

Foot and Mouth Disease outbreak and surveillance update report

12 September 2022*



agriculture, land reform
& rural development

Department:
Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

Report compiled by:
Directorate: Animal Health

* This report includes all information as available by close of business on the indicated date. All the updates contained in this report may not currently reflect on the WOH AH WAHIS system due to technical difficulties with the WOH AH reporting system. This report reflects changes since the previous update report of 5 September 2022.

1. Introduction and summary

South Africa currently has 142 open Foot and Mouth Disease (FMD) outbreaks in the previous FMD free zone, comprised of three outbreak events. The outbreaks affect the Limpopo, North West, Gauteng, Mpumalanga, Free State and KwaZulu-Natal (KZN) Provinces of South Africa. The movement of cattle in the whole country was temporarily suspended on 18 August 2022. On 8 September 2022, the ban was amended to include sheep and goats and is limited to the new Disease Management Areas of KwaZulu-Natal, Limpopo and Free State Provinces.

Map 1: Reported outbreaks in the previous FMD free zone 2021 - 2022

Note: Dots on the maps that indicate locations in close proximity might appear as single dots.

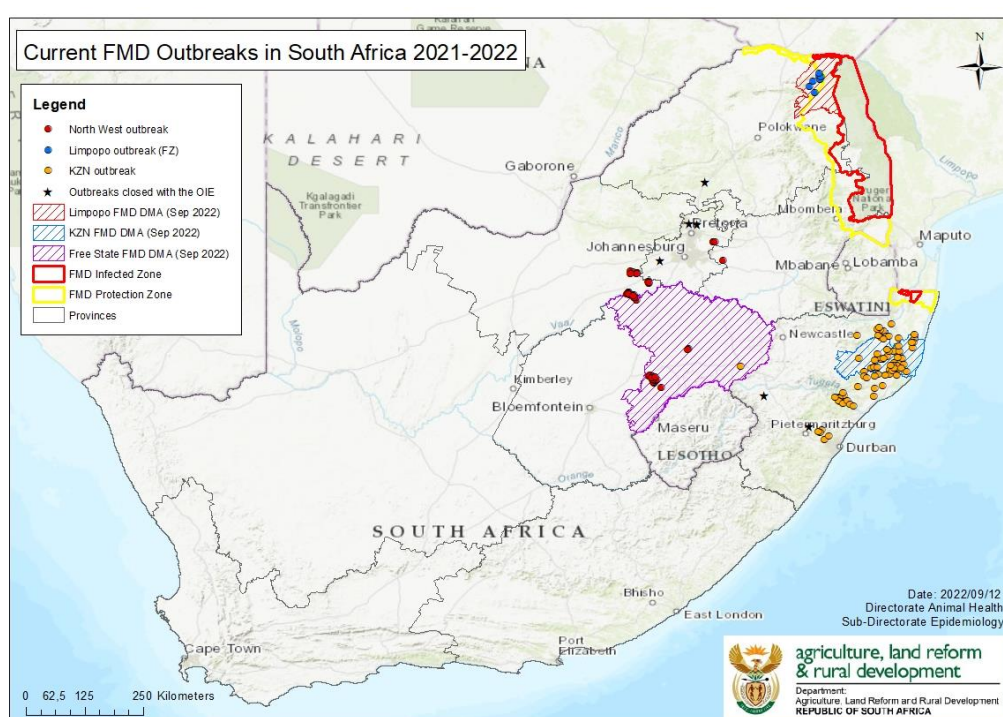


Table 1: Summary of active outbreaks per province:

Province	Number of open outbreaks	Number of resolved outbreaks	Total number of outbreaks	Last reported outbreak
KwaZulu-Natal	87	2	89	2 September 2022
Limpopo (previous free zone)	7	1	8	13 June 2022
North West	14	0	14	21 June 2022
Gauteng	3	3	6	29 August 2022
Free State	30	0	30	5 September 2022
Mpumalanga	1	0	1	5 August 2022
Total	142	6	148	

2. Control Measures

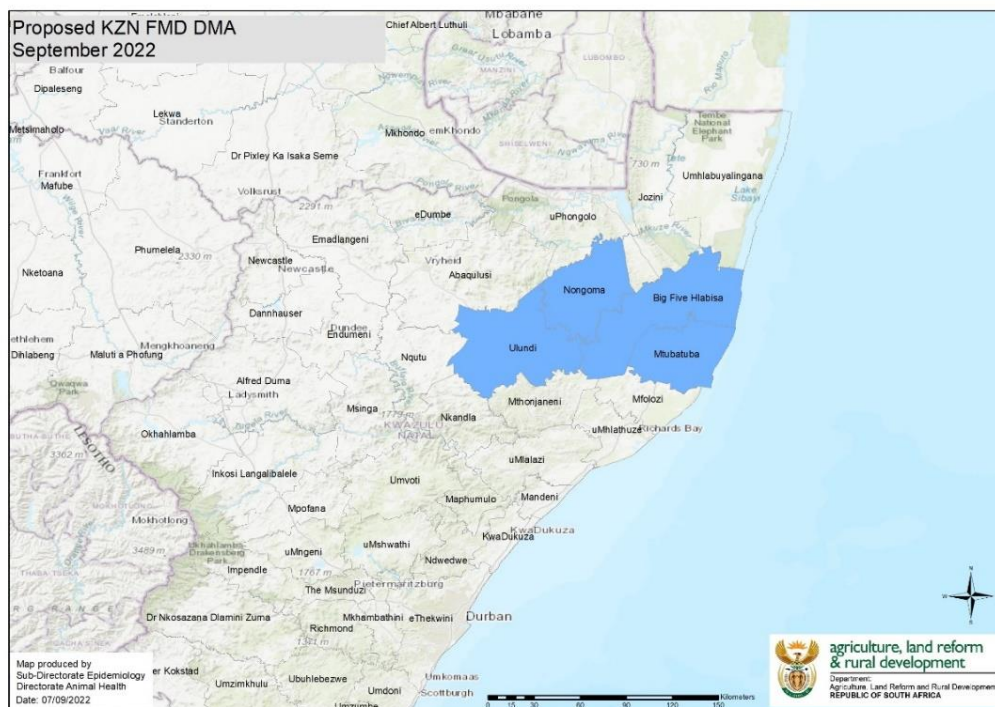
2.1 General control measures on movement of cattle, sheep and goats

