February 2016

Beyond a Public Health Emergency:

Potential Secondary Humanitarian Impacts of a Large-Scale Ebola Outbreak

The ACAPS Ebola Project aims to support strategic decision making, programme design and advocacy work surrounding the Ebola outbreak by providing analysis on current priority needs and ongoing issues. Funded by the European Commission's department of Humanitarian Aid and Civil Protection (DG ECHO), it builds on the contextual knowledge and sectoral analysis forged through the ACAPS Ebola Needs Analysis Project (ENAP).

INTRODUCTION

This report documents the secondary humanitarian problems and impacts of large-scale Ebola outbreak on the different humanitarian sectors, to provide a non-exhaustive plan to help future responders. A large scale Ebola outbreak, in this document, refers to an epidemic with an unprecedented scale, geographical spread and duration.

REPORT

At the beginning of the crisis, the international community perceived the outbreak as a purely public health emergency. The response was oriented towards the containment of the epidemic and treatment of the sick patients. The initial focus was on providing beds for patients and mobilising health practitioners. The livelihoods, education or protection needs of the affected communities, indirectly caused by the outbreak, were left unaddressed.

The secondary humanitarian problems and impacts of the epidemic were extensive, and threatened the lives and livelihoods of more than 22 million people in the three most affected countries, Guinea, Sierra Leone and Liberia. The disruption of public and private services created an "emergency within the emergency". Humanitarian actors failed to activate their surge capacity, or set up emergency funding and coordination structures, as a result of this perception of the crisis. It took time for the humanitarian community to recognise the complexity of the crisis and respond to the secondary impacts on other sectors. One major lesson learned during this epidemic has been the need to broaden the scope of the humanitarian response during a large-scale Ebola outbreak.

SUGGESTED USE

The report helps understanding of what the actual secondary impacts and priority needs during a large-scale Ebola outbreak may be, based on lessons learned from the recent outbreak in West Africa. It can be used to understand the specific factors contributin the disruption of services or access to goods. It provides a profile for the decision-makers of the potential secondary issues and can help to plan programmes appropriately.

PRIMARY VS SECONDARY HUMANITARIAN IMPACTS

Primary impacts in a large scale Ebola outbreak are the direct and immediate consequences of the epidemic on human health. Secondary impacts include negative effects that are not caused by the epidemic itself but by its consequences. They can span a longer period than the outbreak itself and affect a wider group of people.

Primary impacts

+ People being ill
+ Death
+ Continued transmission

Secondary impacts

+ Impact on healthcare system
+ Impact on water, sanitation and hygiene services (WASH)
+ Impact on people's safety
+ Impact on education system
+ Impact on people's ability to get food
+ Impact on household income

LIMITATIONS

+ This document only focuses on **secondary** humanitarian problems and impacts of a large-scale outbreak. It does not include the **primary** impacts of an Ebola outbreak, such as the case management and containment of an epidemic.
+ Only one large-scale Ebola outbreak has occurred, so this document cannot draw on lessons learned elsewhere. As there will be future large-scale

outbreaks, it will be valuable to analyse the secondary problems and impacts in the same way and build on this document.

+ This document does not draw on lessons learned from other types of public health crises, which may have had similar causes or effects. Further research in this area could be valuable to the humanitarian community.
+ The scale of this Ebola outbreak was large because the root causes were specific to the context in the three most affected countries, such as weak health systems, high levels of poverty or a lack of trust in authorities. It is not clear if a similar outbreak in another setting would have the same consequences and effects.

MAIN FINDINGS

Across all sectors, five main causes were identified:

+ **Resources were diverted and reassigned** towards the fight against Ebola.
+ **Ebola cases and deaths** often meant the loss of the main family breadwinner, limiting household resources.
+ **Containment measures** such as quarantines, curfews and roadblocks, hampered people's access to services (health, protection, education) and prevented them from working.
+ **Fear** had detrimental effects on service usage, creating rumours and panic.
+ **Limited public knowledge** of the disease triggered misinformation, rumours and panic.

REPORT OUTLINES

EBOLA BACKGROUND INFORMATION

GENERAL

Previous outbreaks

+ Ebola first appeared in 1976 in two simultaneous outbreaks, in Nzara, Sudan, and in Yambuku, Democratic Republic of Congo. The latter was in a village situated near the Ebola River, from which the disease takes its name (WHO 04/2014). The Ebola virus has broken out at least 24 times since then (The Guardian, 24/11/2015).

Transmission and symptoms of the virus

+ Ebola, formerly known as Ebola haemorrhagic fever, is a severe, often fatal illness in humans (WHO, 08/2015).
+ The virus is transmitted to people from wild animals and spreads in the human population through human-to-human transmission, via direct contact with the blood, secretions, or other bodily fluids of infected people, or with surfaces and materials (e.g. bedding, clothing) contaminated with these fluids (WHO, 08/2015). Infection by Ebola can occur from touching the bodies of those who have died from the disease (WHO, 01/2015).
+ Ebola is a severe acute viral illness often characterised by the sudden onset of fever, intense weakness, muscle pain, headache and sore throat, followed by vomiting, diarrhoea, rash, impaired kidney and liver function, and in some cases, both internal and external bleeding (WHO 04/2014).
+ The virus has been found in semen 199 days after the onset of symptoms, 40 days in sweat, 31 days in urine, and 98 days in ocular fluids. From previous Ebola outbreaks in Africa, the virus had also been found 33 days after the onset of symptoms in vaginal secretion, 22–29 days in rectum swabs, and 15 days in breast milk. The mean and maximum duration of persistence of either live virus or generic fragments in these body fluids is largely unknown. While test results can show whether the virus is still present in body fluids, they cannot imply that the virus is infectious until viral isolation is performed on the samples (MoH/WHO/CDC, 13/10/2015; Sprecher, 14/10/2015).

Treatment and vaccines

+ The average Ebola case fatality rate is around 50%. Case fatality rates have varied from 25–90% in past outbreaks (WHO, 08/2015).
+ Early supportive care with rehydration, and symptomatic treatment improves survival (WHO, 08/2015). There is currently no vaccine for Ebola licensed for use in humans. Clinical trials for at least 15 candidate vaccines are in various phases, with four main candidates in advanced stages of human testing (WHO).
+ Blood donated by Ebola-recovered patients is currently being administered in some Ebola treatment centres in Sierra Leone and trials are under way in Guinea (WHO, 06/10/2015).

WEST-AFRICA OUTBREAK

+ The recent West Africa Ebola outbreak began in Guinea in December 2013, and rapidly spread to neighbouring Sierra Leone and Liberia. As of 20 November 2015, there have been 28,598 suspected, probable, and confirmed Ebola cases. 11,299 deaths have been reported in the three most affected countries. The outbreak has recorded more cases than all past Ebola epidemics combined (WHO, 08/2015).
+ In Sierra Leone, the Ebola outbreak was declared over on 7 November 2015. Three Ebola outbreaks occurred in Liberia between 2014-15. The first began on 30 March 2014, and the transmission was declared over on 9 May 2015. The disease re-emerged on 29 June 2015 and six additional cases, two of whom died, were identified. Liberia was declared Ebola-free once again on 3 September 2015 (WHO, 2015/09/03; WHO,2015/11/20). On 19 November, a new Ebola virus disease (EVD) case was confirmed in the capital of Liberia, Monrovia. The next day, two other people tested positive to the virus (Reuters, 2015/11/20).
+ Many of the secondary humanitarian problems and impacts of this Ebola outbreak were caused or exacerbated by existing issues in the affected countries as well as some of the methods used to contain the outbreak. These include:

Weak health system

+ All three countries had weak health systems before the Ebola crisis. Disease surveillance and health information systems were limited. This enabled the Ebola outbreak to reach unprecedented numbers of cases, and meant the reallocation of already limited resources to the epidemic, diverting attention from other morbidity and mortality present in the countries (WHO, 11/12/2014).

Lack of trust

+ Ebola was new in West Africa and people did not understand why the disease suddenly arrived in the region. The recent civil wars in Liberia and Sierra Leone deeply influenced the way people perceived official information and often informal networks were seen to be more reliable than government sources (IRIN 04/09/2014). International organisations and health workers were, in some places, held responsible for the outbreak. Rumours of cannibalism, organ trafficking and international workers' witchcraft were widespread (IFRC, 14/08/2014). The populations were already mistrustful of authorities in all three countries.
+ This mistrust and fear of authorities, and the national and international health system, facilitated continued Ebola transmission. Ebola deaths caused panic and further dysfunction within the already weak health system. Many patients admitted to Ebola Treatment Units (ETUs) did not survive, fuelling fear of these facilities (UNMEER, 12/12/2014).
+ People were prevented from accessing information because health and containment messages were not widespread enough, the content was often incorrect or inappropriate. For example, written messages were not generally effective given the high illiteracy rates in the three countries. This led to the spread of myths and rumours about the origin and transmission of Ebola.

