



RIFT VALLEY FEVER

AN EVALUATION OF THE OUTBREAKS IN SOUTH AFRICA

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agriculture

Department:
Agriculture
REPUBLIC OF SOUTH AFRICA

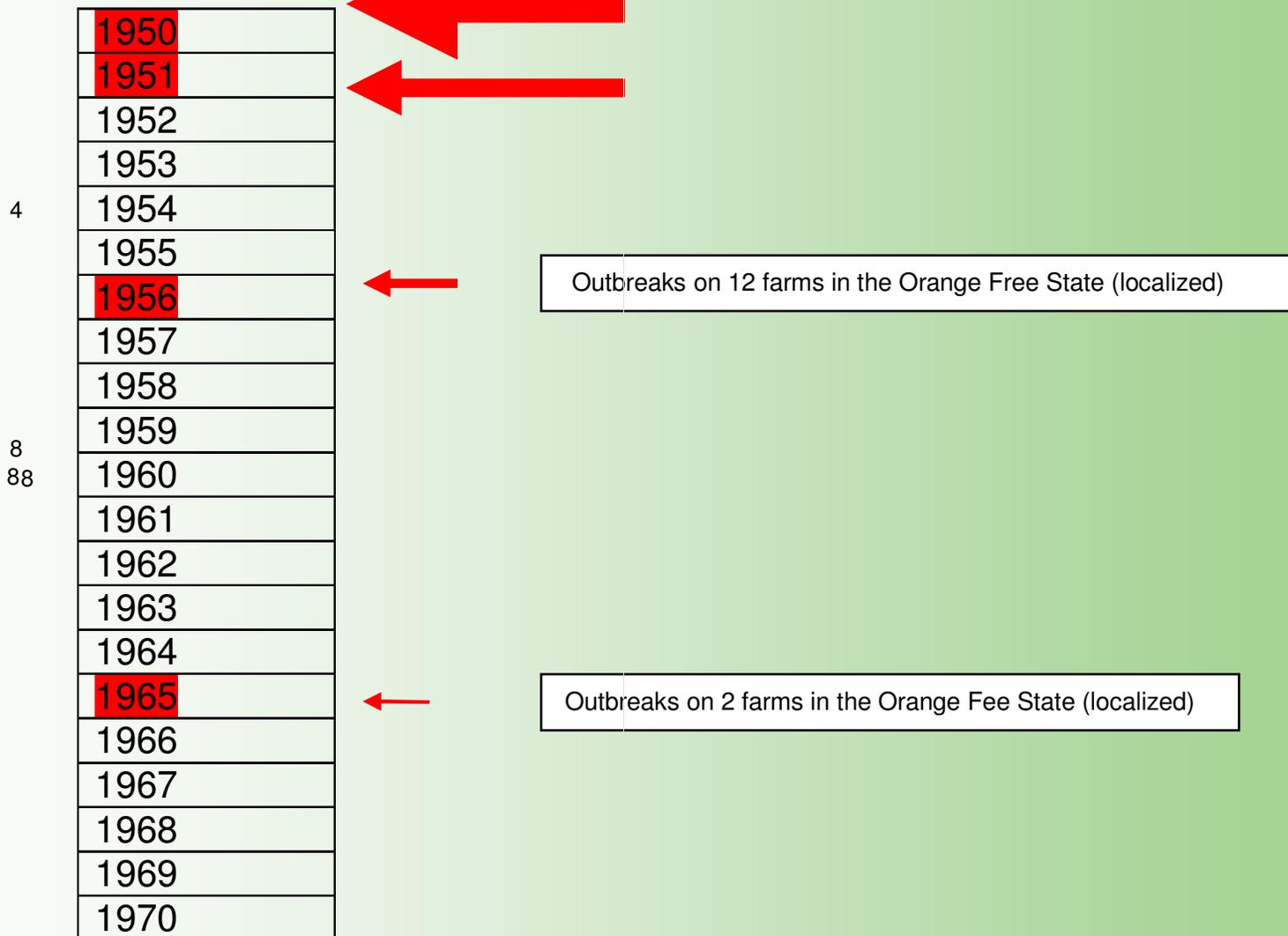
RVF IN SOUTH AFRICA

- Outbreaks have always been associated with above average rainfall at irregular intervals of 5 to 15 years.
- Two major outbreaks occurred in **1950/51** and **1974/1975**
- Lesser outbreaks of RVF or sporadic isolation of virus were recorded.