In an effort to limit the negative effects of the disease as much as possible, the Minister has taken the decision to repeal the control measures relating to FMD as prescribed in the Government Notice No. 2075 of 10 May 2022 and Government Notice No.2391 of 18 August 2022. Movements are now allowed under certain conditions as outlined in Government Gazette notice 2465 of 8 September 2022. Movement restrictions remain on cattle, sheep and goats in three new Disease Management Areas (DMAs) in Limpopo, KwaZulu-Natal and Free State Provinces. The decision is based on the surveillance work done by state and private veterinary and para-veterinary workers during the course of the cattle movement ban.

KwaZulu-Natal Province Disease Management Area:

- (i) The whole of Big Five Hlabisa Local Municipality
- (ii) The whole of Mtubatuba Local Municipality;
- (iii) The whole of Nongoma Local Municipality
- (iv) The whole of the Ulundi Local Municipality
- (v) The whole of Hluhluwe Imfolozi Park.

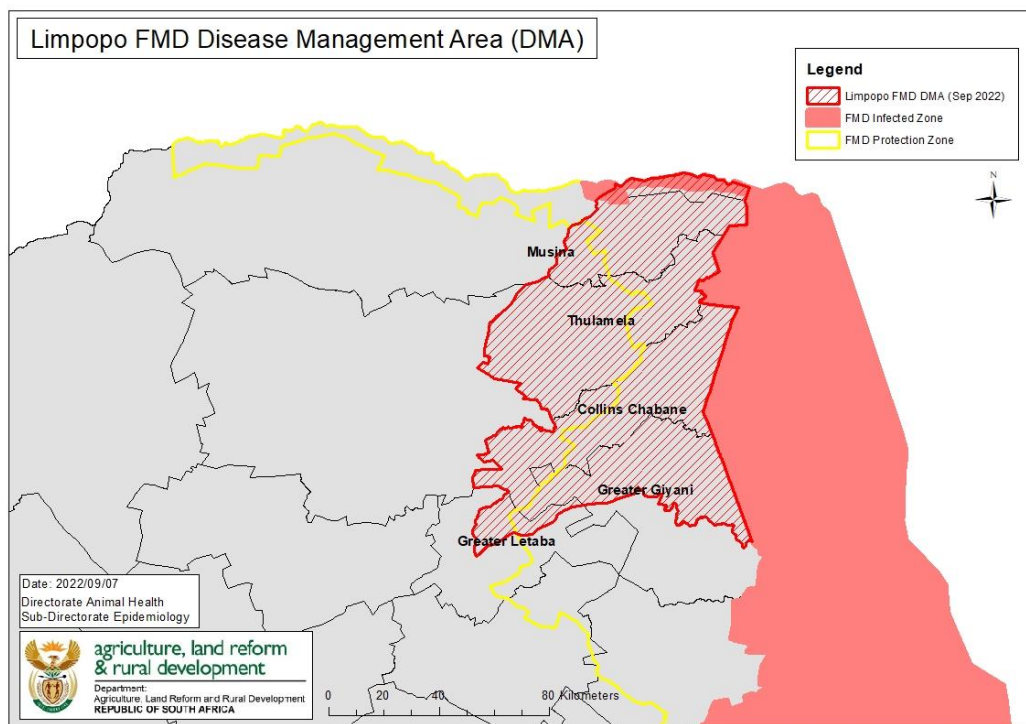
Map 2: September 2022 revised KZN DMA (in blue)



Limpopo Province Disease Management Area:

- (i) The northern boundary is the international border between the Nwanedi river and the Kruger National Park fence, while the eastern boundary is the Kruger National Park fence;
- (ii) The portion of Musina local municipality east of the Nwanedi River;
- (iii) The whole of Thulamela local municipality;
- (iv) The whole of Collins Chabane local municipality;
- (v) The portions of Greater Giyani local municipality and Greater Letaba local municipality which lies east of the D3206 and north of the Mooketsi / Giyani Road (R81) to where the R81 road crosses Little Letaba River and from there north of the Little Letaba River up to the fence of the KNP.

