LIBERIA

MULTI-SECTOR ASSESSMENT

ACAPS - Ebola Needs Analysis Project

April 2015

acaps

ENAP Ebola Needs Analysis Project

Building Markets
Connecting Entrepreneurs. Creating Jobs. Sustaining Peace.

Acknowledgements
ACAPS' Ebola Needs Analysis Project (ENAP) would like to acknowledge all organisations and individuals who supported this assessment by providing inputs to the questionnaires, assessment design and analysis of the results. We would particularly like to thank InterNews, the Health Cluster, Mercy Corps, the Ministry of Education (MoE), the National Civil Society Council of Liberia, Save the Children, United Nations Children's Fund (UNICEF), United Nations Mission in Liberia (UNMIL) and Women's Campaign International for their support to the selection of appropriate key informants (KIs).

Background to ACAPS, ENAP and Building Markets
The Assessment Capacities Project (ACAPS) is a non-profit initiative backed by a consortium of three non-government organisations (NGOs), Action Contre la Faim, Norwegian Refugee Council and Save the Children International. It was created in December 2009, with the aim of supporting the humanitarian community with needs assessments.

In November 2014, ACAPS launched a project to better analyse the humanitarian impact of the Ebola epidemic in West Africa. ENAP provides a comprehensive and independent picture of the impact of Ebola on the needs of affected populations.

Building Markets (BM) was ACAPS' implementing partner during this assessment, and was responsible for identifying suitable KIs, data collection and initial results processing. BM is a non-profit organisation, which champions local entrepreneurs and connects them to new business opportunities. Operating in six post-conflict and developing countries, BM addresses the gaps between economic potential and access to opportunities. BM has operated in Liberia since 2011 and administered surveys during the Ebola outbreak on behalf of several donors, NGOs, the UN, the World Food Programme (WFP) and US Agency for International Development (USAID).

Contents

Acronyms

ACAPS	Assessment Capacities Project
BM	Building Markets
CBO	Community Based Organisation
DFID	Department for International Development
ENAP	Ebola Needs Analysis Project
FAO	Food and Agriculture Organisation
GoL	Government of Liberia
DHS	Demograhic Health Survey
IMS	Incident Management System
INGO	International Non-Governmental Organisation
IPC	Infection Prevention and Control
KI (s)	Key Informant(s)
KII (s)	Key Informant Interview(s)
LISGIS	Liberia Institute of Statistics and Geo-Information Services
MoE	Ministry of Education
MSF	Médecins Sans Frontières
NGO	Non-Governmental Organisation
PI	Personal Interview
SDP	Supplier Development Programme (Humanity United)
SMI-L	Sustainable Marketplace Initiative
UN	United Nations
UNICEF	United Nations Childrens Fund
UNMEER	United Nations Mission for Ebola Emergency Response
UNMIL	United Nations Mission in Liberia
USAID	US Agency for International Development
WFP	World Food Programme
WHO	World Health Organisation

A. Executive Summary

Assessment background: At the beginning of April 2015, ACAPS conducted a phone based, multi-sectoral assessment of KIs in all 15 counties of Liberia. The objective of the assessment was to identify the main problems faced by communities, and how their needs differ from the pre-Ebola situation. The assessment intends to inform the ongoing discussions on early recovery and strategic decision making on sustainable development.

Current priorities: Income generation, education and health are the main problems faced by communities in Liberia, according to the 216 KIs surveyed. The lack of job opportunities is the main obstacle for families to obtain sufficient income. The subsequent inability to afford transport, school materials and fees was identified by KIs as the main reason why children are not attending school.

The impact of the Ebola outbreak on current priorities: The direct and indirect consequences of the Ebola outbreak continue to impact the current situation. The majority of KIs indicate that communities are currently worse off when compared to the pre-crisis situation. There are two main differences between current and pre-crisis needs: the continued impact of the Ebola outbreak on livelihood opportunities and the fear of Ebola infection at schools and health facilities.

The economy has started showing signs of recovery since Ebola incidence decreased significantly, at the end of 2014. However, the assessment results indicate that access to livelihoods is not yet at pre-crisis levels. Business closures, reduced trade and general Ebola related unemployment are still a top concern in most counties. KIs in Bomi, Bong and Lofa stressed the reduction in agricultural production, the impact of which will become clear during the harvest in October 2015.

Much of the response by development and humanitarian actors is currently focused on infection prevention and control (IPC) in health and education facilities. Response data indicates that 98% of targeted schools have received IPC kits, for instance. Nevertheless, fear of Ebola transmission remains a major concern in communities and prevents families from visiting health facilities and sending their children to school. This fear has been reported by almost all KIs countrywide, regardless of whether the county has seen a high number of Ebola cases (see map next page).

At the same time, a number of KIs viewed the current situation as better, when compared to the same time last year, particularly within the health sector. The reasons provided for this improvement are the increased support to health structures from the government and NGOs, and improved awareness among communities on preventive behaviour and health services. The increased NGO presence has generated more employment opportunities, albeit temporarily. There is a high risk that positive impacts of the Ebola response will be difficult to sustain as international support recedes.

Suggested interventions: KIs suggest long-term interventions to address the current problems. Training to improve the skills of families and increase access to employment is the main suggested response, followed by improvements to water, health, education infrastructure and roads. The lack of payment of salaries and incentives for education and health staff was highlighted as a main concern in half of the counties assessed.

Groups most in need of support: When asked to select three groups most in need of support out of a list of ten, most responses concerned girls under 18, Ebola orphans, followed by persons with a disability. In counties with the highest number of reported Ebola cases, those affected by Ebola were higher priority, with Lofa, Montserrado and Margibi reporting Ebola survivors, their families and Ebola orphans as the main groups in need of support.

LIBERIA

Fear of Ebola vs. confirmed Ebola cases

as identified by key informants

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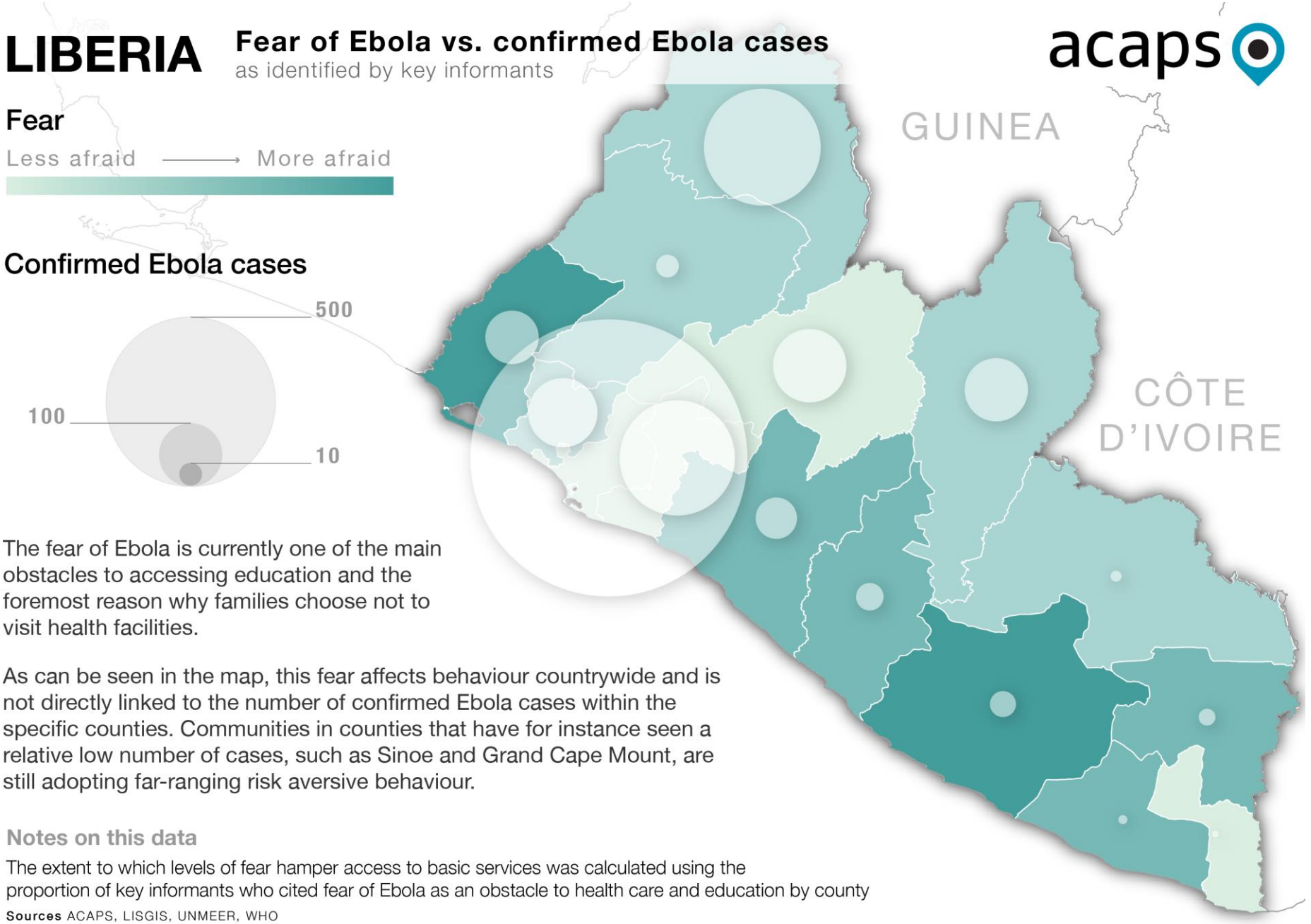


The fear of Ebola is currently one of the main obstacles to accessing education and the foremost reason why families choose not to visit health facilities.

As can be seen in the map, this fear affects behaviour countrywide and is not directly linked to the number of confirmed Ebola cases within the specific counties. Communities in counties that have for instance seen a relative low number of cases, such as Sinoe and Grand Cape Mount, are still adopting far-ranging risk aversive behaviour.

Notes on this data

The extent to which levels of fear hamper access to basic services was calculated using the proportion of key informants who cited fear of Ebola as an obstacle to health care and education by county

Sources ACAPS, LISGIS, UNMEER, WHO

B. Background and Methodology

1. Outbreak Evolution

Liberia's first two reported cases of Ebola were confirmed on 30 March 2014, in Foya district of Lofa County near the border with Guinea. By 7 April, the country reported 21 confirmed, probable, and suspected cases and ten deaths. The situation in Liberia stabilised in April and through May, with cases still largely concentrated in Lofa County. The exponential growth of cases started when the first additional cases in Monrovia were reported in mid-June. The city was not prepared to cope with the outbreak and the disease spread rapidly.

On 6 August, President Johnson Sirleaf declared a three month state of emergency. By 8 September, Liberia had the highest cumulative number of reported cases in the region, reaching nearly 2,000 cases and more than 1,000 deaths.

In late October, the first signs emerged that the situation in Monrovia and Lofa had stabilised, with a slow decline in newly detected cases in the early weeks of November. In mid-November, the government lifted the state of emergency and set a target of no new Ebola cases by 25 December. During late November and early December, rural outbreaks were reported as people who had been working in the cities returned to their rural homes and by mid-December, the virus had largely moved from cities to remote rural areas.

In February 2015, international borders, which were closed in August 2014, and schools, which were closed in July 2014, reopened. Since the end of February only two new cases have been reported. If no additional cases are confirmed, the country will be declared Ebola free on 9 May, 42 days after the burial of the last confirmed case. (NYT 13/11/2014, WHO 01/2015)

2. Background to the Assessment

The current immediate priority for response actors in Liberia is to remain at zero Ebola cases, by establishing and maintaining effective IPC measures. Simultaneously, the national and international response is gearing towards addressing the impact of the Ebola outbreak and underlying systemic issues. To inform strategic decision making, ENAP conducted a Department for International Development (DFiD) funded assessment in Liberia. The survey aims to answer the following question: What are the main problems currently faced by communities and how do they differ from the situation before the Ebola outbreak? Comparisons are made primarily between:

- The current problems compared to the pre-crisis situation
- The differences between and within counties

3. Report Structure

The report presents the findings of the assessment and is divided into two sections.

- The first part (part C) covers the findings on a national level, focusing specifically on multi-sectoral prioritisation, education, healthcare and income generation. To provide these countrywide priorities, the county specific responses were aggregated to a national level. For more information on the methodology used, please see Annex B.
- The second part of the report (part D) outlines the county specific results, highlighting if and how the situation within a specific county is different from other counties.

4. Methodology

The assessment process started mid-March and ended with the release of the report on 29 April 2015.

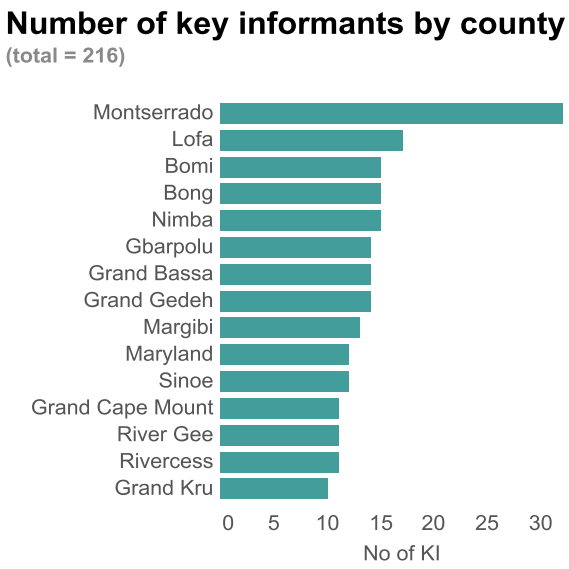
Timeframe	
Assessment preparation	16–25 March
Training	26–27 March
Data collection	31 March–8 April
Data processing, analysis and report writing	9–29 April

Key informants (KIs)

The assessment was designed to collect data from primary sources at the county level, through Key Informant interviews (KIIs). The number of KIs sampled is proportionate to the population within a country:

Number of key informants	
Population size	**No of KI targeted**
<50,000	3
50,00 to 100,000	10
100,000 to 500,000	15
>500,000	30

A total of 218 KIs were interviewed, of which 216 were considered sufficiently reliable (see data quality). There were some slight deviations from the target number of KIs by county, as selection was to an extent dependent on availability and eligibility. Efforts were made to capture informants outside of the main urban areas, particularly in Montserrado, where seven out of 32 informants were interviewed on the situation outside of Greater Monrovia.



A large number of possible KIs were identified from existing traditional, religious, governmental and NGO networks. Afterwards, potential KIs were selected according to the following criteria:

- Awareness of the situation of the entire population for their specific county.
- Knowledge of the needs that communities face, particularly in accessing healthcare, education, and income generating opportunities.
- Understanding of how the current needs compare to the pre-Ebola outbreak needs.

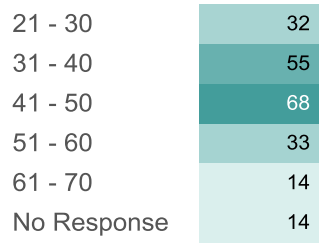
To test whether the respondents were sufficiently knowledgeable to speak for a specific county, several eligibility questions were asked before the start of the actual survey:

- What is your position within your county and what is your engagement with communities in your county?

- What is the name of the senator in your county?
- What are the main sources of income within your county?
- In your opinion, how knowledgeable are you about the situation of communities in your county? Do you know about the situation in the whole county?

Out of the 330 informants approached, 20 were not considered eligible, while over 80 could not be reached as their phone was either switched off or the number provided was incorrect.

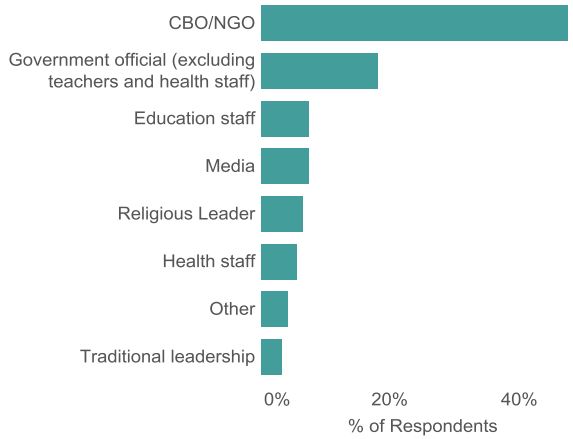
Age of respondents



The average age of respondents was 43 years. 32 informants were under 30 years of age. 25% of the KIs were female. 60% of informants had a university degree, while 36% finished secondary school but did not finish university.

To ensure multiple perspectives were captured, KIs from at least three different institutions were targeted by county. This included government officials, staff working for community based organisations (CBOs) and NGOs, media and traditional leaders:

Type of respondent



[1] The first cases in Liberia were confirmed at the end of March 2014. However, at that time the outbreak was concentrated in one part of the country (Lofa County). The crisis escalated when the outbreak spread to Monrovia in mid-June.

Questionnaire

A multi-sectoral questionnaire was designed to capture:

- Current priority issues and needs for intervention
- The impact of the Ebola outbreak on the current situation
- How the situation differs within and between counties
- Specific vulnerable groups

The questionnaire focused on access to education, health and livelihoods. These sectors were selected because:

- It is generally assumed that the Ebola outbreak still has an impact on these needs
- There is limited information available on these sectors and, at the time of the survey preparation, no comprehensive sector-specific assessment was planned.

Sensitive questions, including those related to protection and symptoms of Ebola, are unlikely to yield useful data during phone based interviews and were therefore not included

KIs were requested to compare the current situation to that existing before the Ebola crisis escalated[1], taking the end of March 2014 as the baseline reference point to ensure that seasonal variations were controlled.

Data quality

Although phone based surveys have several distinct advantages, for instance allowing a large number of households (HHs) to be surveyed in a relatively short period of time, there are also particular constraints. One of the main constraints is that it is challenging to judge the reliability of the answers provided by respondents, as findings cannot be corroborated by direct observation. Several steps were taken to improve data confidence:

- *Quality and diversity of the informant*: KIs were selected according to their knowledge of the situation, following three criteria. During the interview, their eligibility was tested (see key informant profile). An effort was made to ensure a diverse sample, in terms of respondent background, geographic coverage, gender and age. After every questionnaire, the researcher was asked to rank their confidence in the accuracy of the responses, on a scale of 1 to 3. The responses of two KIs were discarded as they were deemed not reliable.

Confidence level	
1	Answers provided appear consistent / no reason to doubt accuracy of responses
2	Respondent might not have understood all questions / some reason to doubt responses
3	Respondent clearly did not understand most questions / significant reason to doubt responses provided

- *Triangulation:* Two types of triangulation of information provided by informants took place. For every county at least ten KIs were interviewed, allowing for corroboration of findings. In addition, the information obtained was complemented and triangulated with secondary sources. These included baseline reports and datasets from the Government of Liberia (GoL), UN Mission for Ebola Emergency Response (UNMEER), Médecins Sans Frontières (MSF), World Health Organization (WHO), UN Development Programme (UNDP), WFP and other humanitarian and development organisations.

Analysis

Four types of analysis were applied to the data:

- **Aggregation of responses to the national level:** Respondents solely spoke about the conditions in their counties of residence. To obtain a nationwide perspective, the county level response was weighted to reflect the population size of the area KIs reported on. The weighting is calculated by dividing the total county population by the number of KIs interviewed about the county. For more information on the calculation of national averages, please see Annex B.
- **Differences between and within counties:** KIs in all 15 counties were requested to provide their perspective on the situation within their county, thereby allowing for a comparison of needs and priorities between the different counties. In addition, KIs identified districts within the counties where communities faced above average needs. The top three districts mentioned (and more if tied) were selected as priority districts.
- **Access vs Availability:** The main problems mentioned by KIs were categorised as ‘access’ and ‘availability’ related obstacles. Access to basic services is defined as both physical and economic access, for instance to education, healthcare and income generating opportunities. Availability refers to whether the services are present and of sufficient quality. The categorisation supports response planning as it provides guidance on whether interventions should focus on improving the existing infrastructure, provide support to families to access the infrastructure or a combination of both.
- **Before and After:** The questionnaire was designed to capture KI views on the current situation, and how these problems compare to pre-outbreak needs. This analysis provides an indication of the direct and indirect consequences of the Ebola outbreak and to what extent this impact remains a relevant factor to consider while planning interventions.

Limitations of the data and survey methodology

- Although efforts were made to ensure diversity of the sample, it is likely that the situations of some segments of the population have not been captured. For instance, it is likely that KIs were not aware of the situation of all those communities in remote and hard to access areas.
- The majority KIs interviewed (75%) were male. This gender imbalance should be kept in mind when interpreting the results. A preliminary gender specific analysis indicates that there are slight differences between the perspectives of male and female KIs. For example, 25% of female respondents indicated that girls under 18 are in particular need of support, compared to 20% of male KIs.
- KIs were selected on the basis of their knowledge of the wider community and situation. As a result, they enjoyed a higher level of education than average, and did not represent a true cross-section of the population.
- Although the findings can be considered indicative of the conditions in a county, interpreting small differences in local priorities as a basis for different recovery policies should be avoided as policy should focus on robust differences.

5. How to Read the Charts

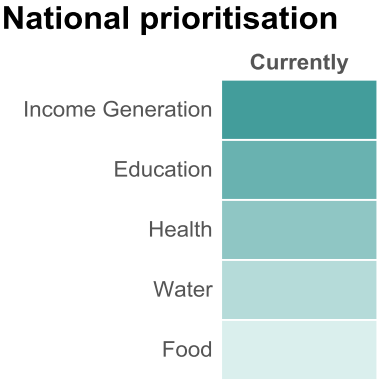
This section offers some tips as to how to read and interpret the main charts used in an appropriate way, to fully understand the findings. In addition to maps, three types of charts are used to visualise the findings:

- **Heat-maps** to summarise priority problems
- **Proportional text based visuals** to reflect before and after conditions
- **Horizontal stacked bar charts** to summarise sector specific obstacles, suggested interventions and vulnerable groups.

"Priority" or "preferences" visuals

Heat-maps are used to summarise multiple priority responses and their relative importance, into a form that is easier to visualise. The questions from which the heat maps are extracted always imply a selection of the top problems.

EXAMPLE



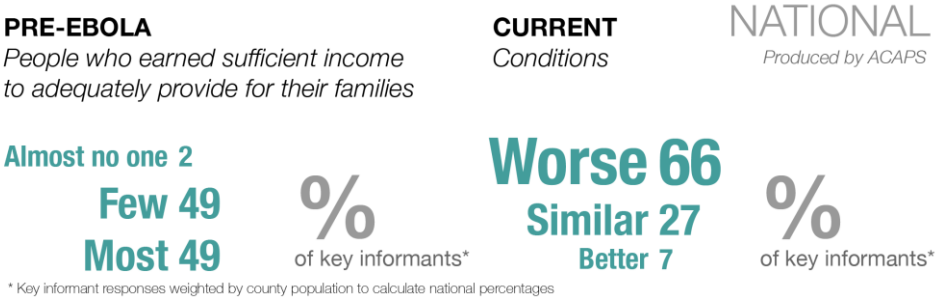
Levels of preference are grouped under several sub-headings. They are sorted in descending importance order on a national level and in alphabetical order on a county level, to allow for easy comparison between counties. The darker the colour, the more frequently the response was mentioned.

In the example heat-map, results can be interpreted as follows: *Income generation was ranked as the main problem, followed by education and health. Water and access to food were ranked lowest.*

Before and after conditions

Text based visuals are used to reflect the answers to questions such as "How would you describe the means for communities to generate an income before the crisis and how would you describe the current conditions, compared to the same time last year?" The size of the text is proportionate to the percentage of KIs providing the specific response.

EXAMPLE

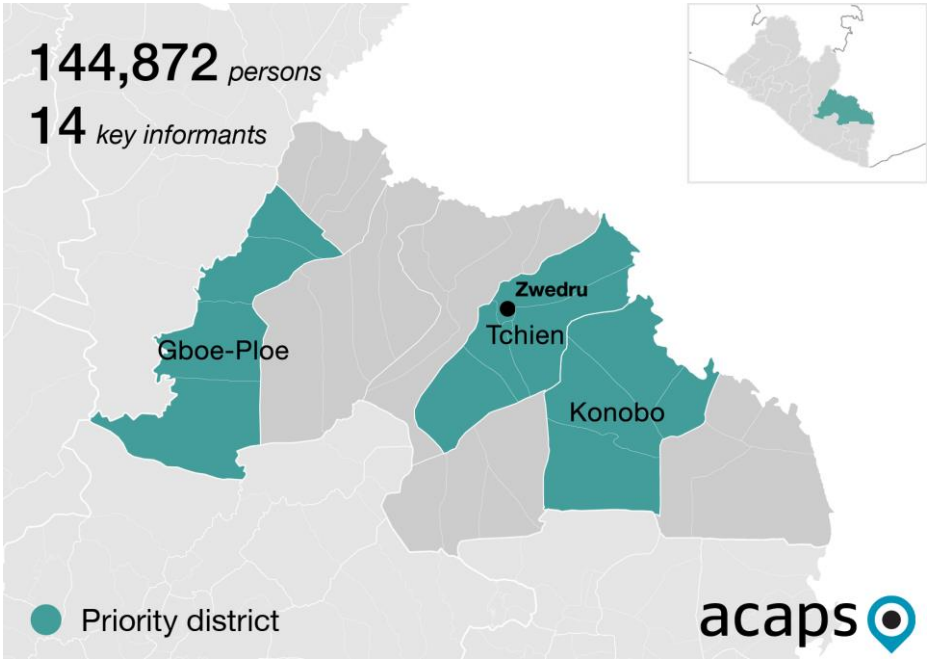


In the above visual, results can be interpreted as follows: *when weighed for population size, the predominant view of KIs is that the livelihood situation has become worse when compared to the pre-crisis situation.*

Prioritisation of districts

The county level maps illustrate the answer to the question "In which districts in your county do people currently face the most problems?" Only those districts that we're mentioned by a significant number of KIs were considered as a priority. To calculate those priority districts, the top three (or more if tied) identified districts were selected. The proportion of KI responses for these districts was divided by 2.5 to limit the possible bias of individual respondent's preferences, and if the resulting number fell above a threshold value the district was marked as a priority.

EXAMPLE

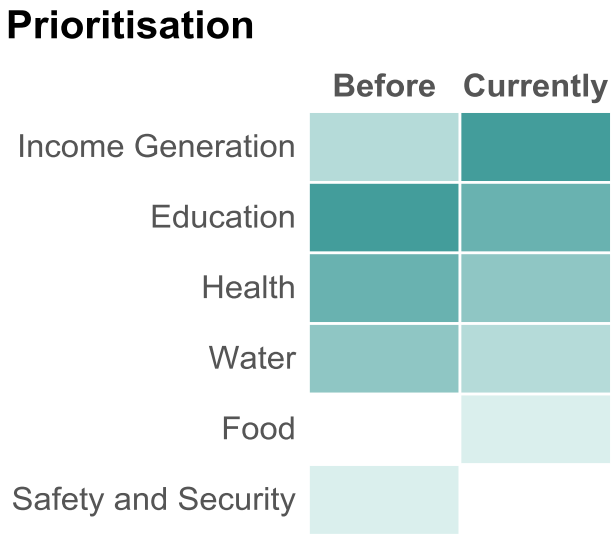


In Grand Gedeh, for instance, the districts of Gboe-Ploe, Tchien and Konobo were identified by KIs in the county as areas where communities are facing the most problems. The population figure of 144,872 refers to the people residing in the county, according to 2015 government projections.

C. Country Level Findings

1. Multi-Sectoral Prioritisation

KIs were asked to rank the problems in water, health services, education, livelihoods, food and safety and security in priority order across their county. Results were then aggregated to give country-wide priorities.



