

SOCIO-ECONOMIC IMPACTS OF EBOLA ON AFRICA

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E-mail: ecainfo@uneca.org
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ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
ASM	Artisanal and small-scale mining
AUC	African Union Commission
ECA	Economic Commission for Africa
ECOWAS	Economic Community of West African States
EBOLA	Ebola virus disease
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross domestic product
GNI	Gross national income
HIPC	Heavily Indebted Poor Countries
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
OCHA	Office for the Coordination of Humanitarian Affairs
OECD	Organization for Economic Cooperation and Development
SMEs	Small and medium-sized enterprises
SARS	Severe Acute Respiratory Syndrome
UNCT	United Nations Country Team
UNDP	United Nations Development Programme
DESA	United Nations Department of Economic and Social Affairs
UNMEER	United Nations Mission for Ebola Emergency Response
UN-Women	United Nations Entity for Gender Equality and the Empowerment of Women
WAMA	West African Monetary Agency
WEFM	World Economic Forecasting Model
WHO	World Health Organization

All dollar amounts are US dollars unless otherwise indicated.

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FOREWORD

Beyond the death toll of the current outbreak of Ebola virus disease (EBOLA), the disease has notable impacts on the three affected countries—Guinea, Liberia and Sierra Leone—through two channels. First, the health and humanitarian response requires human and financial resources that were unplanned, as well as reallocation of resources slated for other development efforts. Second—perhaps worse—is the alarmism surrounding the outbreak of a communicable disease with no known cure or vaccine. This second channel can have tremendous impacts on socioeconomic conditions not only in the three countries but also in their neighbours, West Africa, the continent—and even the world at large.

Earlier studies of this outbreak which was first officially acknowledged in March 2014 have three drawbacks: they offer little insight into effects on West Africa and virtually nothing continent-wide; their projections can draw only on very few and spotty data; and (in view of when they were written) they make the strong assumption that the epidemic is likely to spread, heavily underestimating responses from Governments and development partners, and the wave of remittances sent by the diaspora to their families back home.

To widen and update these findings, ECA has conducted a study on EBOLA's actual socioeconomic costs and their effect on growth and development prospects. The aim was to present an evidence base from which to devise policy options to accompany the above responses.

Based on primary data and information collected during ECA EBOLA Task Team missions in October 2014 (Liberia and Sierra Leone) and November 2014 (Guinea) and my own tour in October 2014 of the

three countries, this study shows that although EBOLA has high mortality and causes untold suffering among those directly affected, it is not the biggest killer among current (or past) diseases. Through an economics lens, it also reveals the effect of current responses, and the minimal impact of EBOLA on West Africa and the continent (given the small weights of the three economies, actual EBOLA prevalence and encouraging national and international responses).

Despite encouraging trend in the epidemiological situation in some of the most affected countries, the struggle has a long way to go before we can declare the crisis over: losses in productivity and adverse changes to social constructs and behaviour need to be remedied while the vulnerability of health systems across Africa is a crucial problem as very few countries are well placed to absorb an EBOLA-induced shock.

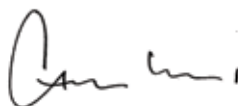
Guinea, Liberia and Sierra Leone already had structural vulnerabilities and limited potential to sustain growth and the EBOLA outbreak has pushed them to the limit by widening their fiscal deficits. If the countries have to continue making debt repayments in the absence of significant financial inflows, they will not be able to fulfill their fiscal and balance-of-payment needs. With the present outbreak severely affecting exports, current account deficits, accumulation of debt service arrears and the external financing gap are projected to widen in all three countries. External debt cancellation would give the three countries breathing space to better address the short-term economic and social challenges of the EBOLA outbreak and to plan their long-term recovery on a solid footing. While the cancellation of debt does not automatically lead to the availability of funds, the financial resources earmarked for debt repayments could instead be

invested into the countries' health-care systems, including training of health professionals, equipping health centres and ensuring the fair distribution of health personnel between rural and urban areas. These funds could also be used to benefit other strategic sectors of their economies that have been hit hard by EBOLA, including education, agriculture and food security, and services.

This outbreak underlines the need for countries and their partners to reconsider the development process, including decentralizing development efforts and not just structures. Nigeria's success in tackling EBOLA showed that decentralization can work against the outbreak, as local authorities did not have to wait for a green light from the central Government to impose quarantine and other containment measures.

This outbreak is certainly a challenge, and the international community has a moral obligation to support affected countries, but it has not fundamentally disrupted the "Africa rising" economic narrative, despite alarmism in some quarters. And if there is one lesson I would like to underline, it is this—the need to communicate properly and so avoid the destructive effects of any possible "Ebola panic disease."

I hope that this document contributes to that effort.



Carlos Lopes

United Nations Under-Secretary-General and
Executive Secretary of ECA

EXECUTIVE SUMMARY

The Ebola virus disease (EBOLA) outbreak in West Africa has the worst death toll since the disease was diagnosed in 1976. It also has far-reaching socioeconomic consequences. Although the disease is still unfolding, several studies on those impacts have been conducted since the disease broke out in West Africa, including those by the World Bank, the International Monetary Fund (IMF), the World Food Programme (WFP) and the Food and Agriculture Organization of the United Nations (FAO). Country Reports have been prepared by United Nations Country Teams (UNCT) under the leadership of the United Nations Development Programme (UNDP) country offices and the World Health Organization (WHO).

But fewer reports have focused on West Africa, and virtually none on the African continent. Moreover, most early prospects and projections on EBOLA's socioeconomic impacts were based on patchy data and reflected uncertainty about the disease's future epidemiological path.

It is against this background that ECA began this study. The overall objective is to assess the socioeconomic impacts on countries, the region, and Africa as a whole, both in terms of the real costs entailed and growth and development prospects, so as to devise policy recommendations to accompany mitigation efforts. The findings and conclusions of the study will be adjusted and updated until the crisis is over, culminating in a fully fledged evaluation of the impacts once the outbreak is contained.

EPIDEMIOLOGICAL SITUATION

According to the WHO Situation Report (7 January 2015), 20,712 cases had been identified in the three countries with widespread and intense transmission (13,191 laboratory confirmed), and 8,220 deaths reported. The mortality rates vary by country—Guinea, 64% (1,781 out of 2,775); Liberia, 43% (3,496 out of 8,157); and Sierra Leone, 30% (2,943 out of 9,780) — with an average mortality rate in the three countries of 40%. These three countries have common characteristics such as political fragility and a recent history marked by civil war and weakened institutional capacity. Eight cases, including six deaths, have been reported in Mali. Outbreaks in Senegal, Nigeria and the Democratic Republic of the Congo were declared over on 17 October, 19 October and 15 November, respectively.

SCALE OF THE RESPONSE

In view of the speedy and geographical spread of the epidemic, the international community has scaled up its efforts to contain the outbreak, and even more needs to be done. The Inter-Agency Response Plan for Ebola Virus Outbreak stipulated a financial requirement of \$1.5 billion for the three countries and the African region over September 2014–February 2015.

Given the size of the outbreak and its potential to be exported to any other country in Africa or the world, pledges are coming in continually from multilateral, bilateral and private organizations. The African continent is also being mobilized. Besides pledges by individual countries, its business community pledged

\$32.6 million at an African Business Roundtable held by ECA, the African Development Bank (AfDB) and the African Union Commission (AUC) in Addis Ababa on 8 November 2014. In-kind contributions from these partners, such as medical equipment and health personnel, have also been made.

ECONOMIC IMPACTS ON THE THREE COUNTRIES

Reflecting alarmism owing to the disease, as well as EBOLA-related mortality and morbidity, economic activity has shrunk. This contraction reflects multiple cross-currents: falling sales in markets and stores; lower activity for restaurants, hotels, public transport, construction and educational institutions (also caused by government measures such as a state of emergency and restrictions on people's movements); and slowing activity among foreign companies as many expatriates leave, with a knock-on felt in lower demand for some services.

- **Public finance.** The outbreak entails lowered revenues and increased expenditure, especially in the health sector, putting extra pressure on fiscal balances and weakening the state's capacity to contain the disease and to buttress the economy via, say, fiscal stimulus. The three countries have resorted to external support to bridge the financing gap.
- **Public revenue.** The fall in public revenue may amount to tens of millions of dollars—a non-negligible proportion of gross domestic product (GDP) for three small economies. This reduction stems from slower economic activity and a contraction of the tax base in most sectors, notably industry and services. To that may be added weaker tax administration, so that fewer taxes are collected on income, companies, goods and services and international trade, as well as fewer royalties collected on the dominant natural resource activities.
- **Public spending.** On the other side of the coin, the crisis triggered by the epidemic calls for heavy public spending on health to contain the disease, while social protection needs grow quickly. Other non-health expenditure may also emerge, e.g. relating to security and food imports.
- **Fiscal deficits.** Through its adverse effects on public revenue and spending, EBOLA is putting the budget under heavy pressure, substantially widening the fiscal deficit.
- **Investment, savings and private consumption.** In the face of lowered public revenue and increased outlays, the crisis may divert public spending from investments in physical and human capital to health and other social expenditure. Foreign and domestic private investment is also declining in the short term, often out of alarmism prompted by the disease. Authorities in all three countries have reported postponed or suspended investment in major projects.
- **Labour supply and productivity.** The crisis has cut the labour supply (including expatriates), potentially lowering the quantity and quality of goods and services, especially public services. EBOLA-related mortality and morbidity have cut the number of farmers available to work in agriculture and taken an extremely heavy toll on health workers.
- **Inflation, money and exchange rates.** Inflationary pressures are mounting as the crisis spreads, undermining competitiveness for businesses and traders and reducing households' purchasing power. External assets have been substantially reduced and local currencies depreciated as foreign trade tumbles and demand rises for dollars. Countries' currency reserves have also been hit.

SOCIAL IMPACTS ON THE THREE COUNTRIES

EBOLA risks causing a rise in morbidity and mortality from diseases not related directly to EBOLA itself, given the following combined effects on regular health-care provision:

- Fewer people are seeking formal medical attention because of fear or the stigma of being exposed to the disease.
- Weakening health services can allow the incidence of other diseases to rise, including malaria, dengue fever and yellow fever, and push up the risks linked to fewer vaccinations and to less pervasive antenatal and child health care, all of which can raise maternal and infant mortality rates.
- A significant share of the deaths reported have been of medical personnel and specialized doctors, hampering countries' capacity to recuperate from this crisis.

The EBOLA outbreak has curtailed educational services. The implications for educational outcomes are not yet clear. The related economic losses borne by the national budget are high as wages to teachers still need to be paid and facilities maintained. Even worse may be future productivity losses, reflecting the lower education of those who do not return to school, which will also require heavy additional investment in an attempt to bring educational outcomes back to pre-outbreak levels.

Unemployment and commercial closures have risen. Many businesses or branches have shut, and even those that remain open have had to make staff redundant or reduce their working hours. The largest proportion of the population exposed consists of rural families who depend on subsistence farming. Such people seldom have much stock to fall back on and have seen most of their savings eroded. And as markets have closed for weeks and economic activity has contracted, producers of perishable products

cannot sell their produce, affecting household security, particularly in border areas.

The crisis is leaving behind a growing number of orphans, who will require targeted support—both them and the families looking after them. Finally, stigma is growing inside countries, and those saving lives are the most affected: doctors and health workers are being treated by the population as potential vectors of infection, making it hard for them and their families to lead anything approaching a normal life.

EFFECTS ON ECONOMIC PROSPECTS IN WEST AFRICA AND THE CONTINENT

Although Guinea, Liberia and Sierra Leone have suffered serious GDP losses, the effects on both West Africa and the continent as a whole will be minimal, partly because, on the basis of 2013's estimates, the three economies together account for only 2.42% of West Africa's GDP and 0.68% of Africa's.

Thus, if the outbreak is limited to these three countries, the size of its impact on GDP levels and growth will be extremely small. ECA simulations based on a "bad scenario," where all three countries record zero growth in 2014 and 2015, suggest that the growth effect for these two years for West Africa will be only -0.19 and -0.15 percentage points, and for Africa as a whole a negligible -0.05 and -0.04 percentage points. In short, at least in economic terms, there is no need to worry about Africa's growth and development prospects because of EBOLA.

POLICY RECOMMENDATIONS

Policy recommendations and responses to the EBOLA emanating from the analysis are presented below in very broad strokes and under four major headings.

EPIDEMIOLOGICAL

- Governments and partners should ensure that all infected people access timely treatment in designated medical facilities, while preventing new infections. They should also abide by strict burial protocols, including the requirement that burials of victims only be conducted by trained personnel, to avoid further contamination through interaction with dead bodies.
- Countries should carry out a detailed stock-taking exercise to identify the various actors operating in their territory so as to establish what each actor is doing, how they are doing it and the impact that their interventions are having.
- Countries and their partners should devise strategies for collecting and disseminating solid socioeconomic data. Urgent steps should be taken to strengthen the statistical systems of the three affected countries, including their civil registration systems. Other African countries should also strengthen their statistical and civil registrations systems to better manage any EBOLA or other disease outbreaks in the future.
- Countries should develop systems for tracking morbidity in the population in real time, particularly for communicable diseases. The cost of not having a system that can pick up infections at an early stage and collect subsequent real-time data can have disastrous health consequences and serious socioeconomic impacts.
- Affected countries should step up the resilience of their health systems to deal with EBOLA and non-EBOLA diseases such as malaria, HIV/AIDS and tuberculosis (these three have claimed far more lives than EBOLA).

- Countries should explore innovative financing strategies and domestic resource mobilization to ensure that right amounts of resources are deployed to the health sector in general and to EBOLA in particular.

ECONOMIC

- In devising fiscal measures, the three Governments should include social protection and safety net programmes to help families of victims and their immediate communities.
- The Governments and their partners should invest in building skills and human capital in the three countries in the short, medium and long term so as to enhance labour supply.
- The monetary authorities should cut interest rates to boost growth.
- Tourism authorities should refocus their efforts on strategies to increase connectivity among them and the countries of the region more broadly, and on business-friendly travel, such as easing procedures for entry visas and encouraging competitive rates at hotels.
- Governments should reinforce border health checks rather than shut down borders, given the huge damage to economic activity that such closure entails, in affected and non-affected countries.
- The three countries should add value to export products so as to take advantage of preferential trade arrangements, such as the Africa Growth and Opportunity Act.
- Bilateral and multilateral creditors should seriously consider cancelling the three countries' external debts.
- The three Governments and their partners should engage in food aid efforts and emergency safety nets to address acute food shortages, particularly among the most vulnerable groups, such as children at risk of malnutrition.

- The three countries' Governments should provide special incentive packages to their farmers to help relaunch their agricultural sectors.
- The three Governments should devise recovery contingency plans for quickly reviving their economies, which may require them to revise their medium-, and possibly long-term, national development plans.

SOCIAL

- Strengthening health systems in the three countries and elsewhere should be prioritized. This should not focus on preventing another EBOLA epidemic but on enhancing the capacity to address public health issues of any kind. Hence EBOLA should not be tackled in isolation from other killer diseases such as HIV/AIDS, malaria, pneumonia and diarrhoea, especially among children and women.
- African countries should seriously consider the merits of decentralizing their health services to enhance health response capacity locally.
- Countries should receive supplementary funding to reach the expected standards for public health, both for emergency response and regular care.
- Social responses should not focus on individuals directly infected by the virus, but also consider those indirectly affected—a much larger group. For those directly affected, policies should aim at a household, not individual, approach.
- The role of social protection and targeted safety nets will be crucial in addressing groups disproportionately affected by the outbreak and in monitoring the rise in the number of orphans owing to EBOLA.
- Steps must be taken to ensure that the EBOLA outbreak does not ignite a food and nutritional crisis.
- Governments and local authorities should ensure that children return to school and that

the educational outcomes hurt by EBOLA are brought back to prior levels.

- Governments need to establish or strengthen gender-responsive disaster risk-reduction and management strategies.
- Authorities should expand economic opportunities for women, by recognizing and compensating women for the unpaid care work they do, and by providing gender-responsive support services.
- All levels of government should strengthen women's agency by building their ability to act on opportunities, and by challenging harmful social and cultural norms that place women at elevated risk of infection.

INTANGIBLE

To offset stigma at home and improve perceptions abroad, the study recommends that:

Pan-African institutions, particularly AUC, AfDB and ECA, need to make more effort to “set the record straight” on EBOLA. This requires them to present more accurate data and information on the disease and its impact.

These three institutions need to develop a media and communications strategy to put out an objective but constructive narrative on EBOLA. Media presence of the three institutions' leaders should be spotlighted, including joint appearances in high-profile African and non-African media. Such efforts should be replicated sub regionally by heads of regional economic communities and other African institutions.

African media and communication houses—print and audio-visual—should be encouraged to provide accurate and fact-based accounts on EBOLA. They should cover progress made to reverse its spread and impact.

AUC, AfDB, ECA and other African bodies should consider a joint, more detailed analysis of the socioeconomic, political and cultural impacts of

EBOLA when the crisis is contained. Such a study, based on primary data generated by African institutions, will enable the continent to tell the EBOLA story in an objective and nuanced manner, putting Africa's interests first and steering clear of the distortions and misperceptions that have grown up around the disease.

African leaders should ensure effective implementation of the decisions of the emergency session of the Executive Council of the African Union in Addis Ababa on 8 September 2014, on the EBOLA outbreak (Ext/EX.CL/Dec.1(XVI)). This relates especially to the need to act in solidarity with affected countries, including breaking the three countries' stigmatization and isolation, and strengthening their resilience (and that of the continent more broadly).

1. INTRODUCTION

BACKGROUND

Africa is experiencing its worst outbreak of Ebola virus disease (EBOLA) since the disease appeared in 1976.¹ West Africa—the epicentre—is experiencing its first outbreak, which began in March 2014. Cases have been reported in Guinea, Liberia, Mali, Nigeria, Senegal and Sierra Leone, with few further cases in northern Democratic Republic of the Congo.

The first reported case in West Africa dates back to December 2013, in Guéckédou, a forested area of Guinea near the border with Liberia and Sierra Leone. By March 2014, Liberia had reported 8 suspected cases and Sierra Leone 6; by the end of June, 759 people had been infected and 467 people had died from the disease, making it the worst ever EBOLA outbreak. Health services in Guinea, Liberia and Sierra Leone were not well equipped to fight the disease. Doctors were unfamiliar with the disease, and because its symptoms resemble those of other ailments, early diagnosis and effective prevention were slow to begin with. Common practices, including communal hand washing, the tradition of caring for sick relatives, and the washing and dressing of dead bodies in preparation for burial, contributed to the spread of the virus. Lack of medical personnel and beds in Ebola treatment units, the complexity of identifying active cases and contacts, and the slowness of the response also contributed to the seriousness of the health crisis (UNDP, 2014).

The 2014 outbreak in West Africa has taken a horrible human toll. The mortality rate of the disease is estimated at 60 to 70%. Although originating in rural Guinea, the outbreak has hit hardest Liberia and Sierra Leone, in part because it has reached urban areas in these two countries, a factor that distinguishes this outbreak from previous episodes that were short and mainly rural. In accord with reports from the World Health Organization (WHO), affected countries are classified into three: those with widespread and intense transmission (Guinea, Liberia and Sierra Leone); those with an initial case or cases, or with localized transmission (the Democratic Republic of the Congo, Mali, Nigeria and Senegal); and those with neighbouring areas of active transmission (Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau and Senegal) (WHO 2014, 18 September).

Beyond the terrible toll on lives and suffering, the epidemic is already having measurable economic impacts, as seen in forgone output, higher fiscal deficits and lower real household incomes. GDP and investment are predicted to decline. Prices of staple goods are already going up, food supplies are dwindling and jobs are being lost as some countries close border posts (WFP, 2014), airlines suspend flights and people's free movement is banned in attempts to prevent the propagation of the virus. Cross-border markets have been closed, stripping vendors of their one source of income (WHO 2014, 18 September). The worst-hit sectors are agriculture, transport, tourism, trade, mining and manufacturing.

Panic and confusion can be as disruptive as the disease itself. Studies of past outbreaks, such as Severe Acute Respiratory Syndrome (SARS) in 2003, have shown that lethal diseases lacking a cure, like EBOLA, tend to provoke overreactions even if the risk of transmission is low.

¹ The Ebola virus outbreak was first reported in 1976 in Yambuku, a village in the Democratic Republic of the Congo, near the River Ebola, hence the name. Since then, there have been more than 20 EBOLA outbreaks mainly in East and Central Africa.

Panic and confusion relating to the Ebola outbreak in the three most affected countries were also triggered by the early projections and attitudes. Most of the early projections of EBOLA's economic impacts depend on patchy data and so are highly uncertain about the disease's epidemiological path (Government of Sierra Leone: Ministry of Health and Sanitation 2014). They make a basic assumption that the epidemic is likely to spread fast and do not give full justice to the swift policy reaction or to the health and humanitarian responses from Governments and development partners.

For example, the World Bank in October 2014 estimated the two-year (2014–2015) regional financial impact to be \$32 billion if the virus continued surging in Guinea, Liberia and Sierra Leone and spreading to neighbouring countries (World Bank, 2014a). However, this estimate turned out to be unrealistic given the actual EBOLA prevalence. The World Bank study also underestimated the potential impact of containment measures by the countries—especially after Nigeria's state of emergency declaration in August (see box 1)—and of international interventions. In early December the World Bank updated this analysis, implying forgone income across the three countries over the two years of more than \$2 billion (World Bank, 2014b).

Given when they were written, the early studies generally failed to incorporate the changes in behaviour seen in response to the outbreak. Most early projection models also ignored other responses, such as heightened remittances from the diaspora in supporting their families back in the affected countries, Governments' budgetary reallocations towards health care and emergency management and donors' additional funding—all of which have limited the expansion of affected areas. These responses should now be used and integrated into the new generation of projections.

Specific features in some of the affected countries have made the outbreak particularly difficult to control. Fear has compounded the crisis while eroding social ties and exacerbating the impact

of the epidemic, leading to the closure of schools, businesses and borders, reducing trade, halting investment, and therefore reducing the prospects for growth in future years (UNDP, 2014). Moreover, the EBOLA epidemic has affected key cash/export commodities, contributing to the reduction of household incomes and ultimately of purchasing power and food access of populations (WFP, 2014).

It is against this background that ECA prepared this study, which builds on the findings of the ECA EBOLA Task Team missions to Liberia and Sierra Leone (6–15 October) and Guinea (12–15 November), and on the Executive Secretary's visit (22–25 October) to the three countries.

OBJECTIVES AND SCOPE OF THE STUDY

The overall objective is to assess the socioeconomic impacts of EBOLA not only on the countries with widespread and intense transmission, but also on West Africa more widely and the continent as a whole—in terms of both the real costs as well as growth and development prospects.

The study looks at the outbreak's impacts—qualitative and quantitative—endeavouring to grasp the interrelations among them by investigating mechanisms and channels of transmission, while trying to capture their size. Analysing these findings, the study offers recommendations to mitigate the disease's impacts, including building more systematic coping and response mechanisms.

Despite uncertainty surrounding some of this study's estimates and analysis, they are useful for policymakers (of affected and non-affected countries) to better understand the impacts of an EBOLA outbreak on socioeconomic development and performance, allowing them to plan ahead and devise strategies for more resilience to EBOLA. The study's findings and conclusions will be updated until the crisis is over, culminating in a fully fledged evaluation once the outbreak is contained.

STRUCTURE OF THE REPORT

The report is structured in eight chapters, including this introduction. Chapter 2 reviews the conceptual framework and methodology, and chapter 3 some literature on EBOLA in Guinea, Liberia and Sierra Leone since the beginning of the outbreak. Chapter 4 outlines the epidemiological situation and scale of the response, while chapter 5 offers a macroeconomic analysis of EBOLA's impacts. Chapter 6 looks at gender dimensions and the vulnerability of African health systems, chapter 7 presents a perception analysis of the outbreak, and chapter 8 rounds off with policy recommendations.

BOX 1. STOPPING EVD IN ITS TRACKS: NIGERIA'S EXPERIENCE

Nigeria has been lauded as one of the success stories in containing the current spread of EBOLA within its borders relative to Guinea, Liberia and Sierra Leone. This is attributed, among others, to brave and decisive Nigerian leadership from the presidency to the lowest echelons of power. The leadership took hard and sometimes unpopular decisions, e.g. putting school activities on hold, discouraging handshakes and restricting movement of dead bodies from affected to non-affected regions—the total aggregate effects of these measures having helped to bring EBOLA under effective control.

By its sheer economic size and a well decentralized governance structure, the country also was able at short notice—particularly in the affected regions—to mobilize and deploy various resources including human and financial resources. These interventions were underpinned by a relatively functional health system that aided in providing an effective multi-sectoral response to the disease. In addition, various stakeholders, including the private sector, played a critical role in arresting the spread of EBOLA by joining hands working with the Government to provide a coordinated response in terms of financial resources and equipment necessary for a combative action against Ebola.

Source: Nwuke 2014

2. CONCEPTUAL FRAMEWORK AND METHODS FOR ANALYSING IMPACTS

CONCEPTUAL FRAMEWORK

The EBOLA emergency is likely to generate a string of secondary effects that threaten progress on social outcomes and hinder the economies of affected countries for years to come. Although the immediate concern during the outbreak is to save lives and to contain the spread of the disease, it is important to understand how the disease is affecting households and social interactions, and thus their livelihoods. A comprehensive response to the epidemic will require immediate emergency actions combined with mid-to long-term perspectives to help the countries to get back on track to achieving their development goals. Figure 1 presents a conceptual framework with which to analyse some of the main potential social and economic impacts of EBOLA on affected countries and on Africa.

ECONOMIC EFFECTS

The impacts on affected countries are severe. Most are driven by aversion behaviour, including increased labour absenteeism and reduced economic interaction owing to a fear of contracting the disease. A slowdown in regular consumption forces companies to cut working hours and layoff staff to maintain operations. In turn, livelihoods are affected, informality becomes the norm rather than the exception and the market responds with rising prices, fuelled by speculation, lack of supply of goods and currency fluctuations, affecting regular domestic production patterns.

The aggregate effect of the changes in consumption patterns can also have an impact on international

consumption patterns. Regular trade partners may be diverted from dealing with EBOLA-affected countries, in the immediate perhaps because of new preventive regulations and changes in logistical services. Some countries have already announced possible visa restrictions for visitors from affected regions. Planes, trains and trucks, carrying cargo or people, may see their activities reduced or suspended altogether.

The altered business environment is not limited to any particular sector, though it affects some more than others, varying by country and reflecting the economic structure. Effects are emerging in the primary sector, such as agriculture, mining and forestry; in the secondary sector in manufacturing and construction; and in the tertiary sector, usually tourism, financial services and trade. The ripples of economic downturn are likely to cross-cut a range of sectors.

The crisis and economic downturn are influencing investment and capital flows. In the public sector, implementation of large-scale projects has been affected, both from a labour perspective and from financial incapacity to meet costs owing to curtailed public revenue. In turn, this is cooling the economy and feeding back into the downturn, possibly deterring foreign investment, reducing the country's stock of financial capital, increasing risk ratings and affecting monetary and fiscal stability.

From a continental perspective, EBOLA can also affect regional integration: suspension of trade in goods and services can force traditional partners to look for alternative sources to maintain supply—undermining

integration and setting back economies' moves towards transformation and greater productivity.

SOCIAL EFFECTS

From a social perspective, the immediate and most direct consequence of the outbreak is a rise in morbidity and mortality for those infected. Given the aggressive nature of the virus, it is medically expected that victims of EBOLA show symptoms 2–21 days after contact with the virus, but in most cases symptoms appear 8–10 days after exposure. Given the high mortality rate of around 37%² (though varying sharply by country), the outbreak causes major loss of life.

The treatment of patients requires a very delicate and comprehensive protocol that demands specialized training and equipment, ideally procured before an outbreak to provide for incremental capacity building of the health system. The current (post-outbreak) mode of acquisition generates an accumulative burden on regular health budgets and a shift of resources, exerting a pressure on health systems that inevitably affects regular health service provision. Hence national capacity to care for other infectious diseases (such as malaria and yellow fever) and regular health services (such as antenatal care and vaccinations) are affected, potentially generating a rise in morbidity and mortality resulting indirectly from EBOLA. These cases, however, would not be registered as related to EBOLA. To fund the health response, Governments of affected countries are mobilizing resources by cutting funds from other areas such as public works and by increasing the fiscal deficit.

Beyond the health sector, provision of social services has been restricted to control the spread of the disease. The provision of social protection schemes and social safety nets may also be affected both

operationally and from an outcome perspective. The interruption of delivery—owing to shifted resources or lack of capacity to respond to emerging health needs—can disrupt productive safety nets and affect ongoing community initiatives that require continuity for success. Asset-building and cash-transfer programmes become a fundamental element of the livelihoods of the most vulnerable, and their volatility and discontinuation can affect the overall gains of social outcomes, and even reverse the progress achieved over many years.

