (around \$37.0 million) and by 15.2 percent in Liberia (\$67.2 million). Evidence from the Ministry of Finance of Liberia further reveals that additional spending pressure resulting from the EVD is estimated at \$79.7 million. Generally, government expenditure rose to between 27.4 and 30.7 percent of GDP following treatment-related expenditures for the outbreak.

In these countries, the increase in spending arose from payment for salaries, operations, maintenance, logistics and public education. Spending on development projects including infrastructure

has been sacrificed. The initial estimate of capital spending sacrificed was estimated to \$20.0 million (Liberia) and \$16.0 million (Sierra Leone) to accommodate the health and social responses. In Sierra Leone, this has been revised to \$44.7 million as opposed to the earlier \$31.3 million proposed in the International Monetary Fund's (IMF) revised augmentation programme.

### **Governments financing gap is widening and it is having a toll on public debts**

The gap between revenue collected and basic needs of government (excluding development spending) as a result of Ebola is around \$113 million for Liberia (5.1 percent of GDP), \$95 million for Sierra Leone (2.1 percent of GDP) and \$120 million for Guinea (1.8 percent of GDP) in 2013 prices.

The overall fiscal deficit (spending gap, including development expenditure and grants) is quite high. Overall deficit for Sierra Leone, as a result of EVD, rose by 31.79 percent between April and September 2014. By early October, this was revised from 4.2 percent of non-iron ore GDP to 5.7 percent, while the estimated total grants and loans were also revised from 7.0 percent of non-iron ore GDP to 7.9 percent as a result of the crisis. The Ministry of Finance estimated the financing gap for 2014 at \$100.3 million. There was a funding gap of \$202.6 million in Liberia arising from fall in revenue collection of \$106.1 million and net expenditure pressure of \$96.5 million.

The crisis is having a toll on public debts. In September 2014, the IMF granted additional emergen-



Vendor selling laundry hampers at Waterside Market in Monrovia, Liberia. (Photo: Carly Learson/UNDP)

cy financial aid to Guinea, Liberia and Sierra Leone amounting to \$130.0 million to help respond to the Ebola outbreak – \$41.0 million for Guinea, \$49.0 million for Liberia and \$40.0 million for Sierra Leone. The revised fiscal framework, under the existing Extended Credit Facility with the IMF also provided for additional borrowing of \$17.0 million from the domestic financial market in addition to \$9.2 million previously borrowed. Moreover, there was an agreement to either further borrow \$8 million in the domestic market or undertake a cut in expenditures of the same amount. The World Bank has also approved \$40.0 million for grants and loans for each of the three countries. As of 10 October 2014, the African Development Bank (AfDB), committed \$220.0 million – \$60.0 million through the World Health Organization, \$150.0 million directly to the three countries, and \$10.0 million to mobilize African doctors and health practitioners.

## Conclusions

EVD weakens the ability of the governments of Guinea, Liberia and Sierra Leone to effectively generate tax and non-tax revenues (mostly as a result of risk aversion behaviours). Efforts to contain EVD, treat affected people and provide essential services have increased government expenditure phenomenally.

The diverging trend in revenue and expenditures is exposing governments to unanticipated domestic and external debts, which should be guarded effectively to avoid fiscal unsustainability. To avoid un-

sustainable debts in these countries, we call on the international community to ensure all supports are in the form of grants, rather than loans. This is important to boost their future economic and social development outlook.

Risk aversion behaviour, hysteria or panic, is an important channel through which EVD affects the fiscal positions of government. The best antidote for fear or panic is urgent and effective response. The international community must change the narrative that has started to stigmatized people in the Manu River Union.

Sacrificing development spending, especially for roads, energy, building schools and hospitals, could truncate peace dividends in these countries. The international community should translate their pledges into commitment to halt the crowding out of infrastructure spending. Development partners' efforts to refocus their programmatic interventions in containing is commendable and should be continued. Efforts to beef up the absorptive capacity of government is also vital.

Essential services are needed in quarantine areas and treatment holding centres. It is crucial to invest in building institutional capacity of the health system in order to address the underlying causes and factors that have made it difficult to contain the outbreak. This includes renovating health infrastructure, increasing the quantity and quality of healthcare staff, and investing in the decentralization of health system management.



