

Analysis of fire distribution across South Africa: a focus on recent fire alerts and hotspots

Devastating fires sweeping through South Africa, from urban centers to rural villages, are leaving communities in turmoil as homes, livelihoods, and wildlife are destroyed. This crisis underscores the urgent need to investigate the underlying causes of these blazes. Wildfires, which occur regularly in South Africa, often cause significant damage. While human error is a factor, environmental conditions such as changing weather patterns, urban spread, dry seasons, and natural vegetation that provides ample fuel also increase the risk and severity of these fires. Additionally, the improper lighting of fires by individuals contributes to their recurrence and impact.

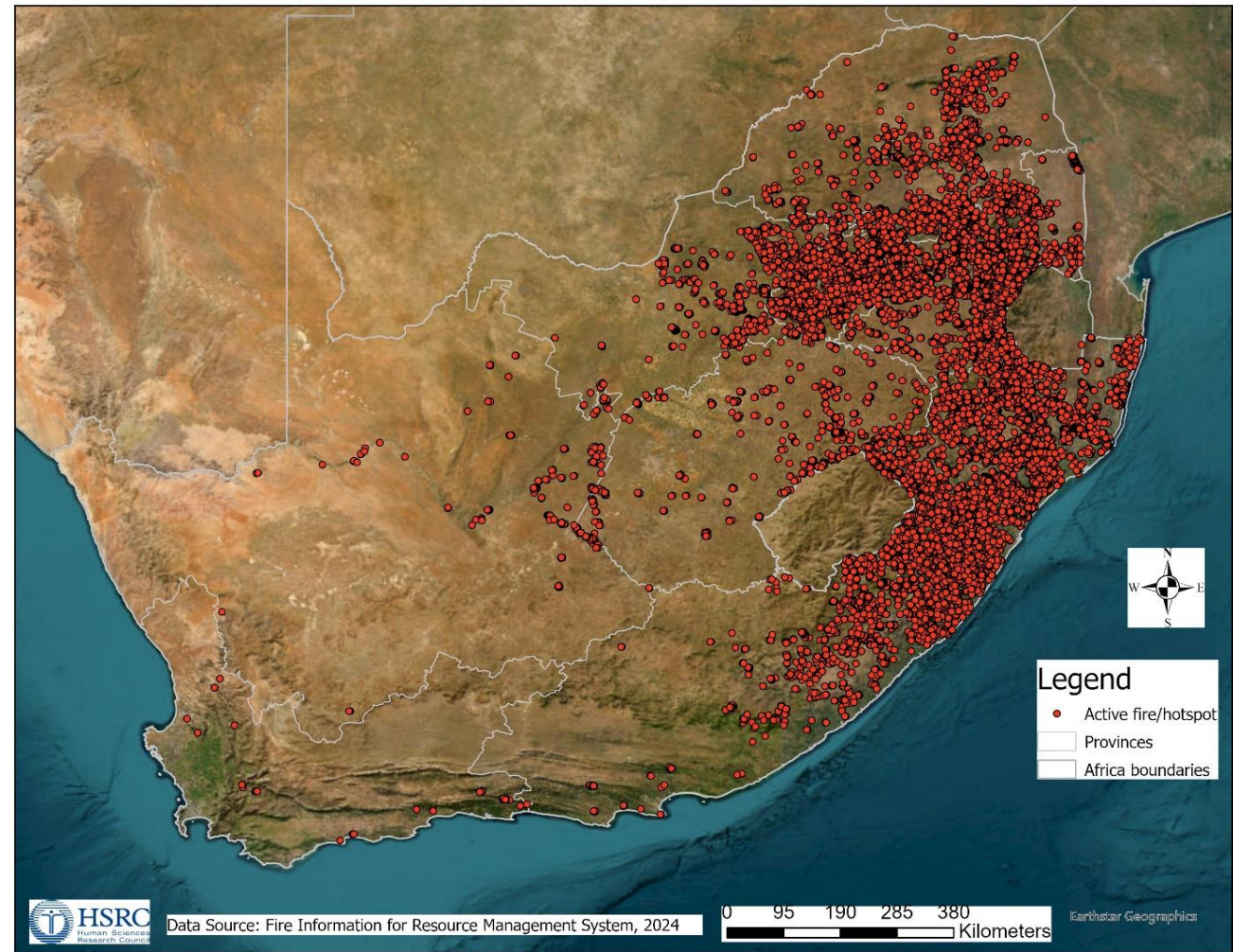
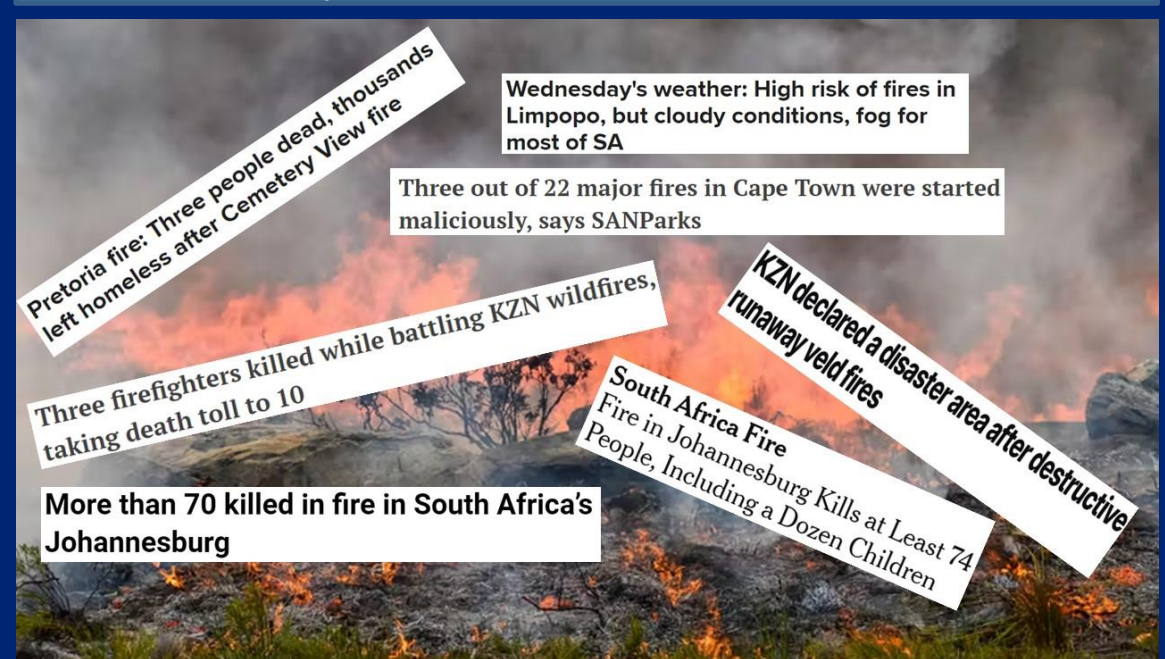