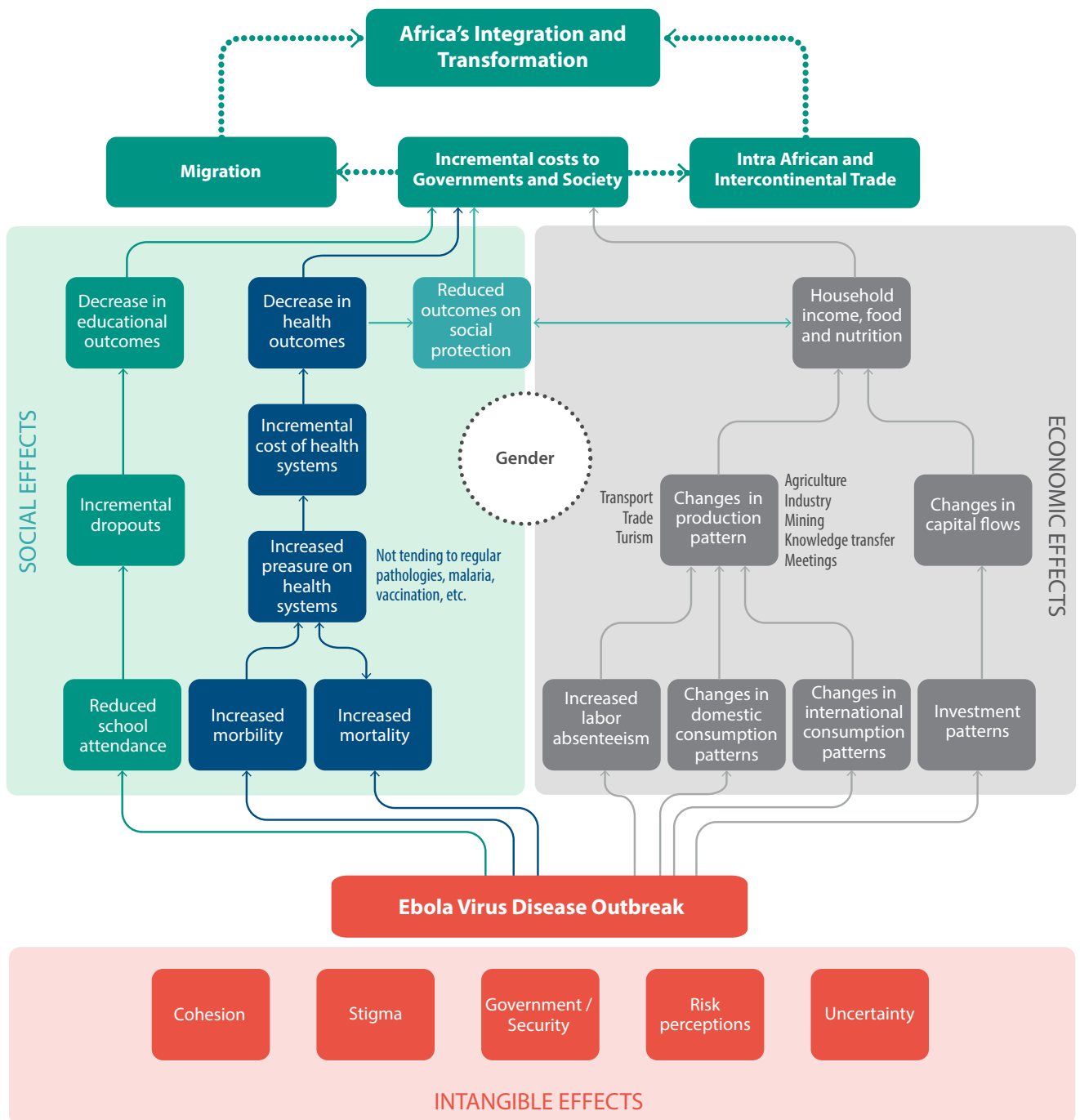
Educational services have also been reduced: the immediate budget losses are not yet known—because teachers' and others' wages still need to be paid and facilities maintained. Many of these recurring operational costs are still borne by the Government. Nor are the immediate impacts on educational outcomes known.

Further out the consequences could well be far-reaching, as the lack of educational activity may increase the probability of dropping out of school, as older children engage in support activities and take a bigger role in providing for the household's livelihood. The lost educational years may also have a life-long impact on the person's income and perpetuate the intergenerational cycle of poverty. The future productivity losses on lower education of those who do not return to school will also require an incremental investment, just to bring the education system to its pre-outbreak status.

The EBOLA outbreak therefore has potential indirect impacts on human capital formation through deteriorated educational outcomes by affecting enrolment, age-appropriate attendance and educational grade achievements for different cohorts of the population. Further, school facilities will have to be brought back to operational readiness when educational services are resumed, increasing the outbreak's economic impact on educational budgets.

² According to WHO, the average EBOLA case fatality rate is around 50%. Case fatality rates have varied from 25% to 90% in past outbreaks. Up to 2 November 2014, the fatality rate of the current epidemic was 36.9%, a figure that might be underestimated owing to underreporting of cases (WHO 2014, 5 November).

FIGURE 1. ANALYTICAL FRAMEWORK FOR THE EVD OUTBREAK



Source: ECA.

INTANGIBLE EFFECTS

Given the complexity and evolving nature of EBOLA, the disease generates “intangible effects” for social cohesion, stigmatization, governance and security, and risk perceptions. When evaluated with the social and economic impacts of EBOLA, the intangible effects could worsen the humanitarian crisis in the immediately affected region.

Social cohesion: Since the outbreak of EBOLA in early 2014, social gatherings such as weddings, church meetings, funeral ceremonies and many communal activities have either been abandoned or drastically reduced in all the affected countries. This has serious implications for the social cohesion and trust that act as a glue in society, particularly for post-conflict countries such as Liberia and Sierra Leone. If not properly managed, this outcome has the potential to reverse gains made in establishing peace and social stability after the end of the civil war in the two countries. Crucially, unless appropriate information and advice are provided to the public on broad measures for containing the disease, the foundations of social cohesion might be disrupted through community isolation and stigma—a recipe for instability in affected and surrounding areas.

Stigma: The ECA Task Team that went on a fact-finding mission (October and November 2014) to Guinea, Liberia and Sierra Leone noted that stigma was affecting medical professionals as well as recovered patients. For instance, medical personnel (doctors, nurses and clinical officers) can be stigmatized by

communities as they are perceived to be vectors of the disease and hence people do not want anything to do with them. This prejudice could well aggravate the spread of EBOLA as people shun health facilities for fear of coming into direct contact with medical staff.

At an institutional level, quarantining patients and suspected victims of EBOLA—though necessary for containing the spread of the disease—can lead to violation of fundamental human rights through imposed restrictions on movement of people and restrictions on their economic activities. For example, in September 2014, Sierra Leone imposed a three-day lockdown that heavily restricted movements in and out of affected areas as part of a national response to contain the disease’s spread.

For isolation measures to work, they should be part of a comprehensive package to include sustenance of the patients and their immediate families through provision of basic needs, such as food and water for sanitation. They must also be carried out after close consultation with communities to avoid a backlash through unintended outcomes such as community denial and concealment of suspected cases, putting more people at risk. Otherwise, isolating affected people and communities can reinforce stigma, possibly leading to violence (as seen in Liberia a few months ago). In some instances, people face stigma even after they have recovered from the disease (see box 2).

BOX 2. STIGMA AFTER RECOVERING FROM EVD

High school teacher Fanta Oulen Camara spent two weeks in March fighting for her life against the deadly Ebola virus but her darkest days came after she was cured of the disease and returned to her home.

“Most of my friends stopped visiting. They didn’t speak to me. They avoided me”, the 24-year-old said. “I wasn’t allowed to teach anymore”.

Source: Nichols and Giahvue 2014.

As in the early days of HIV/AIDS, the drivers of stigma linked to EBOLA have to be identified if the battle is to be won on all fronts. Interventions have to eliminate the fear of transmission, which usually drives stigma. Communities and individuals should be given the right information on the modes of transmission and the supporting mechanisms for those already infected.

Governance and security: Given that most of the health services in the affected countries have to be accessed locally, EBOLA has overstretched local authorities' capacity to respond well. The three countries have weak decentralization structures and increasingly rely on central administration to provide most of the services needed for a response, which centralization has the potential to undermine these authorities' ability to deploy resources.

Notably, health centres and government services in many affected communities are ill-equipped to provide a semblance of a decent health package and accompanying services, such as water and sanitation in an emergency situation.

Apart from such governance challenges, EBOLA has security implications. For instance, at the sub regional level, immigration laws and regulations have been tightened to control the influx of people from affected countries. These are forcing people to use unconventional routes to cross back and forth, posing heightened risk to areas that are currently free from EBOLA. Yet countries in West Africa, as in

many parts of Africa, have long and porous borders that are hard to police for illegal movement of people and goods, increasing the risk of spreading the virus. Unrestricted movement of people may also compromise border security.

Risk perceptions: EBOLA is distorting business perceptions of Africa in general and of the three countries in particular, affecting long-term investment decisions. For instance, WHO notes that some African airlines such as Kenya Airways have suspended flights to affected countries because of perceived transmission risks—unlike, say, Royal Air Maroc (see box 3). Many countries across the globe have put tough screening measures at their ports of entry for all people they regard at higher risk, particularly those coming from EBOLA regions.

These measures demonstrate the adverse effects of negative perceptions and ignorance on economic activities, and the losses associated with cancelled or delayed investment, for example, may well be immense. They are also tarnishing Africa's image as a region with huge potential for growth and business, which could be hurt permanently if no countervailing messages are put out by African leaders and their own people. It is worth mentioning some good practices in this regard namely the hosting of the Africa Cup of Nations by Equatorial Guinea and Niger (see box 4).

BOX 3. ROYAL AIR MAROC CONTINUES FLYING TO EVD-AFFECTED COUNTRIES

Royal Air Maroc has maintained its flights to Guinea, Liberia and Sierra Leone the three most affected countries by EBOLA. The airline took this decision at a time when they were hard hit by a health crisis and risked becoming more isolated. Its commitment has allowed international assistance to reach affected zones. Halting flights would undoubtedly have aggravated an already alarming situation.

The decision has been saluted by many organizations and high-level decision makers.

Source: Royal Air Maroc

BOX 4. LIFE WITH EBOLA: EQUATORIAL GUINEA AND NIGER TO HOST THE AFRICA CUP OF NATIONS COMPETITIONS

The most important football competition on the continent, the Africa Cup of Nations (CAN), and related celebrations will take place on the African continent from 17 January to 08 February 2015. This competition will take place thanks to the determination of the Government and people of Equatorial Guinea who have accepted to host it despite the concerns around the EBOLA virus disease outbreak. Africa as a whole has saluted this move by the Government and people of Equatorial Guinea. The Country has set up measures to minimize the associated risks. In an interview to the BBC, Mr. Lucas Nguema Esono Mbang, Second Vice-Premier in charge of Social Affairs and Minister of Education and Sciences, affirmed that “the Country has secured 2 million dollars to procure health equipments and has set up two quarantine and isolation zones with specially equipped rooms in Malabo and Bata.” In addition to usual airports checks, the country has also set up checkpoints in the four stadiums that will host the games to detect and isolate suspected cases. On the other side of the continent, preparations are underway to host the U17 CAN in Niamey, Niger from 15 February to 01 March 2015.

Source: Confédération Africaine de Football (CAF)

METHODS FOR ANALYSING IMPACTS

So, how are all the above effects measured or otherwise analysed? Various parts of this ECA study draw on different methods. Underlying all the methods is data availability, which largely determines the type of model or approach to be adopted in a given analysis. Because a raft of economic variables and sectors are affected by EBOLA, there is a temptation to use economy-wide models to capture the essential complex changes and interrelationships of the outbreak.

This study draws on four approaches:

DESCRIPTIVE QUANTITATIVE AND QUALITATIVE ANALYSIS

Used in the majority of Chapters 4, 5 and 6, this approach followed developments in social, economic and intangible areas, and their interactions, based on the above framework. It also worked off macroeconomic models. ECA used primary and secondary data collected in affected countries by national ministries, departments and agencies, with data from United Nations agencies in the field as well

as other sources. For future versions of the report, secondary information will be regularly compiled on key indicators³ via focal points established during the EBOLA Task Team missions.

SURVEY ON NON-AFFECTED COUNTRIES' PREPAREDNESS AND ON INDIRECT EFFECTS OF EBOLA

Some neighbouring countries closed their borders to EBOLA-affected regions. Others introduced health screenings at airports or even regular check-ups via government-provided mobile phones, like Morocco. One element of the study is an ongoing survey among African countries to assess the preparedness of non-affected and “mildly affected” countries (Mali, Nigeria and Senegal) to a possible EBOLA outbreak, as well as the perceived indirect effects emanating from their links to the three affected countries. The survey is being conducted by ECA Sub regional offices

³ Number of cases, fatality rates, incremental costs of health centres, number of medical staff, demand and supply for non-EBOLA-related health care, school attendance, public spending on health care and other areas, domestic economic indicators including sectoral production and inflation, trade flows, and investment flows.

and touches on issues such as the socioeconomic sectors affected, special measures introduced by the Government, direct costs of measures introduced and indirect effects of EBOLA. Preliminary survey results received as of 10 January 2015 are discussed in the section ‘Survey on non-affected countries’ preparedness and on indirect effects of EBOLA.’

INTERNATIONAL TRANSMISSION OF THE EBOLA EFFECT

The negative economic shock originating from Guinea, Liberia and Sierra Leone has been transmitted to countries with which they have strong economic ties (analysed further in the section entitled Economic effects of EBOLA on West Africa and the continent). To assess the size of the effect on growth in West Africa and the continent, we use the World Economic Forecasting Model (WEFM). The WEFM consists of 150-plus linked country models and is regularly used by the United Nations Department of Economic and Social Affairs (DESA) and the United Nations regional commissions to develop economic projections at global, regional and country levels. The model

includes a detailed structure of international links that provides a framework to study the international transmission of economic shocks originating from one or more countries.

PERCEPTIONS ANALYSIS BY STATISTICAL TEXT MINING

Statistical text mining (as used in Chapter 7, Perceptions analysis) contributes to a better understanding of the perception of EBOLA, and the image of Africa, around the world. Taking a large sample of articles on EBOLA, ECA ran a standard statistical text analysis tool (available in the R statistical text-mining package) and computed statistics on the most used words, recurrent topics, frequencies and proximities, etc. The results provide some perceptions of EBOLA by region and how those perceptions evolved.

3. RECENT DOCUMENTS ON EBOLA IMPACTS IN GUINEA, LIBERIA AND SIERRA LEONE

The following non-comprehensive review of recent publications—mainly from WFP, FAO, UNICEF, UNDP, OCHA, IFPRI, Plan International, IMF and the World Bank—looks at socioeconomic impacts in the three most affected counties.

GUINEA

Economic impact. The economic situation in the EBOLA-affected countries deteriorated because of the combined effects of the disease and of prevalent structural problems. Guinea is a case in point, with its structural problems of low energy availability and slow execution of structural reforms to improve growth and reduce poverty.

In August 2014, the IMF revised down GDP growth for Guinea from 4.5% to 3.5% for 2014 (IMF, 2014a). In October, EBOLA led to a downward revision by the IMF to 2.4%, and the World Bank's 2014 GDP forecast from 4.5% to 2.4%, with 2% forecasted for 2015 (World Bank, 2014a), down from 4.3% forecast before the outbreak. In December the World Bank cut the 2014 growth projection further to 0.5% (World Bank, 2014b), while the Government of Guinea's forecast stands at 1.3% in November 2014 for the same year. This official national revision suggests an income loss of \$662 million compared to initial projections for 2014.

UNDP estimates a loss in GDP growth of 2.3%. The UNDP simulation using a computable general equilibrium model indicates a loss of 6.1% in GDP growth for 2014. According to the estimates, even if

the EBOLA outbreak is brought under control in early 2015, the loss in GDP for 2015 may range between \$230 to \$300 million (UNDP, 2014b).

The indirect knock-on effects not only hit investment in the country but are also seen in lost jobs, underemployment and lower household and individual incomes. Within six months of the start of the outbreak in March 2014, household income loss was at 13% (UNDP, 2014). This is mainly because the household members disproportionately affected are in the economically active age group (15–49 years). Where life expectancy is low, this group is crucial for household income.

In October 2014 the fiscal impact of the outbreak was estimated at \$120 million—\$50 million attributed to revenue shortfalls and \$70 million to increased spending as part of the response (World Bank, 2014a). Direct EBOLA-related spending in 2014 to date has been \$90 million, including \$10 million from own resources and the rest from donors. The fiscal impact of the outbreak has been heavy, at over \$200 million, taking together falling revenues, increased spending and forgone investment (World Bank, 2014b).

Social impact. The social effects include behaviour changes—sometimes violent—driven by fear. In the mountainous part of the country where the outbreak began, villages hidden by dense forest have been cut off from the outside world. In September 2014, eight officials and local journalists—part of a delegation sent to warn of EBOLA's dangers—was killed by a

mob in the village of Womey, and the dismembered bodies were dumped in a septic tank. In another village, Koyama, the highest-ranking district official was held hostage for hours under a hail of stones. It became impossible for the Red Cross and other international teams to enter villages to retrieve sick people or bodies.

Education remains temporarily suspended and vaccination campaigns disrupted. The social divide in the forested region is less severe but remains visible. Some village communities are excluded from the weekly markets. About 230,000 people are severely food insecure due to the impact of Ebola; by March 2015, that number is expected to rise to over 470,000. The total production of food crops in Guinea for 2014 may be down by about 3% compared to the previous year (FAO/WFP, 2014a). According to investigations conducted remotely by WFP, Ebola constitutes a shock to an already precarious situation of chronic food insecurity and malnutrition (OCHA, 2014), especially in Forest Guinea. IFPRI (2014) estimates at 15% the country's proportion of undernourished population between 2011 and 2013, with 18.2% of under-fives underweight.

EBOLA carries a strong gender dimension in all the affected countries. In Guinea, women account for the highest share of Ebola cases in Gueckédou (62%) and Télémilé (74%). The epidemic has disrupted important sources of employment for women, particularly informal sector activities such as the production and exchange of agricultural and handicraft products (UNDP, 2014b).

LIBERIA

Economic impact. Some multilateral organizations even before the outbreak expected growth to slow in Liberia. IMF, for example, forecasted a slowdown from 8.75% (in 2013) to 6% (in 2014) even before EBOLA. However, because EBOLA curtailed activity in mining, agriculture and services in the second half of the year, it subsequently revised down its 2014 real GDP growth forecast for Liberia to 2.5% (IMF, 2014c). In October, the World Bank revised down

its 2014 GDP growth forecast from 5.9% before the crisis to 2.5% (World Bank, 2014a) and later 2.2% in December (World Bank, 2014b). However, as the epidemic may be abating in the country and with some signs of activity picking up, the World Bank's 2015 forecast projects a slight uptick in growth to 3.0% compared with 2014. Though this is still far below its 6.8% GDP growth forecast from before the outbreak, it is higher than its 1.0% forecast for 2015 made in October (World Bank, 2014b).

Inflation increased to about 11% in June 2014 and is expected to rise to 13.1% by the end of the year, according to IMF (2014c). Imports were \$200 million lower than in its previous pre-EBOLA projection for the same period. Private credit expansion fell to 14% in June from a year earlier.

The effects of EBOLA on the fiscal balance are harsh. Fiscal revenue is projected to decline by about \$46 million in 2015 and by \$49.9 million in 2016, for a fiscal deficit in 2015 of at least \$93 million (11.8% of GDP). Direct EBOLA-related spending (for health, quarantine security and food imports) is put at \$67 million (IMF, 2014c). As in Sierra Leone, pressure on the financial sector is increasing the volume of non-performing loans threatening banks' financial stability. According to UNDP, total revenue may decrease by 7% and tax revenue by 18%, while borrowing could rise by 171% (UNDP, 2014b) in 2015.

Social impact. Two densely populated neighbourhoods of the capital saw riots in August due to government quarantine measures (IMF, 2014c). More generally, inflation has hit the poor and vulnerable very hard, underlining the need for a strong social protection effort as part of the recovery. For instance, some communities are reporting that the price of rice has increased by around 50% (Plan International, 2014) since the beginning of the outbreak.

In the area of education, to date, students have remained at home after the Government decided in August 2014 to close schools to prevent further spread of the disease. There is a concern that girls are at greater risk of sexual abuse and early

pregnancy and marriage due to the loss of education and career opportunities, and greater poverty (Plan International, 2014).

Regarding the agricultural sector and food security, about 170,000 people are severely food insecure due to the impact of Ebola, and by March 2015 that number is expected to rise to over 300,000. The rapid spread of the virus in the country coincided with the period of crop growth and harvest, and agricultural labour shortages have led to a decline of 8% of the total production of food crops (FAO/WFP, 2014b). This will exacerbate food insecurity and malnutrition for a country where, between 2011 and 2013, 28.6% of the population was already undernourished and almost 15% of children under five were underweight (IFPRI, 2014).

According to UNICEF (2014), children are affected by this epidemic in two ways. First, many have lost one or both parents and been left orphaned. Second, the epidemic has had a catastrophic impact on already fragile health systems. Some hospitals had to close their doors, forcing women to give birth at home and depriving children of immunization and basic medical care.

SIERRA LEONE

The World Bank revised down its 2014 GDP growth forecast for Sierra Leone from 11.3% before the crisis to 8.9% in October (World Bank, 2014a) and to 4.0% in December (World Bank, 2014b). UNDP's estimates are in line with the World Bank's moderate scenario. In fact they are forecasting a loss of 4% using a computable general equilibrium model. Given that this scenario is the most likely, GDP growth could be 7.4% in 2014 (UNDP, 2014b).

The economic impacts include falling growth, rising prices and slipping business and personal incomes.

The general message of the Government's preliminary assessment, published in October, is that the country will see reversals in gains made on the Millennium Development Goals and other economic metrics (Government of Sierra Leone, 2014). The

Government estimates a growth decline from 11.3% to 6.6% in 2014 mainly owing to the disruptions of economic activities in key sectors such as agriculture, mining, construction, manufacturing, trade, tourism and transport (Government of Sierra Leone, 2014). The IMF country report of September indicates a broadly similar growth decline for 2014, from 11.3% to 8% (IMF, 2014b). Its forecast for 2015 is a 2.0% contraction, contrasting starkly both with its own 8.9% forecast from before the EBOLA outbreak and with the 7.7% forecast in October by the World Bank (2014b).

According to government officials (Government of Sierra Leone, 2014), panic buying, supply reductions, area quarantines and border closures pushed up the inflation forecast for 2014 from 6.7% in June to 7.5% in August 2014. The September IMF figure put the rise higher, at 10% at the end of 2014, and predicted elevated inflation in 2015 (IMF, 2014b). Fortunately, inflation appears to be easing slightly. From September to October 2014, national inflation fell from 8.5% to 8.3%, while in Freetown it fell from 12.6% to 11.8%. This decrease in price levels is due to the advent of the harvest season, in which the supply of food on the market increases significantly (UNDP, 2014b).

Containing the EBOLA outbreak led to rises in government spending and capital spending reallocated from other projects (such as those earmarked for long-term growth), widening the fiscal deficit, even if risks to debt or fiscal sustainability are believed to be moderate. As in Liberia, there is some financial sector fragility stemming from increasing non-performing loans.

The balance of payments is suffering because of increased food and health-related imports (Government of Sierra Leone, 2014). IMF (2014b) projects the balance of payments shifting from a programmed surplus of \$38 million before the crisis to a deficit of \$72.4 million in 2014.

Although the closing of operations by mines and other companies run by multinationals has led to a decline in foreign direct investment, the offsetting role of

voluntary donations and support from development partners should be recognized. National restrictions on air, sea and road transport, and border closures, have also severely hit trade with neighbours and other countries. The currency depreciated relative to international currencies, which are in high demand domestically. Another obvious impact of EBOLA is the increase in unemployment (National Revenue Authority of Sierra Leone, 2014).

Except for GDP and inflation, there are no indicative numbers on most of the negative economic impacts of the disease. Other studies indicate the revenue implications of EBOLA on Sierra Leone and have identified transmission channels. According to some preliminary country estimates, revenue is set to decline by 14.9% by end-2014, largely owing to EBOLA (National Revenue Authority of Sierra Leone, 2014). In monetary terms the EBOLA-related revenue loss will be \$45.7 million in 2014 and \$91.3 million in 2015, or 1% and 1.6% of non-iron GDP (IMF, 2014b).

Social impact. Negative effects include mortality of key health personnel, stretched health infrastructure and reversal of health gains as non-EBOLA health delivery is compromised. The education sector suffers because of school closures and delays to or diversions from water and sanitation projects. According to UNICEF, some 5 million children aged 3 to 17 are out of school as a result of Ebola in the three affected countries.

EBOLA is a threat to social cohesion, especially among vulnerable groups such as women and children. More women than men are infected (51% against 49%), including more women in agriculture and trade than men (Government of Sierra Leone, 2014).

According to the Ministry of Health, the number of children dying of curable diseases such as malaria, pneumonia and diarrhoea could exceed the number dying of Ebola by three or four times, because of people's fear of seeking treatment in medical facilities. While 50% of deaths in the country are not Ebola related, many are due to Ebola-related behaviour, including an aversion to and fear of going

to health-care facilities when infected with other treatable diseases (Sierra Leone Health Facility Survey, 2014).

Essential social services, such as child health protection programmes, nutrition, water and sanitation, and HIV prevention and treatment, will need special attention so that already vulnerable families can be better protected.

The FAO/WFP's (2014c) November 2014 estimate indicates that 120,000 people are severely food insecure due to the impact of Ebola in Sierra Leone. In March 2015, this number could reach 280,000. The country already had a high proportion of undernourished people (29.4%) and underweight children under five (19.9%) between 2011 and 2013 (IFPRI, 2014, IFPRI; Welt Hunger Hilfe, Concern Worldwide, 2014).

It is estimated that the total production of food crops for 2014 will be less than 5% compared to 2013. However, rice production is expected to decrease by 17% in one of the most infected areas of the country (Kailahun), which is usually one of the most productive agricultural regions.

Women make up 60% of cross-border traders and rely heavily on sales in community markets, and both activities have been severely disrupted by the epidemic (UNDP, 2014).

KEY CONCLUSION—MORE THAN EBOLA AT WORK

The three economies had structural problems—at the root of most of their socioeconomic issues—exacerbated by the outbreak. For instance, Guinea's structural troubles include a chronic electricity shortage and lack of structural reform. In 2013, it saw a sharp slowdown in mining activity, mainly owing to lower bauxite and diamond production.

Yet these countries' prospects (and those of other African countries) will be largely set by other factors not related to EBOLA. Generally declining prices in international commodity prices, for example, will

challenge many of the continent's countries. Nor is it possible (from impact studies) to single out EBOLA's impact and project socioeconomic trends on that basis. For instance, elections—planned for 2015 in Ethiopia, Guinea, Nigeria and Burkina Faso among other countries—often throw up uncertainties, affecting investment and growth prospects, reflecting mainly delayed investments.

4. EBOLA EPIDEMIOLOGICAL SITUATION AND RESPONSE IN THE THREE COUNTRIES—AND OTHER GLOBAL KILLERS

The epidemic was declared in Guinea in March 2014 and quickly spread to Sierra Leone, Liberia, Nigeria, Senegal (one case imported from Guinea) and, later, Mali. The largest and deadliest EBOLA epidemic in history, it can tear apart the social fabric of a country. It has claimed the lives of thousands of people (figure 2 presents the latest data for Guinea, Liberia and Sierra Leone), and patients still flow into centres of care, which are overwhelmed.

It began with an isolated outbreak of level 2, upgraded to level 3 (the highest) by the Director-General of WHO on 24 July 2014. The epidemic is now considered a public health emergency of global scope.

The three countries' public health systems are relatively underdeveloped and do not have the basic tools to diagnose patients, perform epidemiological tracing of the disease or communicate with affected areas to collect or update data. Nor do they have the basic skills to perform the essential tasks of public health disease prevention and control. Among the main problems they face are lack of skills in laboratories to perform rapid virological tests, of health workers and of trained personnel for diagnosis, treatment, logistics management and contact tracing—all of them compounding the health crisis.

These three countries, members of the Mano River Union, have other common characteristics such as political fragility and a recent history marked by

civil war, loosening of ties between government and society, a "governance deficit," and weak institutional capacity. A decade after the end of regional conflicts, Mano River Union countries have made progress towards reconciliation, although too many people are still marginalized owing to poverty and unemployment. Their lack of jobs—especially for women—weak institutional capacity and paucity of resources to provide basic services (water, health care, education and electricity) arouse their populations' discontent. Centralized government and citizens' distrust of the state and public institutions create mistrust in some communities, making it hard to isolate patients and monitor their contacts.

EPIDEMIOLOGICAL SITUATION

Guinea was the first affected country in the Mano River Union in December 2013. The earliest reported cases came from Guéckédou, Macenta and Kissidougou in the Forested Region and later from Conakry, the capital. On 21 March 2014, the Government declared an epidemic after the Institut Pasteur in Lyon, France, confirmed the cases on samples it had received.

