Food and Agriculture Organization of the United Nations

alert

FAO AND IGAD ALERT FOR EASTERN AFRICA TO INCREASE VIGILANCE FOR RIFT VALLEY FEVER

15 June 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. People can get it through contact with blood, body fluids, or tissues of infected animals.
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.
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 Eastern Africa region. The epidemiology of RVF is complex, making monitoring of 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.

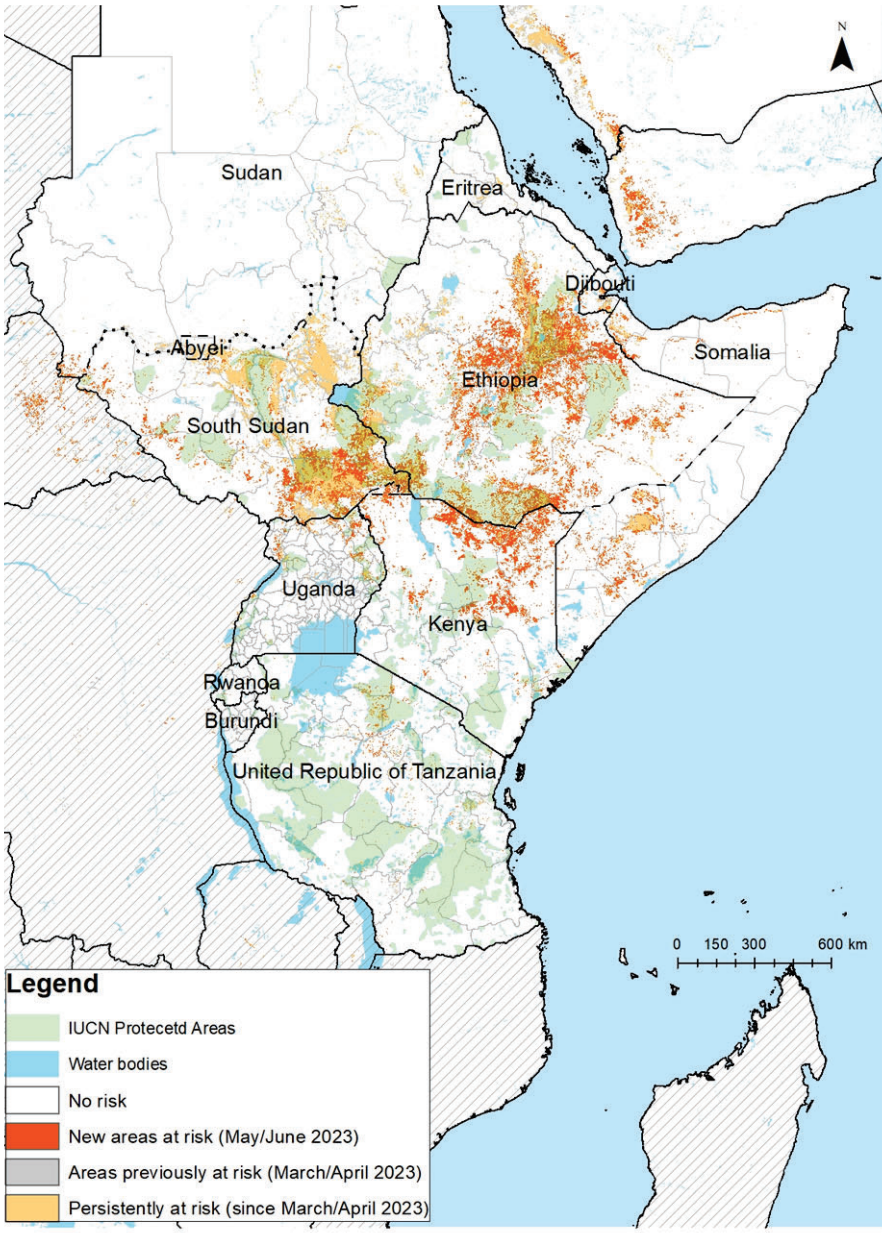
On 30 May 2023, the FAO Animal Health Service, based on the analysis of data available through the RVF DST, FAO Global Early Warning and Response System for Major Animal Diseases, including Zoonoses (GLEWS), FAO Emergency Prevention System (EMPRES) Global Animal Disease Information System (EMPRES-i+) and expert knowledge, concluded that the **risk of RVF occurrence in Eastern 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 March–May 2023, heavy, prolonged, and widespread rains triggered severe floodings in **Ethiopia**, **Somalia**, **Kenya**, western **Tanzania**, **Burundi**, and **Rwanda**, creating suitable environmental conditions for vector amplification, abundance, and distribution. Extensive **hotspots for RVF vector amplification** are predicted in **Kenya**, **Ethiopia**, **South Sudan**, **Somalia**, and **Djibouti**, while **localized hotspots** are predicted in **Uganda**, **Sudan**, **Tanzania**, **Burundi**, and **Rwanda** (Figure 1). The suitable conditions for vector amplification are predicted to persist in the region due to favourable rainfall forecasts for June–August 2023.

Useful Links

- 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
- Real-time monitoring and forecasting of Rift Valley fever in Africa (FAO FCC Information Sheet 2019) www.fao.org/3/ca5511en/ca5511en.pdf
- 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
- Rift Valley fever action framework (FAO Animal Production and Health Guidelines, April 2022) https://www.fao.org/documents/card/en?details=cb8653en%2f
- 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

Figure 1. Forecasted risk of RVF vector amplification for May-June 2023



Source: United Nations Geospatial 2020 Map of the World. United Nations. Cited 22 August 2022. www.un.org/geospatial/file/3420/download?token=TUP4yDmF modified with data from the web-based RVF DST, November 2022.

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.

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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.
- **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).