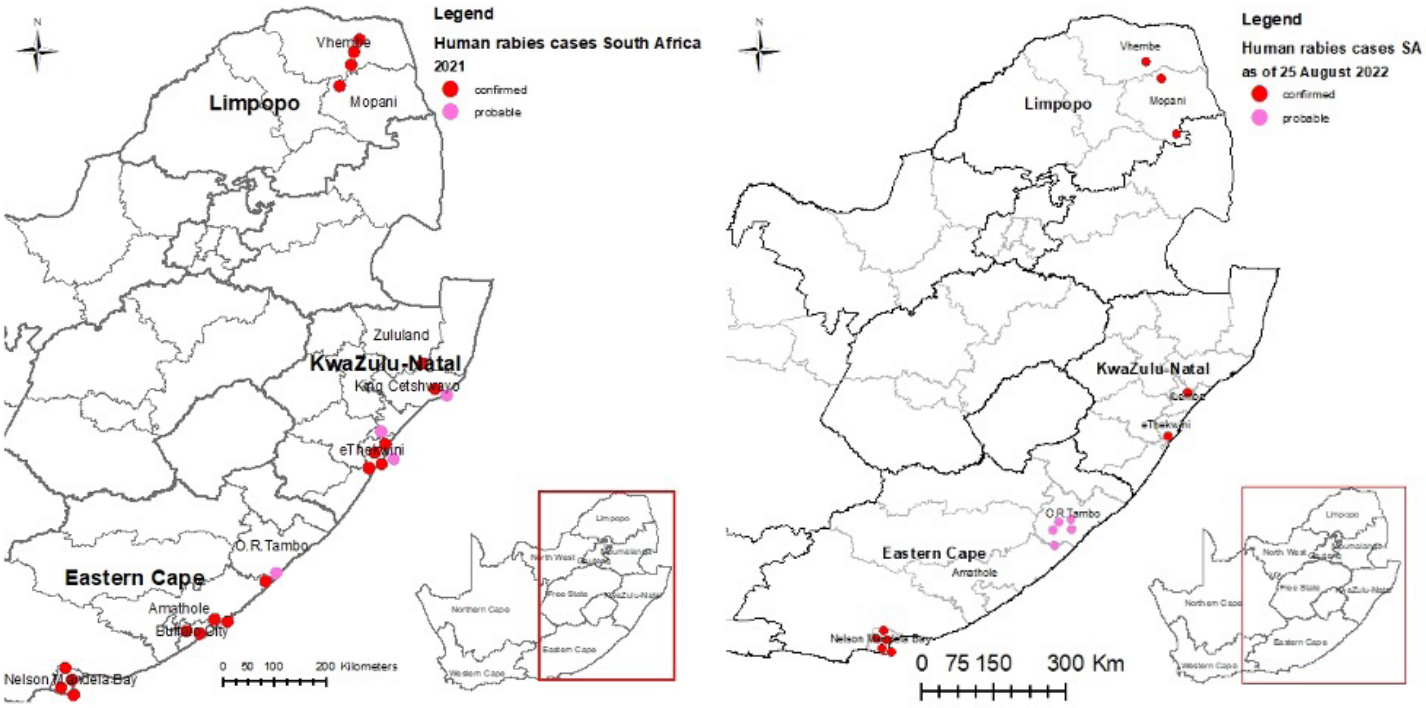
Rabies update - World Rabies Day

Rabies is a zoonotic disease with a high fatality rate that is typically contracted by being bitten by a rabid dog. Despite the existence of rabies vaccination for more than a century and the elimination of canine rabies in many regions of the world, dog-transmitted rabies remains a serious public health concern with 37% of cases in the world occurring in Sub-Saharan Africa, followed by 35% in India, 25% in the rest of Asia excluding India and Central Asia, and 3% in the Middle East, including northern Africa and Central Asia. Sub-Saharan African countries are estimated to spend the least on post-exposure prophylaxis (PEP), resulting in the highest costs associated with human rabies deaths and the wide underreporting of such deaths.

In the past two years, there has been an increase in human rabies cases in South Africa as a result of dog rabies outbreaks. In areas where it was previously unheard of, human rabies cases have also been reported. To date (22 September 2022), 29 cases of human rabies have been laboratory confirmed in South Africa in 2021 and 2022. The Eastern Cape (EC=14), Limpopo (LPP=7), and KwaZulu-Natal (KZN=8) were the three provinces that reported cases. Additionally, nine other probable cases of human rabies deaths were reported from the EC and from KZN (Figures 2 and 3). Nelson Mandela Bay district, which had an unprecedented number of human cases, Buffalo City, OR Tambo and Amathole districts (EC); Vhembe and Mopani districts (LPP) and eThekwini and King Cetshwayo, Zululand and iLembe districts (KZN) all reported cases (Figures 2 and 3). However, no cases have been reported in the most recent month after 25 August 2022 (Figure 3).



Figures 2 and 3. Laboratory-confirmed and probable cases of human rabies cases in South Africa in 2021 and 2022 up until 22 September (from NICD data source).

The World Health Organization, the World Organization for Animal Health, the Food and Agriculture Organization of the United Nations, and the GARC proposed this strategy in 2016. It deliberately designates dog-mediated human rabies deaths as the first target for rabies elimination because of its importance for public health as well as its possibility to be achieved in the short term. The longer-term objective of stopping the spread of the disease and completely eliminating canine rabies would take more time, but precedents from many different nations show that it is feasible. The National Strategy for the Elimination of dog-mediated rabies in South Africa (2019-2030) was signed by the Department of Agriculture, Land Reform and Rural Development and the Department of Health in 2021 (Introduction (dalrrd.gov.za)). The proposed strategy focuses on using a One Health approach to manage rabies outbreaks in both humans and animals through interdisciplinary collaboration between public health and veterinary sectors, moving countries from having endemic rabies to eliminating dog-mediated rabies.

Since 2007, the anniversary of Louis Pasteur's death on 28 September has served as the date for World Rabies Day. In 1885, Louis Pasteur, a French chemist and microbiologist, successfully administered the rabies vaccine to a dog bite victim for the first time. World Rabies Day strives to promote rabies elimination globally and increase public awareness of the disease. More than thirty rabies vaccination and awareness and learning activities coordinated by governmental and private stakeholders in South Africa have been registered with the Global Alliance for Rabies Control (GARC) (www.rabiesalliance.org), to be organized and held in September 2022. Additional details regarding rabies and PEP as well as the Rabies World Day may be found on the NICD website (www.nicd.ac.za) and GARC website (www.rabiesalliance.org).

Figure 4. The theme for the 16th annual World Rabies Day in 2022 is 'One Health, Zero Death'.

Source: Centre for Emerging Zoonotic and Parasitic Diseases, NICD-NHLS; JacquelineW@nicd.ac.za