TEMPORAL DISTRIBUTION OF OUTBREAKS

Temporal distribution of Rift Valley Fever outbreaks in South Africa: 1950 to 1970

1950/51 - Severe outbreaks throughout the North Eastern portion of South

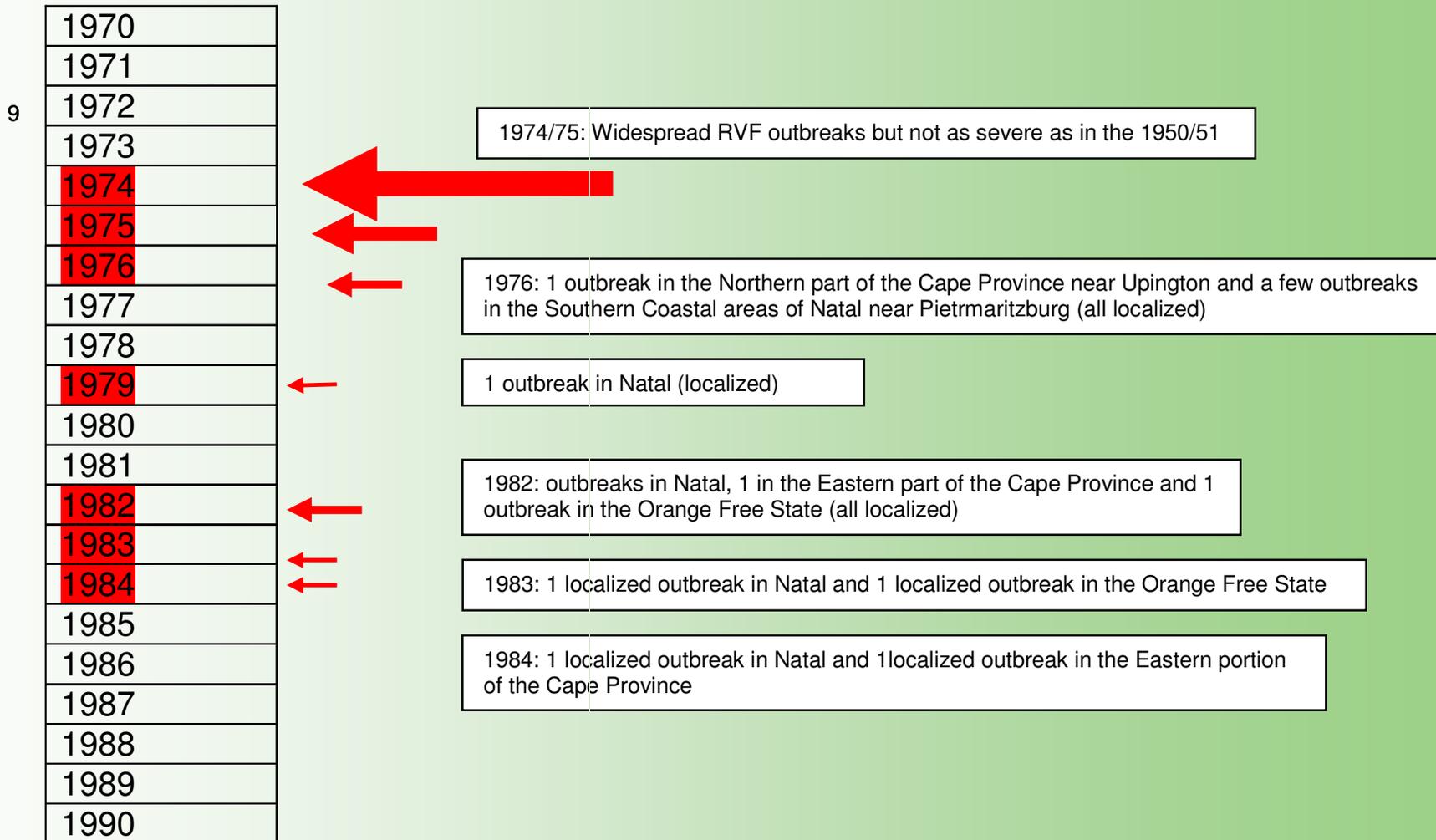


Outbreaks on 12 farms in the Orange Free State (localized)

Outbreaks on 2 farms in the Orange Fee State (localized)