According to WHO, despite stabilizing in some districts, the virus still shows intense transmission in Guinea, with the number of cases fluctuating but staying high. Transmission is high in Macenta in the southwest near the Liberian border. Transmission is persistent in the neighbouring district of Kérouané, N'Zérékoré, Beyla, Faranah and Coyah. Conakry requires sustained efforts to fight the disease. Siguiri district, on the border with Mali, has reported new

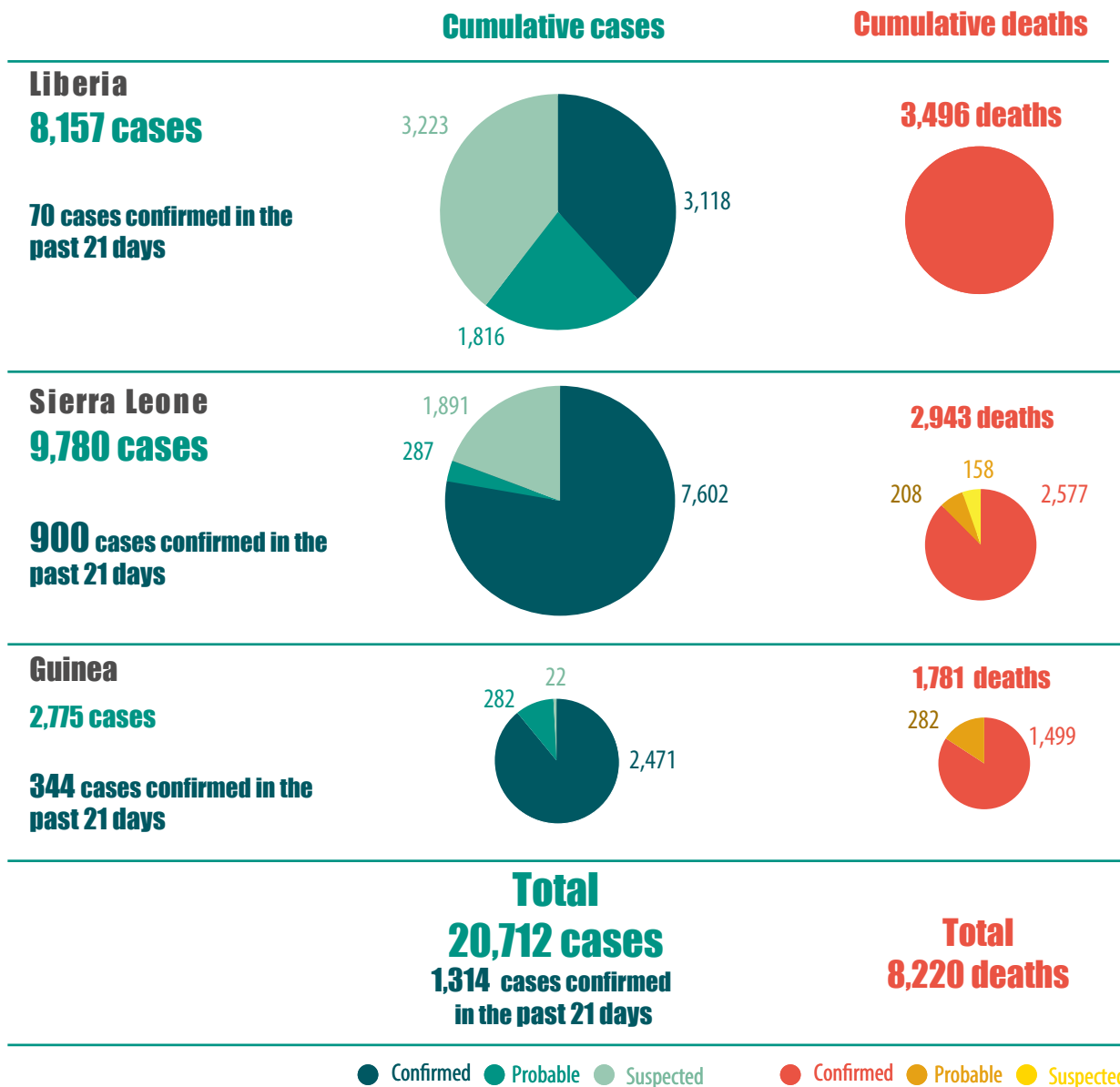
confirmed cases. A high level of vigilance is needed there, particularly because of its proximity to Mali, which has reported several EBOLA cases.

The number of new cases has been declining in the epicentre of the epidemic, Guéckédou. Out of 34 districts in Guinea, 10 are not affected by the virus, unlike Liberia and Sierra Leone, where all districts have been affected.

Sierra Leone was hit by the outbreak in May 2014, and has since seen it spread quickly in the three main towns along the eastern border region near Kailahun.

According to WHO, transmission of the disease is high. Many of the new confirmed cases are related to intense transmission in the west and north. Transmission also remains intense in the capital, Freetown, and high levels of activity persist in the neighbourhoods of Bombali and the rural West, Port Loko and Tonkolili. Koinadugu and Kambia have reported some cases. The neighbouring regions of Kenema and Kailahun are seeing a sharp decline in incidence, reflecting the response efforts there, including isolation of patients, screening and contact monitoring, and robust prevention and control measures.

FIGURE 2. EBOLA CASES IN GUINEA, LIBERIA AND SIERRA LEONE



Source: WHO, 7 January 2015

Liberia is the country most affected by the outbreak, showing exponential growth in cases between the first confirmed laboratory case on 13 March 2014 and September 2014. According to WHO, the number of weekly cases dropped from mid-September to late October. This decline has leveled off since then. Efforts to fight the disease are still critical, especially in the capital Monrovia. Incidence is declining in the neighbouring district of Marigibi

but high transmission persists. Other areas of high transmission include Bomi and Bong counties. Lofa, however, has seen a steady decline in new cases per week (Sharma and others, 2014). The latest news from Liberia is encouraging, as the number of new cases is declining. In fact, 13 out of 15 counties have not registered new cases in the past 40 days, with the exception of Monrovia. Even in Monrovia, the number of new cases is around 2 per day, as

BOX 5. MALI'S EXPERIENCE IN ADDRESSING THE EBOLA VIRUS DISEASE

Mali registered two independent Ebola cases, both coming from bordering Guinea, at the end of October 2014. The first case was a two-year-old girl infected by family members in Guinea. None of her identified contacts in Mali were infected. The second one was a Grand Imam who travelled to Bamako for treatment and died, presumably of EBOLA. The two cases revealed the country's weakness in spotting EBOLA cases at its borders, as both cases were already showing symptoms when they entered Mali. The fact that the second patient was not diagnosed with EBOLA when he was hospitalized led to further transmissions and raised issues over the preparedness of medical staff. As of 31 December 2014, a total of 8 people had been infected in Mali, of which 6 died. Since 16 December, there have been no EBOLA new cases in the country. Following the initial two EBOLA cases, over 850 people who might have come into contact with the victims were identified and put under medical surveillance.

The EBOLA cases triggered a change in public attitudes, and the authorities strengthened border controls (road and airport checkpoints), launched public awareness campaigns via posters, radio and television, and reinforced health controls and sanitary measures in public places such as schools, hotels and restaurants. As part of the strategy, Ebola centers were established in Bamako and Kayes. All of these measures have been coordinated by the Ministère de la santé et de l'hygiène publique and the Ministère de l'action humanitaire, de la solidarité et des personnes âgées, with significant support from development partners including UNICEF, UNMEER, WHO, Germany and the United States. The ongoing Ebola virus disease related measures have overridden other public health awareness campaigns, especially those targeting HIV prevention.

Contrary to most of the countries in the affected zone, Mali did not close its borders, but it did decide to reinforce control measures, with a clear focus on its porous 850 km border with Guinea.

On the socioeconomic side, day-to-day economic activities (street vendors, local markets, public transport) have reportedly fallen in Bamako. This is mostly due to fear and anxiety among the population. It is difficult, however, to capture the global magnitude of the drop in the economic sector due to the lack of data on informal sector activities.

Source: ECA Mission to Mali (December 2014)

compared to 50 per day in October 2014⁴. This development is an indication that the situation is being stabilized and that ongoing efforts are pointing in the right direction.

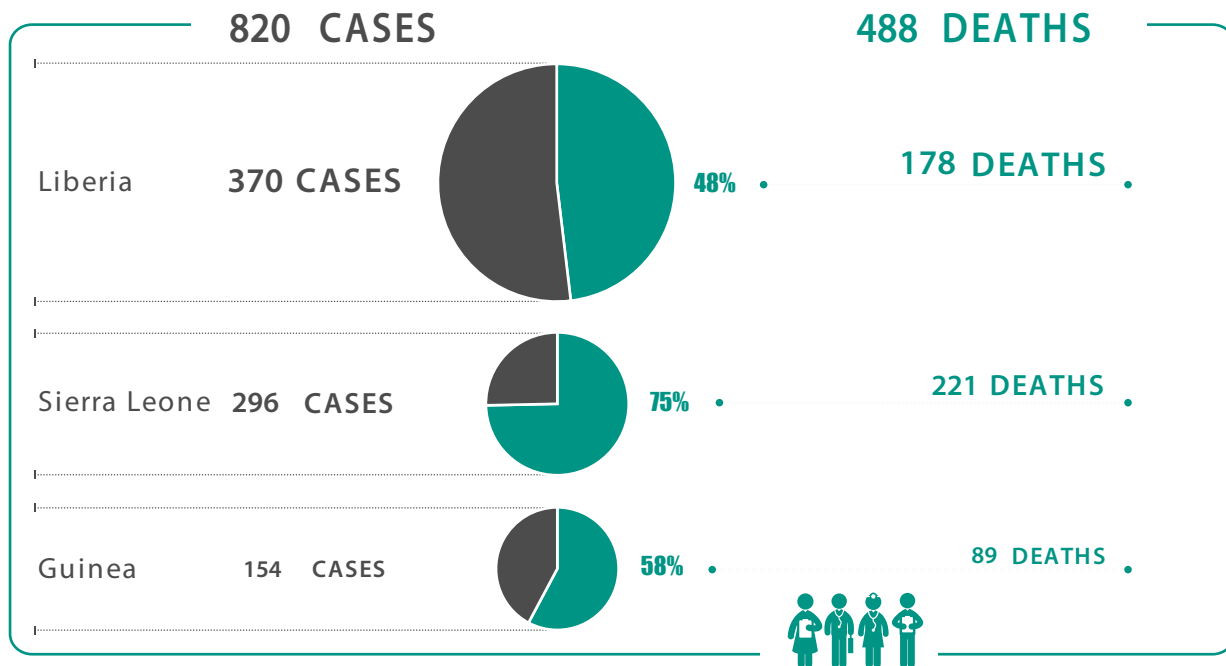
For the three countries, figure 2 shows 20,712 cases identified (13,191 laboratory confirmed), and 8,220 deaths reported. In addition, 8 cases, including 6 deaths, have been reported in Mali (see box 5).

A total of 838 health-care workers (of which 820 in the three most affected countries) are known to have been infected with Ebola as of 4 January 2015 (see

figure 3). The total case count includes 2 health-care workers in Mali, 11 in Nigeria, 1 in Spain (who became infected while treating an Ebola-positive patient), 1 in the United Kingdom (who became infected in Sierra Leone), and 3 in the United States (1 infected in Guinea, and 2 infected during the care of a patient in Texas). Investigations are underway to determine the source of exposure in each case. Early indications appear to show that a significant proportion of the infections occurred away from Ebola treatment centres and other care facilities, which underlines the need to adhere to infection prevention and control measures in all health institutions, not just EBOLA-related facilities.

⁴ UN-wide mission (12-15 January 2015) to Guinea, Liberia and Sierra Leone to prepare for Ebola recovery assessments as the basis for the preparation of countries' recovery plans.

FIGURE 3. EBOLA INFECTIONS AMONG HEALTH-CARE WORKERS



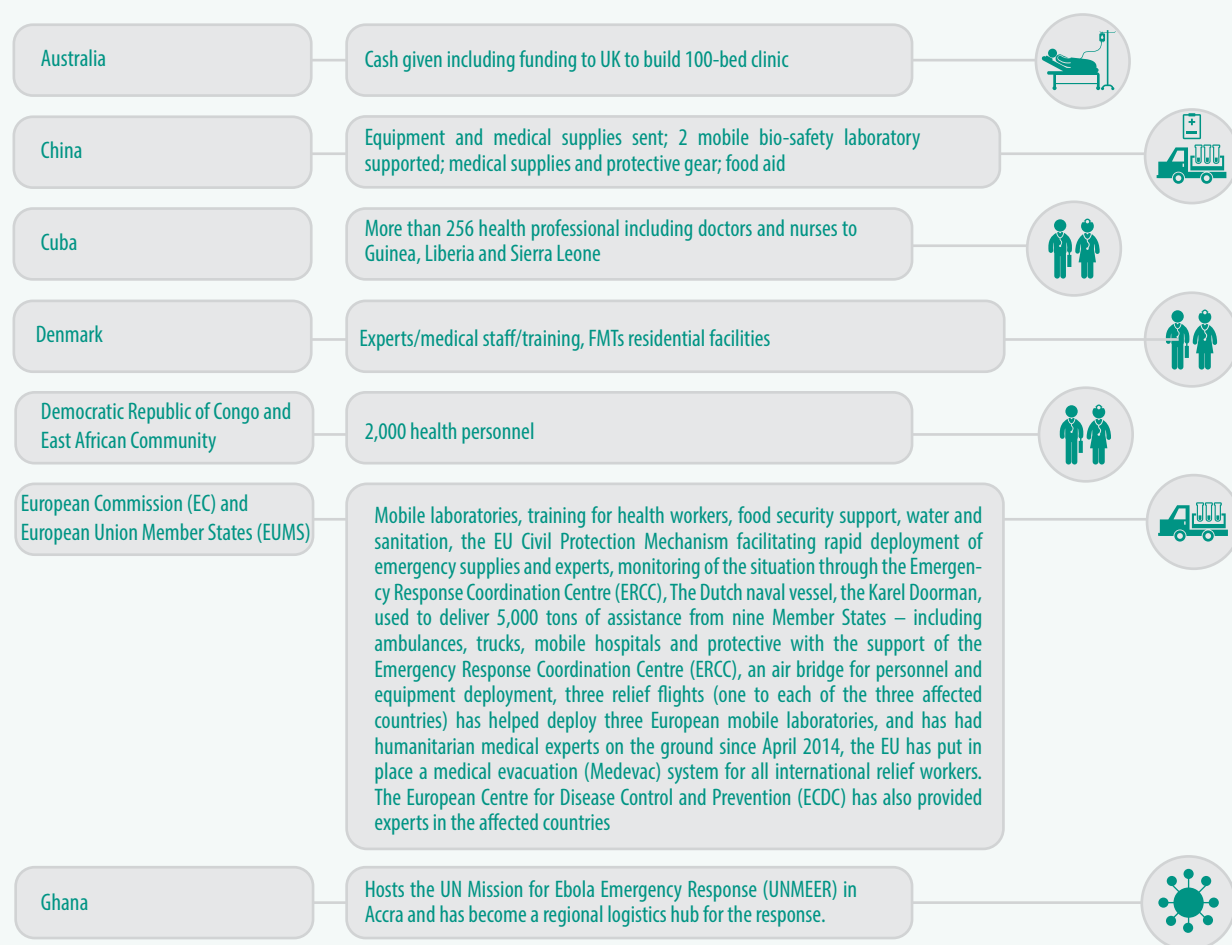
Source: WHO, 7 January 2015

SCALE OF THE RESPONSE

In view of the speedy and geographical spread of the epidemic, the international community has stepped up efforts to contain the outbreak, even as more needs to be done. According to the OCHA monitoring report on the needs and requirements for EBOLA as of 8 December 2014, the Inter-Agency Response Plan for Ebola Virus Outbreak stipulated a financial requirement of \$1.5 billion for Guinea, Liberia, Sierra Leone and the region for September 2014–February 2015. As of 13 January 2015, 1.16 billion (78%) of this amount had been found, through response plan funding.

Figures 4 and 5 do not include an exhaustive list of pledges which are coming in continuously. For example, on 8 November 2014 the African business community pledged \$32.6 million during an African Business Roundtable held by ECA, AfDB and AUC. Other leading African businesses may follow suit soon after consulting their boards. Multilaterally, the United Nations has set up the United Nations Mission for Ebola Emergency Response (UNMEER), which aims to treat the infected, ensure essential services, preserve stability and prevent further outbreaks. It has also established the Ebola Multi-Partner Trust Fund to oversee a coherent, UN-wide response.

FIGURE 4. SOME IN-KIND CONTRIBUTIONS



Source: ECA compilations from websites of organizations/countries.

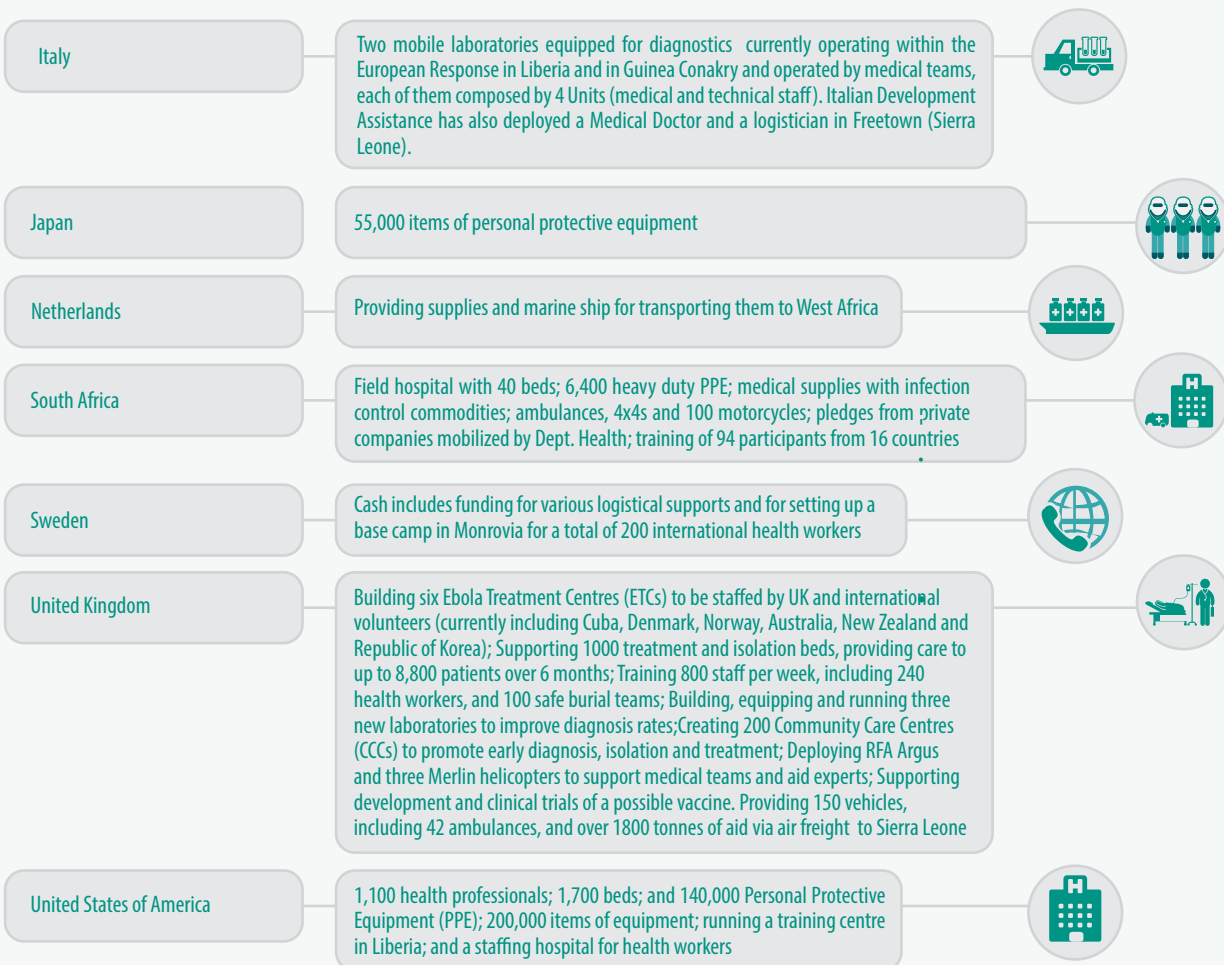
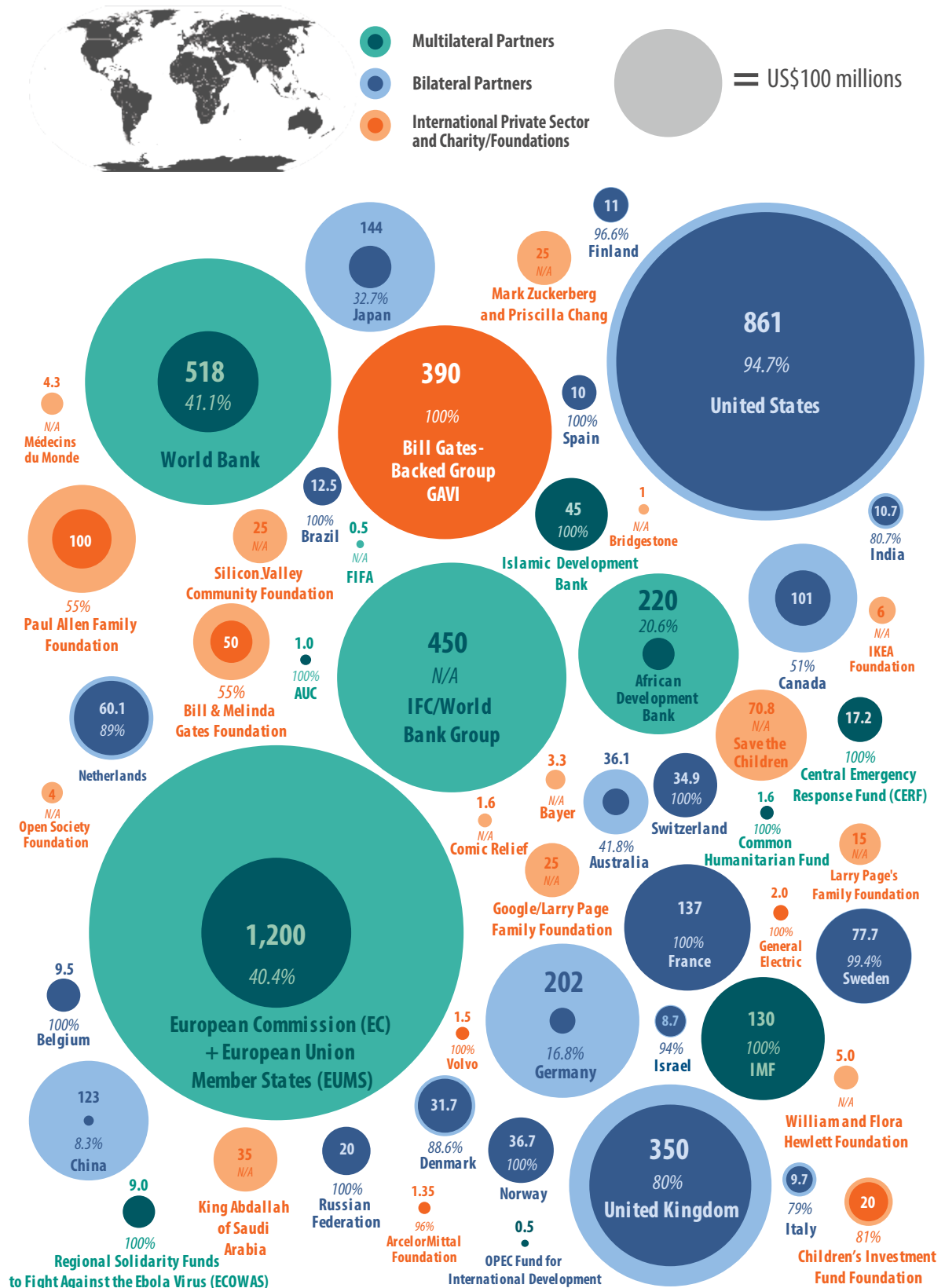
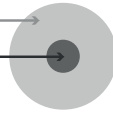


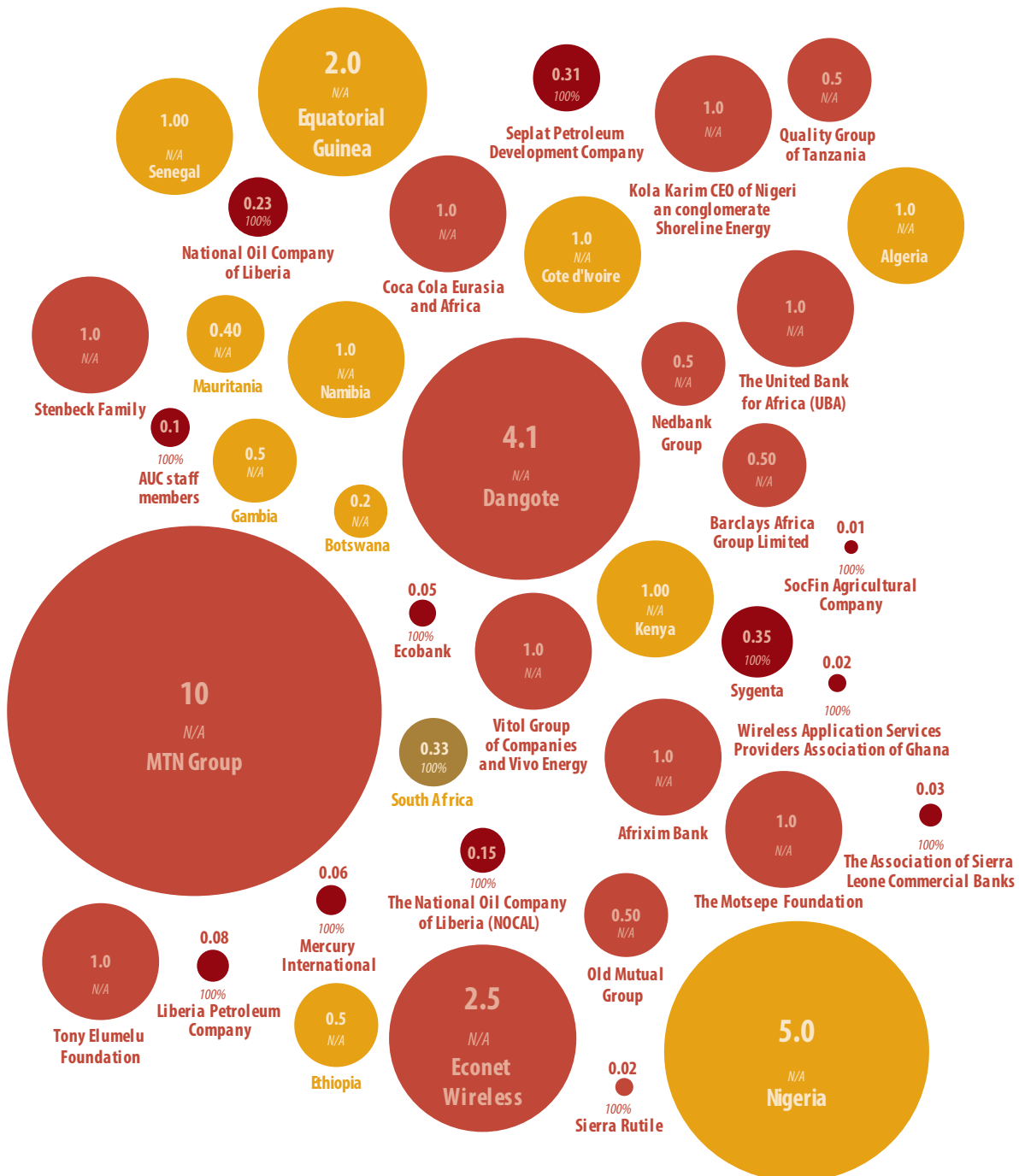
FIGURE 5. SOME PLEDGES AND DISBURSEMENTS TO CONTAIN THE EBOLA OUTBREAK



Amount pledged (\$million) vs. percentage disbursed (%)



- African Private Sector
- African countries'



Source: See Appendix II.
Note: N/A is 'not available'

How the EBOLA toll compares The world has been shaken by the contagion of Ebola, which is becoming a question of global public health, claiming more than 8,000 lives. Yet for all the grief the disease is causing, its total mortality and morbidity are, so far at least, low in a global and historical context.

For example: the 1918–1919 influenza outbreak, also called “Spanish flu,” became a pandemic and claimed about 30 million lives according to the Institut Pasteur, and up to 100 million according to certain revisionist analysts. It may be the most lethal pandemic of all time, certainly in such a short time. Over a longer period, the Black Death caused an estimated 50 million deaths during the 14th century (WHO, 2014).

More recently, the cholera epidemic that emerged in 1994 in the Democratic Republic of the Congo, after the Rwandan crisis, raged among refugees. Among the 500,000–800,000 who crossed the border seeking asylum in the suburbs of Goma, 50,000 died within a month of arriving, owing to a generalized outbreak of cholera and dysentery.

According to WHO, contagious diseases in developing countries still account for seven of the 10 main causes of children’s mortality. In 2002, for example, some of the leading killers were respiratory infections (1.9 million deaths), diarrhoeal diseases (1.6 million deaths) and malaria (1.1 million deaths). Yet non-communicable diseases now account for more than half the deaths in low- and middle-income countries, killing around 29 million people every year versus 36 million deaths from communicable diseases worldwide (WHO, 2013).

WHO puts at 8.6 million the number of new tuberculosis cases across the globe in 2012 and at 1.3 million the number of people who died from the disease that year. Some 3.3 billion people worldwide are vulnerable to malaria⁵: in 2012, the disease killed

about 627,000 people, most of them aged under five and living in Africa (WHO, 2013). Measles caused 145,700 deaths worldwide in 2013. The number of deaths owing to SARS during that epidemic, despite its wide footprint, was a modest 774 (WHO, 2013).

At the end of 2012, 35.3 million people were HIV positive, including about 2.3 million new infections.⁶ Some 1.7 million people, including 230,000 children, died from AIDS. More than two thirds of new HIV infections are in Africa excluding North Africa, according to WHO.

Tobacco, too, is a big killer: tobacco consumption and smoke exposure (passive smoking) claim more than 700,000 lives in the European Union, and this in an area with strong anti-tobacco legislation (WHO, 2013).

