

Accelerating malaria elimination in Suriname

By increasing domestic investment in treatment and vector control, Suriname can achieve malaria elimination by 2024, bolstering the Guyana Shield's prospects for achieving regional elimination.

Overview

- **Suriname has made significant progress in driving down malaria in recent years**, achieving a 46% reduction in annual cases between 2015 and 2019. Such progress positions the country to achieve malaria-free status before the Americas' regional elimination target date of 2030. However, achievement of Suriname's national elimination goal will require investment in increased malaria response and coordination across the Guyana Shield region.
- **Scaling up national malaria interventions in Suriname and neighboring Guyana is projected to enable Suriname to achieve malaria elimination by 2024 -- four years earlier than under continuation of current interventions.** This scale-up would require an additional outlay of USD 3.1 million in Suriname over the next four years, less than USD 800,000 annually, but would avert at least 500 clinical cases, enabling Suriname to meet its national elimination goal, and generate a 20% return on investment.
- **Threats of importation from Suriname's neighbors in the Guyana Shield region jeopardize the country's ability to reach and maintain elimination.** Imported cases have accounted for over 80% of Suriname's malaria burden over the past five years, underscoring the necessity of a regionally coordinated approach for accelerating progress towards elimination and sustaining gains in Suriname. Targeting and tailoring interventions to populations in border areas is key to reaching elimination and will require coordination with neighboring countries in order to address cross-border movement.
- **Regional scale-up is projected to further increase health and economic benefits.** If the entire region – including Guyana, French Guiana, Venezuela, and the Amazonian states of Brazil – mounted a coordinated, scaled-up malaria response, Suriname, and the region as a whole, would experience additional health and economic benefits. Such benefits include the prevention of an estimated 800 clinical cases in Suriname during the next four years alone.
- **Resurgence is likely if sufficient financing for malaria is not sustained.** The uncertainty of future domestic and donor financing poses risks for the sustainability of Suriname's malaria response, as the country is currently equally dependent on both funding sources to finance its program. If financial support from either source diminishes after 2024, the reduced investment could lead to disruptions in critical malaria interventions. These disruptions could, in turn, cause up to 700 additional clinical cases over the subsequent five years and push national elimination before 2030 out of reach.

Regional Scale Up* Projections

2024	Projected year of malaria elimination** in Suriname
800	Clinical cases averted in Suriname (2021 to 2024)
800,000	Annual additional investment in Suriname (2021 to 2024), USD
20%	Return on investment in Suriname

*Regional scale-up includes simultaneous intensification of interventions in Suriname, Guyana, and French Guiana, as well as a decrease in cases imported into these countries from Brazil and Venezuela.

**Projected elimination is considered to have been achieved when the number of projected indigenous cases is less than 0.1 per 1,000 population at risk.

Suriname is on the path to malaria elimination

Suriname has achieved remarkable gains in driving down its burden of malaria over recent decades. From a peak of 16,600 malaria cases in 1996, the number of cases within the country has declined to only a few hundred per year (just over 200 in 2019). Subnational elimination has already been achieved along the coast and in interior villages. Malaria in Suriname is now concentrated in remote Amazonian gold mining communities along the southern and eastern borders with Brazil and French Guiana, respectively.

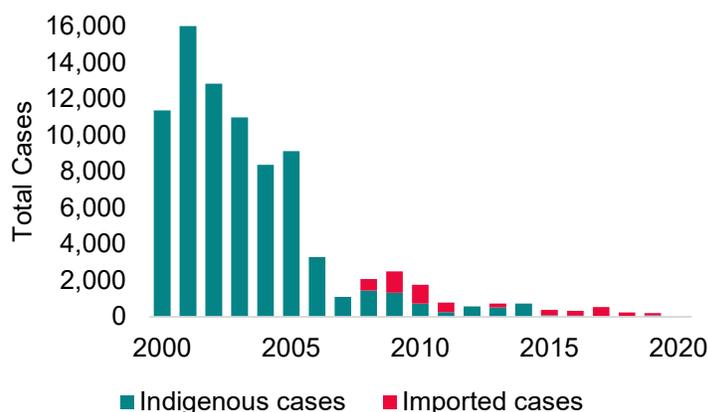
Suriname's substantial progress against malaria has been driven by significant, sustained financial support from the Government of Suriname, The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and the United States Agency for International Development (USAID) with the technical assistance of the Pan American Health Organization (PAHO)/World Health Organization (WHO). The sum of contributions from all of these sources has averaged USD 2 million annually in recent years. Key investment priorities that have yielded reductions in transmission include mass distribution of long-lasting insecticidal nets (LLINs); enhanced surveillance and data sharing systems; and expanded service delivery to all people in Suriname regardless of citizenship status.

In spite of remarkable progress and relatively low malaria incidence, Suriname faces challenges in achieving malaria elimination. An increasing number of mobile and migrant populations, predominantly from Brazil, travel through Suriname en route to the gold mines in French Guiana, facilitating malaria transmission. The remote Amazonian terrain and transient nature of the mining communities make stable provision of services logistically difficult, resulting in low adherence to current antimalarial drug regimens and posing challenges for distribution and retention of LLINs. Targeting and tailoring interventions to populations in border areas is key to reaching elimination and will require coordination with neighboring countries in order to address cross-border movement.