Containment measures

+ Restrictive confinement policies used during the outbreak hampered access to healthcare, food, and markets. Border closures limited passage of humanitarian cargo and personnel. Containment measures damaged trust between the affected population and emergency responders (ACAPS, 10/2015).
+ At the beginning of the Ebola outbreak, the Liberian government quickly imposed quarantine. In August 2014, three counties (Bomi, Lofa and Grand Cape Mount) were under quarantine (AFP, 2014/08/11). At the end of August 2014, curfews were declared over the country and the West Point slum in Monrovia was completely sealed off. This sparked violent clashes between security forces and West Point residents, in which live ammunition was used, dozens of people were injured, and one killed (AFP, 2014/08/20).

+ The Government of Sierra Leone declared a state of emergency on 31 July 2014, following the rapid spread of Ebola from Kailahun and Kenema districts (epicentre of the outbreak). Restrictions on movement and public gatherings were quickly introduced. These quarantine measures included self-quarantine, application of Chiefdom by-laws, and government-imposed mass quarantines as high as district level (GoSL, 14/11/2014). As the outbreak continued, more communities and villages were quarantined at different times. By December 2014, over one million people in quarantine required food assistance from WFP (WFP, 18/12/2014).

Local customs

+ In Liberia and Sierra Leone, where burial rites are carried out by a number of secret societies, some mourners bathe in or anoint others with rinse water from the washing of corpses, believing that doing so allows the transfer of powers (WHO, 01/2015). Funeral and burial practices in West Africa are therefore exceptionally high-risk in a context of an Ebola outbreak. Data reported by Guinea's Ministry of Health, in August 2014, indicated that 60% of cases there could be linked to traditional burial and funeral practices (WHO, 01/2015). In November 2014, WHO staff in Sierra Leone estimated that 80% of cases in the country were linked to these practices (WHO, 01/2015).
+ The secure burials put in place by the humanitarian responders to limit the transmission of the virus interfered with traditional burial practices, and were believed to affect the spirit of the deceased (WHO, 03/2015; Red Cross Movement, 19/03/2015). In addition, the treatment of patients by ambulance workers and of corpses by burial teams was perceived as disrespectful, especially at the beginning of the epidemic when appropriate protocols were lacking (Kinsman and al., 15/04/2015). In Liberia, the decision to cremate bodies created large and long-lasting negative perceptions towards safe and dignified burial teams, leading to the rejection of the teams by communities (PI, 05/10/2015).

METHODOLOGY

SOURCES

This report uses a qualitative research methodology to identify the **main secondary humanitarian impacts** of a large scale Ebola outbreak. Findings are based on a mix of primary and secondary sources, mainly:

1. 70 semi-structured **interviews** conducted by the ACAPS team with members of the UN, NGOs, donor organisations, national responders and academics. Most were conducted in person in Guinea, Liberia, Sierra Leone, the UK and Geneva between January–May and September– November 2015, supplemented with a small number of telephone and Skype interviews.

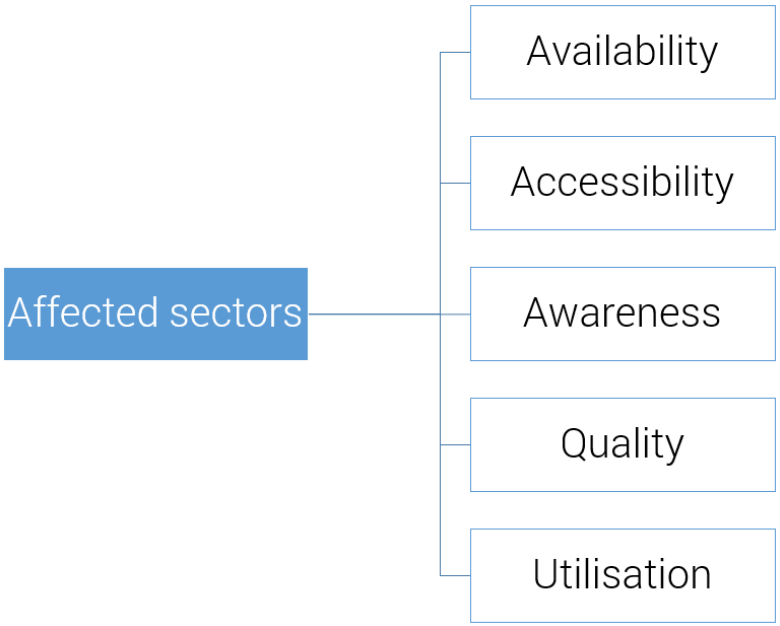
2. A **literature review** based on a range of publicly available sources including from academia, think tanks, NGOs, governments, the UN and the media.

FRAMEWORK

Secondary humanitarian impacts of the Ebola outbreak are complex and need a timely and targeted response. To effectively plan an appropriate response, we need to understand the causes of the impacts. We need to closely look at the problems encountered during the outbreak, which resulted in the impacts. Looking at the impacts without closely examining the problems will not address all the potential issues. A critical aspect of analysing humanitarian needs is to identify the nature of the problems affecting populations – availability, accessibility, awareness, quality and utilisation. Classifying by category of problem allows the identification of factors or combination of factors which contribute the most to the crisis.

This report is structured by humanitarian sector – health, WASH, protection, education and food security and livelihoods. We first explore all the potential problems triggered by a large-scale Ebola outbreak, then look at the impacts all these problems combined had on the affected populations.

CATEGORY OF PROBLEMS



Availability

Availability refers to the physical presence of goods and services in the area of concern through all forms of domestic production, commercial imports and aid. It is determined by the production, trade, stocks and transfer of goods in a given area.

Availability problems could include a lack of facilities, staff or goods.

Accessibility

Accessibility refers to people's ability to access and benefit from goods and services. It often concerns the physical location of services, but can also be influenced by economic or security restrictions.

Accessibility problems could include services located far away from people's homes, lack of transportation, high fees or insecurity.

Awareness

This refers to whether people are aware of the existence of goods and services. If services exists but are not visible or known to residents, then the need may be for an information campaign rather than the creation of new services. Awareness is determined by the message appropriateness, the communication channels and the frequency of updates.

Awareness problems could include a community not knowing or having incorrect information about where they can obtain free medication.

Quality

The quality of services depends on the number of people with the required skills and knowledge to perform a given service, the capacity to deliver the service with the fewest resources and in a timely manner, and the feeling of security for beneficiaries.

Quality problems could include ineffective or below standard services.

Utilisation

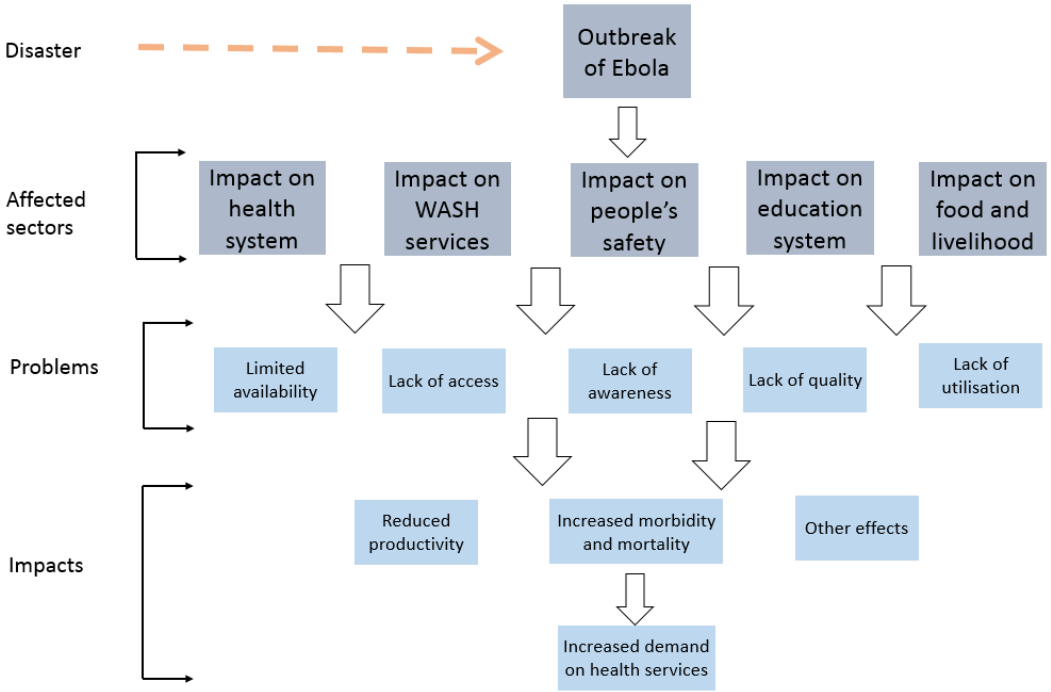
The extent to which goods or services can be used to achieve specified goals with effectiveness, efficiency and satisfaction in a specific context. Utilisation is determined by the knowledge of the individuals on how to use a specific good or service, the attitude and beliefs of a person towards that good or service and the actual practice of these beliefs.

Utilisation problems could include the fear of going to the hospital to get treatment.

These categories are a helpful framework with which to accurately analyse humanitarian needs. However, close relationships between the different categories of problems exist and these categories often overlap. For example, a problem of availability will impact the quality of a given service: a lack of availability of health practitioners will impact the quality of care received by the patients.

IMPACTS

Once the problems have been identified, then we can study the impacts they have on affected populations in a short, medium or long-term.



One example could be:

+ Because of **containment measures**, the food security of people is affected; people's access to markets was restricted, leading to a *reduction in income* and ultimately a *deterioration of the health status* of the person.

