



# **FOOT AND MOUTH DISEASE (FMD) IN ZAMBIA**

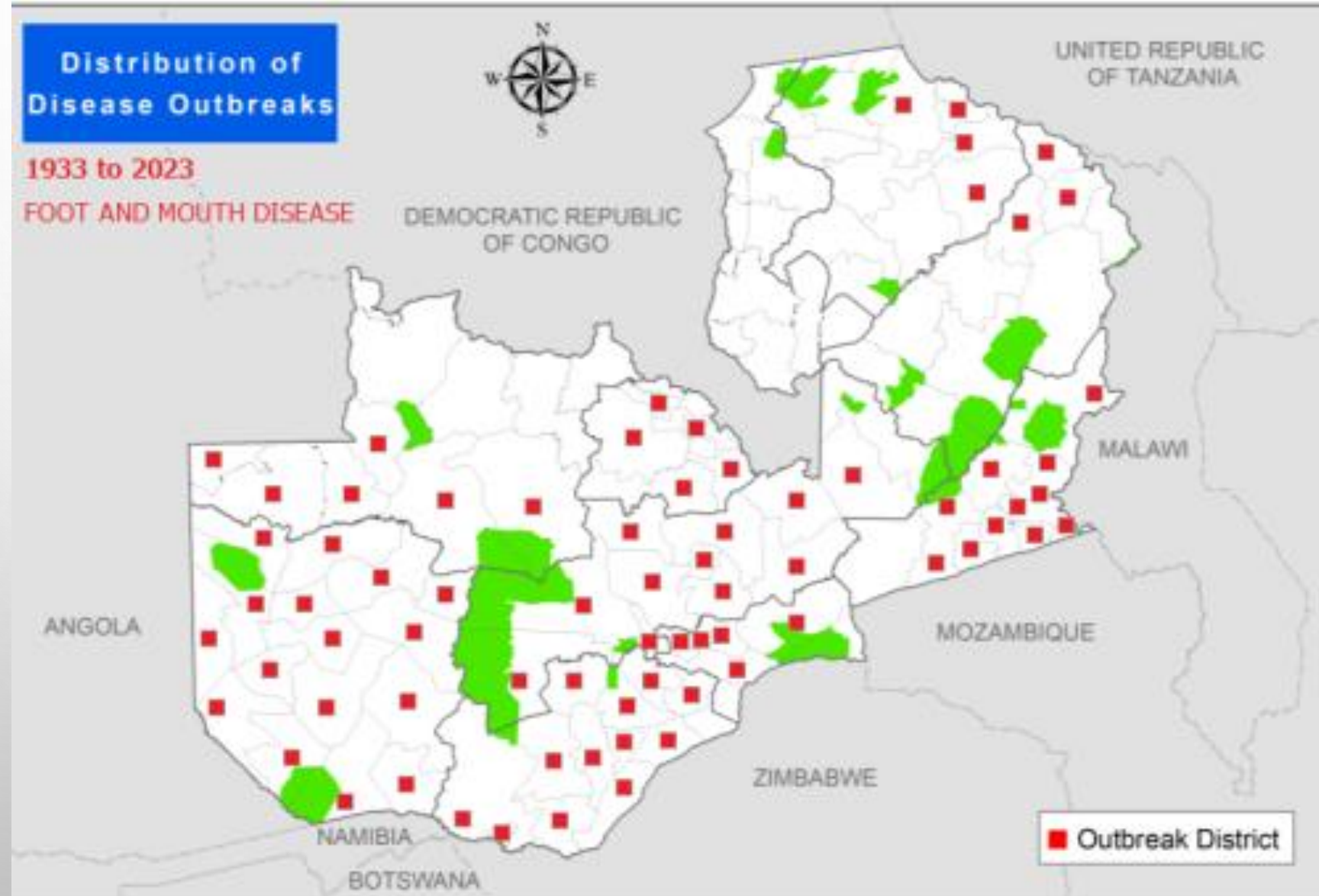
**2020 TO 2023**

**DEPARTMENT OF VETERINARY SERVICES  
MINISTRY OF FISHERIES AND LIVESTOCK**

# - Fact File -

## HISTORICAL BACKGROUND OF FMD IN ZAMBIA

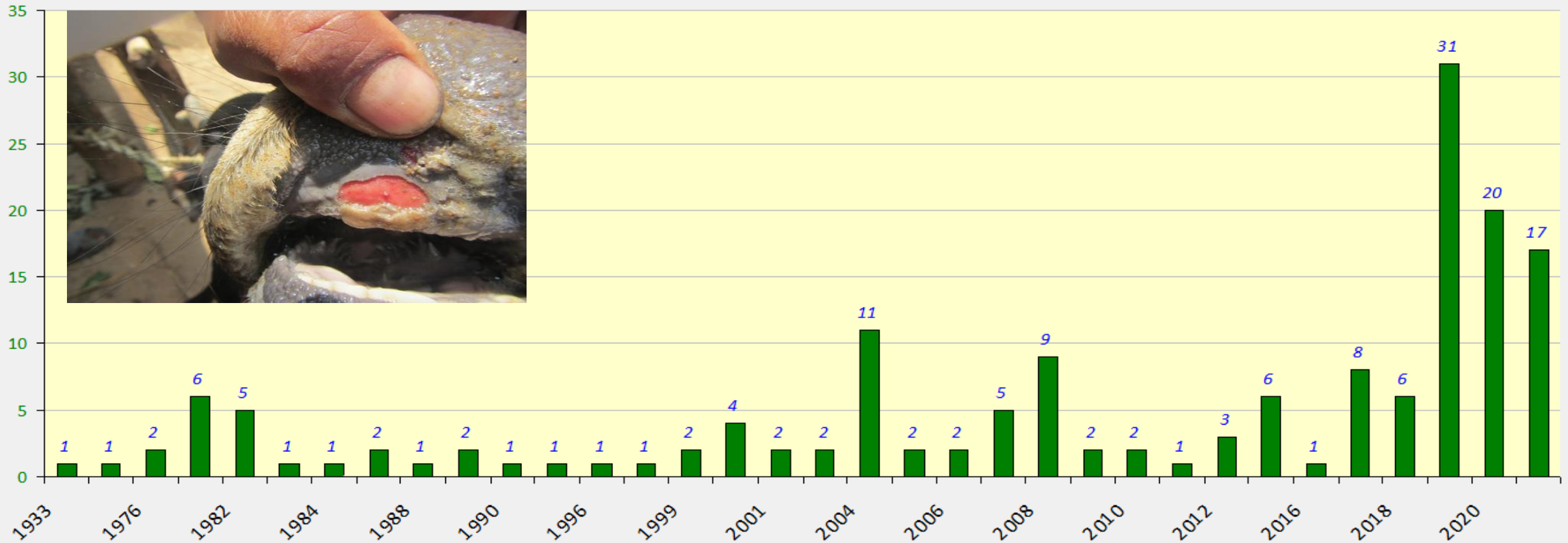
- ❑ Earliest Recorded Outbreak In September **1933** In Mongu
- ❑ Outbreaks recorded in all provinces except **Luapula**
- ❑ Traditionally 3 High Risk Areas
  - ❑ Northern Region (Nakonde/Mbala)
  - ❑ Kafue Flats (Namwala, Mumbwa,ITT, parts of Monze, Choma, Mazabuka)
  - ❑ Southern Region (Kazungula, L/stone)
- ❑ As of 2023, FMD outbreaks have been recorded in **77** districts since 1933 (A period of 90 year)



# ANNUAL DISTRIBUTION OF OUTBREAK DISTRICTS OF FMD 1933 TO 2021

Annual Distribution of Outbreak Districts of FOOT AND MOUTH DISEASE : 1933 - 2021