Investing in malaria interventions can accelerate successful elimination in Suriname

It is projected that if malaria interventions continue at current levels, Suriname will reach elimination in 2028 – preceding the regional Americas' target (2030) but falling short of the country's more ambitious national target (2025). If Suriname and its malaria-endemic neighbor Guyana both intensified their national malaria prevention and response interventions, Suriname could achieve elimination by 2024, four years earlier than under continuation of current interventions. The country would

Figure 1. Total malaria cases in Suriname, 2000-2019.



Source: World Health Organization. *World Malaria Report 2013 and 2020*.

also avert 500 clinical cases in the process and yield a 20% return on investment. This scale-up would require Suriname to spend an additional USD 3.1 million between 2021 and 2024 (less than USD 800,000 per year) in order to finance the introduction of new, single-dose treatment options and increased vector control activities targeting high-risk migrant populations.

Regional coordination is essential to maintaining gains and mitigating resurgence

The Guyana Shield is characterized by economic migration between and within countries, movement that facilitates high rates of cross-border malaria transmission. From 2015 to 2019, over 80% of all malaria cases in Suriname were classified as imported, with 90% of these cases having presumptive origin in French Guiana. Due to the interconnectedness of the region, the achievement and maintenance of malaria elimination in Suriname will, to an extent, remain dependent on progress made by the region as a whole.

A coordinated, regional approach to malaria elimination is projected to be more impactful than isolated control or elimination efforts made by any one country. While regional scale-up is considered optimistic, it demonstrates the value of coordinated efforts to decrease malaria throughout the region.

If the entire region – including Guyana, French Guiana, Venezuela, and the Amazonian states of Brazil – mounted a scaled-up malaria response, Suriname and the region as a whole would experience additional benefits. A coordinated regional approach is projected to enable Suriname to avert 800 clinical cases over the next four years and achieve elimination in 2024 – four years earlier than under continuation of current intervention levels.

Moreover, as a result of synchronized investments in malaria elimination across the region, Suriname is expected to realize health and economic benefits beyond those from a bilateral scale-up of efforts by Suriname and Guyana alone. Such projected benefits include the prevention of an additional 30 clinical cases of malaria and economic savings of USD 200,000 annually by 2025.

Sufficient financing is needed to reduce the risk of resurgence

Current financing projections indicate that Suriname will be equally dependent on domestic and donor financing to sustain its malaria response over the 2021 to 2024 period. If financial support from either the Government of Suriname or the Global Fund diminishes after 2024, reduced investment could lead to disruptions in critical malaria interventions. These disruptions could, in turn, cause up to 700 additional clinical cases over the subsequent five years and prevent Suriname from reaching elimination before 2030. The estimated surge, which is likely to consist predominantly of imported cases, could potentially seed increased local transmission and threaten to wipe out Suriname's hard-won gains against malaria in recent years. This is particularly pertinent within the context of the COVID-19 pandemic, which has had a devastating economic impact on Suriname. The country's national GDP per capita is expected to have contracted by 13% in 2020. Such an impact has generated and will continue to fuel uncertainty around the sustainability of public service provision – including activities associated with Suriname's malaria program – that is supported by domestic budgets.

Recommendations for Suriname

- **An increased investment of USD 800,000 annually in Suriname's malaria response over the next four years is projected to enable the country to achieve malaria elimination by 2024.** Advocacy for sufficient financing of Suriname's malaria response beyond 2024

is critical to preventing potential malaria resurgence, which is often the consequence of an underfunded program. National economic stressors and health systems burdens, exacerbated by the COVID-19 pandemic, further threaten the stability of domestic financing for malaria and underscore the need for sustained advocacy for key domestic resources dedicated to malaria elimination.

- **Regional coordination will be essential to sustaining a malaria-free Suriname.** Increased focus on high-risk populations along the malaria-endemic border areas, as well as strengthened technical and financial coordination with neighboring countries, particularly French Guiana and Brazil, will enable Suriname to leverage and align efforts for a more efficient response. This is of particular importance as the threat of artemisinin resistance to antimalarial drugs is monitored in the region.
- **Strengthened data on imported malaria cases, as well as on mobile and migrant populations, would improve Suriname's ability to target and tailor interventions in order to tackle cross-border malaria transmission.** As Suriname aims for malaria elimination, it will become increasingly important for speciated data on the size and behavior of mobile and migrant populations to be collected at the subnational level. Establishing a regional mechanism for sharing subnational data amongst neighboring countries will bolster Suriname's surveillance efforts and pace towards elimination.
- **Improvements in local malaria expenditure tracking and analysis would strengthen evidence related to the variable costs of malaria interventions,** costs which fluctuate with the boom and bust of the local gold mining industry. Strengthened accounting systems that track the costs associated with malaria interventions at the subnational level could allow for a better understanding of the link between gold prices and the cost of Suriname's malaria program. An improved evidence base could, in turn, enable improvements in budget planning and cost projections.

The methodology, data, and evidence referenced in this summary brief, as well as additional country and regional results projected under different investment scenarios, are included in the full-length investment case report. The report is accessible through shrinkingthemalariamap.org.

The Malaria Elimination Initiative (MEI) at the University of California, San Francisco (UCSF) believes a malaria-free world is possible within a generation. As a forward-thinking partner to malaria eliminating countries and regions, the MEI generates evidence, develops new tools and approaches, disseminates experiences, and builds consensus to shrink the malaria map. With support from the MEI's highly skilled team, countries around the world are actively working to eliminate malaria. shrinkingthemalariamap.org

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