A woman sells oranges in a Monrovia neighborhood (Photo: Carly Learson/UNDP)

*Vol. 1, No. 4, 9 November 2014*



A market street in Monrovia (Photo: Carly Learson/UNDP)

# The Ebola Virus Disease (EVD) Outbreak and Price Dynamics in Guinea, Liberia and Sierra Leone

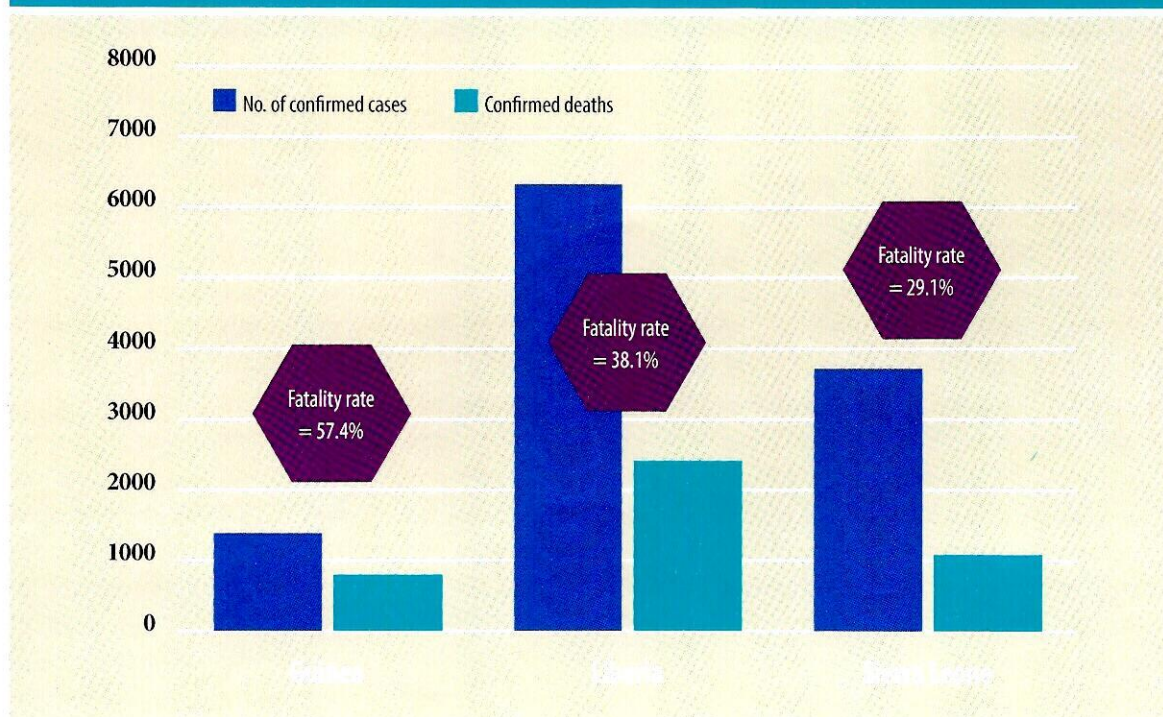
# Ebola, through its impact on prices, is reducing people's purchasing power and is increasing their vulnerability

Containing the EVD in Guinea, Liberia and Sierra Leone still remains a serious concern. The total number of confirmed cases was 11,428, with Liberia accounting for more than half of the cases, Sierra Leone, one third, and Guinea, just above one tenth – as of 27 October 2014. Figure 1 provides the breakdown of cases, deaths and fatalities. The average fatality rate is around 41.6 percent (compared to 70 percent of infected people three months ago); it is highest in Guinea, at around 57.4 percent. The fatality rate among health workers is highest in Sierra Leone (79.5 percent) and lowest in Guinea (53.1 percent),<sup>1</sup> which calls for an urgent need to ensure that they are adequately protected against the disease. There is evidence that the rate of infection has started to decline in Guin-

ea and Liberia, but continues to rise exponentially in Sierra Leone.<sup>2</sup>

EVD could affect prices in several ways. The most affected communities and regions are the food baskets of the epicentre countries; which result in an impending agricultural production shortfall, which could cause a dramatic drop in food prices. Also, the closure of ports with an associated decrease in the number of containers and vessels, and the increase in marine insurance premiums affected the landed costs of imported food and non-food items. Moreover, foreign aid from the international community could lead to a depreciation of local currencies, thereby raising the local prices of imported goods and services. And

Figure 1: Confirmed cases, deaths and fatality rates as of 27 October 2014



finally, the risk of fiscal deficit financing arising from pressure on spending and a decline in revenue collection could also put pressure on prices. *The combined effects of the above together with epidemiology and risk aversion behaviours could weaken the purchasing power of the populations and reduce their income.* This could have a serious impact on their living conditions and livelihoods, thereby increasing poverty and vulnerability.

This Policy Brief examines the depth and dimension of the impact of EVD on price movements in Guinea, Liberia and Sierra Leone.

### The reduction in purchasing powers is stronger in Liberia and Sierra Leone than in Guinea

The response to the outbreak of the Consumer Price Index, a measure of overall price changes, varies across the three countries. Due to different policy initiatives and responses of governments and the reaction of international communities to the affected countries, the Index was relatively volatile in Liberia and Sierra Leone, yet relatively stable in Guinea.

