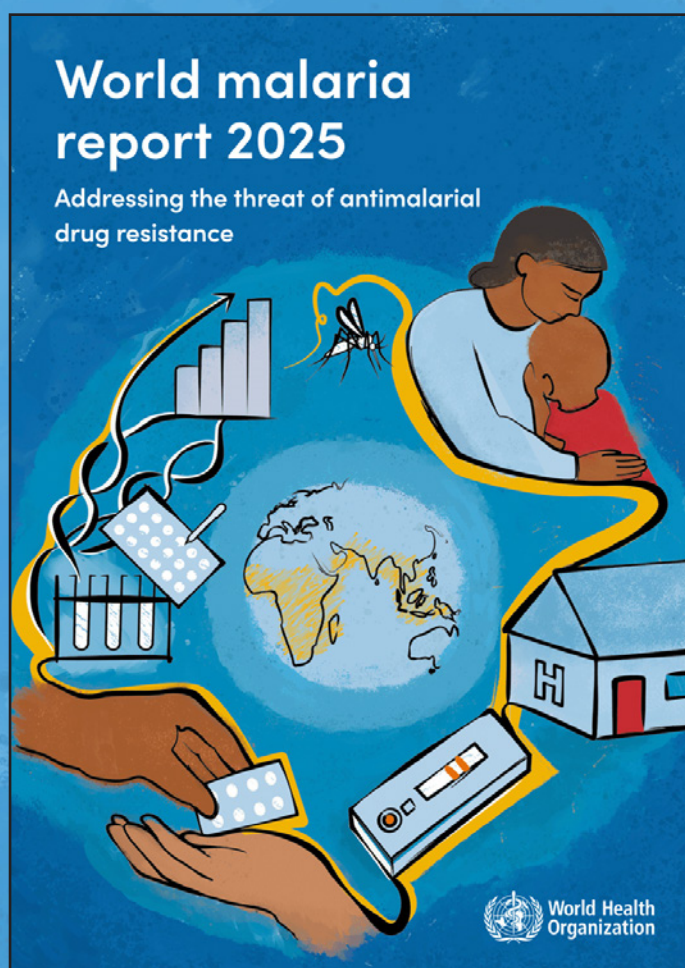


World malaria report 2025

Executive summary



Malaria situation worldwide

This year's report highlights several notable successes and encouraging trends – even amid serious challenges. Since 2000, 2.3 billion malaria cases and 14 million malaria deaths have been averted worldwide. There has been continued movement towards global elimination goals, with 47 countries and one territory now officially certified as malaria free by the World Health Organization (WHO). In 2024, progress in low-burden settings was sustained, with 37 countries reporting fewer than 1000 cases. Core effective interventions, such as the use of piperonyl butoxide (PBO) and dual active ingredient insecticide-treated mosquito nets (ITNs), rapid diagnostic tests (RDTs), seasonal and perennial malaria chemoprevention (SMC and PMC) and the malaria vaccine, were also expanded.

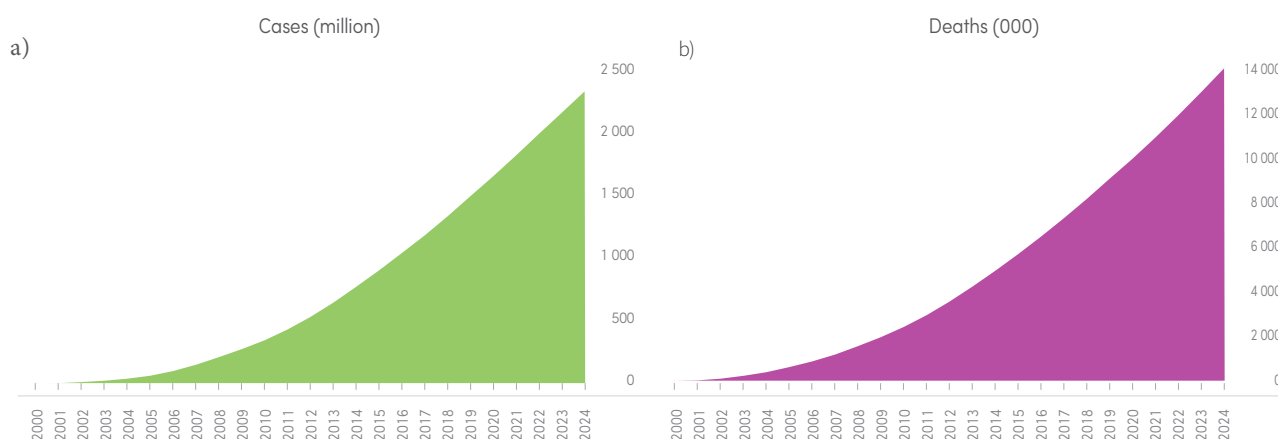
Despite these gains, malaria remains a serious global health challenge, with an estimated 282 million cases and 610 000 deaths worldwide in 2024 – a slight increase compared with 2023. The WHO African Region continues to account for most cases and deaths, with 11 countries accounting for about two thirds of the global malaria burden. Progress is not on track to meet critical *Global technical strategy for malaria 2016–2030* (GTS) 2025 targets for reductions in incidence and mortality.

Malaria responses worldwide are preventing illness and saving lives

Despite challenges, malaria prevention and response continue to have a measurable impact. Since 2000, malaria control efforts have helped avert 2.3 billion cases and 14 million deaths worldwide. Alongside core malaria interventions, new tools and broader health and

development improvements – such as urbanization, improved housing, nutrition, education and access to primary care – have reduced exposure to malaria vectors and improved survival after infection.

Fig. 1. Cumulative number of a) malaria cases and b) malaria deaths averted globally, 2000–2024 Source: WHO estimates.



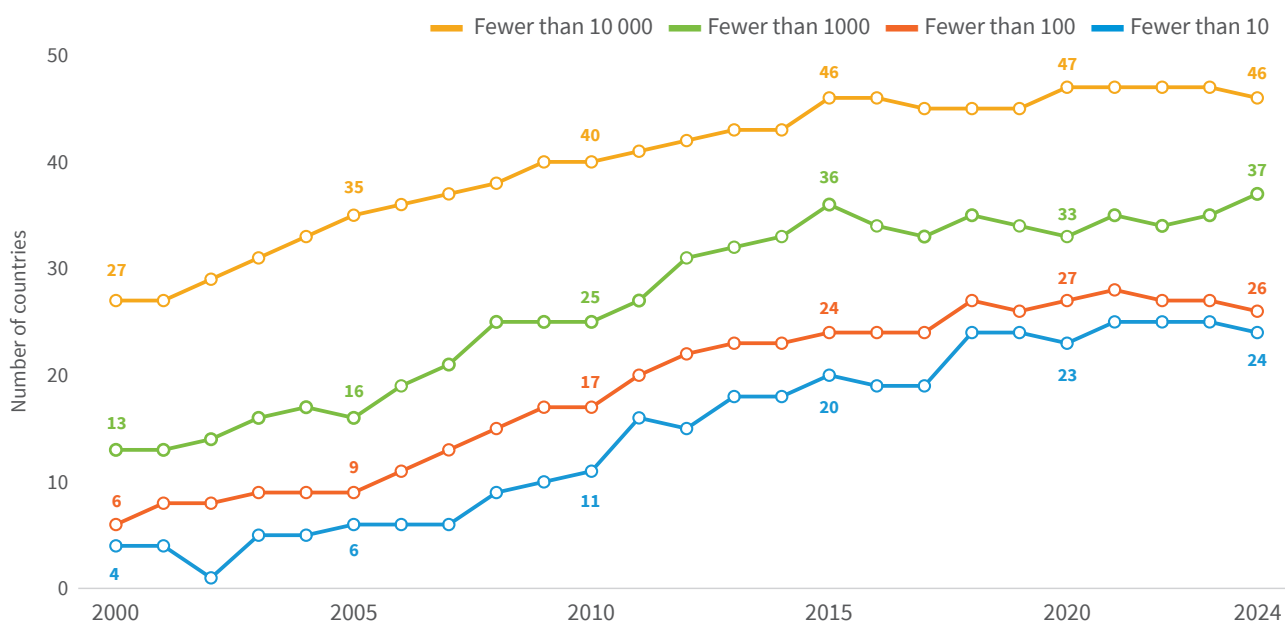
WHO: World Health Organization

Many countries report progress towards elimination

Between 2000 and 2024, the number of countries reporting fewer than 1000 malaria cases per year increased from 13 to

37, while countries reporting fewer than 10 cases increased from four to 24.