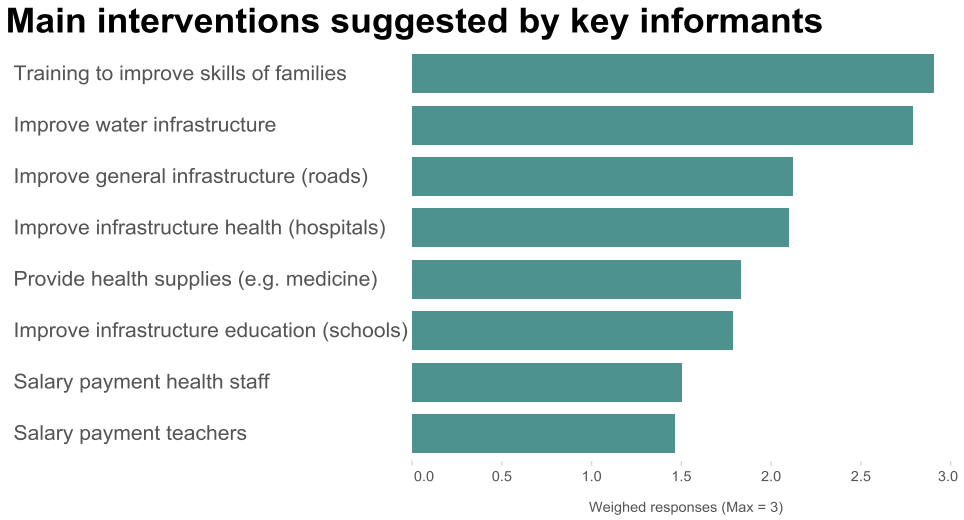
Overall, income generation was ranked as the largest current problem. The endemic lack of job opportunities is exacerbated by the economic impact of the Ebola outbreak on employment levels. The reduction of livelihood opportunities is the most significant change from the pre-crisis outbreak, perceived by KIs. Education and health were also ranked as a high priority, both before the crisis and currently.

Food was ranked as the lowest priority across the board. However, with many families engaged in subsistence farming, access to food and income generation are closely linked in Liberia. It could be that the structural levels of food insecurity in Liberia were perceived by some KIs as an income generation concern, and not mentioned separately. For more information on the access to food as an 'irrelevant alternative', see Annex B.

In most counties the prioritisation follows the national results, but in two counties the perceptions of KIs on the main priorities differ significantly. In Bong, access to water was ranked high, which is likely to be linked to the very low quality of the water infrastructure before the crisis. In Lofa, access to food was prioritised as a main current problem. Lofa is one of the few self-sufficient counties in terms of food production. As a result, any decrease in agricultural production has a direct impact on food availability, with limited opportunities for families to access alternative sources. This assessment did not cover the food security situation in-depth and further research on the food security situation in Lofa is required.

Suggested interventions

One of the objectives of the survey was to capture KI perspectives on the required interventions. The intervention most often suggested is training to improve the skills of families, to address the current problems. According to KIs, an increase in skills and literacy among families will improve access to income generating opportunities. The resulting increase in income will also lessen existing financial obstacles to education and healthcare.



These suggestions do not fully address the identified problems. Although skill development will increase access to employment, a continued lack of jobs will to prevent families from significantly expanding their income sources. The obstacles mentioned indicate that KIs consider access to basic services, such as education and healthcare, as more pronounced than availability. However, the suggested interventions primarily focus on the need to improve health, education and road infrastructure, which indicate the importance of interventions which address both dimensions of the existing problems. The discrepancies between the main obstacles mentioned and main interventions proposed illustrate that, although it is important to integrate KI priorities into response planning, these views should be complemented with expert judgement on the most appropriate health, education and livelihoods interventions.

Vulnerable groups

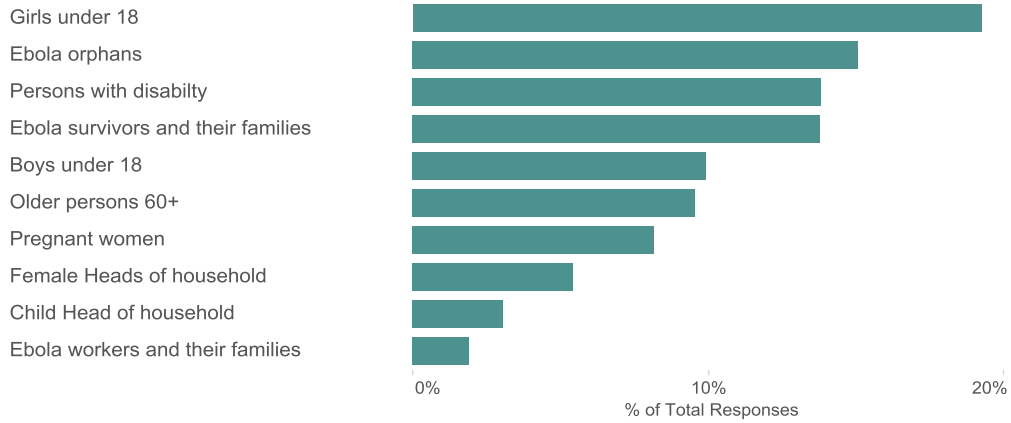
When asked to select three groups most in need of support out of a list of ten, most responses concerned girls under 18. Secondary data highlights the specific vulnerabilities of girls under 18: for instance, an assessment in 2013 found that 25% of women aged 15–18 were either pregnant or had given birth (DHS, 2013). The identification of girls under 18 as a vulnerable group was even more pronounced among female KIs, with 25% of female respondents highlighting this group as in particular need, compared to 19% of male KIs.

Ebola orphans were mentioned as the second priority group most in need. Over 3,000 children have been registered as having lost one or both parents due to the Ebola outbreak. As registration is currently still on-going, the actual number is likely to be higher (UNICEF, 15/04/2015; Child Protection sub-Cluster, 27/04/205 (unpublished)).

Persons with a disability were mentioned as one of the main groups in need of support as well. During a 2010 assessment, 4% of the Liberian population over 5 years of age reported at least one disability, caused primarily by accidents, the civil wars and birth defects (Labour Force Survey, 2010).

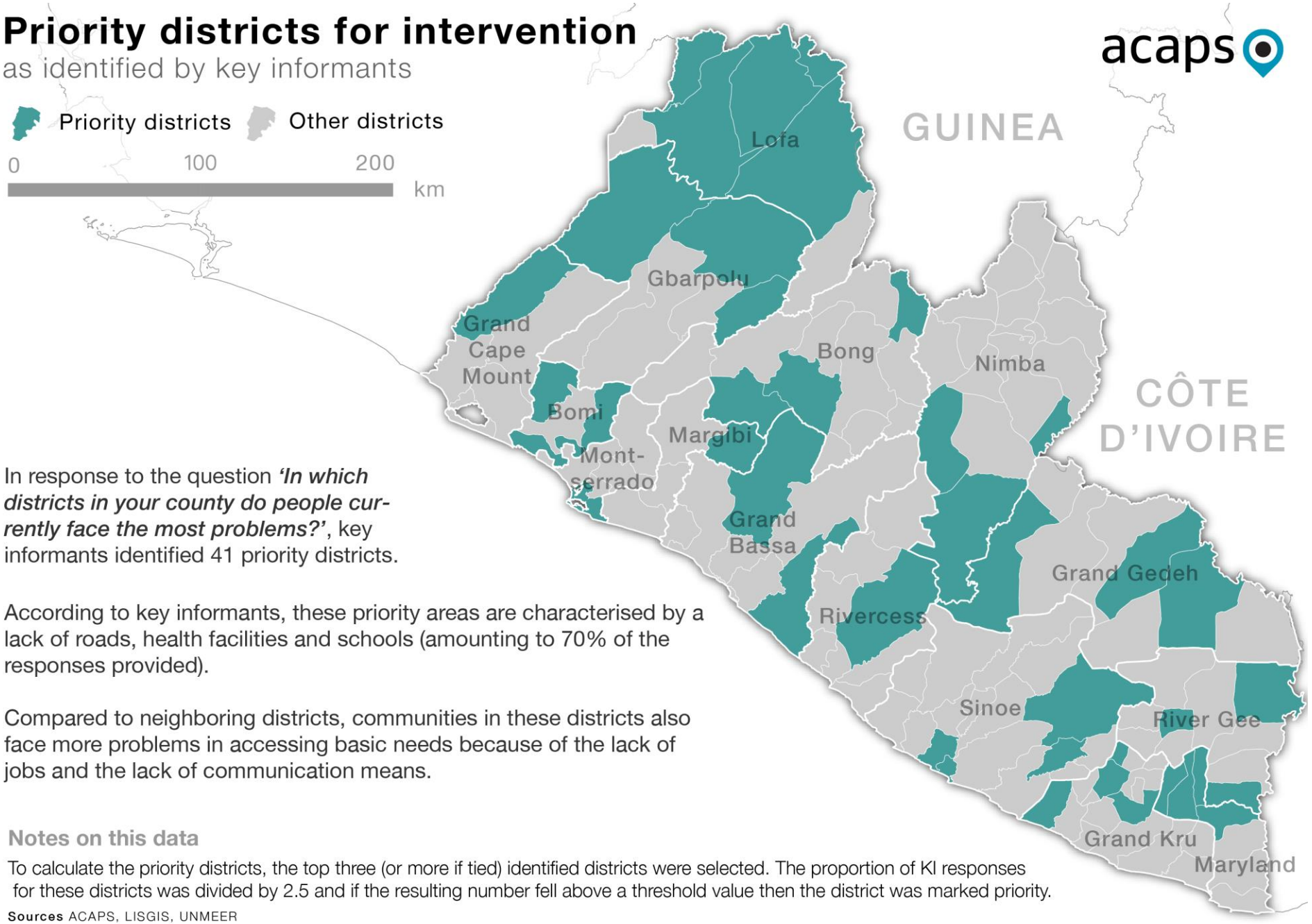
There are noteworthy differences between counties. In counties with the highest Ebola incidence, those affected by Ebola were prioritised higher than in other countries. KIs in Lofa, Montserrado and Margibi reported Ebola survivors, their families and Ebola orphans as the main groups in need of support. Surprisingly, Rivercess and Sinoe also mentioned these groups within their top three, although Ebola incidence has remained low in these counties. Pregnant women are specifically highlighted as one of the main groups in need in Maryland, River Gee and Grand Gedeh.

Groups most in need of support



Priority districts for intervention

as identified by key informants



In response to the question ***'In which districts in your county do people currently face the most problems?'***, key informants identified 41 priority districts.

According to key informants, these priority areas are characterised by a lack of roads, health facilities and schools (amounting to 70% of the responses provided).

Compared to neighboring districts, communities in these districts also face more problems in accessing basic needs because of the lack of jobs and the lack of communication means.

Notes on this data

To calculate the priority districts, the top three (or more if tied) identified districts were selected. The proportion of KI responses for these districts was divided by 2.5 and if the resulting number fell above a threshold value then the district was marked priority.

Sources ACAPS, LISGIS, UNMEER

2. Education

Context

Pre-crisis situation

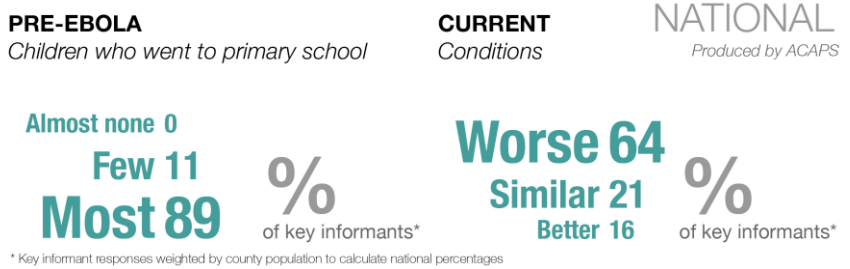
Primary and secondary education is compulsory from the ages of 6–13 (UNICEF, 09/2012). 2013 data indicates that 38% of children aged 6–11 were attending primary school, ranging from 54% in Montserrado to 19% in Bong. 23% percent of youths aged 12–17 attended secondary school. The actual attendance numbers at primary school are much higher, as a large number of children outside of the official school age range are attending school. There is a stark difference between attendance rates in Montserrado and other counties, with girls and boys in urban areas much more likely to achieve higher levels of education (DHS, 2013). Basic education (between 6–11 years' of age) is free in all government schools. However, this policy has not been adopted by all schools in the country and there are additional costs for uniforms and school materials. There is a registration fee for secondary school. School fees / costs were consistently identified as the primary barrier to education pre-Ebola, followed by the need for children to stay home to support the family. (Liberia Education Cluster, 17/03/2015; Government of Liberia, 2015)

Ebola impact

In July 2014 the GoL decided to close all schools to prevent Ebola transmission. As a result, an estimated 1.4–1.5 million school aged children were out of school between July 2014 and February 2015. An assessment by the Education Cluster showed that families consider contracting Ebola and the costs of education as the main obstacles to returning to schools, once they reopen. In the same assessment, students highlighted corporal punishment as a main concern. School administrators also identify traffic on the way to and from school as a major risk. Once the schools opened at the start of March, many parents reportedly refused to send their children to school, due to the fear of Ebola transmission (Liberia Education Cluster, 17/03/2015; USAID, 28/01/2015; UNICEF, 04/03/2015; UNMEER, 02/03/2015). The availability of WASH facilities, a key component of Ebola prevention, remains low in schools. 31% of schools assessed by the Education Cluster did not have functioning latrines, while schools that do average one latrine per 123 students. Only 60% of the schools had safe drinking water within 500m, 40% of schools had soap and water for hand washing, and 39% had functional hand-washing facilities. During the long period of school closures, many of the schools were looted or damaged. 74% of the 351 schools assessed by the Education Cluster reported having had some type of school material lost, stolen or damaged since the beginning of the Ebola crisis (Education Cluster, 17/03/2015).

Assessment findings

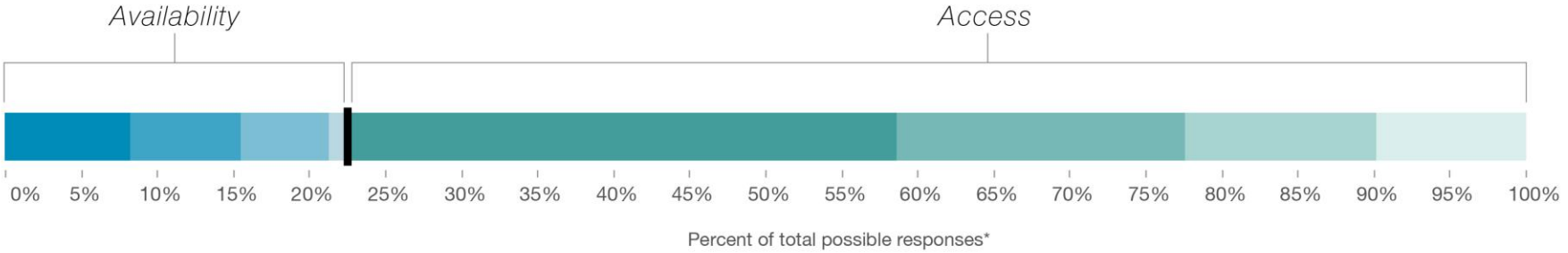
Most children attended primary school before the Ebola outbreak, according to the 216 KIs. However, other data sources indicate that less than half of school aged children attended primary school nationwide. Throughout the country, the proportion of children going to school is overestimated by KIs, when compared to other sources. This could indicate a misunderstanding of the term 'most' in this context. The majority of KIs indicate that the situation is worse compared to a year ago, and this view is supported by multiple other assessments. Those that considered the situation to have improved assign this to a stricter enforcement of the free education policy and NGO support to teachers and education facilities.



OBSTACLES TO EDUCATION

Liberia

Before the Ebola outbreak



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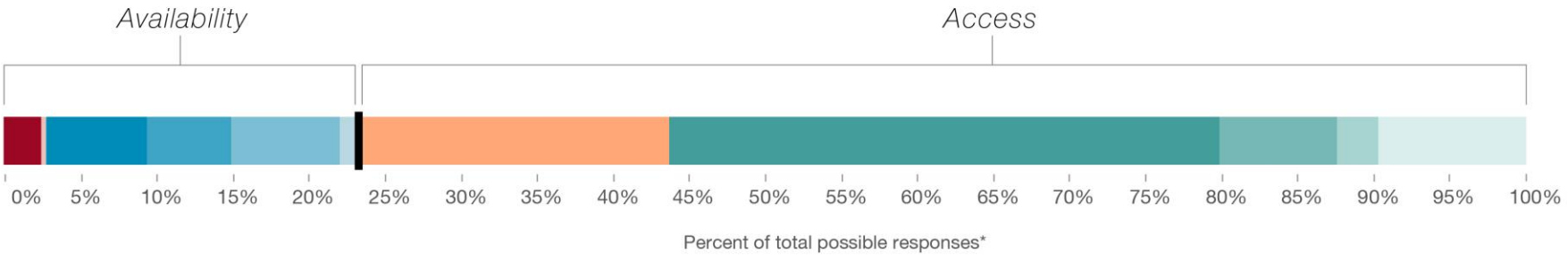


Availability obstacles

- No or limited number of schools available
- Low quality of teachers or school staff not available
- Low quality infrastructure (e.g. buildings, furniture)
- Lack of adapted infrastructure and service for children with disabilities
- School is not yet open or staff are not yet available
- Staff salaries have not been paid

Access obstacles

- Families do not have money to pay for transport, fees or materials
- Children need to help the family (e.g. domestic chores, child labour, teenage pregnancy)
- Families or students do not see the added value of education
- Physical and logistical constraints to access education (e.g. no transport)
- Fear of Ebola infection in schools

Ebola related

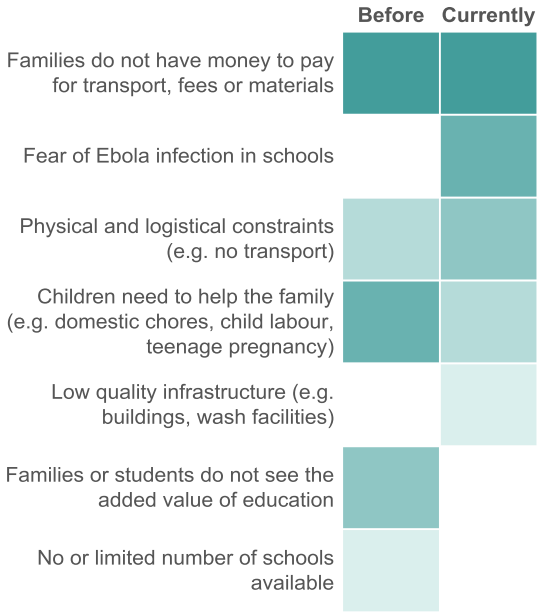
*Respondents were invited to list up to 3 obstacles. Some chose to list fewer than three, causing a tally of less than 100% after data processing and weighting
"Other" responses that could not be categorized were removed

acaps

Priority obstacles

The lack of access to education was ranked as one of the main problems. The main obstacle to education was the inability of families to pay for transport, fees and education materials, before the crisis and currently. An additional current obstacle is the perceived risk of Ebola infection in schools, which discourages families from sending their children. As can be seen on the map on page 6, the level of fear is not directly linked to Ebola incidence in the counties. It can be explained by a lack of IPC at facility level, active social mobilisation spreading fear of Ebola, or misinformation and rumours about the causes of Ebola.

Main obstacles



Overall, the low quality of school infrastructure is currently ranked as a larger concern compared to the pre-crisis situation. This is likely due to the damaging and looting of school infrastructure during the extended period of closure. The low quality of infrastructure was specifically highlighted by KIs in Grand Kru.

In three counties, Gbarpulo, Lofa and River Gee, KIs highlighted that students and families did not see the added value of education before the outbreak of the crisis. Only in River Gee does this continue to be one of the main obstacles. The change over time is either influenced by social mobilisation, which accompanied the back to school campaign, or the relative higher importance of other existing problems.

The large majority of schools have reopened, according to a school monitoring exercise by the Education Cluster. Only in Gbarpolu does the closure of schools or unavailability of staff remain a significant obstacle, according to KIs.

Access vs Availability

To better understand the kind of problems communities face, the obstacles were categorised into ‘availability’ concerns (whether adequate education infrastructure, including staff and furniture, was available) and ‘access’ concerns (whether children could access the required transport, financial means and information to be able to attend school). Problems that can be categorised as a lack of access to education are currently the main obstacles to children attending school. The main pre-crisis access considerations remain. The fear of Ebola infection has become a more prominent concern for families not sending their children to school, than the need for children to support their families The availability of education is primarily an issue in Bomi, Rivercess, Sinoe and Grand Kru, although for very different reasons. In the first three counties the low quality of school infrastructure was highlighted as a key obstacle, while in Grand Kru the low number and quality of staff is a major problem. Illustratively, the training of teachers is highlighted by KIs in Grand Kru as the most important intervention currently required.

Interventions

Improvement of school infrastructure and regular payment of school staff are the main interventions proposed by KIs to address the existing problems. They particularly stressed the need for the payment of salaries in Bomi, Bong and Grand Gedeh.

3. Health

Context

Pre-crisis situation

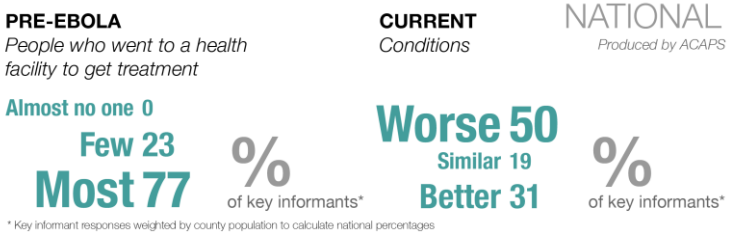
The Ebola outbreak exposed the structural weaknesses of the healthcare system in Liberia. With 8.6 skilled health professionals per 10,000 in 2010, Liberia is among the lowest in the world[2] (Liberia Health System Assessment, 2015). Delays and inefficiencies in the payment of salaries, allowances and incentives have persisted over the years, resulting in further critical shortages of qualified staff. Illustratively, in February 2014, before the outbreak was declared, health centre staff went on strike because of lack of payment. At 6.2% of GDP in 2013–14, government expenditure on health falls below the agreed 15%[3]. The suspension of user fees for health services in 2006 has only been moderately successful (Liberia Health System Assessment, 2015). Transport from remote areas to health centres is often expensive and lengthy due to the poor road network. The lack of infrastructure also affects the supply chain, resulting in a lack of medicine and medical equipment. Shortages of health supplies tend to be highest in counties in the southern and eastern parts of the country (Liberia Health System Assessment, 2015 (unpublished)). The 2013 Demographic Health Survey (DHS) showed that over 60% of women face at least one problem accessing healthcare, mostly a lack of money or long distances to health facilities (DHS, 2013). The lack of access to quality healthcare resulted in high levels of morbidity and mortality. In 2013, maternal mortality rates were as high as 1,000 maternal deaths per 100,000 live births, making it one of the highest in the world (HRH, 12/12/2014; IMS, 30/01/2015; UNICEF, 29/10/2014).

Ebola impact

During the height of the outbreak, a large number of health facilities closed or decreased their service provision. At one point in August for instance, all five of the main hospitals in Monrovia were closed (MSF, 15/08/2014). While most have reopened since the decrease in Ebola cases, most facilities were providing reduced services at the start of 2015, compared to before the Ebola outbreak (PI, 19/02/2015; UNMEER, 29/12/2014). The disruption of services was primarily caused by the lack of staff. At least 370 health workers were infected (probable and confirmed cases) and over 180 died, as at April 2014. Many other health workers stopped working out of fear of infection. In addition, routine health care workers were not paid between September 2014 and March 2015. The high number of health care workers infected has eroded public trust and communities became afraid of seeking treatment (IMS, 02/04/2015 (unpublished); IMS, 23/01/2015).

Assessment findings

To obtain an overview of how the Ebola outbreak has affected access to health services, the 216 informants were asked to judge the health situation before the Ebola outbreak and how the situation has changed since. Before the crisis, in most areas, the majority of people went to a health facility for treatment. For half of the population assessed, the current health situation was worse compared to last year. However, for a significant number of KIs the situation has improved, including all KIs in Bong County. This is primarily because of the additional support provided to the health structure as a result of the outbreak. KIs mentioned increased awareness raising, the training of health staff and provision of supplies as particular activities that have led to an improvement.



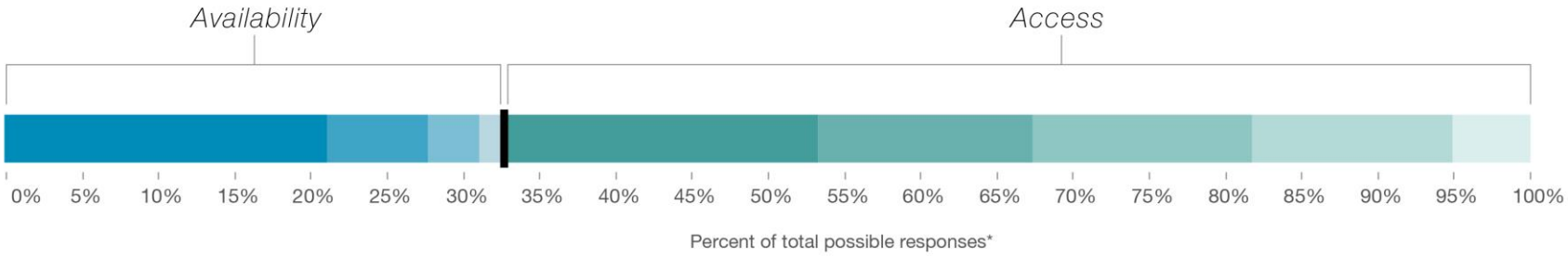
[2] WHO recommends a minimum density threshold of 22.8 skilled health professionals/10,000 people to provide the most basic health coverage. WHO, 01/2014

[3] Abuja Declaration, 2001 (WHO, 2011)

OBSTACLES TO HEALTHCARE

Liberia

Before the Ebola outbreak



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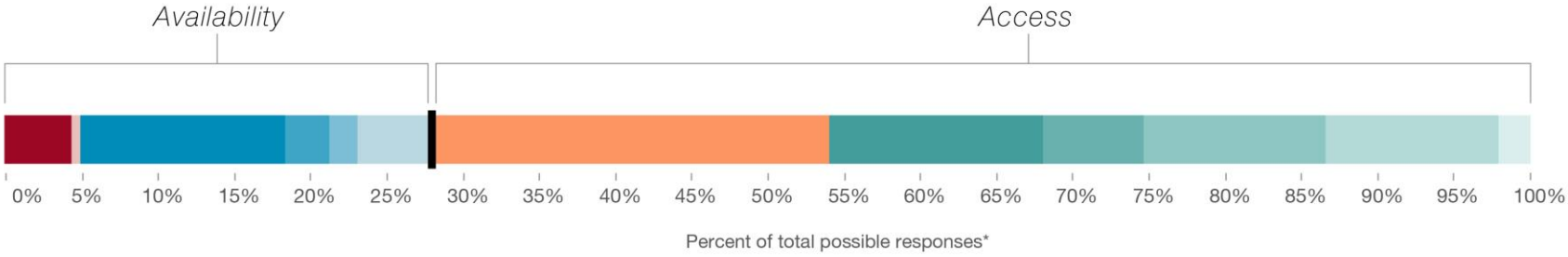

Availability obstacles

- Lack of medicine
- Low quality of staff or staff not available
- Low quality infrastructure
- Staff salaries have not been paid
- Staff not available due to Ebola
- Closure of health facilities or decrease in services

Access obstacles

- Families do not have money to pay for transport or services
- Families choose to visit traditonal healers
- Lack of trust in health facilities
- Physical and logistical constraints to access health care (e.g. no transport)
- Lack of information on available health services
- Fear of Ebola infection in the health facilities

Ebola related

*Respondents were invited to list up to 3 obstacles. Some chose to list fewer than three, causing a tally of less than 100% after data processing and weighting
"Other" responses that could not be categorized were removed

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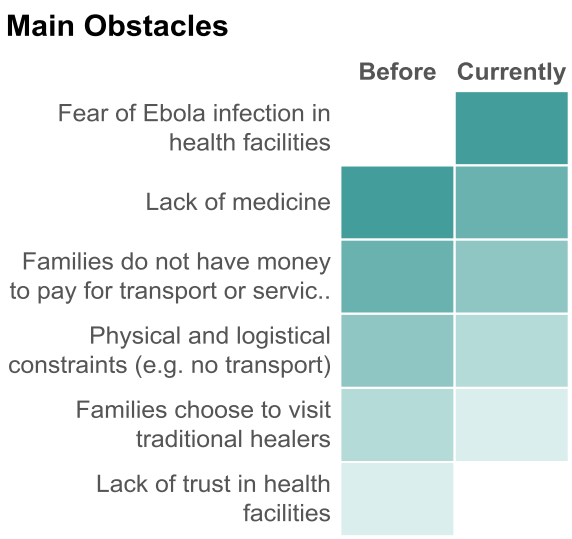
Priority obstacles

When asked about the top three problems across all sectors, KIs indicated that access to healthcare was the one of the main problems before the crisis. Currently, health has become less of a priority as compared to other sectors, after income generation and access to education.

