Food and Agriculture Organization of the United Nations

World Organisation for Animal Health
Founded as OIE

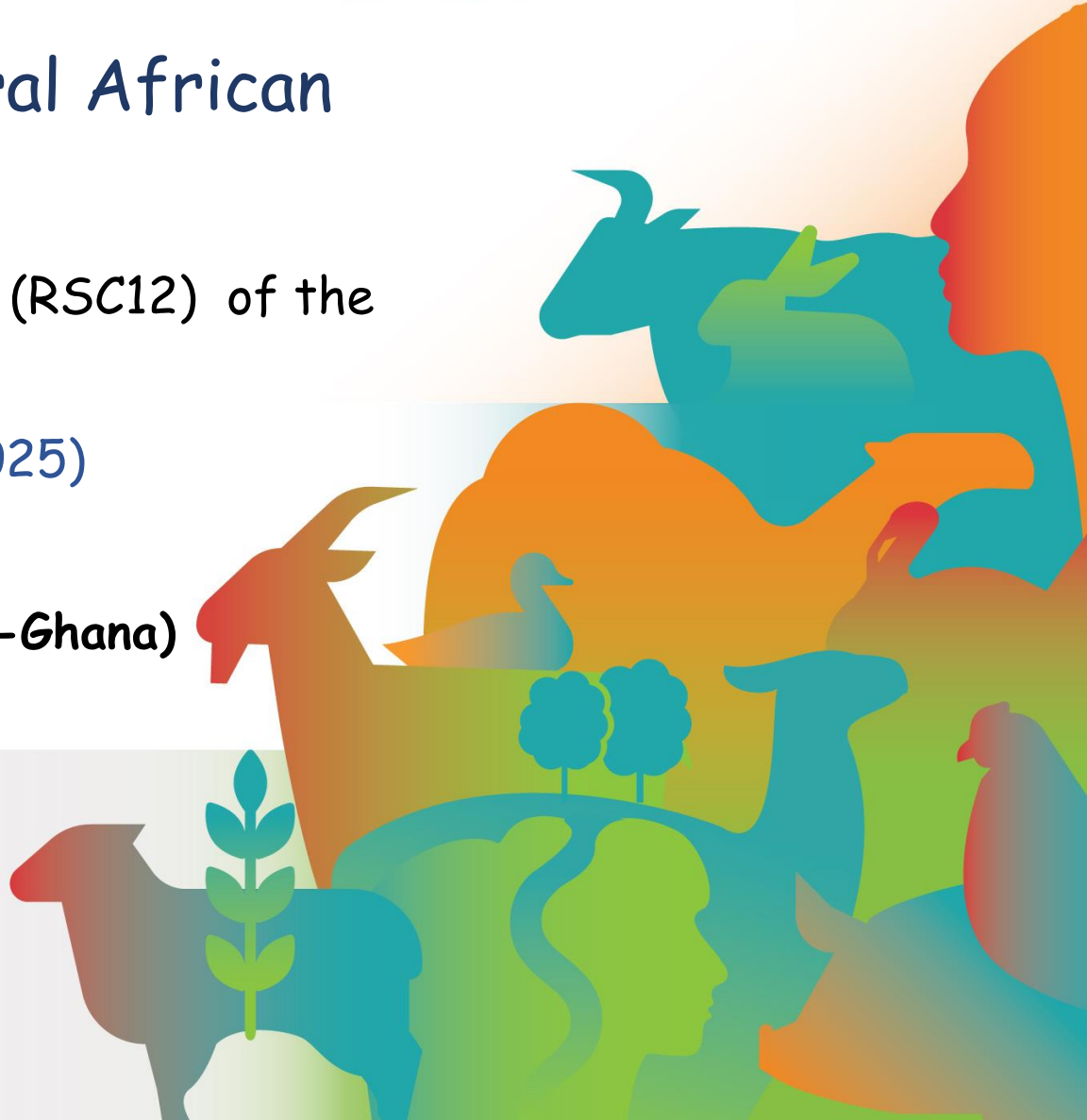
African Union

Update on RVF outbreaks in Central African Republic in 2025

12th Meeting of the Regional Steering Committee (RSC12) of the GF-TADs for Africa

Mbabane, Eswatini (11 – 13 March 2025)

Regional Team (FAO/ECTAD-WCA, RAF, Accra-Ghana)



PRESENTATION OUTLINE

- Key fact on RVF
- RVF Situation in CAR
- RVF outbreak response in Ngaoundaye (2025)
- Key results
- Recommendations

