As of 6 August 43 cases of Ebola including 34 deaths (CFR: 79%) have been reported, and a further 31 suspected cases are currently being investigated. This latest outbreak was declared on 1 August, in Mabalako health zone, Beni territory, Nord Kivu, when four samples collected from patients suffering from an ‘unknown disease’ tested positive for the virus. The declaration of this outbreak followed detection of a significant cluster of suspected viral haemorrhagic fever in July in Nord Kivu. Investigations found that sporadic deaths in May in the affected communities may have been related. A strike affecting the health sector in Nord Kivu is one factor why the detection and response to the virus has been impeded.

Anticipated scope and scale

WHO reported the outbreak in five health zones in Nord Kivu province, and one health zone in Ituri province. Multiple health areas in both Nord Kivu and Ituri are very likely to be affected, with five probable cases in Ituri already reported. Because of population movements, there is a further risk that the outbreak could spread to nearby conflict-affected areas including Sud Kivu, as well as neighbouring countries of Uganda and Rwanda. Number of cases are likely to keep increasing in upcoming days.

Key priorities

- **43 Ebola virus cases reported as of 6 August**
- **34 deaths**
  - CFR: 79%
- **Shortage of medicines and health facilities under-staffed**
- **WASH**
  - poor state of infrastructure

Humanitarian constraints

Access to Beni territory is limited due to a highly volatile security situation with ongoing conflict as well as targeted attacks on humanitarian actors. Physical constraints such as poor road conditions and limited air access also impede access.

Limitations

At this stage, it is difficult to estimate the full extent of the outbreak due to lack of epidemiological and demographic information. Official reports are expected every few days, but it is likely that there is a reporting lag between the spread of the outbreak and the publication of information, meaning numbers cited should be cross-checked regularly.
Crisis impact

On 1 August, an Ebola Virus outbreak was declared in Nord Kivu, after four out of six samples from patients affected by an ‘unknown disease’ tested positive. As of 6 August, the Ministry of Health officials have reported 43 cases including 34 deaths (CFR: 79%). In addition, 31 suspected cases are currently being investigated. (Ministry of Health 06/08/2018) This outbreak is the second one in DRC since the beginning of 2018, and comes barely one week after the last Ebola Virus outbreak in Equateur province was officially declared over. The current outbreak is located some 2,500km from Equateur province and any connection is unclear. However, initial tests identified the strain of the virus as serotype Zaire, the same that affected the Equateur province and which was contained due to the successful application of Merck’s vaccine. Further tests are ongoing to confirm the specific strain of the virus. Merck’s vaccine is only effective against the Zaire strain. (Ministry of Health 02/08/2018, Reuters 02/08/2018, Radio Okapi 01/08/2018, Le Monde 01/08/2018)

The outbreak is currently reported in five health zones in Beni territory, at the border with Uganda in Nord Kivu province (Mabalako, Oicha, Beni, Butembo, and Musienene, with over 72% of cases located in Mabalako), as well as in one health zone in Ituri, where 2 probable cases have been reported. (Ministry of Health 06/08/2018, WHO 04/08/2018, IFRC 02/08/2018, WHO 01/08/2018, DG ECHO 02/08/2018) Although two probable cases have been reported in Mandima health zone, the Ituri governor has denied the presence of the Ebola virus in the province, stating that the outbreak was exclusively contained in Nord Kivu. (Radio Okapi 06/08/2018) It is likely that the case numbers and the spread of the outbreak, at least in the immediate affected areas, will evolve quickly. Updated information is expected to be frequently released.

### Distribution of Ebola virus cases as of 6 August 2018

<table>
<thead>
<tr>
<th></th>
<th>Beni</th>
<th>Butembo</th>
<th>Oicha</th>
<th>Mabalako</th>
<th>Musienene</th>
<th>Mandima</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probable cases</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>21</td>
<td>1</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>Confirmed cases</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Total cases</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>34</td>
<td>2</td>
<td>0</td>
<td>43</td>
</tr>
<tr>
<td>Suspected cases</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>17</td>
<td>0</td>
<td>0</td>
<td>31</td>
</tr>
<tr>
<td>Deaths</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>28</td>
<td>1</td>
<td>2</td>
<td>34</td>
</tr>
</tbody>
</table>

