

Briefing Note – 12 October 2016

# NIGER

## Rift Valley Fever in Tahoua region



	Not required	Low	Moderate	Significant	Major
Need for international assistance		X			
Expected impact	Very low	Low	Moderate	Significant	Major

### Crisis overview

A Rift Valley Fever (RVF) outbreak was declared on 20 September in the districts of Tchintabaraden, Tassara, and Abalak in the Tahoua region of Niger. Cases were first reported on 30 August, when unexplained deaths among humans, along with deaths and abortions of livestock were observed in Tchintabaraden district.

As of 10 October, 90 cases have been reported among humans, including 28 deaths, with a case fatality rate (CFR) of 31.1%. Most of the reported cases are male (62.5%), mostly farmers or animal breeders. An epizootic outbreak is also affecting livestock in the same areas, causing deaths and abortions among cattle and small ruminants, negatively impacting on livelihoods.

### Anticipated scope and scale

Movement of the animal and human population is likely to further increase the risk of the outbreak spreading. The population at risk is estimated at 125,000.

It is probable that the viral disease may spread to neighbouring countries in west Africa. Herders migrating with infected livestock pose the risk of the epidemic crossing borders.

As the end of the rainy season approaches, nomadic populations will progressively move to other southern sub-Saharan countries, including Nigeria, Ivory Coast, Togo, and Benin, and irrigation systems along the Niger river where pastures may still be available. The high density of animals in these area and the transhumance patterns significantly increases the risk of international spread.

### Priorities for humanitarian intervention

- **Health:** Medical assistance is urgently needed. There is limited local laboratory capacity to detect and confirm RVF cases.
- **Food:** The outbreak is affecting populations in Tahoua region, who are already suffering from severe food shortages and malnutrition.
- **WASH:** Recent floods have impacted the livelihoods of pastoralists in the region, thereby increasing their vulnerability to the disease.

### Humanitarian constraints

- Recent armed group activity in Tahoua is likely to constrain the ability of humanitarian workers to deliver assistance to people affected by the outbreak.
- Due to its proximity to the Kidal region of Mali, which has seen a recent surge in violence, Tahoua region is considered to be a high security risk area.

### Limitations

There is a lack of information on the sectoral needs of affected populations and their coping mechanisms.

## Crisis impact

**Health:** The RVF outbreak was declared on 20 September in Tahoua region. On 30 August unexplained deaths among humans, along with death and abortions in livestock in the North Western parts of Niger, and the areas bordering Mali, particularly in the districts of Tchintabaraden, Tassara, and Abalak in the Tahoua region of Niger were reported (IFRC 01/10/2016).

As of 10 October, 90 cases have been reported, including 28 deaths (CFR: 31.1%) (Outbreak News Today 10/10/2016). From 2 August to 22 September, 64 cases including 23 deaths were reported in Tchintabaraden health district in Tahoua region (WHO 29/09/2016). The area is mainly populated by nomadic stockbreeders. Most of the reported cases are males (62.5%) who work as farmers or animal breeders. In the most affected areas, an epizootic outbreak is also reported among livestock during the same time duration, including deaths and abortions among cattle and small ruminants (WHO 29/09/2016). The population at risk is estimated at 125,000 so far, but this might increase due to the fact that the majority of the group at risk (pastoralists) lack medical assistance, and are on the move (IFRC 01/10/2016).

There is limited local laboratory capacity to detect and confirm RVF cases (IFRC 01/10/2016). In addition, community awareness sessions, adequate surveillance, detection of cases, and referrals of suspected cases are lacking (IFRC 01/10/2016). With no specific treatment or effective human vaccine, the impact of the outbreak is expected to increase (Africa News 30/09/2016)

**Food security:** The outbreak is likely to have major societal impacts on the affected population, including significant loss of livelihoods and trade (IFRC 23/09/2016). The outbreak is affecting populations in arid desert regions who are already suffering from severe food shortages and malnutrition (IFRC 23/09/2016). In June, 28,949 cases of Moderately Acute Malnutrition (MAM) were recorded in the region (OCHA 31/07/2016).