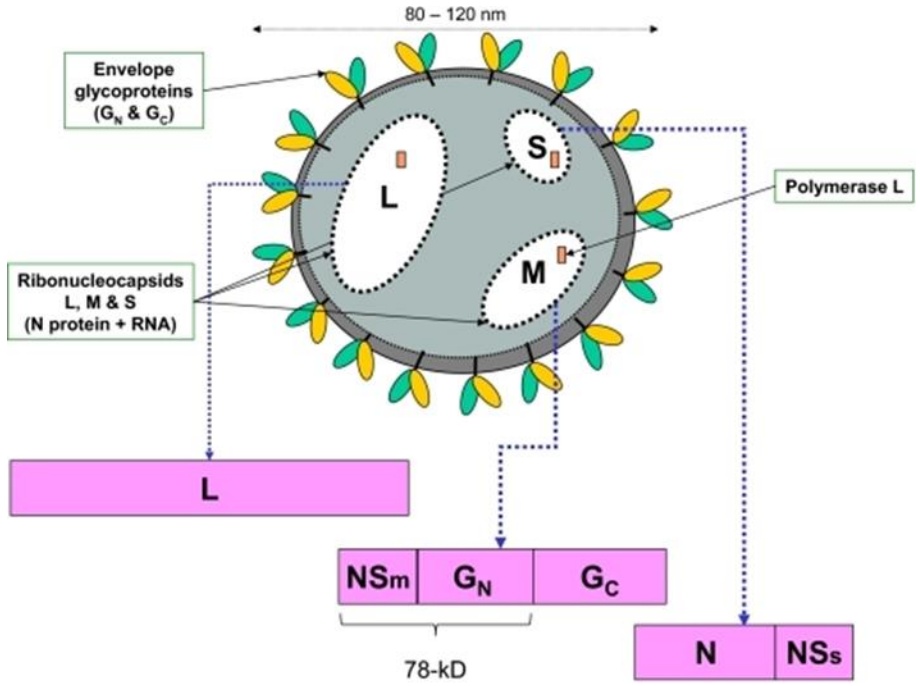
KEY FACTS ON RVF

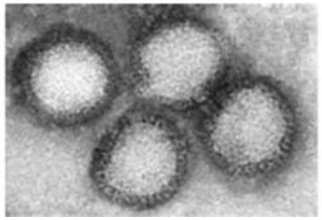
- RVF is an acute, vector-borne, viral and zoonotic disease with severe impacts on livelihoods, national and international markets, and human health.

- The causative virus is single stranded RNA virus with three segments-only one RVFV serotype

- RFV observed in sheep, goats, cattle, buffaloes, camels and humans and is spread primarily by mosquitoes and the movement of animals.

- 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.





KEY FACTS ON RVF

- The dynamic prediction model calibrated by the FAO (DST – RVF), which utilizes vegetation and rainfall anomalies as a proxy for ecological dynamics to map areas at potential risk of RVF.

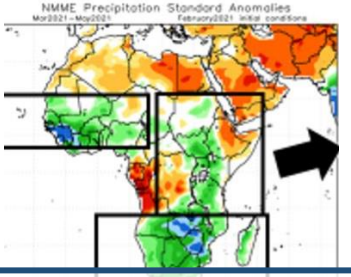
- Main amplifying hosts are domestic ruminants. Wildlife reservoirs (rodents, wild ruminants or bats) may also contribute to the persistence of the virus during inter-epizootic periods.

- Three vaccines commercially available: 2 Live-attenuated (Smithburn vaccine-OVP and Clone 13 vaccine-VSVRI) and 1 Formalin-inactivated (OBP)

RVF Early Warning Decision Support Tool

https://www.fao.org/documents/card/en/c/cb5875en

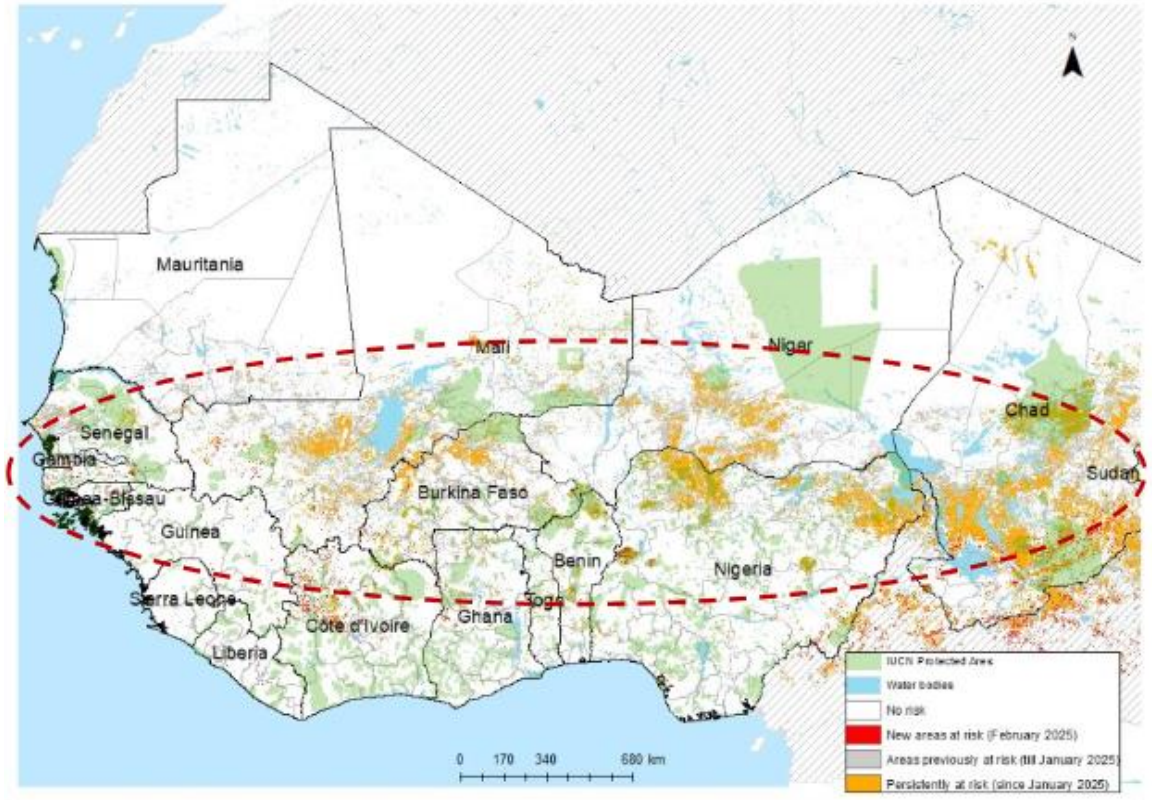
Food and Agriculture Organization of the United Nations