TEMPORAL DISTRIBUTION OF OUTBREAKS

Temporal distribution of Rift Valley Fever outbreaks in South Africa: 1970 to 1990



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TEMPORAL DISTRIBUTION OF OUTBREAKS

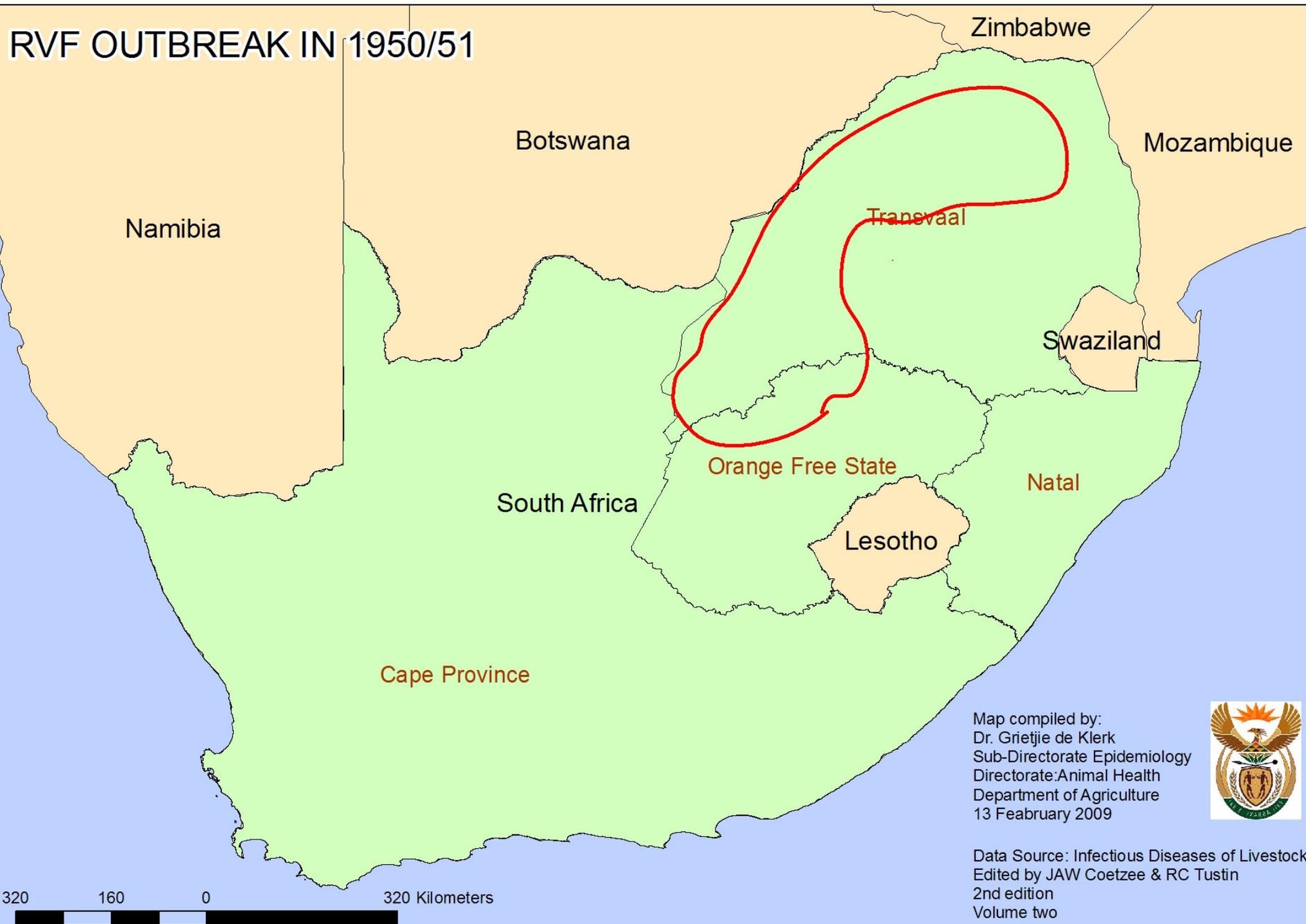
Temporal distribution of Rift Valley Fever outbreaks in South Africa: 1982 to 2009