As a result of the EVD in Liberia, the annual overall price movement (headline inflation rate) rode from 8.0 percent at the end of the fourth quarter of 2013 to 8.2 percent at the end of March 2014. This further jumped to 10.3 percent at the end of the second quarter. A similar trend was also observed in Sierra Leone. As shown in Figure 2, in contrast to the downward trend since the last quarter of 2011, the overall price level increased consistently from 6.39 percent in April to 7.51 percent in September 2014. With income remaining constant, the quantity of goods and services that could be purchased fell by about one fifth in Sierra Leone and by more than one quarter in Liberia. The rising trend of prices in these countries can be explained by: the disruption in agricultural activities (Kailahun and Kenema in Sierra Leone and Nimba, Bong, Grand Bassa and Lofa in Liberia); the closure of Guinea's borders where substantial food imports originate; less commercial trade flows from the main trading partners;<sup>3</sup> pressure on the national currency resulting in a depreciation of the exchange rate; and partly due to the fiscal deficit.

Figure 2: Overall inflation and seasonally adjusted inflation in Sierra Leone

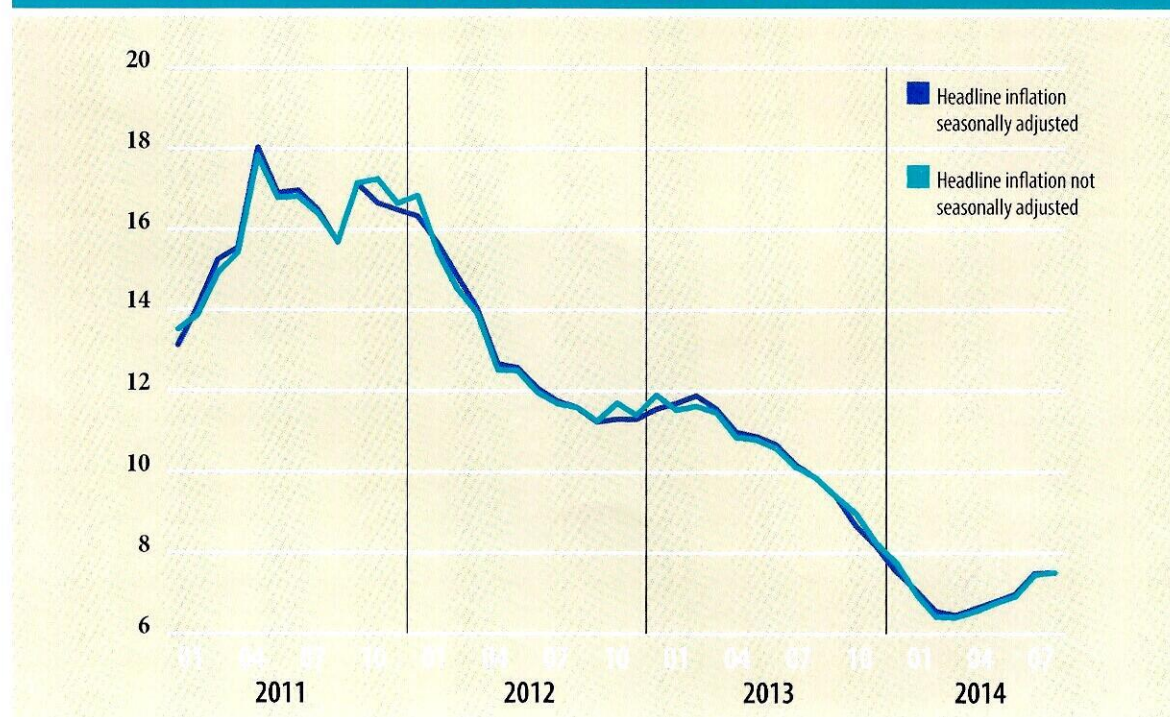
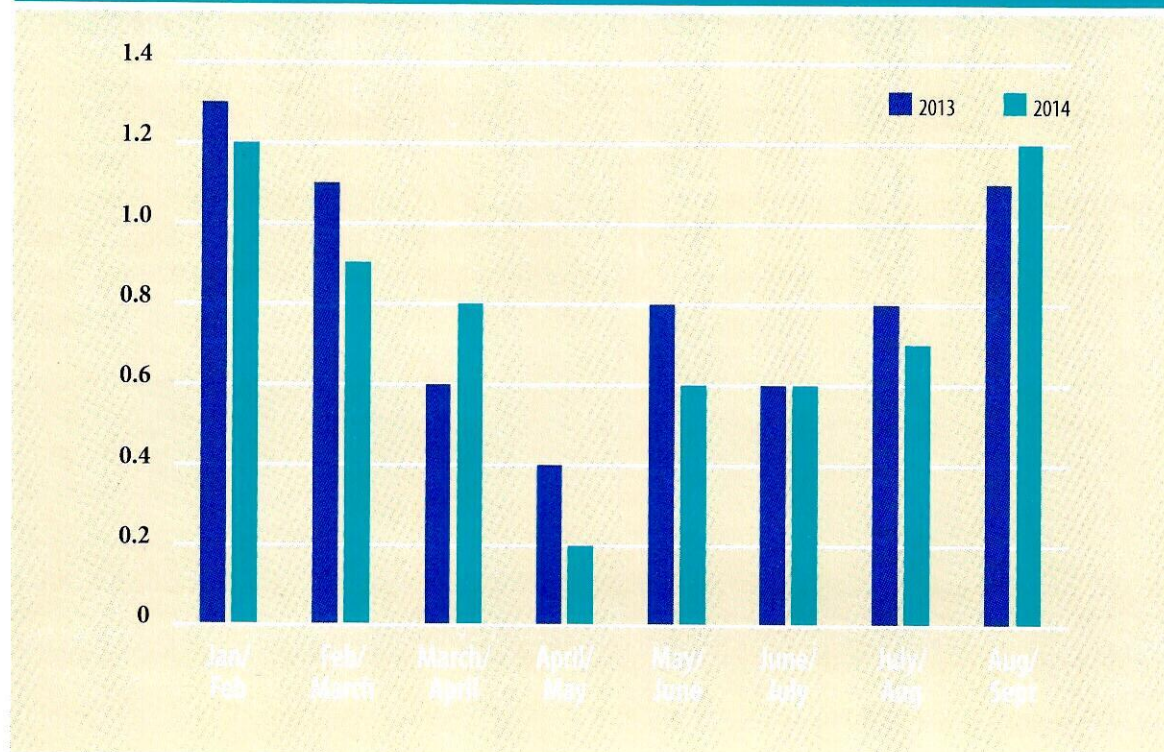