Modelling & Forecasting Tools – DST-RFV/AI

KEY FACTS ON RVF

RVF potential for February 2025



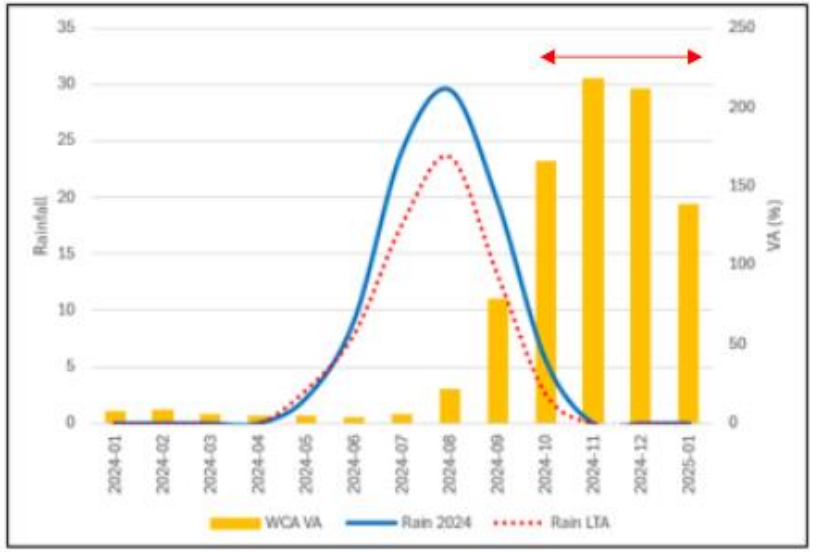
Potential hotspots for RVF vector amplification for Feb 2025

Significant decrease in the RVF vector amplification in the whole **region.**

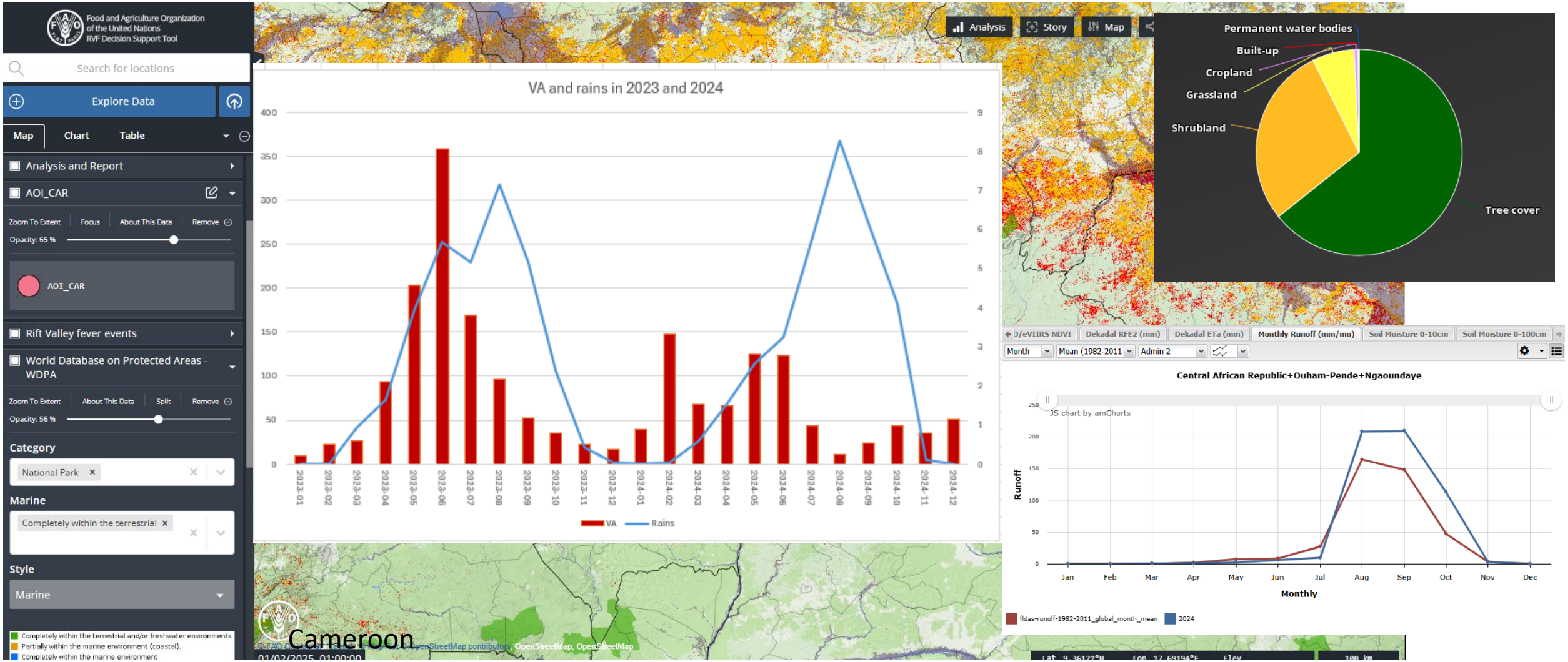
Large persistent hotspots:

