## Anticipated crisis impact

- Sierra Leone reported its first two confirmed case of COVID-19 on 30 March and 02 April (MOHS 02/04/2020) (RFI 31/03/2020). Sierra Leone was one of the last West African countries having no confirmed cases although it was one of the only countries in Africa having COVID-19 testing prior to the global outbreak (FCC 27/03/2020). Three new testing sites have recently been set up and can undertake up to 40 tests a day with capacity to install a 130 bed isolation unit, China has also donated additional tests, respirators, and PPE (RFI 20/03/2020). It is unclear if this capacity is concentrated in Freetown or is across the country.

- Sierra Leone, although currently not carrying a high caseload of COVID-19 affected individuals, is likely to face challenges if the virus is not contained and there is a large outbreak, especially in its capital and biggest city, Freetown. In 2015 the greater Freetown area was the country’s Ebola epicentre, seeing high caseloads and a lack of coping capacity. Current plans are informed by lessons learned, although the infrastructural and economical conditions of much of the city’s inhabitants are challenging and may hamper COVID-19 prevention efforts.

- Freetown’s 68 informal slums house 35% of the city’s population, indicating a high percentage of people living in inadequate conditions. This may aggravate the spread of COVID-19 as the density and living conditions may make physical distancing measures and improved hygiene practices difficult practice, mirroring the country’s experiences with Ebola from 2013 to 2016 (World Bank 2019).

- 47% of Freetown’s population live without direct access to running water, posing a challenge for recommended hygiene-related behavioural change and other city-wide sanitation efforts (FCC 27/03/2020).

## Anticipated scope and scale

**Overcrowded slums in Freetown, lacking access to clean and running water or sanitation, pose increased risk of COVID-19 transmission. There is a risk of diversion of healthcare resources from prevention and treatment of other people in Sierra Leone, including malaria, to tackle the COVID-19 outbreak (DHSE 26/01/2020) (New Scientists, 10/03/2020). Many Sierra Leoneans are poor and may lack financial coping capacity. The economic impact is forecasted to be high with job cuts (RFI 20/03/2020).**

**Lessons learned**

Sierra Leone was hit hard by the Ebola epidemic from 2013 – 2016, counting 3956 deaths, including 90 healthcare workers or 7% of workforce, out of 14,124 cases (Robinson 2019) (CDC last accessed 01/04/2020). Protection and prevention are central. A key lesson learned was the importance of tailored messages and effective communication channels, both in preparedness and during the intervention, to limit virus spread. This is effectively included in the current response plans (FCC 27/03/2020) (ACAPS, February 2016).

**Humanitarian constraints**

Restrictions on movement over land, sea, and river may constrain humanitarian access and limit the provision of services and aid (RFI 31/03/2020). Additionally much of Freetown, particularly its Eastern areas, lack road networks and available roads throughout the city are often poorly maintained (World Bank 2019).
Aggravating factors and risks

**WASH**
- Clean water and adequate sanitation facilities are crucial to provide in the context of a potential epidemic and mitigating its spread. Freetown faces several pre-existing WASH challenges. Only 75% of Freetown inhabitants have access to an improved water source; only 30% of inhabitants have access to improved sanitation facilities (public or private flush toilets) (World Bank 2019). Running water is necessary – but 47% of Freetown’s inhabitants live without access to it (FCC 27/03/2020).
- Freetown’s provision of public services is limited and unequally distributed; solid waste management is a notable challenge resulting in informal disposal techniques. As a consequence flooding often contaminates water sources needed for cleaning (World Bank 2019).
- Out of 31 markets only 10 provide a source of water for hand washing. 21 have no publicly available water supply (FCC 27/03/2020).

**Health**
- Sierra Leone has 1.4 doctors, nurses, and midwives per 10,000 inhabitants (Robinson 2019), much lower than the world average of 9.3. Communication between health authorities and communities is poor, resulting in a lack of trust that may hamper COVID prevention efforts (SLURC 2018). An outbreak may also strain psycho-social needs and available resources.
- Sierra Leone has high malnutrition rates amongst children and adults, particularly women, which may limit immunity (Global Nutrition Report).
- In Freetown public services are limited, complicated to access and unevenly distributed (see Figure 3). Healthcare shortages are prevalent across the country as well – prior to the outbreak it was estimated that Sierra Leone was short 32,000 health professionals to meet the normal needs of its population (Robinson 2019).
- Out of Freetown’s 74 Public Health Facilities, 30 do not have adequate water sources. If inadequately addressed, this may aggravate the spread of COVID-19, especially in health facilities that may treat COVID-19 positive individuals. Other diseases risk being spread, if water sources are put under larger strain because of increased usage, and if health resources are diverted (FCC 27/03/2020).