There are large variations between counties. KIs in Sinoe, Lofa and Bong did not consider health a major concern while those in Grand Kru ranked it as the main issue.



Before the outbreak, the lack of medicine was ranked as the main obstacle to obtaining healthcare, throughout the country, followed by the lack of financial resources to pay for health services.

Currently, these problems remain the main obstacles, with a lack of medicine, money and logistical constraints ranked in the same order as before the crisis. However, the fear of Ebola infection in health facilities has become by far the largest concern, with two thirds of KIs mentioning this as an obstacle.

Traditional health care was the only reliable source of care during the civil wars, between 1989 and 2003. Recent improvements to the formal health care system have reduced reliance on this sector, but it remains an important source of care, particularly during birth (Kruk. Et al, 2011). However, the responses indicate that families are less likely to choose traditional healers currently, compared to last year. This could be explained by the fact that several localised outbreaks were sourced to traditional healers, which could have eroded trust in their practices. In addition, part of the social mobilisation messaging during the outbreak warned patients with Ebola symptoms against the use of traditional healers.

Access vs Availability

To understand whether health interventions should focus on improving the health infrastructure or enabling families to visit health centres, the findings were categorised as 'availability' obstacles (e.g. the lack of health centres) and 'access' obstacles (e.g. families do not have the means to access available health centres). Both before the crisis and currently, obstacles to health care are mostly driven by access issues, for instance a lack of money and fear of Ebola hampering families from visiting health facilities. Meanwhile, the availability of health services remains insufficient. The assessment results show that pre-crisis problems related to the lack of qualified staff have been compounded during the crisis. Non-payment of salaries and a decrease in the number of staff, due to Ebola infections, are often mentioned as problems.

Interventions

KIs were asked to identify the three main activities required to address problems in their county. Most health related interventions proposed were intended to strengthen and expand the health infrastructure. The need to improve the quality of the health infrastructure and provide supplies, such as medicines, were the most often mentioned interventions. KIs in River Gee specifically mentioned the need for additional health supplies, with half of KIs mentioning this as one of the main activities required. The need to pay health staff salaries was highlighted by KIs in nine of the 15 counties, most often in Bomi and Bong.

4. Income Generation

Context

Pre-crisis situation

The main source of income varies significantly between urban and rural Liberia. The agricultural sector is the primary livelihood source in rural areas, mainly smallholder and subsistence farming and the production of cash crops such as rubber, palm oil, cocoa and coffee. Rice is the main staple food grown, followed by cassava (FAO, 2012). Agricultural productivity is low due to a lack of modern technology, inadequate tools, limited access to markets, and a lack of access to capital / credit.

Most urban HHs derive their income from two or more livelihood sources, combining agriculture with petty trade, hunting and casual labour (WFP, 2013; OECD, 2008; FAO/WFP, 05/01/2015; DHS, 2013). In Greater Monrovia, sales and services are the most dominant livelihood group, employing over 80% of working age men in 2013 (DHS, 2013). The informal sector, which includes petty trading, construction, mechanics, and security services, remains one of the major sources of employment and income for the urban population in Greater Monrovia (WFP/GoL, 2010).

Unemployment estimates vary greatly. The most recent data, from 2013, indicates that around 23% of working age men and 44% of working age women were unemployed in the 12 months preceding the survey (DHS, 2013). Under-employment is extremely high, at over 60% (WFP, 10/2010). The large majority of Liberia's youth missed out on basic education during the civil wars, therefore today's adults lack the required skills to obtain gainful employment in either the private or public sectors (WFP, 06/2013).

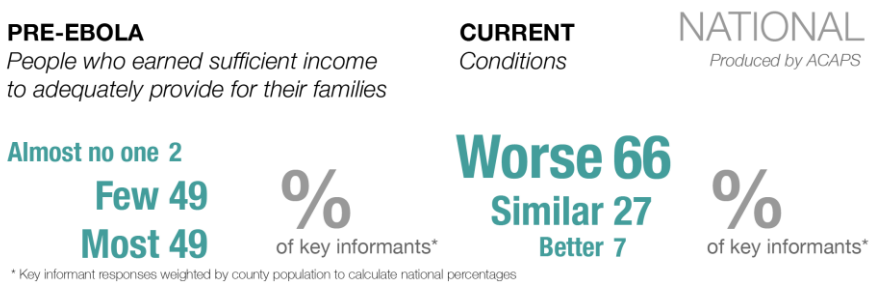
Ebola impact

The largest economic effects of the outbreak have been those linked to changes in behaviour, either as part of government-imposed aversion measures or driven by fear of Ebola infection.

The GoL imposed a state of emergency between 6 August and 13 November 2014. Borders and markets were closed, transport restrictions and curfews were imposed on some communities and counties, and government activities were limited. At the same time, many NGOs and large mining and agricultural companies scaled down their operations and evacuated their expatriate staff for fear of contracting Ebola (ACF/WHH, 12/2014; FAO/WFP, 12/2014; BM, 03//2015). According to a survey in October and November 2014, roughly half of urban respondents and a third of rural respondents were no longer employed, despite working earlier in the year. This survey also found no statistically significant differences in unemployment levels between the worst-affected by Ebola regions and other regions of the country (FEWSNet, 11/2014). At the start of 2015, trading activities and the general economy started showing signs of recovery, with several assessments indicating that there has been a substantial return to work. At the end of February, the Liberian side of the international borders reopened (FAO/WFP, 12/2014; BM, 03/2015; WB, 24/02/2015).

Assessment findings

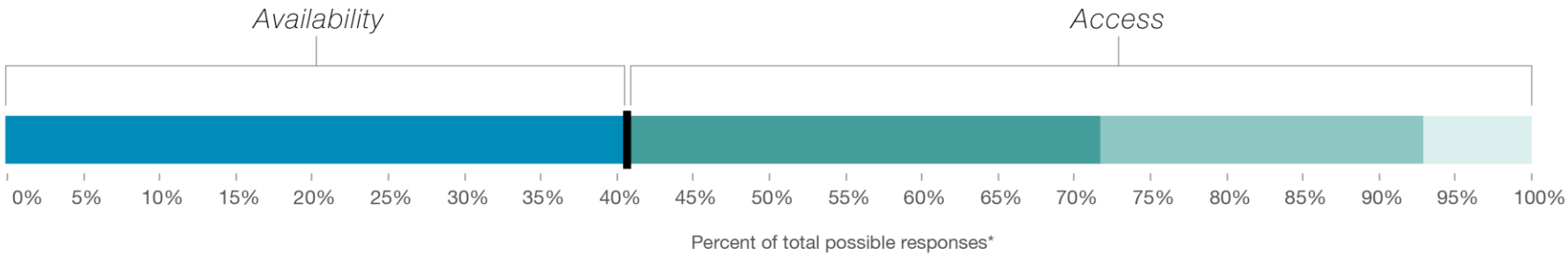
Despite the initial signs of recovery, two thirds of KIs still consider the current conditions worse than they were pre-outbreak. KIs in five counties hold a different perspective - most KIs in Bomi, Bong and Grand Gedeh indicate that the current situation no longer differs from the pre-crisis situation. Several KIs judged the situation to have improved, compared to the year before. In Maryand, Grand Kru and Grand Gedeh, they point to the increased availability of employment due to the presence of NGOs as a cause for the improvement.



OBSTACLES TO INCOME GENERATION

Liberia

Before the Ebola outbreak



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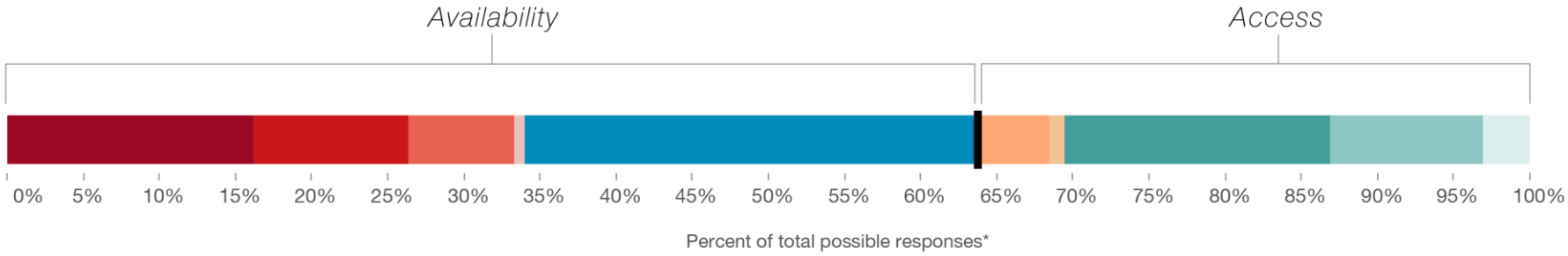

Availability obstacles

- Lack of job opportunities
- Increase in the number of unemployed due to Ebola
- Closure or disruption of markets and businesses
- Decrease in agricultural production
- Reduction of wages or working hours due to Ebola

Access obstacles

- No or limited literacy or skills
- No/limited money to invest in productive assets
- Physical and logistical constraints (e.g. no transport)
- Death or sickness of breadwinners
- Stigmatisation of Ebola survivors

Ebola related

*Respondents were invited to list up to 3 obstacles. Some chose to list fewer than three, causing a tally of less than 100% after data processing and weighting
"Other" responses that could not be categorized were removed

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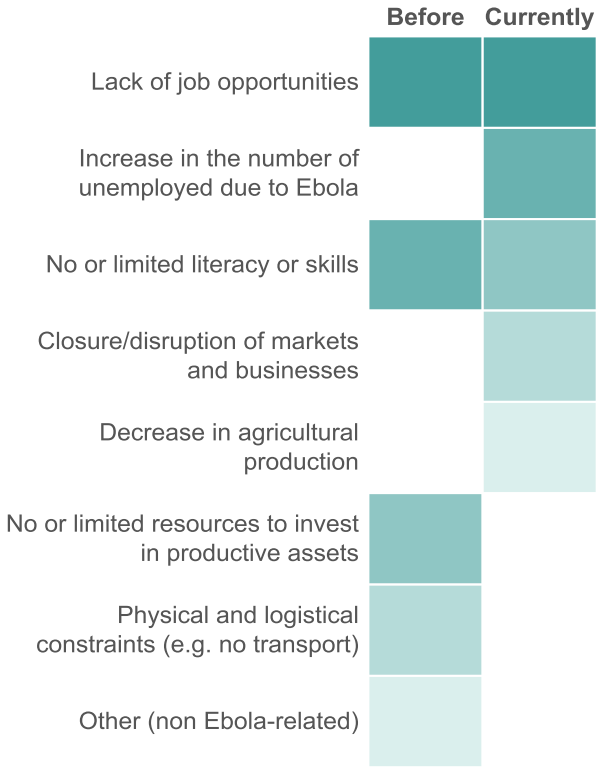
Priority obstacles

Although there have been some signs of market recovery since Ebola transmission has slowed down, the assessment findings show that the labour market remains heavily affected by the secondary impacts. KIs nationwide rank access to income generation as a larger problem than access to healthcare, education, water, safety and security and food.

The lack of jobs, one of the main concerns before the outbreak, remains one of the main obstacles to obtaining an adequate standard of living. This problem has further expanded due to the outbreak, with the decrease in agricultural production and closure or disruption of markets and businesses.

The only county where the endemic lack of job opportunities is not the main current concern is Lofa. KIs in Lofa, which was the epicentre of the early Ebola outbreak, indicated that increased unemployment due to the outbreak and the impact on markets and businesses is the main current obstacle.

Main obstacles



The Ebola outbreak peaked during a time when famers would normally plant rice. Movement restrictions are likely to have led to a decrease in yields. The decrease in agricultural production was mentioned by KIs as one of the top three obstacles in Bomi, Bong and Lofa.

Stigmatisation of Ebola survivors was mentioned as a concern in Montserrado and Lofa, the counties most affected by the outbreak.

Access vs availability

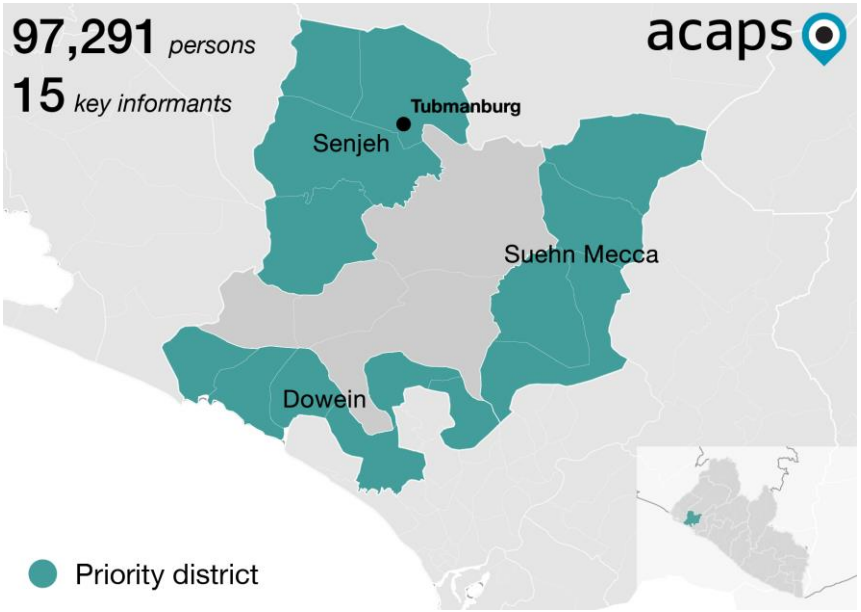
Existing availability problems, primarily the lack of jobs, have become more prominent than access related concerns due to the continued negative impact of the outbreak on economic productivity. Access to income opportunities is currently mainly influenced by the lack of literacy or skills. This is a structural problem, primarily affecting youth who had limited access to education during the civil wars.

Interventions

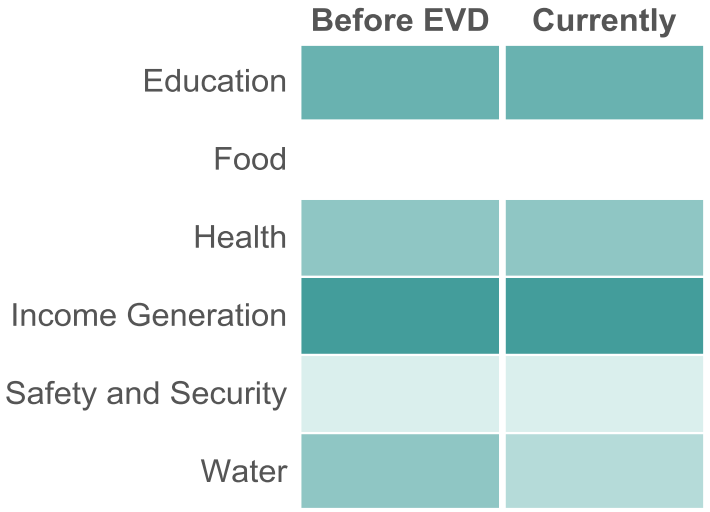
Training to improve skills is the intervention most required to address existing problems, according to KIs. The need for additional support to agricultural production was mentioned in River Gee and Lofa, while the need to improve the road infrastructure, which will facilitate trade, was the third most suggested intervention. Overall, KIs offered limited suggestions on how to address the lack of income generating opportunities, although the lack of job opportunities is the main factor hampering access to income and, by extension, access to education and health care.

D. County Profiles

1. Bomi



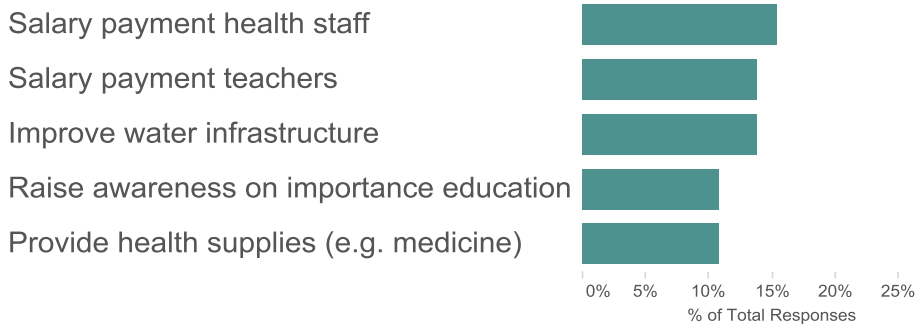
Needs prioritisation Bomi



Key findings

The current situation in Bomi does not differ significantly from before the crisis, according to KIs. Income generation, education and health were the main priorities before the outbreak, and are now. The lack of salary payments to teachers and health staff seems to be a more pressing issue in Bomi than in other areas of Liberia, as does the perceived reduction in agricultural production. KIs highlighted three districts as being most in need of support, Senjeh, Dowein and Suehn Mecca. These districts are traditionally less accessible (GoL, 2008) and the limited number of roads, health facilities and schools are the main reasons why these districts were selected over others in the county.

Main activities required



Context

Bomi is the most food insecure county in Liberia, despite being rich in natural resources and having a large agricultural potential. A 2013 assessment found that 55% of the population were food insecure, compared to 18% nationwide, the highest proportion in the country (WFP, 2013). The remoteness of villages, lack of employment opportunities and limited food production contribute to the high levels of food insecurity. Illustratively, only 33% of the male population was engaged in agriculture in 2013, compared to 62% of the population in all districts in rural Liberia. In 2008, 105 villages, or an estimated 20,000 people, were reportedly cut off from vehicular transport (GoL, 2008). In 2013, school attendance rates in Bomi were the fourth lowest in the country, at 31% of children aged 6–11.

The first Ebola case was reported from Bomi mid–May, making it the second county affected by Ebola after Lofa. Over 130 confirmed Ebola cases were reported between May and the end November 2014 (MoH, 04/2015 (unpublished)). The local infrastructure was overwhelmed by the outbreak in September 2014, the two largest hospitals were temporarily closed, leaving over 330,000 people without healthcare (NYT, 12/09/2014).

Education

As in the rest of the country, the lack of resources is the main reason why families were not able to send their children to school before the crisis. This is still the main concern, followed by the fear of Ebola infection in schools. The low quality of teachers or school staff was of larger concern in Bomi than other counties, with 40% of KIs mentioning this as one of the three main obstacles, compared to 10% countrywide. To address this problem, KIs proposed regular payment of teacher salaries.

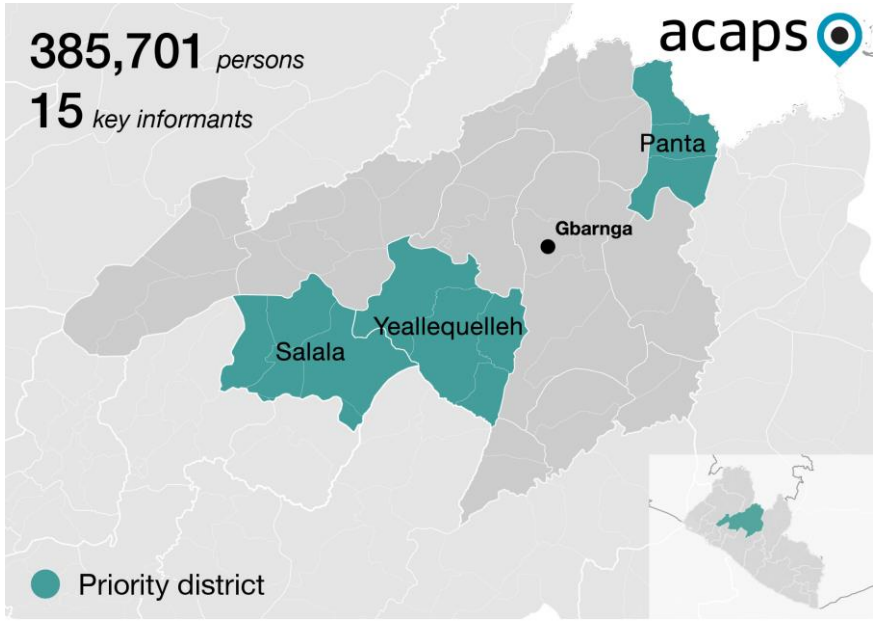
Healthcare

With 2.5 health facilities per 10,000 residents, Bomi County is relatively well served in terms of health infrastructure compared to other counties (Liberia Health System Assessment, 2015). The majority of KIs agree that most people accessed health facilities to seek treatment before the crisis. The availability of staff was mentioned as one of the main concerns, both before the crisis and currently. Ten out of 15 KIs highlighted the need to pay health staff salaries. 80% of KIs indicated that the current situation is similar or better than the same time last year. Increased assistance to health facilities following the Ebola outbreak and training of healthcare workers are the main reasons mentioned for this improvement. As in the rest of the country, the fear of Ebola infection is the main obstacle to accessing healthcare.

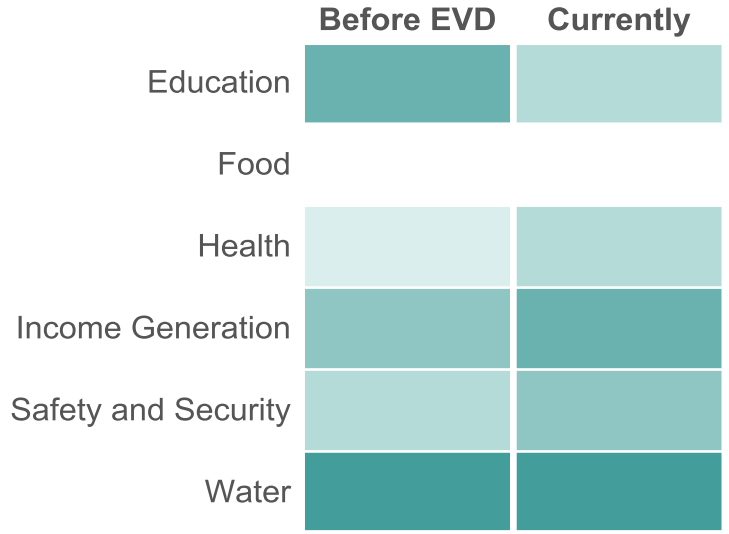
Income generation

Obtaining sufficient income to support families was a significant concern before the crisis. KIs continue to rank the lack of job opportunities as the main obstacle to generating an adequate income. The closure / disruption of markets is another major obstacle to finding employment. One KI mentioned that the presence of NGOs responding to Ebola has lowered the rate of unemployment in the county. The decrease in agricultural production due to Ebola is ranked relatively high when compared to the rest of the country, and currently forms one of the most important obstacles to generating an income. As one of the areas with a high number of Ebola cases, it is likely that farmers in Bomi reduced the number of workers used for planting and harvesting. Additional data collection is however required, to see to what extent agricultural yields have decreased.

2. Bong



Needs prioritisation Bong

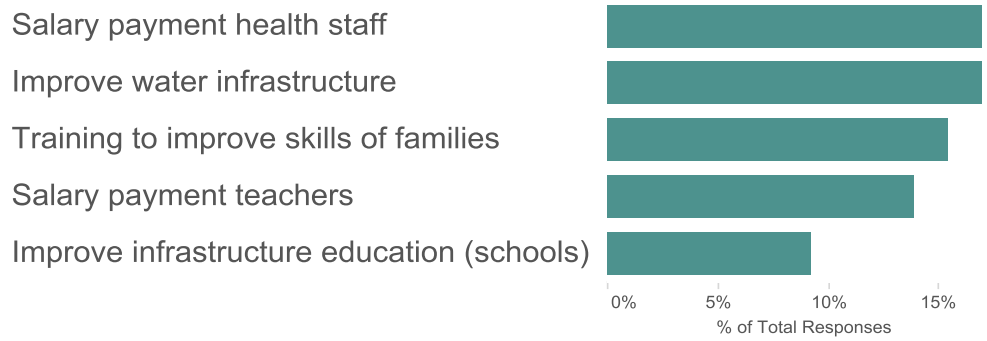


Key findings

The views of KIs in Bong differ significantly from those in the rest of the country. KIs consider the current situation similar or better than a year ago, with all informants highlighting that the health situation has improved. This is primarily attributed to increased NGO and government support, as a result of the Ebola outbreak.

The main priority is access to water, according to KIs, both currently and before the crisis. This is a much lower priority in other counties. Salary payments for health staff and teachers are a larger concern to KIs in Bong, compared to the rest of the country. The fear of Ebola, a main concern in most of the counties of Liberia, was not ranked as a priority.

Main activities required



Context

Bong County has one of the largest proportions of people working in agriculture, with 70% of men engaged in cultivation in 2013, compared to 40% nationwide. The civil wars (1989–2003) destroyed much of the infrastructure and economy, resulting in high levels of unemployment, especially amongst young women and men (GoL 2008). The reconstruction and development of iron ore mines was delayed, partly due to the global economic crisis in 2008–09. The county was one of the few in the country where poverty actually increased, to 67% between 2007–10 (WB, 2011).

In 2013, Bong had the lowest primary school attendance rates in the country, 19% of children aged 6–11. Most of the school buildings in the county were damaged or destroyed during the civil war. Literacy rates were the lowest in the country in 2013, at 53% compared to 70% countrywide (DHS, 2013; GoL, 2008).

At one facility per 10,000, the county experiences the lowest health facility coverage in the country (DHS, 2013; GoL, 2015). However, the main hospital, Phebe hospital, was known as one of the best hospitals in rural Liberia and receives significant national and international support (CNN, 24/09/2014; PI, 24/04/2015).

Water infrastructure is traditionally underdeveloped in Bong, and with one of the highest rates of open defecation in the country (73% according to the 2013 DHS), the quality of water is of concern (DHS, 2013; PI, 24/04/2015).

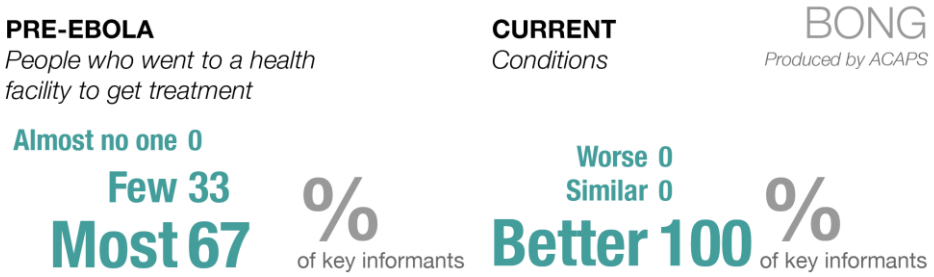
The first Ebola case was reported in July 2014, and 149 additional Ebola cases were reported in the following five months (MoH, 04/2015).

Education

Over half of KIs judged the current education situation to be better than a year ago, primarily due to the reduction and abolishment of fees and increased government support to education facilities. However, access to education before the crisis was one of the worst in the country and significant concerns remain. The main obstacles to accessing education, in order of priority, are the lack of resources for families, the low quality of the infrastructure and logistical constraints, according to KIs.

Health

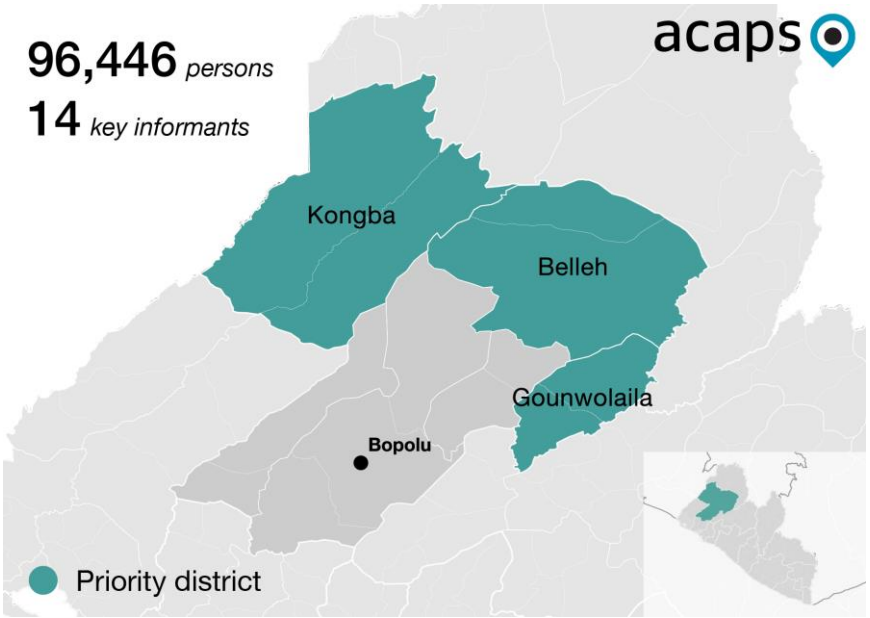
All KIs agreed that the current health situation is better compared to the year before. Additional health facilities have been established, more health care workers are working in the county and there is increased awareness among communities on the importance of health. The lack of medicine, a main concern before the crisis, seems to have been partly addressed by the health interventions. KIs no longer mention this as a problem. The lack of payment of staff salaries and incentives, a concern before the outbreak, is currently ranked as the main obstacle to accessing treatment by KIs. Multiple KIs warned that health care workers will go on strike if the outstanding payment issues are not resolved.