Figure 3: Monthly price change in Guinea



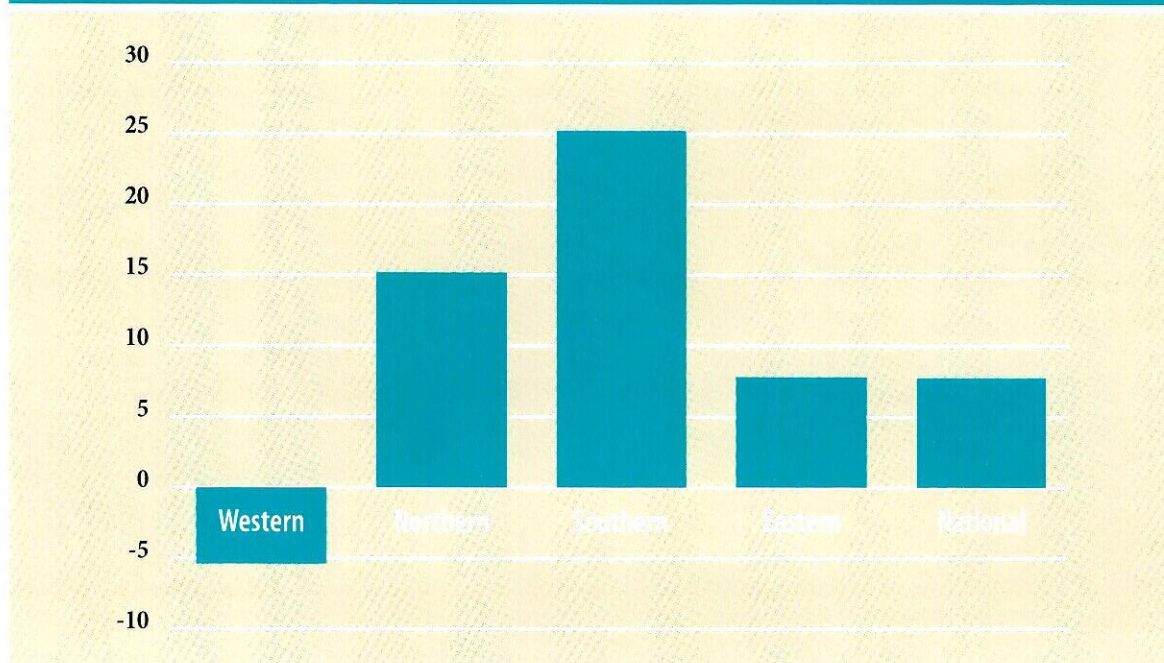
The aggregate money supply also rose, including credit to governments to finance the deficit. For instance, money supply rose by 121.6 percent in Sierra Leone between May and September 2014. Furthermore, depreciation of the national currency became pronounced from March in Liberia and from June in Sierra Leone.<sup>4</sup> To a large extent, this reduces the purchasing power of the local currencies in these countries. The cost of transport, which more than doubled in affected regions, also contributed to the hike in prices.