Finally, more than 20 million people are killed or seriously injured by road accidents every year across the world, with economic costs of around \$518 billion—\$65 billion in developing countries (WHO, 2013).

5.

5 http://www.who.int/topics/millennium_development_goals/diseases/fr/

6 http://www.who.int/topics/millennium_development_goals/diseases/fr/

MACROECONOMIC IMPACTS OF EBOLA VIRUS DISEASE

The first observations from Guinea, Liberia and Sierra Leone suggest that EBOLA can affect the economy in multiple ways and to varying degrees.⁷

GDP

Owing in part to the alarmism sparked by the disease, economic activity is declining, reflecting falling transactions in markets, stores and shops, as people begin to shun physical contact. Services, including restaurants, hotels, public transport, construction and education, also suffer because of both panic and governmental measures, such as a state of emergency and related restrictions on movement and gatherings. Another economic toll comes from foreign companies reducing operations, as they cut staff to a minimum and expatriates (including nonessential diplomatic staff) leave, curtailing their demand for services. The EBOLA-induced shocks to the labour force, public finance, investment and savings may cause a sharp fall in GDP, retarding development.

The impacts of the epidemic on GDP growth as estimated by the three countries' national authorities are in the range of 2 to 5⁸ percentage points for 2014 (i.e. lower than what GDP growth would have been without EBOLA). At purchasing power parity, this GDP loss comes to around \$716 million for the three economies.⁹ Since the outbreak and subsequent

slowing economic activity, all three countries have revised one or more times their GDP projections for 2014 (see tables 1–3): Guinea revised its GDP growth from 4.5% to 3.5% and then to 1.3%; Sierra Leone from 11.3% to 8% and then to 6.6%; Liberia from 5.9% to 2.5% and then to 1%.

INVESTMENT, SAVINGS AND PRIVATE CONSUMPTION

In the face of lowered public revenue and increased need for a sound response, the EBOLA crisis is diverting public spending from investment in physical and human capital to health and other social spending. Foreign and domestic private investments, too, are declining, largely out of panic. The decrease in domestic investment is likely to continue over the medium term if investors do not get financial support to resume activities.

Authorities in all three countries have reported postponed or suspended investment in major projects in their countries. In Guinea, for example, the operations of a Rio Tinto project worth \$20 billion have been put largely on hold. The project was expected to double GDP in the coming years. Similarly, a Guinea Alumina Corporation bauxite project led by the United Arab Emirates and worth \$5 billion has postponed its Guinean operations.

In Sierra Leone, construction of the Kenema–Kailahun and Matotoka–Kono roads; reconstruction of the Makeni–Kabala road, Hillside Bypass road, and Lumley–Tokeh road; and work on city and town streets in the provinces and the Western Area have been suspended (Government of Sierra Leone, 2014).

7 The appendix offers further discussion of the economic and social impacts by sector.

8 2.2%2.1% for Guinea, 4.7% for Sierra Leone and 4.9% for Liberia.

9 ECA calculation based on GDP at purchasing power parity for 2013 from AfDB, OECD and UNDP 2014 for the three countries, to which pre-EBOLA and post EBOLA growth rates for 2014 from national sources are applied.

Closures of overland borders to neighbouring countries has been disastrous to numerous fruit and vegetable operators in Guinea, who are usually well organized and prosperous, with substantial bank credits, and selling their products over the border. The closures have led to spoiled produce, indebting investors (they expect to generate no cash until the crisis abates and with have no immediate prospects of new loans.)

More widely, families' consumption and savings have been hit by the disease, though micro data are hard to come by, owing to mortality and morbidity, and reduced economic activity, working hours and income.

INFLATION, MONEY AND EXCHANGE RATES

Affected countries face inflationary pressures as the EBOLA crisis spreads, inducing a competitiveness problem for businesses and traders, and a fall in purchasing power for households. External assets may decline and the local currency depreciate with checks on foreign trade, and an appreciating US dollar on boosted demand for a "safe haven" currency. The countries may also see their import cover fall (the months of imports covered by currency reserves).

Central banks and ministries of finance may have to simulate demand and prevent excessive currency depreciation (which feeds into inflation). In Liberia, for instance, monetary policy has been cautious: the central bank increased its intervention by about \$9.7 million to address July and August's pressures on the local currency, reflecting a surge in demand for foreign exchange (IMF, 2014c).

Also in Liberia, inflation is rising, pushed by a strong pressure on food prices. Year-end 2014 inflation is now projected at 14.7% and to remain high at about 10% in 2015. The country's gross official reserves are forecast to fall from 2.8 to 2.6 months of imports (IMF, 2014c).

The nominal exchange rate of the leone against other currencies has depreciated, with an increased

parallel market premium and consequent pass-through effects on domestic prices (Government of Sierra Leone, 2014). Still, effects vary among countries: Guinea, for example, was showing no clear inflationary pressures in the first months of the outbreak (PNUD-Guinée, 2014).

PUBLIC FINANCE

As seen, one impact of EBOLA is to lower public revenue and raise expenditure, especially in health, putting further pressure on the fiscal balance. This further weakens the state's capacity to contain the disease or to buttress the economy against wider impacts (primarily via fiscal stimulus). Ultimately, countries face dependence on external support to bridge the gap.

PUBLIC REVENUE

The fall in public revenue may amount to tens of millions of dollars, a non-negligible proportion of GDP for three small economies. It stems from factors including slower economic activity followed by a contraction of the tax base in most sectors, notably industry and services (often the main public revenue sources). To that may be added weaker tax administration. Combined, these factors see fewer taxes collected on income, companies, goods and services, and international trade, and fewer royalties collected on natural resources, usually the dominant drivers of economic growth in these three countries.

In actual numbers, in Sierra Leone the revenue shortfall owing to EBOLA is estimated at about \$46 million and \$91 million for 2014 and 2015, or 1% and 1.6% of non-iron ore GDP (IMF, 2014b). Estimates for Liberia indicate that government revenues for 2014 will be \$106.1 million lower than initially projected (Government of Liberia, 2014), or about 5% of GDP, while the revenue shortfall in Guinea was estimated in August 2014 at about \$27 million, or 0.4 percentage points of GDP (IMF, 2014a). The National Revenue Authority of Sierra Leone (2014) reported a 15% shortfall in tax collection against the targets set for July and August 2014; the Liberia Revenue

Table 1. GDP projections, Guinea (%)

Source of data	2014		2015	
	Initial projection	Projection after outbreak	Initial projection	Projection after outbreak
Guinean authorities	4.5	1.3	6.3	1.9
ECA ^a	4.5	1.3	6.3	1.9
World Bank ^b	4.5	2.4/0.5	4.3	2.0/-0.2
IMF	4.5	2.4	4.3	4.1
African Economic Outlook	4.2	—	4.3	—

— data not available.

a Based on discussions and exchanges with national authorities on assumptions and methodological soundness, ECA aligns itself with country estimates of the impact of EBOLA. ECA simulations to capture the effects of the EVD crisis on West Africa and the continent are also based on country estimates as a starting point.

b The World Bank's after-outbreak projections have two figures: the first from October 2014 (World Bank 2014a) and the second from December 2014 (World Bank 2014b).

Table 2. GDP projections, Liberia (%)

Source of data	2014		2015	
	Initial projection	Projection after outbreak	Initial projection	Projection after outbreak
Liberian authorities	5.9	1.0	6.8	0.0
ECA ^a	7.3	1.0	7.0	0.0
World Bank ^b	5.9	2.5/2.2	6.8	1.0/3.0
IMF	5.9	2.5	6.8	4.5
African Economic Outlook	6.8	—	8.2	—

— data not available.

a See note a, Table 1

b See note b, Table 1

Table 3. GDP projections, Sierra Leone (%)

Source of data	2014		2015	
	Initial projection	Projection after outbreak	Initial projection	Projection after outbreak
Sierra Leonean authorities	11.3	6.6	8.9	—
ECA ^a	11.9	6.6	11.6	—
World Bank ^b	11.3	8.0/4.0	8.9	7.7/-2.0
IMF	14.0	8.0	8.9	9.9 ^c
African Economic Outlook	13.8	—	11.6	—

— data not available.

a See note a, Table 1

b See note b, Table 1

c This takes into account the sudden and quick catch-up of mining output, which was dormant in 2014.

Administration expects projected revenues for 2014 to decline by 19% (Government of Liberia, 2014).

PUBLIC SPENDING

Against the fall in public revenue is the rise in public spending. The health crisis triggered by the epidemic calls for substantial spending in the health sector to contain the disease, at the same time as the need for social protection grows, given the number of deaths and families hit, including an increase in the number of orphans and number of poor. Other non-health spending may also emerge in, for example, security and food imports.

The inverse movements in revenue and spending leave Governments with no choice but to reallocate to new needs some of the initially planned spending, including capital outlays, which cuts public investment. The emphasis on health versus social spending varies among the three countries: in Sierra Leone, for instance, EBOLA-related spending for 2014 is put at \$36 million (72% direct disease-related health response and 28% social spending), and for 2015 at \$40.9 million (100% social spending) (IMF, 2014b). In Liberia the authorities estimate direct EBOLA spending at \$79.7 million, besides \$20 million in cash transfers and \$30 million in agricultural stimulus (Government of Liberia, 2014). The Guinean Government puts the EBOLA-related bill at \$134 million through to February 2015 (Government of Sierra Leone, 2014; Government of Liberia, 2014; Gouvernement de la Guinée, 2014).

FISCAL DEFICITS

Through the above effects on government revenue and spending, EBOLA puts the budget under pressure and widens the fiscal deficit. The fiscal deficit (the overall balance including grants) in Liberia is set to widen by 4.7 percentage points from its originally projected 7.1% of GDP in 2015, owing to reflecting additional financial needs, while the projection for 2014 remains unchanged. In Sierra Leone the fiscal deficit is forecast to widen by 1.5 and 1.7 percentage points in 2014 and 2015 (IMF, 2014b; IMF, 2014c).

DEBT BURDEN AND DEBT ALLEVIATION

Pledges and contributions are key to bridging the fiscal gaps generated by the EBOLA crisis — for example IMF's \$300 million pledge made during the G20 meeting of November 2014 in Brisbane, Australia. Similarly, in a press release dated 2 December 2014 (World Bank, 2014c), the World Bank Group stated that it is mobilizing nearly \$1 billion in financing for the hardest-hit countries. This includes \$518 million for epidemic response, and at least \$450 million from the International Finance Corporation—a member of the World Bank Group—to buttress trade, investment and employment in the three countries.

Such assistance from the international community is laudable and much needed to bridge financing gaps. However, with part of the assistance as loans, the EBOLA crisis could possibly aggravate the three countries' debt burdens. The World Bank, for example, provided credit support of \$40 million to Guinea (World Bank, 2014d) and of \$20 million to Liberia (World Bank, 2014e). Similarly in September 2014, IMF approved EBOLA-related credits to the three countries of \$41 million for Guinea, \$49 million for Liberia and \$39 million for Sierra Leone (IMF, 2014d) and its additional pledge of \$300 million made in Brisbane for the three countries is a combination of concessional loans, debt relief and grants.

All three countries have benefited from the Heavily Indebted Poor Countries (HIPC) initiative and the Multilateral Debt Relief Initiative over the past 10 years. For example, owing to its eligibility for the HIPC initiative in 2012, Guinea cut the interest paid on its external debt from 3.7% of Gross national income (GNI) in 2011 to 2.8% in 2012 and 1.1% in 2013. It is crucial that the crisis does not spark debt distress nor offset any of the fiscal gains (mainly reduced debt servicing and thus higher development spending) generated by these initiatives, because these gains are crucial to poverty reduction and economic transformation.

Figure 6 provides some indicators of the debt burden for the three countries before the outbreak,

showing a pre-EBOLA (2013) external debt burden in the range of 20.8% to 31.1% of GNI, for a total of some \$3.1 billion. Even after the implementation of the above-mentioned initiatives, the burden of the external debt service still constrains the fiscal space of the three countries. In 2013, the Government of Guinea allocated \$60.4 million of public resources towards the servicing of the debt – this corresponds to 1.1% of its GNI. During the same period, Liberia spent \$5.8 million, or 0.3% of GNI, to service external debt, and Sierra Leone paid \$27.3 million or 0.6% of GNI to external creditors.

It is in this context that ECA appeals to all stakeholders for more debt cancellation for the three countries (see appendix III).

LABOUR SUPPLY AND PRODUCTIVITY

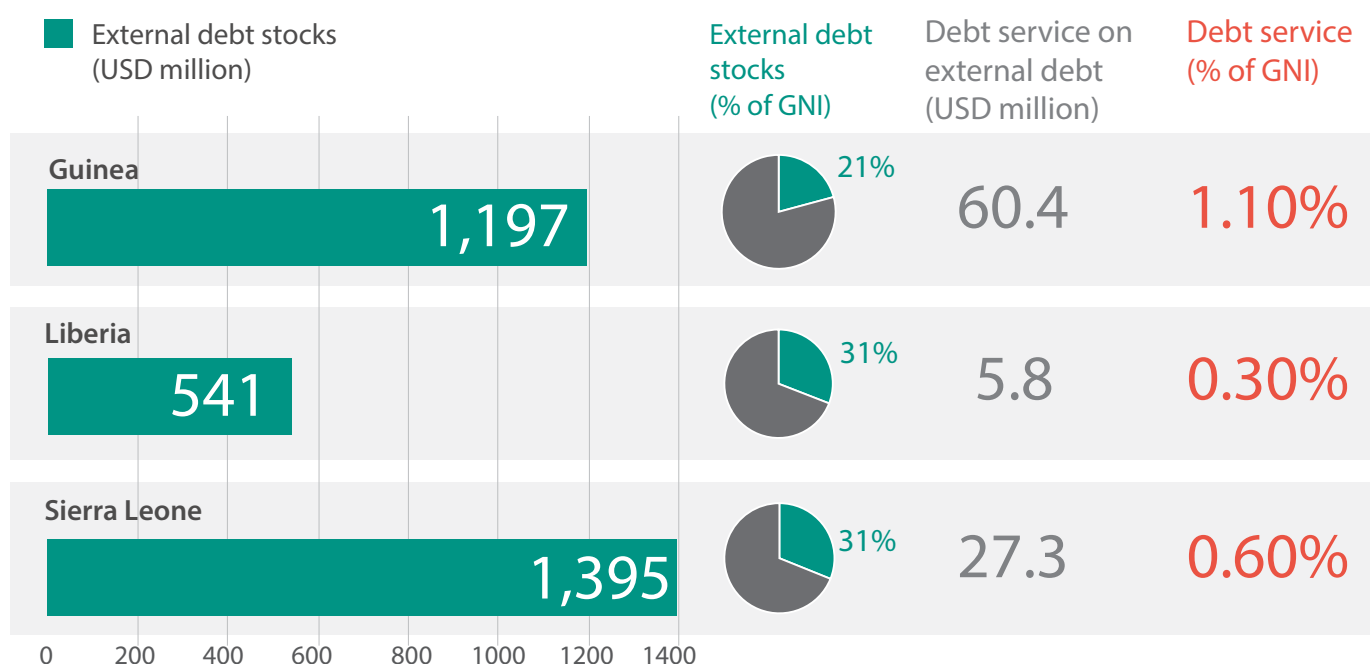
EBOLA may decrease labour supply, potentially hurting the quantity and quality of goods and

services, especially in the public domain. To reduce close contact in workplaces, some public and private institutions have asked some non-essential staff to stay at home; others have reduced working hours for all staff, leading to a fall in productivity.

In Sierra Leone, for example, banks cut their working hours and thus their daily services. And in line with the restrictions imposed by the state of emergency in July 2014, daily markets were closed earlier than usual. These measures had repercussions on workers' productivity from all sectors as they had to leave work earlier to carry out financial transactions before the banks and markets closed. Some expatriates have left, as seen, undermining labour supply and productivity as these workers may be hard to replace in the short term.

EBOLA-related mortality and morbidity have hit the number of farmers who can work in agriculture (whether directly or through looking after loved

FIGURE 6. EXTERNAL DEBT AND DEBT SERVICE FOR THE THREE COUNTRIES, 2013



Source: World Development Indicators Database of the World Bank, accessed 13/1/2014.

ones). They have also taken away skilled workers from the labour market, especially (and tragically) in health, where nearly three out of five of those infected have died (see figure 3). The ultimate effect of the disease, in terms of labour and productivity, is thus to hurt economic activity, the tax base and public revenue collection.

POVERTY AND INEQUALITY

In the short term, the epidemic is likely to widen income inequality and increase poverty in the three countries by impoverishing directly affected individuals and families, and by reducing consumption and access to basic social services, especially among the poor. In the longer term, the disease's effect on GDP growth may well be felt on GDP per capita. And given that income distribution is already highly unequal, it is extremely likely that the poor will be hit hardest—undermining the socioeconomic development gains of recent years.

CONTINGENCY AND RECOVERY PLANS

In the face of the multiple economic impacts, beyond their short-term responses, Governments need to devise recovery plans. These will aim to bring the economy back to its pre-crisis growth path by providing support to consolidate the economic fabric, restore confidence, and resume consumption, investment and growth. Revisions to medium-term economic plans should aim to strengthen resilience and response capacity to future, similar shocks. Already, the ministers of finance of Guinea, Liberia and Sierra Leone have met to explore a post-Ebola strategy (IMF, 2014e). The United Nations system, in partnership with other organizations,¹⁰ is preparing an Ebola Recovery Assessment that will support and complement national efforts in the elaboration of the recovery plans. The first version of the Assessment is expected to be ready by March 2015.

¹⁰ Including the African Union, the Mano River Union, the African Development Bank, the World Bank and the European Union.

SURVEY ON NON-AFFECTED COUNTRIES' PREPAREDNESS AND ON INDIRECT EFFECTS OF EBOLA

The analysis in this subsection is based on an ECA survey of countries' preparedness for an EBOLA outbreak and on the indirect effects of EBOLA, which was launched in November 2014 (and is still being conducted) among nearly all African countries other than those directly affected by EBOLA; 18 responded.

It aims to inquire about how and the extent to which the non-affected countries have been hit by the disease and have organized themselves for protection against its spread and socioeconomic consequences.

The results are based on the 18 replies,¹¹ pending a more exhaustive response.¹² While awaiting replies from the remaining countries, the analysis is partial.

ECONOMIC EFFECTS

Some countries may not have recent data on many of the economic indicators that could help them to conclude with certainty the economic impact of EBOLA. Even if they have them, any economic worsening may not stem directly from EBOLA—causality has to be established. West African countries neighbouring Guinea, Liberia and Sierra Leone may have felt a larger impact give their closer economic interaction. The survey therefore focused on perception of the authorities whether a given indicator has been or is likely to be affected by EBOLA in the future.

Although all those responding are not very close to the EBOLA-affected countries, those in West Africa reported negative impacts on economic indicators such as GDP growth, inflation and trade. They perceive tourism and transport as directly affected sectors. Among the respondents, the authorities of

¹¹ Angola, Burkina Faso, Burundi, Cameroon, Cabo Verde, the Central African Republic, Chad, the Republic of the Congo, the Democratic Republic of the Congo, Equatorial Guinea, Gabon, Ghana, Gambia, Guinea-Bissau, Madagascar, Niger, Rwanda and Sao Tome and Principe.

¹² Details on the questionnaire can be found at <http://www.un-eca.org/sro-wa/pages/Ebola-web-appendix>.

non-West African countries think that the negative impact of EBOLA is less than earlier expected, even if they feel that EBOLA has contributed to slower export and import growth.

SOCIAL EFFECTS

The impact on the social sector owing to EBOLA is likely to be less visible, particularly in countries far from the three affected countries. However, countries highlighted some issues that may not be apparent through aggregated data.

In response to questions on the impact of the outbreak on routine health delivery systems, more than half of respondents stated that they had introduced special precautionary measures (laser thermometers, protection material) at medical centres. These measures, however, do not seem to have taken away substantial resources from regular health-care provision. Furthermore, around a third of countries reported that they were restricting the movement of people by closing borders or stopping direct flights to the affected countries. Some of them have already lifted these measures. None of them reported introducing visa bans.

SPECIAL MEASURES

All respondent countries reported taking special measures for economic and health preparedness. Almost all countries have set up high-level, multi-governmental committees that monitor preparedness for a possible outbreak. Almost all the respondents have designed a contingency or an EBOLA prevention plan. These strategies were reported to cost \$1.5 million in the Central African Republic, \$3.1 million in the Democratic Republic of the Congo and \$0.8 million in Sao Tome and Principe.

Most have also introduced some sort of special health programme to prepare for a possible EBOLA outbreak and identified treatment and isolation centres. Almost all countries have launched awareness campaigns: the Democratic Republic of the Congo has established an EBOLA toll free number that people can call for information on the disease;

the Central African Republic declared 26 August as a day for intensified communication on EBOLA; Chad involves political, religious and traditional leaders in activities aimed at raising prevention awareness; and Ghana has trained 10,000 health workers and 50,000 volunteers to carry out a door-to-door campaign.

All countries reported having received some sort of assistance from United Nations agencies and bilateral development partners. Five countries (the Democratic Republic of the Congo, Equatorial Guinea, Gambia, Ghana and Sao Tome and Principe) pledged financial support directly for the worst-hit countries or did so via WHO, while the Democratic Republic of the Congo, Guinea-Bissau and the Niger also provided non-financial support by deploying health workers and sending medical equipment.

ECONOMIC EFFECTS OF EBOLA ON WEST AFRICA AND THE CONTINENT

Although the three affected countries will be seriously hit by lost GDP, effects on West Africa and the continent as a whole are likely to be slight.

Based on 2013 estimates, the three countries together represent 2.42% of West Africa's GDP and 0.68% of Africa's GDP. The sub region accounts for 28.3% of Africa's GDP. West Africa's growth is robust, with the fastest rate on the continent in recent years—at 6.7% in 2012 and 2013—with projections of 6.9% and 6.8% for 2014 and 2015.

Africa as a whole has been recording excellent economic performance in the recent past, with growth averaging 5% or more in the 2000s before the global financial crisis hit, and a still-high 4.7% and 4.0% in 2012 and 2013. Forecasts for 2014 and 2015 show a pick-up to 4.7% and 5.0% (ECA, 2014f).

The continent's performance is based on external factors such as favourable commodity prices and on internal elements including improved economic management, enhanced ability to attract foreign investment and trade partnerships (notably from emerging countries) and consumption boosted by a newly emerging middle class. If the EBOLA outbreak

is contained to the three countries, its impact on the continent's GDP growth will be extremely small, according to the results of an ECA simulation, conducted in November 2014 using the World Economic Forecasting Model (WEFM). The model is used as framework for analysing international transmission of economic shocks.

Because all three EBOLA-affected countries have been revising downward the projections for their GDP growth rate for 2014 and 2015, the simulation looks at a benchmark scenario where all three countries register a growth rate of 0% in 2014 and 2015; projected growth for the other African countries remains unchanged for these years.

In the simulation, the disruptive effects of EBOLA on the economies of Guinea, Liberia and Sierra Leone are mirrored by negative shocks to investment,

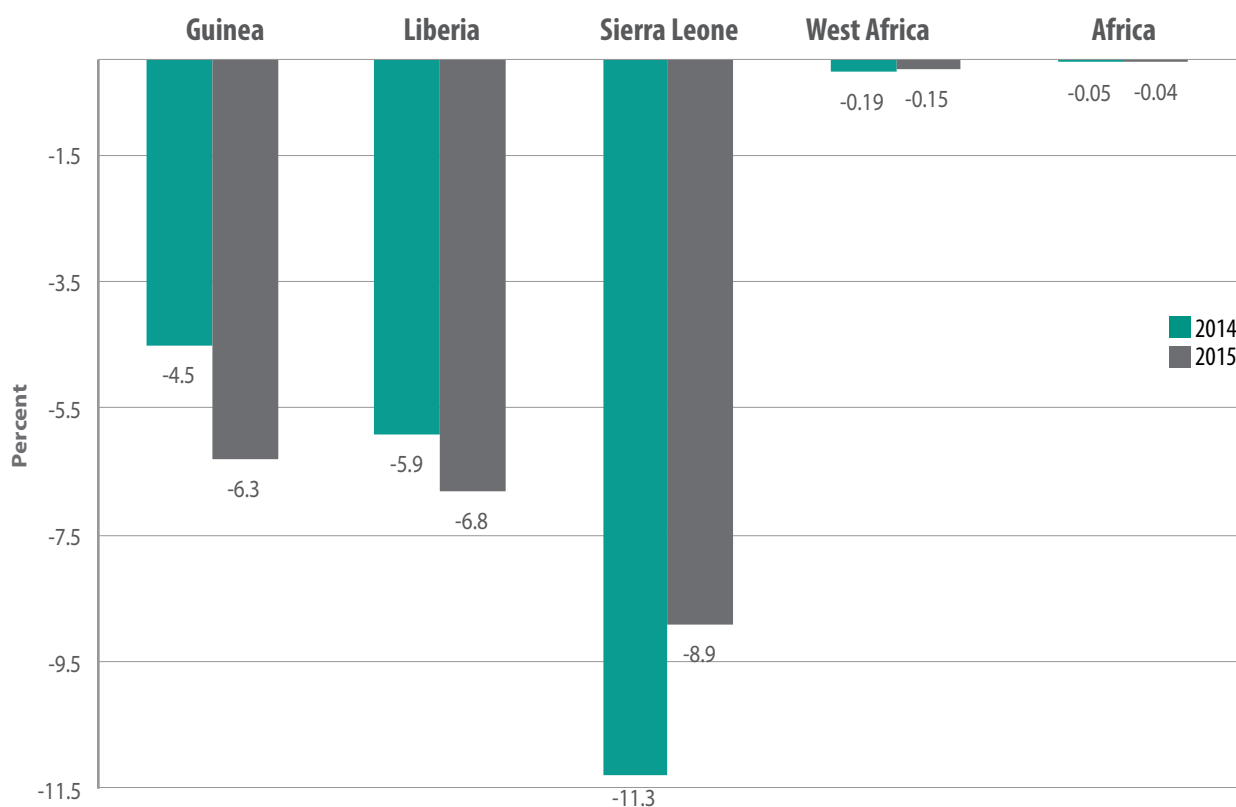
consumption, unemployment, inflation and potential output. The shocks are calibrated such that they match a negative effect on GDP growth in the three countries, which results in a zero growth scenario.¹³ We assume that the non-affected countries are only affected through the international transmission of the negative economic shocks originating from the three countries and that there is no contagion.¹⁴

This simulation yields for GDP growth a small effect in West Africa (-0.19 percentage points in 2014 and

¹³ The WEFM includes country models for Guinea and Sierra Leone but not for Liberia. For this reason, the shock originating from Liberia was directly introduced to its African trade partners with a strength corresponding to the reduction in Liberian imports and exports.

¹⁴ The extent to which the economies of the non-affected countries are hit other than through international economic integration is hard to quantify. Those channels may include changes in consumer sentiment, reduction in tourism and other factors. See the previous section.

FIGURE 7. SIMULATED GROWTH FOR WEST AFRICA AND AFRICA



Source: ECA simulations as of 17 January 2015

-0.15 percentage points in 2015), and a negligible effect in Africa (-0.05 percentage points in 2014 and -0.04 percentage points in 2015). These minimal impacts are unsurprising given the three countries' small GDP shares in West Africa's and Africa's GDP, and the tremendous response at national and international levels in combating the epidemic.

In short, there is little need to worry about Africa's growth and development prospects because of the EBOLA crisis.

6. GENDER AND HEALTH SYSTEMS ANALYSIS OF EBOLA'S IMPACTS

This chapter looks at key cross-cutting aspects such as gender and the vulnerability of the three countries' health systems.

GENDER DIMENSIONS—WOMEN BEAR THE BRUNT

Gender and sex differences have a profound impact on how women and men experience, respond to and recover from infectious diseases. Evidence reveals the disproportionate risk of infection, duration, severity and mortality between women and men from emerging infectious diseases such as EBOLA (WHO, 2011). This differentiated impact is attributed to socially ascribed gender norms and behaviour; the gendered division of labour between men and women; and gender-related differences in access to and control over productive resources as primary rights-holders.

In this light, the EBOLA outbreak poses an unprecedented challenge in the overall achievement of gender equality and women's empowerment. The unpaid care work at household and community levels as well as the gendered division of labour have led to women bearing the brunt of the outbreak (as evidenced by UN-Women, 2014), which reports that as many as 75% of EBOLA fatalities in Liberia and 59% of those in Sierra Leone are among women. Across the three countries, 55% to 60% of the dead are women (Washington Post, 2014).

Further, sharp retrogression has been experienced by women and their health indicators, such as maternal mortality. With medical facilities overwhelmed, expectant mothers are often left without pre-natal care, obstetric services and new-born care, reversing the earlier progress towards the Millennium

Development Goal on maternal mortality in all three countries.

Compounding this, an increased risk of gender-based violence and exploitation of girls and young women has been reported in the countries, due in part to isolation by quarantine or to orphanhood by EBOLA. Women have also felt reversals in economic empowerment, owing to the shutting of borders affecting cross-border trade (where the majority of traders are women), and in agriculture and mining (which have significant female workforces).

CROSS-BORDER TRADE

Informal cross-border trade in Africa is estimated at 43% of official GDP, placing it almost at par with formal trade (Lesser and Moisé-Leeman, 2009). Economic liberalization policies, high unemployment rates and rising urbanization in the recent past for many West African states have led to a huge expansion of the informal sector in recent years. Sustained economic growth in West Africa will probably be increasingly driven by trade in non-traditional exports such as agricultural products, livestock, fish, handicrafts and manufactured goods (ECA, AU and AfDB, 2010).