Source: Ministry of Health 06/08/2018

Health: Trained health staff, medical supplies, and functioning health infrastructure are needed to respond to the outbreak. However, in Beni territory, health infrastructure is for the most part inadequate, and struggles to deliver quality services. There are seven hospitals and 133 health centres in Beni territory. Health facilities are often confronted with shortages of medical supplies, and they lack equipment and qualified staff to respond properly to the outbreak. (CAID 31/03/2017) Even though the outbreak may have originated in May, and a significant cluster of suspected viral haemorrhagic fever in North Kivu Province was detected and rapidly investigated in mid to late July, the declaration of the outbreak only occurred in August. One factor is that some of the health staff in Nord Kivu have been on strike since last May to protest working conditions and unpaid salaries. Some medical personnel undertook response activities due to the outbreak despite remaining on strike, simultaneously using the opportunity to underline their poor working conditions. (Actualite CD 2/08/2018, Le Monde 01/08/2018)

WASH: In DRC, about 13.1 million people are in need of WASH support. (OCHA 19/01/2018) Adequate WASH infrastructure and access are crucial to prevent Ebola virus from spreading. Particularly safe disposal of medical waste in areas affected by the outbreak is crucial. However, water and sanitation infrastructure poor in parts of Nord Kivu, including in places hosting IDPs. (OCHA 10/07/2018)

Protection: As of 6 August, most cases are concentrated in Mabalako health district, where the Allied Democratic Forces (ADF, an armed group founded in the 1990s in Uganda) has been historically active, including with attacks on local populations. (Ministry of Health 06/08/2018, IRIN 09/04/2016, Le Monde 01/08/2018, Le Figaro 01/08/2018) The latest incident was on 16 July, when ADF rebels attacked an FARDC base near Beni, killing three soldiers and three civilians. (Security Council, 02/08/2018) Insecurity and ongoing armed conflict in Beni territory is causing frequent displacement, but also paralyzing socioeconomic activities, making the response to the outbreak even more challenging. (OCHA 28/05/2018)

Tensions between the DRC and Uganda armed forces are also high: since early July, over 30 people have been killed around Lake Edward in clashes between the two armies.

Humanitarian and operational constraints

Humanitarian access in Nord Kivu and Ituri is limited; much of DRC’s 1,700km road network is in poor condition. Most roads are made of dirt, and only 11% are paved. (OCHA 31/07/2018) Most humanitarian access in Nord Kivu depends on air, but air access is also affected by the rainy season (expected to begin in September and last until January), the poor quality of landing tracks, and financial constraints, all of which impede the delivery of aid. (OCHA 31/07/2018, FEWSNET 12/2016)

The security environment is also a major constraint for humanitarian actors. Ongoing violence and clashes between the Congolese army and armed militias are a threat to the delivery of humanitarian assistance. Some affected areas in Nord Kivu (displacement...
sites in particular) are inaccessible to humanitarian actors because of insecurity. Since January 2018, it was reported that over 18,000 people living in Beni had almost no access to humanitarian assistance due to security constraints. Access is severely restricted most of the conflict-affected areas in Ituri as well. Unlike the outbreak in Equateur, where the security situation was mostly stable, one of the main challenges of the response in Nord Kivu is the difficulty for humanitarian agencies to access populations in need. (OCHA 31/07/2018, OCHA 09/04/2018, The Guardian 02/08/2018)

Violence against humanitarian actors is a recurring issue in Nord Kivu. Robberies, lootings, kidnapping, and killings are regularly reported. During the first three months of 2018, three kidnappings were reported, and two local NGO workers were killed. In 2017, seven kidnappings were reported. (OCHA 31/07/2018)

Attacks on health facilities and aid workers have been regularly reported in Nord Kivu in 2018, particularly in Goma, Rutshuru, and Mushikiri villages. Ongoing intercommunal violence and conflict has a detrimental impact on the access to health care (Insecurity Insight 05/2018, Insecurity Insight 03/2018, Insecurity Insight 02/2018, WHO 02/2018, MSF 16/01/2017).

Aggravating factors

Existing vulnerabilities

In Nord Kivu, over 31% of the population (2.6 million out of 8.3 million total) are in need of humanitarian assistance. (OCHA 31/07/2018)

Upcoming elections

The upcoming presidential, provincial and legislative elections have been continuously postponed since December 2016. They are set to take place in December 2018, but uncertainties still remain around the electoral process. In an already tense political climate, there is the risk of increased political violence and insecurity in the lead up to the election, which would further destabilise the region. (Security Council Report 28/06/2018)

Violently repressed demonstrations and high levels of political violence are common in Nord Kivu, particularly in Goma, the city with the second highest number of protests in DRC since 2015 (HRW 2018, ACLED).