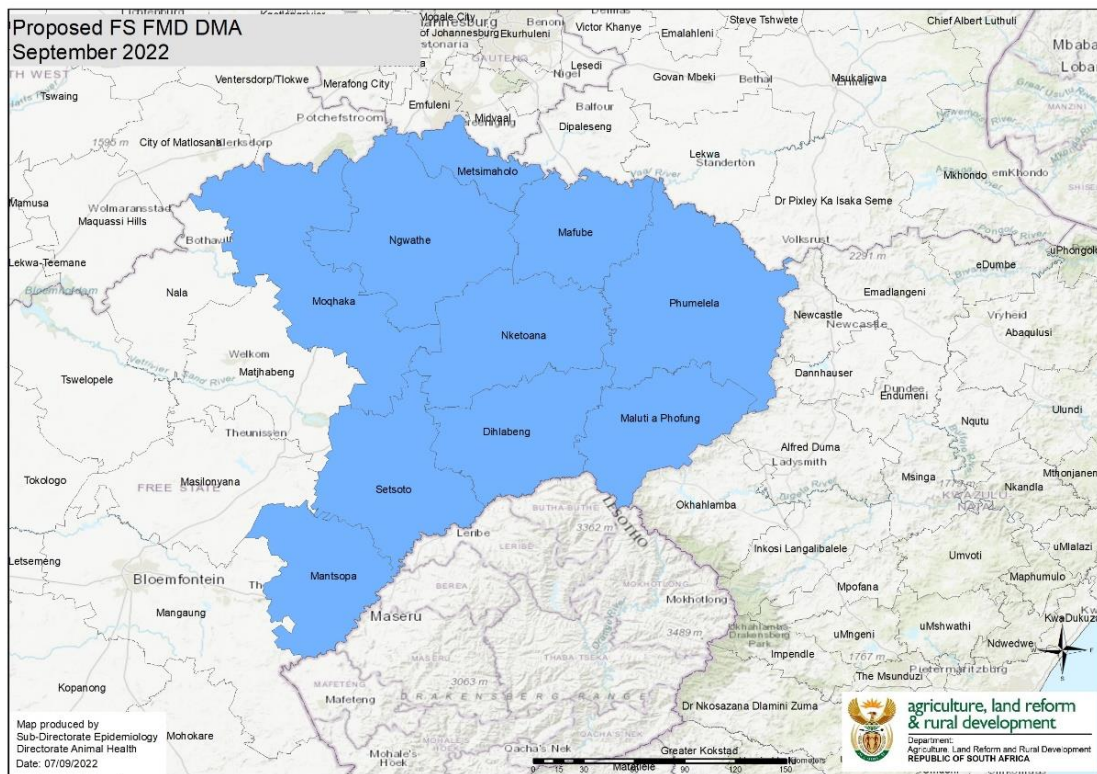
Map 3: September 2022 revised Limpopo DMA (striated in red)



Free State Province Disease Management Area:

- (i) The whole of Thabo Mofutsanyane District Municipality, consisting of Dihlabeng Local Municipality, Maluti-a-Phofung Local Municipality, Mantsopa Local Municipality, Nketoana Local Municipality, Phumelela Local Municipality and Setsoto Local Municipality;
- (ii) The whole of Fezile Dabi District Municipality, consisting of Mafube Local Municipality, Metsimaholo Local Municipality, Moqhaka Local Municipality and Ngwathe Local Municipality

Map 4: September 2022 Free State DMA (in blue)



Inside the three DMAs, cattle, sheep and goats may not be moved from one property to another for any reason, except for direct slaughter at a registered abattoir. Such movements require veterinary health certification and a movement permit. Cattle, sheep and goats may also be slaughtered for own use, own consumption or for cultural or religious purposes, but only in the same epidemiological area where they were kept prior to slaughter. Visible Veterinary Patrols and roving and stationary road blocks are directed to cover high risk areas according to information on possible movement of animals.

The control measures for movement of cloven-hooved animals and products out of the FMD protection zones have not changed. In the rest of the country there is no restriction on the movement of cloven-hooved animals, their products or genetic material. However, owners must provide a declaration of health and origin and must obtain the necessary Stock Theft documents for all cattle, sheep and goats to be moved from their property of origin onto new properties. Recipients of such animals must give written agreement to isolate new livestock for 28 days before introducing them into the main herds of the destination farm.

2.2 Movement control on affected farms / locations

All affected farms and feedlots in North West, Gauteng and Mpumalanga Provinces remain under quarantine with strict access control. The locations involved are well fenced and movement of animals from these farms can be effectively prevented. Affected locations in KwaZulu Natal and Limpopo also remain under quarantine and no cloven-hooved animals or their products may move from these locations.

2.3 Vaccination

Vaccination campaigns continue in affected provinces and total of 519 802 vaccinations have been recorded so far. Although vaccination campaigns run continuously, the vaccination statistics for the purpose of these technical update reports reflect the consolidated information as received at the national office.

In KZN, the vaccination campaign started on 15 March 2022 and is still ongoing in the areas where there appears to be active virus circulation. A risk-based approach is followed to determine which areas to vaccinate and over 275 080 cattle were vaccinated thus far.

The Thulamela area of Limpopo Province was vaccinated and routine vaccinations within the Protection Zone is continuing. 82 locations with a total of 99 522 cattle have been vaccinated, and the vaccination campaign continues.

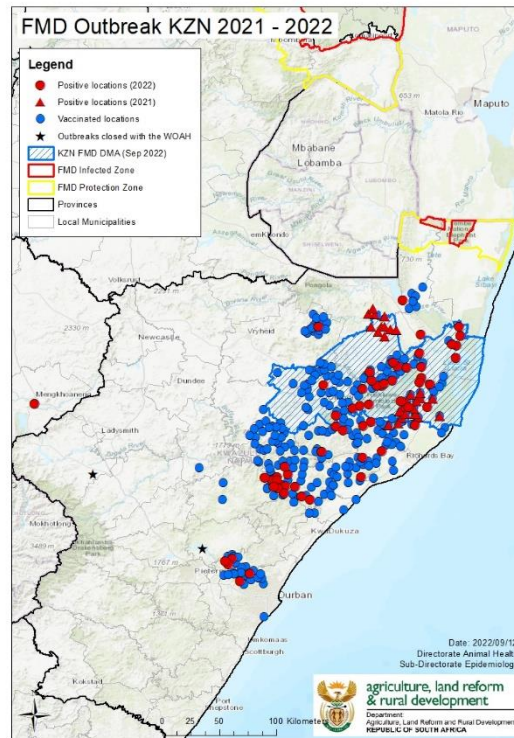
Vaccinations of affected premises in the North West Province began in early June 2022 and Veterinary Services has started with the second round of vaccinations. During the first vaccination campaign 28 895 animals were vaccinated and currently more than 4 682 animals have been vaccinated in the second round of the campaign.