In Guinea, the general Consumer Price Index rose by 4.1 percent between March and September 2014: the decline in purchasing power was marginal. This trend is consistent with the seasonal rise at this time of year (Figure 3) and is within the projected annual inflation rate set at 8.5 percent, which is also consistent with the macro-economic targets for 2014. Between January and September, the corresponding monthly inflation rates in 2013 were generally higher than in 2014. This is an indication that EVD has no discernible impact on prices in Guinea.

### Rural communities felt the burden of price movements more than their urban counterparts

Rural communities feel the effects of price movements due to the impact of EVD on prices more than urban communities. For instance, the overall price change was less than 10.0 percent in Freetown compared to almost 18.0 percent nationally – an indication that the situation in rural areas is worse than the national average. In Sierra Leone, there is also regional variation: the trend of price movement was upward in the northern, eastern and southern regions, whereas it declined in the western region. Figure 4 shows that the increase in prices is highest in the southern region – the province with the least number of infected cases. Quarantine actions and restrictions of movements have weakened access to food. Depressed demand partly accounts for deflation (i.e. fall in prices) in the western region in the context of a supply of agricultural products that surpasses what could be locally consumed due to a restriction of movement of goods and people – lack of market access creates a glut. A similar trend was also observed between Monrovia and other parts of Liberia. For instance,

Figure 4: Changes in prices (%) between February and September 2014 across regions in Sierra Leone



the price of a 25 kg bag of Bellaluna rice in Monrovia, which was US\$17.5 in October, was sold for US\$21.28 in the southeastern region. This implies that the price that southeasterners paid for 25 kg of Bellaluna rice was enough to secure Monrovi-ans around 30 kg of the same rice. Most remote communities were quarantined, and the restricted movement of goods and people did not allow im-ported items to reach marginalized communities, which resulted in a high impact of EVD on prices in rural areas. The increase in prices has worsened livelihoods, increased vulnerabilities and deep-ened inequalities among individuals, groups and communities.

### Proactive management matters in reducing the impact on the people

The domestic production of rice, the most con-sumed staple, dropped by 10.0 percent, largely due to a 35.0 percent decline in harvest from the Guinea Forest region, where around three quarters of EVD infection cases occurred. Domestic rice production covers 80.0 percent of national rice production. How did the Government of Guinea respond to such a heavy drop in local produc-tion? Importing large quantities of rice was the winning strategy: 512,000 tonnes of rice import-

ed between January and September 2014 against 396,000 tonnes for the corresponding period for 2013. This stemmed the possible impact of a short-fall in local production on prices. In Sierra Leone, there was mere 1.21 percent rise in the amount spent on food items between May and September. The closure of Liberia's and Sierra Leone's borders also substantially reduced export of local rice from Guinea to these two contiguous countries. How-ever, the heavy imports of food items are taking a toll on Guinea's foreign reserves, which requires some policy attention. Is the impact of EVD on prices similar across commodities in these three countries?

### The price effect is more severe on food items than on non-food items

Price changes are more pronounced on food items than non-food items in the three epicentre coun-tries. Sierra Leone serves as an interesting example of diametrically opposed trends in price move-ment for food and non-food items; in contrast to the rise in prices of around one fifth for food items, non-food items (excluding fuel) such as tobacco and narcotics, clothing and footwear de-clined by more than one quarter. During the EVD outbreak, people focus more on basic items, thus

depressing demand for non-essential items such as electronics. For instance, in Sierra Leone, the price of an imported brand of rice (50 kg) rose from Le130,000.00 before the outbreak to Le170,000.00 during the outbreak, i.e. approximately a 30.8 percent increase.

A similar trend was observed in Liberia. Prices of food items between March and June increased by 67.3 percent compared to just 13.1 percent for non-food items. The price of a 25 kg bag of Bellalu-na rice in Monrovia increased from \$US14.5 by the end September to US\$17.5 in October, a 20.68 percent increase in just one month. The prices of local staples such as cassava, farina (gari) and oil rose by 150 percent, 100 percent and 53.8 percent, respectively, from September to October alone. There has been a similar trend for meat, flour and sugar, and the prices of health items are also on a rising trend.

In Guinea, although price changes are marginal, in general, when they do occur, the changes in prices of food items are higher than non-food items. Several factors account for the relative stability in prices in Guinea: the decline in trade with the rest of the country, the restriction of trade with the countries of the sub-region, and the distribution of large quantities of food to affected households and communities by the international community. In spite of the price stability, the high cost of local rice relative to imported rice, which almost doubled, deserves some policy consideration.

In these three countries, the panic purchase of food items and non-food products often used to fight against EVD, such as chlorine, buckets and infrared thermometers, also contributed to the diametrically opposed inflationary trends in Liberia and Sierra Leone. The opposite is the case for non-essential items such as electronics, which declined by 40.0 percent in Liberia between June and September 2014. The effect of rising prices vis-à-vis constant or plummeting incomes of the

active labour force narrows people's consumption choices and reduces the quality of their standard of living.