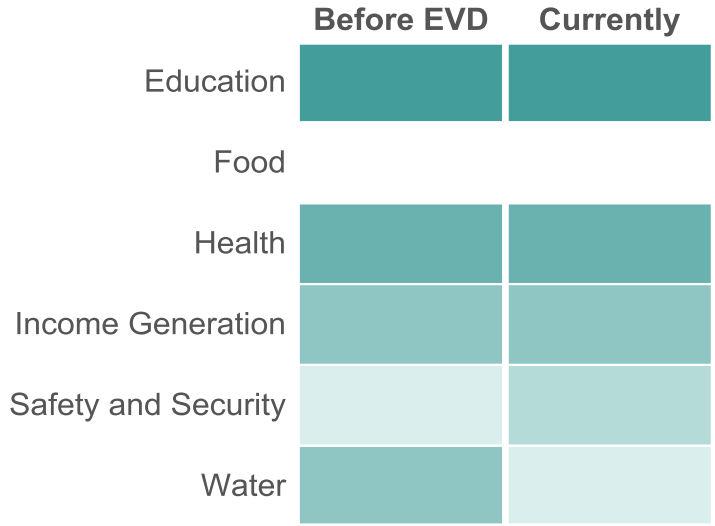
Income generation

The main income generation issue is the lack of job opportunities, pre-Ebola and currently. Bong is one of the three counties, in addition to Bomi and Lofa, where the decrease in agricultural production was prioritised as a significant problem by KIs. Secondary data indicates that the closure of markets and reduction in trade was a major concern at the height of the outbreak (WFP/FAO 12/2014). However, KIs indicated that since the reopening of the roads and the markets, the situation has improved significantly.

3. Gbarpolu



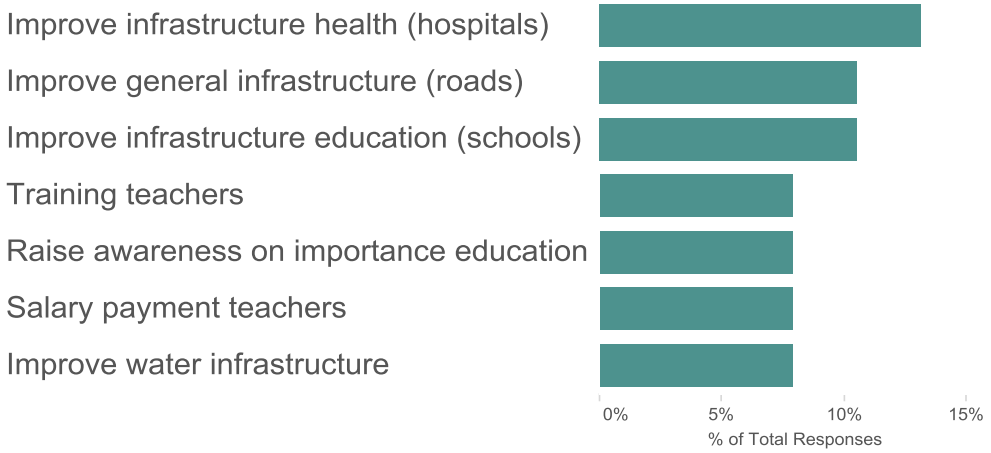
Needs prioritisation Gbarpolu



Key findings

The overall situation in Gbarpolu is currently not significantly different from the pre-crisis conditions, according to the prioritisation of problems by KIs. Access to education and health ranked as the main concerns before the crisis and at the time of the assessment. However, the secondary impacts of the Ebola outbreak, including the fear of Ebola, continue to affect the needs in the county. The main interventions suggested by KIs focused on the structural causes of the current problems, including the improvement of health, education and road infrastructure. KIs highlighted Belleh, Gounwolaila and Kongba as areas where communities face more obstacles than in other areas, mainly due to the lack of job opportunities and health infrastructure.

Main activities required



Context

Like the rest of rural Liberia, the main source of income in Gbarpolu is agriculture, followed by unskilled manual labour. Gold and diamonds are the most commonly exploited mineral resources in the county.

The county is specifically underdeveloped in terms of access to education and had the lowest literacy rate of the country in 2013 (GoL, 2008; DHS, 2013). In 2013, 40% of the population was part of the poorest 20% in the country. However, food insecurity levels in the county match the national average, which was 20% before the crisis (WFP, 06/2013). Most families cultivate food crops or engage in fishing (GoL, 2008).

Gbarpolu was one of the last counties where an Ebola case was confirmed, six months after the first case in Liberia. 15 additional cases were confirmed, with the last being reported at the end of September 2014 (MoH, 04/2015).

Education

Education has been ranked as one of the main concerns in Gbarpolu, both before the crisis and currently. In 2013, school attendance rates were among the lowest in the country (26% of children aged 6–11) (DHS, 2013). Over half of KIs (60%) agree that the situation has become worse.

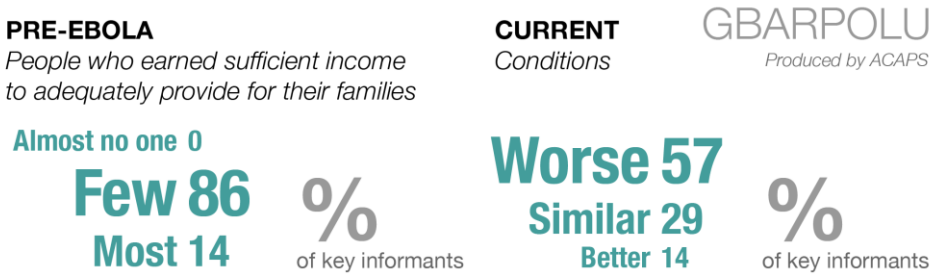
The fear of Ebola infection in schools is the main obstacle to accessing education, despite it being over six months since the last confirmed case. The results suggest that the reopening of schools has not been as effective in Gbarpolu, compared to the rest of the country. 30% of KIs in Gbarpolu mentioned the closure of schools or staff not returning to their work as an issue, compared to 10% across the country.

Health

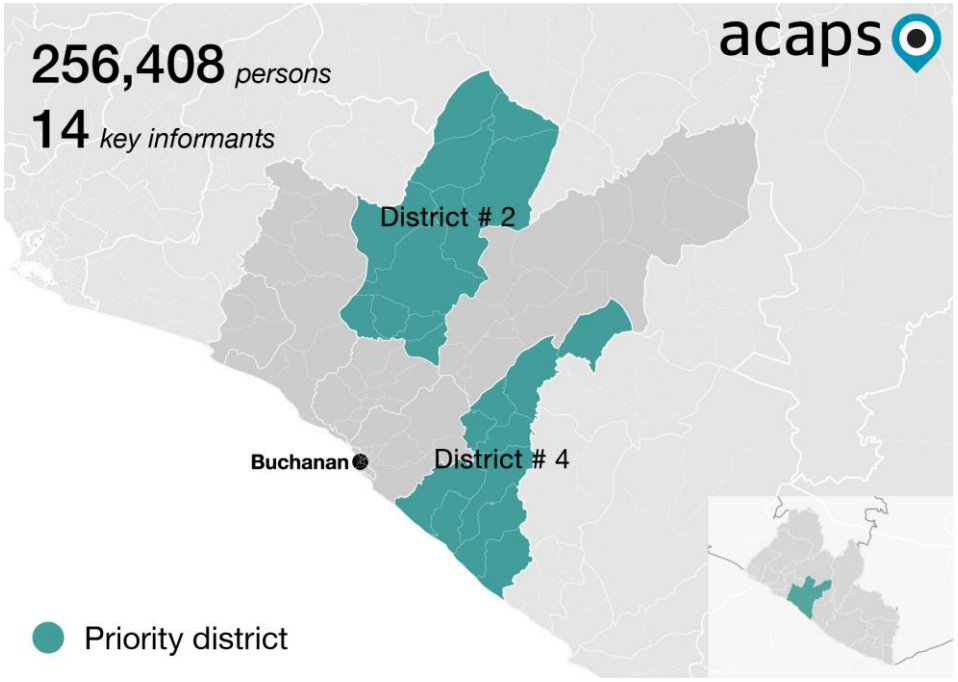
Health is one of the other main problems, according to KIs. As with education, the fear of Ebola is hampering access to services. Despite this additional barrier, 60% of informants indicated that the situation has actually become better compared to a year ago. This is due to the provision of medicines, ambulances and increased awareness of the importance of adequate healthcare among families. Additional support is still required, with improvement of the health infrastructure mentioned by 30% of KIs as a required intervention.

Income generation

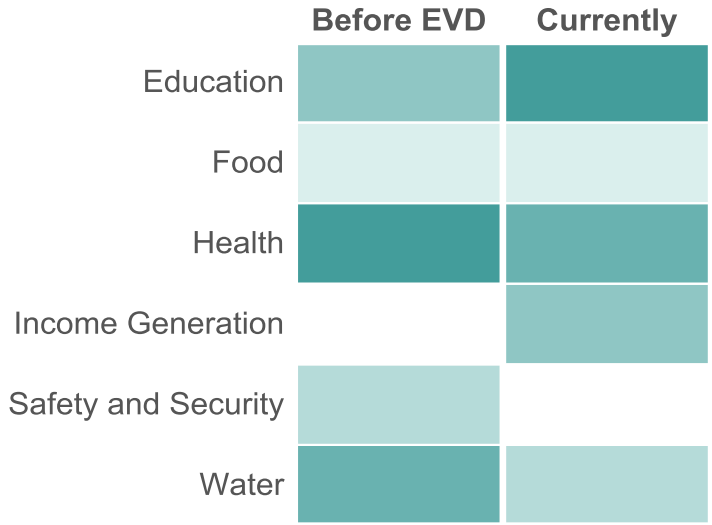
According to KIs, only few could obtain sufficient income to adequately provide for their families, which is in line with the available baseline data on poverty levels within the county. When asked about the livelihoods situation, 60% of KIs indicated that the situation is currently worse compared to a year ago. The lack of job opportunities was identified as the main concern before the outbreak. This problem has been compounded by a general increase in unemployment and the closure of markets and businesses.



4. Grand Bassa



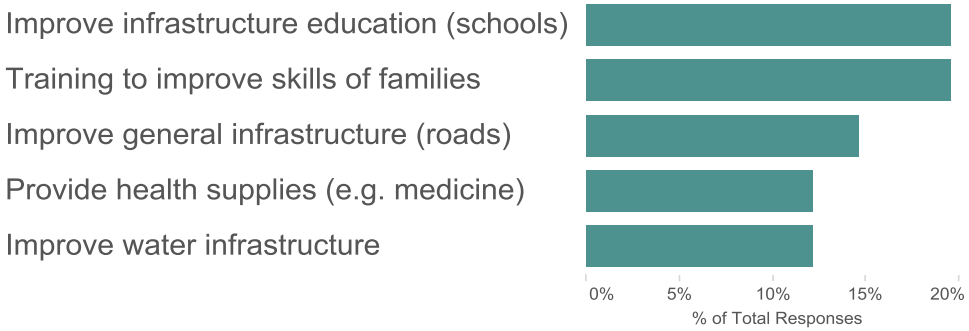
Needs prioritisation Grand Bassa



Key findings

The current situation in terms of access to education, livelihoods and health is worse compared to a year ago, according to a majority of KIs surveyed. The education situation is of particular concern, with KIs considering it currently a higher priority than before the crisis. Fear of Ebola infection is the main obstacle to accessing health and education, although the Ebola incidence has been relatively low in the country and no cases have been confirmed since December 2014. Districts 2 and 4 were those most in need, and KIs agreed that this was mainly due to the limited number of health facilities in these areas.

Main activities required



Context

Palm oil and food crop production are the most important livelihood activities in the county. The majority of citizens are engaged in informal work in agriculture and / or petty trading (GoL, 2008).

Poverty rates are slightly above the average for rural Liberia, with 43% of the population in the lowest quintile (DHS, 2013). School attendance rates in Grand Bassa are the second lowest in the country, after Bong, at 23%. In 2008, a shortage of educational facilities was identified and available schools were often overcrowded (GoL, 2008). Traditional culture remains strong, with the Poro and Sande societies playing a major role in the education and initiation of boys and girls and access to healthcare.

The first Ebola case in the county was reported mid-July. 54 confirmed cases in total have been recorded, between July and mid-December (MoH, 04/2015).

Education

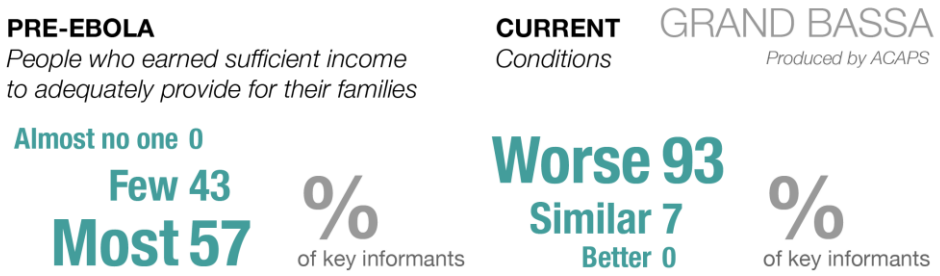
Access to education is currently seen as worse than before the crisis, indicated by 80% of KIs. The inability of families to pay for transport and materials is the main obstacle, both currently and before the crisis. The poverty levels in the county partly explain this. In addition, the fear of Ebola infection has further eroded the willingness of families to send their children to school. Several schools have not yet reopened or staff are unavailable, according to KIs.

Health

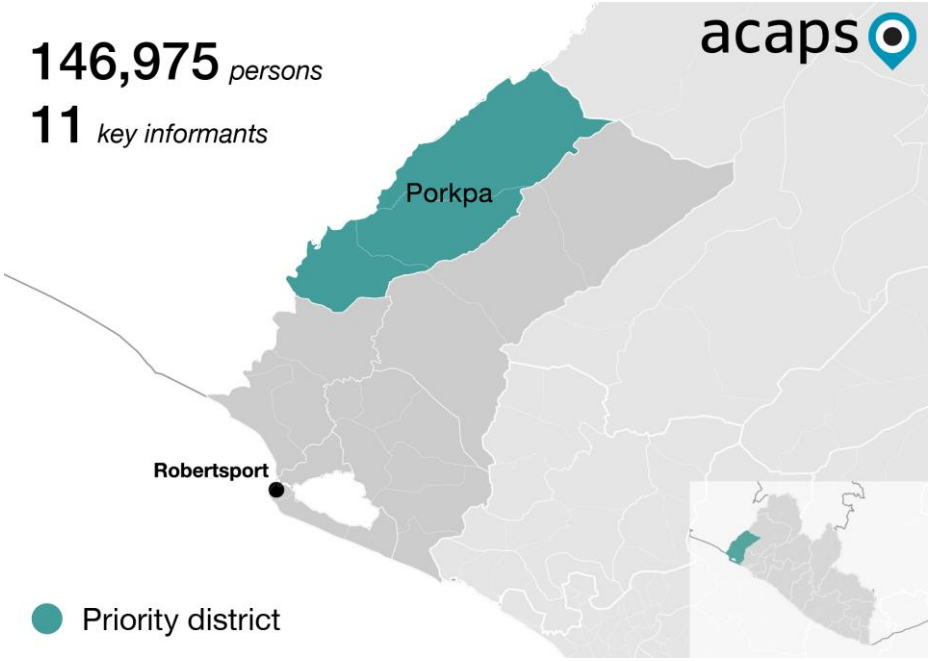
The fear of contracting Ebola is still the main obstacle to accessing healthcare, according to KIs, although there has not been a confirmed Ebola case in over five months. From all KIs surveyed nationwide, Grand Bassa ranks the highest when it comes to the lack of trust in health facilities. The majority of KIs judge the current situation to be worse than a year ago. However, two KIs indicated that the health situation has improved, with NGOs providing support to several health centres.

Income generation

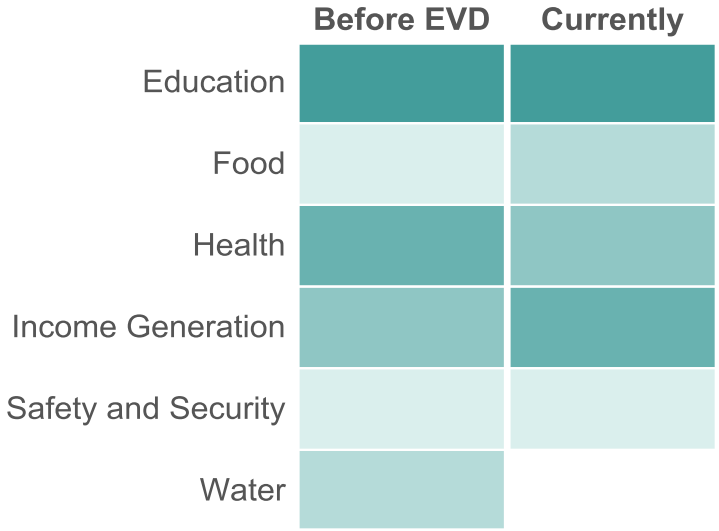
The two main pre-crisis obstacles to income generation, a lack of employment opportunities and limited skills and literacy, remain the largest problems. KIs almost universally agreed that the ability of families to obtain an income has decreased, as some have become unemployed due to the impact of the Ebola crisis on the economy.



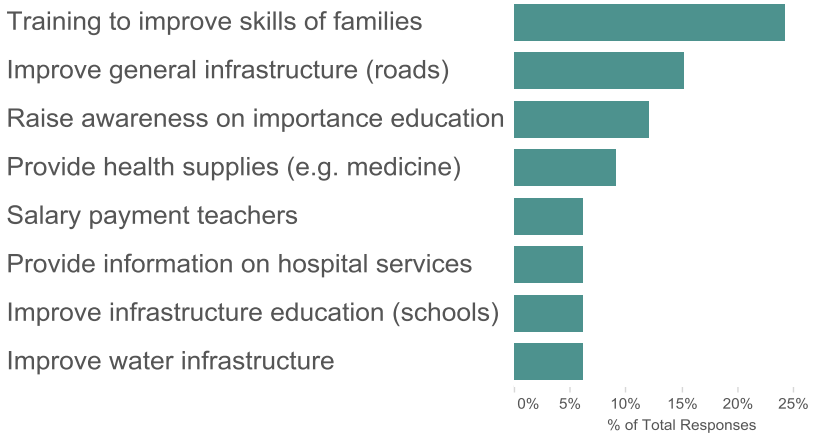
5. Grand Cape Mount



Needs prioritisation Grand Cape Mount



Main activities required



Key findings

Access to education and livelihoods is still negatively impacted by the consequences of the Ebola crisis, according to KIs. The results suggest that the general decrease in livelihood opportunities has impacted the financial means of families to send their children to school. There is a lack of trust in the ability of health and education services to protect people from Ebola transmission. KIs suggested increasing the provision of information on health services and the importance of education to address this. Porkpa district was identified as the district most in need, due to insufficient schools, health facilities, roads and jobs.

Context

Petty trading and agriculture are the main sources of income in the county. Grand Cape Mount has the highest percentage of HHs dependent on mining nationwide. 31% of 6–11 year olds are enrolled in primary school, below the national average of 38% (DHS, 2013). Food insecurity is severe, with just 21% of HHs being food secure, according to a 2012 assessment (WFP, 06/2013). There is only one paved road in the county and accessibility to some areas during the rainy season is virtually impossible due to damaged bridges (GoL 2008).

Grand Cape Mount was one of areas with the highest Ebola incidence. The first case was confirmed in July 2014, and cases continued to be reported until mid-January 2015 (MoH, 04/2015). In October, roadblocks were set up to limit travel to neighbouring counties and several communities in the county capital, Robertsport, were put under quarantine (AFP, 24/10/2014; UNMEER, 30/11/2014).

Education

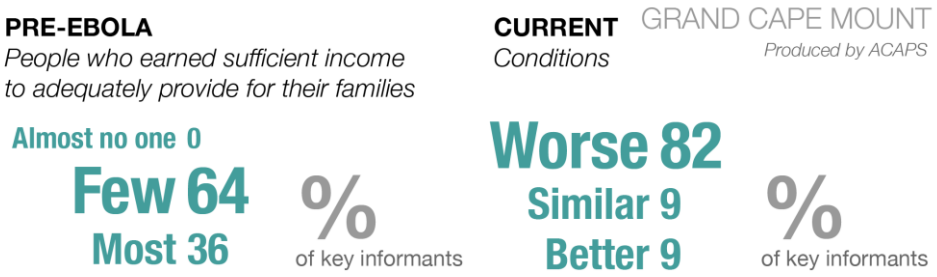
Access to primary education was ranked as a major problem, both before the crisis and currently. 80% of the KIs indicated that access to education is currently worse. Even before the crisis families did not have sufficient resources to pay for transport and school materials, and access to education has further diminished due to the fear of Ebola in schools. KIs indicate a need to disseminate information on the importance of education, which was highlighted as the main activity required to address existing problems.

Health

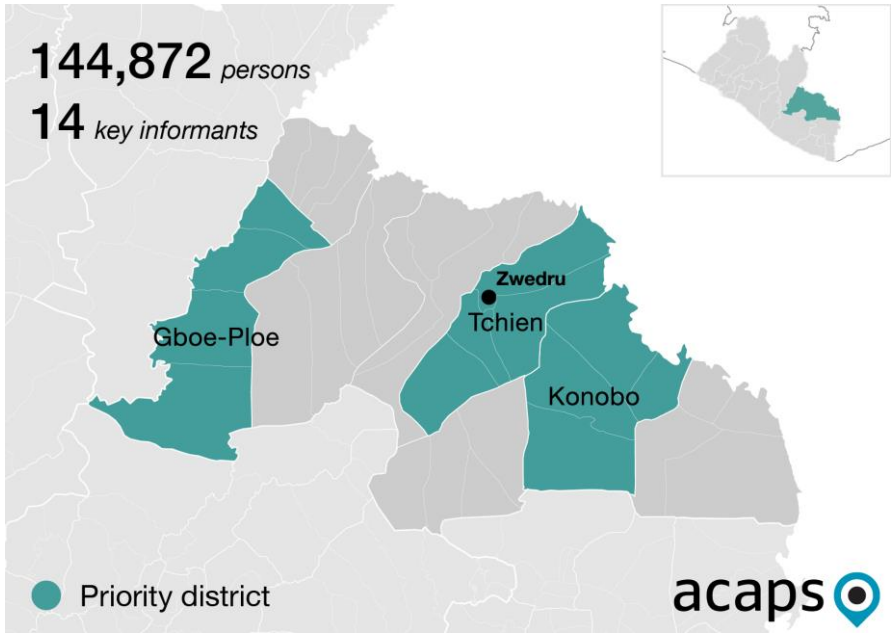
The current main obstacles to accessing healthcare differ significantly from a year ago, according to KIs. Before the outbreak, the main obstacles were the lack of medicine, lack of financial resources and physical constraints. The fear of Ebola and the lack of trust in health facilities have now overtaken these. Almost half of KIs indicated that access to healthcare has improved, with external actors currently providing support and medicine to health facilities. However, KIs requested additional health supplies and information on hospital services, to address the lack of trust in the health system.

Income generation

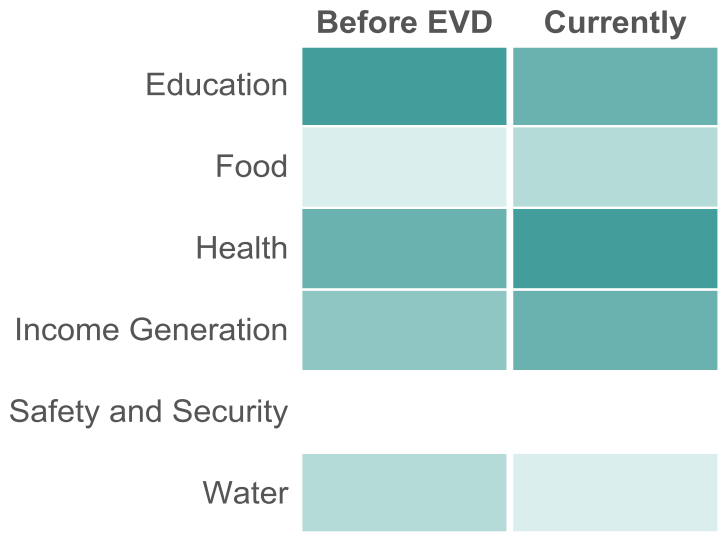
The majority of KIs surveyed (over 80%), viewed the current income generation situation as worse compared to a year ago. The lack of job opportunities and limited literacy and skills are the main obstacles, as in the rest of the country. Training to improve the skills is the most often mentioned required intervention. Unemployment has increased in the county due to Ebola, as not all companies have reopened or returned productivity to pre-crisis levels.



6. Grand Gedeh



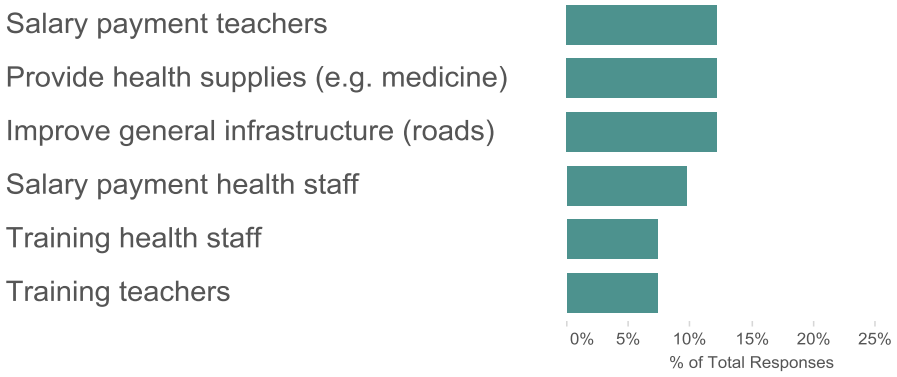
Needs prioritisation Grand Gedeh



Key findings

KI opinions differ widely on the current education, healthcare and income generation situation, as compared to before the crisis. KIs who said that the situation had improved assigned this to the increased support from the government and NGOs. Hence, the variation in opinion could be an indication of the localised differences in levels of support. Grand Gedeh is one of nine counties where KIs highlighted the lack of payments to health and education staff as a main obstacle. Gboe-Ploe, Tchien and Knobo were singled out as districts where communities faced most problems, due to the general lack of infrastructure. Girls under 18 and people with a disability were highlighted as those most in need of support.

Main activities required



Context

Grand Gedeh is mostly dependent on agriculture. Production is low, as land cultivation is still relatively undeveloped. Consequently, people rely on other sources of food and income, including hunting and petty trading (EMMA, 2012). Cross-border trade from neighbouring Guinea and Cote d'Ivoire is an important source of food and non-food items. However, transport is hampered by a lack of maintenance of roads and bridges, and infrastructure damage inflicted during the civil war. The county is known to have gold, diamond and iron ore deposits, but the natural resources are not exploited (GoL, 2008). In December 2014, the county hosted over 20,000 refugees from Cote d'Ivoire, primarily in PTP refugee camp (LRRRC, 28/01/2015).

In 2013, 49% of children under 5 were chronically malnourished, the highest rate in the country. This is primarily linked to feeding practices. Only a third (33%) of newborns are breastfed within one hour of birth, compared to the national average of 50%. 40% of children aged 6–11 attend school, which is close to the national average of 38% and far above average for the counties outside of Monrovia.