TOTAL : 116 Districts



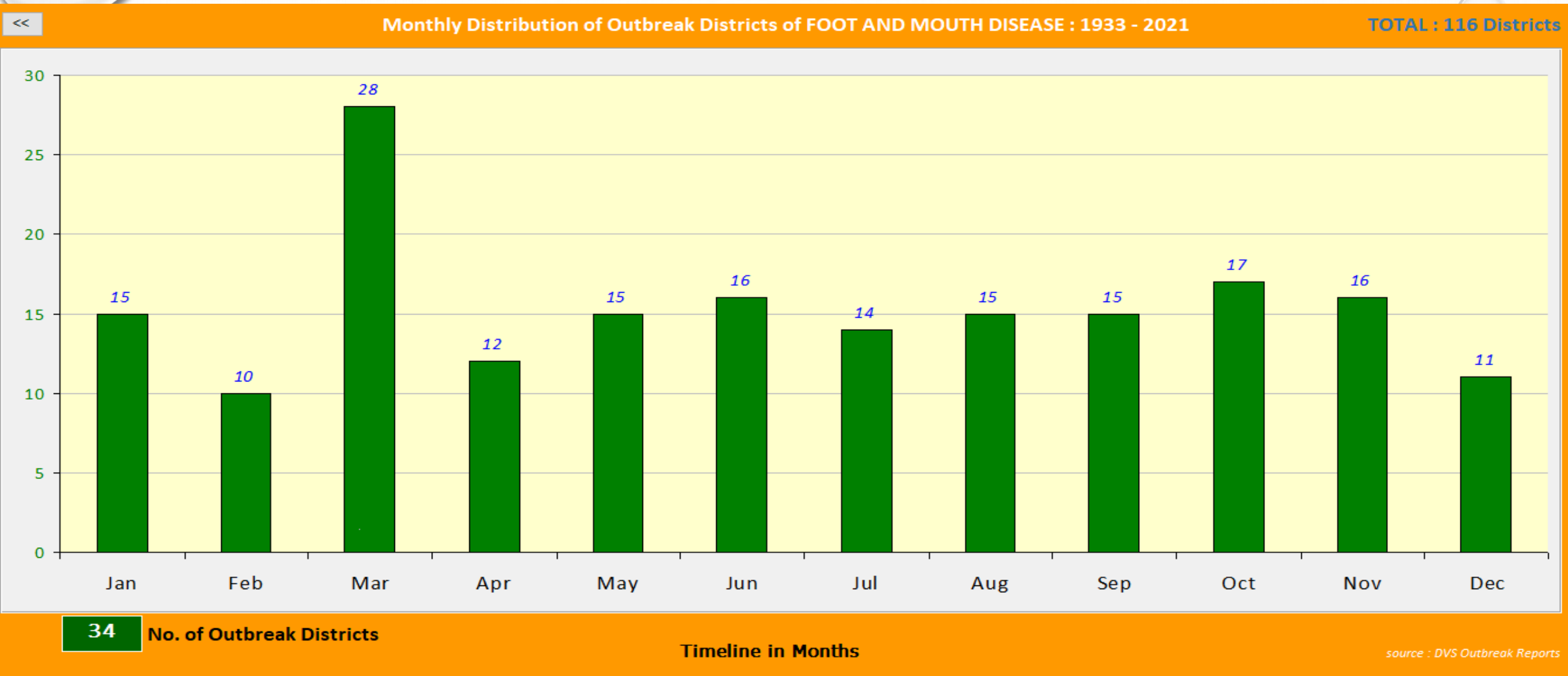
56 No. of Outbreak Districts

Timeline in Years

source : DVS Outbreak Reports

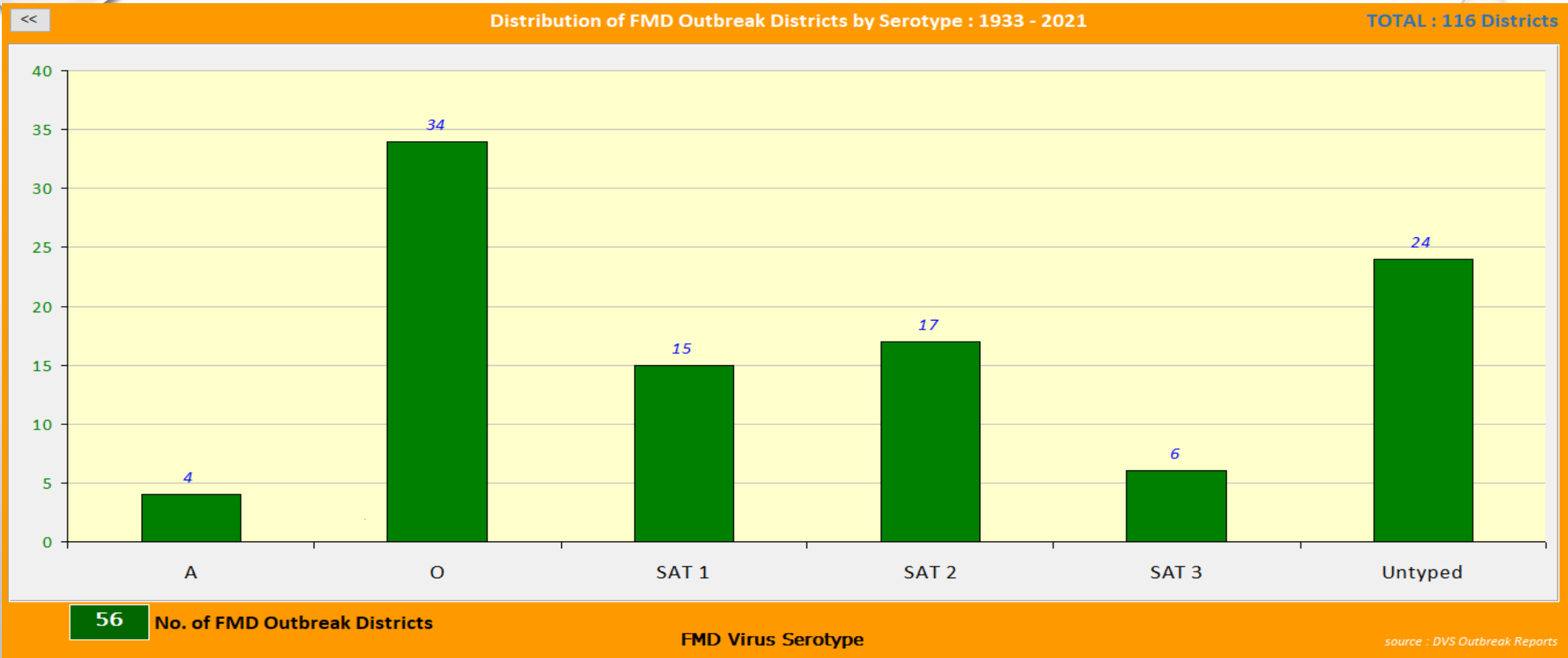
- Only 4 calendar years (namely 2004, 2019, 2020 and 2021) have recorded more than 10 outbreak districts
- Central and Southern Provinces affected in all the 4 calendar years