Figure 1: Active fire/hotspot distribution in South Africa: June to mid-July 2024.

Analysis of fire distribution across South Africa: a focus on recent fire alerts and hotspots

Spatial Insights Edition 13, 2024

From June to mid-July, active fires and hotspots were predominantly concentrated in some of the summer rainfall areas in Gauteng, KwaZulu-Natal, Mpumalanga, and Limpopo. There was a moderate distribution in the North West, Free State, and Eastern Cape, while the Northern Cape and Western Cape showed a lower distribution (Figure 1). Figure 2 illustrates the fire alert count for each province in South Africa during weeks 27 to 29 (1 -21 July). A "fire alert count" refers to the number of detected fire events or hotspots within a specific time period, based on satellite monitoring systems. The map shows that the highest fire alert counts were in Mpumalanga (663) and KwaZulu-Natal (608), followed by Limpopo (230).

This distribution highlights the regional variations in fire activity, with certain provinces experiencing more intense fire events during this period. This spatial pattern should inform local, provincial and disaster planning agencies to allocate adequate resources (human, water, fire trucks, etc.) for dry seasons.

Moeti, T. & Weir-Smith, G. (2024). *Analysis of fire distribution across South Africa: a focus on recent fire alerts and hotspots. Spatial Insights: Edition 13*. Pretoria: eResearch Knowledge Centre, Human Sciences Research Council.