Fig. 2. Number of countries that were malaria endemic in 2000 and had fewer than 10, 100, 1000 and 10 000 indigenous malaria cases, 2000–2024 Sources: NMP reports and WHO estimates.



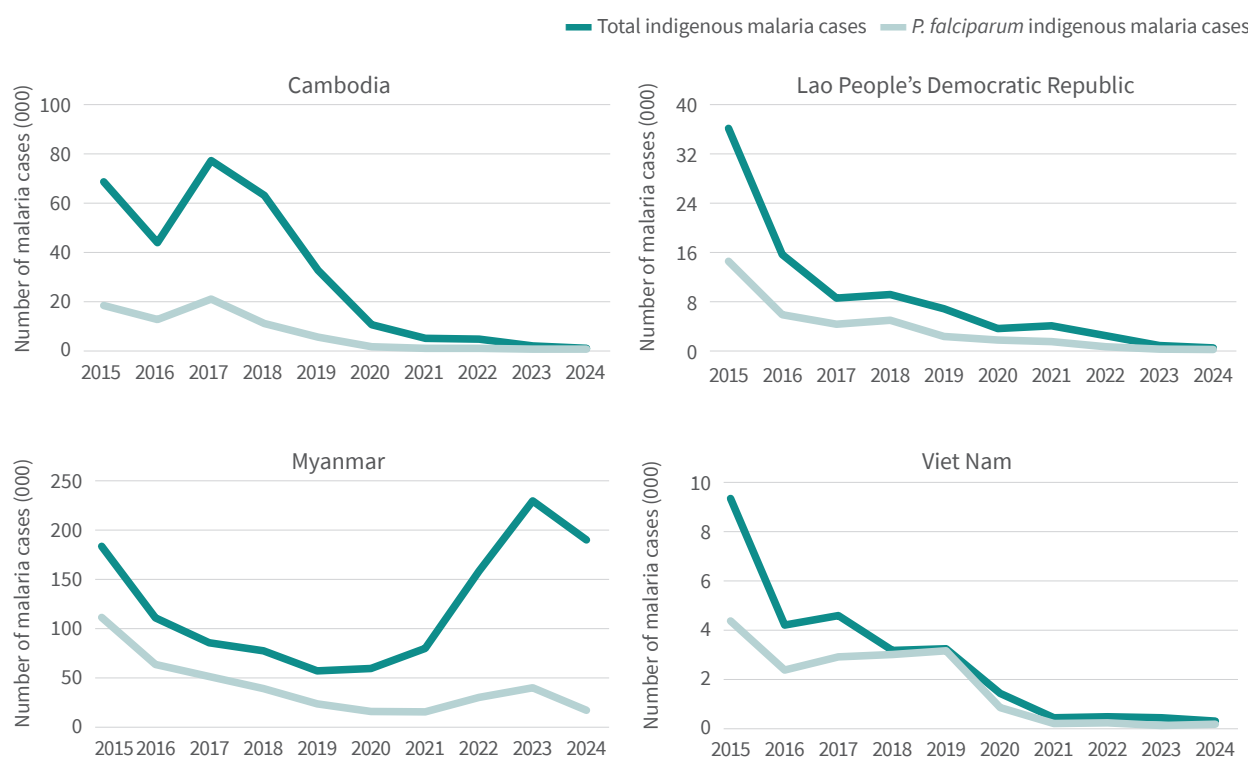
NMP: national malaria programme; WHO: World Health Organization.

In the face of antimalarial drug resistance, elimination is now within reach in three countries in the Greater Mekong subregion (GMS)

Between 2015 and 2024, indigenous *Plasmodium falciparum* cases fell by nearly 90% in the GMS, with Cambodia, the Lao People's Democratic Republic and Viet Nam nearing elimination. This success reflects strong national leadership,

targeted use of effective treatments, robust surveillance and sustained community engagement, proving that malaria elimination is achievable even in areas long affected by antimalarial drug resistance.

Fig. 3. Total indigenous malaria and *P. falciparum* cases in endemic countries in the GMS, 2015–2024 Source: NMP reports.



GMS: Greater Mekong subregion; NMP: national malaria program; *P. falciparum*: *Plasmodium falciparum*.

To date, WHO has certified 47 countries and one territory as malaria free

Malaria free certification is granted when a country can prove, beyond a reasonable doubt, that the chain of indigenous malaria transmission has been interrupted

nationwide for at least 3 consecutive years. Recently certified countries include Egypt, Georgia, Suriname and Timor-Leste (as of October 2025).

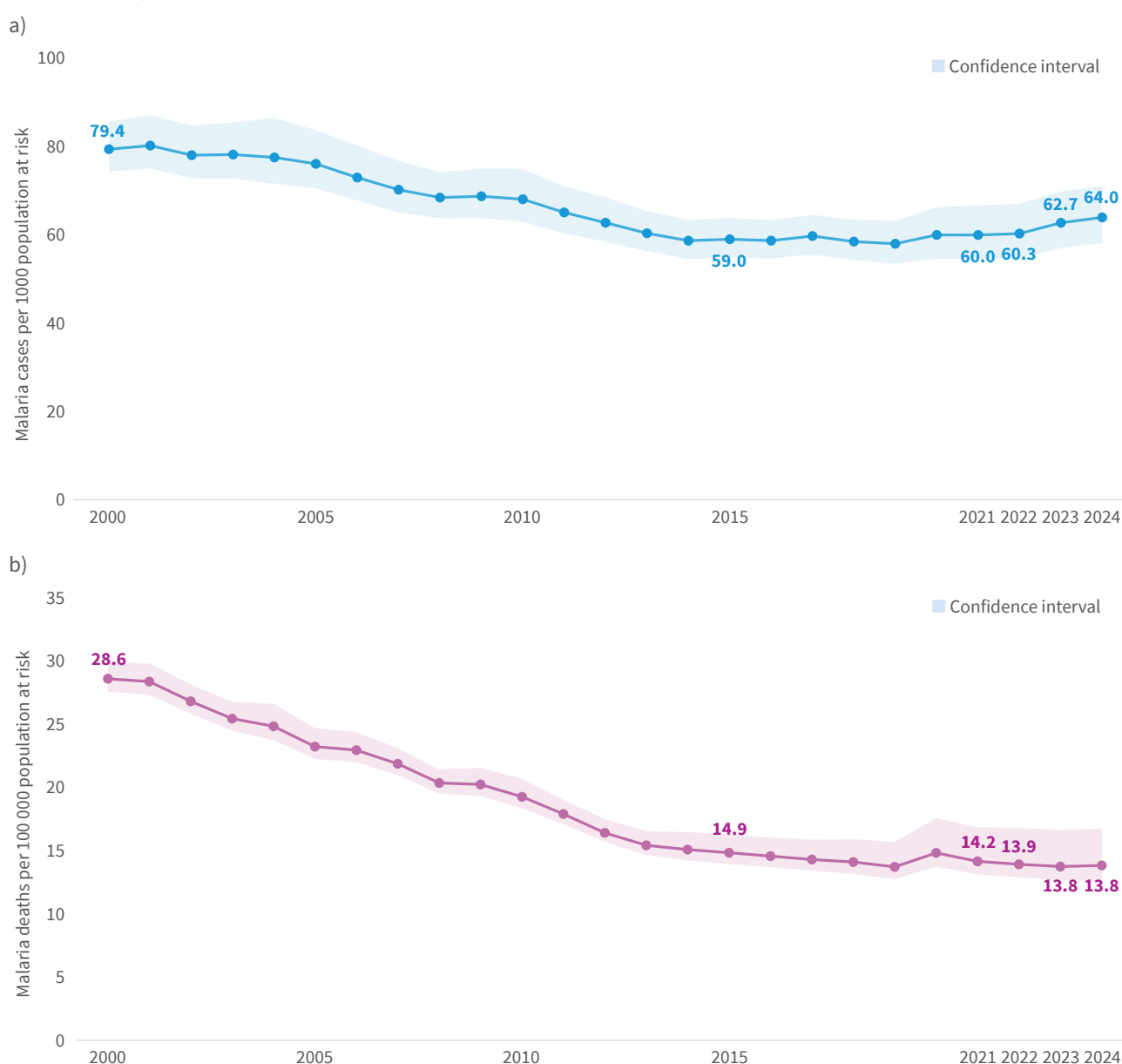
Malaria remains a serious global health challenge, particularly in the WHO African Region