**WASH:** The impact of the crisis has been exacerbated by the lack of preventive personal hygiene methods, such as washing hands, and wearing gloves when handling livestock (IFRC 23/09/2016; The Point 07/10/2016). Vulnerability to the disease and the likelihood of contracting the disease has been exacerbated by the recent floods in August. Heavy rains killed 14 people, and left more than 46,000 homeless in the arid desert regions of Niger. Tahoua was one of the most affected regions. Some 20,000 heads of cattle (cows, goats, sheep, and camel) were lost due to flooding, impacting the livelihood of pastoralists (OCHA 22/08/2016).

### Factors affecting efforts to control outbreak

Recent activity by armed groups is likely to constrain humanitarian access. On 7 October, 21 people were killed by unidentified armed groups in Tahoua (BBC News 07/10/2016).

Humanitarian access in Tahoua region is further hindered by its proximity to the Kidal region of Mali. In recent months, attacks on civilians have increased in the Kidal region. Attacks on 5 and 7 August in Kidal killed one person and injured six (UNSC 08/08/2016). GATIA and the AMC who have jointly governed Kidal since February, clashed in Kidal on 21 and 22 July, and then again near Kidal on 30 July and 9 August. At least 50 people were killed and 82 injured (Jeune Afrique 11/08/2016).

### Vulnerable groups affected

Most of the cases that have been reported are people who have direct contact with blood or organs of the infected animals, and body fluid delivered from infected animals, such as milk (IFRC 01/10/2016). Laboratory staff handling infected biological samples are also at a great risk of infection (ECDC 07/10/2016).

## Aggravating factors

### Previous disasters in the area

22,379 people were affected by the floods in July and August in Tahoua (OCHA 27/08/2016).

### Important upcoming events

Pastoralists traditionally move to the South with their livestock in October. The main harvest season begins in October (FEWSNET 30/09/2016).

### Population density

There are approximately 29.3 people per square km in Niger (INS-Niger 2012). In highly populated rural areas, this presents a risk the disease might spread. No RVF case has been reported in urban areas – therefore highly populated urban areas are virtually out of risk (WHO 31/05/2010).

Nomadic stockbreeders from Niger and neighbouring countries have just participated in the Cure Salée festival, a major annual mass gathering event from 23 to 25 September. During this festival, herds are brought to graze on the salty pastures ahead of the dry season. Around two million cattle and even more small ruminants were expected to be part of the event (WHO 29/09/2016).

## Political stability and security

The internal political situation remains stable in Niger. Virtually all major political protests occur in Niamey; they are, for the most part, non-violent (ACLED 08/10/2016).

There was little violence surrounding the 2016 presidential elections, despite a boycott of the second round by the opposition (al Jazeera 20/03/2016). Election fraud allegations were made by the opposition (AFP 23/02/2016).

The security situation in Tahoua remains globally calm (OCHA 31/08/2016). The region remains vulnerable to the conflict in Northern Mali, due to porous borders (Crisis Group 25/06/2015). Cross-border arms and drugs trafficking is also frequent (OCHA 31/08/2016).

On 6 October, a Malian refugee camp was attacked in Tazalit. Al Qaeda in the Islamic Maghreb (AQMI) is most likely responsible for the attack (Jeune Afrique 06/10/2016). Mali-based armed group Ansar Dine also clashed with Nigerien army in Tahoua city, earlier in 2016 (ACLED 08/10/2016). Many clashes were reported since July in the Kidal region bordering Tahoua (ACLED 08/10/2016).

## Other factors of vulnerability

Food insecurity and malnutrition are already present in Tahoua. Around 25% of the population is food insecure. High food prices worsen food insecurity (OCHA 31/08/2016). The high number of Malian refugees are partly causing this hike (OCHA 31/07/2016). Violent winds in July in Tahoua prolonged the wedding period, worsening food insecurity for poor households (FEWSNET 30/09/2016).

Severe acute malnutrition (SAM) rate was of 12.3% in 2015, and global acute malnutrition (GAM) was of 37.2% (OCHA 31/07/2016).

An avian flu (H5N1) outbreak was declared in July. The outbreak threatens livelihoods (WHO 13/07/2016).

165 meningitis cases and 201 measles cases were reported in Tahoua in June 2016 (OCHA 31/07/2016).