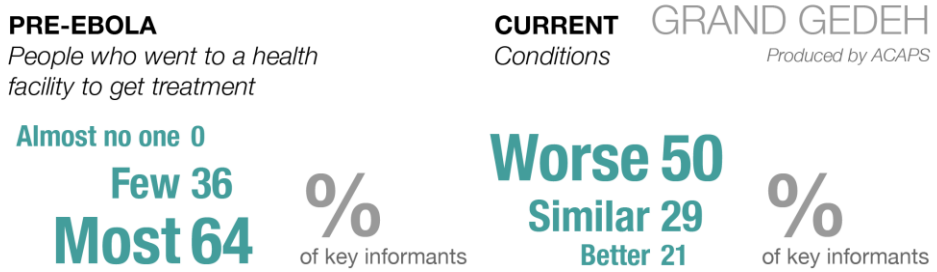
There have only been three confirmed Ebola cases, the first on 13 September and the last a month later, on 4 October 2014 (MoH, 04/2015).

Education

As in the rest of the country, the lack of financial resources is the main constraint to accessing primary education. Despite the low number of cases, Ebola infection was ranked by KIs as the second largest obstacle. One KI highlighted that staff salaries had not been paid, while five others stated that salary payments are one of the main interventions required. Most KIs (around 80%) agreed that the situation is worse or similar, when asked to compare current access to education to before the outbreak.

Health

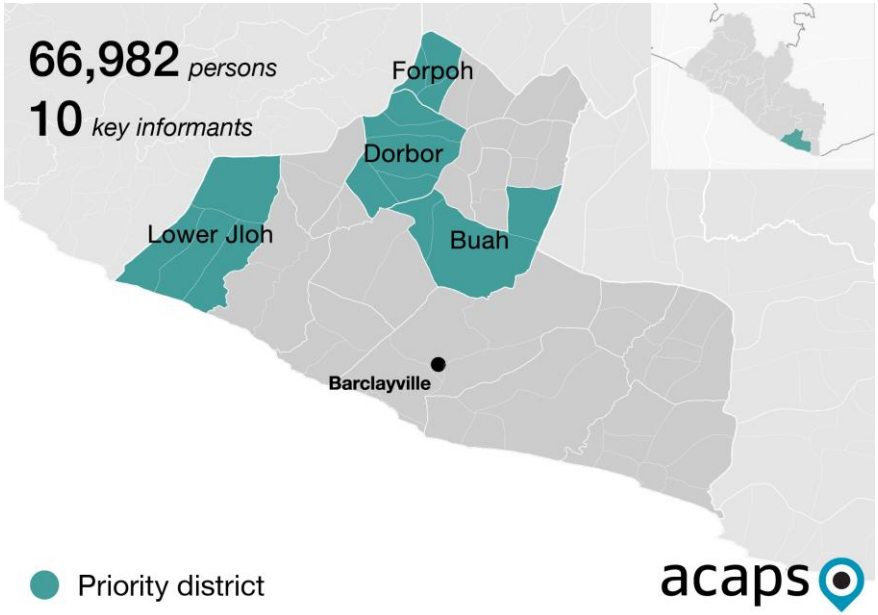
The health situation has become worse, according to half of KIs. The fear of Ebola is the main obstacle, followed by a lack of medicine. The payment of staff salaries was also mentioned as an obstacle to accessing healthcare, and a priority for intervention. NGO assistance and the increased number of health staff has led to an improvement of the situation, according to three KIs.



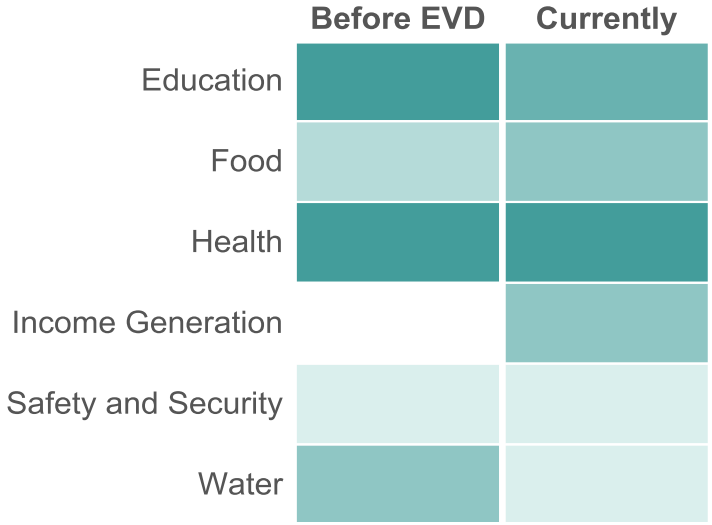
Income generation

As in the rest of the country, the lack of job opportunities continues to be the main obstacle to income generation. This is exacerbated by the closure / disruption of markets and businesses, due to restrictions on cross-border movement. However, half of KIs indicated that the current income generation situation is largely similar to the pre-outbreak levels. NGO support was mentioned by two KIs as having a positive impact, resulting in better access to income sources compared to before the crisis.

7. Grand Kru



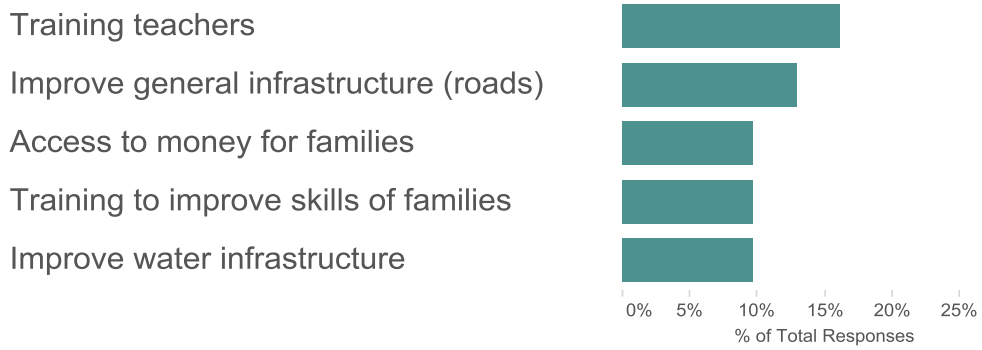
Needs prioritisation Grand Kru



Key findings

Health and education remain the two main priorities in the county. Income generation has recently become more of a concern with markets closed or disrupted, compounding the already low levels of employment. The needs are primarily driven by the poor state of the road infrastructure, affecting access to education, health and livelihoods. Grand Kru is the only county where KIs ranked physical constraints as the main obstacle to accessing health. Unlike in other areas, the quality of the staff and low number of teachers is mentioned as one of the main concerns. Teacher training is highlighted as the most important intervention required. Girls under 18 and persons with a disability were main vulnerable groups highlighted by KIs.

Main activities required



Context

Grand Kru is one of the most isolated and underdeveloped areas in the country, with the highest poverty rates (DHS, 2013) and below average health indicators. Families are largely dependent on subsistence farming and there are limited other job opportunities (GoL, 2008). A 2013 assessment found that 45% of people are food insecure, the highest proportion after Bomi, compared to 18% nationally. (WFP, 06/2013)

The lack of infrastructure is particularly pressing. In 2008 it was estimated that more than two thirds of the county was inaccessible by car (GoL, 2008). As a result, the population face large difficulties in accessing basic services. In 2013, 70% of women faced at least one problem in accessing healthcare. 50% indicated that this was due to a lack of money (46% nationwide) and / or the large distances to the health facilities (40% nationwide) (DHS, 2013). The county is prone to floods. At the end of 2014 floods affected rice, cassava and palm oil production as well as cash crops (Ministry of Agriculture, WFP, FAO, 30/11/2014).

Grand Kru was the last county affected by Ebola. The first case was confirmed on 24 October 2014. Only three additional cases were reported from the county, the last one in mid-November (MoH 04/2015).

Education

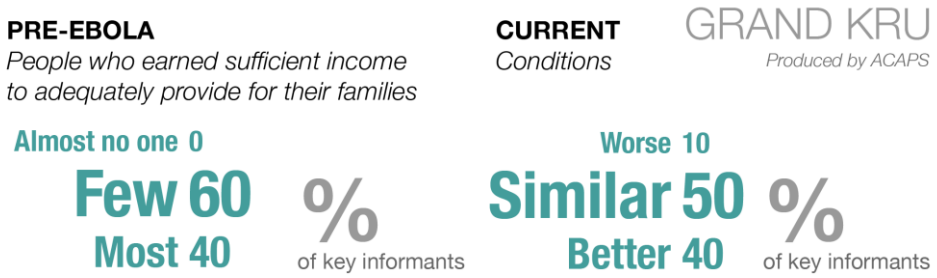
In 2008, most schools lacked proper structures and furniture (GoL, 2008). Several interventions have taken place since then, but the low quality of the school infrastructure is a continued obstacle highlighted by KIs. The low quality and unavailability of staff is currently one of the largest problems. Training education staff was one of the three main activities required, as indicated by half of KIs. However, even if adequate education facilities were in place, children would face large difficulties in accessing schools. The main problem both before the crisis and currently is the ability of families to pay for transport and education materials, due to the high levels of poverty and remoteness of many populated areas. Six out of ten KIs said that the current situation was worse than a year ago, with the fear of Ebola infection in schools compounding existing access constraints.

Health

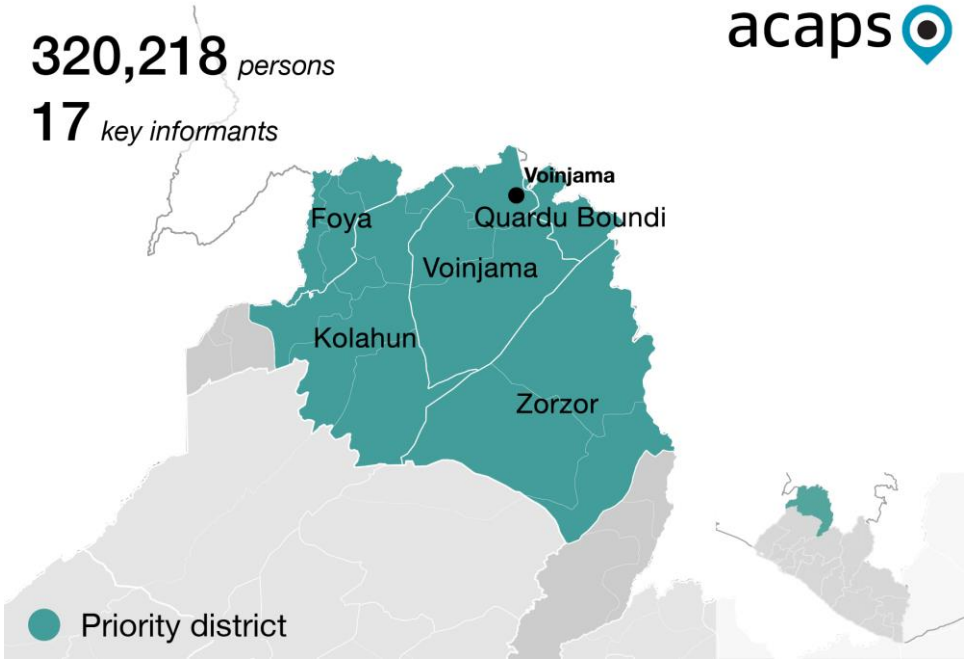
The county is relatively well covered by health infrastructure with 17 health facilities, 2.5 per 10,000 people (Liberia Health System Assessment, 2015). The main obstacles to access are physical constraints, followed by a lack of medicine. Despite having the lowest incidence of Ebola, just four cases, fear of Ebola and a lack of available staff in health facilities are the other main current constraints. 60% of KIs judged the current situation as being worse compared to a year ago, while 40% thought the situation was the same. The lack of information on health care services was ranked as one of the main concerns before the crisis, but KIs rank it as a much lower priority now.

Income generation

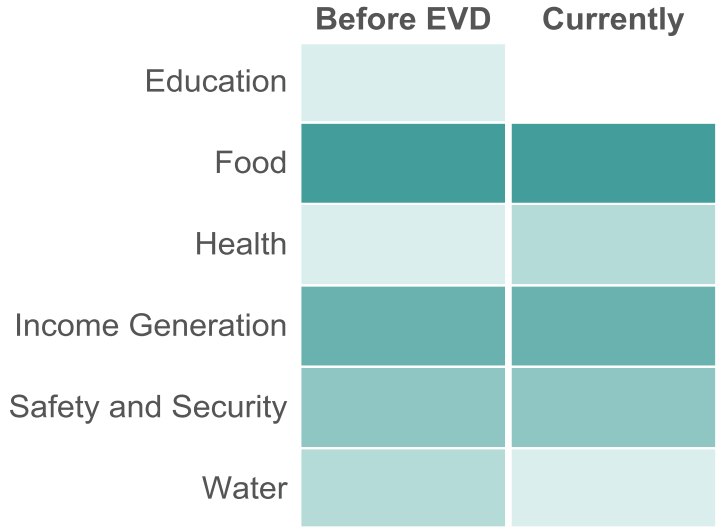
The Ebola response in the county has resulted in additional, temporary, job creation, but the overall situation has not structurally improved. The lack of job opportunities is the main obstacle to making an income, followed by the disruption of markets and businesses due to Ebola and physical / logistical constraints.



8. Lofa



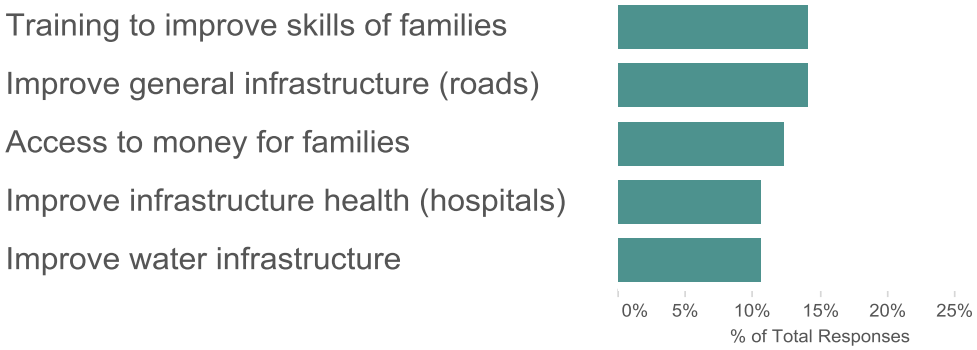
Needs prioritisation Lofa



Key findings

The Ebola outbreak in Liberia started in Lofa and the county reported one of the highest number of Ebola cases. The peak of the outbreak took place in the planting season between April and June. Although the county is normally self-sufficient in terms of food, income generation and food are currently the main priorities. The results indicate that the outbreak has changed the behaviour of communities, with an apparent decreased utilisation of traditional healers and avoidance of schools out of fear of Ebola infection. Ebola orphans, survivors and their families were highlighted as the groups most in need.

Main activities required



Context

Lofa County was severely affected by the civil war. It suffered extensive damage to infrastructure and basic social services, as well as mass displacement. The county's population is mostly reliant on agriculture, with very limited activities in rubber, timber or mining (GoL, 2008). The county is seen as the main breadbasket in Liberia, and is self-sufficient in rice production (WFP, 06/2013). Most indicators regarding access to services are in line with the national averages. Primary school attendance rates for instance were at 36% of children aged 6–11 in 2013, compared to 38% nationwide (DHS, 2013).

Liberia's first confirmed Ebola cases were reported from Foya district in Lofa, on 13 March. The county has been one of the worst affected during the outbreak, with over 300 cases confirmed in the following nine months (MoH, 04/2015; GoL, 21/10/2014; IMS, 02/04/2015). A Mercy Corps assessment in October 2014 found that smaller harvests are expected for both staple and cash crops, because of quarantined zones and restrictions on movement in the county (Mercy Corps, 23/10/2014).

Education

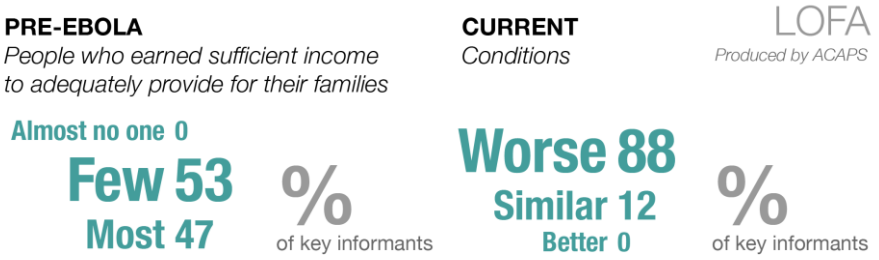
Before the crisis, the main obstacle to accessing education was the inability of families to afford transport, fees or materials. The fear of Ebola infection in schools has overtaken these, and was ranked as the main problem now. Almost 90% of the KIs indicated that access to education was worse than a year ago. However, when asked about the main problems currently faced by communities, KIs prioritised food, livelihoods, water, healthcare and safety and security over education.

Health

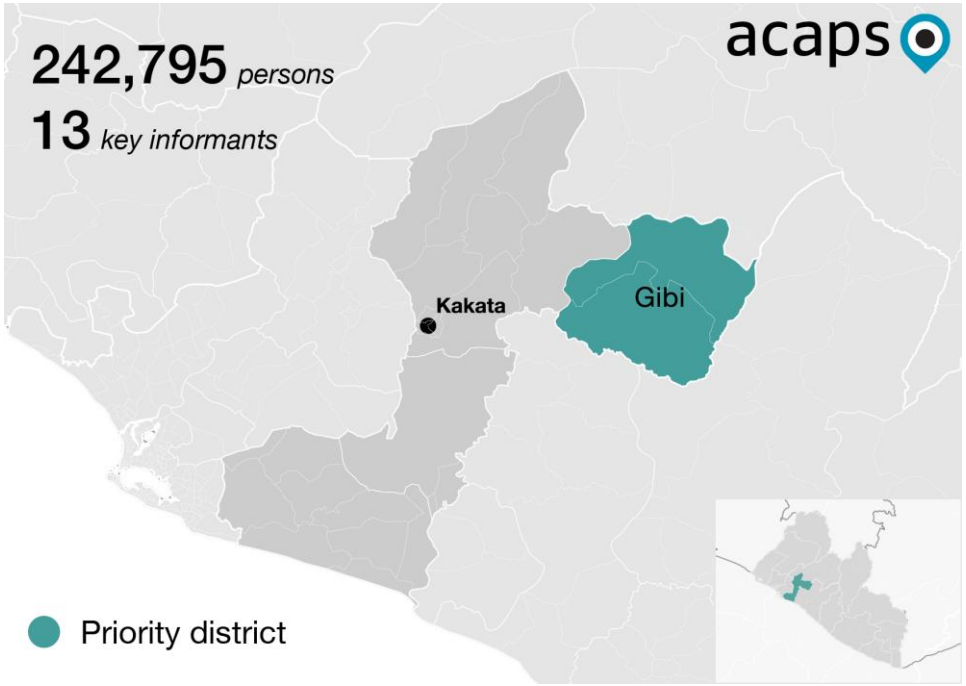
The county has strong cultural and traditional practices. Before the crisis families mostly decided to visit traditional healers, and KIs indicated that this was the main obstacle to accessing formal health care. Currently, this is no longer ranked as an obstacle. This could be an indication of an erosion of trust of traditional healers, who were linked to localised outbreaks of Ebola in the county, and the impacts of social mobilisation. The current main problem is families' fear of Ebola infection in health facilities. Most KIs agree that access the healthcare is currently worse compared to before the outbreak. The two KIs who judged the current situation as better, highlighted the positive impact of increased awareness of the importance of healthcare among communities.

Income generation

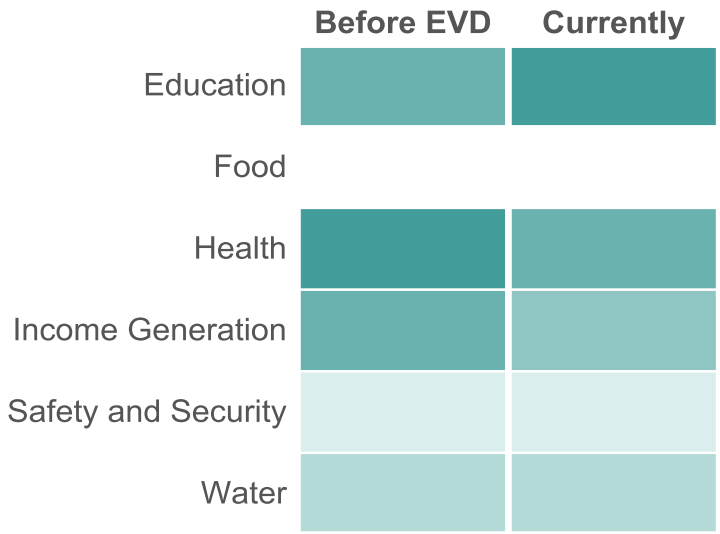
Before the crisis, there was no clear prioritisation of the problems in the livelihood sector. The lack of job opportunities, limited literacy and limited resources to invest in productive assets all ranked as major obstacles. Currently, the three main problems are all a direct or indirect consequence of the Ebola outbreak: the closure / disruption of markets, increased unemployment, followed by a decrease in agricultural production. The outbreak in the county peaked during the planting season, from April to June, and the main harvest in October. Rice production is expected to have decreased. This is due to the limited maintenance of the fields during the growing season, because of quarantine measures and restrictions on group work (Mercy Corps, 23/10/2014; WFP, 11/2014). The majority of KIs judged the situation as worse compared to a year ago.



9. Margibi



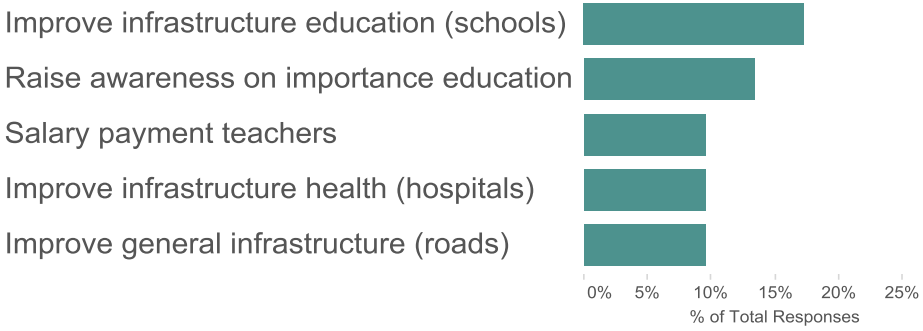
Needs prioritisation Margibi



Key findings

Margibi County was one of the hotspots during the outbreak, with a large number of Ebola cases reported in a short period of time. The main impact of the Ebola crisis currently is the decrease in livelihood opportunities, according to KIs. Although the fear of Ebola is an additional obstacle to accessing healthcare and education, overall the current situation is similar to that of a year ago. Girls under 18, Ebola orphans, survivors and their families were highlighted as the groups most in need of support. Gibi district was highlighted as the priority district, primarily due to a lack of roads and job opportunities.

Main activities required



Context

Margibi County is known for its rubber plantations, primarily the Firestone and Salala plantations. These industries are an important source of income and provide basic services including schools, shelter, and healthcare to employees and families. Food crop production is not as widespread in Margibi as in other counties, and it is a high deficit area in terms of rice and cassava. Traders rely on suppliers from outside of the county for their stock replenishment (Food Security Cluster, 13/11/2014). The healthcare system is below average, with one of the lowest proportions of health workers for the total population (Liberia Health System Assessment, 2015).

After Montserrado, Margibi recorded the highest number of Ebola cases at 392 confirmed cases. The first case was identified at the end of March and cases were reported for the following 11 months (MoH, 04/2015).

Education

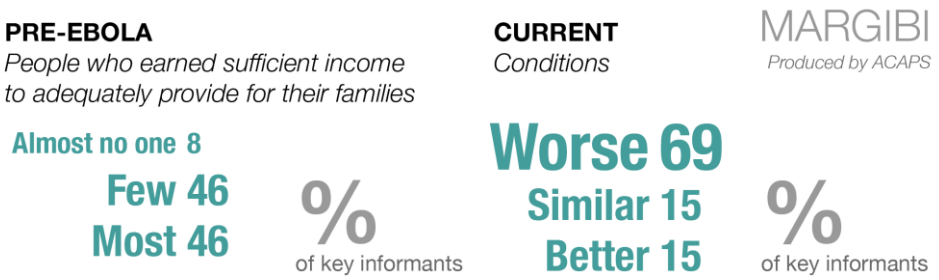
Attendance rates before the crisis were the highest of the counties outside of Montserrado, at 40% of children aged 6–11 (DHS, 2013). Most KIs (70%) indicated that the education situation has remained similar or has improved compared to last year, mainly due to increased support from the government and NGOs. However, as in other counties, the lack of resources to pay for transport, fees or materials remains the main constraint to accessing education. The fear of Ebola infection in schools is currently one of the three main obstacles, which is unsurprising in a county with one of the highest Ebola rates in the country.

Health

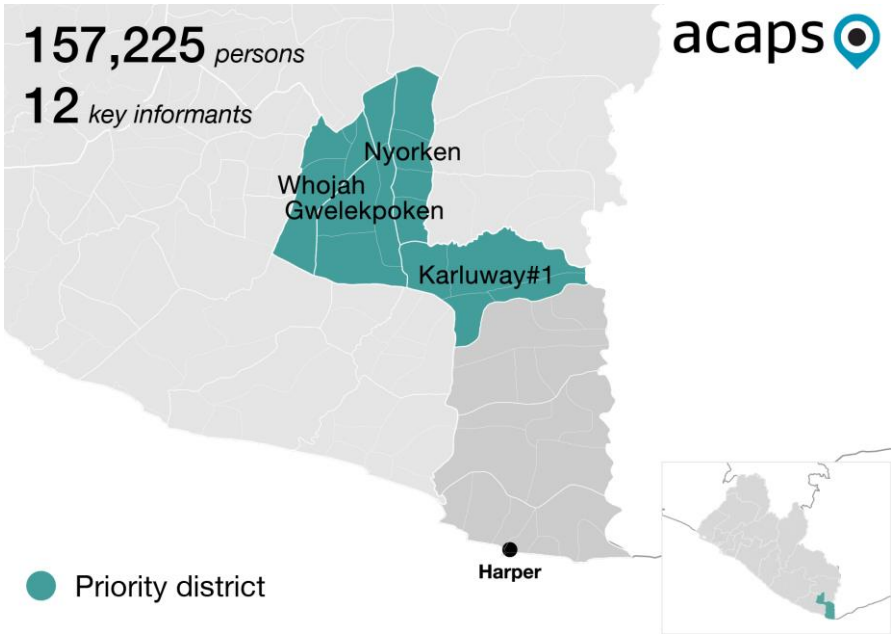
Margibi is one of the two counties where physical constraints are the main obstacles to accessing healthcare, treatment or preventive care. The lack of medicine at health centres is an additional main obstacle. Before the crisis visiting traditional healers, instead of formal healthcare centres, was one of the main obstacles identified by KIs. This is no longer mentioned as a concern, which could indicate that communities have lost trust in traditional health practices due to the Ebola outbreak and subsequent social mobilisation. 70% of KIs indicated that the current situation is similar or better than last year, which could indicate that most of the current problems were already of concern before the outbreak. Four KIs indicated that the situation is currently better, due to NGO support and the increased awareness among communities of the importance of health care.

Income generation

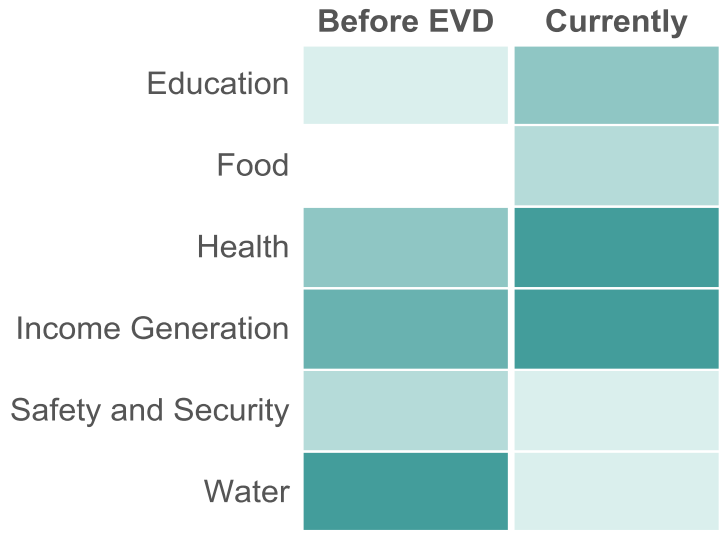
The main livelihood activities are rubber tapping, charcoal production and subsistence agriculture. KIs mention increase unemployment as one of the main concerns, partly due to Ebola related closures and the disruption of markets and businesses. The rubber plantations are highly dependent on transport, and Ebola related border closures and travel restrictions throughout the region have severely limited the import and export of goods. Most of these restrictions have now been lifted, but KI responses indicate that the market has not yet fully recovered. 69% of respondents indicated that the current situation is still worse than before the outbreak.