- Chad
- Niger
- Mali
- Senegal

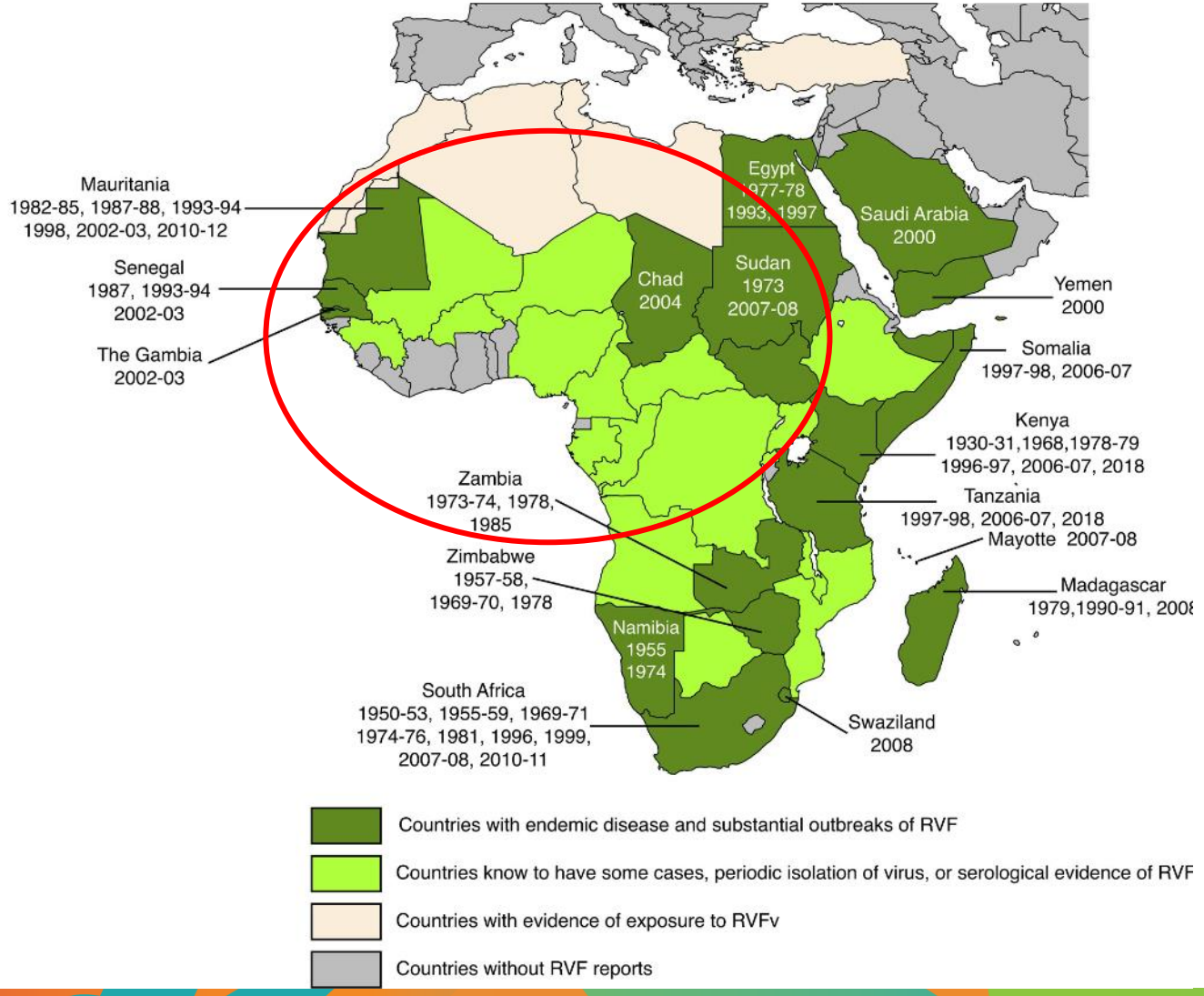
- Burkina Faso
- Nigeria
- CAR



Central Africa – The Central African Republic, *Rift Valley fever (RVF), humans, confirmed, follow-up;*