HISTORY OF RVF IN SOUTH AFRICA

- First recorded in South Africa in **late 1950** but only recognised as RVF in **1951** when humans became ill after contact with infected animals. The outbreak was a severe and occurred in the North Eastern part of South Africa.
 - Severe outbreak: Approximately 100 000 sheep died and 500 000 aborted in the epidemic with smaller losses in cattle.
 - Occurred in the North Eastern Part of South Africa. [**Orange Free State (West) and the Transvaal (North, South and West)**]
- Attenuated live vaccine was introduced. (Smithburn)

RVF OUTBREAK IN 1950/51



Map compiled by:
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Department of Agriculture
13 February 2009

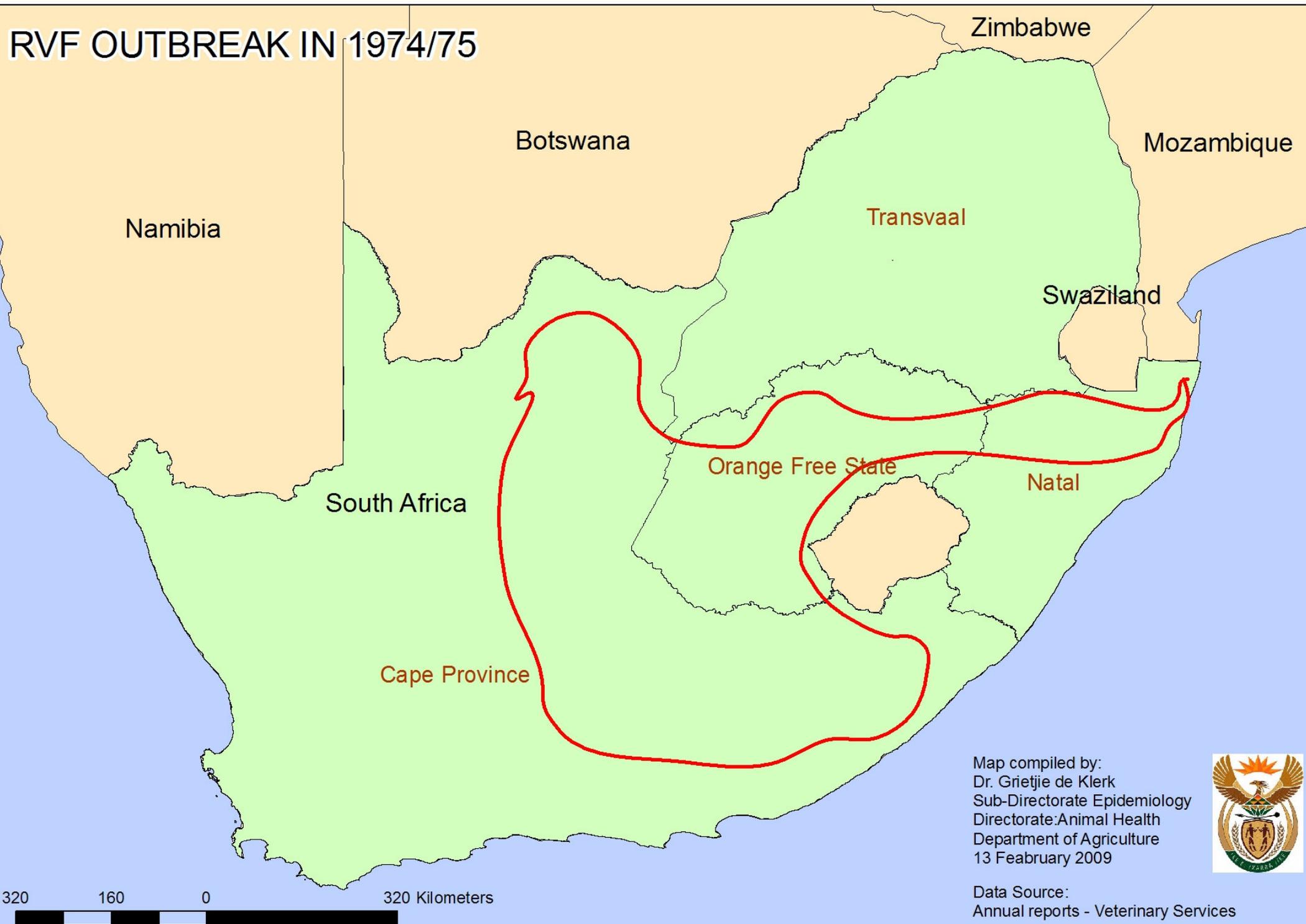


Data Source: Infectious Diseases of Livestock
Edited by JAW Coetzee & RC Tustin
2nd edition
Volume two

HISTORY OF RVF IN SOUTH AFRICA

- Widespread outbreaks in **1975**
 - Favourable climatic conditions and heavy rains
 - More widespread but less severe than the 1950/51 epidemic
 - Cape Province(North, East and West), Orange Free State (South) and Transvaal (West) involved in outbreak
- Formalin-inactivated vaccine was introduced