- In 2024, there were an estimated 282 million new malaria cases in 80 malaria endemic countries worldwide, up from 273 million in 2023 and 230 million in 2015. Increases in cases were largely driven by trends in a few countries, including Ethiopia (+2.9 million), Madagascar (+1.9 million) and Yemen (+378 000). Malaria case incidence, which accounts for population growth, grew in the period 2015–2024 from 59 to 64 cases per 1000 population at risk.
- The global tally of malaria deaths reached 610 000 in 2024, compared with 578 000 in 2015. Since 2015, the global malaria mortality rate has declined from 14.9 to

13.8 deaths per 100 000 population at risk. The increase in the number of deaths, despite the declining mortality rate, reflects the effects of population growth, while interventions were effective in reducing the mortality rate.

- The WHO African Region remained hardest hit by malaria in 2024, accounting for 94% of cases and 95% of deaths globally, with 75% of deaths in the region occurring in children aged under 5 years. Five countries – the Democratic Republic of the Congo, Ethiopia, Mozambique, Nigeria and Uganda – contributed more than half of all global cases.

Fig. 4. Global trends in a) malaria case incidence (cases per 1000 population at risk) and b) mortality rate (deaths per 100 000 population at risk), 2000–2024 *Source: WHO estimates.*



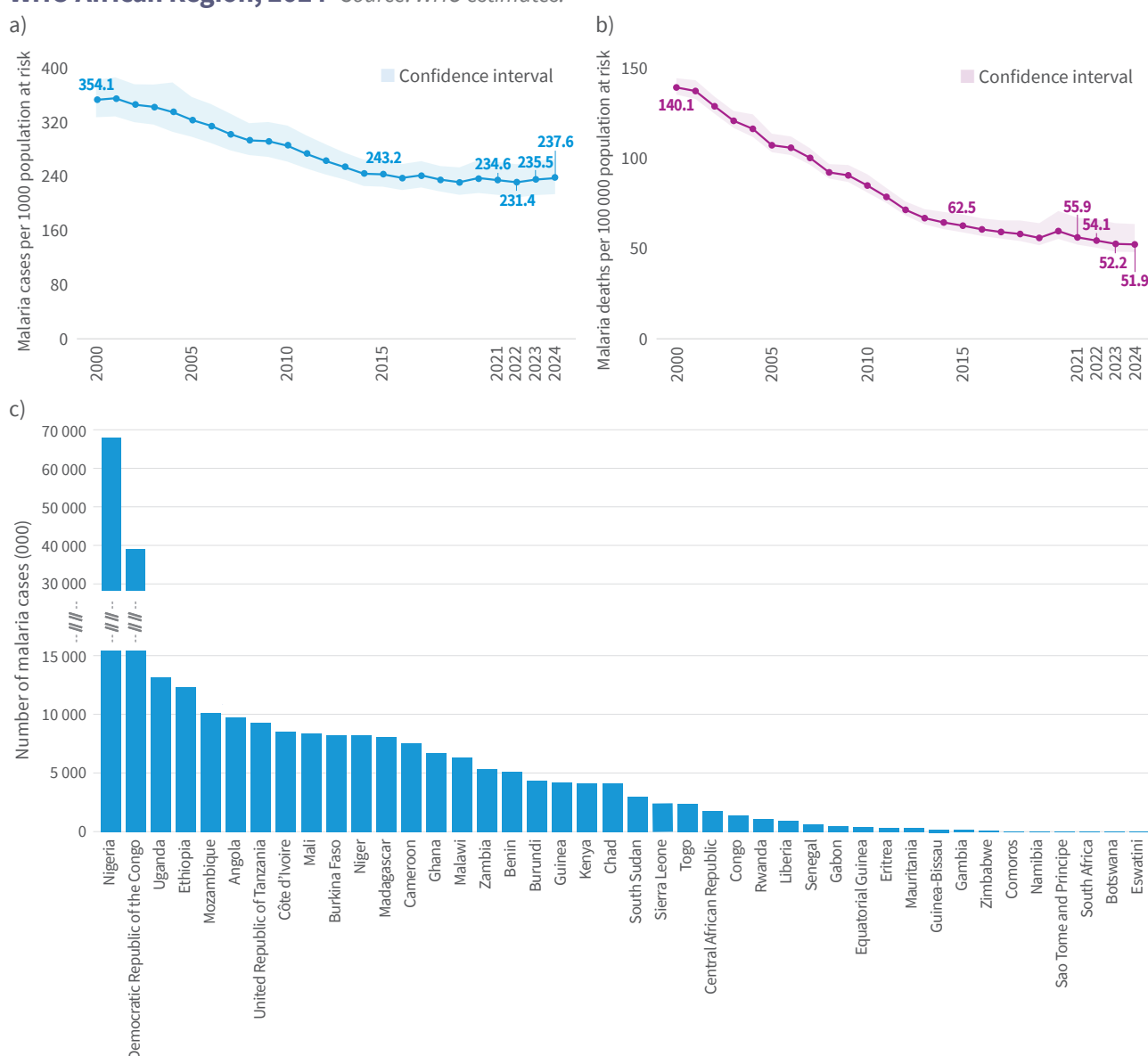
Despite gains in Africa's malaria response, progress must be accelerated

■ About two thirds of global malaria cases and deaths are concentrated in 11 African countries: Burkina Faso, Cameroon, the Democratic Republic of the Congo, Ghana, Mali, Mozambique, the Niger, Nigeria, the Sudan, Uganda and the United Republic of Tanzania.¹ Case incidence (cases per 1000 population at risk) and mortality rate (deaths per 100 000 population at risk) in these countries declined by about 1% and 14%, respectively, in the period 2017–2024.

■ Between 2015 and 2024, the WHO African Region achieved a 2% reduction in case incidence and a 17% decline in mortality rate. However, rates in 2024 for both indicators were more than double the target levels set by the GTS.

¹ These 11 countries have adopted the high burden to high impact approach, a targeted effort to reach populations at greatest risk of malaria with tailored packages of interventions informed by local data and disease settings.