### Stemming the tide of EVD on future prices is doable

Some of the strategic interventions to achieve this include:

- In Guinea, Liberia and Sierra Leone, price shocks increase the vulnerability of the poor and the marginalized communities, especially rural areas experiencing the outbreak. This calls for a well-targeted social protection for people and communities heavily affected by price hikes.
- The closure of borders reduces the supply of imported commodities that could compensate for the shortfall in domestic production. Countries should desist from closing their borders to avert the inflationary impact of such actions on the epicenter countries.
- The Governments of these three countries should strategically support local farmers to prepare for the next planting season to avoid food shortages in 2015 and beyond. This includes the provision of improved seedlings, fertilizers and finances. It is also important to address all impediments that make locally produced rice more expensive than imported rice.
- The ministries of finance and central banks of these countries should effectively coordinate fiscal and monetary policies to ensure that exchange rates and domestic borrowing do not distort the price system.
- Given that EVD affected the planting seasons of these countries, the international community should scale up support for the provision of food and related items to cushion the effect of food shortages and the associated price hikes.



Vendors struggle with plummeting sales and rising cost of transporting goods to the market in West Point after the Ebola Outbreak and quarantine took effect in Liberia. (Photo: Carly Learson/UNDP)

# The Ebola Virus Disease (EVD) is threatening livelihoods in Guinea, Liberia and Sierra Leone

# A substantial reduction in EVD transmission rate, but new outbreaks in previously unaffected areas remain serious a concern

There has been mixed progress over the past two months on the containment of EVD. The substantial reduction in the transmission rate, especially in Guinea and Liberia, is a welcomed development; yet new outbreaks in areas not previously heavily affected are damaging the gains made. For instance, there have been no new cases over the past three weeks in Guéckédou in Guinea, or in the district of Lofa in Liberia over the past two weeks, and a substantial decline has been witnessed in the last two weeks in Kenema and Kailahun in Sierra Leone. However, the new transmission cases reported in south-eastern Guinea and in Montserado District in Liberia as well as the rising trend in western and northern Sierra Leone remain a serious challenge.

The rising number of treatment facilities, the timely laboratory diagnosis of cases, and the capacity to conduct safe and dignified burials play a crucial role in halting EVD transmission. However, capacity varies across countries. For instance, between 20 October and 9 November, 72.0 percent of all reported patients with EVD were isolated in Guinea compared to 20.0 percent in Liberia and 13.0 percent in Sierra Leone. The bad condition of roads and highly centralized supply chain systems of Ebola facilities are serious impediments to effective containment of the outbreak. As of 19 November 2014, 15,145 confirmed, probable and suspected cases of EVD were reported in six affected countries (Guinea, Liberia, Mali, Sierra Leone, Spain and the United States of America) and in two previously affected countries (Nigeria and Senegal), with 5,420 reported deaths.<sup>1</sup> Cases and deaths continue to be under-reported in this outbreak.

## **The knock-on-effect of EVD on livelihoods is complex – from the loss of jobs and rising under-employment to low productivity and reduced incomes**

The EVD impact on livelihoods takes many forms. EVD mortality and morbidity as well as the associated restriction of movement of people and goods, and the closure of borders and markets have disrupted households' economic activities, jobs and incomes. People's primary sources of incomes and savings and loans schemes have been depleted, and food prices have been rising. Due to limited or lack of access to jobs, livelihoods are compromised. For example, many farmers cannot access their farms, and when they can, they lack workers for planting and harvesting. The limited supplies of goods and services as a result of the closure of borders and quarantine activities have led to underemployment. Further, public health emergency by-laws prohibit certain activities, including group farming in Sierra Leone and Liberia; bars, night clubs and cinemas have been closed; and the hunting of bush animals and the movement of motorbikes have been prohibited during specific times of the day, especially in Liberia. The actively productive population are the most affected, particularly women, who earn most of the household incomes and provide most of the family support. Finally, stigmatization is denying people access to jobs and new opportunities. Because of stigmatization, people find it difficult to leave their communities to search for alternate sources of income. A photographer from Banjour community, who opted to go to Monrovia because of lull in economic activities in his area, was denied living his community.

### **The most active and productive segment of the labour force including women are being decimated by EVD**

The disease is unleashing havoc on the labour force. The economically active age group (15-49 years), which provides the largest proportion of household incomes and family support, has been heavily hit by EVD. For instance, in Sierra Leone, 65.13 percent of the affected people were in this group and there is a similar trend in Guinea. Women are important drivers of economic activity in West Africa. The outbreak in Guinea, as in other countries, affects more women (53.0 per cent) than men (47.0 per cent). Women's special role in the family as caregivers at home and in health centres for sick people explains their vulnerability to EVD, which, however, varies across the regions. For instance, 62.0 percent of the affected population in Guéckédou and 74.0 percent in Télémilé are women. In Middle Guinea, 70 percent of the people involved in the potatoes value chains are women. And in Liberia, women comprise over half of the agriculture labour force and about two thirds of the trade and commerce labour force.<sup>2</sup> Due to the strong contribution of women to economic activities in these countries, there is a pronounced negative impact of EVD on productivity, jobs and income generation.