Political stability and security

Insecurity is particularly high across Beni territory, which has been unstable for the last few years, mainly due to an increase of ADF’s activities since the last quarter of 2017. (ICG 02/2018, RFI 09/10/2017) Attacks on civilians and clashes between FARDC and ADF rebels are regularly reported in Beni, and the ongoing insecurity is paralysing socioeconomic activities, and forcing hundreds of families to flee to neighbouring Oicha, Mavivi, and Mandumbi (La Libre Afrique 17/07/2018, Radio Okapi 23/07/2018, OCHA 28/05/2018)

Ebola risks aggravating the already severe humanitarian crisis. The virus already has spread to Ituri, and there is also a risk it might spread to Sud-Kivu. Violent clashes are ongoing in Ituri province, with large population movements, large number of casualties, and fires reported in 2018 (OHCHR 03/07/2018).

Other diseases in region

The most common diseases reported in Beni are malaria (60%), respiratory infections (15%) and diarrheal diseases (12%) (CAID 31/03/2017)

The mountainous zones of Nord Kivu are hypoendemic to malaria: the incidence of the disease is relatively low and the transmission season short, which leads to low immunity and higher risk of epidemics. More than 2 million cases of malaria were registered in Nord Kivu in 2017 with Mweso, Masisi, Rutshuru, Walikale, and Kaina health zones affected the most. (ACP 29/04/2018, US Aid 2018)

Cases of cholera, other types of haemorrhagic fevers, and an outbreak of rabies (with CFR at 18%) have been reported in Nord Kivu in 2018 (IFRC 2/08/2018, WHO 27/07/2018).

Displacement

Nord Kivu has been one of the provinces of DRC most affected by conflict and displacement in recent years. It hosts the highest number of IDPs (25% of IDPs in the country or 1.15 million people) particularly in Lubero and Rutshuru, where 616,000 IDPs were hosted in the beginning of 2018 (OCHA 31/01/2018). 95% live with host communities, putting a strain on local infrastructure, health and WASH in particular. (OCHA 31/01/2018)

In 2018, conflict-affected provinces of Nord Kivu and Ituri (located in proximity to Beni territory) reported 750,000 people displaced due to the conflict (NRC 3/08/2018). In Ituri, intercommunal violence in Djugu territory displaced over 340,000 people between December 2017 and March 2018 (USAID 12/06/2018).

Since mid-March, approximately 4,200 newly displaced people have arrived in Beni territory. Previously in 2018, up to 4,000 people were displaced by armed groups in Oicha Health Zone in Beni territory. Urgent needs and low response capacity were reported concerning this displacement. (IOM 03/07/2018, IOM 23/02/2018)

Nord Kivu shares a border with Rwanda and Uganda. The spread of Ebola could be exacerbated by cross-border movements, as well as crossing of Lake Edward. (The Guardian 02/08/2018)

Ituri currently hosts 78,000 IDPs in Mambasa, and 287,000 IDPs in Irumu, including 50,000 in Bunia city, between 1,200 and 5,000 having arrived in May. (OCHA 31/01/2018,
Between December 2017 and March 2018, intercommunal violence in Djugu territory displaced over 340,000 people. Despite a volatile security environment, around 150,000 people returned to Djugu territory between March and July 2018, while 3,600 others who fled to Uganda returned to Tchomia and Kasenyi zones. Returnees have found infrastructure in their villages destroyed and their livelihoods severely impacted. (FEWSNET 30/07/2018, Atrocity Alert 25/07/2018, RFI 30/05/2018, OCHA 23/05/2018)

**Contextual information**

**Political stakeholders**

The Armed Forces of DRC (FARDC) is the state organisation responsible for defending the DRC. The majority of FARDC members are land forces, but it also has a small air force and an even smaller navy. Together, the three services may number between 144,000 and 159,000 personnel (Radio Okapi 04/08/2016).

Allied Democratic Forces (ADF) is an armed group founded in the 1990s in Uganda. It is active in Beni territory in Nord-Kivu, and its main interest is to make use of gold and timber mining and engage in illegal trading. It has strong links with local political and economic figures. The ADF/NALU has an estimated 1,200 to 1,500 armed fighters (IBT 29/10/2016).

Democratic Forces for the Liberation of Rwanda (FDLR) was founded by some of the key perpetrators of the 1994 genocide in Rwanda, who fled across the border into eastern DRC in the wake of those massacres. Since August 2016, the FDLR and FDLR-allied Mayi-Mayi Nyatura have been mainly active in Nord-Kivu to protect Hutu interests (IRIN 31/10/2013).