# MONTHLY DISTRIBUTION OF OUTBREAK DISTRICTS OF FMD 1933 TO 2021



Majority of outbreaks (28) recorded in the month of **March**

# DISTRIBUTION OF FMD OUTBREAK DISTRICTS BY SEROTYPE 1933 TO 2021

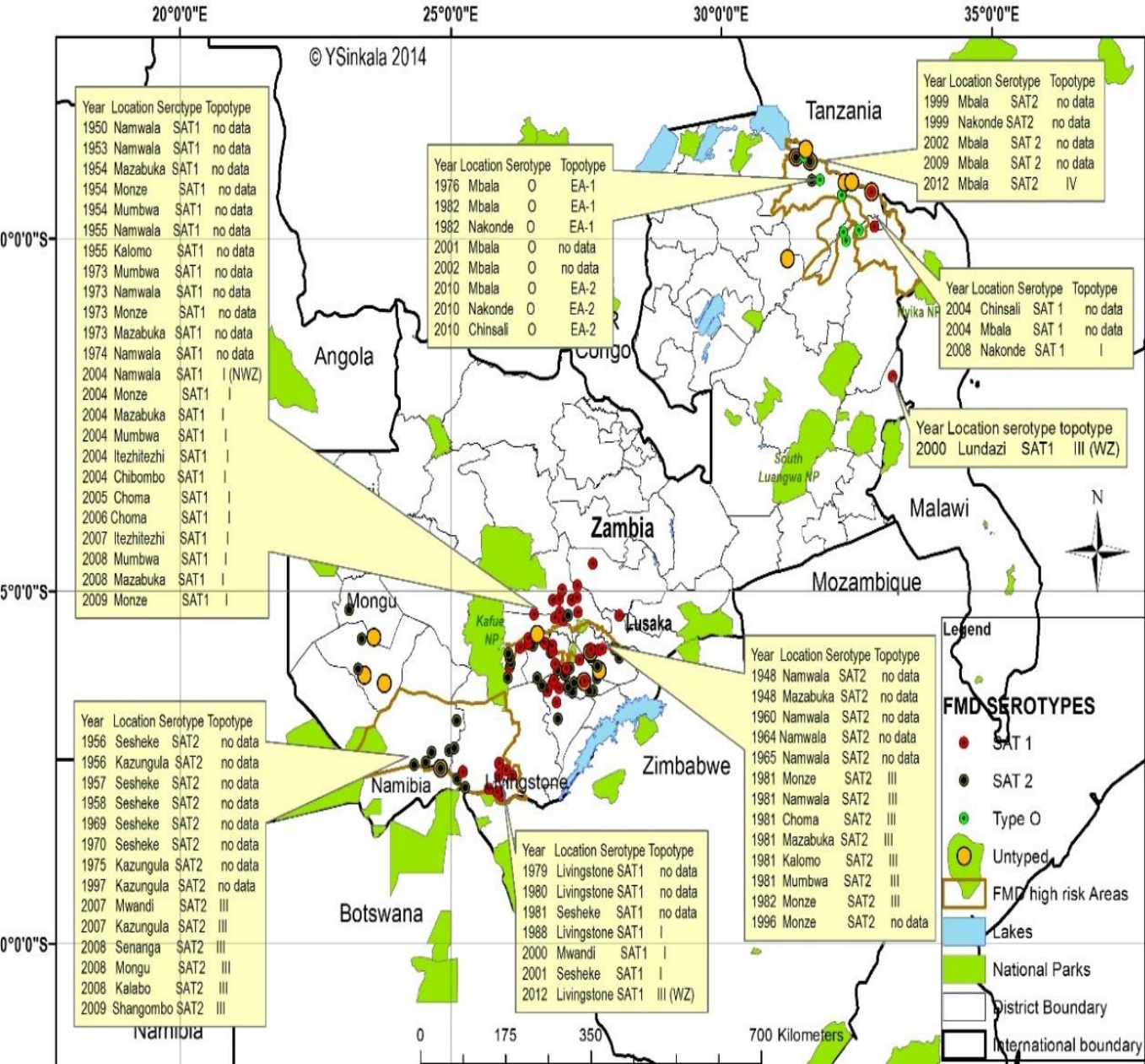


- Serotype O recorded in the highest number (34) of outbreak districts
- Serotype A recorded in the lowest number (4) of outbreak districts

# FMD HIGH RISK AREAS IN ZAMBIA

FMD is endemic in Zambia and three high risk areas have been identified:

- ❑ Southern parts of Western and Southern provinces from Kazungula/Livingstone to Sesheke district. SAT 1, SAT 2 and SAT3 have been isolated from this area.
- ❑ The Kafue Basin which covers parts of Central and Southern provinces (Itezhi tezhi, Mumbwa, Namwala and parts of Monze, Choma and Mazabuka districts). SAT 1, SAT 2 and SAT 3 have been isolated.
- ❑ The Northern part of the country in the Nakonde-Mbala region. Serotypes O and A, SAT 1 and SAT2 have been isolated from this area.