A containment measure is the physical barrier directly **causing** the problem of lack of access to a service, leading to a negative *impact* on the income of the households in a short-term and, on the long-term, on the health status of the person.

COPING STRATEGIES

Coping strategies or mechanisms are remedial actions undertaken by people whose survival and livelihood are compromised or threatened (WHO, 1998), in short what people do to handle a problem. There are activities to which people resort to obtain goods and/or services when their normal means have been disrupted.

Health - Likely humanitarian problems and impacts

INTRODUCTION

+ This section focuses on the impact of the West Africa Ebola outbreak on non-Ebola related health services.

+ The large number of EVD cases overwhelmed the weak and under-resourced health systems in the three most affected countries. Scarce resources were diverted to the Ebola response, and health facilities were temporarily closed or reduced operations.

+ The lack of monitoring and surveillance for diseases other than Ebola led to large information gaps. Little information was available on other health problems, including potential disease outbreaks, access to treatment for HIV/AIDS or tuberculosis, the disease burden of malaria, access to maternal health services, immunisations and medication.

+ Fear of contracting Ebola and mistrust of the health system made people reluctant to seek treatment, further impacting the health sector and increasing the risk of mortality and morbidity from otherwise treatable diseases.

+ Coping mechanisms included: reliance on other healthcare services (pharmacies, traditional healers and private practices) and migration to other areas with available services.

+ Aggravating factors on the health system included low baseline indicators and floods, which can increase the transmission of water and vector-borne diseases.

Each of the following tables looks at the multiple problems, organised by category – availability, accessibility, awareness, quality and utilisation.

Problem: Availability

Problem	*Example*
Funding *Decrease of non-Ebola health service expenditure*	*Routine health service expenditure suffered during the Ebola outbreak. In September 2014, only half of the planned amount was received. Cost recovery dropped due to the decrease in use of health services and some donor funding for the health sector was redirected to contain the epidemic (UNDP, 23/12/2014).*
Diversion *Closure or repurposing of non-Ebola health facilities*	*Some hospitals were entirely taken over by Ebola patients or had to close because they could not treat Ebola patients safely (international media, 25/09/2014). In 2014, clinical teams and facilities for tuberculosis were repurposed to the Ebola response (WHO, 10/12/2014). In October 2014, in Liberia, MSF had to close its 200-bed referral hospital near Bo because of the strain of responding to the Ebola outbreak (MSF, 16/10/2014).*
Equipment *Limited equipment available for non-Ebola health procedures*	*Reports of health workers being forced to recycle gloves or use plastic bags to protect themselves to perform non-Ebola health procedures were frequent in the three countries during the Ebola outbreak (HRW 15/09/2014).*
Medication *Limited medicine available for non-Ebola health activities*	*In April 2014, in Liberia, an assessment indicated that obstacles to accessing healthcare included a lack of available medication in health services (ACAPS, 04/2015).*
Laboratory *Strain on testing capacities for non-Ebola purposes*	*Testing was suspended due to reduced resources, as they were reallocated to the Ebola outbreak (UNDP, 23/12/2014).*
Monitoring *Disruption of surveillance and reporting of communicable and non-communicable diseases*	*Monitoring and surveillance of diseases other than Ebola have been severely affected by the epidemic (ACAPS, 26/02/2015). The Ebola outbreak paralysed the monitoring system. No consolidated information was available from June 2014 onwards. The collection and analysis of monthly data and biannual and annual monitoring were extremely impeded (PI, 12/02/2015).*
Personnel *Lack of medical staff for non-Ebola procedures*	*Many staff working in polio eradication programmes were transferred to Ebola duties (Global Polio Eradication Initiative, 02/10/2014). Many healthcare workers, who are at high risk of contracting the virus, stopped reporting to work (UNDP, 14/11/2014).* *As of November 2015, a total of 881 confirmed health worker infections have been reported in Guinea, Liberia, and Sierra Leone; of whom 513 reportedly died (WHO, 04/11/2015).*
Routine health activities *Disruption of non-Ebola health programmes*	*The mobilisation of all resources for Ebola in both affected and in still unaffected regions meant the neglect of other activities, especially immunisation and anti-malaria activities (PI, 13/02/2015).*

Problem: Accessibility

Problem	*Example*
Containment measures *Restriction of people's movements*	*Curfews and roadblocks reduced people's access to medical care (ACAPS, 26/09/2014).*
Resistance *Limiting access to communities*	*In Guinea, community resistance to the Ebola response was widespread. This made it difficult to transmit information to the population (PI, 13/02/2015; UNMEER, 18/02/2015).*
Income *Lack of financial resources*	*In April 2015, in Liberia, an assessment indicated that obstacles to accessing healthcare included reduced income during the Ebola outbreak, which prevented people from affording health services (ACAPS, 04/2015).*
Stigmatisation *Denial of care because of perceived risk*	*Pregnant women have been denied care, due to the high risk of Ebola infection associated with deliveries (UNMEER, 03/11/2014).*

Problem: Awareness

Problem	Example
Misinformation *Lack of reliable information*	*Misinformation about the impact of Ebola on health services made women reluctant to access maternal and reproductive health services (UN WOMEN, 27/03/2015).*
Frequency *Lack of regular information*	*There was considerable confusion among quarantined people, who did not know under which conditions they were allowed to leave their houses. Some people died in quarantined households because they did not seek medical care (PI, 17/09/2015).*
Stigmatisation *Association of health facilities and practitioners with Ebola*	*The association of Ebola with services deterred people from using them, including ambulances, hospitals and channels used to report suspected Ebola cases (for example calling 117 in Sierra Leone) (PI, 05/10/2015; Ebola Deeply, 19/02/2015).*
Information flows *Limited information on health services available*	*The outbreak affected information flows, slowing the reporting process (PI, 20/02/2015).*
Indirect Ebola impact *Lack of information on impact of the disease on non-Ebola health services*	*In-depth needs assessments were not often carried out, leading to a lack of information on the current situation and the needs of the population (PI, 12/02/2015).*

Problem: Quality

Problem	Example
Effectiveness *Neglect of non-Ebola health activities*	*Fear of infection made some healthcare professionals reluctant to approach patients who presented similar symptoms, such as malaria, leaving them with a lower quality of care (Aljazeera, 18/09/2014).*
Confidentiality	*Many ambulances came to collect patients, suspected Ebola cases and others, with the horn blaring and wearing full protective personal equipment, disregarding bereaved families who felt violated (PI, 07/10/2015).*

Problem: Utilisation

Problem	*Example*
Behaviour *Change of health-seeking behaviour*	*Reliance on other forms of healthcare, including traditional healers and self-medication, was rising (UNDP, 14/11/2014; WHO, 13/11/2014; UNDP, 23/12/2014). In Sierra Leone 43% of respondents changed the place where they seek medical advice, according to a UNDP household survey. 24% indicated a reluctance to use health facilities because the normal facility was no longer operational. 26% said they had lost trust in their facility. 22% were happy with self-medication, either through the purchase of drugs in the pharmacy (18%) or the use of herbs (4%) (UNDP, 12/2014).*
Fear *of health facilities*	*In April 2015, in Liberia, an assessment indicated that fear of Ebola transmission remained a major concern in communities and prevented families from visiting health facilities (ACAPS, 04/2015). Patients suffering from non-Ebola conditions were avoiding professional healthcare due to fear of Ebola and mistrust of the health system (UNDP, 14/11/2014; WHO, 13/11/2014; UNDP, 23/12/2014).*
Distrust *Decreased trust in the health system*	*During an Ebola outbreak, trust in the public health system decreased due to a perceived lack of respect for sick or deceased relatives and inconsistent or inaccurate information (Hewlett, 2008).*
Resistance *Avoiding healthcare workers*	*The annual immunisation campaign in Liberia was marked by poor turnout. Parents hid their children or chased the vaccination team out the village, fearing their children could be given experimental Ebola vaccines. The vaccination targets were not reached in Monrovia (international media, 12/02/2015).*

Now that the different categories of problems have been described, we look at the combined impact on affected populations.