Women dominate cross-border trade in West Africa (70% in the Mano River region), even though their economic contribution is hardly given due value. Their contribution to national GDP amounted to 64% of value added in trade in Benin, 46% in Mali and 41% in Chad. It is reported that in West Africa, female informal cross-border traders employ 1.2 people in their home businesses, and on average support 3.2 children and 3.1 dependants who are not children or spouses.

Of the 2,000 women informal cross-border traders surveyed by UN-Women between 2007 and 2009 in Cameroon, Liberia, Mali, Swaziland, the United Republic of Tanzania and Zimbabwe, the vast majority stated that revenue from their trading is the main source of income for the family; women traders use it to buy food and other items for the household, pay for school fees, health-care services and rent, save in “susu” clubs and banks, and reinvest in their businesses.

In short, the official closures of the major borders between Guinea, Sierra Leone, Liberia, Côte d’Ivoire, Senegal and Guinea-Bissau have devastating impacts on household incomes.¹⁵

MINING

Women are involved in the extractive industries, especially mining, although they lack visibility partly because they are largely in artisanal and small-scale mining (ASM), which in some countries is illegal. Guinea, Liberia and Sierra Leone are among 21 African countries¹⁶ with more than 100,000 ASM operators with estimated dependants ranging from 600,000 to 9 million for each of these countries (ECA and AUC, 2011).

As most ASM operations operate in the informal economy, their contributions to local and national development are typically below the radar of most decision makers, government analysts and the general public. Nationally, ASM inputs to GDP and foreign exchange earnings, while rarely captured, can be substantial: for instance, when half of the combined income expenditures of the 50,000–75,000 artisanal diamond miners in Liberia was examined, more

than \$13.5 million was projected as being injected into local economies annually, creating markets for locally grown or supplied products and increasing the cash component of household incomes. Also, ASM-injected capital probably stimulated local formal and informal enterprises with an additional \$33.75 million in local Liberian economies (ECA and AUC, 2011). Additionally, of the 582,000 carats of diamonds officially exported from Sierra Leone in 2006, 84% originated from ASM operators (Government of Sierra Leone, 2011).

Conservative estimates suggest that women make up more than 40% of the greater than 8 million ASM workforces in Africa, in roles such as prospecting, exploration and actual mining, as well as marketing (World Bank, 2012). They work in a range of functions, including wage labourers, labourers paid by production, distributors (assured buyers), licence-holders, cooperatives, dealers and supporters (financiers, often licence-holders). For instance, ASM is Sierra Leone’s second largest employer after agriculture and provides a livelihood for an estimated 200,000–300,000 individuals and their families.

But EBOLA has forced many ASM operators—particularly women—to abandon artisanal diamond and gold mining altogether because of tight border controls aimed at curbing the spread of the disease, and restrictions on people’s movements. Before the crisis, artisanal gold mining—a female-dominated activity—provided a steady and reliable income for women (Maconachie, 2014).

The downstream links between mining and agriculture have also been severely strained by the outbreak, as female artisanal operators combine farming and mining, with proceeds from mining frequently reinvested into farming or the expansion of cash crops.

¹⁵ Recent data indicate that 30% of households in Liberia were headed by a woman in 2009, 22% in Sierra Leone in 2008 and 17% in Guinea in 2012. Source: World Development Indicators, World Bank, <http://data.worldbank.org/indicator/SP.HOU.FEMA.ZS>, accessed 25 November 2014.

¹⁶ Angola, Burkina Faso, the Central African Republic, Chad, Côte d’Ivoire, the Democratic Republic of the Congo, Eritrea, Ethiopia, Ghana, Guinea, Liberia, Madagascar, Mali, Mozambique, the Niger, Nigeria, Sierra Leone, the Sudan, Uganda, the United Republic of Tanzania and Zimbabwe.

AGRICULTURE

Women account for 43% of the agricultural labour force in developing countries and an estimated two-thirds of the world's 600 million poor livestock keepers (FAO, 2013). Gender issues fundamentally shape the totality of production, distribution and consumption within an economy but they have often been overlooked in times of emergencies (Spence, 2012). Kailahun and Kenema districts in Sierra Leone, for instance, have women master farmers and heads of household whose agricultural bases have been severely eroded and, in some cases, completely wiped out by EBOLA deaths (AfDB, 2014b).

Additionally, restrictions on movements have led to the loss of income of women who are traditionally breadwinners in rural homes, as much-needed staple foods rot away for lack of transport to markets. Similarly, restrictions on the number of traders who gain access to some key markets in Liberia—in an effort to avoid contagion—have resulted in heavy losses for women traders who comprise 70% of the traders. Finally, access to and control over land and other productive resources have become problematic for EBOLA widows because customary land laws on inheritance in Guinea, Liberia and Sierra Leone discriminate against women.

UNPAID CARE WORK

Unpaid care work is a reflection of societal expectations of the unpaid productive and reproductive chores that women and girls are required to undertake for their male kin that determines a household's ability to sustain basic daily consumption. It is (more often than not) time, labour and drudgery intensive without corresponding entitlements (UAF-Africa, 2014). In Guinea, it is estimated that a workload of 15–17 hours per day is borne by women in family and professional activities. Similar work hours have been reported for Liberia and Sierra Leone.

As women are pulled out of their daily work to care for sick family members or children orphaned by the disease, they have less time to earn money and

grow and sell food, which can lead to increased food insecurity and perpetuation of the poverty cycle.

VULNERABILITY OF AFRICAN HEALTH SYSTEMS

The rapid expansion of EBOLA revealed the low capacity to react and manage an infectious disease outbreak among most African countries' health systems, exposing few means, even more limited knowledge among health personnel and the systems' low ranking among government priorities.

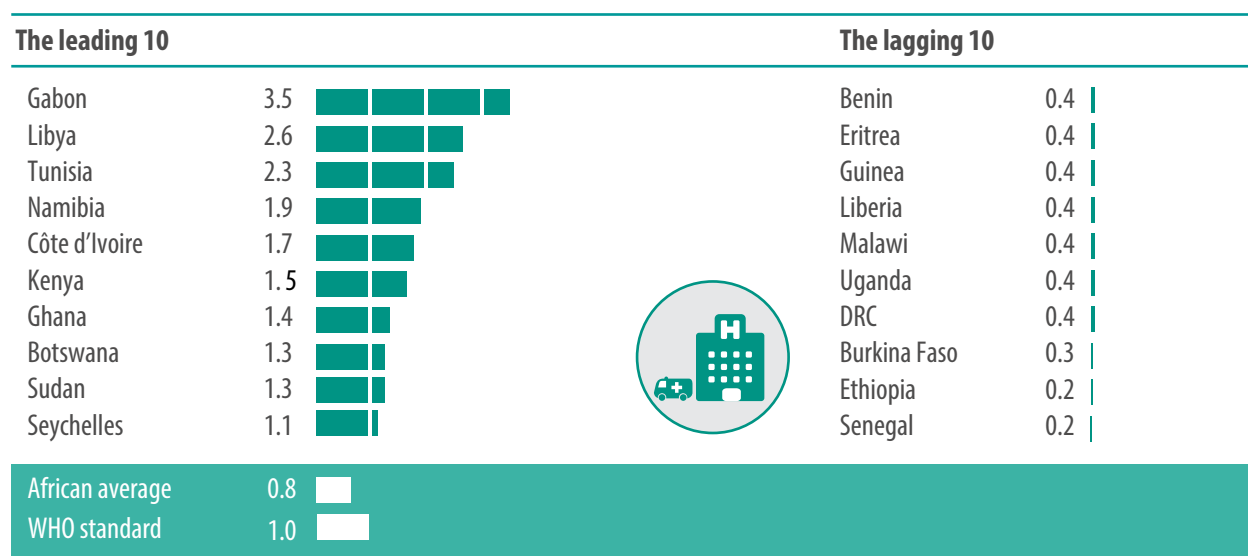
Public health systems need to be reprioritized and strengthened, as the following data show. Solid institutions are needed, providing preventive and curative health services, and this can be met only through improving performance and efficiency of the essential components of health systems. WHO considers six elements essential for a functional health system: provision of services; health personnel; systems of information and knowledge on health; medical products, vaccines and technologies; health financing; and leadership and governance.

UNDER-INFRASTRUCTURED

With the support of partners, African countries have built a health infrastructure of sorts, but at 0.8 the African average does not even reach one hospital per 100,000 inhabitants (WHO, 2014). Only 13 countries exceed this standard, with Gabon having the best outcome; Guinea and Liberia are way below the African average (see figure 8). Worse, this metric has declined in Africa, down from 0.9 in 2013 (when Gabon had four hospitals per 100,000 inhabitants). Beyond this weak coverage is a stark problem of access, notably average distances to a health service, reflecting both geographical distribution and poor transport infrastructure.

The technical facilities of many African countries are not in good shape, too often equipped with laboratories and radiological equipment scarcely

FIGURE 8. NUMBER OF HOSPITALS PER 100,000 INHABITANTS 2013



Source: WHO 2014.

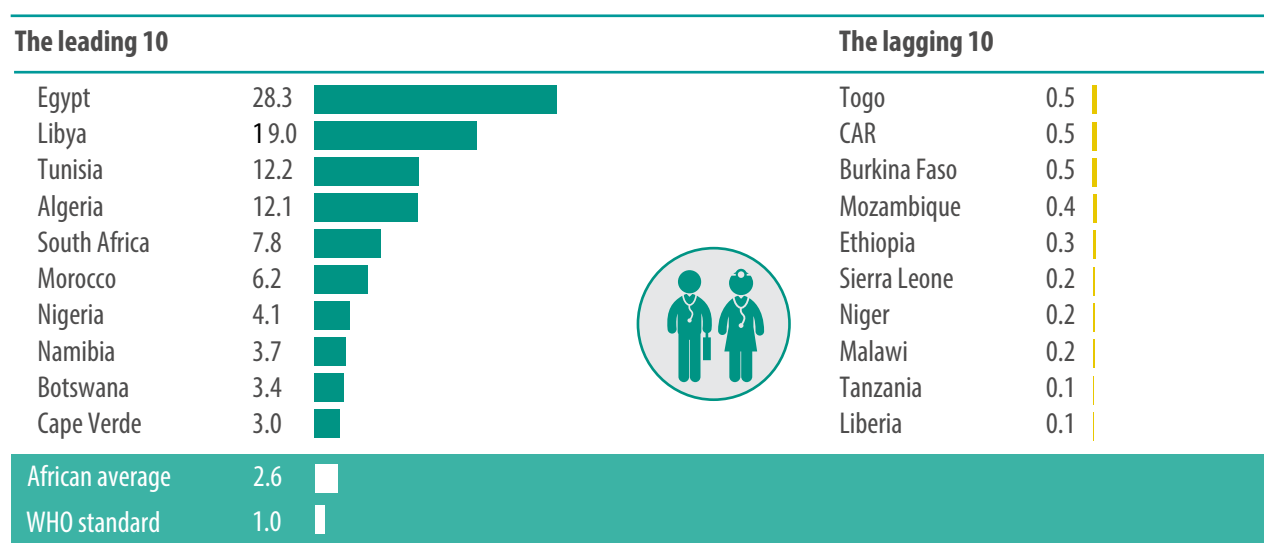
working owing to a lack of maintenance. One reason is that payroll consumes a heavy share of the budget (60–80% of most ministries of health), leaving few resources for spending elsewhere (Gobbers and Pichard, 2000). The upshot is a heavy percentage of temporary staff, sometimes paid on piece rate without fixed-term contracts, and traditional healers or poorly trained health staff. Sometimes services are contracted out. In some countries poorly managed recruitment—under the ministry in charge of the

public service—explains these inadequacies, seen among all professions: doctors, nurses, qualified caregivers, laboratory technicians, paramedics and social workers.

UNDER-STAFFED

The African average for doctors is reasonable, with 2.6 doctors per 10,000 inhabitants, but not so for nurses and midwives, as these doctors supervise on

FIGURE 9. NUMBER OF MEDICAL DOCTORS PER 10,000 INHABITANTS, 2006–2013



Source : WHO 2014.

average 12.0 nurses and midwives. WHO’s standards are for one doctor per 10,000 inhabitants, one nurse per 300 inhabitants and one midwife per 300 women of reproductive age. Support staffs in health units (plumbers for drinking water and sanitation, electricians and drivers, experts in high technology for equipment) are in extremely short supply.

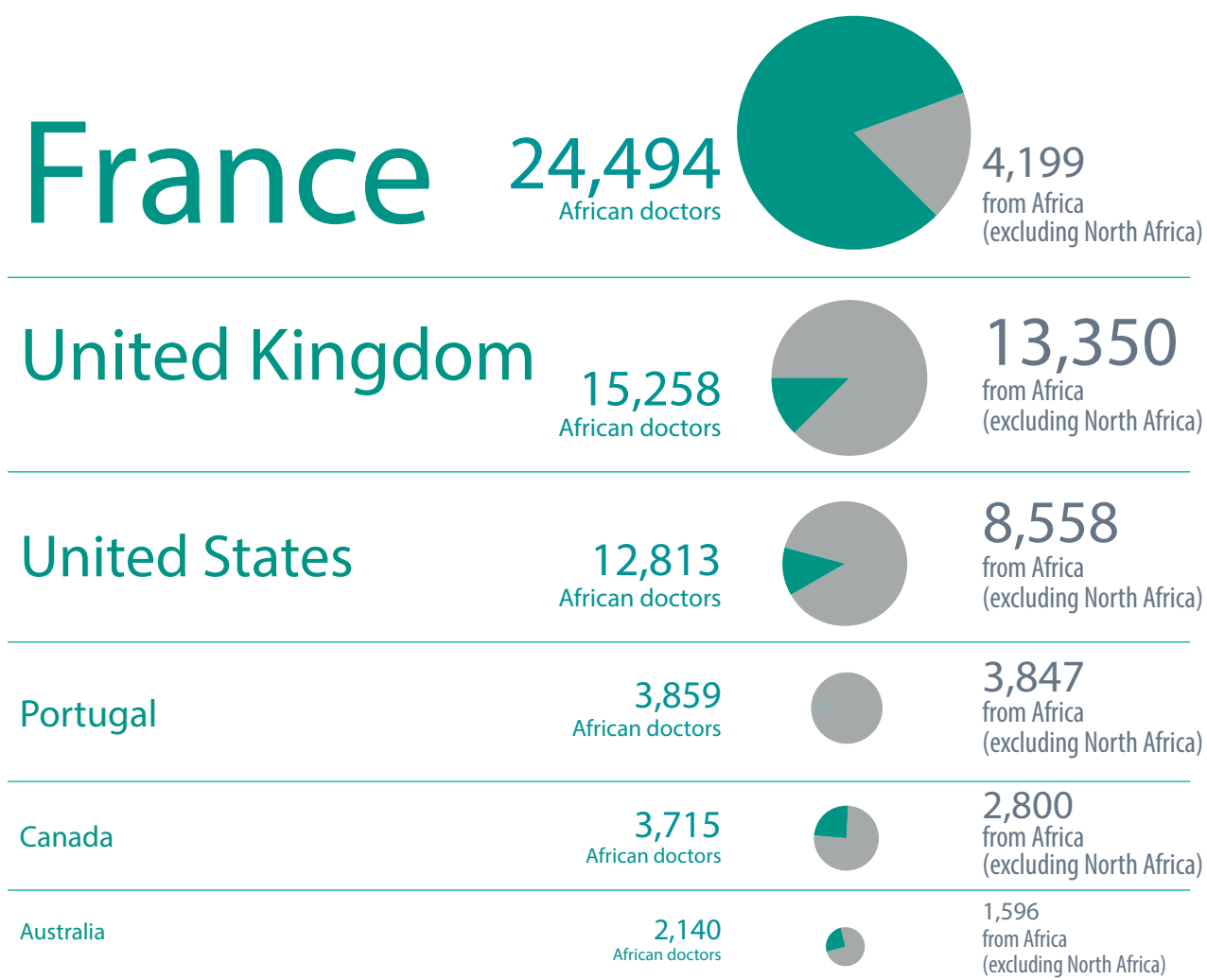
Among countries affected by EBOLA, the ratios for doctors are far below that average: Guinea (1.0), Sierra Leone (0.2) and Liberia (0.1) (see figure 9). Indicators for nurses and midwives are also worrying: 2.7 in Liberia and 1.7 in Sierra Leone, not even a

quarter of the African average. At these rates, medical supervision and support are grossly inadequate.

Medical staff numbers are especially low in rural areas, and doctors particularly prefer urban areas. Nurses and midwives practise more in the public than private sector. The personnel deficit is wider in areas with poor living conditions, which are frequently in rural areas. Foreign practitioners work in the public and private sectors.

Doctors in the public sector also work privately in most countries (not always fulfilling their public

FIGURE 10. THE MAIN HOST COUNTRIES OF THE DRAIN OF MEDICAL SKILLS FROM AFRICA (EXCLUDING NORTH AFRICA)



Source: Performance Management Consulting, www.performancesconsulting.com

service obligations). This “dual job holding” usually stems from poor working conditions and low salaries in the public sector. But the lack of even well-paid private jobs is the origin of their continual search for other more lucrative situations, which can be abroad, draining the continent’s medical base (see figure 10). Still, there may be huge financial benefits to sending countries (at least in the short term): the massive recruitment of Ghanaian doctors by the United Kingdom between 1998 and 2002 made it possible for the country to save nearly \$172 million (Performance Management Consulting, 2010).

Yet the overall picture is not encouraging: Africa has 1.3% of the planet’s health workers but its global disease burden is 25% (Performance Management Consulting, 2010). The human resource deficit is a pressing burden with, at times, devastating consequences.

UNDER-RESOURCED

Lack of funding is one of the main reasons for the above unimpressive data on infrastructure and staff performance. States are the main funders of their

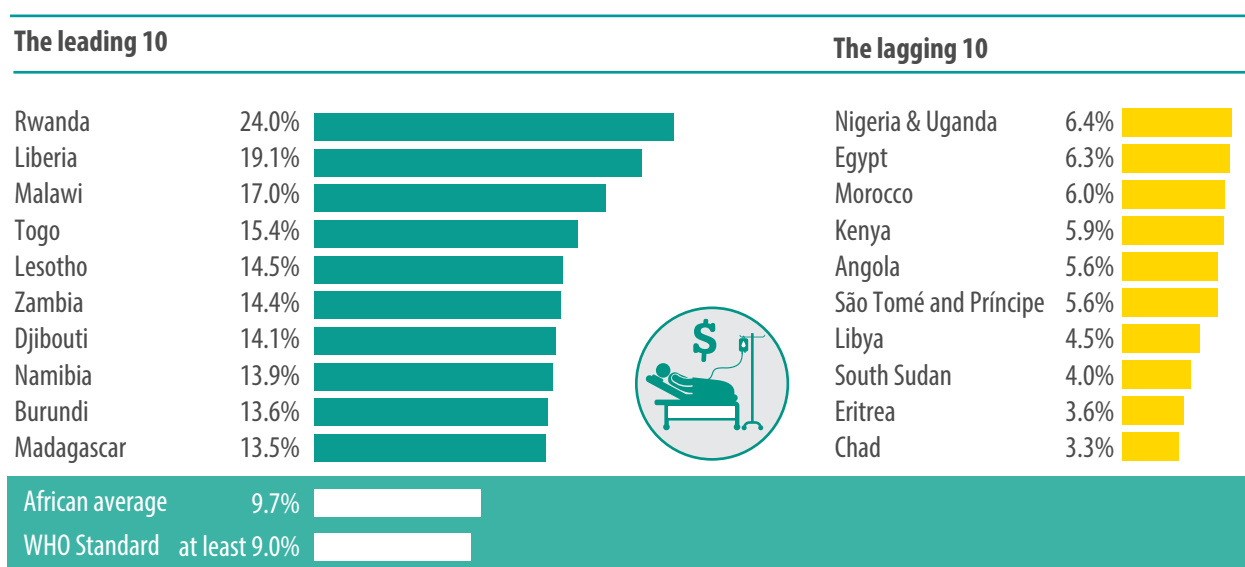
health systems. In countries that have decentralized more than others, local communities also contribute to the health effort (although community health is far from a priority in Africa, despite the discourse).

WHO calls on countries to devote at least 9% of public spending to health—and to their credit, many countries do so (see figure 11). Other bodies have other spending targets: the African Union 10% and the Economic Community of West African States (ECOWAS) 15%.

In 2011 these rates were 19.1% in Liberia, 12.3% in Sierra Leone and 6.8% in Guinea, against the African average of 9.7% (WHO, 2014). These figures may though be a shade misleading, as these amounts reflect health system reconstruction. In Guinea, the Coordination Body for the Combat against Ebola argues that the true health budget is only 2.7% of national government spending.

Most African states thus spend less than \$20 per person per year, and some less than \$10—not even half the \$34–\$40 needed for essential minimum health services (AU, 2007).

FIGURE 11. SHARE OF HEALTH SPENDING IN NATIONAL BUDGETS, 2011 (%)



Source: WHO, 2014. Icons used in this figure have been designed by Freepik.

Health care is also financed by the private sector and religious entities. Owing to low salaries in the public sector, the private sector has benefited from human resources moving from the other sector (and, as seen, some of these personnel use public infrastructure when practising privately). These practices, which can increase the costs of health care, may reduce the credibility of formal health in favour of traditional practitioners.

UNDER-INTEGRATED

In several countries, the health sector draws little support from the other sectors. This indicates a lack of a system-wide, overall approach integrating the cultural dimensions of the people and the contributions of other sectors for promoting health

The swift advance of the EBOLA epidemic is explained not only by struggling health systems but also by the failure of other sectoral policies.

For example, low access rates to safe drinking water and minimal attention to sanitation leave people seriously exposed to infection, as does malnutrition. Economically, agriculture is oriented towards cash crops for export rather than food crops, which do not benefit at all from support mechanisms for production and marketing, and thus their expansion is limited. This orientation reinforces dependency on external food and even more on food aid, which undermines local production. Health care poses environmental problems with poorly managed waste.

Cross-border activities are very dense, and in that sense integrated, which is why border closures are such a draconian measure. Such density allowed the virus to disseminate fast internationally: from Guinea it spread throughout Sierra Leone and Liberia. In June 2014, Guinea had only two cases, but the virus then came back from Sierra Leone to spread at great speed throughout the Mano River region. Added to this were cases imported from Liberia to Nigeria and from Guinea to Senegal, which dealt with them quickly. Cases have also been imported from Guinea to Mali.

The failure to integrate and coordinate international activities is also apparent: the West African Health Organization, for example, has been unable to fully play its role of distributing resources in common and reinforcing cooperation among member states and third countries. Neighbouring countries have preferred to close their borders, adding to the misery and suffering highlighted in earlier chapters.

INEFFICIENT

A principal components analysis was conducted based on WHO data. It covers 36 African countries according to the availability of data on health indicators, covering the period 2006–2013. Four major features emerge from the analysis:

- Financial resources allocated to health, mainly from the State, are spent on hospital equipments rather than human resources;
- Despite the emergence of a more dynamic private sector and the priority accorded to it, the quality of services in the public sector remains better;
- The social security system is as important as the level of health expenditure per capita; and
- Good-quality health services require not only good hospital equipment but also adequate human resources.

The analysis shows the importance of human resources in the efficiency of the health system. For instance, although Liberia has mobilized substantial financial resources for its health system, weak human resources proved to be its Achilles heel, unlike Nigeria, Egypt, Côte d'Ivoire and Senegal, which have a relatively high number of doctors per 10,000 inhabitants. Liberia's total expenditure on health is equivalent to 15.6% of its GDP, with a ratio of 8 beds per 10,000 inhabitants. Other African countries spend less than 7% of their GDP, with an average of 5.5 beds per 10,000 inhabitants, but have a greater number of doctors than Liberia.

In Sierra Leone, the health system is primarily based on the private sector, which accounts for around 83.5% of the total expenditure. This is in contrast to Mali, Benin, Djibouti, Eritrea, Gambia, Lesotho, Malawi, Mauritania, the Democratic Republic of the Congo, Rwanda, Togo and Zambia, where the contribution of the private sector is estimated to be between 22.5% (minimum) and 56.2% (maximum).

In Guinea, the main feature of the health system is the importance of social security but with very low health expenditure per capita. Indeed Guinea, like Ghana, Guinea-Bissau, Kenya, Lesotho, Mozambique, Niger and Togo, spends on average 13.4% of its public health expenditure on social security, while total health expenditure per capita is on average \$35. At the opposite end of the scale, Nigeria, Equatorial Guinea and Namibia spend only 0.6% of public health budgets on social security but have higher health expenditures per capita (ranging from \$85 to \$1,051).

7. PERCEPTIONS ANALYSIS

It is important to know what the world is saying about the EBOLA outbreak—its “perceptions.” Are these opinions, expressed at different times and places, optimistic or pessimistic?

To find out, “sentiment analysis” was used. This is a data mining technique that has received recognition, particularly after Pang and Lee’s (2008) paper. Also called “opinion mining”, this uses natural-language processing techniques to determine the attitude of a speaker towards a topic via methods such as detection of keywords, computing similarities between texts based on word frequencies and correlations, and other data mining techniques that have been adapted to text documents. The underlying idea is that, when the speaker is positive about a subject, he or she will have a tendency to use more positive words when talking about it—and vice versa.

Other statistical techniques that allow automatic extraction and grouping of recurrent topics in a text were also used. These include a variation of opinion mining that computes the frequencies of words related to a specific topic and the lingo algorithm (Osiński, Stefanowski and Weiss, 2004), which can automatically find recurrent phrases in a list of texts and classify the texts by topics based on such phrases.

SENTIMENT ANALYSIS

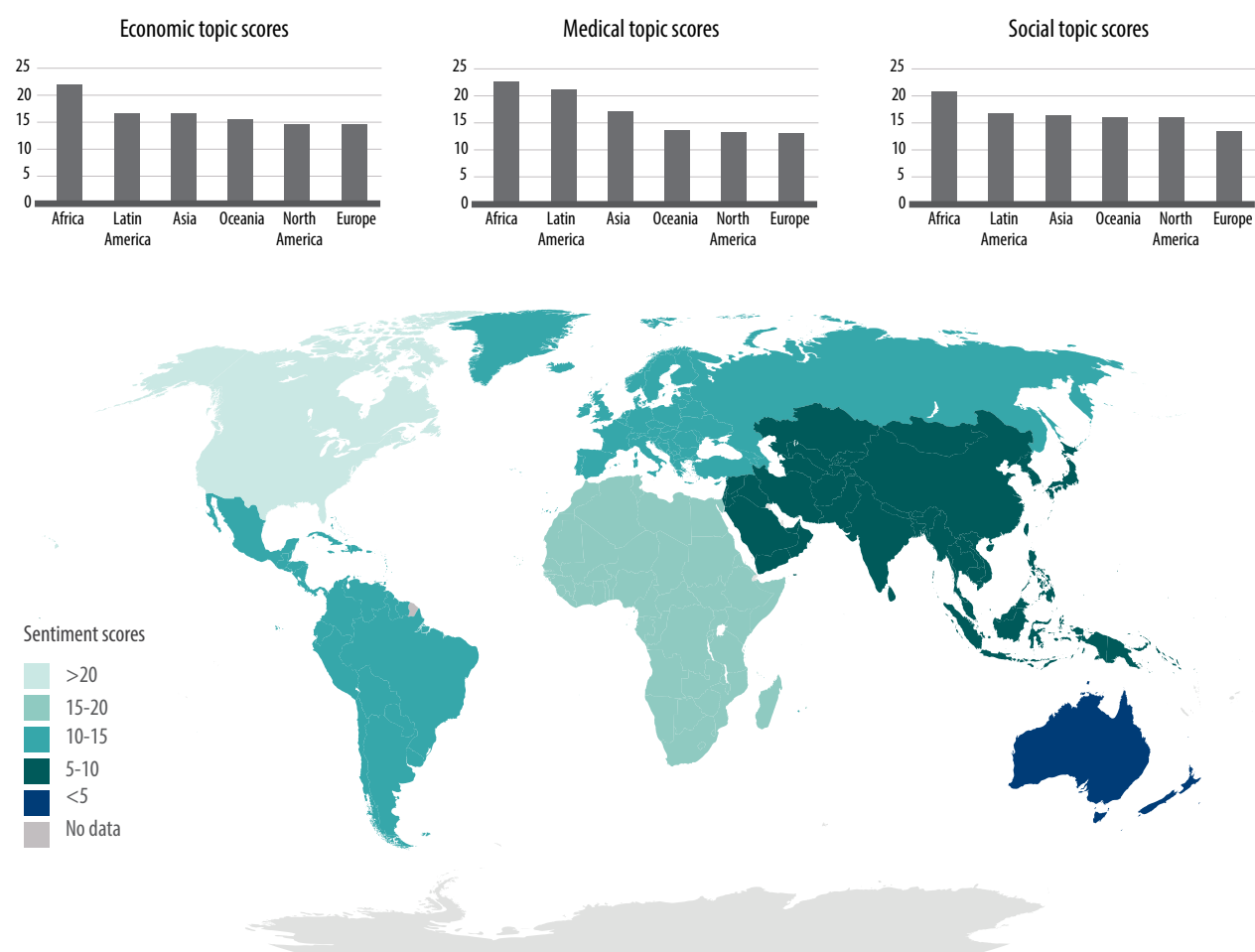
Based on 2,502 news articles published in affected countries between March 2014 and November 2014 and 729 news articles published in various countries around the world, a sentiment score was computed using the R text mining package and R sentiment analysis plug-in.