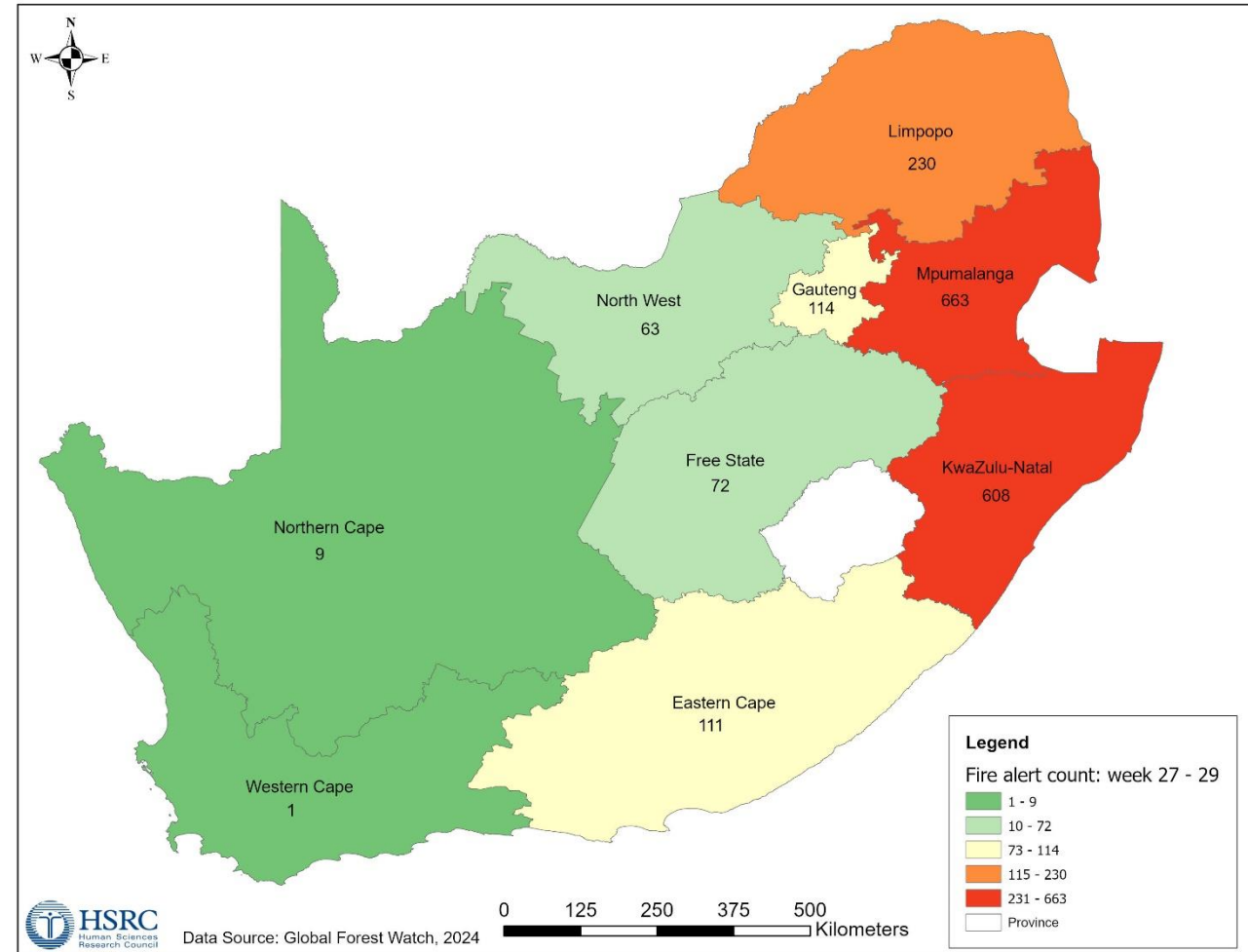


Figure 2: Fire alert counts by province in South Africa: weeks 27 – 29.

For more information, contact:

Ms Thabiso Moeti
tmoeti@hsrc.ac.za

Dr Gina Weir-Smith
gweir-smith@hsrc.ac.za