Mayi-Mayi: At least 20 Mayi-Mayi groups, formed by local leaders along ethnic lines, are active in Nord-Kivu, Sud-Kivu, and former Katanga. The number of fighters can range from 100 to 1,000 in one group. The term Mayi-Mayi refers to a range of local and community-based militias who have been active since, and during DRC’s two wars between 1996 and 2003 (IBT 29/10/2016).

**Cause and symptoms of Ebola**

The average CFR for the EBV is around 50%, and is often fatal in humans. It is transmitted through wild animals and other infected humans via bodily fluids. The transmission can also occur during burial, when there is a direct contact with the infected body of a deceased person. (WHO 12/02/2018)

Initial symptoms include headache, muscle pain, fever, fatigue, and a sore throat. These symptoms are usual followed by vomiting, diarrhoea, rash, and sometimes internal and external bleeding. The incubation period varies between 2 to 21 days. (WHO 12/02/2018)

**Previous outbreaks of Ebola**

This is the tenth outbreak in the country since the disease appeared in 1976, but the first time an outbreak has occurred in Nord Kivu. (Centers for Disease Control and Prevention accessed 02/08/2018)

The current outbreak is the second in the country since the beginning of 2018. The first one, in Equateur province, was declared over on 24 July, and had a total of 54 cases including 33 deaths. (CFR: 61.1%) (WHO 25/07/2018)

During the last outbreak in Equateur province, the virus was contained thanks to prompt local and international response, as well as the vaccination of more than 3,300 people. (Al Jazeera 01/08/2018)
Risk factors

Ebola can be transmitted through the infected bodies of deceased patients. Therefore, safe burials need to be ensured to prevent infection from people attending funerals of deceased Ebola cases. (Stat News 09/05/2018).

Ebola has a significant impact on a country’s health system. This includes fear of, and stigma against health workers, which can cause detrimental health outcomes for patients in need of treatment for other diseases. (IPS 01/12/2014, Journal of Public Health 2015).

Vaccines, control and prevention

Oral or intravenous rehydration, along with treatment of symptoms, can improve survival. (WHO 12/02/2018). Recently, a new experimental vaccine called rVSV-ZEBOV has been developed and tested in Guinea. It is so far the most advanced form of prevention for the Ebola virus, and was used for the first time during the last outbreak in Equateur province, in a ‘ring’ vaccination campaign (vaccinating the people around each infected person to stop the disease spread). (MSF 27/06/2018) By the end of the Equateur outbreak, 3,330 people had been vaccinated, which proved extremely successful and contributed to reducing the spread of the disease and controlling the outbreak. (MSF 27/06/2018, WHO 25/07/2018)

Key characteristics

- **Demographic profile:** The total population of Nord Kivu is 6,655,000, and Beni territory is 1,131,645. (CAID 31/03/2017, Population Data 2017)

- **Health statistics (countrywide):** under five mortality rate: 94.3/1,000; neonatal mortality rate: 29/1,000 (UNICEF)

- **Food security figures:** 7.3 million people are estimate in severe food insecurity across DRC. (OCHA 24/07/2018) In conflict-affected areas such as Nord Kivu, conflict, insecurity, and recurrent population movements limit access to livelihoods and disrupt farming activities. (OCHA 19/01/2018) According to the latest IPC data available, 619,557 people (8% of the population) in Nord Kivu are in Crisis (IPC 3). (IPC 06/2017) This number is now most likely higher, since the food security situation has been deteriorating across the country.

- **WASH statistics** (countrywide): use of unimproved sanitation services: 42%, use of unimproved drinking water services: 37%, use of surface water: 11% (UNICEF)

Response capacity

**Local and national response capacity**

Ebola being endemic to DRC because of the equatorial forest ecosystem, a national system of epidemiological surveillance was already in place in all at-risk areas, including Nord Kivu. The last Ebola outbreak was declared over on 24 July, which means the intervention teams are ready to intervene, and equipment is in place. The national coordination and working groups have been reactivated in Kinshasa, and laboratory, medical treatment, epidemiological surveillance, awareness raising, and logistics responses have been activated in Nord Kivu. Given the volatile security situation in the region, a new security component has been adopted to ensure protection for both responders and affected populations. (DG ECHO 02/08/2018, The Guardian 02/08/2018, Ministère de la Santé République Démocratique du Congo 01/08/2018) Country, regional, and global coordination mechanisms have been activated in Nord Kivu and Ituri provinces to respond to the outbreak. A team of 12 experts, composed of epidemiologists, psychologists, and physicians, was deployed in Beni by the Ministry of Health on 2 August. In addition, Rapid Response Teams were deployed by the Ministry of Health and WHO. A vaccination campaign is expected to beginning on 8 August in Beni territory, where 966 contacts (people who have been in contact with patients infected with Ebola virus) have already been registered. (Politico 07/08/2018, WHO 04/08/2018, Le Figaro 01/08/2018, Jeune Afrique 01/08/2018)