The Free State Province vaccination campaign is ongoing, including vaccination of new affected premises. First round vaccination statistics for Free State are 62 669 cattle vaccinated at 27 locations. The second round of vaccinations at some locations have started, with 154 second round vaccinations completed so far.

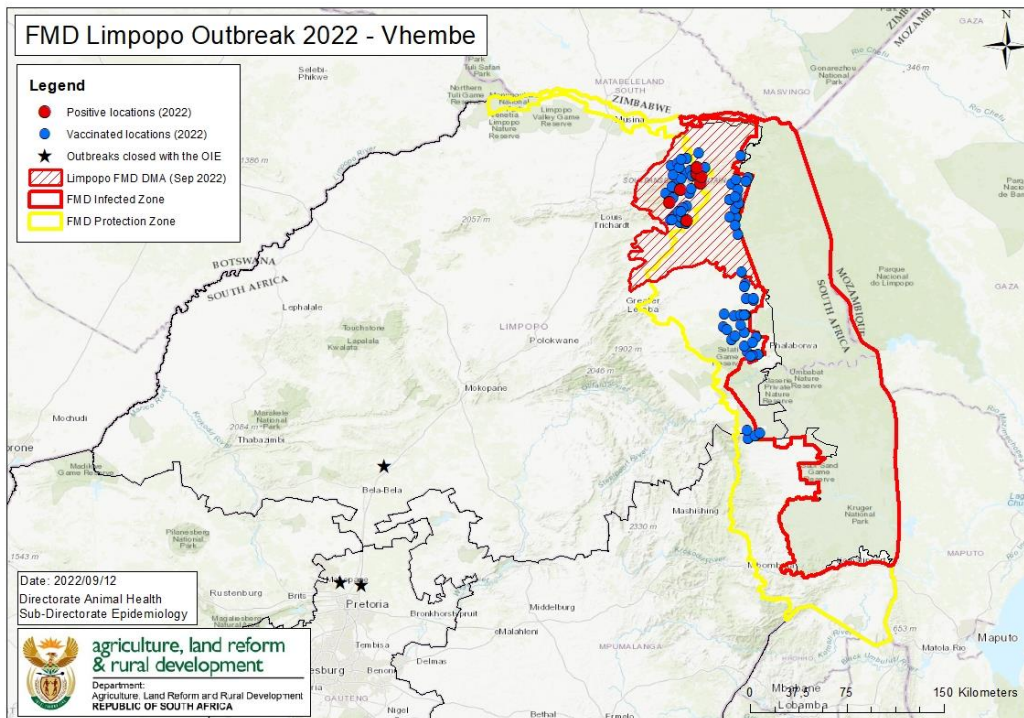
Vaccination campaigns at infected premises in Gauteng have vaccinated 22 727 animals thus far. In Mpumalanga Province, all 26 073 animals at the positive location have been vaccinated.

The following maps reflect to the most recent consolidated vaccination statistics.

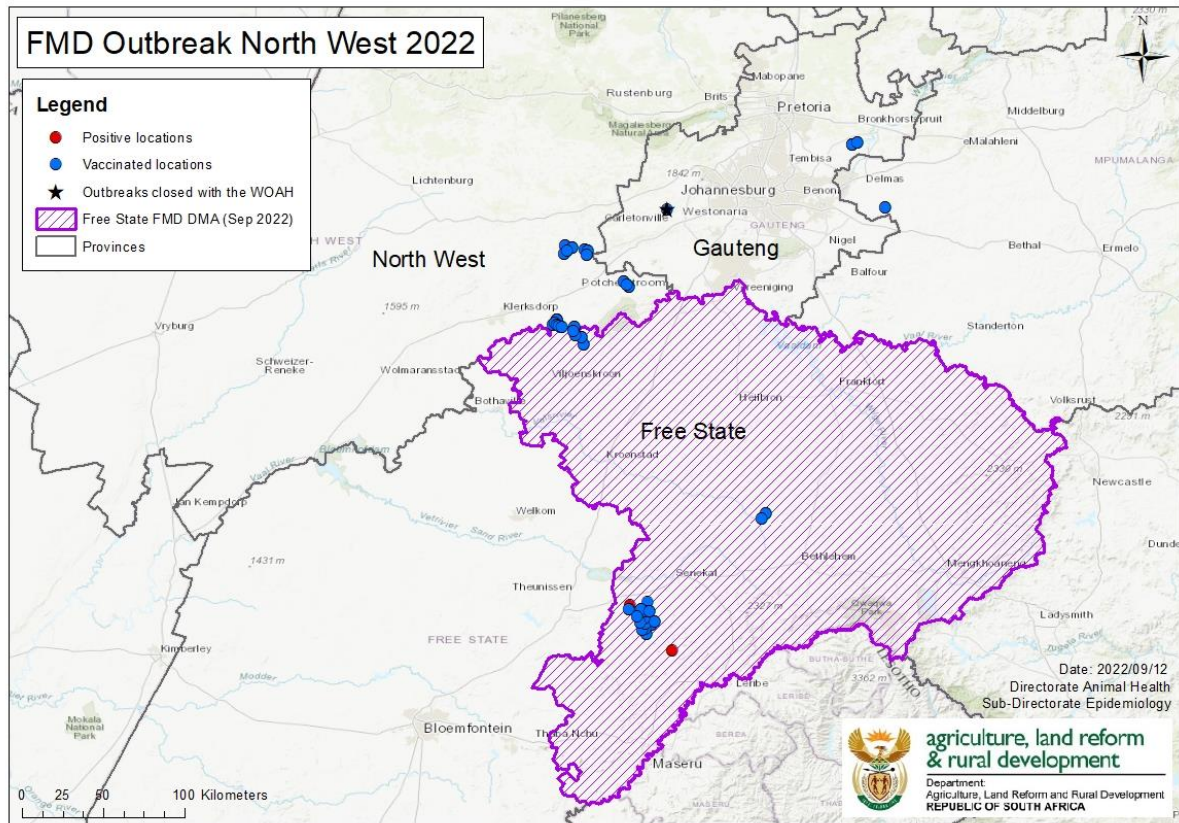
Map 5: Vaccinated locations in KwaZulu-Natal – Free State Provinces outbreak event
 (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



