1. Introduction
Among the countries affected by the Ebola Virus Disease (EVD) in West Africa, Sierra Leone and Liberia have been hit hardest. The event is unprecedented in scale and in the response required: The current outbreak has claimed more lives and displayed a greater spread than any other episode in history. To make matters worse, it has spilled from rural areas into urban centers, a factor which distinguishes it from previous outbreaks.

Since the official outbreak of the epidemic in Sierra Leone, the virus has infected 2,416 people and spread across all but one of the country’s 14 districts. Although, according to official figures, 477 people have died so far, true numbers are possibly 2-4 times higher. (MoHS: 06.10.2014) Many health centers and hospitals have closed and those that are still open are full to capacity, with sick people being turned away. The WHO reports that 114 ‘health care workers’ have contracted the Ebola Virus Disease and 82 have died. (WHO: 03.10.2014) “[L]imiting the human cost will require significant financial resources and a concerted partnership between international partners and the affected countries.” Tackling the crisis is beyond the capacity of the Sierra Leonean authorities alone. (WB: 17.09.2014)

The epidemic is impacting macroeconomic activity and budgetary resources and has negative consequences for the livelihood and food security of the population. The short term effects and medium term impacts of the Ebola Virus Disease result from two distinct factors:

1. The illness itself which leads to increased mortality, greater health care costs and labor shortages, and
2. Behavior changes and policy choices which restrict travel, limit the right of assembly, curtail labor force participation, reduce employment opportunities and disrupt transportation and trade.

Both factors are having significant socio-economic effects on sectors such as agriculture, mining, manufacturing, construction and services. Being “disproportionate to the human toll that Ebola has taken to date”, the effects of the disease are culminating in economic slowdown and food insecurity. (WB: 17.09.2014)

### Government Regulations during the Crisis
In the fight against the epidemic the government of Sierra Leone has enacted strict regulations:

1. **Travel and Transport Restrictions**
   Police and army have set-up check points along all major roads. Travelling is only allowed in daytime. Taxis must not transport more than two passengers on the rear seat.

2. **Restrictions on the Movement of Individuals**
   In order to interrupt disease transmission and control the further spread of the virus, “Ebola hot-spot areas” are put under quarantine and cordoned off by police.

3. **Restriction of the People’s Right of Assembly**
   Group gatherings of any kind, business meetings and workshops are prohibited. Schools and markets have been closed. Farming groups are being barred from working. Bars, Restaurants and Nightclubs provide restricted services.

4. **Establishment of Community By-Laws**
   Many villages have established by-laws regulating the social intercourse of the community members and propagating a “do-not-touch” policy which is counterproductive in many rural settings.
2. Short Term Effects of the Ebola Outbreak

Sierra Leone has seen sustained economic growth and social progress over the past decade. In 2013 the per capita income added up to 680 USD. Over the first half of 2014 the country displayed broad and robust growth. Nevertheless, 53% of the population live below the poverty line (2013) and formal employment opportunities are rare: The majority of Sierra Leoneans make a living from activities related to agriculture. The current crisis thus constitutes a large setback.

Social Effects and Nutrition Security

Since the beginning of the crisis many health centers and hospitals have closed as ‘health care workers’ have died or deserted. Those that are still open are full to capacity and have to turn sick people away. Often, these then roam around town aimlessly in search of help, posing a great risk to others.

The Ebola outbreak has effects on the operations of development organizations. Since the outset of the crisis many have halted their projects and left the countries. Most have not yet returned. Their target groups are left alone.

While most community members are subsistence farmers who produce food crops for own consumption, households strongly depend on markets to access food and other important commodities which they cannot produce. The closure of many markets thus poses a problem to many families as they are forced to change their supply channels.

While 62% of all household expenditures are for food; 59% of rice growers are net buyers of rice at the same time. Accordingly, the food insecurity among the population is high: During the lean season 45% of the community members do not have access to sufficient food. The reduction in production levels and incomes has thus direct effects on food security. A study conducted by FAO and DWHH reveals that 72% of community members only have one meal per day. Children are particularly affected: As schools normally run feeding programs, the closure of 7,000 schools all over the country has affected the well-being of 1.6 million children. In addition, the cancellation of classes means that students lose valuable learning time during the school year.