# FMD OUTBREAKS

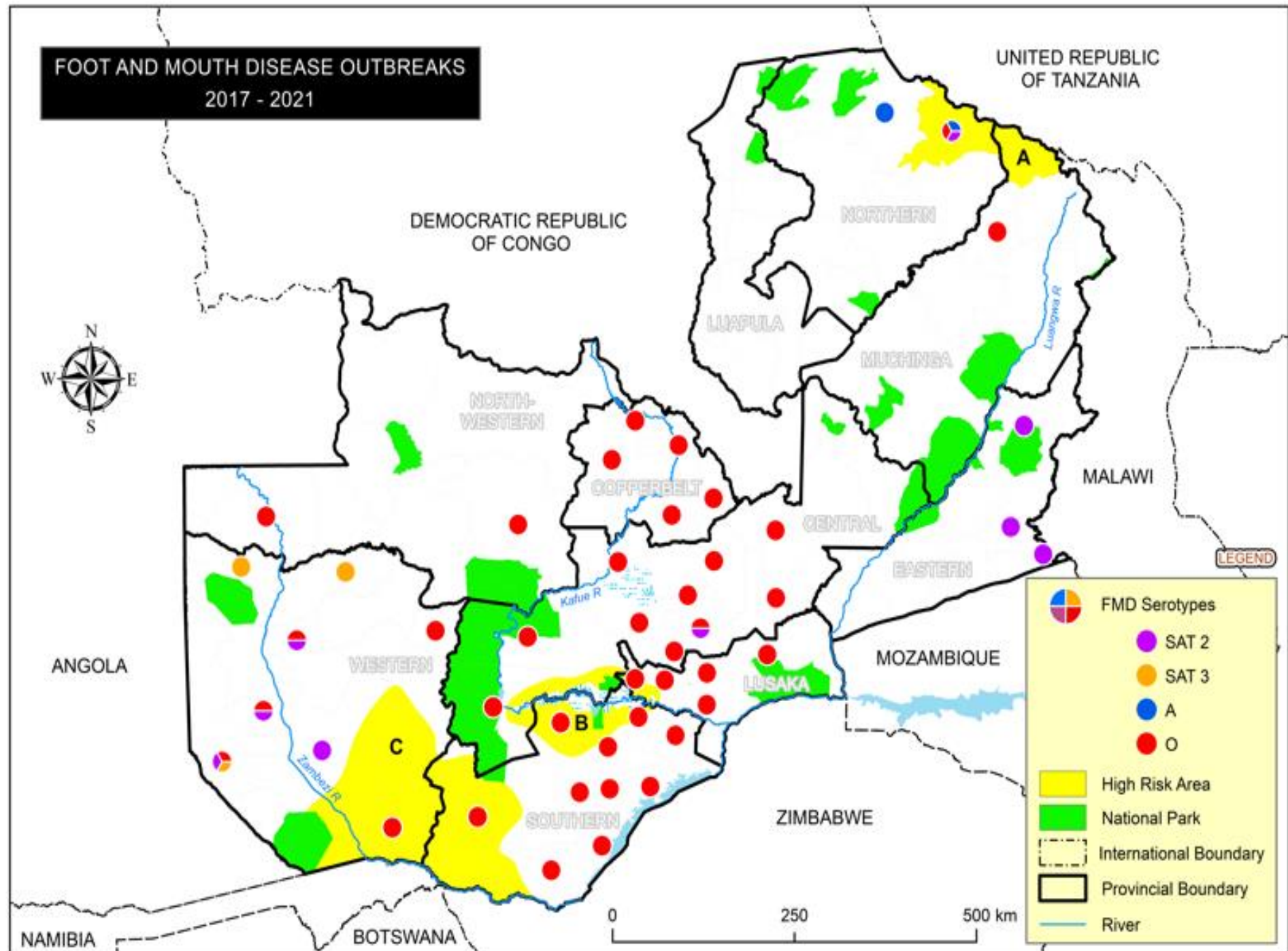
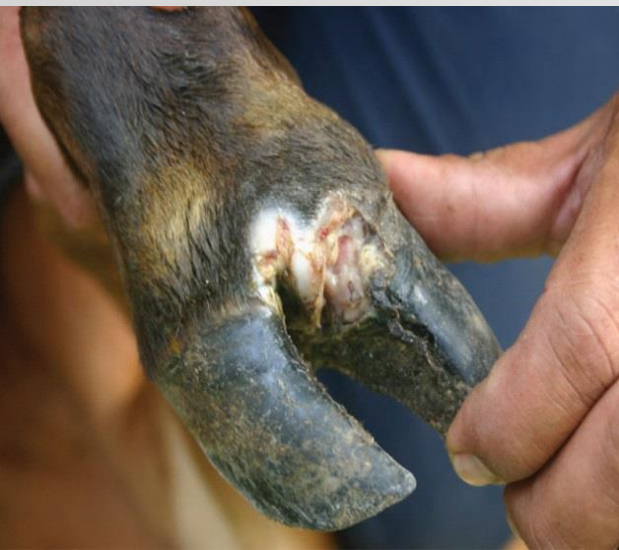
- Zambia has experienced 3 major outbreaks of FMD since 1980 to date.
- During this period, the **First Major Outbreak** of the Disease occurred from; **October 1981 to September 1982**.
- This outbreak of SAT 2 FMD covered the entire Southern Province and parts of Central Province. The disease outbreak was compounded by illegal movements of cattle and sharing of watering and grazing points.
- The **Second Major FMD Outbreak** occurred from **2004 to 2006** and affected Namwala, Mazabuka, Monze districts of **Southern Province**, Lundazi district in **Eastern Province**, Mbala, Nakonde and Chinsali in **Northern Province**, and Mumbwa and Chibombo in **Central Province**.
- The **Third Major FMD Outbreak** is the current outbreak which started in **October 2017** in Mbala district and is still **continuing to date**.