KEY FACTS ON RVF



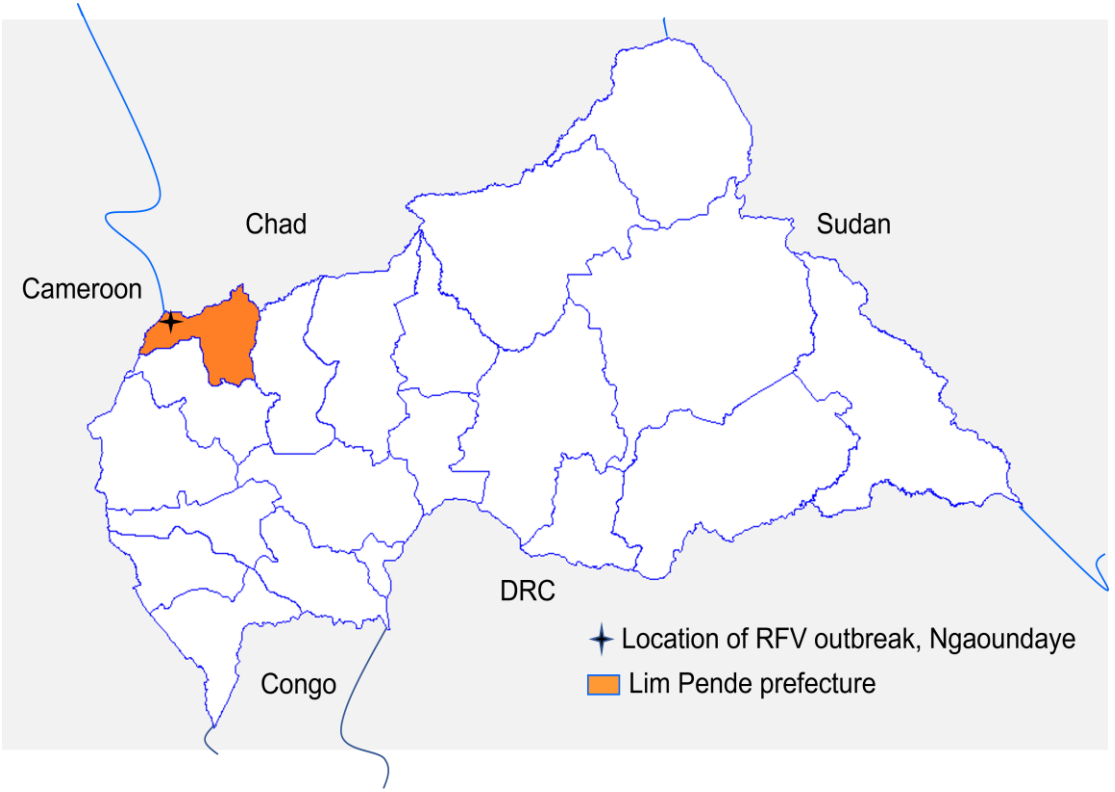
Geographical distribution of RVF in Africa
(Sumaye et al., 2019)
DOI : 10.1371/journal.pone.0209929

RVF SITUATION IN CAR

- **General information:**

- On 10 January 2025, the MoH reported a RVF outbreak in Lim Pendé prefecture with 1 confirmed human case by the national reference lab and 5 suspected cases, including one death.

- The affected area (**Ngaoundaye in Lim Pendé prefecture**) shares borders with Chad and Cameroun (transhumance, landlocked and unsecured area).



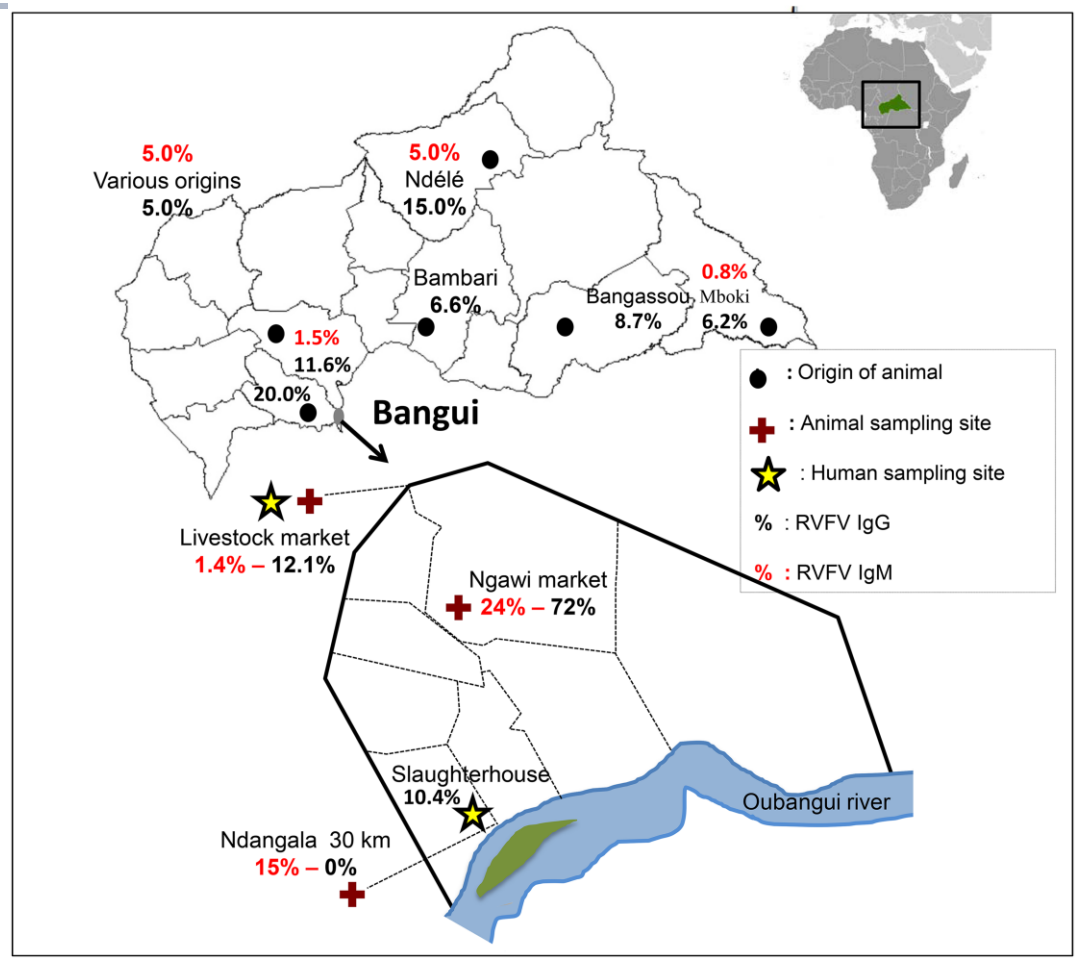
Location of the RVF Outbreak area, Ngoundaye