Impacts

Impact	*Example*
Chronic diseases *Disruption of treatment*	*In Liberia, over 60% of facilities distributing antiretroviral medicines were closed during the outbreak (IRIN, 21/11/2014).*
Immunisation *Decreased immunisation coverage*	*Mass vaccination campaigns were postponed to avoid public gatherings during the Ebola outbreak (UNDP, 23/12/2014). Coverage of the third dose of DTP vaccination decreased by 25% between August 2013–14 (PI, 06/02/2015).*
Disease *Increase of communicable and non-communicable diseases*	*The number of HIV cases could have increased since health facilities remained non-functional for months. New HIV-positive patients were not identified, leading to further transmission of the virus (IRIN, 21/11/2014; UNAIDS, 31/10/2014).*
Maternal health *Deterioration in maternal and child health status*	*Decreased availability of and access to maternal health services likely increased rates of maternal and infant mortality (UNDP, 12/2014; international media, 10/10/2014).* *There were concerns that severe acute malnutrition in children under five increased as well (UNMEER, 03/11/2014).*
Emergency *Deterioration of emergency services*	*Only a minority of hospital specialists and technicians were still working. Consequently most emergency responses could not be carried out, leading to a gap in the delivery of critical life-saving operations (international media, 15/08/2014).*

Impacts

Impact	*Example*
Grief *Deterioration of mental health*	*In Sierra Leone, the trauma of the Ebola crisis put people at increased risk of mental health problems, due to reduced access to community support systems and normal coping strategies (International Medical Corps, 09/01/2015). The population struggled with grief and complex psychological needs, including fear and worry, isolation, disconnection, and separation (Mercy Corps, 09/01/2015).*
Utilisation *Decreased number of visits*	*In Guinea, hospital visits decreased by 53% in October 2014, medical appointments by 59%, and vaccinations by 30% (UNMEER, 31/10/2014).*
Migration *Move to urban areas*	*Lack of health workers and ETUs in rural areas led many to move to urban areas (IDMC, 19/11/2014).*
Quality *Inadequate training and supply*	*Distrust in public health facilities increased. Inadequate training in infection prevention control (IPC) and limited supply and poor quality of protective materials led to the spread of Ebola in health facilities and among health staff (UNDP, 23/12/2014).*
Mortality *Increase of non-Ebola related morbidity and mortality*	*The lack of detection of potential outbreaks, suspension of vaccination campaigns, and a decrease in services provided at health facilities likely significantly increased morbidity and mortality related to preventable and treatable diseases (ACAPS, 26/02/2015).*
Other	*Stress on scarce services, increase of mortality of disease (fatality per case) (UNMEER, 29/10/2014).*

Typical assistance needs

+ Enhanced IPC measures
+ Sensitisation campaigns: on Ebola itself, transmission, IPC measures, and on health services to rebuild trust with the affected population and health practitioners
+ Timely payment of salaries and risk allowances to frontline workers and volunteers
+ Recruitment and training of health workers
+ Community health education
+ Emphasis on mental health
+ Mobile clinics to reach people in quarantine
+ Available and affordable drugs

Secondary problems of a large-scale Ebola outbreak

Availability	*Accessibility*	*Utilisation*	*Awareness*	*Quality*
+ *Decrease of non-Ebola health service expenditure* + *Closure or repurposing of non-Ebola health facilities* + *Limited equipment available for non-Ebola health procedures* + *Limited medicine available for non-Ebola health activities* + *Strain on testing capacities for non-Ebola purposes* + *Disruption of surveillance of communicable and non-communicable diseases* + *Lack of medical staff for non-Ebola procedures* + *Disruption of non-Ebola health programmes*	+ *Restriction on people's movement* + *Limited access to communities* + *Lack of financial resources* + *Denial of care*	+ *Change of health-seeking behaviour* + *Fear of health facilities* + *Decreased trust in the health system* + *Resistance towards healthcare workers*	+ *Lack of reliable information* + *Lack of regular information* + *Association of health facilities and practitioners with Ebola* + *Limited information on health services available* + *Lack of information on impact of the disease on non-Ebola health services*	+ *Neglect of non-Ebola health activities* + *Sharing of private medical information*
Reduction in availability of health services	Reduction in access to health services	Reduction in utilisation of health services	• Limited awareness of health services available • Limited awareness of Ebola transmission and risks	Lack of quality care

Secondary impacts of a large-scale Ebola outbreak

+ *Disrupted treatment of chronic diseases*	+ *Decreased number of visits to health facilities*
+ *Decreased immunisation coverage*	+ *Migration to urban areas*
+ *Increase of communicable and non-communicable diseases*	+ *Inadequate training and supply of health staff*
+ *Deterioration in maternal and child health status*	+ *Increase of non-Ebola related morbidity and mortality*
+ *Deterioration of emergency services*	+ *Stress on scarce services*
+ *Deterioration of mental health*	+ *Increased mortality of disease (fatality per case)*

WASH – Likely humanitarian problems and impacts

INTRODUCTION

+ This section focuses on the impact of the West Africa Ebola outbreak on **non-Ebola related WASH services**.
+ The Ebola outbreak severely impacted the WASH sector: for every doctor and three nurses working at an ETU there were approximately 26 WASH staff. This meant that non-Ebola related WASH activities were constrained.
+ During the crisis people had to explore alternative water sources and sanitation facilities, particularly if in quarantine.
+ Uncollected waste built up due to logistical and movement restrictions. This was exacerbated by the need to safely manage waste produced as part of the Ebola response, such as used personal protective equipment or bedding and clothes used by Ebola patients.
+ Ebola facilities increased the strain on weak WASH systems, causing additional environmental damage through improper disposal of waste products and incineration.
+ Remote rural areas and urban slums are the most vulnerable and most affected by a weakened WASH sector.
+ Investment in and monitoring of WASH activities in health and education facilities increased. Improved WASH in facilities and improved community hygiene may be positive consequences of the Ebola response.
+ **Aggravating factors** include low WASH baseline indicators and floods which can increase the transmission of water and vector-borne diseases.

Each following table looks at the multiple problems, organised by category – availability, accessibility, awareness, quality and utilisation.

Problem: Availability

Problem	*Example*
Water *Limited water available*	*Each Ebola facility requires 200–400L per day per patient. This likely meant a huge diversion of water from the local population to Ebola centres, particularly in large urban areas. The exact number of people affected by the diversion remains unknown. In Freetown, it was estimated that between 1.3–15% of water was diverted (PI 04/2015; PI 02/2015; WHO 02/2015).*
Strain on regular services *Infrastructures repurposed or closed*	*Some regular WASH services were suspended and/or activities interrupted (PI, 23/01/2015). Large infrastructure projects were stalled as contractors left at the Ebola outbreak and funds were diverted to the response (WASH Sector, 02/2015).*
WASH personnel *Lack of staff*	*For every doctor and three nurses working at an ETU there were approximately 26 WASH staff. Most of the WASH staff were recruited locally. This meant a huge diversion of personnel towards Ebola treatment centres (ETCs) (London School of Hygiene and Tropical Medicine, 12/01/2015).*

Problem: Accessibility

Problem	*Example*
Containment measures *Restriction of people's movements*	*Movement restrictions severely affected people's access to WASH facilities (ACAPS, 19/05/2015). Access to facilities for skilled personnel, such as maintenance teams and IPC professionals, was hampered (Early Recovery Strategy, May 2015).*
Stock supply *Restriction of goods' movements*	*In Guinea, community resistance to the Ebola response was widespread. This made it difficult to transmit information to the population (PI, 13/02/2015; UNMEER, 18/02/2015).*
Stigmatisation *Denial of access*	*The restrictions and border closures hampered imports of essential water treatment products, such as chlorine (Early Recovery Strategy, May 2015).*
Resistance *Hiding from WASH actors*	*Actors trying to promote better hygiene and sanitation practices were resisted by communities, who did not want to let them in their villages (ACAPS, 24/04/2015).*

Problem: Awareness

Problem	Example
Misinformation *Lack of reliable information*	*Many people believed that the widely used disinfection spray, which contained chlorine, also contained the Ebola virus. They believed that the spray was a propagation factor, and as a result refused to let their houses decontaminated (Scidev, 29/04/2015).*
Stigmatisation *Association of WASH facilities and practitioners with Ebola*	*Rumours that drinking-water wells were being poisoned by the government, to cash in on the international aid meant for addressing the crisis, created stigma towards wells (The Guardian, 20/08/2014).*
Information flows *Lack of information on available WASH services*	*Initially responders emphasised the use of chlorine as an IPC measure, over soap and water. As a result, chlorine sold fast and disappeared from the supermarkets. The population did not know what to use instead or where to find chlorine (KI, 25/11/2015).*
Indirect Ebola impact *Lack of information on impact of the disease on non-Ebola services*	*Limited availability of information led to a sporadic and incomplete picture of the exact impact of Ebola on the WASH sector in all three countries. Humanitarian actors focused the data collection on WASH priorities already identified in the recovery and response strategy, rather than attempting to get a holistic view of Ebola's impact on WASH more generally (ACAPS, 19/05/2015).*

Problem: Utilisation

Problem	*Example*
Fear *of chlorine*	*In Sierra Leone chlorine was perceived as a means of killing people, and in some areas still is. Consequently people refused to use it (PI, 28/09/2015).*
Misuse *Improper use of chlorine*	*Many reported that chlorine was used improperly as people perceived it as a "cure" for Ebola. Cases of chlorine poisoning were frequent (CDC, 06/11/2014).*

Problem: Quality

Problem	*Example*
Effectiveness *Suspension of activities*	*It is estimated that 800,000 consumers in the Sierra Leone districts of Bo, Kenema, and Makeni did not benefit from the Three Towns Water Supply Project. This project, planned before the outbreak , aimed to improve water supply, sanitation capacity and service delivery (Early Recovery Strategy group, 02/2015).*
Maintenance *Lack of maintenance of services*	*Several maintenance routines were stopped (IRIN, 14/10/2014).*

Coping strategies

+ Open defecation
+ Migration to areas with available WASH facilities and health practitioners
+ Reduced water consumption

Typical assistance needs

+ Frequent safe water distributions
+ Access to sanitation
+ Reliable waste management systems
+ Sensitisation campaigns
+ WASH staff training
+ Timely payment of salaries and risk allowances to frontline workers and volunteers
+ Maintenance and repairs to existing water and sanitation infrastructures

Now that the different categories of problems have been described, we look at the combined impact on the affected populations.