Map 6: Vaccinated locations in Limpopo Province outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



Map 7: Vaccinated locations in North West - Free State – Gauteng - Mpumalanga Provinces outbreak event (most positive locations are also vaccinated, therefore vaccinated and positive points are superimposed)



2.4 Depopulation of affected premises and closure of outbreaks

In total, 6 premises where outbreaks occurred have been resolved and closed with the World Organization for Animal Health (WOAH founded as OIE).

One Free State farm was depopulated and remains under quarantine until 28 days after depopulation and disinfection. The outbreak on this farm will be officially closed once the disinfection process has been concluded.

Two farms in Gauteng were depopulated through movement of the cattle to a designated abattoir for controlled slaughter, and destruction with safe disposal of other cloven-hoofed animals that were present on one of the farms.

Serologically positive F-branded animals were found at two auction premises in Gauteng and Limpopo Provinces. These animals were slaughtered and disposed of, followed by disinfection of the auction premises, and these two outbreaks have subsequently been closed.

Two feedlots in KwaZulu-Natal Province were depopulated through controlled slaughter and the outbreaks on these properties were closed.

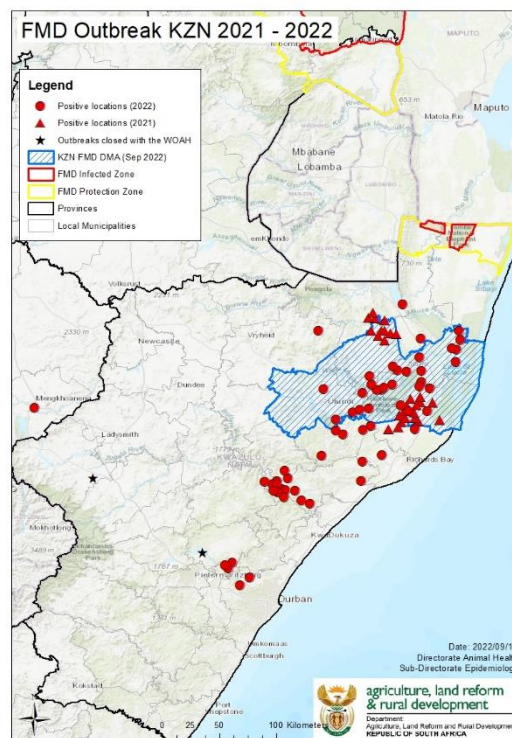
The North West Province has begun depopulating animals from positive locations, with 5 176 cattle sent to designated abattoirs for controlled slaughter. These properties will remain under quarantine until 28 days after they have been depopulated and disinfected.

3. Details of open outbreaks

3.1 Outbreak event 1: KwaZulu-Natal – Free State Provinces

There are 88 affected properties in this outbreak event (87 in KZN and one in the Free State), while two outbreaks have been resolved. This outbreak's event started in May 2021 in KZN Province and has recently spread to a feedlot in the Maluti-a-Phofung municipality in the Free State Province. Vaccinations in the areas surrounding the affected locations is ongoing to contain the spread of disease.