# RECENT CHANGES IN FMD EPIDEMIOLOGY

- Although the three high risk areas of FMD in Zambia have remained constant, a slight change in the epidemiology of the disease in the country has been observed recently. The changes include:
  - ❑ Introduction of FMDV SAT-3 (topotype II) causing FMD cases in cattle of Western Province from 2015 to 2017;
  - ❑ Emergence of FMDV serotype O (topotype O/EA-2) in Central, Southern, Copperbelt, Western, Lusaka and North-Western Provinces from 2018 to 2021;
  - ❑ Outbreaks due to SAT 2 (Topotype I) in Eastern Province in 2019 and the Isolated case of SAT 2 (topotype IV) in Central Province which has a close relation to viruses circulating in East Africa (Pool 4) in 2021.



# Foot and Mouth Disease Virus Serotypes detected in Zambia between 2015 and 2021



# CONTROL MEASURES IMPLEMENTED.....



## **(A) SURVEILLANCE AND DISEASE IDENTIFICATION**

- ACTIVE SEARCH OF THE DISEASE ON FARMS AND COMMUNAL AREAS.
- DISTRICTS NEIGHBOURING FMD AFFECTED AREAS PLACED ON HIGH ALERT AND CARRY OUT SURVEILLANCE ACTIVITIES TO QUICKLY IDENTIFY ANY DISEASE INCURSIONS.

## **(B) MOVEMENT CONTROLS**

- ALL THE AFFECTED AREAS PLACED UNDER QUARANTINE AND ISSUANCE OF LIVESTOCK MOVEMENT PERMITS ARE UNDER RESTRICTIONS.

## **(C) SENSITIZATIONS OF FARMERS AND OTHER KEY STAKEHOLDERS**

- DVS WORKS WITH OTHER KEY STAKEHOLDERS IN SENSITIZING FARMERS AND THE GENERAL PUBLIC ON FMD USING COMMUNITY RADIO STATIONS, MEETINGS, FMD LEAFLETS, POSTERS, AND BROCHURES, AND ALSO USING TRADITIONAL AND CIVIC LEADERS AMONG OTHERS.

# CONTROL MEASURES IMPLEMENTED....



## **(D) STEPPING UP OF BIOSECURITY MEASURES IN AND OUT OF THE AFFECTED AREAS**

- BIOSECURITY CHECKPOINTS IN THE AFFECTED AREAS ARE SET UP AT STRATEGIC POINTS IN PARTNERSHIP WITH OTHER STAKEHOLDERS. ON-FARM BIOSECURITY IN AFFECTED AREAS IS ENCOURAGED AND IMPLEMENTED.

## **(E) VACCINATION AGAINST FMD OF HIGH RISK CATTLE POPULATIONS**

- FROM 2021, THE DVS HAS VACCINATED **3 MILLION** HEADS OF CATTLE COUNTRYWIDE (INCLUDING BOOSTER VACCINATIONS).

