

# Epidemics

## Why Preparedness is a Smart Investment

In many countries, governments struggle to reconcile limited resources with competing demands. As a result health rarely ranks amongst top budget priorities, and within health, epidemic preparedness is often overlooked.

This paper draws on examples and recent economic research to demonstrate the economic case for investing in preparedness.

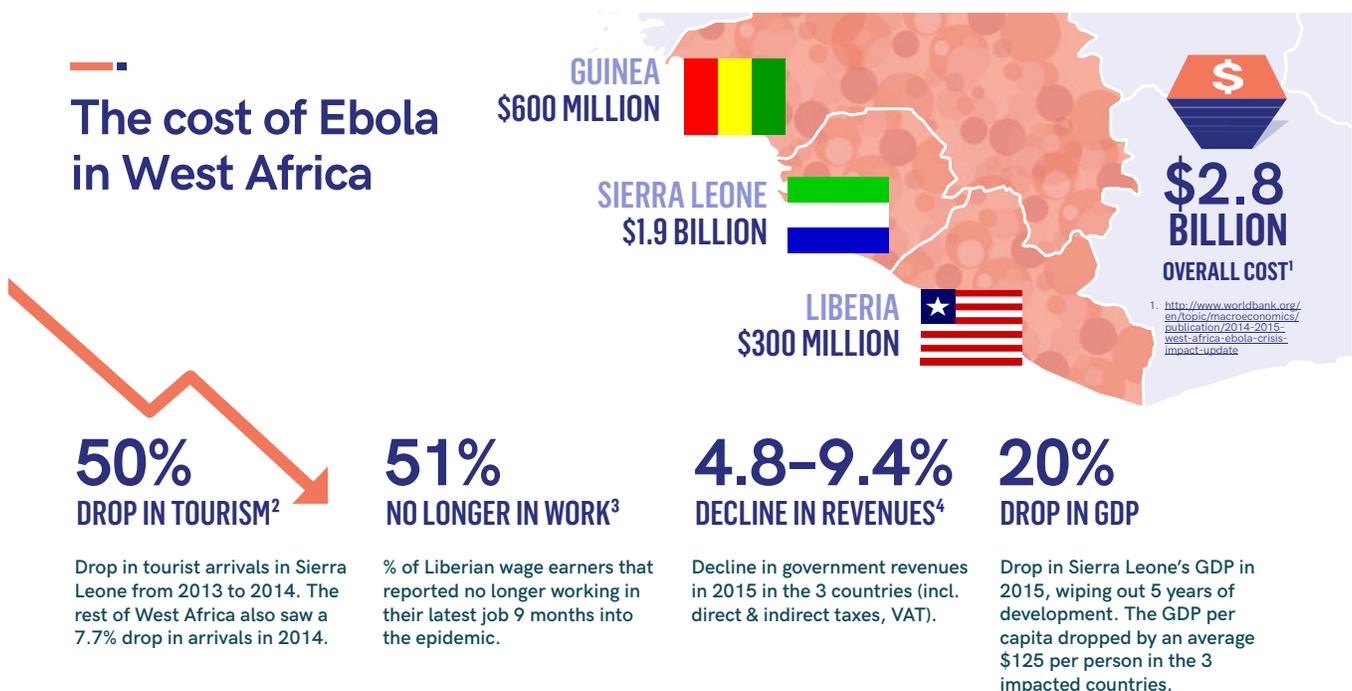
### Key Message

- The cost of responding to outbreaks is far higher than the cost of being prepared.
- Investing in preparedness yields extremely high return on investments (ROI).
- Preparedness mitigates economic, political, social and security impacts and is needed to boost investor and private sector confidence.

### Cost of Responding vs. Cost of Preparing

There is a consensus amongst experts that the world will see another pandemic. Records consistently show that responding to outbreaks is "far more expensive—in lives and money—than investing in preparedness."<sup>1</sup>

The West African Ebola crisis illustrates this point. By the end of 2015, \$3.6 billion had been spent fighting the epidemic and Liberia, Sierra Leone and Guinea collectively sustained an estimated loss of \$2.8 billion in GDP that year.<sup>2</sup> Meanwhile Nigeria **already had an epidemic response infrastructure in place** when Ebola struck. They had an established contact tracing method, a highly skilled virology laboratory, experienced epidemiologists, and strong clinical governance, which helped prevent substantial loss of human lives, limit the costs of responding to the outbreak and lessen the financial losses and impacts on the country's economy.<sup>3</sup> The economic cost incurred by Nigeria was much lower than other affected countries at US \$186 million.<sup>4</sup>



<sup>2</sup> <https://www.wtcc.org/-/media/files/reports/2018/impact-of-the-ebola-epidemic-on-travel-and-tourism.pdf>

<sup>3</sup> <http://www.worldbank.org/content/dam/Worldbank/document/Economic%20Impact%20Ebola%20Update%202%20Dec%202014.pdf>

<sup>4</sup> <http://pubdocs.worldbank.org/en/207531463677588074/Ebola-Economic-Impact-and-Lessons-Paper-short-version.pdf>

<sup>1</sup> <http://www.worldbank.org/en/topic/macroeconomics/publication/2014-2015-west-africa-ebola-crisis-impact-update>