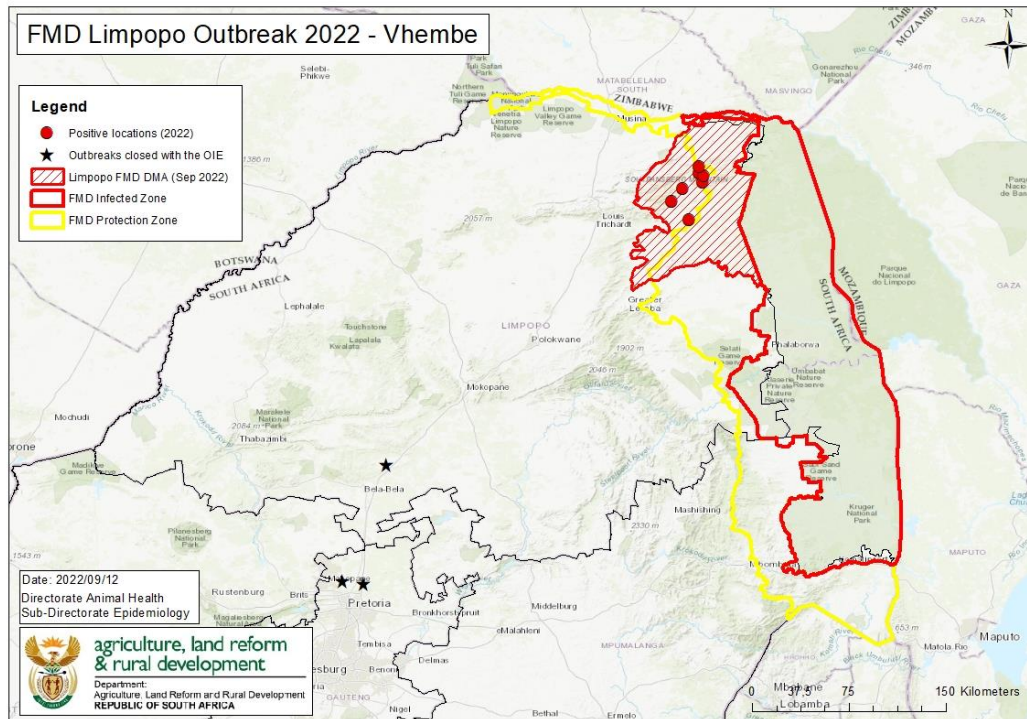
Map 8: Outbreak event in KwaZulu-Natal – Free State Provinces



3.2 Outbreak event 2: Limpopo Province

This outbreak event started in March 2022. There are 7 affected properties, with the last positive case reported on 13 June 2022. Three outbreaks have been resolved.

Map 9: Outbreak event in Limpopo Province



3.3 Outbreak event 3: North West - Free State – Gauteng - Mpumalanga Provinces

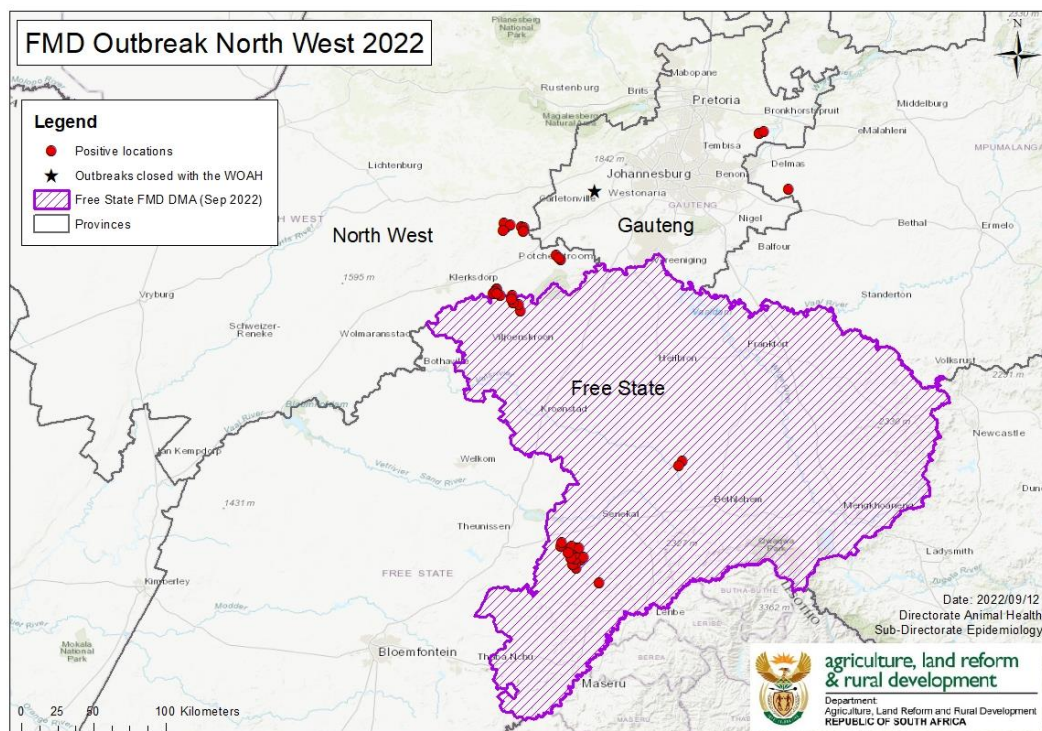
This outbreak event started in North West Province in March 2022. There are 47 properties currently affected in this outbreak event, with no new positive locations reported since the update report of 5 September 2022, and 1 outbreak has been resolved. The breakdown per province is as follows:

- North West Province has 14 open outbreaks, with the last positive case reported on 21 June 2022 and no outbreaks resolved yet.
- Gauteng Province has 3 open outbreaks, with the last positive case reported on 29 August 2022, and 1 outbreak has been resolved.

- Free State Province has 29 open outbreaks in this outbreak event, with 5 new positive cases reported on 2 September 2022, and no outbreaks resolved yet.
- Mpumalanga Province has 1 open outbreak, which was reported on 5 August 2022 and no outbreaks resolved yet.

Locations were detected through serological surveillance within the radius surrounding previously identified infected locations or through detection and reporting of clinical signs.

