

Monday, 5 January 2026

Two tornadoes on 2026 New Year's Day in Mpumalanga

On day one of January 2026, two short-lived tornadoes were reported across the eastern highveld of Mpumalanga - one just to the north-east of Middelburg, and the other one near Carolina. Although no loss of life was reported, damage to property was observed.

The two phenomena occurred amid widespread severe thunderstorm activity. Just as the issuing of weather forecasts and, where necessary, severe weather warnings, is the responsibility of the South African Weather Service (SAWS), so is the occasional assessment of weather impacts to damaged property and infrastructure.

Middelburg area

On Friday, 2 January 2026, the SAWS assessed the damage to property in the north-eastern area of Middelburg in the aftermath of the tornado. This was despite communication challenges, with internet connectivity unavailable. Locals suspected that the communication challenges were the direct results of the severe thunderstorm that hit the area the previous day as seen in Figure 1 below.



Figure 1: A recent supercell thunderstorm that caused a brief tornado with strong damaging winds to the north-east of Middelburg (Pictures: © Middelburg Observer)

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Restricted access to several private farms in the area prevented a full survey of damage to property. However, damaged and rusted communication lines on the one side of Stoffberg Road and extricated tree branches on the other side suggested that tornadoes might be underreported in the area.

Eyewitness accounts and limited ground observations indicated that strong winds and particularly large hail were observed just before and soon after 18h00 on the day. One eyewitness reported observing a funnel-like feature below the cloud near Stoffberg Road (i.e., circled stretch of R555 road in Figure 2).

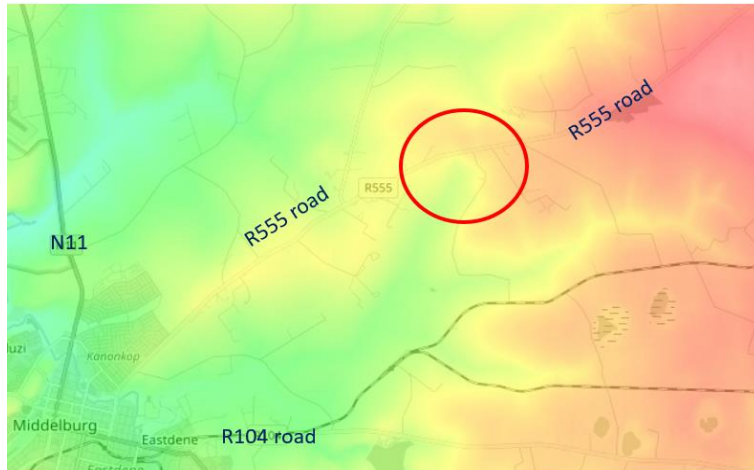


Figure 2: Surface effect – a hook-like valley (red circle) which carries the potential to strengthen the surface wind sharply.

During their journey back home, workers from nearby farms faced severe weather, including a high frequency of thunderstorm lightning. As a result, hiding spots were sought in the nearby settlements.

Preliminary assessment

Desktop analyses of EUMETSAT satellite images of the late afternoon of the New Year's Day over the northern Highveld of Mpumalanga (see Figure 3) showed signs of a rotating thunderstorm between 17h40 and 17h50 albeit with gaps of nine minutes before each subsequent image.

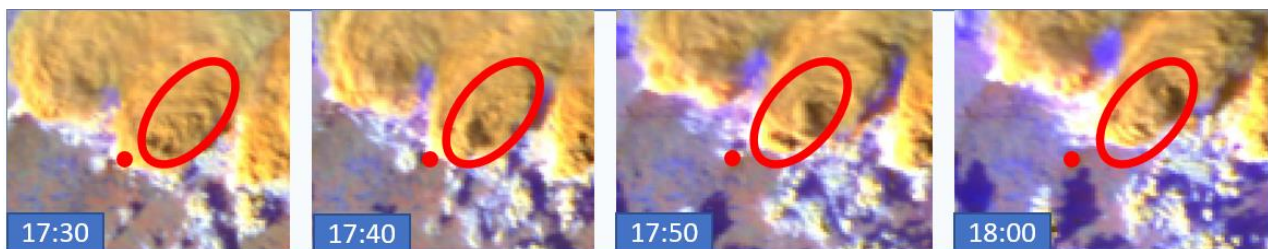


Figure 3: Summary of Middelburg tornado, 1 January 2026. Referencing with Middelburg (red dot), a storm that moved towards the north-east (red oval) was forced to organise itself into two cells from about 17h40. The narrow valley (shown in Figure 2 above) probably increased the speed of the rear storm sharply. In effect, the adjacent storm grew stronger and produced a tornado just to the north of R555 road (Stoffberg road) (Images: © EUMETSAT).

Weather analysts accept that a thunderstorm that is rapidly neared by another has the tendency to produce at least one tornado. Tornadoes that develop in this fashion (e.g., the Middelburg tornado and Randfontein tornado of 27 November 2024) are the trickiest to detect for the purposes of warning the

public in advance in that they offer no time to upgrade warnings. Of at least two thunderstorms that approach a common geographic location, the one that reaches this location first could spawn a tornado

Carolina area

Regarding the Carolina tornado, which was reported under similar convective conditions, no surface damage assessment could be conducted in this area due to access restrictions and limited time available.

Meteorological context

Since New Year's Eve, the SAWS issued Levels 2 and 4 warnings for potential severe thunderstorms for Thursday, 1 January 2026. A Level 4 warning meant that the likelihood for the occurrence of the severe thunderstorms was low, but with potential significant impacts. The two warnings were for Mpumalanga and KwaZulu-Natal, and they highlighted the risk of damaging winds, large hail, and heavy rainfall.

Public safety advice

Residents are advised to:

- Avoid travel during severe weather.
- Find shelter quickly in smaller rooms like bathrooms when in the midst of two adjacent storms or more.
- Move quickly out of the path of the leading storm.

These interim measures could minimise the possibility of injuries or loss of lives.

Ongoing research

In recent years, researchers Kaitano Dube and David Chikodzi of the Vaal University of Technology conducted a focussed study on tornadoes that occurred across Mpumalanga. The SAWS continues to enhance post-event verifications, particularly in regions where no numerical data are collected. Researchers are continually working with various academic institutions to categorise these events, including the development of their **nowcasting techniques**.

Accessing weather warnings

Weather warnings are updated daily and can be accessed via:

- The SAWS website: **www.weathersa.co.za**
- Radio and television broadcasts
- X: **@SAWeatherServic**
- Facebook: **South African Weather Service**
- The WeatherSMART mobile application

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