**Population density and shelter**
- Freetown’s population density is one of the highest in the world with 8,450 persons per km² (World Bank 2019).
- There is a high level of national and international movement in and out of Freetown, which may make contact tracing extremely difficult.
- The city has a high proportion of informal settlements, notably near the city centre, housing 35% of the city’s inhabitants (FCC 27/03/2020).
- These conditions may pose a challenge to preventative measures and aggravate the spread of COVID-19 as physical distancing and restrained movement may be difficult to practice and/or impose in informal settlements (World Bank 2019).

**Livelihoods at risk**
- The Freetown City Council acknowledges that a lockdown restricting all movement in the city may be difficult as the reserve capacities, or available food stock or savings, of inhabitants is severely limited; according to the latest statistics from 2011 52% of Sierra Leoneans live under the national poverty line (World Bank accessed 02/04/20). In Freetown, 30% of households earn less than $1 a day (FCC 27/03/2020).
- The Freetown City Council’s three-tier COVID response plan indicates that market times will be regulated as a facet of its “Behavioural Change Support” pillar: markets will be open only from 7am to 7pm with restrictions on night trading, which may affect disrupt traders’ livelihoods (FCC 27/03/2020).
- Additionally, smaller community markets may be closed which may further strain local communities if other livelihood opportunities or food aid are not provided (Politico SL 31/03/2020); this may be especially challenging for a city whose economy is dominated by small-scale business and petty trade (SLURC 03/2017) (FCC 27/03/2020).
Current Government Measures and potential limitations

The Sierra Leone National Government has already declared a state of emergency over the next 12-months across the country, requiring civilians to abide by government directives (Garda 26/03/2020). Public spaces (including schools, colleges, and universities as of 31/03/2020) (RFI 31/03/2020) have been closed and gatherings of more than 100 people banned. Movement across land, sea, and river has been restricted (RFI 31/03/2020), which may impact the psycho-social health of communities for whom movement, including as part of the burial process, is important (ALNAP 2017); traders and other workers who must move for their work may see their livelihoods restricted. Restrictions on travel and denials of entries for foreign persons have been in effect since the week of 16 March (RFI 20/03/2020). The borders with Liberia and Guinea were closed on 27 March for 30 days, as both countries have higher caseloads (16 cases in Guinea and 6 cases in Liberia) (WHO last accessed 01/04/20). This measure reflects lessons learned from the 2013-2016 West African Ebola epidemic (ALNAP 2017). The President has given some indication that measures may be reinforced in the near future although it is unclear what those may be (Sierra Leone State House 31/03/2020).

Physical distancing, improved hygiene practices, and the local production of masks have been encouraged across the country (RFI 31/03/2020). These recommendations may be particularly difficult to practice in Freetown's informal settlements and among residents who have limited access to safe water and adequate sanitation facilities; the Government’s response plan as well as the Freetown City Council’s seeks to partially address this by providing handwashing stations in schools, health facilities, and markets (RFI 25/03/2020). The Freetown City Council’s plan also outlined several contingency preparations including identification of quarantine and burial locations, and the set-up of contact tracing and surveillance teams (FCC 27/03/2020). It is unclear however if these preparations may be ready to handle significant caseloads and sudden growths in caseloads.

Sierra Leone was one of the only African nations to have COVID-19 testing capacity prior to the outbreak (FCC 27/03/2020) and more testing kits have been donated to the country, although it is unclear if this capacity can be increased to accommodate higher caseloads. Additionally tests are only being done if individuals show “signs or symptoms”, a strategy that may discount asymptomatic carriers who can also spread the virus (RFI 31/03/2020). The country’s healthcare capacity was already limited and under-capacitated to serve inhabitants (Robinson 2019; SLURC 2018); although there have been some proposed preparation measures including pre-positioned testing, isolation, and treatment facilities, it is unclear if treatment capacity will be able to deal with high active caseloads if preventative measures fail to contain the spread of the virus (Sierra Leone State House 31/03/2020). Other critical health issues, including Malaria and maternal complications (SLURC 2018), may not be addressed if resources are exclusively funneled towards COVID-19 responses.
These maps illustrate the complicated living conditions of Freetown’s inhabitants, as well as the inconsistent accessibility of health care resources which may hamper COVID-19 prevention and treatment efforts.

**Fig. 1 Map of settlement type across Freetown**  
Source: World Bank 2019

**Fig. 2 Map of Population density across Freetown**  
Source: World Bank 2019

**Fig. 3 Distance to health facility under 0.5 miles**  
Source: World Bank 2019