Map 10: Outbreak event North West - Free State – Gauteng – Mpumalanga Provinces



4. Diagnostic tests and epidemiology

The outbreak event in Vhembe district in Limpopo Province is caused by a SAT 3 virus, which is also responsible for the outbreaks in the North West, Free State, Mpumalanga and Gauteng Provinces. This virus appears to be highly contagious and spread despite the implementation of quarantine and movement control. From preliminary epidemiological investigations, it appears that there are three main routes of virus transmission:

- Movement of clinically healthy animals that are in the incubation period
- Contamination of properties by vehicles, persons, implements and other possible fomites entering the farms
- Nose to nose contact between cattle on neighbouring farms

In KwaZulu-Natal Province, the virus responsible for the outbreak is a SAT 2 serotype and is closely related to a SAT 2 virus responsible for an outbreak that occurred in the FMD Protection Zone in northern Limpopo Province in 2019. The SAT 2 virus was identified in a feedlot in the Free State and has thus been linked to the KwaZulu-Natal outbreak event.

For all reported outbreaks, confirmation of disease was done using a combination of the following diagnostic tests at the ARC Onderstepoort Veterinary Research Transboundary Animal Diseases laboratory (OVR-TAD):

- Solid Phase Competition ELISA (SPCE)
- Non Structural Protein (NSP) ELISA
- Polymerase Chain Reaction (PCR)

5. Surveillance

The three outbreak event areas continue to be subjected to clinical and serological surveillance, with intensified inspections around newly identified infected farms and dip tanks and at epidemiologically linked locations identified through forward and backward tracing.

Passive surveillance leads to reporting of suspect outbreaks by veterinarians and farmers that are followed up by intensive clinical inspection and laboratory testing. Some outbreak locations were identified as a result of such reports of varied clinical signs seen in cattle, while most were identified during trace back and trace forward exercises, including links of movements, as well as surveillance of farms adjacent to positive locations. The varying clinical presentation of the disease in different locations necessitates surveillance based on both clinical inspections, including mousing, as well as serology.

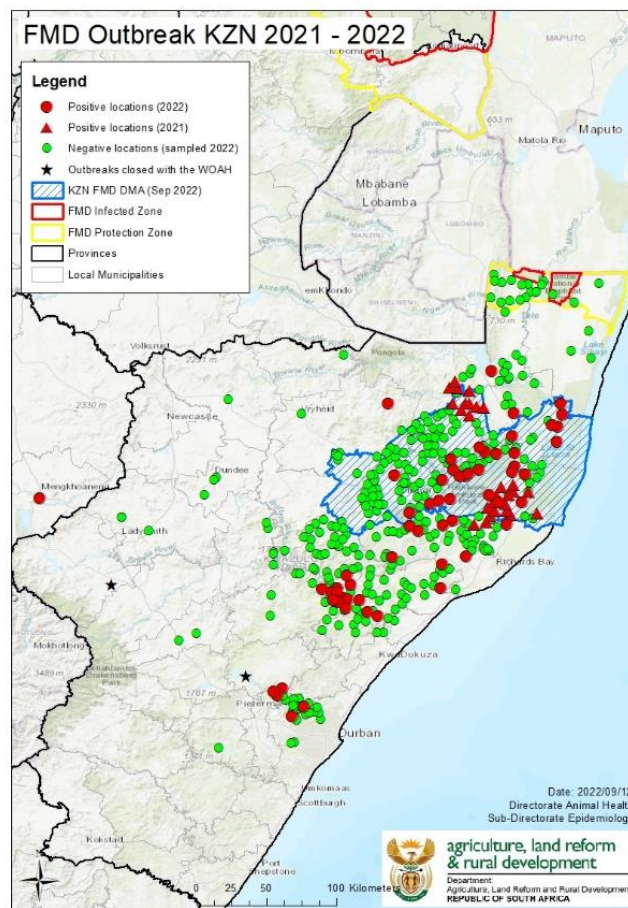
Table 2: Summary of Serological surveillance per province:

Province	Number negative locations	Number of open positive locations	Total number of locations
KwaZulu-Natal	357	87	444
Limpopo	199	7	206
North West	76	14	90
Gauteng	40	3	43
Free State	90	30	120
Mpumalanga	18	1	19
Total	780	142	922

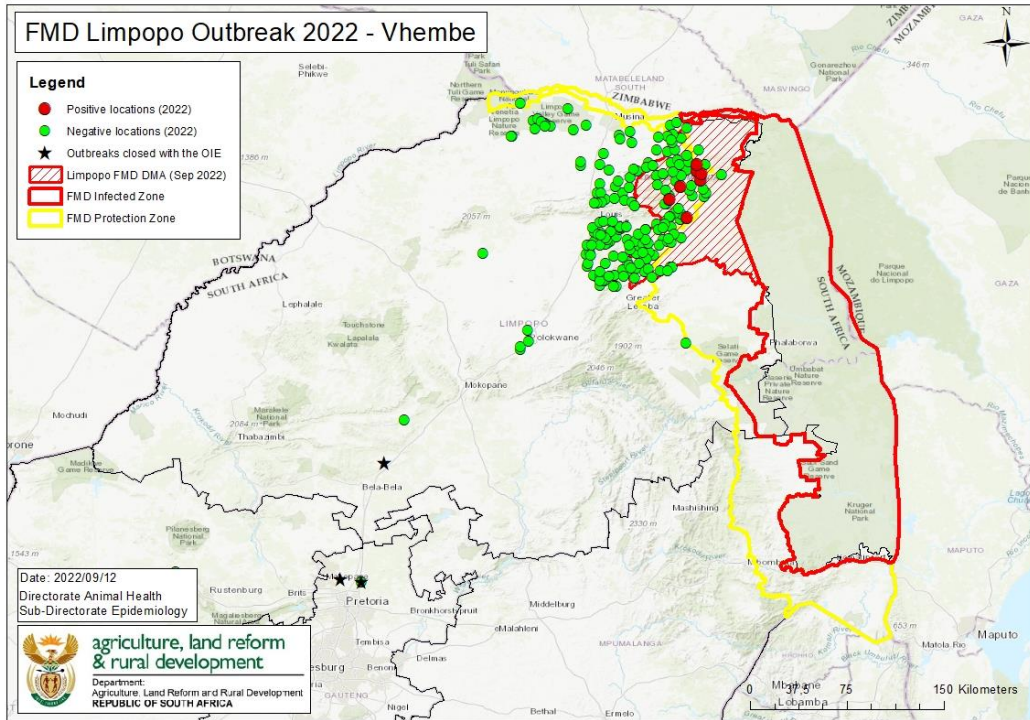
Once any animals are found to be positive at a location, the entire location with all in contact animals at the location, are regarded as positive. The table above therefore reflects the status of locations and not the individual animals at the locations. Note that the number of negative locations statistics are only updated when all the information has been received and has not changed since the last report on 5 September 2022.