Impacts

Impact	*Example*
Additional strain *Stress on scarce services*	*Efforts to contain Ebola put a strain on regular WASH infrastructures, which did not have the capacity meet the demand. This led to a breakdown of facilities in communities and public institutions (PI, 23/01/2015).*
Maintenance *Lack of maintenance of WASH infrastructures*	*Lack of maintenance and the disruption of development programmes were the main WASH sector consequences of the Ebola outbreak in the three countries (PI Sierra Leone, 04/2015).*
Quality *Gap in service provision*	*The Ebola emergency exposed the deterioration in capacity and quality of WASH services in urban centres. It highlighted the gap in service provision and WASH professionals to vulnerable communities, especially to slum residents in the three countries (Cities Alliance, 2008).*
Water *Reduced water consumption*	*Remote communities had to travel further and had more logistical challenges finding alternative improved facilities and safe drinking water (Stratégie de relance, 2015).*
Investment in facilities *Neglect of communities*	*Most WASH-related aid efforts were focused on facilities rather than communities. Humanitarian actors saw the immediate improvement of WASH standards in facilities as the most achievable goal (ACAPS, 19/05/2015).*
Sensitisation *More sensitisation to stop the spread of Ebola*	*Communities gained better hygiene awareness (PI, 23/01/2015). In Sierra Leone, more than 90% of respondents had changed their behaviour since learning of Ebola. Washing hands with soap and water was the most common action taken (IFRC, 03/2015).*
Hygiene *Improvement of hygiene practices*	*In Sierra Leone, some districts saw a significant increase in hand-washing. Compared with the 2013 Sierra Leone Demography and Health Survey, the January 2015 IFRC Knowledge, Attitudes and Practices survey saw the proportion of people in Koinadugu reporting regular hand-washing with soap and water increased from 5% to above 90% (IFRC, 01/2015, SLDHS, 02/2013).*
Other	*Deterioration of hygiene conditions, increase in communicable diseases, increased morbidity and mortality.*

Secondary problems of a large-scale Ebola outbreak

Availability	*Accessibility*	*Utilisation*	*Awareness*	*Quality*
+ *Limited water available* + *WASH infrastructures repurposed or closed* + *Lack of staff*	+ *Movement of people restricted* + *Movement of goods restricted* + *Denial of access to WASH services* + *Resistance towards WASH actors*	+ *Fear of chlorine* + *Misuse of chlorine*	+ *Lack of reliable information* + *Association of WASH facilities and practitioners with Ebola* + *Lack of information on WASH services available* + *Lack of information on impact of the disease on non-Ebola services*	+ *Suspension of activities* + *Lack of maintenance of services*
Reduction in availability of WASH services	Reduction in access to WASH services	Reduction in utilisation of WASH services	• Limited awareness of WASH services available • Limited awareness of Ebola transmission and risks	Lack of appropriate services

Secondary impacts of a large-scale Ebola outbreak

+ *Stress on scarce services*
+ *Lack of maintenance of WASH infrastructures*
+ *Gap in service provision*
+ *Reduced water consumption*
+ *Investment in facilities and neglect of communities*
+ *Decreased number of visits to health facilities*
+ *Migration to urban areas*
+ *Inadequate training and supply of health staff*
+ *Increase of non-Ebola related morbidity and mortality*
+ *Stress on scarce services*
+ *Increased mortality of disease (fatality per case)*

Protection – Likely humanitarian problems and impacts

INTRODUCTION

+ Containment measures generated deep frustration, as they disproportionally impacted people's lives and livelihoods.
+ The security situation gradually deteriorated over the course of the epidemic. The Ebola crisis aggravated citizens' lack of trust in their governments and exacerbated social tensions.
+ Children and women were deeply affected by the Ebola outbreak. Orphans were extremely vulnerable and often in critical situations.
+ Stigmatisation had a range of harmful effects on vulnerable groups, notably in terms of access to and use of basic and essential services, socialisation, emotional distress and livelihoods.
+ Aggravating factors included high levels of pre-crisis insecurity and pre-existing ethnic, religious and social tensions.

Each following table looks at the multiple problems, organised by category – availability, accessibility, awareness, quality and utilisation.

Problem: Availability

Problem	Example
Closure of police stations *Limited safe spaces*	*Several police stations in Monrovia, Liberia, closed during the Ebola outbreak (AFP, 30/09/2014).* *In Sierra Leone, many sexual assault and domestic violence clinics were closed (IRIN, 04/02/2015).*
Diversion *Security forces redirected towards fight against Ebola*	*Security forces played a central role during the outbreak as they were charged with enforcing quarantines and movement restrictions (HRW, 15/09/2014).* *Several officers died of Ebola, limiting the number of civilian forces available (AFP, 30/09/2014).*
Suspension *Lack of judicial services*	*In Sierra Leone, courts did not sit, were suspended or reduced operations for a year, resulting in an increased backlog of cases (UNDP, 14/04/2015).*

Problem: Accessibility

Problem	*Example*
Containment measures *Restriction of people's movements*	*Procedures restricting travel may have had a serious impact on the ability of the elderly or the disabled to receive support (UNDP, 26/03/2015).*
Stigmatisation *Denial of protection*	*There are reports of survivors being evicted from their homes after being discharged from ETCs, due to stigma. Frontline workers were also evicted from their homes (PCCR, 30/09/2015; international media, 30/09/2015; BRC, 25/09/2015).*
Resistance *towards law and order staff*	*In Sierra Leone, some quarantined residents disarmed a soldier who was deployed to guard their residence in Barmoi town, Kambia district (All Africa, 29/04/2015).*

Problem: Awareness

Problem	Example
Misinformation *Lack of reliable information*	*There was confusion among quarantined people, who did not know under which conditions they were allowed to leave their houses (PI, 17/09/2015).*
Stigmatisation *People associated with Ebola*	*Survivors and their households, grieving families, orphans and frontline workers were blamed for keeping Ebola in the communities, infecting loved ones or preventing burials (ACAPS, 11/11/2015).*
Indirect Ebola impact *Lack of information on impact of the disease on non-Ebola services*	*Security systems were centred primarily on security and on traditional risks, such as conflict or natural disasters. They were not able to integrate early on with ministries of health and other institutions dealing with non-traditional emergencies (UNDP, 26/03/2015).* *During the outbreak, there was no comprehensive view of the support structures that were disrupted during the quarantine (PI, 16/10/2015).*

Problem: Utilisation

Problem	Example
Fear *of military personnel*	*Armed forces were mobilised to screen people for Ebola symptoms and enforce curfews (INGO, 18/09/2014). In Liberia, people were fleeing and screaming at the sight of a soldier or policeman, whether they were involved in the Ebola response or not (International media, 21/08/2014)*
Fear *of quarantine*	*During the Ebola outbreak, some patients ran away from contact-tracers or ETCs, fearing quarantine (Reuters, 06/09/2014; Ebola deeply, 17/08/2015)*

Problem: Quality

Problem	*Example*
Effectiveness *Services unable to fully function*	*The Ebola emergency left fragile judicial institutions weaker and less effective (UNDP, 14/04/2015).* *Due to a lack of doctors to examine women who were sexually assaulted, victims of sexual violence had no medical evidence to take to the courts, even if they were open (IRIN, 04/02/2015).*
Human rights *Violation of international standards*	*In Sierra Leone, unnecessary detentions under the emergency regulations led to severe overcrowding in detention centres in violation of international human rights conventions (UNDP, 14/04/2015).* *Quarantines imposed during the epidemic were frequently not based on scientific evidence and too broad. This disproportionately impacted people unable to evade the restrictions, including the elderly, the poor, and people with chronic illness or disability (HRW, 15/09/2014).*

Coping strategies

+ Displacement of population to safer areas
+ Avoidance of insecure areas
+ Sending children to safer places
+ Formation of self-defence or vigilante groups

Typical assistance needs

+ Social awareness campaigns
+ Food assistance
+ Targeted support such as counselling and psychosocial and training supports
+ Mediation with families
+ Community engagement
+ Community reconciliation initiatives

Now that the different categories of problems have been described, we look at the combined impact on the affected populations.