## Contextual information

### Cause and symptoms

RVF is transmitted from animal to human, including blood-feeding flies and mosquitoes (WHO 31/05/2010). Other forms of transmission include: mother-to-son (ECDC 07/10/2016), indirect contact with blood or organs and consumption of unpasteurized milk from infected animals (WHO 31/05/2010).

RVF in humans causes none to mild symptoms for 96 to 98% of all cases. For mild RVF, many symptoms are similar to common flu symptoms, such as fever, headache, as well as muscle and joint pain. Symptoms can also be meningitis-like, such as vomiting, loss of appetite, light sensitivity and neck stiffness. Symptoms of mild RVF appear within two to six days from infection (WHO 31/05/2010) (Centre for Disease Control and Prevention 14/11/2013).

Haemorrhagic RVF, which is less than 1% of all human RVF cases, will cause death in roughly half of those affected. Symptoms can include bleeding, jaundice, vomiting blood, presence of blood in faeces, ecchymosis and menorrhagia (WHO 31/05/2010).

Meningoencephalitis RVF, less than 1% of human RVF cases, leads to inflammation of the brain, or encephalitis (Centre for Disease Control and Prevention 14/11/2013). Symptoms include intense headache, loss of memory, hallucinations, confusion, disorientation, vertigo, convulsions, lethargy and coma one to four weeks after infection. Long-term residual neurological deficit is common for those affected. Symptoms of this type of RVF appear one to four weeks after onset of mild RVF symptoms (WHO 31/05/2010).

Presence of ocular RVF in the macula causes permanent loss of vision roughly half of the time. Otherwise, blurred and decreased vision will disappear within 10 to 12 weeks (WHO 31/05/2010) (Centre for Disease Control and Prevention 14/11/2013).

High rates of abortion and youth mortality in animals are signs of a RVF outbreak. Influenza-like symptoms and depression also appear in older animals (Anne-Lie Blomstrom et al. 04/07/2016) (FAO 2003).

### Treatment

There is no specific treatment against human RVF (ECDC 07/10/2016). It is usually left untreated in mild cases. General supportive care is provided for more severe cases (Centre for Disease Control and Prevention 14/11/2013). Infected people are sometimes placed in isolation to prevent further spreading (All Africa 18/03/2016).

### Previous outbreaks

There was no major RVF outbreak in Niger. Other countries in the Sahel, namely Mauritania, Senegal and Sudan, were previously affected by major outbreaks (Bernard Bett et al. 31/07/2015).

Populations lacking RVF knowledge are at risk of using dangerous coping mechanisms, such as trying to treat contagious animals rather than isolate them (Kiplimo Jusper et al. 30/09/2014).

## Risk factors

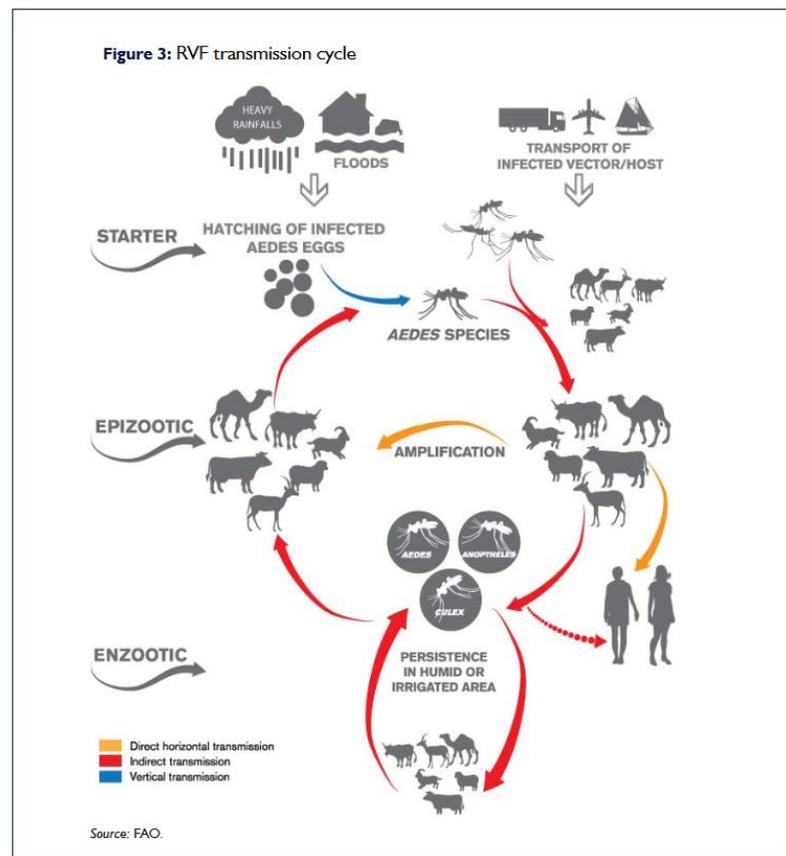
The breeders are mostly nomadic, moving to the South in October (FEWSNET 30/09/2016). There is thus a risk that the disease spreads geographically – especially in areas along the Niger river. (WHO 29/09/2016).