Agriculture and Food Trade

Agriculture forms the backbone of Sierra Leone’s economy: In 2013 the sector accounted for 50% of the country’s GDP. The two epicenters of the epidemic, the districts of Kailahun and Kenema are the most productive areas in the country. Most cocoa and coffee (two of the most important cash crops), as well as 18% of the domestic rice are grown here. However, this year, harvests will be affected by the Ebola Virus Disease: The outbreak erupted at a critical time in the agricultural season for rice and other food crops. Many farmers were unable to perform husbandry activities. Due to the death of community members and the restrictions imposed by government, farmers have been confronted with a shortage of labor. According to the FAO, 40% of the smallholders in the epicenters of the epidemic in Kailahun District have abandoned their farms or died; resulting in 90% of the plots not being cultivated.

The people’s fear of infection, the closure of markets and the imposition of internal travel restrictions have disrupted the marketing of agricultural produce and curtailed food trade. While smallholders have difficulties in taking their produce to the markets, buying agents who usually provide support to farmers and function as contact points between traders and their producers refuse to enter certain operational areas for fear of Ebola. As a consequence, farmers’ incomes fall.

Caused by supply shortages, panic buying and speculation the epicenters of the epidemic have experienced rapid food price increases: Prices have gone up by 13% for imported rice and over 40% for fish. Also the prices of cassava, peanuts and palm oil have risen. On the other hand, the prices of vegetables have dropped as market demand has slumped: The women vegetable growers in Koinadugu district suffer greatly. Although there has been no confirmed Ebola case in the district, the Ebola Virus Disease has led their businesses near to collapse. As a result, household incomes come under extreme pressure.

Mining

Mining makes up 87% of Sierra Leone’s industry. While iron ore is the most important commodity, other minerals such as rutile, diamonds, ilmenite and bauxite also play a role. Though many companies have reduced their expatriate personnel, the Ebola Virus Disease only has minor effects on mining. While the risk of disruption remains, the sector provides a stable source of revenue for the government.

Manufacturing, Construction and Services

Manufacturing accounts for only 2% of the economy. Nevertheless, the sector provides formal employment opportunities and is thus of disproportionate relevance. Enterprises are mostly small-scale producing products such as beer, soft drinks, paint, soap, cement and foam mattresses. In the wake of the epidemic, the sector has experienced a setback: Sales have dropped heavily. Between January and July 2014 the sales of soft drinks, for example, have declined by over 40%.

Similarly, the construction industry faces a downturn due to Ebola. While the sector contributes to only 3% of GDP, it is very important for Sierra Leone’s economy: The industry’s well-being is an important indicator for capital spending and foreign investment and as such for future growth. It is labor intensive and provides employment to unskilled workers. As such, the recent drop of weekly cement sales by more than 60% between January and early September 2014 sends a worrying signal.

Services make up 30% of Sierra Leone’s economy. The sector provides both, formal and informal employment to a vast number of people. The restrictions on bars, restaurants, clubs, markets and transportation imposed by government dampen the sector’s growth prospects. Due to some airlines’ decision to halt services, the number of flights going to Freetown has fallen from 32 per week in August to six per week in September. As a consequence, Sierra Leone is increasingly isolated from international markets. The effects on the hospitality sector are
massive: Occupancy rates have fallen from between 60-80% to 13% and the water taxis which used to ship passengers from Lungi Airport to Freetown providing work particularly to young men, are now idle. Visitor arrivals have slumped from more than 6.000 in January to less than 2.000 in August 2014.

3. Medium Term Impacts of the Ebola Outbreak
The medium term impacts of the Ebola Virus Disease in Sierra Leone are difficult to predict. The World Bank has thus developed two scenarios:

Scenario I: Rapid Containment of the Ebola Virus Disease
The outbreak will have been contained by late 2014. Economic recovery takes place over the course of 2015 and is bolstered by government spending which is financed by revenues from the mining industry. The overall growth prospects are dominated by the iron ore sector which continues to expand rapidly. While it prospers, it cannot mask the slow recovery of all other economic sectors: Deferred investments only slowly start to boost economic development. Due to the weak harvest in 2014, agricultural growth falls to just 2%. Many farmers suffer from hunger and depend on external food assistance. However, the service sector rebounds, manufacturing increases and foreign visitors return. Overall, the GDP grows by 8% in 2014. This is more than 3% lower than predicted before the outbreak of the epidemic. Accordingly, the total economic loss caused by the Ebola Virus Disease accrues to 59 million USD.