Impacts

Impact	*Example*
Breakdown of law and order *Threat to the safety of the country*	*UN and national officias warned of the serious threat Ebola posed to the safety of the countries. In a statement to the UN Security Council on 9 September 2014, the Liberian Defence Minister warned that Liberia's national existence was "seriously threatened" by Ebola (AFP, 23/09/2014).*
Criminality *Increased armed attacks*	*In the poorest parts of Monrovia and Nimba county, Liberia, armed attacks and opportunistic crime increased during the Ebola outbreak (DRC, 24/09/2014; UNMEER, 12/11/2014). Extortion and bribery were reported in places under quarantine (HRW, 15/09/2014).*
Tensions *Violence among communities*	*Rising inter-ethnic tensions were observed in late August 2014 in Ganta, Nimba county, Liberia (DRC, 24/09/2014). In Guinea, tensions between President Conde's ethnic group, the Malinke, who make up about 35% of the population, and the Peul ethnic group, about 40% of the population, rose during the Ebola response (local media, 18/10/2014). International Crisis Group warned of a social breakdown over the course of the epidemic (International Crisis Group, 23/09/2014).*
Clash *Fighting between security forces and affected population*	*In Freetown, Sierra Leone, security forces clashed with residents who were protesting over delays in removing the corpse of a suspected Ebola victim. Security forces fired tear gas and live rounds to disperse the crowd that had barricaded the street (Reuters, 14/10/2014).*
Stigmatisation *Rejection*	*Children and Ebola survivors were rejected by their communities and in need of protection (BBC, 30/09/2014). There are still rumours of chasing, lynching and death threats towards survivors in the Bombali and Kambia districts of Sierra Leone, and of local leaders imprisoning survivors on suspicion of transmitting Ebola (PI, 12/10/2015; PI, 30/09/2015).*
Displacement *Forced relocation* *Hygiene*	*Some survivors had to relocate because they faced strong stigmatisation after returning from hospital (IDMC, 19/11/2014).*
Protection status *Deterioration of protection status of vulnerable groups*	*In Sierra Leone, health authorities raised concerns about patients being abandoned by their families at hospitals, even after testing negative for Ebola. A lot of people came to hospitals due to fears of being reprimanded by officials during potential house searches (international media, 05/01/2015).*
Quality *Additional financial burden*	*The pressure of caring for increased numbers of orphans might have resulted in lower quality of care (World Bank, 2015/02/01).*
Mistrust *Disproportionate confinement policies*	*Some expressed concerns that quarantine policies in Sierra Leone would jeopardise trust between patients and healthcare practitioners (The Public Library of Science, 05/11/2014).*
Resistance *towards humanitarian responders*	*The epidemic has been characterised by incidents of resistance to the response. In several areas these incidents were violent and this impacted humanitarian access to certain communities. At times humanitarian actors had to temporarily suspend their activities because of insecurity (IFRC, 12/02/2015).*

Secondary problems of a large-scale Ebola outbreak

Availability	*Accessibility*	*Utilisation*	*Awareness*	*Quality*
+ *Closure of facilities* + *Security forces redirected towards fight against Ebola* + *Lack of judicial services*	+ *Restriction of people's movements* + *Denial of protection* + *Resistance towards law and order staff*	+ *Fear of military personnel* + *Fear of quarantine*	+ *Lack of reliable information* + *Stigmatisation of people associated with Ebola* + *Lack of information on impact of the disease on non-Ebola services*	+ *Services unable to fully function* + *Violation of international standards*
Reduction in availability of social services	Reduction in access to social services	Reduction in utilisation of social services	• Limited awareness of social services available • Limited awareness of Ebola transmission and risks	Lack of appropriate services

Secondary impacts of a large-scale Ebola outbreak

+ *Breakdown of law and order*
+ *Increased armed attacks*
+ *Violence among communities*
+ *Fighting between security forces and affected population*
+ *Stigmatisation and rejection*
+ *Displacement*
+ *Deterioration of protection status of vulnerable groups*
+ *Additional financial burden*
+ *Resistance towards humanitarian responders*

Education – Likely humanitarian problems and impacts

INTRODUCTION

- Schools were closed for months during the Ebola outbreak, in the three countries. Even after they reopened, a long lasting impact on education could be seen. The outbreak heightened the risk of children dropping out of school.
- Families struggled to afford sending their children to school, such was the impact on livelihoods. Some needed children to contribute to the family income, to compensate for additional expenses.
- Once schools reopened, a drop in the number of students was reported. This is partly because children who sought work when their school was closed were now engaged in economic activities, and were rarely encouraged to return to school.
- Lingering concerns of Ebola infection about schools prevented some families from sending their children back to school in 2015.
- **Aggravating factors** include low levels of school attendance pre-crisis and a high level of child labour.
- **Coping strategies** are mainly finding alternative education programmes (students groups, private teachers).

Each of the following tables looks at the multiple problems, organised by category – availability, accessibility, awareness, quality and utilisation.

Problem: Availability

Problem	*Example*
School closures *Lack of schools*	*Five million children lost almost a year of education due to school closures (UNICEF, 12/03/2015).*
Diversion *Teachers redirected to other activities*	*Teachers were trained as social mobilisers for sharing information and educating communities about Ebola. In Sierra Leone over 7,000 teachers were included as social mobilisers (Education Cluster, 26/02/2015).* *In Liberia, in the assessed schools, 18 teachers contracted Ebola, of whom 15 died (Education Cluster, 02/2015).*
Diversion *Social workers reassigned to other activities*	*Social workers, involved in family mediation programmes to send children to schools, were reassigned towards Ebola related activities such as sensitisation campaigns (PI, 30/09/2015; 14/10/2015).*
School material *Lack of education materials*	*Many children reported not having learning materials (textbooks, paper, pens) as they had been used for other purposes (Save the Children, UNICEF, Plan, World Vision, 01/10/2015).*

Problem: Accessibility

Problem	*Example*
Containment measures *Restriction of people's movements*	*Children in quarantine were not able to go to school (PI, 27/09/2015).*
Income *Lack of financial resources*	*Many families lost their daily income because of Ebola and did not have the funds to send their children back to school (BBC 20/02/2015; MdM, 18/09/2015).*

Problem: Awareness

Problem	*Example*
Misinformation *Lack of reliable information*	*Lack of awareness among parents about safe school reopening, through the implementation of protocols, was a challenge (UNICEF, 04/03/2015).*
Stigmatisation *Association of teachers with Ebola*	*Some teachers were involved in the Ebola response. When they returned to their original job, some were refused due to fear of Ebola (IRIN, 11/06/2015).*
Lack of information *Confusion about schools reopening*	*The confusion over official school reopening dates, delayed multiple times, led to low student attendance once they actually reopened in March 2015 in Liberia (UNMEER, 2015/03/02).*

Problem: Utilisation

Problem	*Example*
Fear *of school*	*In Liberia, an ACAPS assessment conducted in April indicated fear of Ebola remained a concern and continues to prevent families from sending their children to school. The fear was reported countrywide, regardless of whether the county had seen a high number of Ebola cases (ACAPS, 04/2015).*
Grief *Emotional stress prevented children from returning to school*	*Some children who lost one or both parents to Ebola faced considerable mental health issues, from their experience of the disease and witnessing death and suffering. This led to significant emotional stress and prevented them returning to their previous life (The Guardian, 27/10/2015).*
Incentive *Children engaged in economic activities*	*During school closures, some children sought work and were engaged in economic activities when schools reopened. As a result, their families relied on the income they generated and rarely encouraged them to return (Street Child, 14/10/2015).*

Problem: Quality

Problem	*Example*
Maintenance *Lack of maintenance of facilities*	*The infrastructure of many schools had been damaged, as they had been closed for months in the three countries. Maintenance of facilities did not take place during the emergency (Education Cluster, 02/2015).*

Now that the different categories of problems have been described, we look at the combined impact on affected populations.

Impacts

Impact	*Example*
School drop-out *Less attendance*	*Schools were closed during the outbreak. A drop in the number of students was reported once they reopened in Sierra Leone, in September 2015 (Street Child, 14/10/2015).*
Vulnerability *Children at higher risk of abuse*	*Children who dropped out of school faced an increased risk of abuse, such as child labour, sexual exploitation and early marriage (Child Protection sub-cluster, 2015; IRIN, 07/10/2015; Street Child, 13/02/2015).*
Knowledge *Loss of education*	*Knowledge loss, reversal in literacy and interruption of the development of children was the main consequences of school closures (ACAPS Assessment Sierra Leone, 04/2015).*
Confidence *Loss of self-esteem*	*Loss of confidence and self-esteem were reported, due to a lack of social interaction with school friends and loss of education (Plan International, 2015; Save the Children, UNICEF, Plan, World Vision, 01/10/2015).*
Quality *Lack of quality of teaching*	*The quality of teaching and learning would have decreased, as less teachers were available (Education Cluster, 03/10/2014).*

Typical assistance needs

+ Alternative education programmes through distance approaches, such as daily school radio programmes
+ Psychosocial support
+ Distribution of radios
+ Training of teachers
+ School feeding programmes
+ Ebola IPC measures in schools
+ Improvement and rehabilitation of school infrastructures
+ Regular payment of school staff
+ Sensitisation campaigns
+ Mediation with families to send the children to school
+ Livelihood support
+ Education advocacy with community leaders

Secondary problems of a large-scale Ebola outbreak

Availability	*Accessibility*	*Utilisation*	*Awareness*	*Quality*
+ *Lack of schools* + *Teachers redirected to other activities* + *Social workers reassigned to other activities* + *Lack of education materials*	+ *Restriction of people's movements* + *Lack of financial resources*	+ *Fear of school* + *Grief preventing children returning to school* + *Lack of incentive for children engaged in economic activities*	+ *Lack of reliable information* + *Association of teachers with Ebola* + *Confusion about schools reopening*	+ *Lack of maintenance of schools*
Reduction in availability of education services	Reduction in access to education services	Reduction in utilisation of schools	• Limited awareness of schools available • Limited awareness of Ebola transmission and risks	Lack of appropriate education

Secondary impacts of a large-scale Ebola outbreak

+ *School drop-out*
+ *Children at higher risk of abuse*
+ *Loss of education*
+ *Loss of confidence and self-esteem*
+ *Lack of quality of teaching and learning*

Food security and Livelihoods – Likely humanitarian problems and impacts

INTRODUCTION

+ Reduced food trade, rising prices, and lower domestic harvests, all undermined a fragile food security situation.