RVF SITUATION IN CAR

- **General information:**

- Human cases were already reported in 2019 in Boali (Ombella-M'Poko prefecture) and in 2022 in Ouaka and Lobaye prefectures.

- Serological study also confirmed the circulation of the virus in animals in the country in 2016 (*Nakouné et al., 2016*) and in 2024 in Mboko, Bangui.



Prevalence of RVF in CAR (Nakouné et al., 2016)
https://doi.org/10.1371/journal.pntd.0005082

RVF outbreak response in Ngaoundaye (2025)

- **Immediate actions taken by Public Health sector:**

- Field investigation in the affected area (Ngaoundaye, Lim Pendé prefecture) under OH approach.
- Human blood samples collected (54 tested negative and 1 positive out of the 59 collected).
- Response actions were putted in place by the hospital of Ngaoundaye with the support of the NGO ALIMA (Alliance for Internation Medical Action).
- Awareness raising among community leaders on barrier measures, consumption of bush meat or deceased animals, and notification of suspected cases.
- Contact with potential partners for further follow-up and support.

RVF outbreak response in Ngaoundaye (2025)

- **FAO support**

1. Upon declaration of the outbreak, the following measures were taken:

- Activation of GLEWS+ Platform
- Mobilization of FAO officers in the country for monitoring of events and information sharing

2. Following Government request, a joint mission (FAO county-regional team) was mobilized to provide support to the VS in responding to the outbreak with objectives to:

- Conduct further epidemiological investigation in the affected area and its surroundings **(25 km)**
- Continue raising awareness among livestock farmers, veterinary agents, and the population
- Assess the needs of veterinary services in CAR regarding surveillance, laboratory confirmation, and response to RVF outbreaks and other animal health emergencies
- Ensure capacity building of local and central VS staff including lab personal for early detection and response to RVF outbreaks.

RVF outbreak response in Ngaoundaye (2025)

- **FAO support**

- Three experts from FAO ECTAD WCA were deployed from 09 to 24 Feb to support the VS of RCA
- Financial support from FAO RCA country office and RAF

Family photo with the CVO and his team

Family photo with the local authority of Ngaoundaye

RVF outbreak response in Ngaoundaye (2025)

- **FAO support**

Outbreak investigation in the field

Field investigation
(interview with Farmers)

Animal sample collection

Sample labeling

RVF outbreak response in Ngaoundaye (2025)

- **FAO support**

Awareness raising /community engagement

Photos of RVF risk communition activity with butchers (A), Breeders (B) and local community (C) in Ngaoundaye

RVF outbreak response in Ngaoundaye (2025)

- **FAO support**

Training sessions of VS staff on RVF surveillance, outbreak investigation and risk communication

Training of local vet staff in Ngaoundaye

Training session in Bangui (VSD)

RVF outbreak response in Ngaoundaye (2025)

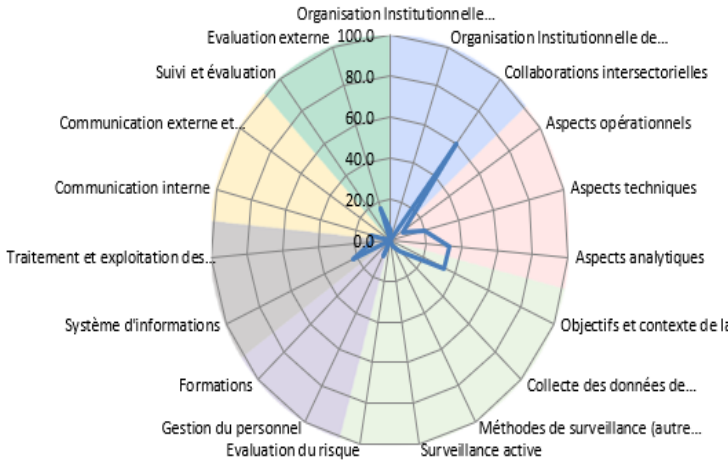
- **FAO support**

  - Evaluation of the National Surveillance System (using FAO' SET)
  - VS needs assessment for animal disease surveillance and RVF detection and response