10. Maryland



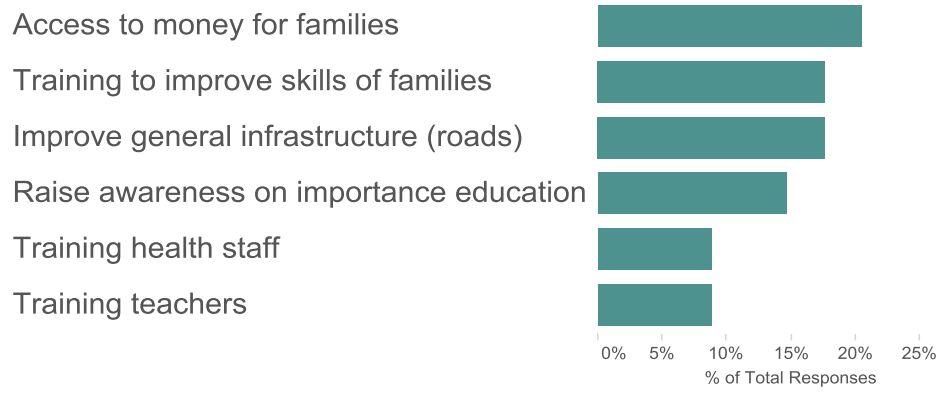
Needs prioritisation Maryland



Key findings

The main problems mentioned related to access to education, healthcare and livelihoods. Most obstacles to accessing basic needs were already of concern before the crisis, including a lack of jobs and physical constraints. The exception is the fear of Ebola, which prevents families from sending their children to school. Surprisingly, access to water was the highest priority before the crisis, while KIs now consider it one of the lowest. As the water infrastructure has not been greatly improved over the last year, it is likely that this difference in ranking stems from the relative increased importance of income generation and health. Physical constraints, primarily the poor roads, are one of the main reasons why families cannot reach basic services. Maryland experiences a long rainy season, during which roads are mostly inaccessible.

Main activities required



Context

Agriculture is the main source of income for Maryland, and rubber cultivation provided an income for around 40% of HHs in 2008. The county borders Cote d'Ivoire and border communities, including the capital Harper, rely on cross-border trade, especially during the rainy season. As in the rest of the southeastern region, the road infrastructure in Maryland is particularly poor, especially during the prolonged rainy season (GoL, 2008). The county hosts at least 10,000 refugees who fled the 2010 post-election violence in Cote d'Ivoire (LRRC 28/10/2015).

In 2013, household wealth was above average when compared to the other counties in the southeastern region. Only 21% of HHs were categorised as part of the poorest 20% in the country, compared to 37% for the rest of the southeastern region. School attendance rates are above the national average, with 39% of children aged 6–11 attending primary school in Maryland in 2013 (DHS, 2013).

The first Ebola case in Maryland was recorded at the start of September 2014. Four confirmed cases were recorded in total (MoH, 04/2015).

Education

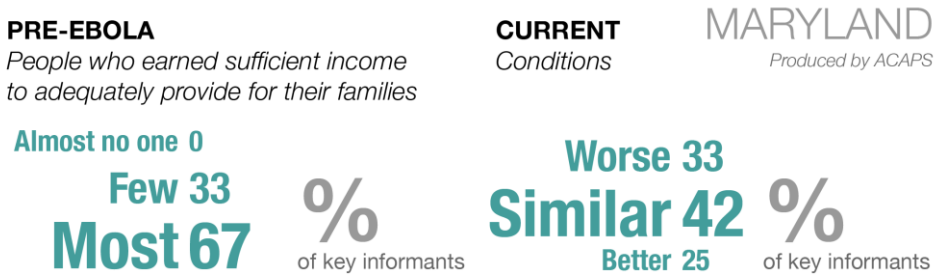
KIs disagree on how the current education situation compares to before the crisis. Half stated that the situation was worse, the other half judged it to be better. The main reason for this improvement is related to the behaviour of students and parents – after a long period without access to education due to school closures, families value schooling more, according to KIs. There is more agreement on the current main problems, with the lack of financial resources identified as the main obstacle by all informants surveyed, followed by the fear of Ebola infection in schools.

Health

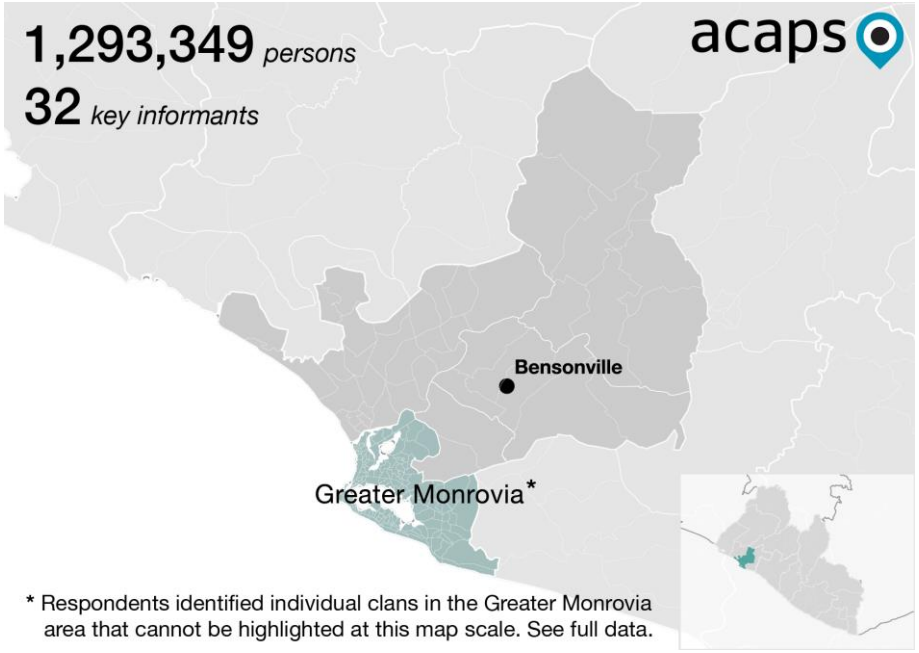
The lack of information on healthcare services was a main concern before the crisis, but no KIs highlighted this as a current issue. This indicates that the Ebola outbreak and response has led to increased awareness of available services. Unlike the rest of the counties, fear of Ebola was not highlighted as a main concern. The lack of medicines and physical constraints, including the poor state of the road infrastructure, are currently the main obstacles to accessing healthcare. One third of the KIs, however, consider the current situation to be better than before the outbreak. KIs attribute this improvement to the additional support of NGOs and greater awareness of health services among communities.

Income generation

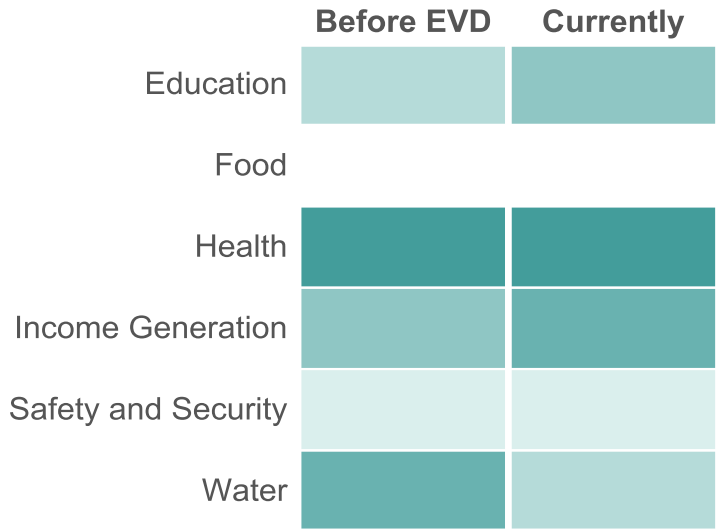
It was widely assumed that the border closures would have a major impact on the livelihoods of communities in Maryland, which are partly reliant on trade with Cote D'Ivoire. However, the main problems mentioned by KIs were the lack of job opportunities and physical constraints, which were the main problems before the crisis. KIs did not mention problems which were directly related to the Ebola crisis. Several mentioned the positive impact of income generating opportunities created by NGOs providing services in the county.



11. Montserrado



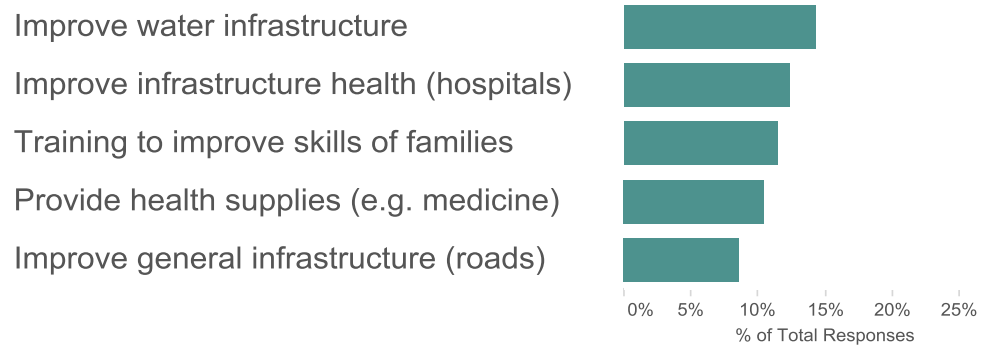
Needs prioritisation Montserrado



Key findings

Despite the concentration of services in Montserrado, the current problems expressed by KIs are surprisingly similar to those faced by rural communities. This is because the majority of problems are access related. Although education and health facilities are largely available in most parts of Montserrado, families do not have the financial means to access services. The existing access problems are compounded by the fear of Ebola, which impacts access to education and health. The suggested activities required are water, health and road infrastructure improvements, indicating that service availability remains of concern.

Main activities required



Context

Monrovia is the centre of most political, economic and social activity in Liberia. It has higher standards of education, health, security and infrastructure. Illustratively, 50% of the population in the county was part of the richest 20% in Liberia in 2013, and almost all HHs were considered to have acceptable food consumption. School attendance rates are far above average, with 53% of children aged 6–11 attending primary school compared to 38% nationwide. However, large scale urban migration is straining the capital's limited infrastructure. More than 20% of rural HHs having at least one family member who has migrated to Monrovia, according to a 2013 study (DHS, 2013; WFP, 2013).

The situation in rural Montserrado is comparable or worse, when compared to other rural counties. In the district St Paul River for instance, there is only one paved road. A WFP assessment in 2013 found diarrhoea rates in rural parts of Montserrado at 25%, far above the national average of 17% (GoL, 2008, WFP, 06/2013).

The first Ebola cases in Monrovia were reported in mid-May (MoH, 04/2015). The city was unable to cope with the high number of infections that followed in June, and a state of emergency was proclaimed at the start of August. At the end of August, the government quarantined the city's West Point slum, hosting over 75,000 people, in an attempt to slow the spread. Violence between the population and armed forces broke out, resulting in the death of one teenager (WHO, 01/2015).

Education

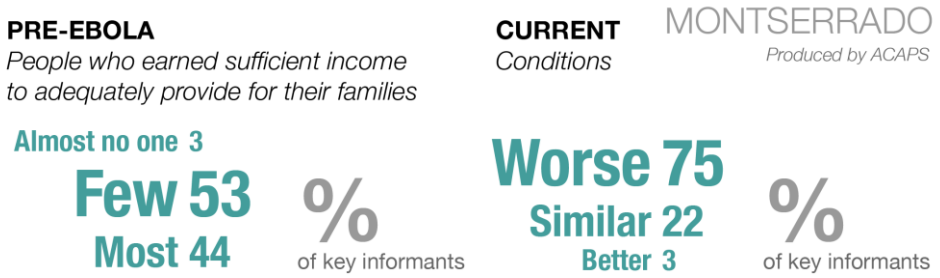
The lack of financial resources was the main obstacle to accessing education, and still is. Over 70% of the KIs indicated that access to education is currently worse than before the crisis. One of the main additional obstacles is the fear of Ebola, which discourages families from sending their children to school. The third main obstacle is the need for children to support their families, with children forced to help with domestic chores or work outside of the house.

Health

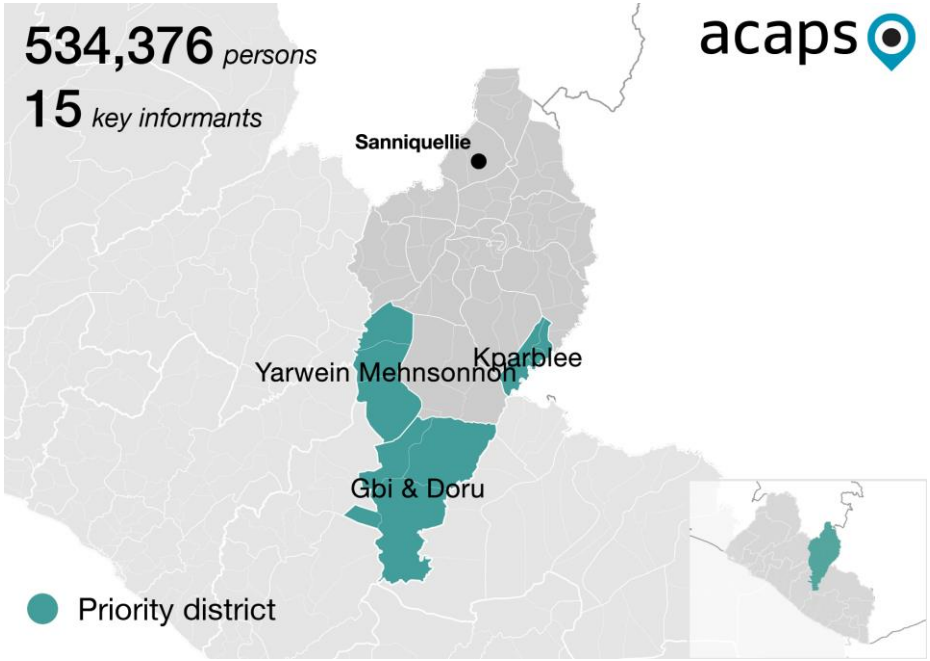
The lack of financial resources is the main current obstacle to accessing healthcare. 200 of the 240 health facilities in the county are private, which are more expensive than their government counterparts (Liberia Health System Assessment, 2015). The fear of Ebola infection at health centres is the one of the main concerns. The lack of trust in the health system is currently the third largest obstacle to accessing healthcare, and was a major problem before the crisis. 60% of KIs indicated that access to healthcare had worsened while over 20% indicated that it had improved, primarily due to the increased support to healthcare centres.

Income generation

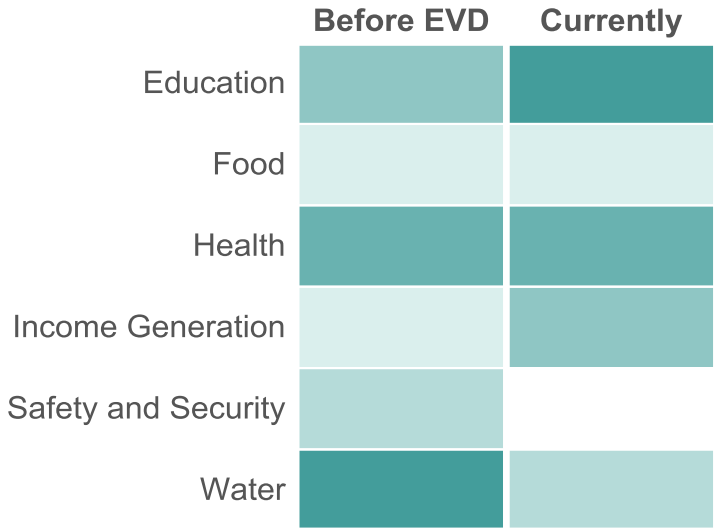
The lack of job opportunities and lack of skills are currently the main obstacles to income generation, as they were before the crisis. However, the majority of KIs view the current situation as worse, compared to before the crisis. The jobs lost during the Ebola crisis have not all been replaced, and the increase in unemployment is still a major concern.



12. Nimba



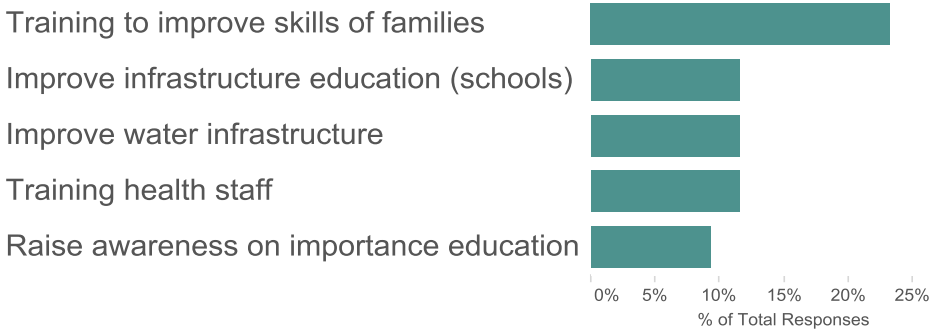
Needs prioritisation Nimba



Key findings

The education, health and income generation situation in Nimba is currently worse than a year ago, according to KIs. The deterioration can be traced to the increased difficulties in accessing healthcare and education, due to the fear of Ebola infection. Livelihood opportunities remain affected by the temporary border closures and movement restrictions, with Ebola related unemployment highlighted as one of the main concerns. Gbi, Doru, Yarwein, Mehnsonnon and Kparblee were emphasised as the main districts in need of support, due to the limited number of schools, health facilities and poor state of the infrastructure.

Main activities required



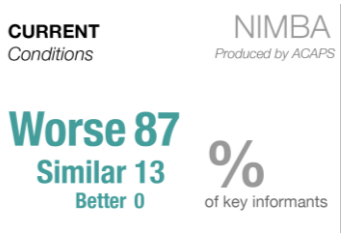
Context

Nimba is the second most populated county in Liberia. During the civil war the county saw some of the heaviest fighting, resulting in large scale displacement and widespread destruction of infrastructure. The exploitation of mineral resources was an important source of revenue and jobs before the conflict. Now it is mostly limited to the illicit mining of gold and diamonds, except for the mining by ArcelorMittal which is extracting iron ore in the county (GoL, 2008). Over 5,000 Ivorian refugees, of the 38,000 who fled to Liberia following the 2010 post electoral crisis, reside in Bahn camp in Nimba (LRRRC, 28/01/2015; UNHCR, 23/10/2014). In 2013, school attendance rates among 6–11 year olds were the third highest in the country, after Montserrado and Margibi, at 34% (DHS, 2013).

The first Ebola case in Nimba was on 4 July, and cases continued to be reported until mid-December (MoH, 04/2015). A Mercy Corps assessment in October 2014 found that one of the main consequences of the outbreak was the halt in cross border trade. With the shift from importing goods overland from Guinea and Ivory Coast to shipping through Monrovia, HH costs have increased significantly while income opportunities have declined (Mercy Corps, 04/11/2014).

Education

13 out of 15 KIs indicated that the current situation has deteriorated compared to a year ago. Access to education was ranked as the main current need. The main obstacles to accessing education now include the lack of resources for families and the fear of Ebola infection. In addition, families do not always see the added value of education. The need for social mobilisation is one of the main activities required within the county.



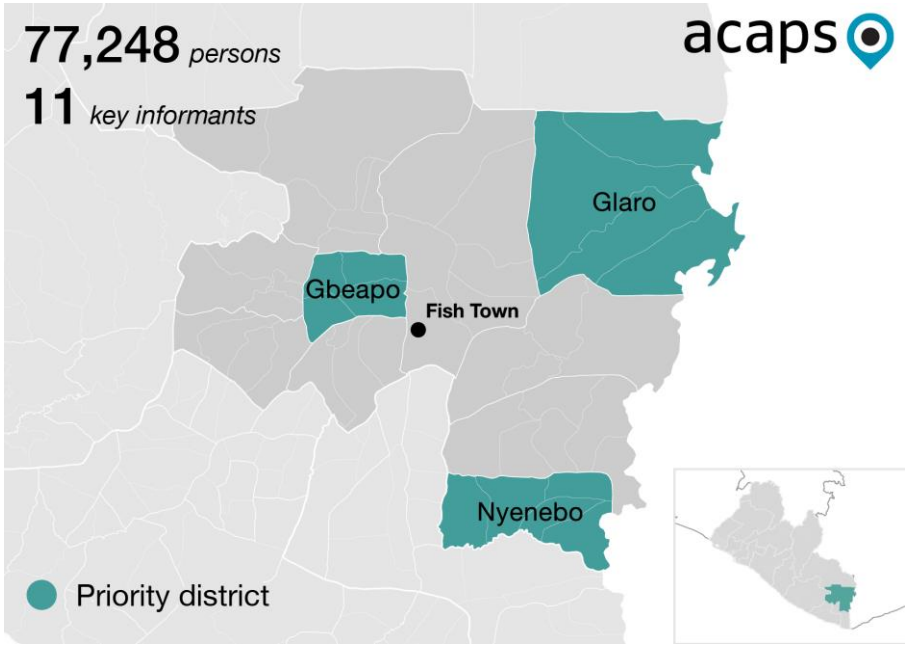
Health

Fear of Ebola infection and the lack of money for transport and services are currently the main obstacles to healthcare, according to the respondents. KIs proposed the training of (additional) health staff as an intervention to address existing obstacles to healthcare. Unlike other counties, the lack of medicine was not considered as a major obstacle to accessing healthcare in Nimba. While it was common for families to visit traditional healers before the crisis, this behaviour was no longer mentioned as a predominant obstacle to accessing conventional healthcare. Four out of 15 KIs indicated that the health situation was better than the same time last year, as there is more awareness among communities on the importance of healthcare and the services available.

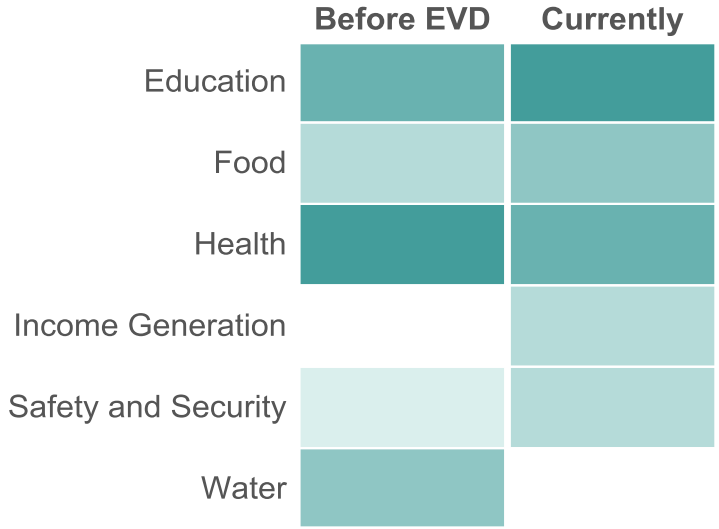
Income generation

11 out of 15 KIs considered the current livelihoods situation as worse compared to a year ago. Income generation is ranked as a higher need than a year ago. Before the outbreak, the limited literacy and skills and lack of job opportunities were the main obstacles to obtaining an adequate income. These issues remain the main concerns. Training to improve the skills of families was one of the main interventions proposed by KIs. In addition, KIs indicated that there is currently an increase in Ebola related unemployment, most likely partly caused by the border closures which have affected trade with Guinea and Sierra Leone.

13. River Gee



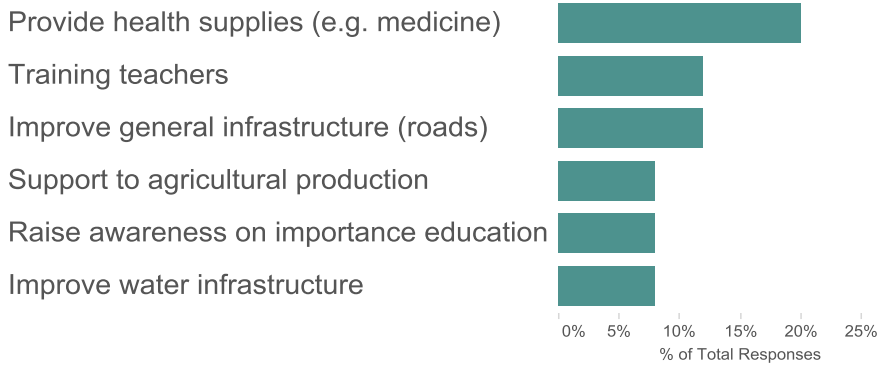
Needs prioritisation River Gee



Key findings

Education and health are the main priorities within the county, according to KIs, with the aftermath of the Ebola outbreak continuing to affect access to both. Although there were only a limited number of cases, the fear of Ebola continues to be a reason why families have difficulty accessing treatment at health centres or sending their children to school. Transport to health facilities is a major concern in the remote parts of the county, and pregnant women were highlighted as the group most in need of support. KIs specifically mentioned the need for additional health supplies, with half of mentioning this as one of the main interventions required. Glaro, Gbeapo and Nyenebo are cited as priority districts, primarily due to the lack of health and education staff.

Main activities required



Context

River Gee has one of Liberia's lowest population densities. While road access is limited throughout rural Liberia, River Gee is generally considered as particularly remote (Liberia Health System Assessment, 2015). Agricultural productivity is mainly focused around subsistence agriculture and communities have very limited access to markets (GoL, 2008). Poverty levels are high, with 73% of the population belonging in the poorest 40% of Liberia. 38% of children aged 6–11 attend school, equal to the national average (DHS, 2013).

The county has seen only a small number of Ebola cases. The first Ebola case was recorded at the start of August 2014, and the last case two months later (MoH, 04/2015).

Education

The lack of financial resources to pay for transport and materials was ranked as the main education obstacle in River Gee. However, the situation in the county differs from other areas when it comes to awareness on the importance of education. Families or students do not see the added value of education, which ranked as one of the main obstacles both currently and before the crisis. 64% of the KIs ranked the current situation as similar or better than before the Ebola outbreak. This is primarily due to the positive impact of the back to school campaign on families' perceptions on the importance of education.

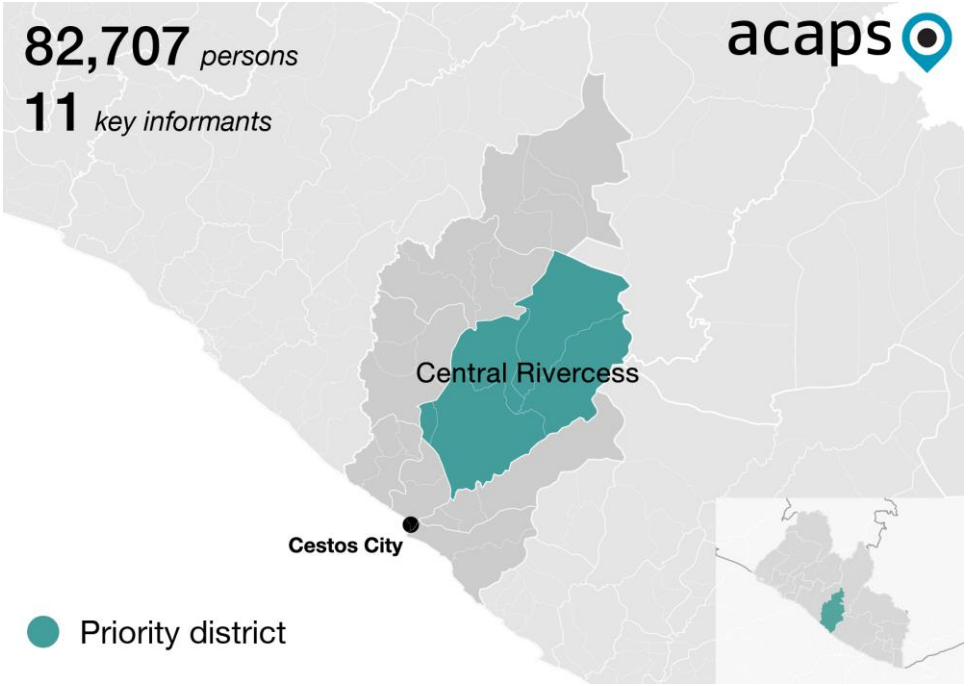
Health

Fear of Ebola is currently the main obstacle to accessing healthcare, followed by the lack of medicine. The provision of health supplies was highlighted as one of the main interventions required. In addition, River Gee is one of the six counties where the lack of payment of staff salaries was mentioned as one of the main obstacles. KIs are divided on how the current situation compares to the pre-crisis conditions, with 45% judging the situation as worse and 55% as similar or better.