+ Control measures implemented to contain the outbreak, such as border closures, quarantine, and curfews, reduced the movement and availability of food, goods, and services in the region. This led to panic buying, food shortages and increased basic food and commodity prices. Higher food prices and the loss of purchasing power meant an increasing number of vulnerable households were resorting to negative coping strategies in order to access food.

+ Changes to household structures affected grieving families' income.

+ Farmers who were quarantined were unable to harvest their fields, affecting their agricultural output.

+ Aggravating factors include a high pre-crisis level of food insecurity, poverty and unemployment, global market prices and natural disasters impacting crops (floods, droughts).

Each following table looks at the multiple problems, organised by category – availability, accessibility, awareness, quality and utilisation.

Problem: Availability

Problem	*Example*
Labour shortage *Limited workforce available*	*Farmers abandoned crops and livestock as they moved to areas perceived as safer from exposure to the Ebola virus (WFP, 09/10/2014). The majority of Ebola victims were between 15–45 years old and were often the main income providers. Various farming activities, including crop maintenance (such as weeding, fencing and application of chemicals) and harvesting of staple crops were disrupted, due to labour shortages (FAO GIEWS, 28/01/2015). In Kenema and kailahun, in Sierra Leone, 71% of the interviewed households struggle to find labourers for their farms (DWHH, 09/10/2014; FAO, 22/10/2014).*
Production *Limited food production*	*In Guinea, the production target for paddy rice was 2.2 million metric tons, but only 2 million tonnes were produced (OECD, 05/2015).*
Closure *of markets and businesses*	*In Liberia, 60% of markets outside Monrovia were closed or scaled down (UNMEER, 13/10/2014). In Liberia, only 50% of people working in the wage employment sector were still working in November 2014, because of business or government office closures (World Bank, 19/11/2014).*
School feeding programmes *Interruption of programmes*	*School feeding programmes stopped in Sierra Leone, due to government school closures. Of the almost 2 million children affected by school closures, nearly 1.6 million were in school feeding programmes (WB 08/10/2014).*
Diversion *Activities stopped or reduced*	*Businesses reduced their activities. Mining and road works stopped because of the outbreak and emergency regulations. Several international companies temporarily ceased their activities. Working hours were increasingly limited by curfews and movement restrictions. Private sector reports mentioned reductions in working hours, especially from July to December 2015 (ACAPS Assessment Sierra Leone, 04/2015).*
Assistance system *Disruption of agricultural support system*	*Support activities, normally conducted by national support services and international agencies (NGOs, United Nations), were halted (OECD, 05/2015).*

Problem: Accessibility

Problem	*Example*
Containment measures *Restriction of people's movements*	*Restrictive confinement policies hampered access to food and markets. Traders were unable to travel to buy food and farmers unable to harvest their crops in Liberia, due to roadblocks and movement restrictions (FAO, 05/09/2014).*
Containment measures *Restriction of goods' movement*	*Due to containment measures, local markets closed and exports stopped (several airlines suspended flights). Significant quantities of perishable agricultural products were lost (OECD, 05/2015).* *In Sierra Leone, thousands of people were forced to violate Ebola quarantines to find food because deliveries were not reaching them (AlJazeera, 05/11/2014).*
Income *Lack of financial resources*	*The majority of Ebola victims were 15–45 years old and were often the main income providers, leading to reduced income among affected households (FAO GIEWS, 28/01/2015).*
Stigmatisation *Denial of food*	*In Liberia, incidents of shunned Ebola victims and survivors left to die, being denied food or shelter by the rest of the village were reported (international media, 12/08/2015).*
Stigmatisation *Denial of job*	*People affected by Ebola have been stigmatised by employers, preventing them from finding new jobs or returning to old ones (PI, 23/09/2015; IRIN, 11/06/2015).*

Problem: Awareness

Problem	*Example*
Stigmatisation *Association of workers with Ebola*	*Many survivors were told they could not sell food at community markets as people were scared to catch Ebola (NPR, 17/10/2014).*
Indirect Ebola impact *Lack of information on impact of the disease on services*	*There were difficulties obtaining information on the consequences of the Ebola outbreak. Information became outdated very quickly and regular field-based assessments were not taking place. In addition, it was difficult to assess the reliability of information collected on humanitarian needs due to the Ebola outbreak (WFP, 11/2014).*

Problem: Utilisation

Problem	*Example*
Fear *of food infection*	*Reports of people refusing to buy food from survivors were frequent in the three countries (NPR, 17/10/2014).*
Fear *of labour force*	*Families and agricultural labour workers became increasingly scared to engage in the usual communal farm labour, due to fear of exposure (ACAPS Assessment Sierra Leone, 04/2015).*

Problem: Quality

Problem	*Example*
Quality of diet *Ban on bush meat*	*The ban on bush products degraded the quality of the diets of households, by decreasing the quantity of protein ingested (JRC, 12/2014).*

Coping strategies

+ Reduction of number and quality of meals (IRIN, 20/10/2014).
+ Spending a larger proportion of household income on food (Mercy Corps, 04/11/2014).
+ Consumption of less-preferred foods: substitution of rice consumption with cassava (WFP, 29/10/2014).
+ Incurring debt to purchase food (WFP, 29/10/2014).
+ Selling personal, household and productive assets (WFP, 27/10/2014).
+ Adult household members limiting their food consumption for the benefit of their children (WFP, 2014/10/27).
+ Migration
+ Child labour

Typical assistance needs

+ Food support (UN, 13/08/2014).
+ Cash transfers
+ Nutritional substitutes
+ School feeding programmes

Now that the different categories of problems have been described, we look at the combined impact on affected populations.

Impacts

Impact	*Example*
Prices *Increased food market prices*	*In Liberia, a sharp price increase for imported rice was reported in the most-affected counties, including Bomi (+18%), Lofa (+12%), Maryland (+42%), and Nimba (+36%) (WFP, 27/10/2014).*
Negative coping mechanisms *Reduced quantity and quality of meals*	*Reduction of food consumption was cited by 33% of informants, and was more frequently mentioned in high exposure districts (WA Urban and Port Loko) (ACAPS Assessment Sierra Leone, 04/2015).*
Negative coping mechanisms *Increased borrowing and debt*	*In Conakry, a large proportion of households reported incurring debt to purchase food (WFP, 29/10/2014).*
Livelihood *Reduction in income/wage*	*In Liberia, household income dropped by 35% as of October, due to the consequences of the Ebola outbreak (UNDP, 14/11/2014). Urban households were more affected by market closures, given their greater reliance on market supplies. Diminished purchases by traders also had a negative impact on rural household income (GIEWS, 02/09/2014).*
Criminality *Increased criminality*	*Increased criminal activity was mentioned as a key consequence of increased food insecurity by one third (31%) of respondents, especially among medium exposure districts (Kailahun and Kenema) (ACAPS Assessment Sierra Leone, 04/2015).*
Production *Limited food production, trade and exports*	*In Guinea, rice production was estimated to have fallen by 20%, or 190,000 metric tons. Coffee production halved in 2014 and cocoa production declined by a third. Corn production declined by 25%. Fish exports fell by more than 40% (World Bank, 02/12/2014).*
Hunger *Reduction of food consumption*	*Hunger and starvation were mentioned by 69% of the respondents as the main consequence of the Ebola crisis. Similar results were obtained across all districts (ACAPS Assessment Sierra Leone, 04/2015).*
Health *Deterioration of the health status*	*Increased morbidity and deterioration of the health status of the population was mentioned by 37% of respondents (ACAPS Assessment Sierra Leone, 04/2015).*
Economic slowdown *Increased unemployment*	*In Liberia, unemployment rates rose due to the general economic slowdown and closure of many industries (Cadre Harmonise, 16/03/2015).*
Poverty *Increased poverty*	*Over 32% of respondents saw increased poverty as the main consequence of the Ebola crisis (ACAPS Assessment Sierra Leone, 04/2015).*
Livelihood *Increased economic burden*	*The high number of Ebola-related deaths profoundly affected household structures. In most cases, it increased the burden on heads of households. They had to survive on a lower income and had to take additional responsibility for orphaned children (ACAPS, 11/2015).*
Other	*Increased stigma, malnutrition and dependency on food aid.*

Secondary problems of a large-scale Ebola outbreak

Availability	*Accessibility*	*Utilisation*	*Awareness*	*Quality*
+ *Limited workforce* + *Limited food production* + *Closure of markets and businesses* + *Interruption of school-feeding programmes* + *Economic activities stopped or reduced* + *Disruption of agricultural support system*	+ *Restriction of people's movements* + *Restriction of goods' movement* + *Reduced income* + *Denial of food* + *Denial of jobs*	+ *People not using available food* + *People not filling available jobs*	+ *Workers associated with Ebola* + *Lack of information on impact of Ebola*	+ *Lack of reliable information on safety rules regarding food* + *People lacking knowledge of the disease and transmission*
• Reduction in availability of food • Reduction in livelihood	• Reduction in access to food • Reduction in access to livelihood	• Reduction in utilisation of food • Reduction in utilisation of livelihood	• Limited awareness of food available • Limited awareness of Ebola transmission and risks	Lack of appropriate food

Secondary impacts of a large-scale Ebola outbreak

+ *Increased food market prices*	+ *Deterioration of the health status*
+ *Reduced quantity and quality of meals*	+ *Increased unemployment*
+ *Increase borrowing and debt*	+ *Increased poverty*
+ *Reduced income/wage*	+ *Increased economic burden*
+ *Increased criminality*	+ *Increased dependency on food aid*
+ *Limited food production, trade and exports*	+ *Deterioration in the nutritional status of the population*
+ *Reduced food consumption*	+ *Increased malnutrition*

Conclusion

The previous sections outlined the main secondary problems and impacts of an Ebola outbreak. Across all sectors, five main causes were identified:

- **Resources were diverted and reassigned** towards the fight against Ebola.
- **Ebola cases and deaths** often meant the loss of the main family breadwinner, limiting household resources.
- **Containment measures** such as quarantines, curfews and roadblocks, hampered people's access to services (health, protection, education) and prevented them from working.
- **Fear** had detrimental effects on service usage, creating rumours and panic.
- **Limited public knowledge** of the disease triggered misinformation, rumours and panic.