The presence of armed groups in Northern Mali presents an overspill risk in western Niger (Crisis Group 25/06/2015). The risk of further clashes involving northern Malian armed groups in Tahoua remains.

## Vaccines

Vaccines are available for animals only. Since the disease is spread from animal to human, animal vaccination can prevent human cases (ECDC 07/10/2016).

## RVF transmission cycle



## Response capacity

### National response capacity

Surveillance, prevention and control of disease is the responsibility of the Niger Health Ministry's Department of Public Health (Government 2016). Since the start of the outbreak, the Alliance for International Medical Action (ALIMA) and Niger's health authorities have opened an emergency treatment centre (Africa News 30/09/2016). Development of Niger's health system was supported through a National Health Plan (2011-2015), which identified several weaknesses including lack of quality health data, budget unpredictability, inadequate drugs, vaccines, blood stocks, lack of quality control (WHO 04/2014). Given Niger's susceptibility to disease outbreaks, an epidemic surveillance system has been established, but requires improvement (WHO 2016).

### International response capacity

Most major UN agencies are present in Niger under the coordination of the Resident Coordinator (UNDG 2016). WHO is working closely with FAO to support the Ministry of Health to investigate and respond to the outbreak (WHO 28/09/2016).

At least 98 humanitarian assistance activities are ongoing in Tahoua, focused predominantly on food security, health, nutrition and WASH.

## Information gaps and needs

- Information on the sectoral needs of the affected population is limited.
- The lack of previous major outbreaks in Niger means that it is hard to predict the extent to which it will impact local areas and populations.
- Human cases are under-detected (WHO 29/09/2016).

## Lessons learned

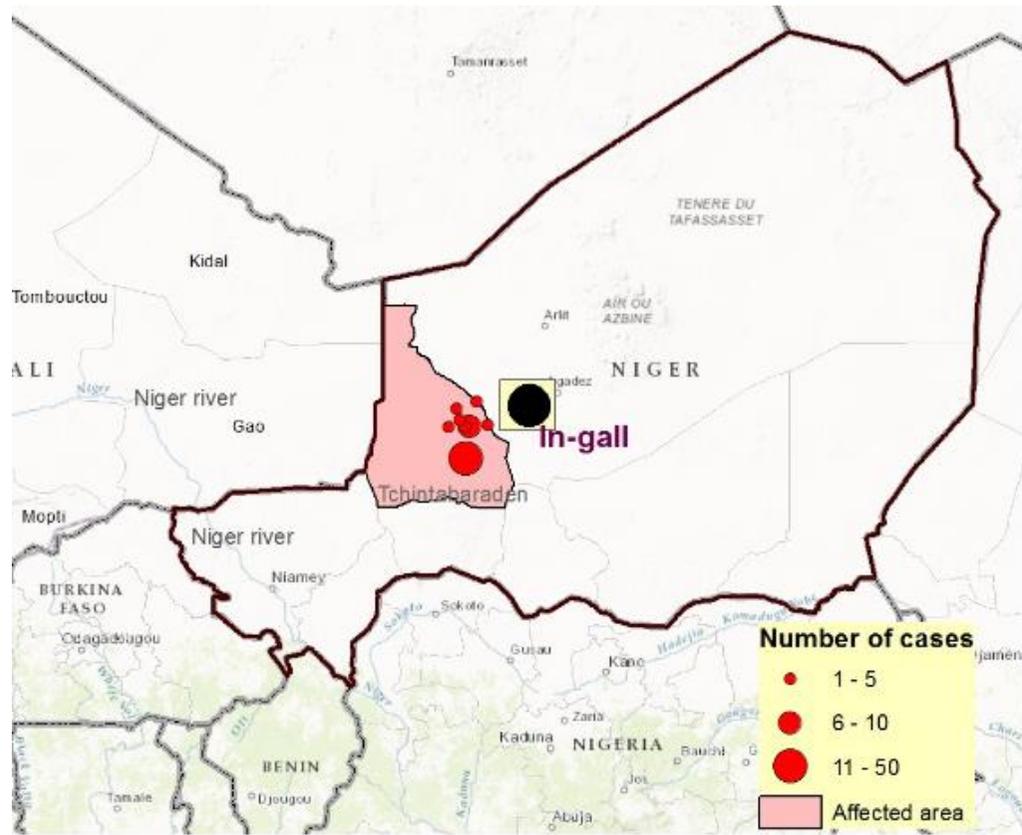
- The last major Rift Valley Fever outbreak reported in west Africa occurred in Mauritania in 2012 (WHO 2016). The outbreak last six weeks from September to October 2012, with a total of 34 cases, including 17 deaths across six regions. All cases involved contact with animals. (WHO 01/11/2012)
- Research has found Rift Valley Fever epidemics tends to occur in cycles of five to 15 years, associated with periods of heavy rainfall linked to the El Nino Southern Oscillation. (FAO 2012) The 2015-2016 El Nino even has been one of the strongest on record.
- RVF epidemics have historically had severe negative socio-economic impact on livelihoods, rural food security and nutrition. Dairy farmers, animal traders, slaughterhouses and butchers have incurred heavy financial losses in past outbreaks in Kenya. In Tanzania in 2007, RVF triggered a 33% drop in livestock prices, 75% of exports banned, and 40% drop in marketed cattle. Impacts of RVF can also extend beyond the livestock industry: agriculture, transport, services are all negatively affected (FAO 2012)
- Early warning and monitoring systems for RVF have emerged and generally improved over the past ten years, but continue to perform poorly in western Africa. Surveillance of high risk areas where mosquitoes breed including rivers, swamps and dams is crucial (FAO 2012)
- Vaccination and communication are key control strategy. Vaccination is only regularly used in a few countries, and is yet to be used in West Africa. (FAO 2012)
- Since this is the first time Rift Valley Fever has been reported in Niger, information of local population is important. Information dissemination on preventative measures including contact with livestock blood has been used to contain outbreaks in other countries. Surveillance of the epidemic, quarantining of animals, vector control, bans on slaughter and immunisation of livestock have been used in the past. (ISID 2009)
- Livestock movement has spread RVF in the past. Livestock trade from Niger goes to Nigeria and Benin and should be controlled.

## Key characteristics

Key indicators	Niger	Tahoua
Total population	18,528,604 (2015) Growth rate 3,9 (2012)	3,598,280 (2015) Growth rate 4,7 (2012)
% population in rural areas	81,3% (2015)	74,1% (2012)
Gender and age distribution of population	0-14 52,1% (2015) 15-64 44,9% (2015) 65+ 3% (2015) M-49,7 (2015) F-50,3 (2015)	0-14 52,7% (2015) 15-64 44,2% (2015) 65+ 3,1% (2015) M -49,9% (2015) F – 50,1% (2015)
State capital	Niamey	Tahoua (161,623)
WASH	access to improved water sources 58% (2015) access to sanitation facilities 11% (2015)	
Health	infant mortality rate 51‰ (2102) under-five mortality rate 81‰ (2102) maternal mortality rate 535/100,000 (2012)	infant mortality rate 65‰ (2012) under-five mortality rate 80‰ (2012)
Food security	4.3 million food insecure	
Nutrition levels	SAM 2.7% (2014) GAM 14.8% (2014)	SAM 2.2% (2014) GAM 14.7% (2014)
Literacy rates	28.7% (adult – 2012)	30.4% (adult - 2008)

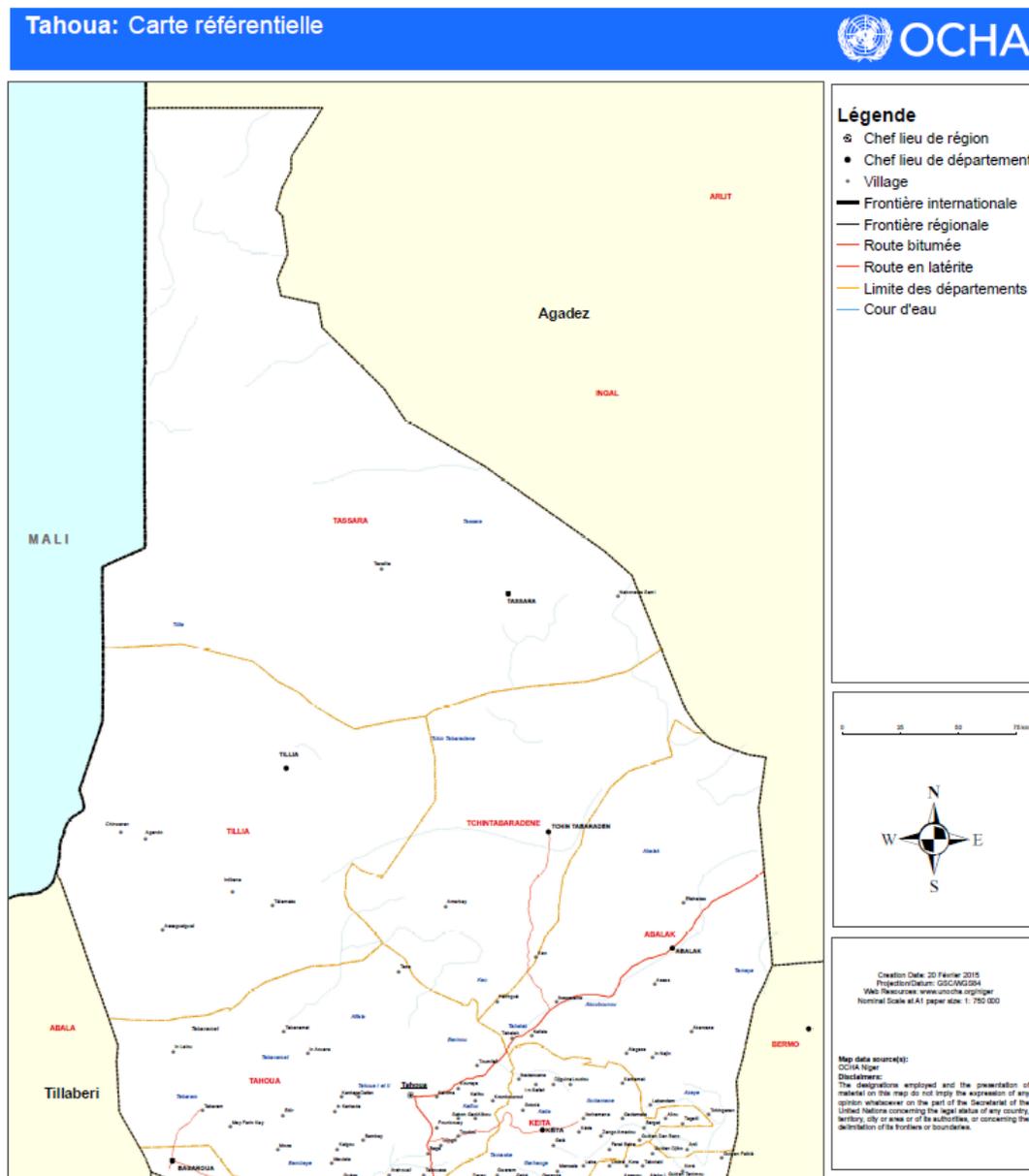
Sources: Unicef; Gov. Of Niger 2013, 2015a, 2015b; OpenDataForAfrica; World Bank 2015a, 2015b; ECHO

Map of Tahoua region (Tchintabaraden district)



Source: WHO 28/09/2016

Map of Tahoua region



Source: OCHA 20/02/2015