### **Income-generating opportunities are being eliminated, particularly in export-oriented sectors**

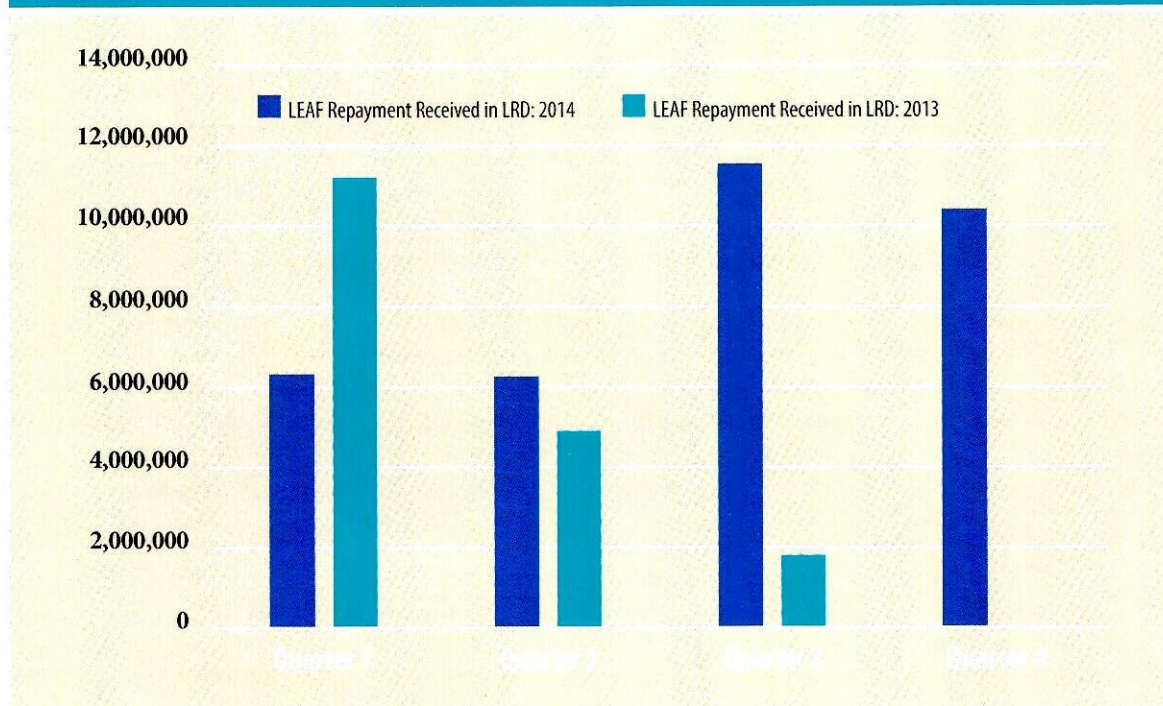
The economies of these countries are decelerating. Compared to earlier projections, real economic growth between January and September 2014 was estimated to fall by 2.1 percentage points in Guinea, 3.3 percentage points in Sierra Leone)ù and 3.4 percentage points in Liberia. The recent official adjustment in Sierra Leone was even more precarious – a 6.3 percentage point decline. As of September 2014, the Sierra Leonean economy lost US\$450.00 million. Agriculture, which contributes around 57 percent to GDP, also declined by 3.3 percentage points. Per capita income fell by US\$71.00 between January and October 2014. Recent surveys reveal that around 97 percent of respondents surveyed indicated that their incomes from farming, petty trading and service delivery

had fallen since May 2014.<sup>3</sup> The situation in Guinea is similar – 83.0 percent and 99.0 percent of surveyed households from epicentre communities indicated, respectively, lower agricultural production and a decline in economic activities, including agriculture, trade and transport. In the Guinea Forest region, the drop in agricultural production is 30.0 to 75.0 percent depending on the various crops (rice, cassava, maize, palm oil, banana and plantain). Moreover, around 50.00 percent of potatoes produced in Guinea are exported. The closure of borders has denied farmers substantial incomes. This was further compounded by the glut in the market, which caused the price of potatoes to fall by approximately 33.0 percent. Vulnerability is more pronounced in export-oriented agricultural products.