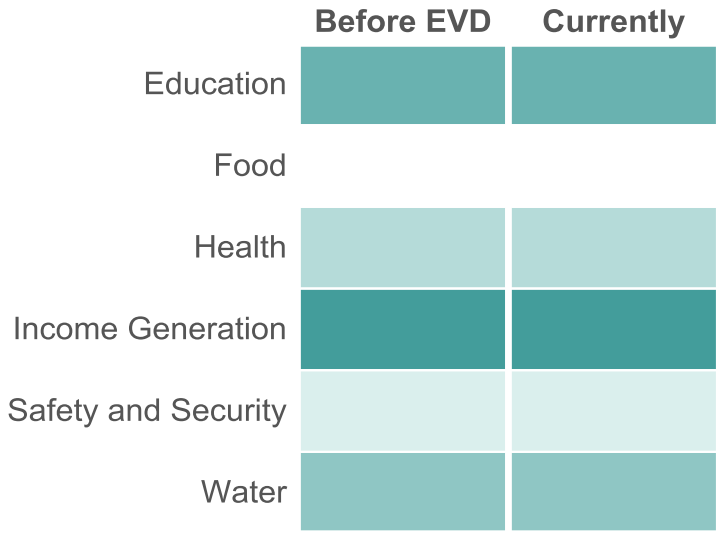
Income generation

The lack of job opportunities is by far the most important obstacle to accessing an income currently. According to KIs, few people could earn sufficient income to adequately provide for their families before the crisis and the situation has worsened. A decrease in agricultural production, the main source of food for most communities, was highlighted as a main concern as a result of the Ebola outbreak. The other two main concerns are more structural, with the lack of job opportunities and physical constraints already a large concern before the crisis.

14. Rivercess



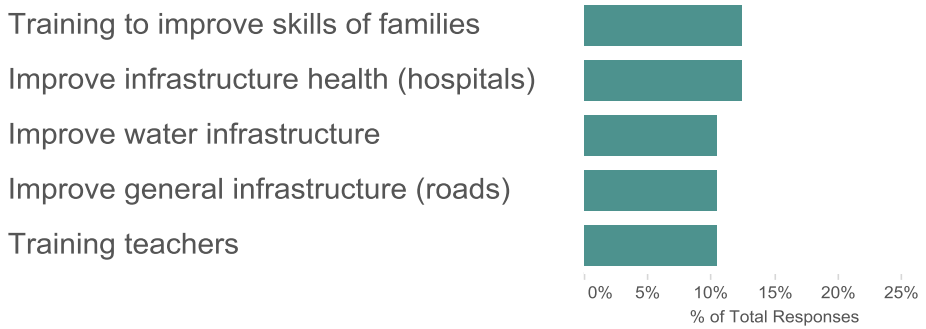
Needs prioritisation Rivercess



Key findings

According KIs, the current priorities are the same as before the crisis – income generation, followed by education and water. However, the intensity of the problems has increased, with most KIs agreeing that education, livelihoods and health situation is currently worse. The underlying cause of most of the problems is the lack of income generating opportunities and basic infrastructure. A large variety of interventions were proposed, which could mean that a wide range of different interventions are required in this isolated and highly underdeveloped county. The group most in need of support are girls under 18, according to KIs.

Main activities required



Context

Rivercess is one of the poorest counties in Liberia, with over 70% of the population being among the poorest 20% in country (DHS, 2013; WB, 2011). Low levels of education partly explain this, with over 60% of the female population having no formal education, compared to 47% countrywide. (DHS, 2013).

The main livelihood activities today include palm oil production, hunting, food crop production and fishing. Gold and diamonds are currently mined illegally, and only at the artisanal level. 80% of HHs do not have access to safe drinking water and 96% have no toilet facilities. School attendance rates are among the lowest in the country, 24% of children aged 6–11. These very low indicators could partly be explained by the geographical isolation of Rivercess, where road access is among worst in the country. (GoL 2008, WFP 06/2013)

The first confirmed Ebola case in the county was on 8 July, three months after the start of the outbreak in Liberia, and cases continued to be reported until 25 November.

Education

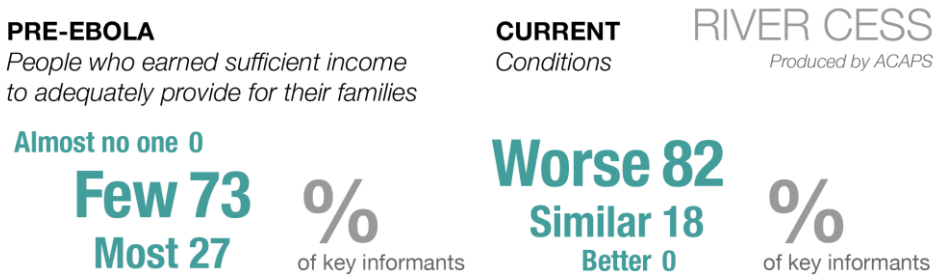
The education situation has worsened compared to the same time last year, according to over 90% of KIs. The decrease in income sources has made it more difficult for families to afford transport and school materials, a main concern currently and before the crisis. KIs indicated that there were only a limited number of schools available before the crisis, and physical constraints, including long distances, make it difficult for children to access them. Due to the high levels of poverty, the need for children to support the family was a significant obstacle before the crisis and currently.

Health

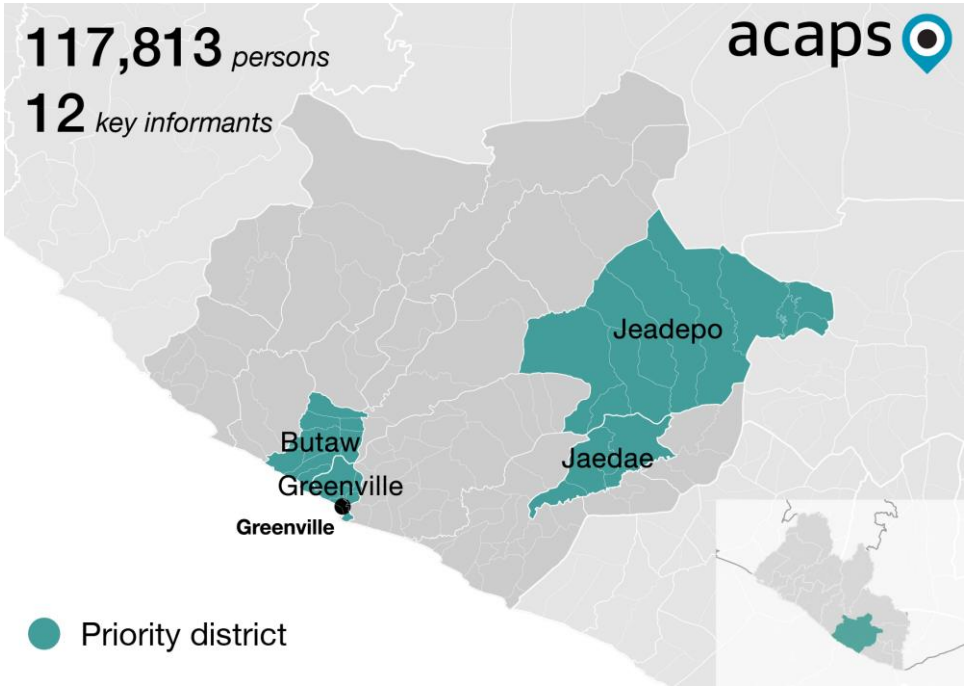
The health situation has become worse compared to before the outbreak, according to over half of KIs. Rivercess is the only county where visiting traditional healers has become a more prominent concern. This was ranked as a major problem before the crisis and is currently the main obstacle to accessing conventional healthcare.

Income generation

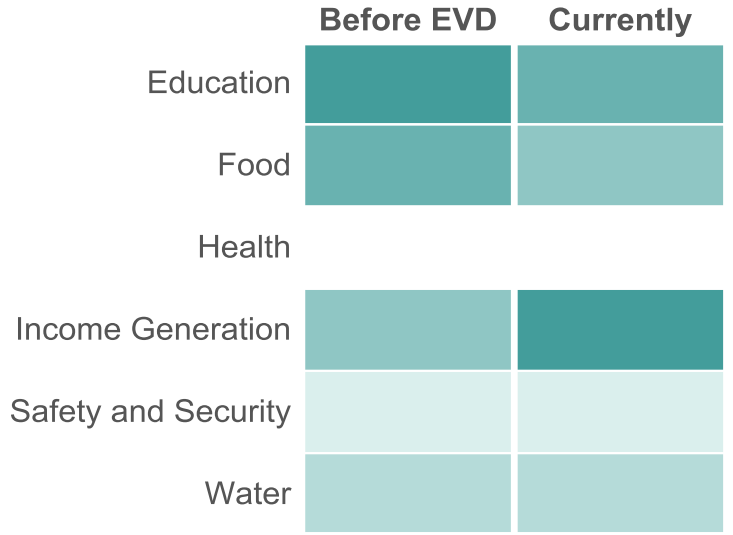
KIs indicated that before the crisis, only a few people earned sufficient income to provide for their families, and the majority agreed that the current situation is similar or worse. The lack of job opportunities is the main obstacle and, according to KIs, the Ebola outbreak has led to increased unemployment. Limited literacy and skills is the second main obstacle, and skills training was one of the main activities proposed.



15. Sinoe



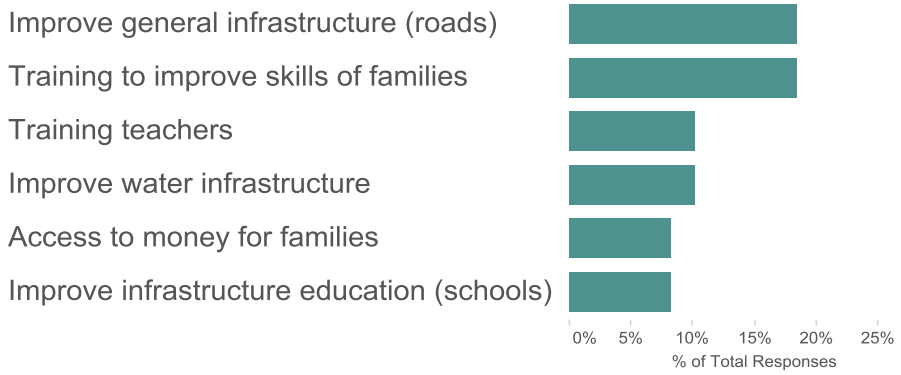
Needs prioritisation Sinoe



Key informants

KIs largely agree that the current education, health and income generation situation is worse than before the crisis. The current priority concerns are income generation, education and food assistance. As in the rest of the southeastern counties, logistical constrains in accessing services are one of the main obstacles and improvement of roads was the main intervention recommended. Butaw, Greenville, Jeadepo and Jaedae were highlighted by KIs as the districts most in need of support, primarily due to the general lack of infrastructure.

Main activities required



Context

Communities in Sinoe rely primarily on agriculture, fishing and mining activities. Despite the relatively high number of health centres, people are still forced to travel long distances to receive treatment. In 2011, only 14% of the population lived less than 5km from health facilities (Health Facilities Assessment, 2015). 33% of children aged 6–11 attended school, above average for rural Liberia (DHS, 2013). A small number of Ebola cases were reported in Sinoe from mid-August to end of December (MoH, 04/2015).

Education

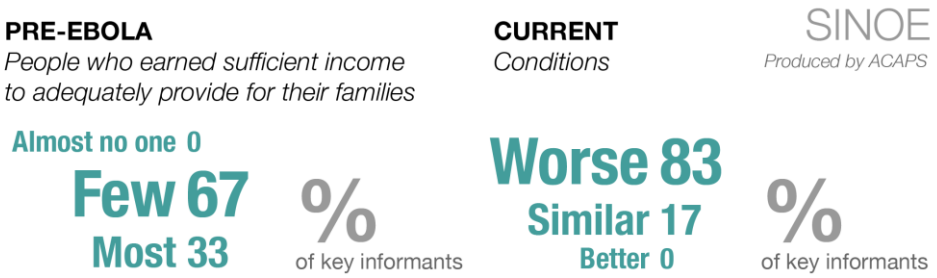
The main obstacle to accessing education is the lack of financial resources, currently and before the crisis. The other main obstacle is particular to Sinoe County. Since the population is spread out over a large territory, people have to travel long distances to reach services. As a result, physical and logistical constraints were among the main obstacles before the crisis, followed by the limited number of schools available. These issues remain. In addition, the fear of Ebola infection has further decreased access. Over 80% of KIs viewed the current situation as worse compared than before the crisis.

Health

Before the crisis and currently, the main obstacle was that families chose to visit traditional healers. The fear of Ebola is also a major obstacle at the moment. Difficulty reaching health facilities was mentioned by KIs, with physical constraints ranked as the third main concern. The vast majority of KIs (84%) viewed the current situation as worse than before the crisis. However, unlike in other counties, KIs do not currently rank health as one of the highest priorities.

Income Generation

Current access to livelihoods is worse compared to the situation in April 2014, according to over 80% of KIs. The lack of job opportunities was the main concern before the crisis, and KIs agree that the current situation is either similar or worse. The Ebola outbreak still impacts access to livelihoods, due to higher unemployed levels and the closure and disruption of markets.



Annex A - Questionnaire

KI QUESTIONNAIRE
ACAPS/Building Markets – Multi Sector Needs Assessment

County:
Date (dd/mm/yy):
Enumerator name:
Name Key Informant:
Phone Number Key Informant:
Time start interview

INTRODUCTION

Good morning/afternoon. My name is..... I am part of a team from ACAPS/Building Markets. Our organization assesses the current needs in Liberia. We would be really grateful if you could spare some time to answer a few questions. The objective of the survey is to have a better understanding of the main needs and challenges faced by the people of Liberia. The questionnaire covers education, health and income generation and takes about 30 minutes. To thank you for your time, you will receive USD 2 in airtime once you have finished the complete questionnaire.

The information you provide will be treated with total confidentiality and your name will not be reflected in the final report. It is within your rights to choose whether or not to take part or, at any point, to withdraw, but it will really be helpful if you could spare time to talk to us.

We will ask you about the situation in your county. There are no 'right' or 'wrong' answers to the questions presented but honest and sincere answers are required. It is OK if you do not know the answer to a question.

If you are willing to participate we will ask you several questions to see if you are the right person to talk to. Would you like to participate in this survey?

□ Yes □ No

I.ELIGIBILITY CRITERIA

I.I County	□ Correct □ Incorrect
I.II What is your position within your county and what is your engagement with communities in your county?	□ Correct □ Incorrect
I.III What is the name of the senator in your county?	□ Correct □ Incorrect
I.IV What are the main sources of income within your county?	□ Agriculture □ Trade and Services □ Fishing □ Mining □ Casual Labour □ Rubber □ Charcoal □ Other_____
I.V Response to source of income	□ Correct □ Incorrect
I.VI In your opinion, how knowledgeable are you about the situation of communities in your county? Do you know about the situation in the whole county?	□ Yes □ No

□ NOT ELIGIBLE

From your answers to these questions I understand that we are looking for a different person to respond to our questionnaire. So the survey stops here. Thank you for your time.

□ ELIGIBLE

You are the right the person to talk to. I would now like to proceed with the full questionnaire, which will take about 30 min. Do you have time right now to answer these questions or shall I call you back later?

□ Continue with full questionnaire □ Scheduled for a later date

A.RESPONDENT CHARACTERISTICS

LET'S START WITH SOME GENERAL QUESTIONS ON YOUR BACKGROUND

A1. What is your gender and age? ☐ Male ☐Female Age

A2. Where do you live? County District Town

A3. What were you doing for a living over the past 12 months? *(multiple answers possible)*

☐ Government employee (excl. teacher, health staff)
☐ Teacher
☐ Health Staff
☐ Other services
☐ Clerical
☐ Petty trade/Business
☐ Domestic service
☐ Agriculture
☐ NGO
☐ Media
☐Other (Please specify)_____

A4. What is the highest education level that you have completed? *(choose only one answer)*

☐ Never been to school
☐ Primary school
☐ Secondary school
☐University
☐Technical vocational school
☐Other (Please specify)_____

A5. In case this line is cut, do you have another number where we can reach you?

B. EDUCATION

B1. How would you describe the education situation before the outbreak, at this time last year?

Most children went to primary school | Few children went to primary school | Almost no children went to primary school | Do not know

B2. For children not going to primary school, what were the 3 main obstacles at this time last year?

B3. Of these 3…

1. What was the biggest problem? _____
2. What was the 2nd biggest problem? _____
3. What was the 3rd biggest problem?_____

B4 Now let's talk about the current situation. How would you describe the current education situation as compared to this time last year?

☐ Worse ☐ Similar ☐ Better ☐ Don't know

B4.1 IF BETTER, why?

B5. Right now what are the 3 biggest problems?

B6. Of these 3

1. What is the biggest problem? _____
2. What is the 2nd biggest problem? _____
3. What is the 3rd biggest problem?_____

C. HEALTH

C1. How would you describe the health situation before the outbreak, at this time last year?

Most people went to a health facility to get treatment	Few people went to a health facility to get treatment	Almost no one went to a health facility to get treatment	Do not know

C2. For people that did not go to a health facility to get treatment, what were the 3 main obstacles at this time last year?

C3. Of these 3…

1. What was the biggest problem? _____
2. What was the 2nd biggest problem? _____
3. Which one was the 3rd biggest problem?_____

C4. Now let's talk about the current situation. How would you describe health situation currently as compared to this time last year?

☐ **Worse** ☐ **Similar** ☐ **Better** ☐ **Don't know**

C4.1 IF BETTER, why? (if worse/similar/don't know move to question C5)

C5. Right now what are the 3 biggest problems?

C.6. Of these 3

1. What is the biggest problem? _____
2. What is the 2nd biggest problem? _____
3. What is the 3rd biggest problem?_____

D. INCOME GENERATION

D1. How would you describe the means for communities to generate an income before the crisis, at this time last year?

Most people could access sufficient income to adequately provide for their families	Few people could access sufficient income to adequately provide for their families	Almost no one could access sufficient income to adequately provide for their families	Do not know

D2. For people that could not access sufficient income to adequately provide for their family, what were the main obstacles at this time last year?

D3. Of these 3…

1. What was the biggest problem? _____
2. What was the 2nd biggest problem? _____
3. Which one was the 3rd biggest problem?_____

D4. Now let's talk about the current situation. How would you describe the possibility for families to generate an income currently compared to this time last year?

☐ **Worse** ☐ **Similar** ☐ **Better** ☐ **Don't know**

D4.1 IF BETTER, why? (if worse/similar/don't know move to question D5)

D5. Right now what are the 3 biggest problems?

D6. Of these 3

1. What is the biggest problem? _____
2. What is the 2nd biggest problem? _____
3. What is the 3rd biggest problem?_____

E. NEEDS PRIORITISATION

E1. You mentioned problems in healthcare, education and making an income. Before the outbreak of Ebola there were also problems with water, safety and security and accessing food. Among those 6, at this time last year,

1. What was the biggest problem? _____
2. What was the 2nd biggest problem? _____
3. Which one was the 3rd biggest problem?_____

E2. Let's talk about now, what are the top 3 problems for your county currently?

1. What is the biggest problem? _____
2. What is the 2nd biggest problem? _____
3. Which one is the 3rd biggest?_____

E3. In your opinion, what are the 3 main activities needed in your county to address these problems right now?

F. PRIORITY DISTRICTS

F1. In which districts in your county do people currently face the most problems?

Districts | Other (specify)_____ | Do not know

F2. And why do these districts face more problems than other districts?

G. VULNERABLE GROUPS

I am going to read a list of 10 groups. Which 3 groups are in most need of support? *(READ OPTIONS OUT LOUD choose only 3 answers)*

- ☐ Girls under 18
- ☐ Boys under 18
- ☐ Older persons (60 and above)
- ☐ Pregnant women/lactating women
- ☐ Persons with disability
- ☐ Female head of household
- ☐ Child head of household
- ☐ EBOLA orphans
- ☐ EBOLA survivors and their families
- ☐ EBOLA workers and their families
- ☐ Do not know/No response
- ☐ Other (specify)_____

H. OTHER

Is there anything else that you want to mention about how the current situation is different from the same time last year?

CLOSURE

We greatly appreciate your time and participation in this survey. Could we contact you again if we were to need further clarification or for future monitoring surveys?

☐Yes ☐No

FOR RESEARHCERS ONLY: On a scale of 1 to 3, how much confidence do you have in the accuracy of the responses?	
1	Answers provided appear consistent / no reason to doubt accuracy of responses
2	Respondent might not have understood all questions /some reason to doubt responses
3	Respondent clearly did not understand most questions/ significant reason to doubt responses provided

FOR RESEARCHER ONLY: COMMENTS

Any comments or remarks, comments on confidence

Status survey: ☐ Completed ☐ Partly completed ☐ Not eligible

Duration survey (in minutes)

Annex B – Methodological annex

Aldo Benini - Survey estimation and the measurement of priorities
A note for ACAPS/Building Markets

23 April 2015

Summary

The Liberia Multi Sector Needs Assessment is a sample survey of key informants polled on changing sector priorities between spring 2014 - before the Ebola crisis - and spring 2015 - the beginning of the recovery period. As such, its findings are subject to sampling variance. This note discusses sector priorities when the uncertainty due to sampling is taken into account.

Priorities were measured with a device known as the "Borda count". The note gives background for this measure, discusses its assumptions and addresses a specific challenge. The challenge results from the fact that key informants were made to prioritize six sectors. Two of these were substantively closely related - "access to food" vs. "income generation". If these two are treated separately, it appears that currently income generation is of similar high priority with education and health. However, when they are suitably combined, "food/income" dominates all other sectors in current priority.

The focus of this note is on country-wide statistics, for which survey estimation is essential in order to avoid bias. Many users will be interested as much or more in district-specific results ("counties" in Liberia - there are 15). For reasons particular to this key informant sample, weighting within given counties is not needed. However, we present county-wise estimates of one Borda count variable to demonstrate that for most counties the difference vis-à-vis the national average is not significant. This cautions against interpreting small differences in local priorities as a basis for different recovery policies. Policy should focus on robust differences.

Introduction

The Liberia Multi Sector Needs Assessment (henceforth "the Assessment") elicited opinions from key informants selected in each of the 15 counties (districts) in the country. The purpose of the survey was to establish challenges that people were facing in transiting from the Ebola crisis into the recovery phase. The survey also sought to establish relative priorities of unmet needs across several sectors.

The key informants were asked to single out the most important, second most important and third most important elements in sets of challenges. A set would typically relate to a specific sector; the Assessment addressed three sectors: education, health, income generation. The questions about challenges were asked twice, once retrospectively concerning conditions in spring 2014 (before the Ebola crisis), and then referring to the current situation (March - April 2015). In this segment, Questions B2 and B3 illustrate the elicitation process by the example of education before the crisis.

Figure 1: Most important challenges - example of the elicitation process

B. EDUCATION

NOW, I WOULD LIKE TO ASK YOU ABOUT ACCESS TO PRIMARY EDUCATION (BELOW GRADE 6) WITHIN YOUR COUNTY. FIRST, WE WILL DISCUSS THE SITUATION BEFORE THE EBOLA CRISIS, AFTERWARDS WE WILL DISCUSS THE CURRENT SITUATION.

B1. How would you describe the education situation before the outbreak, at this time last year? I will give you 3 options ***(READ OPTIONS OUT LOUD choose only one answer)***

Most children went to primary school	Few children went to primary school	Almost no children went to primary school	Do not know

B2. For children not going to primary school, what were the 3 main obstacles at this time last year? ***(Only read out below options if respondent has difficulties in answering the question)***

☐ No or limited number of schools available	☐ Families did not see the added value of education	☐ Physical and logistic constraints to access education (roads damaged, no transport, etc.)
☐ Low quality of teachers and school staff not available	☐ Children needed to help the family (incl. domestic chores, child labour)	☐ No problem
☐ Low quality infrastructure (e.g. buildings, furniture)	☐ Families did not have money to pay for transport, fees or books and school uniform or materials	☐ Do not know/No response
☐ Lack of adapted infrastructure and service for children with disabilities	☐ No feeding programme in schools	☐Other (Please specify)_____
☐ Schools not perceived as safe because of risks, incl. corporal punishment.		

B3. Of these 3…

1. What was the biggest problem? _____
2. What was the 2nd biggest problem? _____
3. What was the 3rd biggest problem?_____

In the inter-sectoral perspective, the interviewers asked the key informants to locate the three biggest problems in six sectors, retrospectively and for the current time. In addition to education, health, income generation, the questions referred also to water, safety and security, and access to food. These questions produced priority rankings for six sectors in two periods.

All in all, Assessment workers interviewed 216 key informants. All interviews were by phone. The key informants were selected randomly from lists, separate for each county, of government officials, NGO and media workers, as well as traditional leaders. They underwent a simple test at the start of the interview to ascertain that they were sufficiently knowledgeable of the needs of people in their respective counties. Of the 330 informants that the Assessment approached, eventually 216 completed the interview.

Survey estimation

As in most key informant surveys, the sample is not a proper probability sample. The normal assumptions of survey estimation do not hold: There is no sampling frame that covers the target population (the set of key informant-capable persons) to a high degree; for the actual sample members, the selection probabilities are not known[4]. Therefore, parameters of interests - means, proportions - can be estimated under far-reaching *idealizations* only:

- By background, the sampled key informants are clearly not representative of the general population, and plausibly not of those residents capable of answering the interview questions either (see the breakdown in other sections of the methodological appendix). Yet, we *assume* that the views of those interviewed in a given county tend towards the true values of the population parameters. In other words, if in county X a majority of the households perceived the unmet need for health care to be stronger than the unmet need for water, AND the interviews could be repeated with other informants of similar background infinitely many times, a preference for health care support would emerge.

[4] This is not a problem of this Assessment only or of surveys in Liberia. It has been observed for expert elicitation studies in general; see e.g., *"it is difficult to recruit a valid probability sample of experts because of difficulties in (a) defining the universe from which a sample should be drawn and (b) overcoming selection biases associated with experts' availability and willingness to participate"* (Swackhamer and Hammit 2010: Annex, page 6).

The practical consequence is that *within* the county every interviewee can be thought of as representing the same number of residents. There is no basis to stipulate that some interviewees represented more persons, and others fewer.

- Although the views of key informants plausibly were influenced by what they had learned about conditions outside their counties - particularly those who had family elsewhere -, we *assume* that every one spoke strictly to conditions in the county of residence or official posting.

The practical consequence is unequal weighting *across* counties. The number of persons that a key informant represents is not simply the national population divided by the sample size. It is the county population divided by the number of key informants interviewed about the county.