SET Résultats principaux

Évaluation actuelle*

SET -Catégories	SCORE	Fiabilité
Organisation Institutionnelle centrale	5.5	100
Organisation Institutionnelle de terrain	0.0	100
Collaborations intersectorielles	60.0	100
Aspects opérationnels	8.2	100
Aspects techniques	20.4	100
Aspects analytiques	33.3	100
Objectifs et contexte de la surveillance	33.3	100
Collecte des données de surveillance	7.3	100
Méthodes de surveillance (autre que surveillance active)	3.6	100
Surveillance active	0.0	400
Evaluation du risque	0.0	200
Gestion du personnel	8.4	100
Formations	0.0	100
Système d'informations	22.4	100
Traitement et exploitation des données	9.5	100
Communication interne	11.0	100
Communication externe et ressources	0.0	100
Suivi et évaluation	0.0	200
Evaluation externe	16.7	100
Grand total (%)	11.1	105



Institutionnelle, TOTAL (%)	11.7
Laboratoire, TOTAL (%)	22.1
Activités de surveillance, TOTAL (%)	7.3
Personnel de surveillance, TOTAL (%)	5.6
Gestion de données, TOTAL (%)	13.4
Communication, TOTAL (%)	8.3
Évaluation, TOTAL (%)	8.3

RVF outbreak response in Ngaoundaye (2025)

- **FAO support**

Capacity building of laboratory staff on sample collection and shipment and RVF laboratory diagnostic techniques with focus on molecular testing (PCR)

Theorical training session

Practical training session

Lab visit

RVF outbreak response in Ngaoundaye (2025)

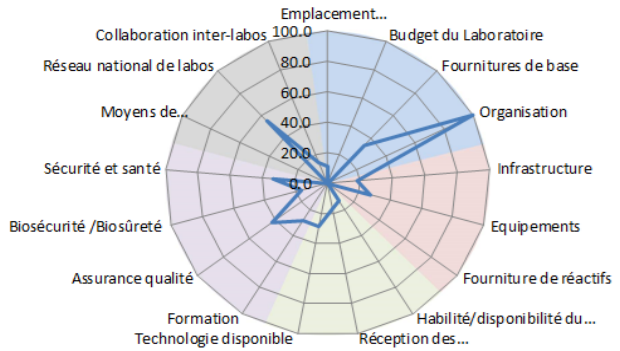
- FAO support
  - Laboratory evaluation (LMT core and LMT safety)
  - Laboratory needs assessment

10 fevrier 2025 - Résultats LMT : Analyse du LACEVET

Evaluation en cours*

Catégorie LMT	10 fevrier 2025 - Résultats LMT pour LACEVET	Fiabilité **
Emplacement géographique	11.1	100
Budget du Laboratoire	0.0	100
Fournitures de base	33.3	100
Organisation	100.0	100
Infrastructure	18.5	100
Equipements	27.8	75
Fourniture de réactifs	0.0	89
Habilité/disponibilité du personnel	13.3	71
Réception des prélèvements	16.7	50
Technologie disponible	28.6	58
Formation	28.6	100
Assurance qualité	42.4	100
Biosécurité /Biosûreté	16.7	100
Sécurité et santé	33.3	100
Moyens de Communication	0.0	75
Réseau national de labos	55.6	100
Collaboration inter-labos	14.8	100
Grand total (%) LACEVET	**22.6**	**86**

10 fevrier 2025 - Résultats LMT pour LACEVET



10 fevrier 2025 - Domaines LMT* Résultats pour LACEVET	TOTAL (%)
Profil général du laboratoire	23.3
Infrastructure, équipements, réactifs	14.5
Performance du laboratoire	20.8
AQ, Biosécurité /Biosûreté	31.0
Collaborations du Labo et réseautage	20.0

*Numéros indiqués en pourcentage; Score basé sur la situation idéale (100%): les numéros dans chaque cellule représentent le pourcentage achevé par rapport au pourcentage optimal (100% étant le laboratoire idéal). Codes couleur: 0-20% , 20-40% 40-60% 60-80% 80-100%
** La fiabilité du résultat dépend du nombre de questions remplies ou laissées vides par catégorie dans le questionnaire LMT. De 100 à 90%, le score LMT est fiable (verte) De 90 à 70%, la fiabilité du score est moyenne (orange), de 70 à 0%, la fiabilité est basse (rouge)

#REF!

