

Burundi Rift Valley fever training of trainers workshop report

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Abbreviations

DST	Decision support tool
FAO	Food and Agriculture Organization of the United Nations
HCP	Highly contagious pathogen
ILRI	International Livestock Research Institute
IPC	Infection, prevention and control
OH	One Health
OHRECA	One Health Research, Education and Outreach Centre in Africa
PPE	Personal protective equipment
RRT	Rapid response team
RVF	Rift Valley fever
ToT	Training of trainers
VSF	Vétérinaires Sans Frontières International

Acknowledgements

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1. Executive summary

This report details a three-day training workshop held from 21-23 June 2022 in Bujumbura, Burundi, as part of efforts by the One Health Research, Education and Outreach Centre in Africa (OHRECA) led by the International Livestock Research Institute (ILRI) to support the country's Rift Valley fever (RVF) outbreak investigation and response efforts. The goal of the training of trainers (TOT) workshop was to enhance the technical capacity of frontline human, animal and environmental health workers in RVF detection and response within the context of a One Health framework. The delivery methods were interactive didactic sessions using overhead presentations, group discussions and case studies to enhance participants' knowledge and skills on the epidemiology of RVF, field and laboratory surveillance, sample management, biorisk management and risk communication.

The workshop was multisectorial training; participants included medical doctors, climate experts, veterinary officers, media personnel, human and animal laboratory officers and representatives of animal health non-governmental agencies in Burundi (Annex 1). An English to French translator was available throughout all the sessions. A team from OHRECA-ILRI facilitated the training. These included Bernard Bett (team lead), Mathew Muturi and Limbaso Konongoi. Clement Kivura and Lionel Nyabongo provided administrative and technical support, respectively.

The main outputs of the training workshop were enhancing knowledge of the multisectorial technical committee on RVF outbreak surveillance and response to coordinate outbreak response and the development of a joint response roadmap for outbreak investigation based on guidelines provided in training.

OHRECA supported the workshop.

2. Background

The primary goal of the training was to enhance the capacity of animal, human and environmental health workers in early detection and rapid response to RVF outbreaks by providing training on key outbreak response competencies. These were outbreak investigation, samples collection in line with requisite biorisk management practices, and risk communication. A secondary goal of the training was to strengthen the implementation of the One Health (OH) approach in Burundi through joint training.

Training objectives

The training was designed to provide and build competency in the following key areas:

1. Outbreak investigation
2. IPC protocols for zoonotic disease management
3. Risk communication and development of key messages
4. One Health coordination

Training organization

The three-day training was organized in-country by Lionel Nyabongo and Clement Kivura. Jean Bosco from the University of Burundi provided English-French translation services.

3. Summary of topics covered and key points

Introduction to One Health

This session introduced the concept and principles of One Health to the workshop participants. The presentation provided a background on the need for structured collaboration, coordination and communication between the human, environmental and animal health sectors.

The session addressed the following aspects:

- Defining the One Health (OH) concept
- Identifying the drivers and benefits of One Health
- The structure and examples of the application of the One Health approach

Epidemiology of Rift Valley fever

This session provided a background of the disease to the participants. The following aspects were addressed:

- Aetiology, transmission, and clinical features of RVF
- Prevention and control of RVF
- Contingency planning and the use of decision support tools (DST) in RVF prevention and control

Overview of outbreak investigation

A key output of the training was to equip the participants with the necessary skills to investigate an RVF outbreak systematically. This session addressed the following areas:

- Steps of an outbreak investigation
- Composition of a rapid response teams (RRT) and its roles
- Identifying the minimum logistics and equipment needed by RRT members for a specific public health event (tools, guidelines, transport, communication, shipping, equipment and supplies)
- Identifying the critical information RRT members should assimilate before their deployment to ensure their readiness, safety and situational awareness.

Infection, prevention and control

This session was focused on providing participants with knowledge and skills to apply standard hygiene precautions, implement additional infection prevention, and control precautions in the context of an RVF outbreak.

Three infection, prevention and control (IPC) sessions were presented:

1. Performing hand hygiene.
The demonstration took the participants through the importance of handwashing, proper handwashing with soap and water, and handwashing with 0.05% chlorine.
2. Donning and doffing of personal protective equipment (PPE).
The focus was on how to select and correctly don full suit PPE as would be expected when handling samples and cases of highly contagious pathogens (HCPs).
3. Preparation of chlorine solutions.
Chlorine solution is an inexpensive, readily available disinfectant that is effective against most HCPs. The objective was to have the trainees understand the process of preparing appropriate chlorine solutions fit that are for purpose.

Sample collection, packaging and shipping

Correct sample collection, appropriate packaging and shipping are some of the essential aspects of detection and response to disease outbreaks. Samples from suspected RVF cases in humans or animals are potentially infectious. They should be collected and handled in the prescribed manner adhering to the appropriate safety and cold chain conditions.

The session had a brief theoretical background to address critical steps for the safe collection of samples from RVF suspected human and animal cases, packaging of the sample for transportation and proper disposal/disinfection of material after use.

Risk communication

The session introduced the participants to the principles of risk and crisis communication. A broad approach to message development and social mobilization was given. The risk communication session had two parts.

- Public communication coordination
The participants explored the challenges and opportunities of effective communication coordination during a public health emergency.
- Risk communication for public meetings
Participants confronted the challenges of communicating sensitive and complex issues through a simulated public meeting.