### **Loan repayment is almost impossible – formal and informal loan schemes for women and local small business holders depleted by EVD**

Women are more affected by EVD than men; the impact on their livelihoods is more severe. They are using their business capital and savings as a strategy to coping with the hardship imposed by EVD, which depletes their informal loans schemes.<sup>4</sup> Evidence from the Central Bank of Liberia confirmed that access to microfinance loans or grants has proven daunting as result of EVD. For instance, the BRAC Microfinance Loan Disbursement, which rose from LRD90.24 million in the first quarter of 2014 to LRD110.27 million in the second quarter, was completely dried up in the third and fourth quarters. This was caused by deaths, morbidity and the loss of livelihoods, which made loan repayment practically impossible. Evidence from Loan Extension and Availability Facility's (LEAF) repayment provides some illumination on the shrinking repayment capacities of loan recipients; it fell from LRD11.19 million in the first quarter of 2014 to LRD4.89 million, LRD1.78 million and nil in the second, third and fourth quarters, respectively (Figure 1). People's livelihoods are further threatened by the abolition of loan disbursement to local business owners. In Lofa County, for instance, women have not been able to repay their debts since July due to the fall in incomes, the loss of jobs

**Figure 1: Loan extension and availability facility (LEAF) repayment in Liberia, 2013 and 2014 (Liberian dollars)**



and the death of family members, which has severely affected the local economy, especially trade, agricultural input purchases, agro-processing and small food businesses. Similarly, in the Guinea Forest Region, women's main sources of financing for their businesses have dried up.

#### **Lockdown activities, closure of markets and quarantine activities are impinging on livelihoods and incomes**

The number of person-hours lost is another indicator of declining livelihoods. Due to the State of Emergency declared by the Governments of Guinea, Sierra Leone and Liberia, schools that were to re-open in early September/October 2014 remained closed. In Sierra Leone, the total number of days lost by the educational sector to date is 51 days in addition to the three-day lockdown between 19 and 21 September 2014. The Luma markets held every week, mostly in the rural areas, were closed and have not been operational for the last 15 weeks. The Kailahun District, where the first EVD outbreak occurred, and the Kenema District (Eastern Region), which initially recorded the highest EVD infection rates, were quarantined on 31 July 2014. On 24 September 2014, three other

districts – Moyamba (Southern Region), Portloko and Bombali (Northern Region) – were also quarantined. The quarantine measure is still in place for the five districts, which has negative impacts on jobs and incomes.

#### **The brunt of livelihood losses is felt by people in vulnerable employment**

The predominance of employment in the informal sector makes livelihoods precarious in Guinea, Liberia and Sierra Leone. Vulnerable employment averaged around 80.0 percent of total employment in Guinea and Liberia. In Liberia, there are more women (89.0 percent) than men (69.0 percent) employed in vulnerable jobs. Many of these workers have lost or are at risk of losing their jobs due to EVD. In the Liberian agricultural sector, for instance, the bushmeat hunters (15,000) have lost their daily source of income due to the ban on the sale of bushmeat, which is a major staple of the Liberian diet. In Guinea, around 1,500 jobs were lost in the transport sector and 42,000 lost in the potato value chains. The severity of the impact on livelihoods in Sierra Leone is not as pronounced as in Guinea and Liberia because Sierra Leoneans engage in multiple economic activities.

be rekindled and sustained to revamp lost and weakened livelihoods in affected communities. Governments, development partners and the organized private sector should provide technical, logistics and financial support to cooperatives and small-scale enterprises to strengthen the capacity of formal and informal microfinance institutions.

***Proactive support to food production in the next planting season is imperative.*** All efforts should focus on preventing a health crisis from turning into a prolonged food crisis. To this end, reviving local food security system is critical to forestalling food scarcity in 2015. Agriculture, the sector most affected by EVD, is the mainstay of economic activities that employ more than 70 percent of the labour force. Substantial support to food production should start in the current dry season in swampy or lowland communities, and in the first quarter of 2015 in highland areas in the three countries. This support includes providing farm inputs such as seeds, seedlings, fertilizers, tractors and finance to farmers, their associations and communities. Conditional cash transfers of UNDP and other partners should focus more on making food available in the next year to avert the looming food insecurity in these countries, especially in Liberia and Sierra Leone.

***The promotion of value chains in export-oriented primary commodities is key.*** Vulnerability is more pronounced in export-oriented commodities such as potatoes in Guinea and rubber in Liberia. Agricultural products are affected to a great extent because they are perishable. Developing value chains will avert the glut in potatoes in Guinea, whose price plummeted by 33 percent. This will also create employment opportunities and improved livelihoods.

***Developing entrepreneurial and skill development programmes is critical to rekindling livelihoods.*** Partnership for entrepreneurial and skill building is critical to revamp lost livelihoods and to diversify the primary sector-dominated economies.

***Changing the narratives on stigmatization is vital.*** Stigmatization and risk aversion behaviours are taking their tolls on investment and other economic activities. It is imperative to revamp all postponed investment plans. We therefore call on companies that have cut down production activities to resume full operations in order to expand job opportunities, create wealth and generate incomes.



A woman in a soap cooperative in Kankan, Guinea (Photo: Anne Kennedy/UNDP)



Aerial view of Monrovia



Empowered lives.  
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