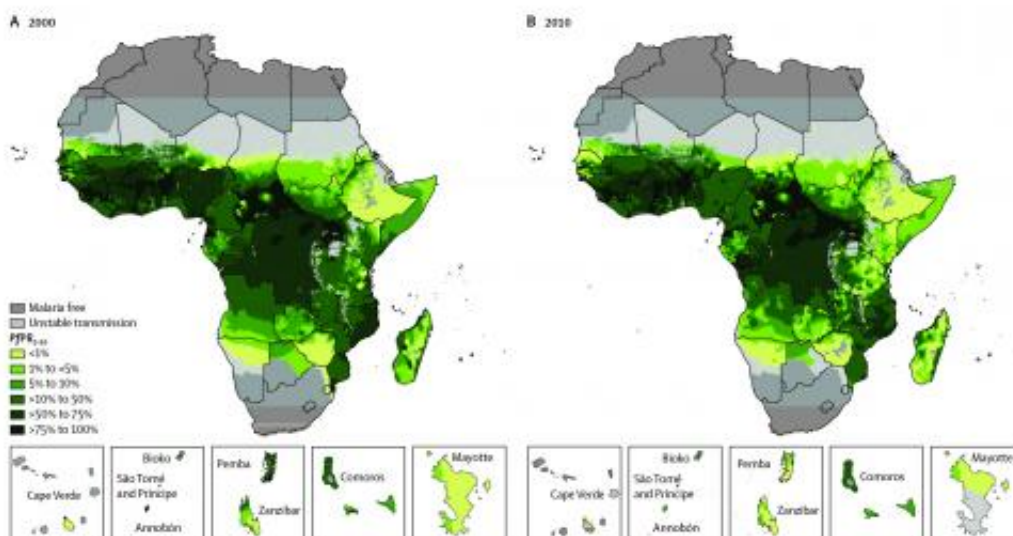


57 percent of Africa's population remains at moderate to high risk of contracting most deadly form of malaria

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Predicted 1 × 1 km spatial resolution *Plasmodium falciparum* parasite rate endemicity class maps of Africa. Credit: Dr Abdisalan Mohamed Noor / The Lancet

However, the findings also show that substantial reductions in malaria transmission have been achieved across most of the malaria-endemic countries of Africa between 2000 and 2010, with more than a quarter of the population (around 218 million people) now living in areas with a much lower risk of infection.

In this study, researchers from the Kenya Medical Research Institute, University of Oxford, and WHO Regional Office for Africa compiled data from the largest ever collection of 26 746 community-based surveys of parasite prevalence covering 3 575 418 person observations from 44 [malaria](#)-endemic countries and territories in Africa since 1980. Using model-based geostatistics they estimated the proportion of the population aged 2-10 years old infected with different levels of the parasite *Plasmodium falciparum* across Africa soon after the launch of the Roll Back Malaria initiative in 2000 and a decade later.

They found reductions in the prevalence of [malaria infection](#) in children in 40 of 44 countries in Africa between 2000 and 2010.

Over the decade, they estimated that the number of people living in high-transmission areas fell from 218.6 million to 183.5 million (a 16% drop), but the population living in areas where risk of infection is considered moderate to high increased from 178.6 million to 280.1 million (a 57% increase).

Conversely, the population living in areas where risk is regarded as very low increased from 78.2 million to 128.2 million (a 64% increase), and four countries (Cape Verde, Eritrea, South Africa, and Ethiopia) joined Swaziland, Djibouti, and Mayotte at levels of transmission that make elimination a realistic goal.

Nevertheless, says Professor Robert Snow from the Kenya Medical Research Institute-Wellcome Trust Research Programme, 57% of people in Africa still live in areas of moderate-to-high transmission intensity. "Almost all (87%) of those in the two highest endemicity classes are living in just 10 countries. Of these, three (Guinea, Mali, and Togo) are not part of the 10 countries that are the focus of the WHO Malaria Situation Room."

The authors point out that high population growth rates have reduced some of the proportional gains in transmission reduction, with 200 million extra people now living in malaria-endemic regions compared with in 2000.

"The international community has invested heavily in malaria control with finance increasing from around \$100 million in 2000 to nearly \$2 billion in 2013", explains Dr Abdisalan Mohamed Noor from the Kenya Medical Research Institute-Wellcome Trust Research Programme and University of Oxford.

"Previous attempts at measuring the effects of efforts to control malaria have used changes in deaths from malaria or clinical episodes of infection that rely on imprecise and unreliable methods such as verbal autopsy and limited passive case detection. A more robust alternative is to measure changes in malaria parasite infection rates detected by microscopy or a rapid diagnostic test sampled through random community surveys. In the next decade these surveys should continue to be implemented. At the same time concerted efforts should be invested in rapidly expanding the diagnosis and reporting of clinical cases in Africa."

According to Professor Snow, "In a period of global economic recession, these results emphasise the need for continued support for malaria control, not only to sustain the gains that have been made, but also to accelerate the reduction in transmission intensity where it still remains high. If investments in malaria are not sustained, hundreds of millions of Africans run the risk of rebound transmission, with catastrophic consequences."

Writing in a linked Comment, Professor Sir Brian Greenwood from the London School of Hygiene and Tropical Medicine and Dr Kwadwo Koram from the Noguchi Memorial Institute of Medical Research in

Ghana say, "Noor and colleagues have shown that, during the past decade, the reductions in malaria transmission that have been achieved in much of sub-Saharan Africa, although encouraging, have been only modest. Also, these gains are threatened by emerging resistance to the pyrethroid group of insecticides and by the potential appearance of artemisinin-resistant malaria parasites in Africa."

They conclude, "More could be done to improve [malaria control](#) in high-risk countries by increasing coverage with proven interventions such as insecticide-treated nets and chemoprevention. However, a focus on elimination must not result in a reduction in support for development of new methods (drugs, insecticides, vaccines, and new approaches to vector control), and improved delivery methods, which will be needed in large areas of sub-Saharan Africa before [malaria transmission](#) can be reduced to the level at which elimination becomes a credible prospect."

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