Below are maps of each outbreak event, indicating all locations surveyed, with negative results indicated in green and positive locations in red. Please also refer to the explanatory notes after the maps for more clarity.

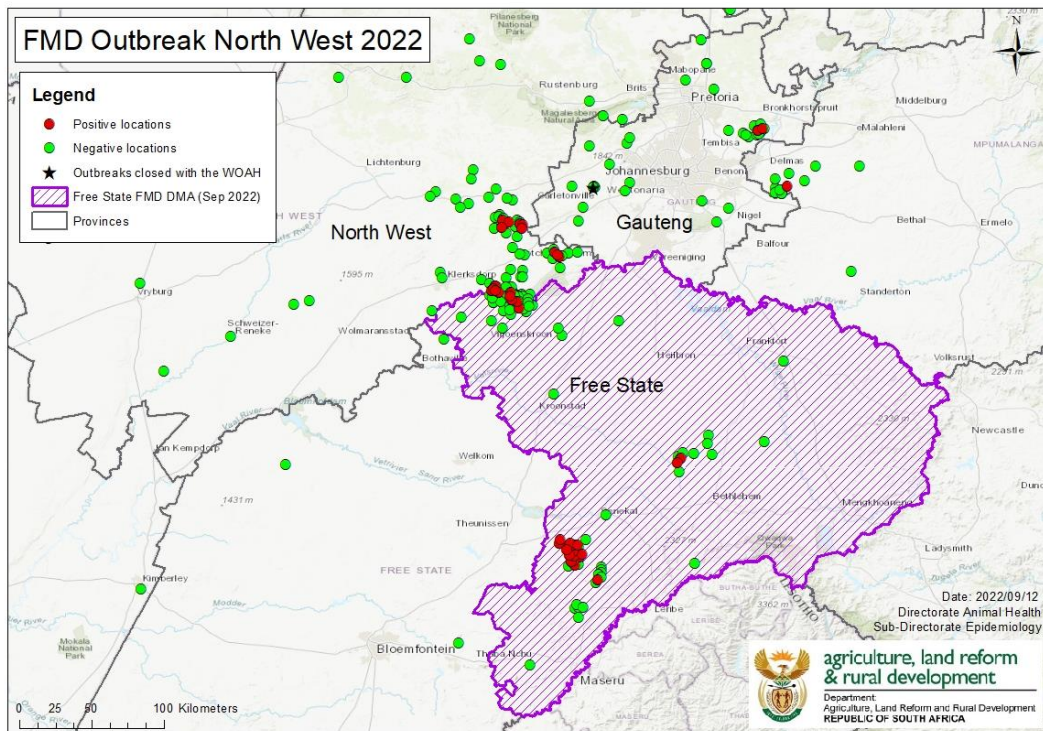
Map 11: Serological surveillance in KwaZulu-Natal-Free State Province outbreak event, showing 357 negative and 88 positive locations



Map 12: Serological surveillance in Limpopo Provinces outbreak event, showing 199 negative and 7 positive locations



Map 13: Serological surveillance in North West - Free State – Gauteng – Mpumalanga Provinces outbreak event showing 224 negative and 47 positive locations (please note that some of the points are superimposed due to close proximity)



Note that the North West, Free State and Gauteng Provinces are undergoing the second round testing on previously identified linked locations and the numbers of the negative locations have thus not changed drastically for these provinces despite the number of locations tested having increased.

Note that in both the table, as well as the maps above, the number of locations that tested negative only indicates the number of locations that tested negative during this year (2022) from when the disease was found to be spreading again. The number of positive locations also includes the locations that were identified as positive last year (2021).

6. Awareness and Illegal Movements

The movement of animals, especially cattle, remains the greatest contributing factor to the spread of disease. The restriction on cattle, sheep and goat movements in the DMAs was announced publicly to ensure that all role players are aware of this development.

The illegal movement of animals from the FMD protection zone with vaccination to the FMD free zone played a significant role in all of the current outbreaks. The outbreaks in KZN and Limpopo Provinces were directly caused by such proven or suspected illegal movements. The industry is actively assisting in the clamp-down on illegal movements by cooperating with veterinary services and Stock Theft Units in reporting suspect movements of animals and by reporting animals of suspect origin being presented at auctions. Any illegally moved animals found are seized and destroyed and perpetrators are prosecuted for contravention of the Animal Diseases Act, 1984 (Act No 35 of 1985).

The animals that caused the outbreak in North West Province moved from an area in Limpopo that, at the time of moving, the area of origin in Limpopo was already infected, though yet undetected at the time. This illustrates the real danger of animals moving during the incubation period of the disease.

Director Animal Health

Date: