Food and Agriculture Organization of the United Nations

alert

FAO AND IGAD CALL FOR ACTION TO PREVENT THE RISK OF RIFT VALLEY FEVER IN EASTERN AFRICA

9 November 2023

Key facts:

1. Rift Valley fever (RVF) is an acute, vector-borne, viral, and zoonotic disease that has severe impacts on livelihoods, national and international markets, and human health.
2. The disease has been observed in sheep, goats, cattle, buffaloes, camels, and humans and is spread primarily by mosquitoes and the movement of animals.
3. Heavy rains and prolonged flooding increase habitat suitability for vector populations, determining massive hatching of RVF competent mosquitoes (e.g., *Aedes and Culex*), thus influencing the risk of RVF emergence, transmission and spread.
4. The dynamic prediction model calibrated by the Food and Agriculture Organization of the United Nations (FAO) builds upon the work by Anyamba *et al.*, (2009; 2010), which utilizes vegetation and rainfall anomalies as a proxy for ecological dynamics to map areas at potential risk of RVF in East Africa.
5. The FAO RVF Early Warning panel of experts verifies the risk areas with the experts on the ground and assesses if conditions warrant an RVF alert (FAO 2019, 2021).
6. RVF outbreaks can disrupt the livestock sector by depleting the future generation of affected herds and therefore constitutes an important socioeconomic and food security threat to vulnerable households. In addition, it can also affect the funds directly available to households through their animals and impact their capacities to access health care and child education. Moreover, it can result in trade bans and affect national and regional economies.

RVF is an endemic vector-borne zoonotic disease that represents a threat to human health, animal health and livestock production in the East Africa region. The epidemiology of RVF is complex, making monitoring of RVF risk and carrying out efficient and timely control measures challenging. To increase knowledge on RVF epidemiology and inform disease management policies, FAO has developed and maintains a web-based RVF Early Warning Decision Support Tool (RVF DST) for near real-time RVF forecasting based on habitat suitability modelling and environmental factors for vector amplification. To this end, FAO, in partnership with the Intergovernmental Authority on Development (IGAD), has been alerting the countries at risk through joint alert messages about the increased risk and mitigation measures.

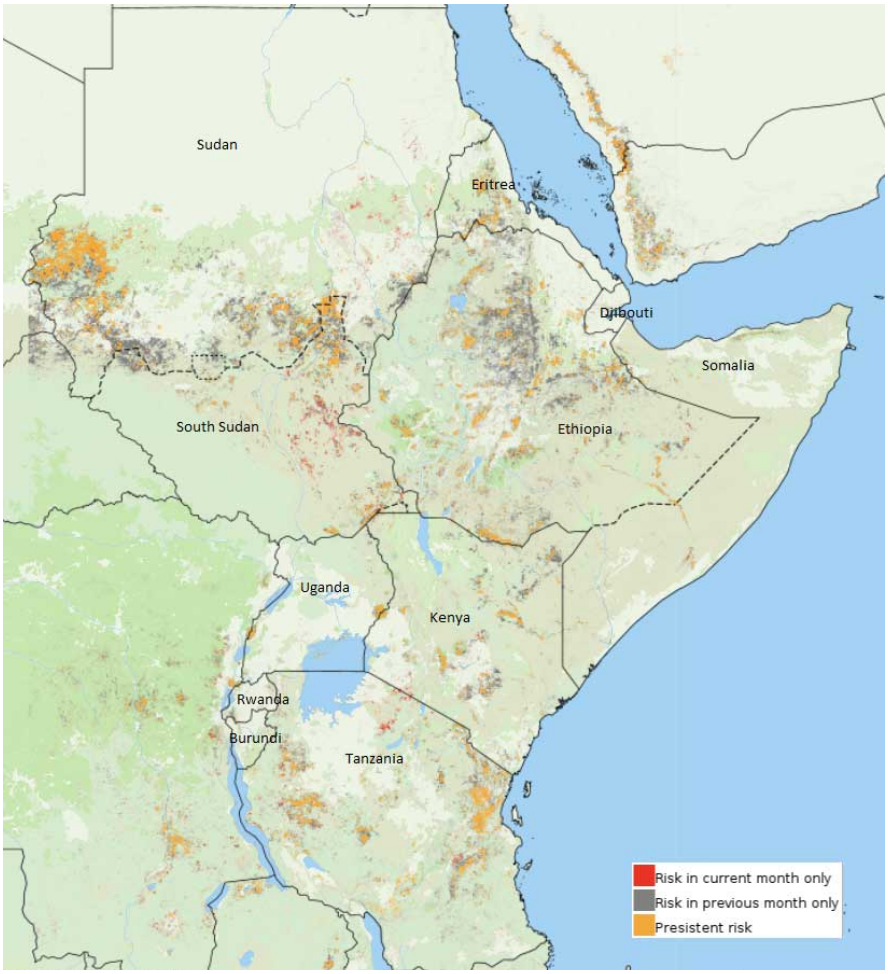
On 19 October 2023, the FAO Emergency Prevention System, based on continuous environmental monitoring and analysis of data available in the FAO Global Animal Disease Information System (EMPRES-i+) on the potential impact of El Niño on livestock health in the region, concluded that the **risk of RVF occurrence in East Africa is considered high both in animals and humans, due to favourable environmental conditions and through movement of potentially infected animals**, underscoring the urgent need to ensure adequate preparedness for potential outbreak of RVF, through the One Health approach.

During the period of July–October 2023 and over the recent weeks, wetter-than-normal conditions occurred in the region, and particularly in Sudan, South Sudan and parts of Kenya, Uganda, Ethiopia, Djibouti, Somalia and United Republic of Tanzania. Flooding conditions persisted in the Sudd wetlands in northern South Sudan. These suitable environmental conditions for potential RVF vector amplification, abundance and distribution are forecasted to persist until January 2024 because of a strong El Niño predicted event that is expected to occur with a 75-85 percent chance. Extensive hotspots for RVF vector amplification are predicted in **Sudan**, **South Sudan**, **Kenya**, **United Republic of Tanzania**, **Ethiopia**, **Uganda**, **Somalia,** and **Rwanda** (figure 1).

Useful Links

- Rift Valley fever action framework (FAO Animal Production and Health Guidelines, April 2022) https://www.fao.org/documents/card/en?details=cb8653en%2f
- Driving preparedness and anticipatory actions through innovation: A web-based Rift Valley fever Early Warning Decision Support Tool (September 2021) https://www.fao.org/3/cb5875en/cb5875en.pdf
- Real-time monitoring and forecasting of Rift Valley fever in Africa (FAO FCC Information Sheet 2019) www.fao.org/3/ca5511en/ca5511en.pdf
- Rift Valley fever surveillance (FAO Manual 2018) www.fao.org/3/I8475EN/i8475en.pdf
- Recognizing Rift Valley fever (FAO Manual 2003) www.fao.org/3/y4611e/y4611e00.htm
- Preparation of Rift Valley fever contingency plans (FAO Manual 2002) www.fao.org/3/Y4140E/Y4140E00.htm
- Decision-support tool for prevention and control of Rift Valley fever epizootics in the Greater Horn of Africa. (ILRI and FAO 2009) Version I. ILRI Manuals and Guides. no. 7. 28p. Nairobi (Kenya): ILRI. cgspace.cgiar.org/handle/10568/22
- Anyamba, *et al.* 2009. Prediction of a Rift Valley fever outbreak. Proceedings of the National Academy of Sciences 106(3): 955-959. www.pnas.org/content/pnas/106/3/955.full.pdf
- What you need to know about Rift Valley Fever https://youtu.be/OBAkrTZMtqY?si=zkxwmj1IO0E9DgcL
- Introduction to Rift Valley Fever open access course https://eufmdlearning.works/enrol/index.php?id=295

Figure 1. Forecasted risk of RVF vector amplification for October/November 2023



Source: United Nations Geospatial 2020 Map of the World. United Nations. Cited 2 November 2023. www.un.org/geospatial/file/3420/download?token=TUP4yDmF modified with data from the web based RVF DST, November 2023.

Disclaimer: The boundaries and names shown and the designations used on these map(s) do not imply the expression of any opinion whatsoever on the part of FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers and boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Final boundary between the Sudan and South Sudan has not yet been determined. Final status of the Abyei area is not yet determined.

Therefore, FAO and IGAD are advising the countries at risk to increase awareness of stakeholders, improve preparedness at national, subnational and community levels to safeguard livestock, livelihoods, and public health, especially for exposed and vulnerable communities (farmers and pastoralists), and improve coordination with public health and environment services for managing the risk of RVF outbreaks.

More specifically, FAO and IGAD recommend:

- **The national veterinary authority should increase awareness** about the disease, **assess the current situation and the specific risk to the country regarding RVF,** and **identify the actions** to support the country to increase its preparedness for potential RVF outbreaks.

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- **The national veterinary authority** should work closely with their **public health counterparts and other relevant sectors to coordinate joint preparedness activities**, through **a One Health approach to mitigate the perceived threat**.

Countries should verify if:

- staff at all levels (national to local) are aware of specific high-risk areas;
- an RVF contingency plan with standard operating procedures for outbreak control exists and is endorsed/activated;
- staff are equipped and trained to implement the plan in case of outbreaks;
- staff are equipped and trained to conduct passive and possibly active RVF surveillance, especially in high-risk areas;
- additional actions should be taken to increase awareness of populations; and
- proper safety/protection measures are in place for first responders/staff.

In case of any inquiry on the subject, including the need for technical support or information on the at-risk areas, you may wish to contact FAO (Ricarda Mondry, Charles Bebay and Madhur Dhingra) and IGAD (Dereje Wakjira and Guleid Artan).