**International response capacity**

In Nord Kivu, 49% of humanitarian projects are executed by local NGOs. There are currently 71 operational actors, including 17 actors operating in the health sector. In Beni territory, 7 organisations are currently implementing health projects. (OCHA 14/05/2018) A lot of international actors were already in place for the response to the Equateur outbreak, and their medical staff and equipment have not yet been repatriated. Four Red Cross volunteers have been deployed in a Beni hospital, while MSF has started installing tents inside health centres. WHO started providing support teams to local and national health authorities as well as local Red Cross committee. Oxfam and CARE announced they started working on awareness raising activities with the local communities and providing WASH assistance. (CARE 07/08/2018, IFRC 02/08/2018, Oxfam 02/08/2018, Le Monde 01/08/2018)
Information gaps and needs

- Information about WASH conditions in Nord Kivu is limited.
- Information of most recent displacement in Beni territory is difficult to obtain. Displacement tracking coverage focuses on other areas of Nord Kivu.

Lessons learned

- The response should begin with an epidemiological investigation to understand exactly where this virus may have spread and how many people could be affected (WHO 2/08/2018).
- The outbreak has been declared in a proximity of major urban population centre. Urban spaces see a high number of anonymous, untraceable interactions every day which problematises contact tracing and surveillance efforts (ALNAP/ODI 2017).
- The outbreak has been declared in a proximity of international border, which facilitates population movement. Fear of getting infected was a significant driver of displacement during Ebola outbreaks in the past, exacerbated by stigmatisation in rural communities and lack of health services. During the EVD outbreak in West Africa, population movement was recognised as a critical issue, particularly as it increases the risk of transmission into large urban centres (ALNAP/ODI 2017).
- Psychosocial support (PSS) for the affected population is crucial throughout the EVD response and advocacy efforts are needed at different levels to ensure that PSS is implemented during response (IFRC 07/2016).
- For the response to and prevention of an Ebola outbreak, WHO recommends the following strategies: (i) coordination of the response, (ii) enhanced surveillance, (iii) laboratory confirmation, (iv) contact identification and follow-up, (v) case management, (vi) infection prevention and control, (vii) safe and dignified burials, (viii) social mobilization and community engagement, (ix) logistics, (x) risk communication, (xi) vaccination, (xii) partner engagement, (xiii) research and (xiv) resource mobilization. (WHO 11/05/2018)
- Two-way communication with affected communities is crucial during a response to an Ebola outbreak. The effectiveness of the response increases when the information provided for communities is appropriate and targeted and when the concerns of affected communities are heard. Thus communities can provide feedback on the response, which contributes to trust-building and community ownership of solutions (IFRC 09/05/2018). Community engagement can also be improved by determining with community leaders the best way to engage with the people (Healio 04/2015).
- Safe and dignified burial needs to be provided for fatalities of the disease since the bodies of Ebola patients remain infectious after death. During the response to the Ebola outbreak in Likati, teams ensuring safe and dignified burials included a community engagement person to speak with affected families (IFRC 09/05/2018).
- Health care workers need to strictly follow infection protocol precautions to avoid being infected themselves. Infection of health care workers has been frequent in other outbreaks (WHO 12/02/2018).
- Languages spoken in the affected areas are diverse, including seven in Beni territory. 80 percent of the population in Beni territory speak Swahili, though Nande/Kinande is the first language for 78 percent of the population. Mbuba is the first language for 20 percent of the population and should not be overlooked in the response and information exchange with affected populations (TWB 03/08/2018).
Map: Geographical distribution of the EVD outbreak in Nord Kivu as of 1 August 2018

Source: Ministère de la Santé République Démocratique du Congo 01/08/2018

Source: CAID 31/03/2017
Map: Crisis Language Map – DRC Ebola Outbreak

Swahili
The lingua franca, spoken by 80 percent of the population in Beni Territory.

Nande
The first language for 78 percent of the population in Beni Territory. Also known as Kinande.

Mbuba
The first language for 20 percent of the population in Beni Territory.

Source: TWB 03/08/2018