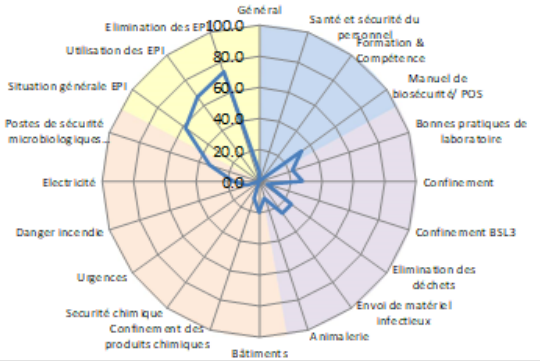
Evaluation actuelle*

Domaine	Catégorie	#REF!	Fiabilité **
Administration	Général	6.7	100
	Santé et sécurité du personnel	0.0	100
	Formation & Compétence	0.0	100
	Manuel de biosécurité/ POS	33.3	100
Opérationnel	Bonnes pratiques de laboratoire	22.2	86
	Confinement	27.8	100
	Confinement BSL3	5.6	75
	Elimination des déchets	25.0	80
	Envoi de matériel infectieux	25.0	80
	Animalerie	11.1	43
Ingénierie	Bâtiments	20.0	71
	Confinement des produits chimiques	11.1	50
	Securité chimique	0.0	100
	Urgences	0.0	100
	Danger incendie	8.3	100
	Electricité	16.7	100
	Postes de sécurité microbiologiques (PSM)	33.3	100
EPI	Situation générale EPI	58.3	100
	Utilisation des EPI	66.7	100
	Elimination des EPI	73.3	100
#REF!		22.2	86

Evaluation actuelle*

#REF!	TOTAL (%)
Administration	6.7
Opérationnel	19.5
Ingénierie	12.3
EPI	66.7

#REF!



*Numéros indiqués en pourcentage; Score basé sur la situation idéale (100% étant le laboratoire idéal): les numéros dans chaque cellule représentent le pourcentage achevé par rapport au pourcentage optimal (100%). Codes couleur: 0-20% , 20-40% ,40-60%

** La fiabilité du résultat dépend du nombre de questions remplies ou laissées vides par catégorie dans le questionnaire LMT. De 100 à 90%, le score LMT est fiable (verte). De 90 à 70%, la fiabilité du score est moyenne (orange), de 70 à 0%, la fiabilité est basse (rouge)

KEY RESULTS

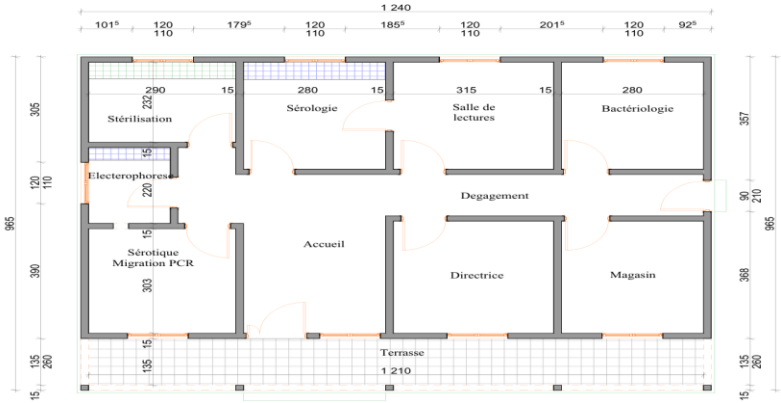
❖ Outbreak investigation - Key findings

- Suspected cases of RVF reported recently and throughout 2024 : abortions (16) and mortality of young animals (34)
- 09 villages visited: 14 herds (cattle and small ruminants) and 64 blood samples collected
- 02 positive cases for IgM were reported in cattle in Balikoko located at 2km from Ngaoundaye
- **Risk factors identified :**
  - Presence of watercourses and ponds near the villages
  - Recent flooding reported,
  - abundance of mosquitoes in the villages, especially during the rainy season
  - **Cross-border transhumance between CAR, Chad and Cameroun**
  - Frequent movements of animals and meat from Chad to CAR for trade
  - Lack of knowledge about RVF and risk factors among farmers, butchers and local community
- Probable source of infection: The virus might be being circulating in the area with potential additional introduction from Chad through animal movements
- Awareness raising conducted on RVF in the visited villages (92 persons met).

RVF outbreak response in Ngaoundaye (2025)

❖ Key challenges (6)

Unsecured area, Security protection needed for UN staff in the field



No enough space to accommodate PCR unit in the Vet Lab, new arrangement is needed

Poor status of the road (20km/h)

Presence of quasi permanent of mosquito larval breeding sites

Limited capacity of the VS
Limited One Health Coordination

RECOMMENDATIONS

❖ **Urgent needs to :**

- Facilitate regional coordination (RCA-CHAD-CAM) for RVF prevention and control
- Strengthen ongoing risk communication activities and develop national RC strategy
- Support the establishment of an Early warning and animal disease surveillance system
- Support capacity building of VS staff at all levels
- Support the VS to implement RVF sentinel and syndromic surveillance for early detection
- Support the re-arrangement of the Vet Lab to accommodate PCR unit
- Strengthen national lab for timely detection of RVF using molecular techniques
- Support entomological surveillance and mosquito's control interventions
- Provide the VS with stockpile for outbreak investigation
- Support multisectoral coordination and collaboration following OH approach
- Evaluate RVF socio-economic impact.

Food and Agriculture Organization of the United Nations

World Organisation for Animal Health
Founded as OIE

African Union

THANKS