A preliminary analysis of a wide range of information including news items, reports and studies about the outbreak illustrates general sentiment in different parts of the world (see figure 12). A high score means that people are globally more positive when talking about EBOLA and a low opinion score the opposite. The opinion score is computed from the frequency of positive and negative words using text mining (Meyer, Hornik and Feinerer, 2008) in the R statistical package (R Development Core Team, 2012). The graph also shows scores of economic, social and medical topics computed using a similar methodology. The scores have been normalized so that the sum of the scores is 100—i.e., only the relative values of the scores are meaningful.

The most positive region is North America, followed by Africa and Europe; the least positive is Oceania. The regions with the highest sentiment scores are also those with cases and where there are the most news articles about it. The negative sentiment seems mainly a fear factor and, the more the subject is discussed, the more that fear factor disappears. People are less alarmed when they know exactly what the disease is about, how it spreads, how to avoid it and, most important, that it can be controlled. That fear factor may be the main channel through which the outbreak may impact economies of non-affected African countries as their inhabitants cancel travel and their companies divert investment.

Such restrictions are already making it harder to move health workers and supplies back and forth and to track the disease, undermining efforts to quell the epidemic—although there are still some good practices (see box 6). Communication about the disease is therefore particularly important.

FIGURE 12. SENTIMENT SCORES AND SCORES OF OTHER TOPICS IN ARTICLES ABOUT EBOLA — PUBLISHED BETWEEN MARCH 2014 AND 15 NOVEMBER 2014—



Source: ECA computations based on sample of articles.

Sentiment in the affected and non-affected countries has followed similar trends (see figure 13), but international sentiment has always been more pessimistic (and it went down more sharply than its EBOLA-country counterpart in September 2014, when the first case was diagnosed in a major Western country). It means that there is unnecessary pessimism in non-affected countries. But the two sentiments are converging, which suggests that the pessimism is dissipating as the world learns to live with the epidemic.

RECURRENT TOPICS

The perception of the crisis can also be illustrated by a “world cloud” (see figure 14). The high frequency of words like “said” shows that people are mostly reporting what they heard from others. The cloud also shows that people tend to focus on health aspects, rather than economic or social factors.

Based on the same methodology as for the sentiment analysis, scores have been computed, instead of using a list of words expressing positive or negative sentiments, on sets of words expressing economic, medical and social concerns about the EBOLA. Figure 15 illustrates the differences in the preoccupations expressed in the articles depending

BOX 6: BRUSSELS AIRLINES SERVING THE THREE COUNTRIES

Brussels Airlines is still flying to Conakry, Monrovia and Freetown. Its twice-weekly flight from Monrovia to Brussels—now the only air link from the city to Europe—is a real humanitarian air bridge. While serving the affected countries and the sub region, the airline has taken the threat of EBOLA seriously and maintained a continuous risk assessment and communication with organizations tackling the outbreak, including Belgium’s own Ministry of Health and Médecins Sans Frontières (Doctors without Borders). The airline also works closely with local governments in the three countries on strict precautionary measures.

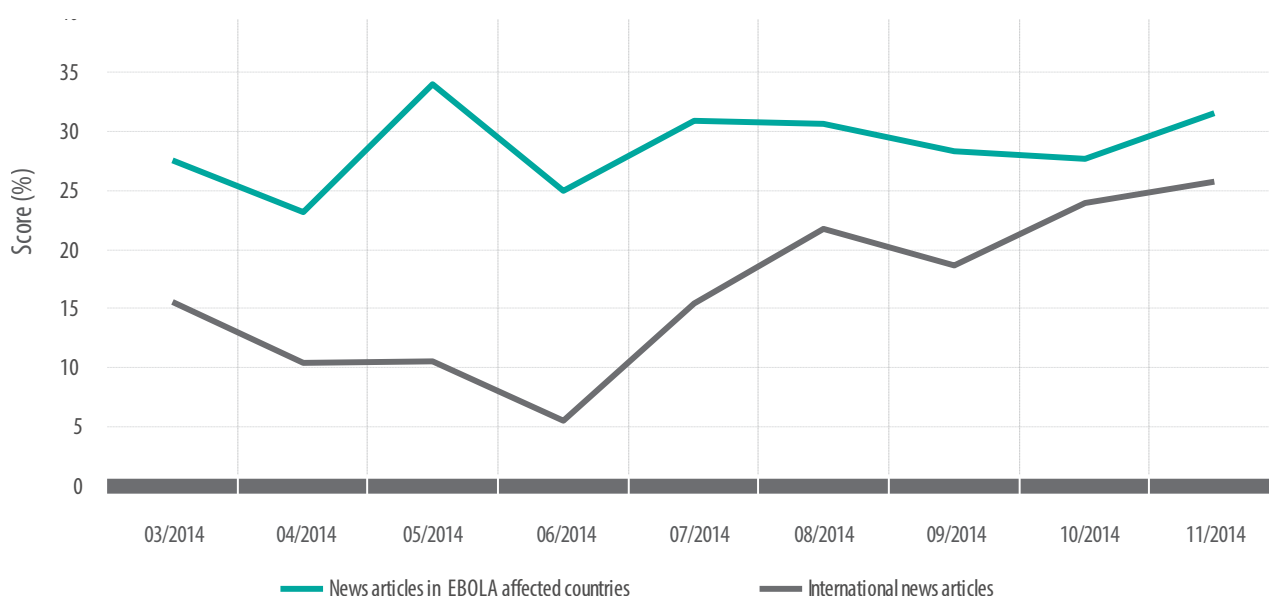
As of 4 November, Brussels Airlines had temporarily suspended the reservations of 77 “suspicious” passengers trying to fly from the three countries but all 77 passengers were later allowed to take their seats as none had contracted EBOLA, but had been infected with more common, but less lethal, diseases such as malaria.

Brussels Airlines relies on its crew volunteering to operate the flights, and to date has always found enough of them to maintain a full schedule. Recently under pressure from staff concerned over safety, it has not envisaged cancelling flights but adjusted its schedule to avoid staff members spending the night in affected areas. Brussels Airlines has redirected the crews which had to staying near Monrovia, for example, to hotels in other West African countries, such as Gambia, Senegal or Côte d’Ivoire, leading to a technical stopover and adding an hour to its flight back to Brussels.

Such decisions have set an example not only of humanitarian responsibility but also a good practice for corporate social responsibility, especially against the backdrop of a complex, humanitarian emergency.

Source: ECA

FIGURE 13. SENTIMENT SCORES COMPUTED ON ARTICLES PUBLISHED INSIDE AND OUTSIDE EVD-AFFECTED COUNTRIES



Source: ECA computations based on sample of articles.

on whether they were written by people living in the EBOLA-affected countries (“local news”) or people living outside them (“international news”).

As EBOLA is first a medical issue, medical topics dominate, in local and international news; international news shows more focus on medical aspects than national news. The scores on medical topics are high at the beginning of the outbreak, because at that time most news articles included a long description of the disease, its history, its high lethality and propagation mechanisms. For example, a security message released in March 2014 by the US embassy in Conakry confirmed the presence of the Ebola virus in the Forest Region of Guinea. The message continued with a description of the symptoms of the disease, indications of mortality rates and the way the disease spreads, and

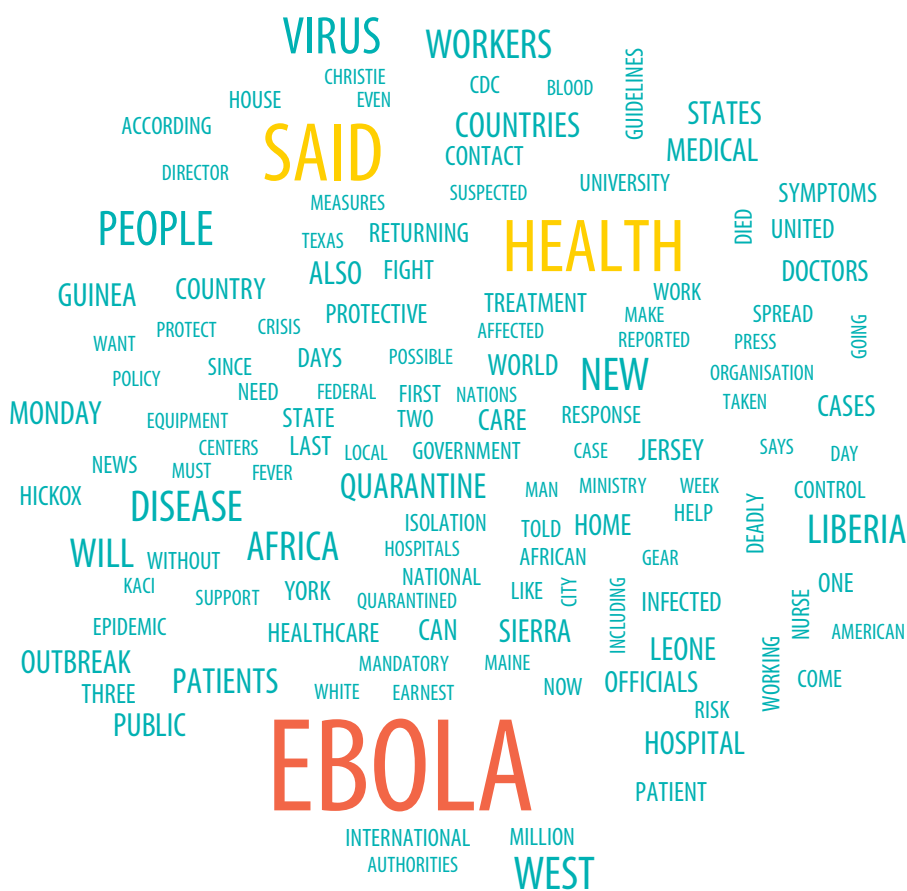
recommendations to avoid contact with individuals showing symptoms until further information became available.¹⁷

In the same month, the first concerns about the virus getting to the West were expressed with the case of a doctor who went back home after working in EBOLA-affected regions and was showing symptoms (RT News, 2014).

Medical concerns showed slight decrease in May, September and November, but the scores were

¹⁷ “Security Message for U.S. Citizens: Ebola Hemorrhagic Fever”, US Embassy, Conakry, http://searchabout.wc.lt/look/Conakry_Guinea_Ebola/Security_Message_For_U_S_Citizens_Ebola_Hemorrhagic_/aHR0cDovL2NvbmFrcnkudX-NlbWJhc3N5Lmdvdi9IYm9sYWwhbW9ycmhhZ2ljZmZ2XXI-uaHRtbA==_blog.

FIGURE 14. WORLD CLOUD OF NEWS ON EBOLA



Source: ECA computations based on sample of articles.

consistently high. It is around June that the phrase “out of control” started to be used consistently (MSF Canada, 2014). This marks a period when the medical concerns started rising again in both local and international news. In July 2014 the first case of EBOLA was confirmed in Nigeria, validating the declaration and increasing international alarm. However, the Nigerian case was well handled, proving to the international community that it was indeed possible to control the spread of the virus in a country if adequate measures were taken (see box 1). In August 2014 a case was reported in Senegal, which was also well handled using containment and treatment measures.

These two cases probably explain the decrease in the concerns in international news for September, October and November, even though only the first true EBOLA case in the US, confirmed in September, really caught the attention of Western citizens. In October 2014, an article was published in a Rwandan

newspaper entitled “What’s Wrong With How the West Talk About Ebola?” (AllAfrica, 2014). The article cited data from Google Trends, which tracks the popularity of specific topics in the news and Twitter statistics, stating that “the world only really started paying attention to the Ebola epidemic when it involved patients in the U.S.”.

For social topics, the high scores in the early months in local news mark the period where society was still absorbing the shock and trying to change its behaviour. The needed changes are numerous, and that the scores went down quickly shows that people have learned to live with the epidemic.

Economic topics seem not to be of major concern in international news while local news put a lot of emphasis on them. After the society has absorbed the initial shock of the outbreak and has learned to live with, economic impacts have become a major concern in affected countries.

FIGURE 15. SCORES OF ECONOMIC, SOCIAL AND MEDICAL TOPICS IN THE SAMPLE OF ARTICLES



Source: ECA computations based on sample of articles.

8. POLICY RECOMMENDATIONS

The socioeconomic and intangible impacts of EBOLA differ by country, by segment of society and by economic sector. Responses should, ideally, be tailored, but as the crisis is still evolving and given the scarcity of reliable data, such customized recommendations are infeasible. This report therefore presents its policy recommendations using broad brushstrokes under the following four headings.

EPIDEMIOLOGICAL

Efforts should be made to ensure that all infected people access timely treatment in designated medical facilities, and that new infections are prevented. Health facilities should be brought closer to communities.

Detailed stock-taking should identify the actors in the three countries, to establish what the actors are doing, how they are doing it and their interventions' impact. This needs to be preceded by a well-structured and detailed socioeconomic needs assessment of the affected countries to establish their short-, medium- and long-term priority needs, which will then serve as a guide for intervention by various stakeholders. These two processes aim at coordination, to ensure that interventions are structured around priority needs of affected communities. This step is needed because the outbreak has attracted multiple actors, particularly to the three affected countries. As in other crises, this presents coordination challenges which, unless managed well, could aggravate rather than alleviate EBOLA impacts.

Strategies are needed to collect and disseminate reliable data. The actual epidemiological scale of EBOLA cannot be measured with precision, nor

the exact impact of interventions and, although aggregate numbers of infected people have begun to decline in the affected countries, a case-by-case analysis (particularly in Liberia and Sierra Leone, where reported cases are higher than in Guinea) is needed. There is an acute shortage of reliable data on socioeconomic sectors in the three countries, partly owing to suspension of many statistical activities. The lack of real-time data on the number of deaths by location and the causes of death has seriously affected interventions tracking the infection and promoting preventive and curative measures. Health interventions depend on continuous gathering of basic data on mortality by age, sex, location and cause of death, including through functional civil registration systems. Components of this recommendation include the following:

- **Systems to track morbidity in real time, particularly for communicable diseases, should be created.** The cost of not having a system that can pick up infections at an early stage and maintain subsequent data on the disease in real time has not only disastrous health consequences but also serious socioeconomic impacts. Continuous data collection is required, particularly in ensuring the number of reported, confirmed and probable cases, along with close attention to compiling EBOLA-related mortality for a correct understanding of the scale of the problem. In addition, household- and individual-surveys need to continue for better policy interventions based on evidence from the field. Analytical studies on household and individual welfare assessments/challenges in relation to EBOLA are best tackled only if survey data are available.

- **There is need to reconcile and harmonize data sources and strengthen the capacity of national statistical offices to process statistical data.** In the medium to long term, ECA stands ready, through its African Centre for Statistics, to support the affected countries in enhancing statistical capacity via training in international statistical standards. These efforts should be complemented with early warning information systems about the disease.
- **Epidemiological management and control of the EBOLA should start with a clear understanding of the disease profile, intensity and dynamics, including its strains.** This calls for learning and relearning of the disease patterns, mode and intensity of transmission. More important, right numbers of epidemiologists, medical doctors, nurses and public health specialists should be mobilized from ECA African member states and elsewhere and be deployed in the affected countries. The African Union Support to Ebola Outbreak in West Africa (ASEOWA) initiative—aimed at strengthening the capacity of local health systems in the affected countries—should be reinforced, including through increased funding by member states and partners.
- **Urgent steps should be taken to strengthen the statistical systems of the three countries, including reopening and strengthening their civil registration systems.** Similar measures should be taken in non-affected African countries with weak statistical and civil registration systems.

The drivers of EBOLA should be isolated from other diseases to avoid prescribing solutions to the wrong problems. Statistical modelling using a range of scenarios can ascertain the before and after effects of EBOLA in the three countries. Related to this is the need to bolster the resilience of these countries' health systems, for EBOLA and non-Ebola diseases.

Communities need to abide by strict burial protocols, including the requirement that burials of victims should only be conducted by trained personnel to avoid further contamination through interaction with dead bodies. The special teams set up to conduct burials in the three countries should be strengthened and urged to continue working with local communities and health personnel to ensure safe burials. Laboratory facilities and the hospital infrastructure in general should be resourced with modern diagnostic equipment, and the skills of medical personnel should be upgraded to match current EBOLA-related demands.

More domestic resources should be mobilized to see to it that the right volumes and types are deployed to the health sector, particularly for EBOLA. Based on existing institutional frameworks such as public—private partnerships, the Africa Chief Executive Officer Forum and philanthropic bodies (e.g., the Mo Ibrahim Foundation), the private sector and wealthy African individual citizens should continue to lever resources, as they did in November 2014 when representatives of the African private sector, under the aegis of the African Union, gathered in Ethiopia as part of the international effort to mobilize resources within Africa and to discuss how to redress the three countries' economic decline. As of November 2014, the private sector in Africa had pledged financial resources to the African Union—led Private Sector Ebola Fund¹⁸ of \$32.6 million.

18 MTN Group and (AfDB (\$10 million each), The); Dangote Group and Trust (\$3 million); Econet Wireless (\$2.5 million); Motsepe Family Trust, Stenbeck Family, Afrexim Bank, Coca Cola Eurasia and Africa, Vitol Group of Companies and Vivo Energy (\$1 million); Quality Group of Tanzania, Old Mutual Group, Nedbank Group USD), and Barclays Africa Group Limited (\$500,000); and United Bank for Africa (\$100,000) <http://pages.au.int/ebola/news/message-of-African-Union-Commission-Chairperson-on-good-progress-on-AU-Private-Sector-Ebola-Fund>

Governments need to employ large teams of health service workers who can be trained and deployed quickly to give information on EBOLA to households in rural areas. Beyond offering jobs to thousands, this has the potential to help prevent outbreaks of infectious diseases in the future.

ECONOMIC

West Africa and the broader African continent should not panic over declines in GDP growth owing to EBOLA. While the three affected countries will suffer steep GDP losses, the effects on both West Africa and the continent will be minimal: -0.19 percentage points in 2014 and -0.15 percentage points, respectively, in 2015; and -0.05 percentage points in 2014 and -0.04 percentage points, respectively, in 2015.

To boost the economy and counteract the damaging alarm-driven indirect effects, the best government measure is to build confidence. Economic recovery in the affected countries will start once the EBOLA outbreak is contained and its full economic impacts are determined. Aid alone is not enough. Providing consistent and regular—and when true, upbeat—messages about EBOLA is extremely helpful.

Lessons from successful past recovery programmes should be levered in crafting workable responses to the EBOLA epidemic. For Liberia and Sierra Leone in particular, there are important lessons from the past, given their success in reconstructing their economies after civil wars. These fragile and post-conflict countries managed to overcome the twin challenges of keeping peace and rebuilding their economies, and so know the economic management steps they can take to recover, this time, from EBOLA. It is also realistic that they will be on the same robust growth trajectory after EBOLA is contained.

- **Fiscal measures need to include the introduction of social protection/safety net programmes to help families of victims and their immediate communities.** There is a need to target vulnerable groups that disproportionately suffered from the crisis such as orphans, children

who lost one parent and women giving care at huge risk to themselves. Other social groups have also lost employment owing to EBOLA and its effects on businesses and production. Support should therefore provide robust social protection to facilitate the socioeconomic recovery of deeply affected communities whose economic livelihood is threatened. The international aid effort and domestic resource mobilization within countries can be earmarked to such interventions.

- **Countries not directly affected need to make budgetary reallocation for better preparedness and containment against an EBOLA outbreak.** This is not easy when most of them face competing demands to their stretched budgets, but it is better to act preventively. International support helps fill some of the spending gaps created by the crisis.
- **Provide targeted incentives to attract domestic and foreign (foreign direct investment) investment.** Affected Governments should consider tax holidays and subsidies for prospective national and foreign investors as a strategy to attract investment, possibly avoiding (or being chased out of) these countries. Governments should establish investment offices, and lever networks of international and regional development banks such as AfDB. They need to attract investors to take advantage of the attractive packages and profitable opportunities for foreign companies in mining, agriculture, manufacturing and tourism.
- **Cut interest rates to boost growth.** This would help investors, particularly small- and medium-sized entrepreneurs whose businesses have been hit by the crisis.
- **Countries should manage their exchange rates cautiously, avoiding hasty adjustment measures.** Even with the crisis and lower trade, large financial inflows are supporting the currencies (e.g., the US \$450 million from the International Finance Corporation —see figure 6).

Modest depreciation can also promote export competitiveness.

Bilateral and multilateral creditors should seriously consider cancelling the three countries' external debts.

These countries will find it highly burdensome to meet their international debt obligations (see figure 6). Properly crafted debt cancellation packages would help them refocus their energies on containing the outbreak, and release resources to support the rebuilding of their fragile economies. This proposal is in line with the G20 countries' request at the Brisbane summit, and should not be offset against EBOLA-linked funding pledges from international financial institutions. The post-catastrophe debt relief scheme for Haiti provides a useful template.

The three countries—and neighbouring states that lost their tourist status—should devise strategies to tighten connectivity between them and the broader region.

They should also adopt business-related travel incentives, easing procedures for securing entry visas and encouraging competitive rates at hotels and on related tourist products. Carefully thought-out confidence-building strategies should be adopted in the medium term, drawing on lessons from Haiti's recovery initiatives.

Governments and development partners should invest in building skills and human capital in the short, medium and long term to enhance labour supply.

They should in particular provide support to artisanal miners, and boost added value and generate employment in mining. More generally they should oversee improvements in sewage and sanitation.

The response effort should aim to reinforce border health checks instead of closing all borders, except when there are compelling reasons. Such reinforcement should also support military personnel at checkpoints and cover health personnel assigned to work at those borders.

With many parts of the three countries suffering acute food shortages—given border closures and disrupted agricultural output—several measures should be taken:

- Boost country food aid efforts and emergency safety net programmes to meet the needs of the most vulnerable groups such as children at risk of malnutrition. A community focus is crucial because many children are now cared for by neighbours and relatives.
- Adopt food price policies including stabilizing measures, for rice particularly.
- Scale up support to the World Food Programme in providing food assistance and facilitating logistics for inaccessible areas. Such food distribution can help stabilize food prices.
- To avoid long-term dependence on food aid, facilitate imports of essential food items and make them available to populations affordably. Such measures will be aided if borders are kept open and travel bans lifted.

African countries should strengthen regulatory mechanisms to identify and sanction economic actors charging higher rates to consumers.

There is much room to improve the regulatory mechanisms that countries can put in place to discourage such responses (e.g., among shipping insurers).

Governments of affected countries should devise recovery plans to quickly revive their economies, which may require revisions to medium-or even long-term national development plans.

Such recovery plans will aim to bring the economy back to pre-crisis growth by providing support for restoring confidence and resuming consumption, investments and economic growth. More tightly they should address weakened government revenue, slower economic activity, weakened SMEs, reduced purchasing power for many households and farmers, apprehensive behaviour of foreign companies (which are usually the drivers of the economies), and falling investment. Medium-term plans should aim to strengthen resilience and response capacity against future similar shocks, which may require support from institutions like ECA.

In the medium and long term, these three Governments, with partners' support, should provide incentive packages to farmers to help relaunch agriculture, which is vital to long-term recovery. After the above short-term measures, in the long term agriculture will need to be rebuilt, particularly as it is the economic mainstay. Some recommendations include supplying key agricultural inputs (e.g., via seed and fertilizer subsidies) and ensuring property rights, particularly to widows. Complementary policies to boost welfare and productivity include providing credit (e.g., through micro-finance institutions) and promoting labour-saving technologies. (Such measures have been used after labour-supply shocks induced by deadly infectious diseases such as HIV/AIDS).

SOCIAL

The crisis and the different scales it has reached evinces an important lesson: EBOLA is not necessarily a socioeconomic crisis in itself—it only becomes one when health systems are unable to contain it. The capacity of countries like Nigeria and Senegal to put in place immediate responses that prevented the outbreak from becoming a national crisis is the strongest evidence of the importance of strengthening health systems across Africa. Hence this study recommends the following:

As national and regional priorities, public health systems continent-wide should be strengthened. Strong systems are crucial for reducing risks from the epidemic and to deal with it when people are exposed. Underpinned by well-trained health personnel and appropriate infrastructure, particularly in rural areas, such systems are hallmarks of an effective response to the current outbreak, and future outbreaks of any disease.

Stakeholders should ensure that EBOLA is not tackled in isolation from other killer diseases such as HIV/AIDS, malaria, pneumonia and diarrhoea, especially among children and women. Health-systems strengthening should not focus narrowly on preventing another EBOLA epidemic, but on

enhancing sub-national, national and regional capacities in public health. Vertical funds, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria, have helped reduce the prevalence of these diseases, but to strengthen the foundations of national systems, a wider approach is recommended. One key element is to rebuild national capacity and foster a new generation of medical personnel, generating incentives for them to become part of national health systems, and so make up for the setbacks on key outcome indicators.

Africa should seriously consider the merits of decentralizing health services. The aim would be to enhance health response capacity locally.

Countries should therefore be given supplementary funding to reach the expected standards for public health, both for emergency response and regular care. Goals on delivery standards must be tackled beyond the health sector, and include discussions of national development planning. Further, the role of statistics in public health financing, effectiveness of service delivery and the workforce will be key as the continent seeks to provide universal coverage.

The three countries (and others with weak health systems) should be supported to deploy multi-pronged approaches to eradicate EBOLA. Such responses should go beyond the health sector to include key social sectors and gender issues. For instance, water and sanitation are essential in guaranteeing hygienic conditions in affected communities, while provision of food and nutrition to infected people would help them to build their resilience and coping mechanisms.

Social responses should not focus just on individuals directly infected by the virus, but should also consider those indirectly affected—a much larger group. Social responses should consist of two key elements: addressing the underlying causes of the outbreak to avoid future crises (a health systems and epidemiological perspective—see Chapter 4); and ensuring that policies and programmes establish commensurate responses to minimize the

social impact of an outbreak. The study suggests the following:

- **For the directly affected, policies should ensure a household rather than individual approach.**

Once a member of a family is lost to EBOLA, the livelihood of the household is affected. Even if that person was not financially contributing to the household, the role of caring and providing in-kind contributions has to be assumed by another member, which can then hit income, labour, education and care.

- **Social protection and targeted safety nets—crucial for groups disproportionately affected by the outbreak—need to be created or beefed up.**

The number of orphans caused by EBOLA needs to be monitored. These children will be vulnerable owing to the stigma of the disease. Special grants should be considered for the families and relatives that take them in. For those of adolescent age, measures should be taken to ensure their enrolment in, for example, vocational training programmes, allowing them to join the labour market.

- **Steps must be taken to ensure that the EBOLA outbreak does not ignite a food and nutritional crisis.**

Proper monitoring should be put in place to ensure that any losses in subsistence farming are replaced by a regular flow of basic food items. Further, special attention should be given to pregnant and lactating mothers, and to contain the rise in child malnutrition, particularly during the first two years of life when cognitive and physical development are critical.

- **Governments and local authorities should ensure that children return to school and that the educational outcomes hurt by EBOLA are brought back to prior levels.** They should avoid closing schools when possible as this increases drop-outs, with long-term personal and national economic consequences.

- **Communities should be supported with counselling and related services.** This will help them to overcome trauma and rebuild new family bonds, including through adoption.

The EBOLA outbreak has had a disproportionate social impact on women, mainly because of their direct role in looking after the sick.

EBOLA has disempowered women and this must be rectified by, for example, putting them at the centre of post-crisis recovery plans. The study recommends that Governments:

- **Establish or strengthen gender-responsive disaster risk-reduction and management strategies.**

These must ensure inclusion, engagement and empowerment of all members of society, given gender relations (as women and men differ in how they experience, respond to and recover from disasters).

- **Facilitate institutional frameworks.** This will be seen in non-discriminatory legal systems that support gender equality and women's empowerment in all spheres, specifically as they relate to land and property inheritance.

- **Expand economic opportunities for women.** This entails recognizing and compensating women for the unpaid care work they do (any transfers to help victims and communities recover must compensate women for this lost revenue), and providing gender-responsive support services in business, agriculture and the extractive industry.

- **Strengthen women's agency.** Steps include building women's abilities to identify and act on economic, social and political opportunities; challenging sociocultural norms that place them at higher risk of infection and that impede their capacity to benefit from economic growth; and using gender-sensitive awareness-raising mechanisms for preventing and responding to infection.

INTANGIBLE

One of the most powerful intangible impacts of the outbreak is its negative effects on the view of Africa as a continent on the rise. As during the early days of HIV/AIDS, characterizations of “disease-prone Africa” have been revived. Although the outbreak has been largely concentrated in three West African countries, some media (and Governments) lump Africa together as one EBOLA-infested region, with the potential to erase Africa’s recent socioeconomic progress.

Although the impact is admittedly heavy on Guinea, Liberia and Sierra Leone, the aggregate effect on West Africa and the broader continent is minimal—the continent is most likely to continue growing strongly. Africa’s rise is not under much threat from EBOLA itself, but more from misinformation and ensuing misperceptions. And so the study recommends the following:

- **Pan-African institutions, particularly AUC, AfDB and ECA, need to make more effort to “set the record straight” on EBOLA.** This requires them to present more accurate data and information on the disease and its impact.
- **These three institutions need to develop a media and communications strategy to put out an objective but constructive narrative on EBOLA.** Media presence of the three institutions’ leaders should be spotlighted, including joint appearances in high-profile African and non-African media. Such efforts should be replicated subregionally by heads of regional economic

communities and other African institutions.