4. Participant feedback and summary of the workshop outputs

The facilitators sought participant responses through guided feedback collection in a plenary session.

General feedback points and key action points are summarized below:

1. One of the main outputs of the training was the development of a multisectoral outbreak response roadmap based on five thematic areas:
 - Joint coordination,
 - Communication,
 - Joint surveillance,
 - Laboratory detection
 - Infection, prevention and control
2. The participants established an RVF technical working group to coordinate surveillance and response to the outbreak in the country.
3. They identified the use of practical Kenyan case studies in training as one of the most impactful aspects of the training.
4. Participants agreed that human and vector surveillance is an immediate response need.
5. The team agreed to vaccinate livestock after the end of the outbreak (at least 40 days after the last active case).

5. Annexes

List of participants

No	Name	Name of organization
	Nzibomera Casuel	Veterinary Cankuzo
	Hamady Azaiz	RPE Muyinga
	Herman Nakintije	World Vision
	Célestin Manirambona	Institut National de Santé Publique Burundi (INSP)
	Konongoi Limbaso	International Livestock Research Institute
	Mathew Muturi	International Livestock Research Institute
	Nahayo Justin	DAE
	Bimenyimana Alain	DVS team
	Butuneguhei Menigille	FAO
	Ntibwunguka Sylvestre	Institut Géographique du Burundi (IGEBU).
	Nkundwanayo Canesius	Regional integrated agricultural development project in the great lakes (PRDAIGL)
	Ntirandekura Jean Bosco	BURUNDI University Agricultural Policy and Innovation Fund (FABI)
	Barikuryayo Privat	BPEAE
	Bashirahishize Alexandre	BPEAE
	Sindayigaya John	BPEAE
	Nshimirimana Yves	Vétérinaires Sans Frontières Belgium
	Pulchirie Bukeyenzeza	Santé Publique Burundi(MSPLS)
	Ntawuyankira Neilla	Institut des Sciences Agronomiques du Burundi (ISABU)
	Micheline Nduwimana	Burundi National Radio and Television
	Bayaganakandi	MINEAGRIE
	Bawndintwan Fospend	Burundian Office for Environmental Protection
	Nimbona Constatin	Institut des Sciences Agronomiques du Burundi (ISABU)
	Bagorikunda Severin	MINEAGRIE
	Nimbona Felix	MINEAGRIE
	Liliane Nkengurutse	KSPLS/COUSP
	Nsengiyumva Dieudonné	DGE/DPFA
	Desire ntakirutimana	DSA
	Berahino J. Claude	International Livestock Research Institute
	Lionel Nyabongo	International Livestock Research Institute
	Clement Kivura	International Livestock Research Institute

Meeting agenda

Day 0	Pre-planning meeting	Facilitators
3.00-5.00pm	- Meeting Burundi team - Venue visit - Review of training material	All facilitators
Day 1: 21 June 2022		Facilitators
8.00 – 8.15am	Registration	Secretariat
8.15 – 8.30am	Introductions and opening	
8.30 – 9.00am	Objectives, outputs and participants expectations	
9.00 – 9.30am	RVF Pretest	All
9.30 – 10.00	Update on the RVF outbreak situation	Burundi rep
10.00 – 10.30am	Introduction to One Health	M. Muturi
10.30 – 11.00am	Health break	All
11.00 – 12.00pm	Epidemiology of RVF	B. Bett
12.00 -13.00pm	RVF in animals	M. Muturi
1.00 – 2.00pm	Lunch break	All
2.00 – 3.00pm	RVF in humans	M. Muturi
3.00 – 4.30pm	Use of RVF DST	B. Bett
4.30 – 5.00pm	Q&A and day's evaluation	
Day 2: 22 June		Facilitators
9.00 – 9.30am	Recap of day 1	Burundi team
9.30 – 10.30am	Overview of RVF outbreak investigation	M. Muturi
10.30 – 11.00am	Health break	All
11.00 – 12.00pm	RVF IPC presentation	S. Konongoi
11.30 – 1.00pm	RVF IPC practicum	S. Konongoi
1.00 – 2.00pm	Lunch break	
2.00-3.00pm	Introduction to RVF sample collection and management	S. Konongoi and M. Muturi
3.00 – 4.00pm	Practicum on triple packaging of RVF samples	S. Konongoi
4.00 – 4.30pm	Q&A session/discussion and day's evaluation	All
4.30 – 5.00pm	Health Break	
Day 3 – 23 June		Facilitators
9.00 – 9.30am	Recap of day 2	
9.30 – 10.30am	RVF Laboratory detection	S. Konongoi
10.30 – 11.00am	Health break	All
11.00 – 12.00pm	RVF lab detection methods continuation	S. Konongoi
12.00 – 1.00pm	Vector control in Burundi and its role in outbreak RVF outbreak response	Burundi Rep
1.00 – 2.00pm	Lunch break	
2:00 – 3:00pm	Introduction to risk communication	M. Muturi
3:00 – 3:30pm	Developing key messages	M. Muturi
3.00 – 3.30pm	Course evaluation by participants	All
3.30 – 4.30pm	Action plan and next steps and Official closure of training	Country rep
4.30 – 5.00pm	Health break	