## (F) ESTABLISHMENT OF VETERINARY ROAD CHECKPOINTS

1. **Southern Province:** *Mazabuka, Chikankata and Kazungula (Kasaya)*
2. **Western Province:** *Nkeyema and Mwandia*
3. **Central Province:** *Chibombo, Mumbwa(Nalusanga) and Mkushi*
4. **Lusaka Province:** *Chilanga (Westwood) And Luangwa*
5. **Copperbelt Province:** *Masaiti and Mufulira*
6. **Eastern Province:** *Petauke and Katete*



# FMD DIAGNOSTICS

- **NATIONAL LABORATORY – CENTRAL VETERINARY RESEARCH INSTITUTE (CVRI)**
  - 3 ABC ELISA
  - ANTIGEN ELISA
  - PCR
  - POST VACCINATION SERO-MONITORING
- **REFERENCE LABORATORIES (BOTSWANA VACCINE INSTITUTE (BVI) AND PIRBRIGHT)**
  - VACCINE MATCHING
  - SEQUENCING

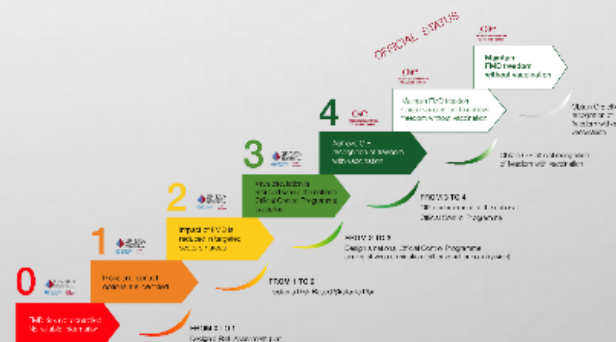
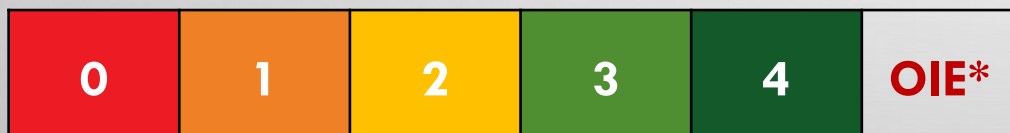


# CURRENT AND FORESEEN PCP STAGE 2020-2025

- CURRENT PROGRESSIVE CONTROL PATHWAY (PCP) STAGE:
- Zambia has redrafted the FMD Control Strategy to be in conformity with the Risk Based Strategic Plan (RBSP) in line with the Progressive Control Pathway (PCP).
  - RBCP needs to be accepted by SADC Regional Advisory Group with support of FAO/OIE FMD working group.
  - Zambia was assigned a Progressive Control Pathway Support Officer (PSO) to assist with the drafting of the RBSP.
  - Draft Submitted

| Country Zambia | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 |
|----------------|------|------|------|------|------|------|
| Foreseen stage | 2    | 2    | 2    | 2    | 2    | 3    |

## Colour codes FMD-PCP



\* OIE official status on FMD (with or without vaccination)

**During 3rd SADC FMD Roadmap Meeting: 2 – 5 November 2020**

# CHALLENGES



- Inadequate resources have contributed to inadequate surveillance (clinical and serological) to monitor the disease in outbreak areas by field staff.
- Challenges in timely vaccine procurement and vaccination logistics (first vaccination and booster vaccinations) and inadequate post-vaccination sero-monitoring resources.
  - This leads to poor vaccination coverage and resurgence of FMD in districts where the disease was previously resolved.
- Rampant illegal movements of livestock are contributing to the spread of the disease in previously free areas.
- Due to covid-19 pandemic – there are/were challenges in cross-border collaboration with neighbouring countries.

# WAY FORWARD



- Enhance serological and clinical surveillance by field staff.
- Intensify enforcement of regulations on animal movement controls.
- Ensure vaccine procurement and logistics in place for vaccinations.
- Strengthen sustained awareness campaigns to involve more stakeholders.
- Find innovative ways to strengthen cross-border collaboration with neighbouring countries.
- Implement the FMD risk based strategic plan.



The image features a light gray background with a subtle radial gradient. In the top-left and bottom-right corners, there are several realistic water droplets of varying sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The text "THANK YOU" is centered in the middle of the frame.

**THANK YOU**