- **African media and communication houses—print and audio-visual—should be encouraged to provide accurate and fact-based accounts on EBOLA.** They should cover progress made to reverse its spread and impact.
- **AUC, AfDB, ECA and other African bodies should consider a joint, more detailed analysis of the socioeconomic, political and cultural impacts of EBOLA when the crisis is contained.** Such a study, based on primary data generated by African institutions, will enable the continent to tell the EBOLA story in an objective and nuanced manner, putting Africa’s interests first and steering clear of the distortions and misperceptions that have grown up around the disease.
- **African leaders should ensure effective implementation of the decisions of the emergency session of the Executive Council of the African Union in Addis Ababa on 8 September 2014, on the EBOLA outbreak (Ext/EX.CL/Dec.1(XVI)).** This relates especially to the need to act in solidarity with affected countries, including breaking the three countries’ stigmatization and isolation, and strengthening their resilience (and that of the continent more broadly).

APPENDIX I. SECTORAL ANALYSIS OF ECONOMIC AND SOCIAL IMPACTS

The socioeconomic impacts of EBOLA are felt mainly by key economic sectors in Guinea, Liberia, and Sierra Leone and their neighbours. The key sectors discussed in this appendix (in greater country-level detail than in the main text) are trade and mining, agriculture and services. The next figure shows some of the inter-sectoral relationships.

TRADE AND MINING

This section looks at the impact of EBOLA on trade activities of the three countries. It explores as well possible effects on services and mining given the interconnections, although the full extent of the impact of EBOLA on trade cannot be fully assessed until the crisis stabilizes.

Evidence suggests that trade has been severely hit in all three countries. The reduction in exports during the second half of 2014 for Liberia was estimated at 16.5%, while the annualized growth rate of exports and imports for Guinea for the same period stood at -2.2% and -4.6% respectively. In Liberia internal trade involving commercial trucks declined dramatically by 80%, while there has been a 27% drop in fuel sales since May 2014 in Sierra Leone. Agricultural exports also fell, including commodities such as rubber (-20% in Liberia), cocoa (-24%), coffee (-58%), palm oil (-75%) and rice (-10%) in Guinea. Informal cross border trading activities were also adversely affected to the tune of 50% in Guinea and 70% in Liberia.¹⁹

¹⁹ These figures are quoted from IMF data (IMF Country Reports for the three countries – Guinea IMF Country Report No. 14/244 (August 2014); Liberia IMF Country Report No. 14/299 (September 2014); and Sierra Leone IMF Country Report No. 14/300 (September 2014)), and the World Bank's

In addition, many businesses have had to close. Even those that have managed to stay open have seen steep drops in activity owing to reduced working hours and lower staff numbers. Scarcity of commodities, food in particular, has pushed up inflation, reducing competitiveness, hurting exports and cutting the surplus available for export. Many official border crossings between the three countries have closed, disrupting intra-country trade, driving domestic prices up, limiting the supply of goods and hurting vendors' incomes. These closures are expected to worsen food insecurity in the three countries given the high level of cross-border trade in agricultural commodities, including staples such as rice and palm oil. Transport activity has fallen owing to tight restrictions on movement and a reduced labour force, thereby raising the cost of moving commodities and reducing the availability of goods. Depreciating domestic currencies (stemming from mounting demand for foreign currency) have had mixed impacts on trade, as although they boost exports, at the same time they hurt imports.

The contribution of the mining sector to the three countries' economies is not negligible. As of 2014, the contribution of this sector is estimated to be 15%, 14% and 20% in Guinea, Liberia and Sierra Leone respectively. The mining sector is a significant contributor to exports. For instance, the share of mining as a proportion of Liberia's total exports is estimated to be 56% in 2014. However, as mining companies have ceased many of their activities in the sub region, mining exports have declined since

Economic Impact of 2014 Ebola Epidemic: Short- and Medium-Term Estimates for West Africa (2 December 2014).

the outbreak began. In Sierra Leone, for example, in the second half of 2014, the contribution of the non-iron ore sub-sector to overall GDP declined by 1% and exports of diamonds fell by \$29.1 million (IMF country reports and World Bank, 2014), while in Liberia mining exports dropped by 30% in 2014.

GUINEA

Agricultural exports are declining. EBOLA has hit hard rural areas including Gueckédou, Macenta, Nzérékoré, Boffa and Téliémélé—the food basket not only for Guinea but for neighbouring regions too. Agricultural production in these areas has been strongly undermined by market closures, deaths of local people, and the departure of expatriates and local workers. Key exports such as cocoa and palm oil have tumbled owing to reduced production. Data suggest production decreases for the major national export commodities of coffee, palm oil and rice of 50%, 75% and 10%, respectively. Potato output has also shrunk, hitting exports to Senegal, traditionally the destination of half of Guinea's potato production. Because exports draw mainly on surpluses as well as existing stocks, the drop in exports of these commodities is probably even higher than the fall in output.

As evidence of the sharp drop in agricultural exports, traders in southern Senegal claim a 50% drop in market activities since early August owing to the border closure with Guinea. They also report that fruit and palm oil from Guinea are no longer available in border markets. Further, the closure of 16 weekly markets in southern Senegal (along the border with Guinea) is expected to further disrupt trading and slow regional economic activity, affecting not only Guinea and Senegal, but also Gambia and Guinea-Bissau.

Mining production and exports, too, have been hit. Accounting for 15% of GDP, mining's pain comes mainly from panic surrounding the disease's spread. The cost of maritime freight has risen by 25–30%. The repatriation of foreign personnel has also shaken the sector. It is reported that RUSSAL, a major mining

company, repatriated 50% of its foreign staff. All the staff of Henan-China Company were repatriated, and 51 employees of Société Aurifère de Guinée have also left the country.

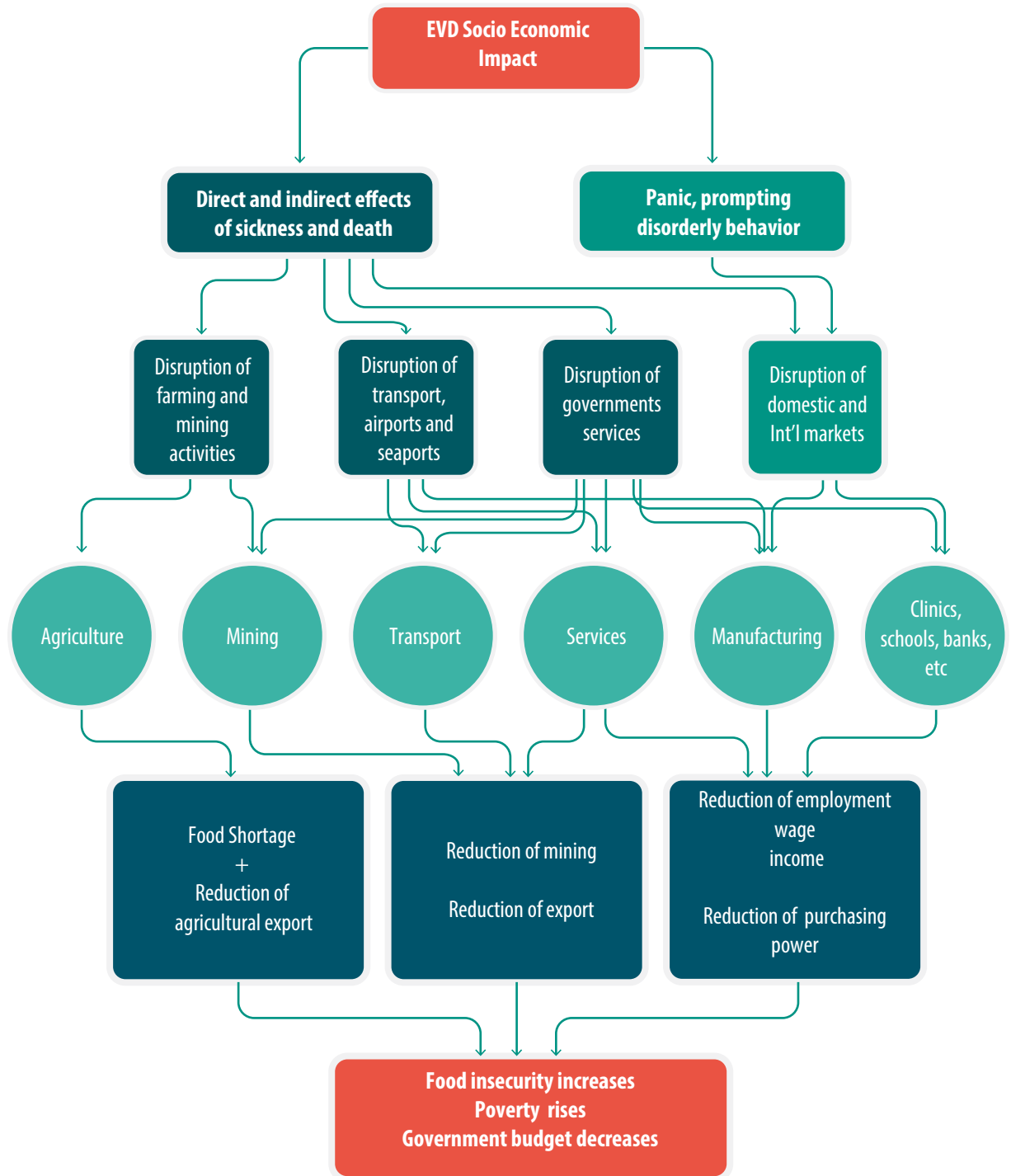
Moreover, many infrastructure projects and studies have been delayed, hitting mining production seriously. Worse, as investment in large new (iron-ore) mining projects is likely to be delayed, medium-term GDP growth and government revenue are projected to suffer. Closer in, mining revenue is estimated to decline from 3.5% of GDP in 2013 to 2.4% in 2014 (IMF, 2014c). The drop in mining output is expected to hurt government revenue badly, given that mining contributed around 20% of fiscal revenue in 2013. On the brighter side, Guinea is not seeing a major impact on mining because its main mines are away from areas at high risk of infection.

Shipping services have suffered, with around a 60% reduction in traffic at Conakry Port and a cumulative loss of around \$3 million since March 2014. Activity at the port has fallen by 32% and 9.4% for containers and ships, respectively. Growth in services is projected to fall from 6.7 to 3.8%, with the categories of transport and commerce stagnant. Insurance and freight fees have climbed steeply. On land, lengthy border crossing times have drastically affected trade in agricultural products with the six neighbouring countries.

There are no clear inflationary pressures even if inflation was revised from 8.5% to 9.4% with potential impact on exports competitiveness being felt as modest. Government revenues are expected to be badly affected owing to low mining revenue and taxes on international trade.

Mining exports have not yet been affected in volume terms but the sector is bearing additional costs. Exports of agricultural products are the most affected with exports of coffee and cocoa dropping by 58% and 24%, respectively relative to the same period last year. Foreign direct investment is set to fall by about 37% in 2014.

FIGURE A1. SECTORAL INTERCONNECTIONS



Source: ECA.

The hard-hit mining and agricultural sectors will likely see far lower export receipts owing to the drop in investment. Falls in mining and agricultural exports will likely widen the merchandise trade deficit and reduce the revenue of the international trade tax in 2014 (which contributes around 18% of total revenue).

Although it is still too early to assess the full impact of these factors on trade given the lack of first-hand data, the economic slowdown, combined with high inflation, will most probably reduce trade activity further, fuelling inflation, food insecurity and poverty, possibly sustaining a vicious circle.

LIBERIA

Inflation is on the rise, from 10% to 14%. This poses a problem of competitiveness for businesses and traders; and a fall in purchasing power for households. The domestic currency has depreciated by almost 15% and 9% since last December and February, respectively. However, incoming financial assistance and diaspora transfers may offset, to some degree, emerging demand for US dollars. Inflation is driven by increases in food prices. The price of rice, for example, has gone up by 13%. Year-end inflation is now projected at 14.7% in 2014 and to remain high at about 10% in 2015.

Many companies are scaling down or only maintaining investments. For instance, Arcelor Mittal has postponed further investments to 2016. Others, such as the world's largest producer of palm oil, Sime Darby, have reduced investments owing to the evacuation of managerial and supervisory personnel, and shifting the focus to maintenance. This will affect exports of palm oil in the coming years. Suspension of development projects has medium-term impacts on exports. Several of them, especially in transport and energy, and initiatives promoting trade facilitation and exports, have been suspended. Previously allocated resources—physical, financial and human—have been diverted towards the new, immediate needs. For externally financed projects, it is reported that contractors have declared force majeure and evacuated key personnel, putting construction on

hold. Suspension of these developments, such as the Mount Coffee Hydropower Plant and other major energy and road rehabilitation projects, and initiatives on hold will push out further any possibility of reducing the costs of doing business.

Services have contracted sharply as expatriates have left the country, hitting trade severely. Tourism has virtually halted, with the hotel occupancy rate standing at around 30%, down from 70% previously. The number of weekly commercial flights to Liberia has dropped from 27 before August to only six at the start of September.

Farmers have abandoned their farms and harvest, in most cases affecting agricultural exports. According to field observations by FAO in Lofa County—once Liberia's bread basket—EBOLA has heavily affected income, livelihoods and agriculture owing to enforced termination of farming activities. The observations even indicate that savings accumulated over several years are fully eroded for lack of income-generating opportunities. This has directly affected food security and the local economy, as these savings were essential for micro trade, food procurement, agricultural input purchases, agro-processing and small business.

According to a recent report by Mercy Corps (2014), EBOLA containment measures are even aggravating food security, market supply chains and household incomes in some of the affected regions: 90% of households reported reducing the amount of meals and substituting preferred food with lower quality or less expensive food as measures of coping with decreased income and rising prices. Buying and selling activities in local markets have been hampered by sharply rising prices and reduced household purchasing power, making some goods unavailable owing to transport and mobility restrictions (Mercy Corps, 2014). This has undoubtedly undermined internal trade, hitting local traders, women and small-scale vendors in particular.

The supply of goods in local markets has declined also owing to border closures with Guinea, Sierra Leone, and Côte d'Ivoire, in addition to the closure of weekly

markets. Reports suggest that markets in the border counties of Lofa and Nimba have been severely affected as they used to heavily count on cross-border trade for buying and selling, given the proximity to cross-border markets (usually with less expressive prices than bringing them from Monrovia). Currently, half of the vendors have changed their source for purchased goods with most of non-locally produced goods in Lofa and Nimba counties are being brought from Monrovia. This has resulted in increased prices, causing a 70% drop in sales as reported by vendors. On informal trade, no goods are coming across the border, with the potential exception of cattle from Guinea.

Internally, the supply of goods has been restrained by transport challenges within the transportation services. Given restrictions on movements, with multiple checkpoints to contain the spread of EBOLA, trucks may now take two to three days to travel between Nimba and Monrovia; it used to take one day. This is causing loss of perishable goods owing to spoilage. The number of commercial trucks operating at the moment has tumbled, by perhaps 80%.

Estimates of impacts on agricultural production, and thus exports, caused by disruptions to movement of the labour force, difficulties in moving products to ports and closure of cross-border markets, do not exist. However, IMF has recently provided a reduction estimate of around 20% in rubber exports, which were initially projected to be \$148 million in 2014. (Rubber is the major agricultural export and the second single most important export commodity for Liberia, contributing around one quarter of national exports.) Rice, the country's major staple, has seen production severely disrupted owing to the labour shortage, affecting both the harvesting and replanting for next session. Rice exports and reserves are expected to be severely affected, flagging the possibility of a looming food crisis. Palm oil production and exports are expected to be badly hit as well, though the effects seem not so significant. The same could apply to forest exports.

The iron ore-based mining sector has been hard hit with one of the two dominant firms shutting down

since August. The other dominant mining firm, though on track to achieve its annual target, has suspended its investments that aimed to expand production capacity by five-fold, which will heavily affect future economic growth. Artisanal mining, including that for gold and diamonds, has almost ceased operations owing to restrictions on movement of people.

According to IMF, the mining sector is projected to contract by 1.3% in 2014 in contrast to an initial growth projection of at least 4%. This is expected to reduce the sector's contribution to GDP from 14% in 2013 to 11.5% in 2014. Iron ore-related revenue will likely decline from \$43.8 million in 2014 to \$28.1 million for 2015 (IMF, 2014b). Mining exports in 2014 will likely fall by around 30%. The impact on national export revenue is expected to be serious given the huge share of mining in total exports: in 2013, the sector contributed around 56% of total exports—\$599 million.

According to the Ministry of Commerce, shipping lines still willing to travel to Liberia claim high risk insurance for all incoming ships, pushing up prices for all imported goods, including fuel. The volume of incoming sea-borne containers is down 30% compared with normal levels—not drastic—but this could, though, reflect obligations to fulfil earlier scheduling contracts. However, forward scheduling is set to experience a sharp drop per indicators.

The expected increased demand for imported food and the drop in foreign direct investment and exports would widen the deficit on the balance of payments.

SIERRA LEONE

Domestic trade has been severely affected, as indicated by the drop in fuel sales of around 27% since May 2014. Agricultural production has been massively disrupted, particularly in the two eastern districts—Kailahun and Kenema—where EBOLA emerged, once considered the nation's bread basket. The two districts, home to one fifth of the country's population, produce around 19% of total domestic rice, the country's major staple food. With the severe disruption, caused by quarantine-

induced restrictions on farmers' movements and other movement restrictions, it is highly likely that national rice production for the 2014/15 season will be greatly affected, further widening the production deficit and increasing demand for imports. Given the long-standing heavy dependence on rice imports to satisfy domestic needs and the closure of land borders to the traditional main sources of imported rice, it is expected that rice supply will be severely curtailed, pointing to a looming food crisis. As a result of ongoing closure of markets and restrictions of internal movement, food trade has crashed, causing acute supply shortages. The rice price is reported to have increased by about 30% in the EBOLA-affected areas.

Mining, which accounts for 17–20% of the national economy, is dominated by the iron-ore sector that contributes around 16% of GDP. (Mining operations also include retile, limonite, bauxite and diamonds.) Government reports indicate little effect of EBOLA on mining production, and the main mining companies indicate businesses as intending to maintain their planned production levels. However, many of these firms are operating with fewer expatriate personnel.

There are difficulties in exporting and in collecting tax revenue given the slump in mining activity (Sichei, 2014). The export difficulties for iron-ore mining companies are mainly owing to rising marine insurance costs. Air travel bans and cancellations of flights by major airlines serving the region have made it difficult for diamond companies to ship their exports abroad. The tax revenue decline for 2014 to Sierra Leone in the form of reduced mining royalties and licences is projected to be \$15.1 million and that for exports of diamonds and of iron ore for the same period, \$29.1 million and \$291.1 million. In August 2014 the EBOLA-related revenue shortfall was estimated at 1% of non-iron ore GDP in the second half of 2014 and will increase to 1.6% in 2015 (IMF, 2014a).

Services, which account for 30% of the economy, have been hard hit by EBOLA. The number of weekly commercial flights has descended from 31 to six with

a severe dampening effect on the hospitality sub-sector. Reports indicate a steep drop in the hotel occupancy rate to 13%, from the year-round average of 70%.

POTENTIAL IMPACT OF A SUSTAINED REDUCTION IN TRADE

Sustained reduced trade could potentially affect livelihoods in the three countries. Some of the potential impacts include worsening food security,²⁰ rising inflation and a widening budget deficit. Reserves of rice, the major staple in all three countries, are worryingly depleted. Impaired trade of rice—particularly cross-border—could well lead to food crises. Reduced imports and domestic production would result in a limited supply of a broad array of commodities, pushing up prices. Reduced trade and market activities would hit trade-related commercial operations, further worsening unemployment, especially as the informal sector is the major source of jobs. The budget deficit is expected to widen as a result of projected declines in mining and agricultural exports and royalty revenues, owing to the halt in mining production. Even if mixed impacts are expected for the merchandise trade balance, economic growth will decelerate.

Overall, the impacts of EBOLA are expected to be considerable in the three countries, owing to the compounded effect of three region-specific factors. Much of the trade in the three countries is still conducted through personal meetings and individuals approaching markets and purchasing products, then returning back home and trading their purchases. Quarantine and restrictions on people's movements are expected to hit trade harshly, within and across EBOLA-affected countries. Thus, as a large part of the recent growth in these three countries is driven by trade across borders, which are now

²⁰ About 200,000 people are experiencing limited food access as revealed recently by the World Food Programme. The analysis indicates that if the disease continues to spread at the average rate observed since mid-September, around 750,000 people could lose access to affordable food by March 2015. This would be mainly from disruption to the food transport system, as well as from closed cross-border trade.

closed, the economic impact of EBOLA is probably greater than experts may think. The impact of falling trade is probably underestimated as official trade statistics do not capture informal trade, including cross-border trade, which is estimated to contribute 20–72% of GDP in West African countries (Sy and Copley, 2014). GDP growth in the three countries is fuelled largely by exports of agriculture, mining and oil. Thus a blocked trade sector will stall their economic growth. Although mobility restrictions are vital to break the chain of transmission, they should be applied prudently—otherwise they may do more harm than good, for instance by blocking trade in essential goods, such as food and medicine.

AGRICULTURE

The EBOLA outbreak is already threatening food security in the affected countries, as just seen, and could involve neighbouring countries such as Côte d'Ivoire, Mali, Nigeria and Senegal. If not addressed now, consequences could lead to long-lasting impacts including disruptions in food trade and marketing in the three countries and the sub region as a whole.

Food prices are on the rise while labour shortages are putting the upcoming harvest season at serious risk (FAO, 2014a). The outbreak is reducing households' ability to produce food as movement restrictions and fear of contagion are preventing communities from working in the fields. Furthermore, movement of traders in rural communities is also very limited, which means that even if harvested (if at all), agricultural products may not be marketed. In addition, the ban on bush meat is expected to deprive some households of an important source of nutrition and income, especially in the deep forest regions of the three countries.

Border closures adopted by some neighbouring countries may affect food market supply as all three countries are net cereal importers and cross-border trade is important for food. These closures, alongside imposition of quarantine zones and restrictions on people's movements, have seriously curtailed the movement and marketing of food, prompting panic

buying, food shortages and steep food price hikes for some commodities, especially in urban centres (FAO, 2014b).

The agricultural sector has been hit hard by EBOLA in all the three countries. In Liberia, agriculture accounts for nearly 25% of GDP, and employs almost 50% of the workforce. Falling workforce mobility and rising migration of people to safe zones, and foreign companies postponing investments owing to the evacuation of expatriates, have hurt exports and domestic agriculture. As a result, the World Bank revised its growth expectations from 5.9% to 2.5% for 2014. Also, owing to many small farms that produce food for domestic consumption abandoned, it is expected that Liberia will experience food shortages that may in turn lead to further food price pressures.

Similarly, Sierra Leone's agricultural sector, which focuses on rice, cocoa and palm oil, accounts for about half of the economy. According to the Ministry of Agriculture, Forestry and Food Security, the two regions that were the epicentre of the outbreak together produced about 18% of domestic rice output. Quarantined zones restricted workers' movements and many farms were abandoned. Government reports indicate that rice prices jumped by 30% in the affected regions.

Guinea's economy is largely composed of agriculture and services. There has been a large reduction in production of cocoa and palm oil, the main agricultural exports that underpin the economy. One effect of the economic slowdown will be a slowdown in tax revenues. At the same time, the Government will have to increase spending to meet the increased costs of fighting the disease.

According to the World Bank, the three countries' budget deficits are expected to increase by 1.8% of GDP in Sierra Leone and Guinea and by 4.7% in Liberia. Contraction of the major economic sectors coupled with a sharp decrease in exports will hurt GDP growth. The World Bank has, for example, revised the 2014 GDP growth projection from 4.5% to 2.4%

CHALLENGES FOR AGRICULTURE AND FOOD SECURITY

Many challenges have been recorded in the food sector including on-farm labour shortages—a big problem as harvesting depends on seasonal workers. From September to December, depending on the region in the three countries, is the time to harvest maize and rice. This harvest has been seriously compromised and in some areas crops are still waiting to be harvested as of November 2014. This shortage has been exacerbated by movement restrictions and migration to other areas.

Other challenges include destabilization of food price systems where disruption of market linkages owing to travel restrictions, which has led to sharp price hikes; a steep decrease in food and cash crop production owing to panic and labour shortages; high food-producing areas were coincidentally the hardest-hit areas, especially in Sierra Leone and Liberia; lack of transport for food-surplus areas to ship out supply; and in nutrition and health, unavailability of health clinics to diagnose diseases unrelated to nutrition problems caused by EBOLA, which has increased incidence of those diseases, mainly among children, raising malnutrition rates among children under five in the region.

GUINEA

Agriculture accounts for 25–30% of GDP and employs 84% of the active population. The main subsistence crops are rice, maize, cassava, sweet potato, yam, plantains, citrus fruits, sugar cane, palm kernels, coffee and coconuts. The agricultural sector offers several investment opportunities including construction and management of processing centres; construction and maintenance of storage facilities; enterprises to produce agricultural inputs and packaging; large-scale production of crops such as fruits, vegetables, rice, cashew, coffee, cocoa and cotton; creation and development of agricultural production poles to boost agro-industrial value chains; and livestock production and processing.

Rice production declined by 8.5% in badly affected regions such as N'Zerekore. Cereal import requirements could not be satisfied due to the decline in export earnings. More people than not will be food insecure by March 2015, and the Ebola outbreak has contributed significantly to that (FAO/WFP, 2014a).

With the EBOLA shock, much of this can change if the disease is not curbed swiftly. Government reports indicate a reduction in agricultural commodities entering markets of the capital, Conakry, the hub for the rest of the country. This has put upward pressure on food prices. Guinea is relatively better off than the two other countries for food imports: its dependency ratio is around 16%. It exports small volumes of rice, maize and millet to neighbouring countries. But the informal trade channel with neighbours was very active, and so border closures have affected food flows.

The country is richly endowed with mineral resources such as iron ore and bauxite, as well as strong hydropower potential. Its economy is a mix of agriculture, services and mining. The poverty rate is high at more than 55% of the population. Recent income growth has not matched that in neighbouring countries. EBOLA has therefore entered an already shaken economy.

The main economic impacts of EBOLA in Guinea to date have been on agriculture and services. Because of the impact of EBOLA on farm activities, the World Bank has projected GDP growth for 2014 to decrease from 4.5% to 2.4%. Projected agricultural growth for 2014 has also been cut from 5.7% to 3.3%. Agriculture in EBOLA-affected areas has been hit by an exodus of people from these zones, affecting key export commodities such as cocoa and palm oil. Coffee production has also fallen by half, from 5,736 tons to 2,671 tons between the first six months of 2013 and the first six months of 2014 (World Bank, 2014a); cocoa production has declined by a third (from 3,511 tons to 2,296 tons over the same period). Palm oil production has fallen by 75%. In some areas of the country, crops have not been

harvested because of the lack of labourers. In others, excess supply of produce without available transport has caused losses to farmers. The situation is dire and compounded sometimes by panic and fear.

LIBERIA

Liberia is a small country with about 4 million people where 70% of the population is engaged in agriculture. The sector is forest based, dominated by traditional subsistence farming systems (slash and burn) mainly in the uplands, and characterized by labour intensity, shifting cultivation, low technology and poor productivity.

Although production of rice, cassava and vegetables accounts for about 87% of cultivated land, output of the staple foods remains below national requirements. Small acreages of tree crops are maintained for generating cash income. Commercial agricultural activities are almost exclusively plantation estates of rubber, palm oil, coffee and cocoa; the latter two are produced exclusively for export, and little or no value is added to rubber and palm oil.

Besides the plantation estates, very little private sector investment has been made in agriculture except for limited commodity trading that has persisted over the years. Agriculture contributes 42% of GDP. Rice and cassava, the main crops, contribute 22% and 23% of agricultural GDP; tree crops, e.g. rubber, coffee and cocoa, make up 34% of agricultural GDP; livestock, 14%; and fisheries, 3%. Forestry contributes around 19% of national GDP (Ministry of Agriculture of Liberia, 2013).

As in the other hard hit countries, food production in Liberia declined, and the EBOLA outbreak exacerbated the situation. In 2014 aggregate national food production was about 12% lower than in 2013. In March 2015, out of the total food-insecure population, 40% of them will be food insecure mainly due to EBOLA (FAO/WFP, 2014b).

The livestock sub-sector was decimated by the civil conflict, and the current livestock population is below 10% of national consumption requirements.

The fisheries sub-sector is underdeveloped with only about 6.8% of sustainable yield harvested annually. Land and water resources are abundant and offer potential for expanding agricultural production greatly. An estimated 600,000 hectares of land for irrigation exist, with less than 1% of it developed (Ministry of Agriculture of Liberia, 2013).

Liberia seems the hardest hit of the three countries and some of the food-producing areas like Barekedu in Lofa County and Dolo in Margibi County were cordoned off, making food movements very difficult or even impossible to Monrovia and other parts of the country. Lofa and Margibi produce around 20% of Liberia's rice and largely meet their own rice demand, while producing numerous other crops and trading with cross-border markets and domestically. The FAO Monrovia local office reported that EBOLA effects prevented women farmers' associations from repaying their loans, especially in Foya district (Lofa County) where the first case of EBOLA was diagnosed in the country, in March 2014.

The palm oil sector has been hit. Although Golden Veroleum is continuing its operations, Sime Darby, whose activities are near several affected areas, is slowing its activities. These are the two main companies in the palm oil sector with more than 7,000 workers. One can imagine the devastation if they closed. Rubber, Liberia's second-leading export, has largely continued activities, although recent EBOLA cases in Kakata in the centre of the rubber-production region could slow production drastically. Timber output, which has dropped since 2013 owing to governance issues and transport bottlenecks, is based in the largely unaffected southeast and has avoided any major impacts so far.