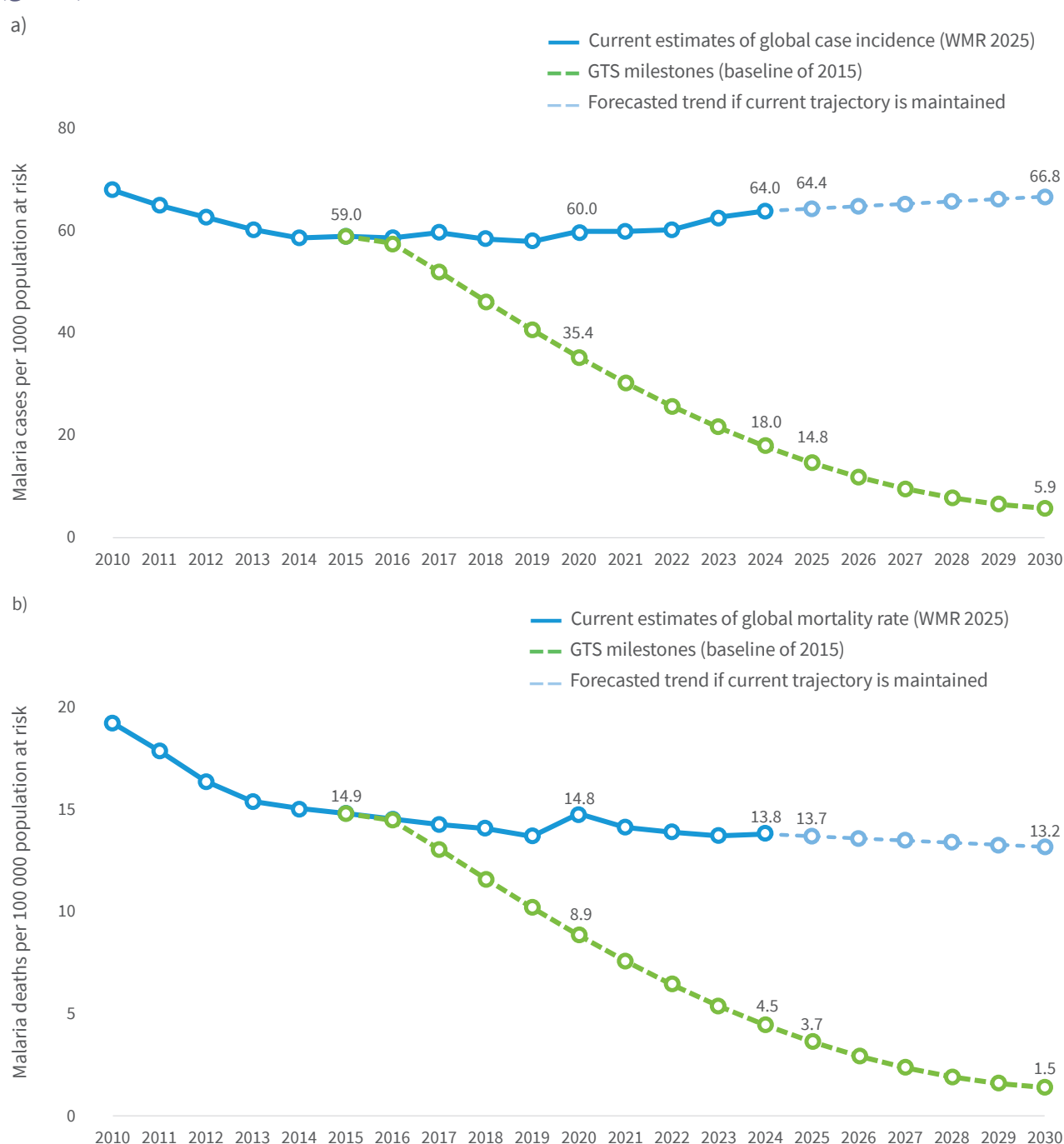
Fig. 5. Trends in a) malaria case incidence (cases per 1000 population at risk) and b) mortality rate (deaths per 100 000 population at risk), 2000–2024; and c) malaria cases by country in the WHO African Region, 2024^a Source: WHO estimates.



Progress towards key targets of the WHO GTS remains substantially off track

- The GTS calls for reductions in malaria case incidence and mortality rate of at least 75% by 2025 and 90% by 2030, compared with 2015 baseline levels. The 2024 malaria incidence of 64 cases per 1000 population at risk was more than three times higher than the 18 cases per 1000 needed to reach the target.
- In 2024, there were 13.8 malaria deaths per 100 000 population at risk, more than three times the GTS target of 4.5 deaths per 100 000.

Fig. 6. Comparison of global progress in malaria a) case incidence and b) mortality rate considering two scenarios: current trajectory maintained (blue) and GTS targets achieved (green) Source: WHO estimates.



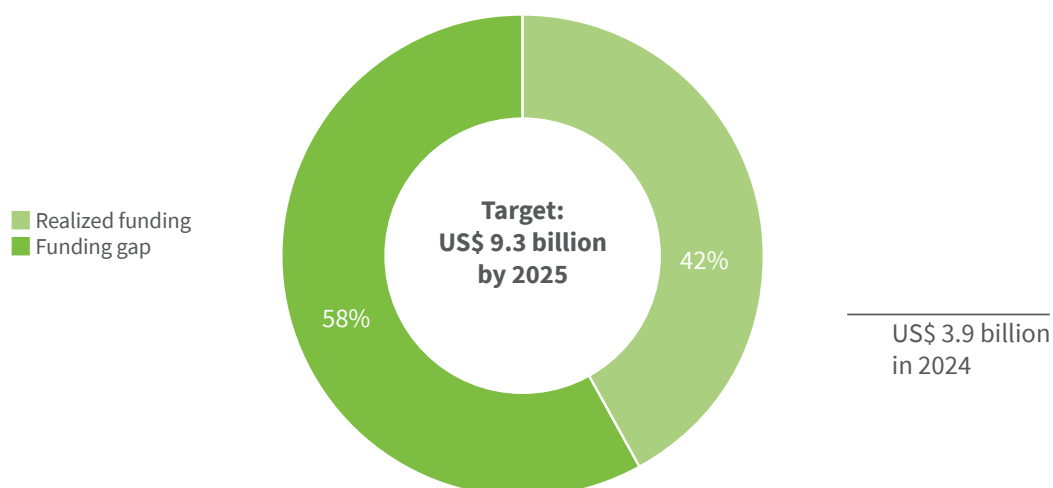
Key threats to progress

The year 2024 was marked by significant biological, systemic and financial challenges. Antimalarial drug resistance and *P. falciparum* histidine-rich protein 2 and 3 (*pfhrp2/3*) gene deletions continued to compromise the effectiveness of case management, while widespread insecticide resistance reduced the impact of vector control tools. *Anopheles stephensi* further expanded its range and is now reported in nine African countries, heightening urban malaria risks. Beyond biological threats, climate change, conflict and humanitarian crises continue to drive malaria resurgence and disrupt essential services.

In 2024, available malaria funding fell far short of the GTS target of US\$ 9.3 billion by 2025

- Globally in 2024, total investments in malaria control reached an estimated US\$ 3.9 billion. Based on the 2025 GTS target of \$9.3B, this corresponds to a projected shortfall of about \$5.4B, with only 42% of required funding attained.
- Between 2010 and 2024, about 67% of malaria funding came from international sources, while endemic countries supplied 33%. In 2024, about 56% of malaria funding came from international sources, with endemic countries increasing their share to 44%.

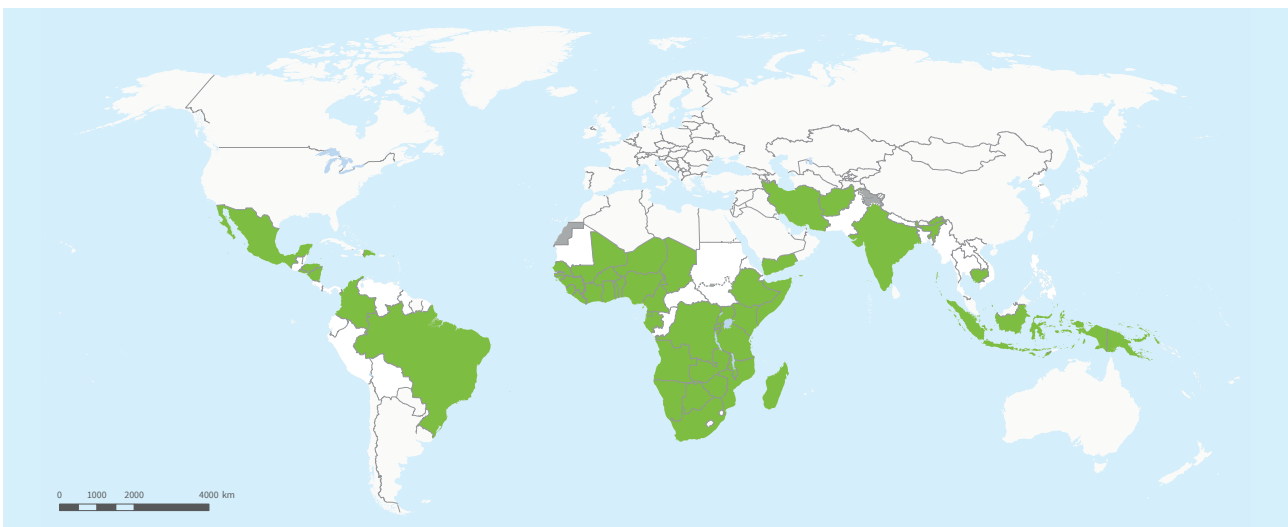
Fig. 7. GTS 2025 funding target for malaria control and elimination Sources: GTS and 2021 GTS update.



Mosquito resistance to pyrethroids – the most commonly used chemical on ITNs – remains widespread

- Widespread uptake of ITNs has been credited with leading to a 70% reduction in malaria cases in Africa between 2000 and 2015. However, most of these ITNs were treated with insecticides from one class: pyrethroids.
- The effectiveness of ITNs is threatened by the development of resistance to pyrethroids, which has been confirmed in 48 of 53 countries reporting on pyrethroid resistance between 2020 and 2024.
- New-generation nets (PBO and dual active ingredient) offer superior malaria protection over pyrethroid-only nets and are becoming more widely available.

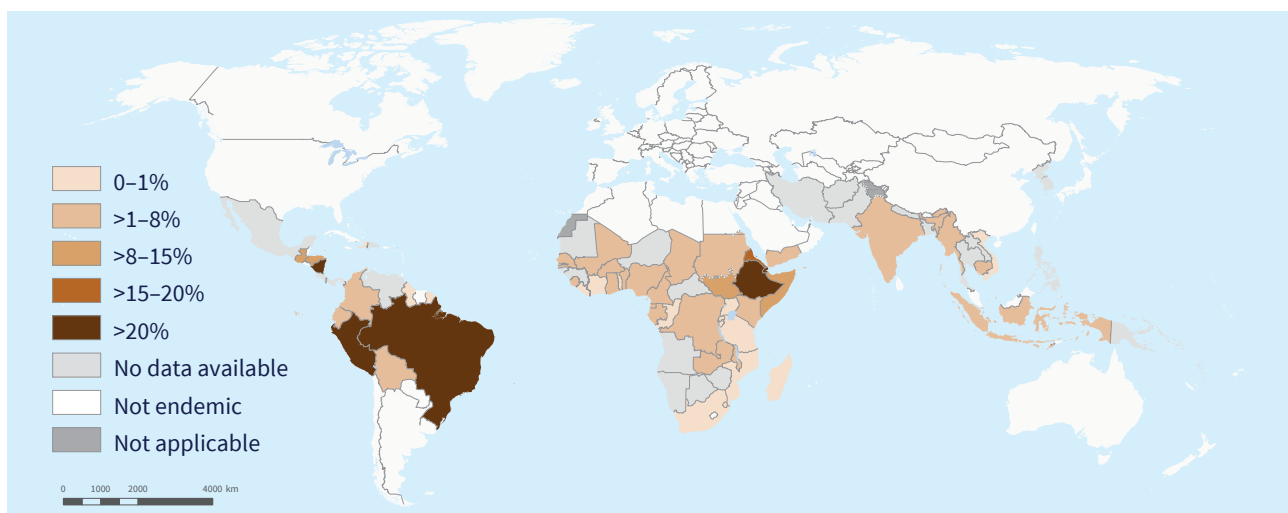
Fig. 8. Countries reporting confirmed pyrethroid resistance, 2020–2024 *Source: Reports from National Malaria Programmes and national health institutes, their implementation partners, research institutions and scientific publications.*



Pfhrp2 gene deletions continue to spread, undermining malaria diagnosis

- As of 2024, malaria parasites with *pfhrp2* gene deletions have been reported in 42 endemic countries. Viet Nam reported *pfhrp2* gene deletions for the first time in 2024. Although the prevalence of *pfhrp2* gene deletions is still low in most countries, it exceeds 15% in Brazil, Djibouti, Eritrea, Ethiopia, Nicaragua and Peru. WHO now recommends switching to non-histidine-rich protein 2 RDTs in areas where the prevalence of deletions exceeds 5%.

Fig. 9. Estimated prevalence of *pfhrp2* gene deletions, 1996–2024 *Source: Review of published literature included in the Malaria Threats Map*

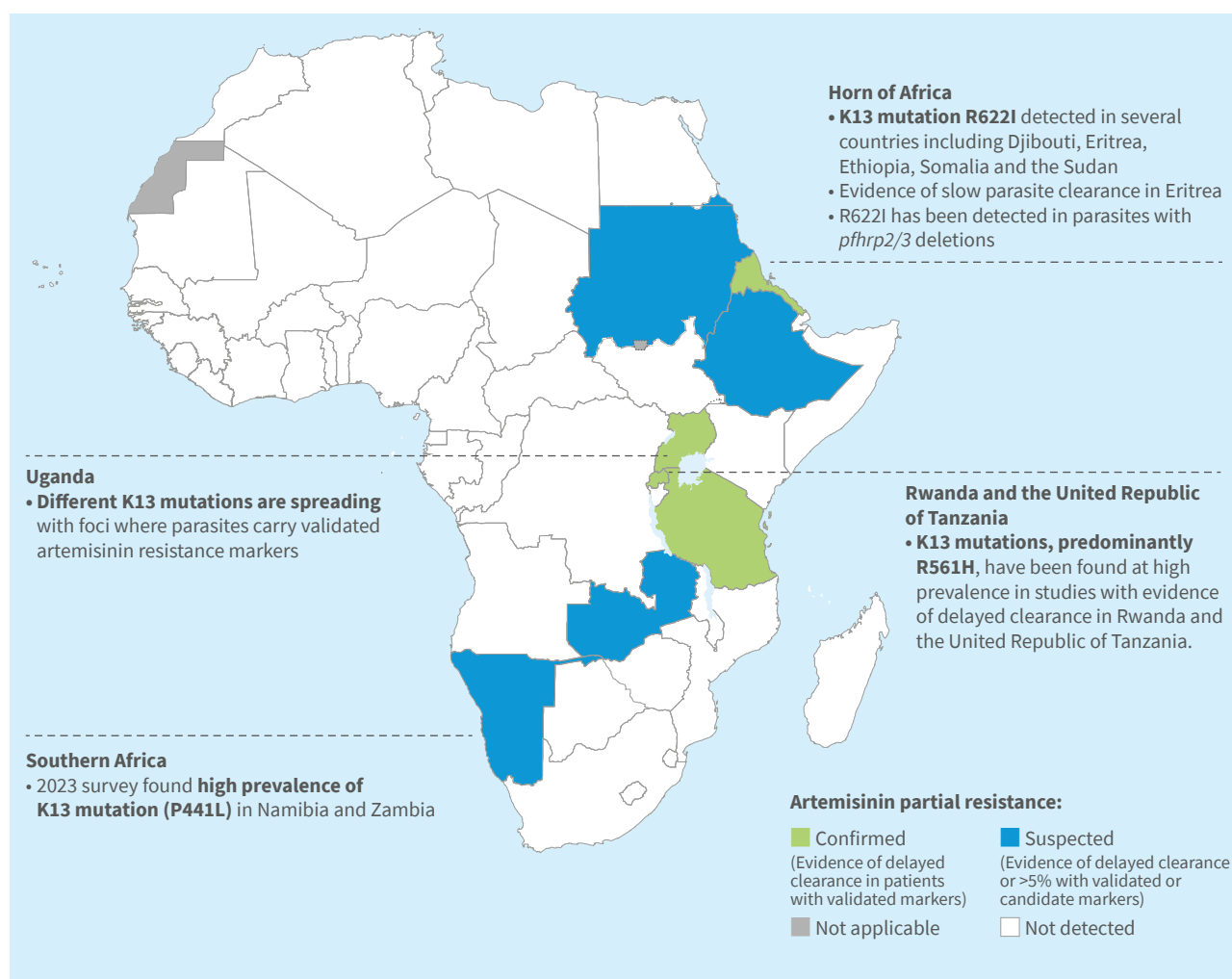


pfhrp2: *Plasmodium falciparum* histidine-rich protein 2.

The spread of antimalarial drug resistance in Africa is an acute concern

- Antimalarial drug resistance stands among the greatest threats to sustaining progress towards malaria elimination. History of the use of chloroquine and sulfadoxine–pyrimethamine shows how quickly resistance can reverse gains when it spreads undetected or unaddressed.
- In the GMS, the emergence of resistance became a unifying threat that drove large-scale investment, coordinated surveillance, rapid data sharing and policy change. Countries that were once the epicentre of resistance, including Cambodia, the Lao People's Democratic Republic and Viet Nam, are now close to eliminating *P. falciparum* malaria.
- In Africa, *P. falciparum* Kelch13 (*PfKelch13*) gene mutations associated with artemisinin partial resistance have emerged from multiple independent origins and are spreading. Artemisinin partial resistance has been confirmed in Eritrea, Rwanda, Uganda and the United Republic of Tanzania, and suspected resistance has been reported in Ethiopia, Namibia, the Sudan and Zambia. In some high transmission settings, such as Uganda, more than half of parasites have been found to carry mutations associated with artemisinin partial resistance.
- Therapeutic efficacy studies (TES) indicate that artemisinin-based combination therapies (ACTs) are still able to cure most infections across Africa, but the repeated emergence and spread of artemisinin partial resistance point to rising drug pressure and increasing vulnerability of partner drugs, especially lumefantrine and amodiaquine, in a context where treatment depends on a limited number of combinations.

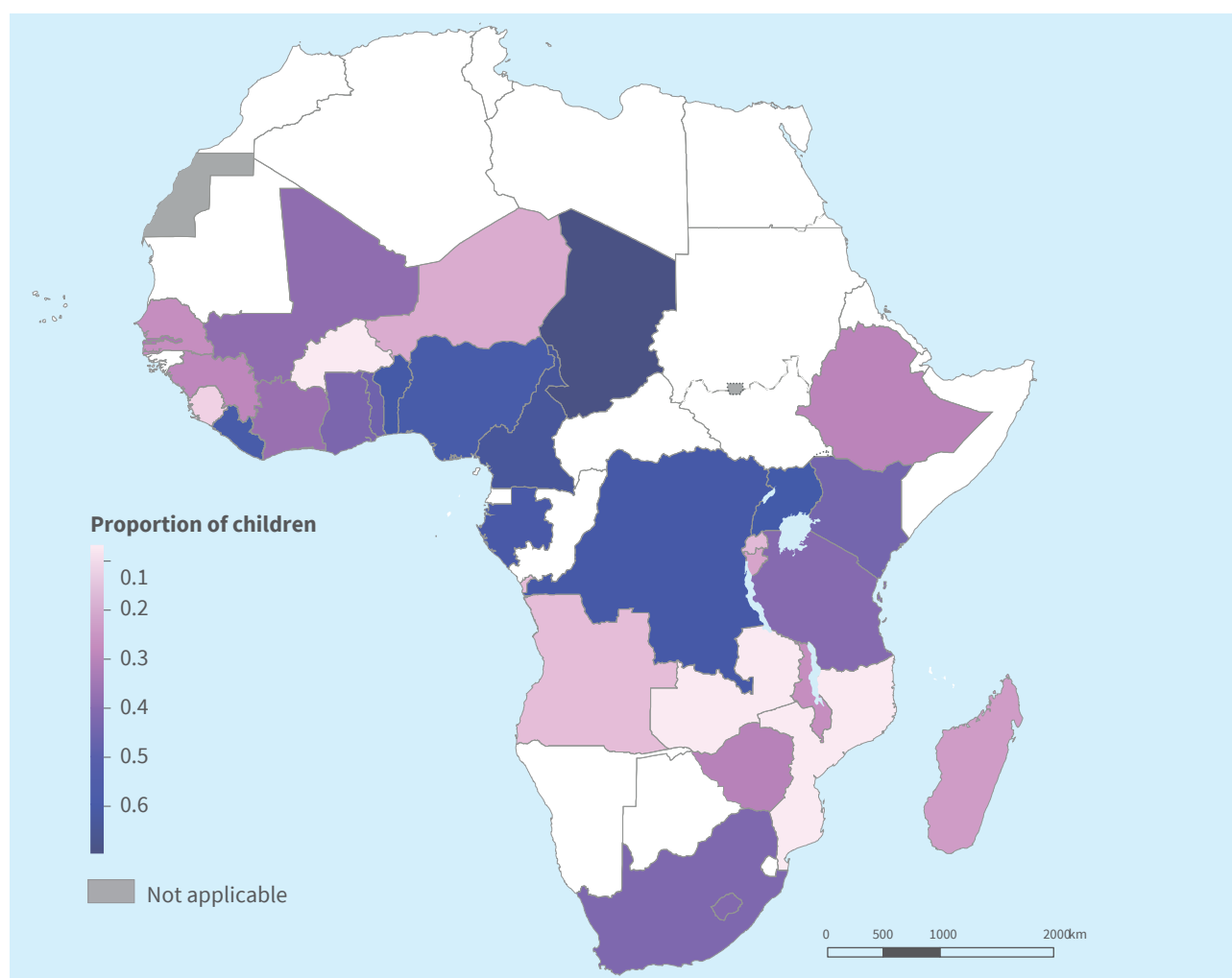
Fig. 10. Map of artemisinin partial resistance in Africa. Source: Review of published literature included in the Malaria Threats Map



- The private sector is a major source of malaria care in many endemic countries, with more than 60% of children with fever seeking treatment from private providers in Benin, Cameroon, Chad, the Democratic Republic of the Congo and Gabon. These outlets expand access to care, but limited diagnostic testing, presumptive treatment, incomplete courses and circulation of non-approved or poor-quality antimalarials create conditions that favour the emergence and spread of resistant parasites.
- In 2022, WHO launched its *Strategy to respond to antimalarial drug resistance in Africa*, aiming to improve detection and timely responses, delay the emergence of resistance to artemisinin and ACT partner drugs, and limit the spread of resistant parasites where they are already established.
- An effective response must be adapted to local contexts and reflect where people actually seek care, supported by strong regulation, better quality assurance and active engagement of providers across public and private sectors. Incorporating new tools and strategies, including the use of multiple first-line therapies, will be important to reduce drug pressure and slow the spread of resistant parasites. Several countries, including Burkina Faso, Eritrea, Malawi, Rwanda and Uganda, are now adapting the WHO strategy to their specific needs.
- Timely, high-quality surveillance of drug efficacy and resistance, expansion of molecular surveillance, rapid sharing of data and quality case management across both public and private sectors, supported by sustained financing and coordinated action across countries and sectors, are central to detecting and limiting the impact of resistance.

Fig. 11. Proportion of children seeking care in the private sector (formal, informal or pharmacies)^a

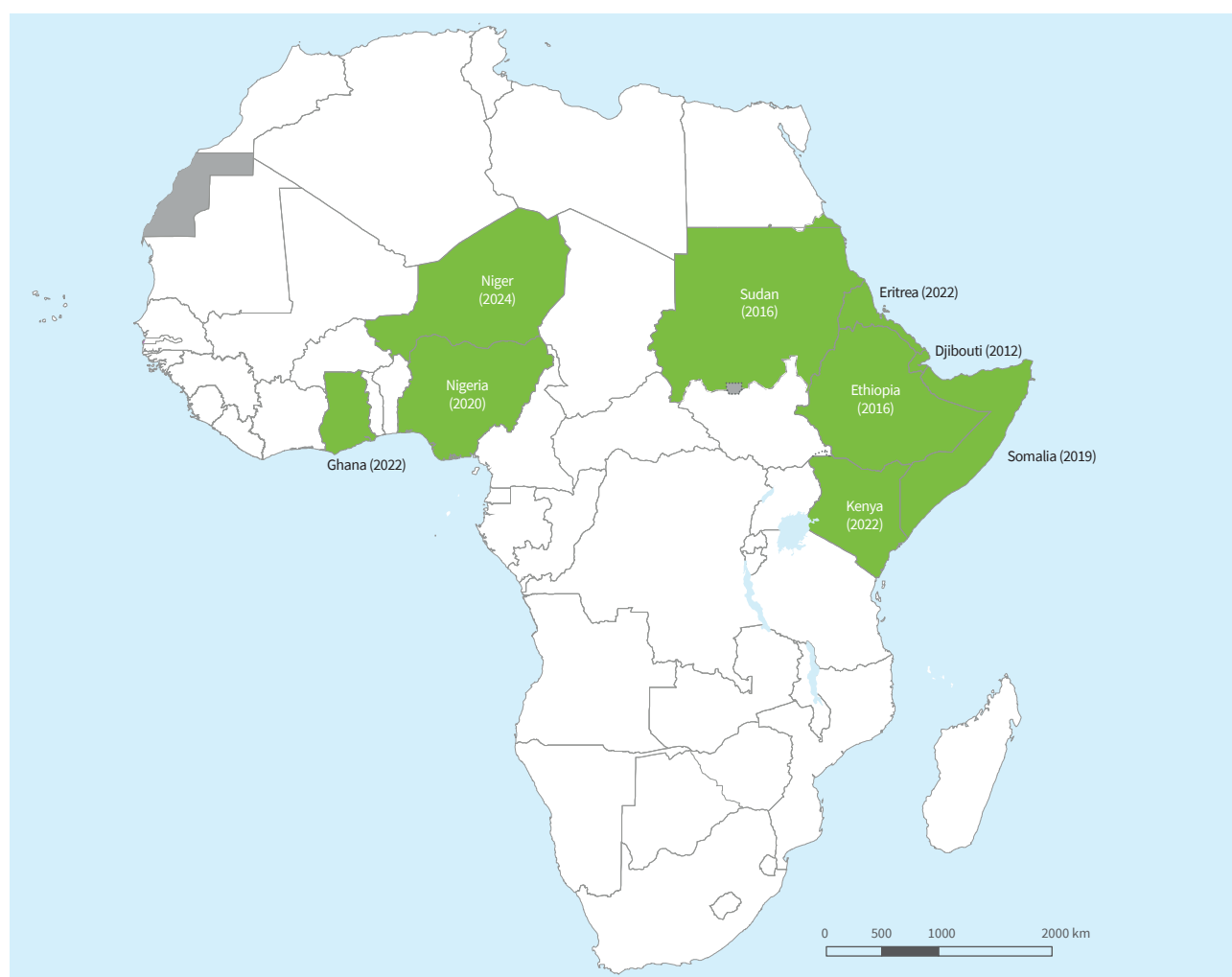
Source: DHS/MIS 2015–2024.



The spread of *An. stephensi* presents an added challenge for malaria control on the African continent

- Originally native to parts of southern Asia and the Arabian Peninsula, the invasive mosquito species *An. stephensi* has been expanding its range over the past decade, with detections reported to date in nine African countries. In 2024, *An. stephensi* was reported for the first time in the Niger.
- *An. stephensi* thrives in urban settings, endures high temperatures and is resistant to many of the insecticides used in public health.
- In 2022, the *WHO initiative to stop the spread of Anopheles stephensi in Africa* was launched to raise awareness of this growing threat and catalyse existing efforts by WHO Member States and partners to stop the further spread of *An. stephensi* in Africa.

Fig. 12. Spread of the invasive species *An. stephensi*, 2024. Data source: Reports from NMPs and national health institutes, their implementation partners, research institutions, scientific publications.



An.: *Anopheles*.

The spread of the *P. knowlesi* parasite poses unique challenges for malaria elimination in South-East Asia

- The zoonotic parasite *P. knowlesi*, initially found in monkeys, is known for its rapid and severe onset of infection, which has a human fatality rate of 1–2%. Globally, there were 2164 reported cases of *P. knowlesi* infection in 2024, a decrease of 34% compared with 2023, when 3290 cases were reported. Most of the cases (89%) were in Malaysia, followed by Indonesia (6%), Thailand (4%) and Cambodia (0.5%).
- In 2024, Malaysia reported 1927 cases – a 33% decline in indigenous *P. knowlesi* cases from 2023 – and three *P. knowlesi* deaths, down from 14 in 2023.
- The four *P. knowlesi* cases detected in malaria free Brunei Darussalam highlight the importance of maintaining strong surveillance systems.

Fig. 13. Countries reporting the highest numbers of *P. knowlesi* malaria cases, 2024 Data source: Reports from NMPs



What is being done

The World malaria report 2025 highlights positive trends in the scale-up of effective prevention tools, including expansion of new-generation nets, the malaria vaccine and SMC, as well as the introduction of PMC. There has also been notable progress in providing timely diagnosis and treatment for young children. However, coverage of ITNs and intermittent preventive treatment of malaria in pregnancy (IPTp) continues to lag, underscoring areas needing further action.

There have been improvements in case management for children aged under 5 years

- Data show a positive shift towards timely and effective malaria care in the vulnerable population of children aged under 5 years. Across 21 sub-Saharan African countries, the proportion of febrile children who were taken to a health service provider and received a diagnosis increased from a median of 30% in baseline studies (2005–2011) to 47% in more recent surveys (2017–2024). Of the children who reached a health service provider and received an antimalarial drug, a median of 68% were treated with an ACT in the period 2017–2024, compared with 34% in 2005–2011.
- ACTs are the most effective and widely recommended treatment for uncomplicated malaria, especially for infections caused by *P. falciparum*, the parasite responsible for most malaria deaths in Africa.

In recent years, usage of nets plateaued but there has been significant progress in deploying new-generation nets

- To date, more than 3 billion ITNs have been distributed globally. In sub-Saharan Africa, although bed net usage has dramatically increased since 2000, just below half (47%) of those at risk of malaria were sleeping under an ITN in 2024, similar to levels seen since 2015. Among young children and pregnant women and girls, ITN use reached 53% in 2024, still well short of the goal of universal coverage.
- Most of the nets deployed since 2000 have been treated with insecticides from one class: the pyrethroids. To overcome rising mosquito resistance to insecticides, WHO recommends the use of pyrethroid-PBO and dual active ingredient ITNs, which offer greater protection against malaria compared with standard pyrethroid-only nets. In 2024, these more effective nets accounted for 84% of the 168 million nets shipped by manufacturers to sub-Saharan Africa, up from 10% in 2019.