RVF OUTBREAK IN 1974/75



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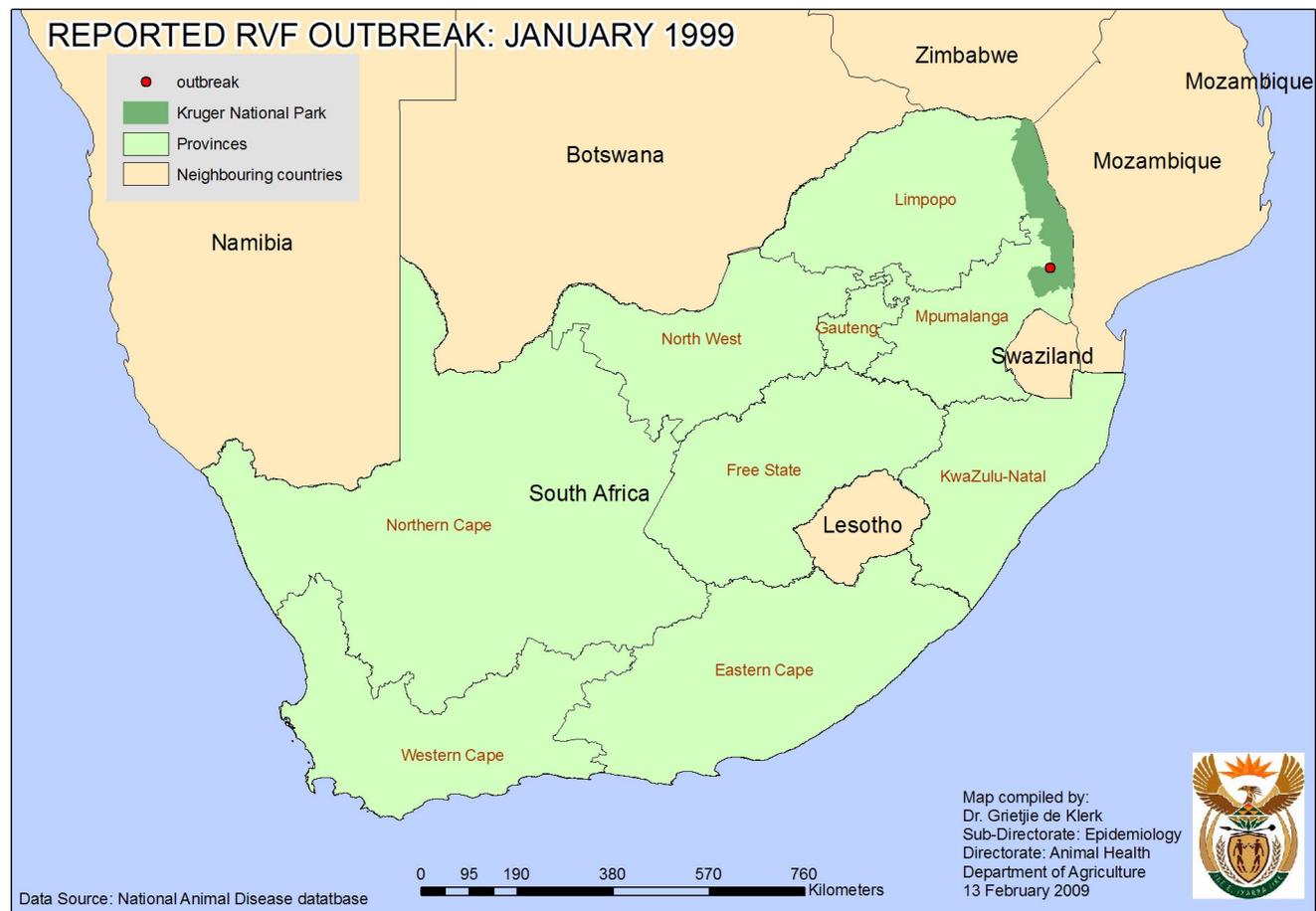


Data Source:
Annual reports - Veterinary Services

320 160 0 320 Kilometers

RECENT HISTORY OF RVF IN SOUTH AFRICA

- Isolated outbreak in buffalo held in an enclosure at Skukuza in the Kruger National Park- **January 1999**