Scenario II: Slow Containment of the Ebola Virus Disease
The outbreak worsens significantly into 2015. Due to rising rural deaths and the increasing abandonment of farms by rural smallholders the agricultural output of food and cash crops falls dramatically. Increasing imports and the deteriorating supply situation place pressure on the exchange rate and drive inflation. The services sector contracts and major mines close for at least six months. While pre-crisis estimates had forecasted a growth of 8.9%, the overall GDP stagnates and the non-mining sectors even shrink by 3%. The post-crisis recovery is extremely slow. The total economic loss caused by the Ebola Virus Disease accrues to 439 million USD. Widespread hunger poses a serious threat to social stability.

4. Government Spending and Fiscal Impacts
Currently, all financial and human capacities are concentrated on the fight against the Ebola Virus Disease. All other activities have stopped. Government services ranging from agricultural extension work over employment promotion to rural development lie idle. Service provision has largely broken down. The disease is likely to cause revenue shortfalls: Not only has the epidemic led to reduced economic activity, but it has also resulted in lower levels of compliance. Falling export earnings from mining and agriculture as well as the low market prices of iron ore contribute further to diminishing revenue flows. At the same time, the adequate response to the disease requires additional spending and necessitates larger imports (especially of food and health sector needs). While the flow of remittances has remained steady, the exchange rate of the SLL has dropped by 6% against the USD since May 2014. Against this background the World Bank foresees a funding gap of 79 million USD to emerge in the course of the coming months.

5. Policy Recommendations
The Ebola Virus Disease has measurable socio-economic impacts: Household incomes drop, poverty spreads, inflation and food prices rise while productivity and production volumes fall. Government faces budget overruns and higher fiscal deficits. At the same time, economic growth and revenue inflows plummet. The poor are becoming increasingly vulnerable. Their access to services and food considerably worsens. Against this background, a sound policy response of the Sierra Leonean government and the international community is required:

The costs of the fight against the Ebola outbreak plus the costs of reduced productivity induced by the disease place a high burden on the government of Sierra Leone. “External financing [and fiscal support] is [thus] urgently needed [to fill the widening fiscal gap].” (WB: 17.09.2014) Expenditures are likely to be cost effective, if they contribute to the rapid containment of the Ebola Virus Disease.

The humanitarian response must focus on reducing the direct and indirect costs from sickness and mortality AND - at the same time - minimize the negative effects of the government restrictions, contribute to attitude changes and greater acceptance among the affected population.

Government must implement a sound set of policies which enable the flow of relief and re-establish a conducive business environment. Tailor-made technical support programs for farmers have to be designed in order to strengthen the self-help capacities of rural communities. Smallholders must be enabled to re-engage in farming and market activities. NGOs and other development partners must resume their work in the affected areas.

The surveillance, detection and treatment capacity of the health sector must be increased.
Ebola in Sierra Leone

References
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Cover Photograph: A local market at Bendu Junction which has been temporarily closed as a result of the Ebola outbreak.
Photo: Deutsche Welthungerhilfe (DWHH), 30.09.2014

As per October 7th, 2014
Pedestrians crossing the police check point at "Mile 4" have their temperature taken.
Photo: Deutsche Welthungerhilfe (DWHH), 29.09.2014
Ebola in Sierra Leone

‘Health Care Workers’ at the Ebola Treatment Centre of MSF in Kenema who have left the isolation unit and are now preparing to take off their protective clothing. They are spray-washed with a chlorinated solution.

Photo: Deutsche Weltbuhmgirlfe (DWHH), 30.09.2014
Deutsche Welthungerhilfe (DWHH) distributes food aid to 26 quarantined households in a housing unit in Kenema town on October 1, 2014.

Photo: Deutsche Welthungerhilfe (DWHH), 01.10.2014
A ‘Burial Team’ buries a 42 year old man in the village of Baskin Collage, 36km from Kenema town on October 2\textsuperscript{nd}, 2014. The man died of Ebola and is thus transported under great safety measures. His body is highly contagious.

Photo: Deutsche Welthungerhilfe (DWHH), 02.10.2014