**Relatively small annual spending can limit high future losses.** In countries where there is a reasonably comprehensive and well-functioning health system, it is estimated that **improved preparedness would cost less than \$1 per person per year.**<sup>5</sup> In its 5-year national action plan 2017-2021, Tanzania estimated its average preparedness needs at about \$0.50 per person per year. Improving preparedness in countries with significant gaps in health coverage and care will likely cost more, but still significantly less than future losses from reduced productivity of affected populations, the direct cost of the response, and the slowdown of economic and financial activities. The Asian economy is estimated to have lost \$60 billion as a result of the SARS epidemic, mainly driven by losses from tourism and consumer confidence.<sup>6</sup>

## The Return on Investment of Preparedness

Countries' preparedness for epidemics refers to a range of health and non-health interventions, capabilities and systems at the community and national levels. Their purpose is to prevent, detect, and respond to the spread of disease and other hazards, mitigating social, economic and financial disruptions. There is conclusive evidence demonstrating that **investing to prevent future epidemics is economically wise and will, in fact, produce substantial returns on investment.**

Considering only the benefits to economic growth (rather than human life), estimates by the World Bank suggest that investment to strengthen national health systems to International Health Regulations (IHR) standards would yield a positive return on investment in all plausible scenarios.<sup>7</sup> **A yearly investment of US \$1.9–3.4 billion to strengthen animal and human health systems would yield an estimated global public benefit of over US \$30 billion annually,**<sup>8</sup> an ROI of 10 to 1 or higher.<sup>9</sup>

**High return on investment is expected even if only some epidemics are prevented,** as systems which can quickly find, stop and prevent outbreaks can drastically reduce human and economic losses. A recent study showed that in response to meningitis outbreaks, a shorter response time (4 weeks instead of 6 weeks to reach desired coverage) could increase the number of averted cases by 218% and reduce related losses. When it comes to immunization, it is estimated that every dollar spent yields \$16-44 benefit.<sup>10</sup> Other models show that spending on core public-health systems and anti-microbial resistance prevention and control, even if only 10% effective, would still yield an annual return of 47%—a return on par with the most successful investments.<sup>11</sup>

## Preparedness to Boost Investor and Private Sector Confidence

For foreign and domestic private investors, knowing that a country has taken the appropriate steps to mitigate risks associated with disease outbreaks is critical. A study of foreign investments in 74 countries found that inflows in low and middle-income countries were positively correlated with health.<sup>12</sup>

For the private sector, the prospects of severe disruption in production and demand for goods and services, trade and travel which impact productivity and the bottom line can act as severe disincentives. Knowing preparedness activities to reduce disruption from outbreaks have been undertaken can help support **private sector confidence<sup>13</sup> in a country's ability to withstand epidemic shocks.**

International funders have shown willingness to support investments in public health and may give preferential lending terms and offer increased funding opportunities to countries that prioritize preparedness. The 2016 International Working Group recommended that **preparedness indicators be included in World Bank Loan decisions,** and that other banks and funding institutions include preparedness in their terms.<sup>14</sup> An ability to demonstrate readiness to withstand an epidemic is thus crucial for investment cases for countries seeking support from funding institutions.

1 <http://documents.worldbank.org/curated/en/979591495652724770/pdf/115271-REVISED-FINAL-IWG-Report-3-5-18.pdf>

2 <http://www.worldbank.org/en/topic/macroeconomics/publication/2014-2015-west-africa-ebola-crisis-impact-update>

3 <http://documents.worldbank.org/curated/en/979591495652724770/pdf/115271-REVISED-FINAL-IWG-Report-3-5-18.pdf>

4 <https://gh.bmj.com/content/1/3/e000111>

5 <http://pubdocs.worldbank.org/en/890291523304595565/FINAL-IWG-Report-3-5-18.pdf>

6 "Assessing the Economic Impact and Costs of Flu Pandemics Originating in Asia," Oxford Economic Forecasting Group, 2005

7 <https://www.nap.edu/read/21891/chapter/8#86>

8 People, pathogens and our planet: the economics of one health. Washington DC: The World Bank Group; 2012.

<http://documents.worldbank.org/curated/en/612341468147856529/People-pathogens-and-our-planet-the-economics-of-one-health>

9 Schar DL, Yamey GM, Machalaba CC, Karesh WB. A framework for stimulating economic investments to prevent emerging diseases. Bull World Health Organ. 2017;96(2):138-140.

10 <https://www.sciencedaily.com/releases/2016/02/160208183314.htm>

11 World Bank (2016). - Drug-resistant Infections-A Threat to Our Economic Future. Discussion Draft. September 2016. <http://pubdocs.worldbank.org/en/689381474641399486/1701381-AMR-Lab-Report-Web.pdf> referenced in Funding challenge for furthering One Health activities, Olga Jonas, Draft, October 26, 2018

12 [http://eprints.whiterose.ac.uk/114510/2/MANUSCRIPT\\_CLEAN.pdf](http://eprints.whiterose.ac.uk/114510/2/MANUSCRIPT_CLEAN.pdf)

13 [www.healthfinancejournal.com/index.php/johcf/article/download/69/71](http://www.healthfinancejournal.com/index.php/johcf/article/download/69/71)

14 <http://documents.worldbank.org/curated/en/979591495652724770/pdf/115271-REVISED-FINAL-IWG-Report-3-5-18.pdf>