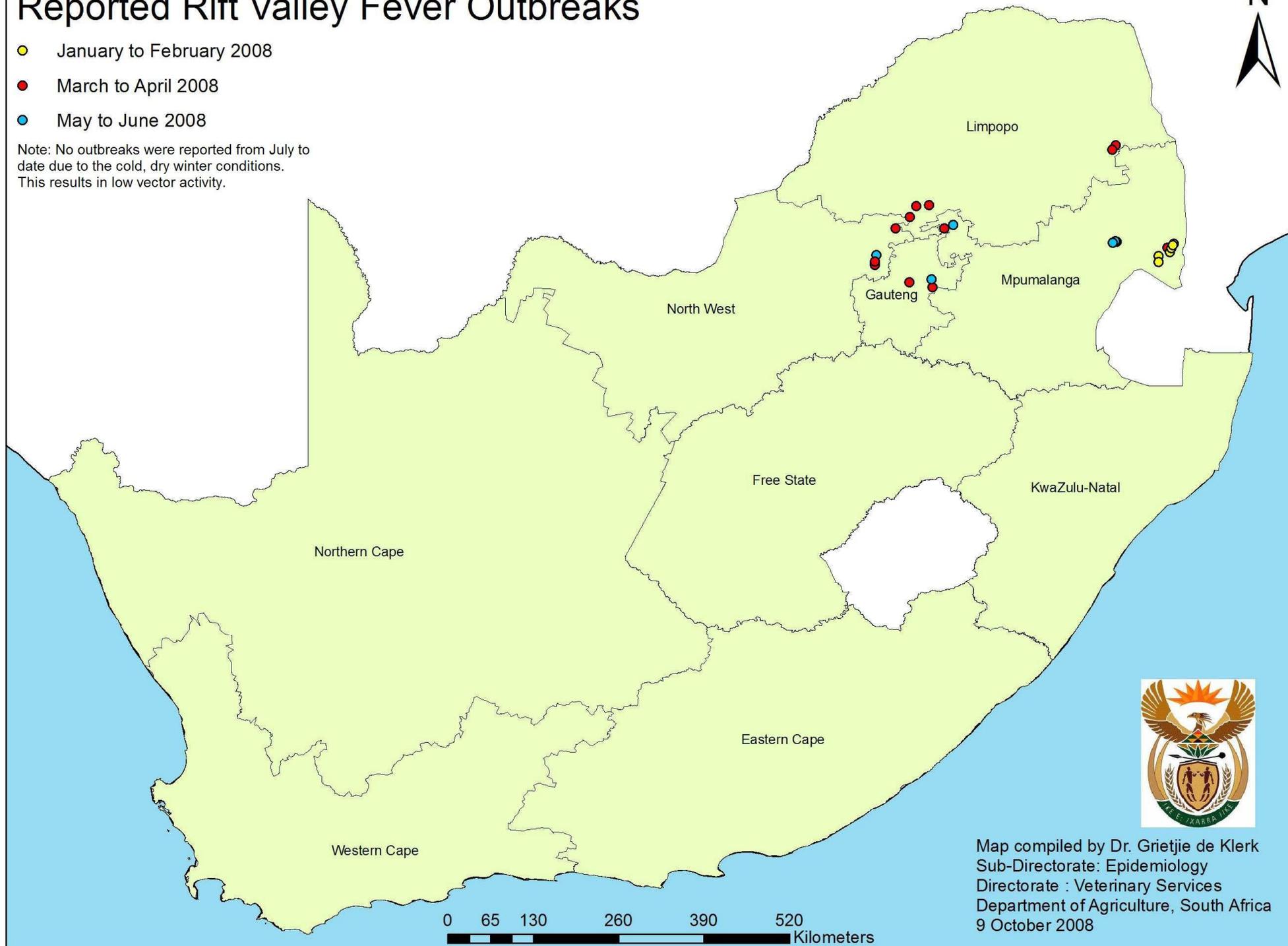
RECENT HISTORY OF RVF IN SOUTH AFRICA

- The most recent outbreak was from **January to June 2008** in **Limpopo, Mpumalanga, North West Province and Gauteng**

Reported Rift Valley Fever Outbreaks

- January to February 2008
- March to April 2008
- May to June 2008

Note: No outbreaks were reported from July to date due to the cold, dry winter conditions. This results in low vector activity.



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RECENT HISTORY OF RVF IN SOUTH AFRICA

- Current season (**2008/2009** summer) – no outbreaks reported so far (**mid February 2009**) despite ongoing passive surveillance.
- Possible reasons for the absence of outbreaks
 - Late onset of rainy season (November/December).
 - Heavy rain and moderate floods.
 - Herd immunity ↑

RVF CONTROL MEASURES

- RVF is a notifiable disease according to the Animal Diseases Act (Act 35 of 1984)
 - Farmer or private veterinarian reports to state veterinarians
 - Emergency reports to the National office
 - Monthly reports from Provinces to National office
 - International reports to OIE and SADC
- Farmers are well advised to vaccinate sheep and cattle (and goats) regularly in high-risk areas, esp. in years of high rainfall

RIFT VALLEY FEVER

- RVF is a zoonosis but infection of humans by mosquitoes/alternative vectors not seen in South Africa – veterinarians, farmers and farm workers are most at risk