Government reports have indicated that distribution of imported food from Monrovia's seaport to rural markets has been cut sharply. As the port is the key source of rice supplies for rural areas, this created shortages that contributed to food price rises around the country. A rapid market assessment by FAO (FAO, 2014a) indicated that prices of some food items like cassava had jumped by 150% in Monrovia.

The increase was inflated by transport costs, which these days make everything more expensive. Liberia imports about 66% of its food, and so its food supply is expected to worsen by year-end.

GDP growth has averaged over 8% since 2011, putting Liberia among Africa's fast-growing nations. But it has already been forecast to slow to 5.9% in 2014, given slower growth in iron-ore production, weak timber and rubber export growth, and the gradual winding down of the United Nations force (AfDB, 2014a).

SIERRA LEONE

The Government, through the Ministry of Health and Sanitation, declared an outbreak of EBOLA after laboratory confirmation of a suspected case from Kailahun district on 25 May 2014. The district is in the eastern region, sharing borders with Guinea and Liberia. This outbreak was a spillover from the ongoing outbreak in Guinea and Liberia since March 2014. The outbreak erupted at the beginning of the rice and cocoa harvest season (July–August) when traders are expected to reach plots, to exchange food and other items for cocoa. One of the first measures by the Government was to restrict movements, which suddenly took down household income. The closure of markets, internal travel restrictions and fear of infection curtailed food trade and caused supply shortages. Although price data have been hard to come by or are not available, reports have suggested food price spikes. The country's dependency on imported rice has been decreasing, but it remains a net importer, with a cereal import dependency ratio of about 18%.

In 2014, the national aggregate level of food production declined by 5% compared to 2013. However, this aggregate figure hides considerable national disparities. For instance, milled rice production declined by 8% nationally, but in certain provinces the decline was as high as 17%. By March 2015, 46% of individuals who are food insecure will be solely due to EBOLA (FAO/WFP, 2014c).

The depreciation of the currency, which has accelerated since June, is expected to add

inflationary pressure. Consumers were already complaining about the depreciation adding to the price hike. The closure of borders with neighbouring countries aggravated food shortages as it disrupted cross-border trade. An FAO national study was launched in August–September 2014, and covered three clusters of villages in each of the 13 districts in which a total of 702 households were interviewed, as well as 351 community leaders, 39 rural market sites, 26 district-headquarter town markets and 8 agricultural commodity traders (FAO, 2014a). The results concluded that the outbreak had caused a shortage of labour on farms. Activities such as weeding, harvesting and other key activities were falling behind or had been abandoned owing to the death of able-bodied persons. Families are reported to have left their farms or to have been displaced to areas perceived as "safe" from the disease. The report also states that the disruption and closure of periodic markets have raised commodity prices in places where they are in heavy demand—prices for imported rice have risen by about 13% and for fish by over 40%, for example—and reduced prices where local supply is excess to demand.

The decrease in prices of commodities in surplus area has hit the income of farming households, especially those involved in production and agribusiness sub-sectors. This income reduction has directly affected food security.

The impact of EBOLA on agriculture across the country is being felt by women farmers and women in small trade and small agribusiness activities, as they are the main agents at lower levels of agriculture's value chain. Because their businesses have been disrupted, that sends food-shortage waves around the country, disrupting agricultural market infrastructure.

IMPACT ON AGRICULTURE IN THE THREE COUNTRIES

The impact has been tremendous. The three countries are all net cereal importers, with Liberia the most reliant on external supplies. The closure of some border crossings and isolation of border areas

where the three countries intersect—as well as lower trade from seaports, the main conduit for large-scale commercial imports—are leading to tighter supplies and are increasing food prices sharply. At least 80% of income is spent on food commodities across the three, underlining the poverty level. The depreciation of national currencies in Sierra Leone and Liberia in recent months is expected to exert further upward price pressure on imported food commodities.

SERVICES

Transport service disruptions caused by air, sea and land travel bans were ineffective ways to contain the outbreak, as shown by results based on the Global Epidemic and Mobility Model (Poletto and others, 2014). Instead, such bans limited the speed of transporting essential medical supplies and personnel, and severely disrupted livelihoods. In Liberia, the number of commercial flights fell from 27 per week in August 2014 to just 6 per week from September 2014. The situation is similar in Sierra Leone, which experienced a decline from 31 flights to 6 flights per week. Meanwhile in Guinea airport traffic has fallen by 60% since March 2014, in addition to a decline of container services by 32% and of ships in ports by 9.4% (World Bank, 2014).

Many airlines stopped flying to the affected countries. One of the direct impacts of EBOLA is to reduce tourist arrivals. There are also indirect effects in the form of declining tourist arrivals to Africa as a whole, mainly owing to general fear associated with air travel to and from the continent. Governments are therefore losing a lot of money from forgone immigration revenue and foreign travel ticket taxes. In addition, hotels, bars and restaurants have lost income from foreign tourists and domestic residents, whose movements are restricted, in turn hitting potential tax income and employment. After bans on gatherings, Sierra Leone Brewery puts the number of redundancies at 24,000 from its operations across the country (National Revenue Authority of Sierra Leone, 2014).

The EBOLA threat is hurting African travel and tourism in countries beyond the countries directly affected. A major online safari broker, Safari Bookings, conducted a survey of 500 safari tour operators in October 2014 and found that half of the tour operators had suffered 20–70% declines in their African safari business because of EBOLA fears. “It is a heavy blow for the industry and the numerous wildlife reserves that rely on its revenue”, the company said. “Tour operators reported that many tourists view Africa as a single country when it comes to risk assessment. They don’t realize that East and Southern Africa, where most safaris are conducted, are just as far from the outbreak area as Europe or South America”. At Kenya Airways, which depends in part on West African travelers to feed its Nairobi hub, sales may slide as much as 4% this year after it pulled out of Liberia and Sierra Leone.

There are specific impacts to countries near the affected countries such as Gambia where many people are poor and more of them depend on the tourism industry. The World Travel and Tourism Council, which represents airlines, hotels and other travel companies, recently stated that early indications suggest a decline of 30% in bookings to West Africa. Gambia derives 16% of its GDP from tourism. At the start of the season in October, there were steep reductions in tourist numbers relative to previous years, with an expected 50–60% drop, according to the tourism minister.

APPENDIX II - SOURCES FROM FIGURE 5

Table A1. Some contributions of multilateral organizations

Partner	Funding USD (million)	Amount disbursed (%)	Source	as of date
European Commission (EC) + European Union Member States (EUMS).	1,200.0	40.4	http://europa.eu/newsroom/highlights/special-coverage/ebola/index_fr.htm and European Union Delegation to the African Union, Addis Ababa	15/01/2015
World Bank	518.0	41.1	http://www.worldbank.org/en/news/press-release/2014/10/30/world-bank-group-additional-100-million-new-health-workers-ebola-stricken-countries	1/9/2014
IFC/World Bank Group	450.0	-	http://www.worldbank.org/en/news/press-release/2014/12/02/ebola-world-bank-report-growth-shrinking-economic-impact-guinea-liberia-sierra-leone	12/2/2014
African Development Bank	220.0	20.6	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/ , AfDB: http://www.afdb.org/en/news-and-events/article/kaberuka-makes-a-call-for-individual-contributions-in-fight-against-ebola-13744/	1/9/2015
IMF	130.0	100	IMF Press release No 14/441, 26 September 2014, < http://www.imf.org/external/np/sec/pr/2014/pr14441.htm >	
Islamic Development Bank	45.0	100	http://www.menara.ma/fr/2014/11/05/1441437-1%E2%80%99oci-et-la-bid-annoncent-une-aide-d%E2%80%99urgence-en-appui-aux-efforts-internationaux-de-lutte-contre-le-virus-ebola.html	11/5/2014
Central Emergency Response Fund (CERF)	17.2	100	http://www.unocha.org/cerf/resources/top-stories/cerf-response-ebola-outbreak7 https://docs.unocha.org/sites/dms/CERF/CERF%20Ebola%20Response%203%20Oct%202014.pdf	1/9/2015
Regional Solidarity Funds to Fight Against the Ebola Virus (ECOWAS)	9.0	100	http://www.panapress.com/Ghana--Le-Fonds-de-solidarite-Ebola-de-la-CEDEAO-atteint-9-millions-de-dollars-us---12-630409874-143-lang1-index.html , http://news.ecowas.int/presseshow.php?nb=207&lang=en&annee=2014	
Common Humanitarian Fund	1.6	100	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16506	1/9/2015
AUC	1.0	100	http://pages.au.int/ebola/documents/fact-sheet-african-union-response-ebola-epidemic-west-africa	12/26/2014
FIFA	0.5	N/A	http://www.un.org/wcm/content/site/sport/home/sport/template/news_item.jsp?cid=41937	9/29/2014
OPEC Fund for International Development	0.5	100	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16507	1/9/2015

Table A2. Some contributions of bilateral partners

Partner	Funding in Million USD	Committed pledges in Million USD	Amount disbursed (%)	Source
United States	861.41	816.41	94.77%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16506
United Kingdom	350.00	280.00	80.00%	UK embassy in Addis Ababa as of 12 January 2015
Germany	202.00	33.90	16.78%	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/(Updated 2 January 2015) ,
Japan	143.88	47.11	32.74%	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/(Updated 2 January 2015) ,
France	136.58	136.58	100.00%	France Embassy in Addis Ababa as of 15 January 2015
China	122.50	10.27	8.38%	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/(Updated 2 January 2015) ,
Canada	101.10	51.70	51.14%	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/(Updated 2 January 2015) ,
Sweden	77.74	77.29	99.42%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16510
Netherlands	60.07	53.91	89.74%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16511
Norway	36.68	36.68	100.00%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16515
Australia	36.10	15.07	41.75%	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/(Updated 2 January 2015) ,
Switzerland	34.85	34.85	100.00%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16516
Denmark	31.70	28.10	88.64%	Danish Emassy in Addis Ababa as of 15 January 2015
Russian Federation	20.00	20.00	100.00%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16518
Brazil	12.50	12.50	100.00%	Joint Press statement of the Ministry of External Relations and of Health-Brazilian Contribution to the International Efforts to Combat the Ebola Outbreak
Finland	11.00	10.63	96.60%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16520
India	10.66	8.61	80.76%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16521
Spain	10.14	10.14	100.00%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16522
Italy	9.73	7.66	78.73%	Italy Embassy in Addis Ababa as of 12 January 2015
Belgium	9.48	9.48	100.00%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16524
Israel	8.77	8.27	94.30%	http://fts.unocha.org/pageloader.aspx?page=emergencyDetails&emergID=16525

Table A3. Some contributions of international private sector and charity/foundations

Organization	Amount pledged (\$ million)	Amount disbursed (%)	Source	as of date
Bill Gates-Backed Group - GAVI	390	100	http://www.swissinfo.ch/eng/bloomberg/bill-gates-backed-group-commits--390-million-to-ebola-vaccines/41164126	12/11/2104
Paul Allen Family Foundation	100	55	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/	1/9/2015
Save the Children	70.84	N/A	http://www.theguardian.com/global-development/2014/oct/09/ebola-outbreak-response-breakdown-key-funding-pledges	10/9/2014
Bill & Melinda Gates Foundation	50	55	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/	12/24/2014
King Abdallah of Saudi Arabia	35	N/A	http://www.one.org/us/ebola_tracker/king-abdallah-of-saudi-arabia/	1/9/2015
Google/Larry Page Family Foundation	25	N/A	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/	12/5/2014
Mark Zuckerberg and Priscilla Chang	25	N/A	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/	12/24/2014
Silicon Valley Community Foundation	25	N/A	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/	12/5/2014
Children's Investment Fund Foundation	20	81	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/	12/5/2014
Larry Page's Family Foundation	15	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16506	1/9/2015
IKEA Foundation	6	N/A	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
William and Flora Hewlett Foundation	5	N/A	http://www.theguardian.com/global-development/2014/oct/09/ebola-outbreak-response-breakdown-key-funding-pledges	10/9/2014
Médecins du Monde	4.30	N/A	http://www.theguardian.com/global-development/2014/oct/09/ebola-outbreak-response-breakdown-key-funding-pledges	10/9/2014
Open Society Foundation	4	N/A	http://www.theguardian.com/global-development/2014/oct/09/ebola-outbreak-response-breakdown-key-funding-pledges	12/5/2014
Bayer	3.30	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16506	1/9/2015
General Electric	2	100	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
Comic Relief	1.60	N/A	http://www.theguardian.com/global-development/2014/oct/09/ebola-outbreak-response-breakdown-key-funding-pledges	10/9/2014
Volvo	1.50	100	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
ArcelorMittal Foundation	1.35	96	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16506	1/9/2015
Bridgestone	1	N/A	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014

Note: N/A is 'not available'

Table A4. Contributions from some members of the African private sector

Organization	Funding in Million USD	Committed pledges in Million USD	Amount disbursed (%)	Source	as of date
MTN Group	10.00	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	9-Oct-14
Dangote	4.10	N/A	N/A	http://allafrica.com/stories/201411121328.html (Last updated as of November 11, 2014)	11-Nov-14
Econet Wireless	2.50	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	9-Oct-14
Afrimax Bank	1.00	N/A	N/A	http://www.citypress.co.za/news/ebola-new-report-gives-bad-news-good/	17-Dec-14
Coca Cola Eurasia and Africa	1.00	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	
Kola Karim CEO of Nigerian conglomerate Shoreline Energy	1.00	N/A	N/A	http://www.citypress.co.za/business/africas-super-rich-asked-step-fight-againstebola/	9-Oct-14
Stenbeck Family	1.00	N/A	N/A		
The Motsepe Foundation	1.00	N/A	N/A	http://www.themotsepefoundation.org/news_pg1.html (updated as of October 28, 2014)	28-Oct-14
The United Bank for Africa (UBA)	1.00	N/A	N/A	http://allafrica.com/view/group/main/main/id/00033833.html	9-Oct-14
Tony Elumelu Foundation	1.00	N/A	N/A	http://www.tonyelumelufoundation.org/pressreleases/tony-elumelu-foundation-donates-n100-million-towards-ebola-containment-relief-across-west-africa/	9-Oct-14
Vitol Group of Companies and Vivo Energy	1.00	N/A	N/A		
Barclays Africa Group Limited	0.50	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	
Nedbank Group	0.50	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	
Old Mutual Group	0.50	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	
Quality Group of Tanzania	0.50	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	
Sygenta	0.35	N/A	N/A	http://www.peaceau.org/en/article/message-dr-nkosazana-dlamini-zuma-african-union-commission-chairperson	

Organization	Funding in Million USD	Committed pledges in Million USD	Amount disbursed (%)	Source	as of date
Seplat Petroleum Development Company	0.31	0.31	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	1/9/2015
National Oil Company of Liberia	0.23	0.23	100%	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16506	1/9/2015
The National Oil Company of Liberia (NOCAL)	0.15	0.15	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
AUC staff members	0.10	0.10	100%	http://pages.au.int/ebola/documents/fact-sheet-african-union-response-ebola-epidemic-west-africa	9/5/2014
Liberia Petroleum Company	0.08	0.08	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
Mercury International	0.06	0.06	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
Ecobank	0.05	0.05	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
The Association of Sierra Leone Commercial Banks	0.03	0.03	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
Sierra Rutile	0.02	0.02	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
Wireless Application Services Providers Association of Ghana	0.02	0.02	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014
SocFin Agricultural Company	0.01	0.01	100%	http://www.uschamberfoundation.org/ebola-outbreak-corporate-aid-tracker	12/5/2014

Note: N/A is 'not available'

Table A5. Some African countries' pledges

Country	Funding in Million USD	Committed pledges in Million USD	Amount disbursed (%)	Source
Algeria	1.0	N/A	N/A	Algeria Embassy in Addis Ababa as of 16 January 2015
South Africa	0.33	0.33	100%	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16543
Ethiopia	0.50	N/A	N/A	One: http://www.one.org/us/shareworthy/new-one-analysis-shows-major-gaps-in-ebola-response-data/ (Updated 2 January 2015),
Gambia	0.50	N/A	N/A	http://allafrica.com/stories/201408280987.html , Aout 2014
Equatorial Guinea	2.00	N/A	N/A	http://www.guineaecuatorialpress.com/noticia.php?id=5658&lang=fr (Updated 16 September 2014)
Botswana	0.20	N/A	N/A	http://sa.au.int/en/content/press-conference-spread-ebola-virus-disease-evd-west-africa (updated 11(Updated 11 August 2014)
Mauritania	0.40	N/A	N/A	http://www.guineetv1.com/le-president-mauritanien-apporte-400-000-dollars-a-la-guinee/ , décembre 2014
Namibia	1.00	N/A	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16569
Nigeria	5.00	N/A	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16570
Kenya	1.00	N/A	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16571
Senegal	1.00	N/A	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16573
Cote d'Ivoire	1.00	N/A	N/A	http://fts.unocha.org/pageloader.aspx?page=emerg-emergencyDetails&emergID=16577

Note: N/A is 'not available'

APPENDIX III - EXTERNAL DEBT CANCELLATION FOR EBOLA-AFFECTED COUNTRIES

Cancelling the external debt of Guinea, Liberia and Sierra Leone, the three countries hardest hit by the EBOLA outbreak, will give these countries the breathing space they need to address the complex social and economic development challenges they now face. In addition to meeting the challenges of the EBOLA outbreak, these countries need to promote positive economic growth, improve public service delivery, meet regular debt service payments and plan their long-term social and economic development. The setback induced by the EBOLA outbreak complicates these challenges and reinforces the compelling case for debt cancellation. Based on available data, this appendix presents the external debt situation of Guinea, Liberia and Sierra Leone, makes the case for debt cancellation, and puts forward recommendations on how to use the resulting freed-up funds.

It is common to call for the cancellation of debts of countries that have been severely affected by sudden shocks such as natural disasters or outbreaks of disease. Haiti, for example, had the debts it owed to major creditors cancelled after the 2010 earthquake. Guinea, Liberia and Sierra Leone already had weak initial conditions, structural vulnerabilities and limited potential to sustain growth and the EBOLA outbreak has pushed them to the limit by widening their fiscal deficits. If the countries have to continue making debt repayments in the absence of significant financial inflows, they will not be able to fulfill their fiscal and balance-of-payment needs. With the present outbreak severely affecting exports, current account deficits, accumulation of debt service arrears and the external financing gap are projected to widen in all

three countries (ECA, 2014; UNDP, 2014²¹). The three countries already have high poverty rates, a very low human development index ranking, and weak policy and institutional environments (see table B2). Their overall development outlook is deteriorating day-by-day and the EBOLA outbreak is still claiming lives, severely limiting economic activities and recovery efforts. Our call is not for intermittent debt relief, but for total debt cancellation.

EXTERNAL DEBT SITUATION OF THE EBOLA-AFFECTED COUNTRIES AND THE CASE FOR DEBT CANCELLATION

Since the outbreak, there has been an influx of donor support, both financial and in-kind. Support from international financial institutions to the three countries through, for instance, the Rapid Credit Facility for better emergency response planning and execution, is commendable (IMF, 2014).²² In November 2014, the World Bank proposed a development policy credit for Guinea amounting to \$40 million (Emergency Macroeconomic and Fiscal Support Grant). However, this is a loan with a maturity of 38 years and a 6-year grace period, along with a grant of \$10 million from the Crisis Response Window of the Bank. Guinea's overall risk rating is "Substantial", suggesting a potential rise in the risk of debt distress and debt overhang.

21 UNDP (2014). UNDP Africa Policy Note, Vol. 1, No. 3, 24 (October).

22 IMF (2014). Third Review Under the Extended Credit Facility Arrangement and Request for Waiver of Nonobservance of Performance Criteria and Modification of Performance Criterion, IMF Country Report for Liberia, No. 14/197, Washington, D.C. These measures include the Heavily Indebted Poor Countries (HIPC) initiative and the Multilateral Debt Relief Initiative (MDRI).

Table B1: External debt and debt ratios for the three countries hardest hit by EBOLA, 2013

Variable	Guinea	Liberia	Sierra Leone
Debt (Current US\$)	1.2 billion	541.5 million	1.4 billion
Debt/GNI (%)	20.9	30.9	31.1
Debt/Exports (%)	190	320	180

Source: IMF and World Bank database accessed in January 2015. Note that debt to exports ratio is not available for 2013 due to lack of data on exports. Hence, the table includes the five-yearly averages prior to 2013 for Guinea and Sierra Leone but the same average can only be computed prior to 2012 for Liberia.

The 2013 external debt of Guinea, Liberia and Sierra Leone in current dollars is \$1.2 billion, \$542 million and \$1.4 billion respectively, for a total of \$3.1 billion. The external debt burden of the three countries is high relative to their GNI and exports, as summarized in table B1. At between 21% to 31%, the external debt burden of the three countries is not a negligible proportion of their GNI, with exports falling far below their debt obligations. In the wake of the outbreak, both exports and the capacity to raise revenue via taxes have been severely affected due to the significant slump in economic activities, EBOLA leading to debt distress and strained government budgets.

The above debt ratios clearly indicate the limited capacity of the three countries to repay their debts, resulting in a debt overhang problem (Moses and Oladeji, 2014²³; Nissanke, 2013²⁴). The debt burden and macroeconomic situation of the three countries mean that they remain vulnerable to external shocks. The decline in exports following the EBOLA outbreak is likely to be deepened by the recent sharp decline in commodity prices, because of the heavy reliance of the three on resource exports. In this regard, major creditors such as the World Bank and IMF recognize that the countries, particularly Guinea, face varying

but intensifying risks of debt distress.²⁵ In conjunction with declining growth, exports and government revenue, these distress levels are likely to rise with continuous debt servicing and the pressure to settle previous debt service arrears.

External debt cancellation²⁶ would give the three countries breathing space to better address the short-term economic and social challenges of the EBOLA outbreak and to plan their long-term recovery on a solid footing. It should be recognized that the cancellation of debt does not automatically lead to the availability of funds. However, the financial resources earmarked for debt repayments could instead be invested into the countries' health-care systems, including training of health professionals, equipping health centres and ensuring the fair distribution of health personnel between rural and urban areas. These funds could also be used to benefit other strategic sectors of their economies that have been hit hard by EBOLA, including education, agriculture and food security, and services.²⁷ The impact of EBOLA on agriculture and food security has been particularly serious given that the outbreak started in rural agricultural areas just as farmers were preparing to start sowing. In

23 Moses, E. and S. Oladeji (2014). External Debt, Servicing and Debt Relief Transmissions in Nigeria, *Journal of Economics and Sustainable Development*, Vol. 5(20):11-33.

24 Nissanke, M. (2013). *Managing Sovereign Debt for Productive Investment and Development in Africa: A critical appraisal of the Joint Bank-Fund Debt Sustainability Framework and Its Implications for Sovereign Debt Management*, mimeo, School of Oriental and African Studies.

25 IMF (2012). *Joint Debt Sustainability Analysis under the Debt Sustainability Framework for low-income countries*, prepared by the staff of the World Bank and IMF, Washington D.C. IMF (2014) *Requests for Disbursement under the Rapid Credit Facility (RCF) and for modification of performance criteria under Extended Credit Facility Arrangement*, IMF Country Report No. 14/298.

26 Lenders to the three countries include all bilateral and multilateral lenders such as the World Bank, IMF and AfDB.

27 ECA (2014). *Socioeconomic Impacts of the Ebola Virus Disease on Africa*, Addis Ababa.

this regard, financial resources freed up by debt cancellation could be channeled into short-term emergency food relief programmes. In the medium term, the three countries will need food imports from neighbouring countries, as the food currently being provided by WFP is not necessarily the same as the customary diet of people in the affected countries. In the long term, the funds from debt relief could be directed towards agricultural policies that support farmers through micro financing and the marketing of agricultural produce. Debt cancellation would undoubtedly provide more fiscal space for the three countries to achieve their social development goals in the context of the post-2015 development agenda, boosting their growth and recovery prospects.

Until the outbreak of EBOLA, the countries were making encouraging economic and social progress and notable post-conflict recovery. However, if the current level of fiscal distress continues into 2015, growth will suffer even more, which in turn will deepen poverty and weaken their recovery. Indeed, the investment potential of the three countries has already been weakened and growth continues to be revised downwards by forecasters (ECA, 2014; World Bank, 2014²⁸). Continued high external debt and debt servicing burdens are likely to discourage future investment in key social sectors such as health and education.

RECOMMENDATIONS FOR POST-DEBT CANCELLATION MEASURES

The three countries need to make effective use of the funds that would be freed up to contain the Ebola outbreak and to finance long-term social and economic development initiatives. The EBOLA outbreak is a public health crisis as well as a humanitarian one. Evidence shows that past debt relief through the HIPC initiative did help many African countries to improve spending on social sectors such as health, supporting the call for cancelling the debts of the three most EBOLA-affected countries (Temah,

2009²⁹). Any funds from the debt cancellation should be targeted at strengthening the weak national health systems of the three countries, improving sanitation, establishing social protection programmes, improving education, and securing access to food for those living in rural areas, many of whom have been badly affected by the outbreak. Creditors could establish mechanisms for the effective monitoring of the use of funds after debt cancellation.

Budget reallocations need to focus on upgrading existing social services and health systems to the level required by international protocols (for instance, WHO standards) and to purchase and stock Ebola virus disease vaccines when developed. The immediate priority is to use the fiscal space created by stopping debt repayments to mitigate the adverse effects of EBOLA, including a significant rise in the allocation of funds for long-neglected health infrastructure, training of health personnel at all levels and timely payment of the salaries of health-care sector workers.

As countries emerging from conflict, Guinea, Liberia and Sierra Leone continue to suffer from weak institutional capacities for policy implementation and public sector management (see their CPIA index, table B2). This calls for additional support from donors for the three countries to effectively use the policy space provided by debt cancellation to strengthen public financial management systems to ensure sound macroeconomic management, prudent fiscal policies and debt management.

It should be noted that debt cancellation should not lead to lack of confidence about the viability and credit worthiness of the three countries for future lending by creditors. Development partners, especially international financial institutions, should promote special lending initiatives and support for the three countries to access external loans with a significant grant element (for instance, 100% grant for \$60 million by AfDB), long grace periods and very low or near zero interest on the amount borrowed.

28 World Bank (2014) The Economic Impact of the 2014 Ebola Epidemic, Short- and Medium-term Estimates for West Africa, Washington D.C.

29 Temah, C. (2009) Does Debt Relief Increase Public Health Expenditure? Evidence from Sub-Saharan African Countries, mimeo, Addis Ababa, Ethiopia.

As in the case of Haiti, post-catastrophe debt relief in the form of debt cancellation must be provided for these three West African countries, which continue to feel the effects of a catastrophic disaster that is yet to be contained.

Table B2: Recent economic, social development & policy performance indicators (2014)

Variable	Guinea	Liberia	Sierra Leone
Population (in mill.)	12.0	4.4	6.2
Per capita income (US\$)	460.0	454.0	679.0
Poverty rate (head count rate)	55.2%	64.0%	52.9%
HDI ranking[1]	179/187	175/187	183/187
CPIA score	3.1	3.0	3.3

[1] All of the three countries are in the bottom of the list of countries classified by UNDP as countries with HDI characterized by 'low human development' (UNDP, 2014).

Source: Except for the HDI figures which came from UNDP, all data is obtained from the World Bank. All figures are for 2014 except CPIA that are for 2013.

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The current outbreak of the Ebola virus disease in West Africa is the most devastating Ebola epidemic that the world has seen since the disease was identified in 1976. Beyond the considerable death toll, the disease has had a noticeable socioeconomic impact, not only in the countries directly affected by the outbreak but also further afield.

The present study assesses the socioeconomic impact of the disease on the affected countries and Africa as a whole, both in terms of real costs and in terms of growth and development prospects. Based on primary data and information collected during missions of the Economic Commission for Africa to the affected countries, the study puts forward policy options that could accompany mitigation efforts.

The study highlights the fact that alarming downward revisions of economic growth rates for affected countries and the West African subregion were carried out using scattered data and amid uncertainty about the future epidemiological path of the disease. In addition, such revisions did not take proper account of the magnitude of the international response. While the affected countries are feeling economic and social impacts, there is a stimulus effect as a result of the ongoing international response to the outbreak. This, coupled with the weight of the affected economies, has meant that the effect of Ebola on West Africa and the continent as a whole has been minimal.

Despite encouraging trends in the epidemiological situation in some of the affected countries, there is still a long way to go before the crisis can be declared over. Some of the most-affected countries were just emerging from years of conflict and already had structural vulnerabilities. Thanks to socioeconomic reforms, in recent years these countries had managed to achieve sustained economic growth, but the Ebola outbreak reversed the positive trend and pushed the countries to the limit by widening their fiscal deficits.

It is against this backdrop that the Economic Commission for Africa calls for, among other things, external debt cancellation for the most-affected countries. This would give the countries the breathing space they need to better address the short-term socioeconomic challenges posed by the Ebola outbreak and to plan for their long-term recovery on a solid footing. While the cancellation of debts does not automatically lead to the availability of funds, the financial resources earmarked for debt repayments could instead be invested into the countries' health-care systems, including training health professionals, equipping health centres and ensuring the fair distribution of health personnel between rural and urban areas. These funds could also be used to benefit other strategic sectors of the economy that have been hit hard by Ebola, including education, agriculture and food security, and services.

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