Lessons Learned and Good Practices

This section provides some lessons learned and good practice, identified by ACAPS, based on research and interviews with key informants in the three affected countries and Geneva. The following list is not intended to be comprehensive, so much as a compilation of examples of initiatives that had some positive impacts.

Sectoral Lessons Learned and Good Practices

Health

- Identify the mental health and psychosocial needs of patients earlier, to respond to growing mental health needs. In Sierra Leone, the Ministry of Health and Ministry of Social Affairs ran some joint pilot operations. Social workers worked alongside clinicians, to better identify patients' mental health needs and facilitate the referral process (PSS pillar, 12/10/2015).

- Prioritise communication campaigns and community engagement to regain the trust in the health system of the affected population. In Liberia, after the end of the outbreak, a lot of outreach was done to convince affected communities to go back to clinics, especially for antenatal and post-natal care (PI, 05/10/2015).

- Put specific structures in place to care specifically for Ebola patients. This will reassure populations and diminish fear. Structures, like Community Care Centres in Sierra Leone, which isolated Ebola patients waiting for transfer to an ETC, proved to be successful. There was a clear separation between facilities handling Ebola patients and those with other diseases (PI, 05/10/2015).

- Organise communication campaigns to reassure populations and encourage the use of ambulances. Some organisations repainted ambulances, once they were decontaminated, to visually convey a change. Ambulance exhibitions in villages. where community leaders took rides in the vehicles, were also successful in changing people's perceptions (SMAC, 02/11/2015).

WASH

- Facilitate maintenance to improve the WASH sector on a longer-term basis. The international Ebola response had a minor benefit to WASH services in the three affected countries. This needs to be sustained through a shift towards a community-led approach, or the legacy will be short-lived (ACAPS, 19/05/2015).

- Plan short-term construction projects to reduce the disparity in WASH service standards between rural/slum areas and relatively prosperous urban areas. WASH project design should aim to address this disparity and provide longer-term solutions (ACAPS, 19/05/2015).

Protection

- Integrate protection concerns to case management activities, to better respond to secondary protection needs following a large-scale Ebola outbreak. In Sierra Leone, the Protection Consortium mobilised social workers to ask protection-related questions during the daily or weekly checks with the quarantined families, such as "who are you usually taking care of that you are unable to care for since you are under quarantine?". That way, support structures disrupted by

containment policies could be identified and assistance offered to anyone in need (PI, 16/10/2015).

+ Provide safe spaces and fora of communication to children, to ensure that they are able to support one another (Plan International, 2015).

Education

+ Identify the barrier(s) that prevent families from sending children to school, to better reintegrate them. According to the type of barriers, the response needs to be adjusted. In rural areas in Sierra Leone, some families could send their children to schools but did not want to. Advocacy on the value of education addressed this barrier. Families who had a business but insufficient income to send their children to school received grants for their businesses. Families who had no income, and therefore could not afford to send their children to school, received livelihood support (PI, 14/10/2015).

CROSS-SECTORAL LESSONS LEARNED AND GOOD PRACTICES

Containment measures

+ Ensure the timely and reliable delivery of resources (e.g., food and water) and expertise (e.g., contact tracing, and safe and dignified burials) to reassure the affected population and deter quarantine violation (ACAPS, 19/02/2015). During quarantine, responders should not only distribute essential items, like staple food, but also toiletries or more "luxurious" products such as sugar (PI, 28/09/2015).

+ People are more likely to cooperate with self-imposed quarantine measures than enforced quarantine, which proved to be counterproductive (ACAPS, 19/03/2015). Similarly, people are more likely to accept quarantine if their livelihood is secured. In Sierra Leone, government initiatives to employ people to farm the fields of quarantined farmers or to take over businesses while people were quarantined, restored confidence in the government's response (PI, 25/09/2015).

+ Reevaluate the necessity of quarantine and containment measures over the course of the outbreak, to ensure the trust of the population. Once the outbreak became more manageable in Sierra Leone, humanitarian actors reassessed the situation and advocated for less enforced measures (PI, 25/09/2015).

Stigmatisation

+ Frontline workers are likely to be stigmatised during an outbreak. Humanitarian actors need to plan ways to counter the stigma they may face. Rejection of health workers hampered their mobilisation, and affected the containment of the outbreak (France24, 02/09/2014).

+ Plan for economic assistance to support survivors of a stigmatised disease. With HIV/AIDS, financial aid helped patients and survivors get back to normal life after illness (international media, 04/11/2014). The same is likely to be true in the case of the Ebola outbreak.

+ Ensure equity of services between affected groups to reduce stigmatisation. In Sierra Leone, survivors were the only recipients of many services, such as psychosocial support. Other affected groups needed the same service, such as frontline workers or grieving families. Their exclusion led to feelings of resentment towards survivors, which exacerbated their stigmatisation (PI, 02/10/2015).

+ Empowering and mobilising groups, such as prominent members of the community, those who have recovered from the disease, and organisations working at the grassroots level was essential, in the context of HIV/AIDs, to disseminate clear and accurate information about transmission and prevention and to promote stigma reduction. In the long-term, education and clarity on preventative measures were the best ways to reduce stigma (Davtyan and al., 19/09/2014).

Communication and community mobilisation

+ Centralised media messaging from a single official source has proven to be successful at minimising rumours in Nigeria (UNICEF, 24/09/2014). Messaging and

becoming accustomed to new practices as the crisis evolved played a central role in changing populations' attitudes towards frontline workers, safe burials, protective equipment and other factors that were initially marked by fear and scepticism (IRC, 2015; NERC, 24/07/2015).

+ Address the excessive fear that can develop from rumours and misconceptions to reduce stigma and prevent other negative outcomes, such as the lack of utilisation of health services. Regularly providing communities with clear information about the outbreak is vital (ACAPS, 11/11/2015).

+ Engage with the community from the start and throughout the outbreak, to ensure the involvement of the population effectively fighting the disease. The initial Ebola response in West Africa used a top down approach, but it was only when the community got involved and started organising themselves that improvements in the response were seen. Community leaders were proud to say that "they achieved something during Ebola" (SMAC, 02/11/2015).

+ Engage with influence-makers, community and faith leaders to ensure acceptance and change community perceptions. Faith leaders played an important role in promoting messages while taking into account local traditions. They worked with communities to communicate accurate messages about Ebola (Cafod and al., 01/07/2015).

+ The entire community needs to be engaged in social mobilisation efforts to ensure access to information. In Sierra Leone, women were usually the caregivers who looked after the sick and they needed information on how to protect themselves. However, early interventions were only aimed at men. Women were involved very late in social mobilisation campaigns (PI, 22/10/2015).

Accountability

+ To ensure trust from the affected populations, lessons from previous non-Ebola emergencies include the need to emphasise local ownership of the response, ensure participatory processes, make transparency a priority, build capacity to manage funds, and handle complaints effectively (The Guardian, 26/09/2014).

+ Address corruption, mismanagement, and capacity issues that prevent effective management of these types of crises to reinforce public trust in the government. Delegating decision-making to local governments can also help (Foreign Policy, 14/08/2014).

Understanding of the context

+ Understand the context, traditions and customs of a population to ensure the trust and participation of the community and take this into account when programming. Local customs, such as traditional burials during the West Africa Ebola outbreak, played a major role in increasing the transmission of the virus. At the beginning of the outbreak, humanitarian responders approached the crisis with a medical and technical perspectives and neglected the traditional aspect of the disease and the burials. The response perceived the burials as the simple collection and disposal of bodies, while for the affected population these were linked to heritage, territory and identity. The safe burial measures set up by the humanitarian responders to avoid transmission radically changed the way people usually buried their loved ones, which triggered resentment, resistance and trauma from the affected populations towards the responders, hampering the Ebola response (PI, 05/10/2015). Deploying operational anthropologists right at the beginning of an outbreak to support data collection, quickly implement activities that are respectful of local customs and provide recommendations to responders, was needed during this outbreak (PI, 05/10/2015).