Multisectoral Joint Risk Assessment of Priority Zoonotic Diseases in Kenya

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Taking a Multisectoral, One Health Approach: A Tripartite Guide to Addressing Zoonotic Diseases in Countries (TZG)
Joint One Health Priority Areas

IHR-PVS (Human – Animal) Roadmap

1. Coordinating Joint Risk Assessment
   - Strengthen JRA capacity at county levels
   - Strengthen RA for CHV & CDR
   - Prioritization of JRA at subnational level

2. Coordinating Risk Communication
   - Risk reduction, risk communication and Community engagement (RCCE)

MCM Action Plan

November 2021

March 2022

June 2022
Risk Framing for a Zoonotic Disease (RVF- 2019, 2021)

  - Assessment of humans at risk
  - Vaccination status
  - Epidemiological shift - hotspots

- JRA Steering committee (RVF TWG):
  - Joint outbreak investigation and surveillance
  - Risk mitigation and safety
  - Risk communication

- Improved stakeholder knowledge
  - Vector control
  - Livestock vaccination
What is the likelihood and impact of…

Specific, relevant, time-bound:

- The **WHAT?** – i.e. Hazard and Event (as agreed during risk framing)
- The **WHERE?** – i.e. Population and Location
- The **WHEN?** – i.e. Timeframe
- The **HOW?** – i.e. Source
  - The source may be refined/decided/finalised *later*, after discussing the risk pathways

**Question:**

What is the likelihood and impact of occurrence of a human case of RVF a village in Nyandarua due to livestock trade within next 2 years?
**Risk Matrix for Estimating Likelihood and Impact**

**Likelihood**: Moderate  
**Uncertainty**: Low  
**Rationale**: Low seroprevalence, Ecology, Hydrology, Animal Pop. density, Enhanced SS

**Impact**: Moderate  
**Uncertainty**: Low  
**Rationale**: Food security, Intervention costs, Severity/Burden and Economics-Trade, Disruptions  

* *National/transboundary trade impacts*

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**Linking risk assessment results with risk management**

**Recommendation**: Increased/Enhanced surveillance strongly suggested
Risk Management and Communication

- Data review in health facilities – Differentials for Acute febrile illnesses
- RVF forecasting and Update the RVF risk map
- One Health sentinel surveillance sites
- Strengthen laboratory diagnostic capacity- infrastructure and human capacity.
- Training of animal and human health officers in diagnosis of RVF
- Multisectoral Simulation Exercises and After-Action Review – COHU (2022)
- Communication: Enhance community sensitization on RVF (causation, transmission, prevention, signs) – IEC, media
Rift Valley fever Outbreaks - 2018, 2021

Joint Risk Assessment and Epidemiological Investigation

First case (Marsabit)
First case (Siaya)
Ban on livestock slaughter

Number of cases

Date of onset

First Case (Wajir)

2021

deaths (n=10)
Lab-confirmed cases (n=30)
suspected cases (n=76)
RVF One Health Surveillance in Kenya, 2022
Integrates near real-time RVF risk maps with relevant geospatial products, expert knowledge, risk assessment and categorization, recommended actions to guide appropriate response to RVF at country level

- **OH guideline document** for RVF Preparedness, response and contingency plans for the target countries

Pilot countries: **Kenya, Uganda, Tanzania** (interest from other countries):

- Routine Enhanced Surveillance System
- National Emergency Response - Incident Coordination Group (ICG) activated
- Use of risk maps produced to target field activities in Kenya to conduct a RRA
- Targeted Livestock vaccination

**Joint FAO-IGAD alert messages (Feb 2022)**
RVF Decision Support Tool (DST) 2022

Cumulative precipitation indicating the Dec 2021 rainfall amounts (Scenario 2)

EVI for Dec 2021 and Analysis report for risk of vector amplification, Jan 2022 is high (Scenario 3)

EVI and current vector amplification monthly forecast (Scenario 4)

Multifactor radar analysis 8.95% risk in humans

- RVF outbreaks
- RVF risk maps
- Rainfall anomalies
- Livestock
- Roads
- Protected areas
- Markets
- Livestock routes
- Soil
- Water bodies
Different sectors have specific risk assessment approaches that can be synergized by a **One Health Approach**.

Conducting multisectoral, multidisciplinary SIMEX - **Risk assessment**, identification of critical gaps RVF & EVD contingency plans (Functions areas of surveillance communication and collaboration).

County One Health Cluster Tabletop Simulation exercises- Review the “Human/Animal” emergency response structures (, PHEOC etc.),
Risk Communication & Community Engagement (RCCE)

- Policy and legislation involving the community
- Community feedback meetings
- Behavioral Change Communication (BCC)
- Risk mapping
- PHEIC – EVD