Accepting these idealizations, survey estimation is needed for two reasons:

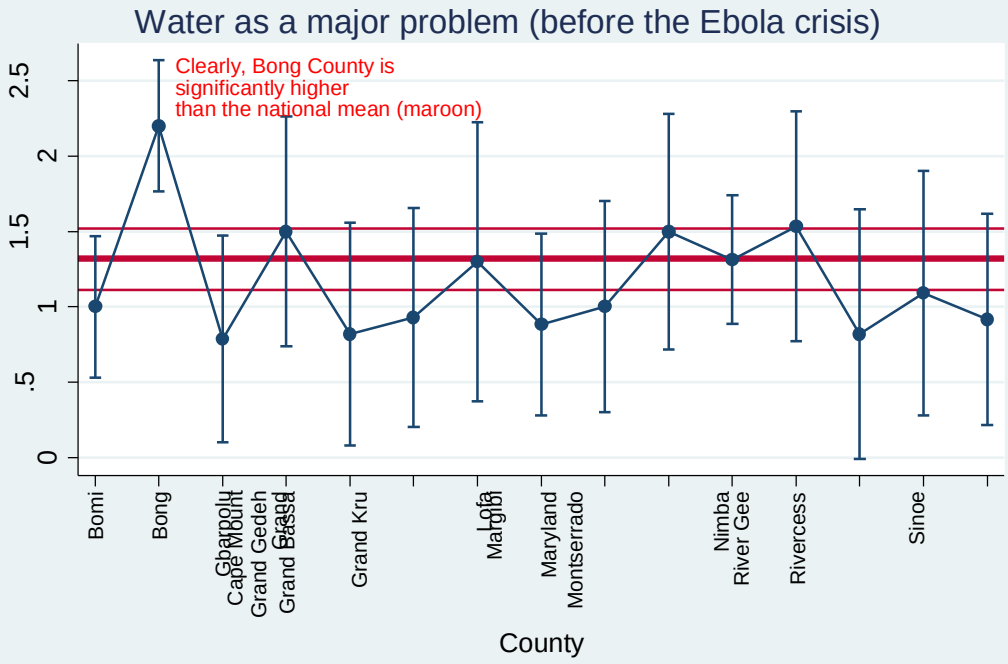
- The number of persons represented by a key informant varies considerably across counties. Therefore national estimates differ depending on whether they are weighted or not.

These differences turned out to be relatively minor, but this was not known beforehand. For example, on the priority measure for the current unmet need for water (explained further below), the unweighted sample mean was 0.81, the design-weighted mean was 0.94. Most other estimates showed smaller differences.

- Since every key informant within a given county is thought of as representing the same number of persons, weighted and unweighted county estimates are identical. However, county samples are relatively small, and therefore estimates are highly uncertain.

These uncertainties can be expressed in confidence intervals, ranges extending to both sides of the estimated parameter (mean, proportion) into which the true values fall with a high probability. Confidence intervals are important as safeguards against attributing importance to local differences that may only reflect sampling variance. For example, there was considerable variation in the priorities expressed of the unmet need for water. However, among the fifteen counties, only in one (in Bong County) did the key informants concur on such a high priority that the resulting score exceeded the national mean with strong statistical significance. Neglecting the uncertainty might cause the assessment users to divert sector resources to counties with spuriously high priorities.

Figure 2: Example of priority estimates, by county, with confidence intervals



Note: 216 key informants total. Blue dots: county means; blue spikes: 95% confidence intervals. Maroon lines: National mean (thick), 95%CI bounds (thin).

In this example, it is obvious that water was a much higher priority than the country-wide mean score for the key informants in one of the 15 counties only.

Sample, sampling weights and estimation set-up

The persons represented by one key informant are used as sampling weights, as detailed in this table, which also compares planned and actual samples.

Table 1: Key informants interviewed and sampling weights, by county

County	Poulation 2014 (projected)	Key informants		
		Planned	Actual	Persons represented by one informant
Bomi	106,146	15	15	7,076
Bong	420,436	15	15	28,029
Gbarpolu	108,382	15	14	7,742
Grand Bassa	281,276	15	14	20,091
Grand Cape Mount	155,384	15	11	14,126
Grand Gedeh	158,575	15	14	11,327
Grand Kru	72,459	10	10	7,246
Lofa	346,430	15	17	20,378
Margibi	263,696	15	13	20,284

Maryland	173,866	15	12	14,489
Nimba	580,662	15	15	38,711
River Gee	83,565	10	11	7,597
Rivercess	89,470	10	11	8,134
Sinoe	129,296	15	12	10,775
Montserrado	1,427,229	30	32	44,601
Total	**4,396,871**	**225**	**216**	**20,356**

While the weights vary by a factor of six, the size of the standard errors generally varies by much less.

The sample was stratified on the counties, with the observations as the primary sampling units and their weights as detailed above[5]. A finite population correction was not made[6].

Measurement of priorities

Borda counts

In the interview, priorities were elicited as "top three problems". This figure reproduces the elicitation wording for the needs prioritization across six sectors.

Figure 3: Elicitation of inter-sectoral priorities

E. NEEDS PRIORITISATION

E1. You mentioned problems in healthcare, education and making an income. Before the outbreak of Ebola there were also problems with water, safety and security and accessing food. Among those 6, at this time last year, what was

1. What was the biggest problem? _____
2. What was the 2nd biggest problem? _____
3. Which one was the 3rd biggest problem?_____

E2. Let's talk about now, what are the top 3 problems for your county currently?

1. What is the biggest problem? _____
2. What is the 2nd biggest problem? _____
3. Which one is the 3rd biggest?_____

Subsequently, the stated priorities were scored for *"modified Borda count"* calculations. The sector taken as the highest priority received a score of 3, the second-highest a score of 2, the third 1. The non-priority sectors were all scored 0.

Borda counts (Borda 1781; Wikipedia 2011; Benini 2013) are preference models in which items (candidates in an election, sectors in a needs assessment, etc.) are assigned votes in descending order of preference. In the original scheme, meant for public elections, the voter gives his top candidate a number of votes equal to the number of candidates minus one (N - 1), and his i-th preferred candidate N - i votes. The preferences of the voters (electors or, in our case, key informants) in the constituency are aggregated by counting the votes of each candidate. These Borda counts are thus ratio-level variables, with meaningful intervals and zero points.

Modified Borda counts - to be precise: the kind of modification relevant here - restrict the voting to M < N choices, with M votes given to the first option, M - 1 to the second, etc., and zero votes to the N - M least favored candidates. The resulting counts certainly have an interval-level interpretation. The zero point may or may not have a substantive interpretation, depending on context and purpose, but it may not be relevant to establishing an informative preference order either (think of temperature measurements for comparisons between points in space and time, without regard for the absolute zero).

[5] As often, the gain in precision from stratification is small. For example, the estimate of the mean of the priority measure for water for the nation currently has a standard error of 0.093 neglecting stratification, vs. one of 0.088 taking it into account. The design effects (DEFF) - the ratios of variances under our sample design to those under an equal-size simple-random sample - are 1.47, respectively 1.23. But a non-stratified sampling would not have been acceptable due to the risk of ending up with even greater imbalances of over- and under-sampled counties.

[6] We mention this because in a similar assessment recently conducted in Sierra Leone, strata were formed of districts, based on exposure to the epidemic and agricultural livelihoods dependency. As primary sampling units, districts were drawn from the small number of districts in the stratum; thus FPC was appropriate, improving precision.

The use of Borda counts outside the arena of public elections relies on idealizations. There are two that are of importance in our context, but one of them is more consequential for this Assessment:

- The underlying voting model implies that the strength of preferences differs between any two adjacent options by the same amount. In addition, in the modified version, the preference for all non-elected candidates is equally low.

For example, if a key informant chooses water as the top priority (meaning: this is the sector with the most important unmet needs), food as the second, and safety/security as the third, the difference in the severity of unmet needs between water and food vs. that between food and safety/security are the same. This appears artificial, but ordinal judgments allow, for sufficiently large samples, underlying preferences to be inferred at interval level (for an almost arbitrarily selected sample application, see: Hatzinger and Dittrich 2012). The critical idealization in Borda is the equal difference at the level of the *individual* voter. In surveys, as a minimum precaution, one should demand that the interviewee understand, prior to answering, that she has exactly M choices. This was respected in the formulation of question E2 (see figure above), but not in E1. Second,

- The use of the Borda count method is made on good faith that the preference order among items A, B, C, etc. is not affected by the inclusion, or not, of additional items U, V, W, etc.

For example, the relative priority of health and income generation should be the same, regardless of whether Questions E1 and E2 include "access to food" as an additional sector choice or not.

The challenge of "irrelevant alternatives"

However, the Borda count is not robust to such changes; it does not secure "independence of clones" or "independence of irrelevant alternatives" (Wikipedia 2014a, 2014b). In plain English, access to food and income generation are in an end-and-means relationship. The addition of "food" to the sector choices therefore is liable to "steal votes" from the income generation option. Without the "food" choice, income generation might attract enough votes to outrank all others. It may do so with statistical significance in this sample survey of key informants. Thus, access to food is at best an *irrelevant alternative* (income generation implies access to food, barring the availability/accessibility aspect), or at worst a *negative clone* on income generation, in the logic of the Borda count. We will calculate this effect further below.
Another modification that was not designed, but which naturally happened in the interviews arose from this: Not all key informants chose to designate three priorities. In this case, the scoring remained the same for the M < 3 exercised options as above, with all others scored 0. For example, among the 216 interviewees, 200 defined three current priority sectors, 15 exercised only two choices, and one chose only one sector. Without further investigation, we assume that the impact of the restricted choices was minor[7].

Despite its shortcomings, the Borda count is a satisfactory system to measure priorities, particularly on account of its simplicity. The mean Borda count is a quantity easily estimated for sample surveys; its uncertainty is visualized in confidence intervals; there are convenient tests for differences between means.

Select calculations

Priority sectors

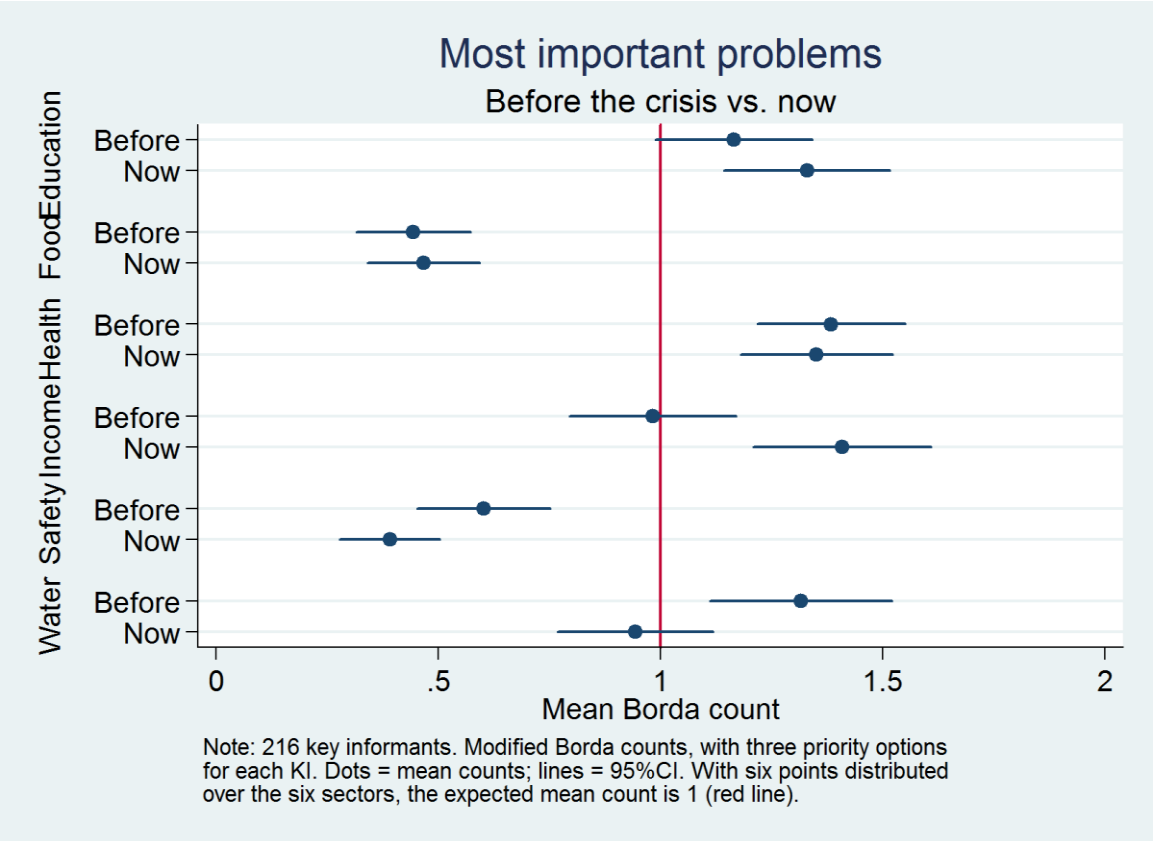
We are interested here primarily in comparisons of the mean Borda counts

- for a given sector between the time before the crisis (spring 2014) and now (March - April 2014, when the data were collected)
- for the six sectors together, in the same period of time (before vs. after the crisis).

This chart succinctly summarizes the survey estimates. Dots designate the mean, spikes the confidence intervals. The red line at x = 1 is the expectation that, with three choices resulting in six votes, the mean over six sectors is = 1.

[7] Statistical purists may expect that we also mention that the modified Borda score variables are nearly *compositional*. This means that, had all key informants exercised their three choices, for every informant 3 + 2 + 1 = 6 votes would be recorded. Since we do not pursue correlational analyses (such as factor analysis), we do not discuss this further. But it is commonsense that if some sectors achieve high mean Borda counts, others are bound to end up low - as in any election. Compositional analyses are demanding (Aitchison 1986; Thió-Henestrosa and Martín-Fernández 2005); potential users of the Assessment database should refrain from interpreting raw correlations among Borda score variables.

Figure 4: Mean Borda counts for six sectors, before and after the crisis



The interpretation is given in the main body of the Assessment report. Numeric output is given in the section below.

"Access to food" as an irrelevant alternative

We suspect that the addition of "access to food" in the list of sectors from which key informants were made to select three as priority sectors stole votes from "income generation" because of their close end/means-relationship (see above). We wish to estimate this effect.

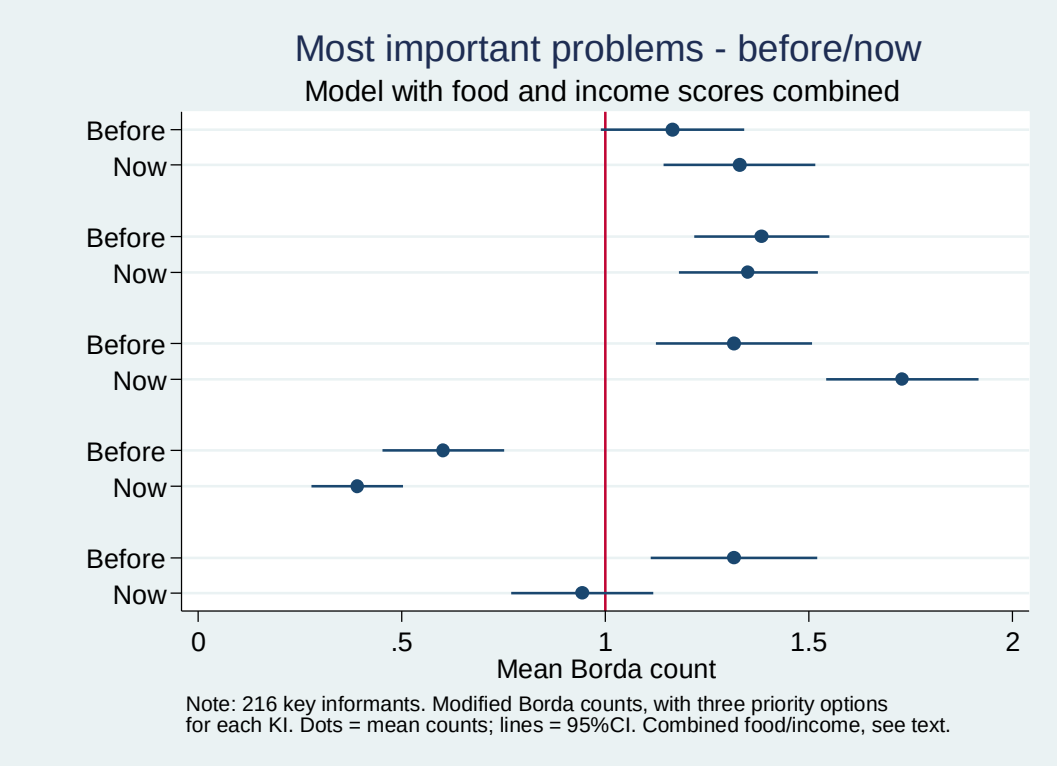
In a complete Borda count, with as many choices as sectors, this could be answered conclusively. All one would need to do is to create an alternative model, by excluding food, and bumping up by one all priority scores that had been lower than the score for food, then re-calculate and compare the models (the cited Wikipedia articles have didactic examples on such situations).

For the modified count, this is not that simple. Some key informants may have been aware that they could state three priorities only (they were told so in Question E2), and some not, or not fully. Among the former, some may have emphasized the difficulty to survive by pressing both access to food and income generation. Others may have chosen only one of them, in order to have two choices left to state other priorities.

Re-scoring in this situation does not produce valid comparisons. Instead, we attempt a comparison by *combining* food access and income generation. We argue that the combined priority can be approximated by the maximum of the two scores. If only one of them was chosen among the three priorities, then its score, by definition, is this maximum. If both were chosen, the larger score seems to be a fair measure of combined priority. The sum of the two would exaggerate the priority considerably since the other four sectors have no chance to be combined with any others in their scoring. The mean would understate it.

We re-create a comparison plot like Figure 4, with "Access to Food" eliminated, and instead "Food/Inc" as a shorthand for the combined access to food / income generation priority.

Figure 5: Mean Borda counts, before/after - food and income combined



Among the current priorities, Food/Inc dominates all others. Significance tests confirm that, but are a luxury, seeing the barely overlapping confidence intervals.

There is therefore a strong suggestion, if not compelling evidence, that "access to food" acted as an irrelevant alternative. It stole votes from income generation. Its inclusion most likely distorted results. Rather than concluding that income generation currently is of similar priority to the people of Liberia as education and health, there is reason to believe that it outranks all other sectors that the Assessment investigated.

Statistical output

We present minimally edited output from analyses run in the statistical application STATA (Stata Corporation 2011).

Priority sectors

Description

. * DESCRIBE BORDA SCORE VARIABLES:

variable name	storage type	display format	value label	variable label
E1item1_1_	byte	%10.0g		Before: Education
E1item2_1_	byte	%10.0g		Before: Food
E1item3_1_	byte	%10.0g		Before: Health
E1item4_1_	byte	%10.0g		Before: Income Generation
E1item5_1_	byte	%10.0g		Before: Safety and Securit
E1item6_1_	byte	%10.0g		Before: Water
E2item1_2_	byte	%10.0g		Currently: Education
E2item2_2_	byte	%10.0g		Currently: Food
E2item3_2_	byte	%10.0g		Currently: Health
E2item4_2_	byte	%10.0g		Currently: Income Generation
E2item5_2_	byte	%10.0g		Currently: Safety and Securit
E2item6_2_	byte	%10.0g		Currently: Water

```
.
. * TABULATE RAW FREQUENCIES OF PRIORITIES:

                |                Borda scores
       Variable |        0         1         2         3 |     Total
----------------+----------------------------------------+----------
  Before: Education |       71        52        53        40 |       216
    Before: Food |      161        19        16        20 |       216
  Before: Health |       70        52        63        31 |       216
Before: Income Genera |      110        33        26        47 |       216
Before: Safety and Se |      147        27        23        19 |       216
   Before: Water |      107        18        33        58 |       216
 Currently: Education |       72        43        44        57 |       216
  Currently: Food |      154        26        15        21 |       216
Currently: Health |       68        48        65        35 |       216
Currently: Income Gen |       78        36        36        66 |       216
Currently: Safety and |      160        30        15        11 |       216
  Currently: Water |      133        17        40        26 |       216
----------------+----------------------------------------+----------
           Total |     1,331       401       429       431 |     2,592

. * CALCULATE MEAN COUNTS with confidence intervals:
```

Before / after, all sectors

Before the crisis:

```
Survey: Mean estimation

Number of strata =      15        Number of obs    =      216
Number of PSUs   =     216        Population size  =  4396871
                          Design df       =      201

--------------------------------------------------------------
             |            Linearized
             |      Mean   Std. Err.     [95% Conf. Interval]
-------------+------------------------------------------------
  E1item1_1_ |   1.165241   .0895459      .9886712    1.341811
  E1item2_1_ |   .4439805     .06475      .3163041     .571657
  E1item3_1_ |   1.384437   .0840772      1.218651    1.550224
  E1item4_1_ |   .9831686   .0948463      .7961471     1.17019
  E1item5_1_ |   .6017073    .075761      .4523189    .7510957
  E1item6_1_ |   1.315709   .1037024      1.111225    1.520193
--------------------------------------------------------------
```

Currently:

```
Survey: Mean estimation

Number of strata =      15        Number of obs    =      216
Number of PSUs   =     216        Population size  =  4396871
                          Design df       =      201

--------------------------------------------------------------
             |            Linearized
             |      Mean   Std. Err.     [95% Conf. Interval]
-------------+------------------------------------------------
  E2item1_2_ |   1.330221   .0944998      1.143883    1.516559
  E2item2_2_ |   .4666225   .0636723      .3410712    .5921738
  E2item3_2_ |   1.351736   .0862356      1.181694    1.521779
  E2item4_2_ |   1.409692   .1011684      1.210204    1.609179
  E2item5_2_ |   .3911297   .0570752      .2785867    .5036727
  E2item6_2_ |   .9438223   .0883234       .769663    1.117982
--------------------------------------------------------------
```

Before / after, pairwise for each sector

[same as above, but different arrangement for easier comparison]

Education

	Linearized		
	Mean	Std. Err.	[95% Conf. Interval]
E1item1_1_	1.165241	.0895459	.9886712 1.341811
E2item1_2_	1.330221	.0944998	1.143883 1.516559

Access to food

	Linearized		
	Mean	Std. Err.	[95% Conf. Interval]
E1item2_1_	.4439805	.06475	.3163041 .571657
E2item2_2_	.4666225	.0636723	.3410712 .5921738

Health

	Linearized		
	Mean	Std. Err.	[95% Conf. Interval]
E1item3_1_	1.384437	.0840772	1.218651 1.550224
E2item3_2_	1.351736	.0862356	1.181694 1.521779

Income generation

	Linearized		
	Mean	Std. Err.	[95% Conf. Interval]
E1item4_1_	.9831686	.0948463	.7961471 1.17019
E2item4_2_	1.409692	.1011684	1.210204 1.609179

Safety and security

	Linearized		
	Mean	Std. Err.	[95% Conf. Interval]
E1item5_1_	.6017073	.075761	.4523189 .7510957
E2item5_2_	.3911297	.0570752	.2785867 .5036727

Water

	Linearized		
	Mean	Std. Err.	[95% Conf. Interval]
E1item6_1_	1.315709	.1037024	1.111225 1.520193
E2item6_2_	.9438223	.0883234	.769663 1.117982

Irrelevant alternatives: Combining food and income scores

Description

variable name	storage type	display format	value label	variable label
E1maxFoodIncome	float	%9.0g		Before: Greater of food or income scores
E2maxFoodIncome	float	%9.0g		Currently: Greater of food or income scores

Comparison with the previous, separate measures for food and income generation

```
------------------------------------------------------------------------------
             |               Linearized
             |      Mean   Std. Err.     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Before:
    E1item2_1_ |   .4439805    .06475      .3163041     .571657
    E1item4_1_ |   .9831686   .0948463      .7961471     1.17019
E1maxFoodIncome |   1.315863   .0972764       1.12405    1.507676

Currently:
    E2item2_2_ |   .4666225   .0636723      .3410712    .5921738
    E2item4_2_ |   1.409692   .1011684      1.210204    1.609179
E2maxFoodIncome |   1.730311   .0951778      1.542636    1.917987
------------------------------------------------------------------------------
```

Tests show that the *current* Borda count of combined food/income is significantly higher than all the other sector counts (all $p < 0.02$, incl. vs. the separate income generation count). For the priorities *before* the crisis, it is significantly higher only compared to safety and security. Since Figure 5 makes these tests a foregone conclusion, the detailed tests are not reported, in order to save space.

STATA do-file

The code is included in the interest of reproducibility. Interested researcher may approach ACAPS for a copy of the data.

```
**********************************************************************
* MEAN BORDA COUNTS                                                  *
* Compare Before / currently; collect results in a graph             *
**********************************************************************

use "C:\..\150416_1529_Liberia_Borda_SurveyEst_LongVarLabels.dta", clear

set more off

* DESCRIBE BORDA SCORE VARIABLES:
des E1item1_1_ - E1item6_1_ E2item1_2_ - E2item6_2_

* TABULATE RAW FREQUENCIES OF PRIORITIES:
tabm E1item1_1_ - E1item6_1_ E2item1_2_ - E2item6_2_
/* tabm is a user-defined command, written by Nicholas J. Cox, University of Durham, U.K. */

* CALCULATE MEAN COUNTS:
* Before the crisis:
svy: mean E1item1_1_ - E1item6_1_
*Currently:
svy: mean E2item1_2_ - E2item6_2_

* PLOTTING MULTIPLE MODELS IN ONE GRAPH (coefplot):
svy: mean E1item1_1_ E2item1_2_
estimates store education
svy: mean E1item2_1_ E2item2_2_
estimates store food
svy: mean E1item3_1_ E2item3_2_
estimates store health
svy: mean E1item4_1_ E2item4_2_
estimates store income
svy: mean E1item5_1_ E2item5_2_
estimates store safety
svy: mean E1item6_1_ E2item6_2_
estimates store water

coefplot (education, aseq(Education) \ food, aseq(Food) \ health, aseq(Health) ///
        \ income, aseq("Income") \ safety, aseq("Safety") \ water, aseq(Water)), xline(1) xscale(range(0 2)) xlabel(0(0.5)2) ///
        xtitle(Mean Borda count) title(Most important problems) ///
        subtitle("Before the crisis vs. now") ///
        coeflabel( E1item1_1_ = "Before" E2item1_2_ = "Now" ///
        E1item2_1_ = "Before" E2item2_2_ = "Now" ///
        E1item3_1_ = "Before" E2item3_2_ = "Now" ///
        E1item4_1_ = "Before" E2item4_2_ = "Now" ///
        E1item5_1_ = "Before" E2item5_2_ = "Now" ///
        E1item6_1_ = "Before" E2item6_2_ = "Now") ///
        note("Note: 216 key informants. Modified Borda counts, with three priority options""for each KI. Dots = mean counts; lines = 95%CI.
With six points distributed ""over the six sectors, the expected mean count is 1 (red line).")
```

```
* The package "coefplot" was written by Ben Jann, University of Berne, Switzerland (Jann 2014).

**********************************************************************
* TEST FOR "IRRELEVANT ALTERNATIVE" EFFECT                           *
* of including "access to food" besides "income generation"          *
**********************************************************************

 * CREATE COMBINED PRIORITY SCORE FOR "ACCESS TO FOOD" AND "INCOME GENERATION"
capture egen E1maxFoodIncome = rowmax(E1item2_1_ E1item4_1_)
label var E1maxFoodIncome "Before: Greater of food or income scores"
capture egen E2maxFoodIncome = rowmax(E2item2_2_ E2item4_2_)
label var E2maxFoodIncome "Currently: Greater of food or income scores"
*Comparison with the previous, separate measures for food and income generation:
svy: mean E1item2_1_ E1item4_1_ E1maxFoodIncome E2item2_2_ E2item4_2_ E2maxFoodIncome

* TEST FOR SIGNIFICANT DIFFERENCES IN CURRENT PRIORITIES between the combined food/income vs. each of the others:
* Before the crisis:
svy: mean E1*
foreach var of varlist E1item* {
test E1maxFoodIncome -`var' = 0
}
* Currently:
svy: mean E2*
foreach var of varlist E2item* {
test E2maxFoodIncome -`var' = 0
}
* PLOTTING MULTIPLE MODELS IN ONE GRAPH (replacing "food" and "income generation" with the combined food/income):
svy: mean E1maxFoodIncome E2maxFoodIncome
estimates store foodinc

coefplot (education, aseq(Education) \  health, aseq(Health) ///
        \ foodinc, aseq("Food/Inc") \ safety, aseq("Safety") \ water, aseq(Water)), xline(1) xscale(range(0 2)) xlabel(0(0.5)2) ///
        xtitle(Mean Borda count) title("Most important problems - before/now") ///
        subtitle("Model with food and income scores combined") ///
        coeflabel( E1item1_1_ = "Before" E2item1_2_ = "Now" ///
        E1item3_1_ = "Before" E2item3_2_ = "Now" ///
        E1maxFoodIncome = "Before" E2maxFoodIncome = "Now" ///
        E1item5_1_ = "Before" E2item5_2_ = "Now" ///
        E1item6_1_ = "Before" E2item6_2_ = "Now") ///
        note("Note: 216 key informants. Modified Borda counts, with three priority options""for each KI. Dots = mean counts; lines = 95%CI. Combined
food/income, see text.")


set more on
```

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