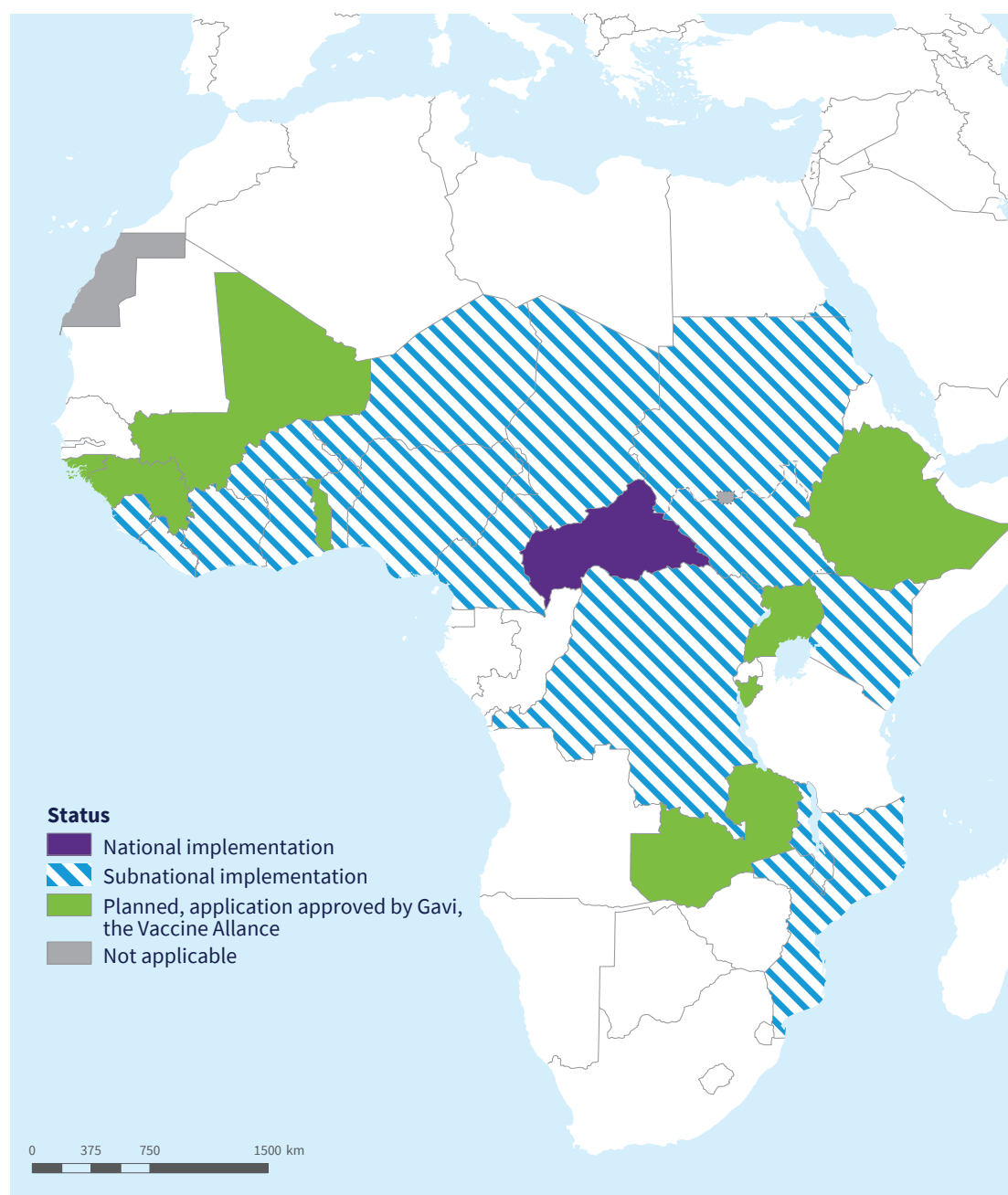
Fig. 14. ITNs delivered in sub-Saharan Africa by type, 2018–2024 *Source: Milliner Global Associates.*



Wider rollout of malaria vaccines holds great promise for reducing the disease burden in Africa

- WHO now recommends two vaccines – RTS,S/AS01 (RTS,S) and R21/Matrix-M (R21) – for use in malaria endemic areas.
- By the end of 2024, malaria vaccines had been introduced in 17 countries, with UNICEF delivering over 10.5 million doses and enabling vaccination of at least 2.1 million children during the year. By October 2025, 7 additional countries had implemented the vaccine.
- The RTS,S malaria vaccine was first introduced into childhood immunization programmes in selected areas of Ghana, Kenya and Malawi in 2019, as part of the WHO-coordinated Malaria Vaccine Implementation Programme, and showed a 13% reduction in all-cause mortality (excluding injury) and a 22% reduction in hospitalizations for severe malaria among children age-eligible for vaccination.

Fig. 15. Countries implementing malaria vaccine or planning introduction with approved Gavi support in 2024 *Source: WHO malaria vaccine introduction dashboard.*



SMC and PMC scale-up is another bright spot in malaria control efforts in Africa

- SMC has proven highly effective in protecting young children from malaria. The intervention involves administering monthly doses of antimalarial drugs during the peak malaria season to children aged under 5 years – the group most vulnerable to severe malaria.
 - Between 2012 and 2024, the average number of African children who were treated per cycle of SMC in 20 countries rose from about 170 000 to 54 million. Kenya introduced SMC for the first time in 2024.
- PMC has also proven highly effective in protecting young children from malaria. The intervention involves providing scheduled doses of antimalarial drugs to children aged up to 2 years, reducing their risk of infection and severe disease.
 - In 2024, at least eight countries implemented PMC, including Benin, Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo, Mozambique, Nigeria, Sierra Leone and Togo.
 - In total, nearly 1 million children aged under 24 months received their first dose of PMC in 2024.

Efforts to expand IPTp access for pregnant women should also be accelerated

- In 2024, in the 33 moderate to high transmission countries in the WHO African Region, there were an estimated 36 million pregnancies, of which an estimated 13 million (36%) were infected with malaria.
- The proportion of eligible pregnant women and girls in 34 African countries receiving a third dose of IPTp increased from 43% in 2023 to 45% in 2024, but coverage is still well below the target of 80%.
 - Current levels of IPTp would result in low birthweight being averted in an estimated 530 000 neonates. If coverage of three doses of IPTp matched coverage of first antenatal care visits, low birthweight would be averted in an additional 161 000 neonates.

What is needed now

Reversing the upward trend in malaria burden requires urgent and coordinated action. Countries must strengthen leadership, governance and accountability mechanisms, building on the Yaoundé Declaration and the forthcoming Big Push framework. The goal remains clear: with the tools and resources available, no one should die from malaria.

Recent cuts in global health aid threaten decades of malaria progress

Sustained financing is essential to maintain global progress against malaria. History shows that even modest funding cuts can trigger malaria resurgence and increased disease burden.

From 2024 to 2025, global malaria financing faced serious setbacks. Total funding in 2024 reached only US\$ 3.9 billion, less than half of what is required, and Official Development Assistance (ODA) fell by 21%, largely due to reductions in support from the United States of America. Reductions in ODA have disrupted health systems, weakening routine surveillance. This has led to the cancellation or postponement of most planned surveys and increased the risk of stock-outs and campaign delays, all of which have undermined programme impact and pose a significant risk to sustaining the malaria response.

Rapid, coordinated mitigation helped to keep key interventions, such as SMC and ITN campaigns, largely on track with partner support, offering some optimism as

United States funding resumed through the Department of State. Nevertheless, major donors signal potential future cuts, highlighting the high ongoing risk. The 2025 funding disruptions have exposed the fragility of external aid. Sustained, diversified and increased domestic funding is therefore vital to safeguard global malaria gains and ensure continued health impact.

Under constrained financing, programmes need to prioritize high-impact, data-driven interventions. The new WHO Subnational tailoring of malaria strategies and interventions reference manual provides countries with guidance to adapt interventions to local contexts. Surveillance systems must be strengthened to close data gaps and enable faster, evidence-based decisions.

Addressing current challenges will require leadership, community engagement and sustainable financing

Political commitment is essential for sustaining progress in malaria control. The Yaoundé Declaration showcased national and continental leadership, accountability and institutional resilience, highlighting the need for a coordinated, multistakeholder approach to reinvigorate global efforts for prevention and control of malaria.

The Big Push framework seeks to strengthen the malaria response through inclusive national leadership, robust data systems, expanded access to quality interventions, rapid adoption of new tools, and increased funding. Communities

play a critical role in accessing interventions, ensuring accountability and sustaining momentum.

A new governance model is needed – one based on strong national leadership, global solidarity and active community involvement, and supported by programmatic advances, including improved surveillance, vaccines, innovative vector control tools and data-driven decision-making.



**Imperial College
London**

For further information please contact:

Malaria and Neglected Tropical Diseases

World Health Organization

20, avenue Appia

CH-1211 Geneva 27

Web: www.who.int/teams/global-malaria-programme

Email: GMPinfo@who.int