

# Investing in prevention of reintroduction of malaria in Sri Lanka

## Sustaining malaria efforts in Sri Lanka results in major cost savings and far-reaching economic benefits

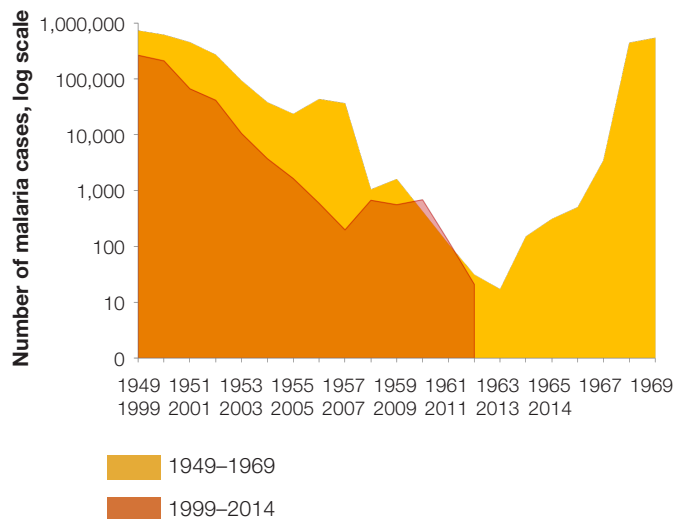
- Despite the continued risk of malaria reintroduction and resurgence, financial assistance from donors is declining and political interest is waning. This threatens the remarkable gains that Sri Lanka has achieved.
- An estimated US\$ 0.57 per capita is required to maintain the current mix of malaria interventions and sustain elimination.
- Failure to invest in prevention of reintroduction activities in one year alone may cost over US\$ 169 million in excess healthcare spending, foregone income from poor productivity and premature mortality, and out-of-pocket household expenditures.
- Investing in malaria generates a return on investment of 13 to 1.

Sri Lanka is one of the latest countries to eliminate malaria within its borders. Through a mix of integrated vector control, active and passive case detection, entomological surveillance and case management, Sri Lanka reduced the burden of malaria by 99% between 2000 and 2011 and has reported zero indigenous cases since October 2012. Relentless political and financial commitment from the government and donors, particularly the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), contributed to the success. In 2015, the Anti-Malaria Campaign (AMC), Sri Lanka's national malaria control program, became eligible to apply for malaria-free certification from the World Health Organization.

### Gains are fragile

Given its tumultuous history with malaria, Sri Lanka faces a significant threat to its elimination success. The country remains susceptible to local transmission and outbreaks. The main anopheles vector remains present throughout the country and imported malaria cases are documented annually, primarily among Sri Lankans returning from international travel. External financing has declined and political interest within the country is waning. At the same time awareness of malaria among health workers is diminishing as malaria is no longer considered a major public health threat and other diseases are prioritized. Failure to sustain malaria activities at this critical juncture could result in a resurgence of the disease as has historically occurred in many countries, jeopardizing the gains that Sri Lanka has made in the past four decades. Figure 1 illustrates the pattern of cases over the past 65 years with several resurgences occurring as a result of program weakening. To effectively implement its national strategy and avoid a repetition of history, the AMC needs to secure adequate financial resources, particularly in the short- to medium-term.

Figure 1: Risk of repeating history? A comparison of malaria cases in 1949–1969 and 1999–2014

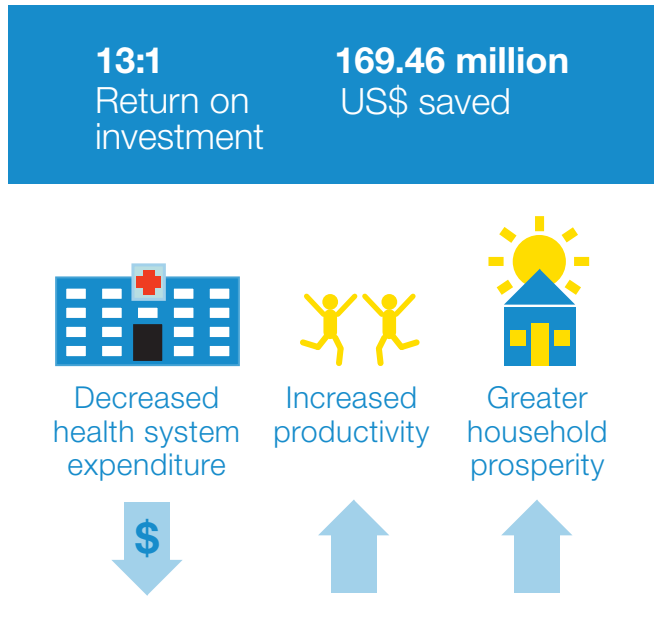


### The investment case

To support Sri Lanka's resource mobilization and advocacy efforts, the AMC and the UCSF Global Health Group developed an investment case for malaria prevention of reintroduction. Using data from the AMC and a sample of districts (Hambantota, Ampara, Anuradhapura, Puttalam and Jaffna), the annual cost of the current malaria prevention of reintroduction program is estimated to be US\$ 0.57 per capita. Seventy-six percent of total expenditures were financed through domestic sources while 24 percent were from the Global Fund. As expected in an elimination setting, human

resources constituted the largest share (83%) of costs. Consumables constituted only about 5 percent of total malaria expenditures. Among malaria activities, the largest cost drivers were program management (63%) and surveillance and epidemic management (12%), followed by prevention and vector control and diagnostics.

**Maintaining gains will result in an economic output of at least 13 times greater than the cost.**



A hypothetical resurgence scenario was modeled using data from the outbreak experienced between 1997 and 2002. The model indicated that Sri Lanka can avert US\$ 169.46 million over five years in unnecessary costs associated with testing and treatment of malaria cases, out-of-pocket expenditures on malaria treatment and prevention supplies, and forgone income from reduced labor productivity and premature death, yielding a return on investment of 13 to 1. When considering the costs averted on the health system alone, the return on investment of malaria prevention of reintroduction was 9 to 1.

**But funding levels fall short**

Sri Lanka is estimated to face a significant financial gap of about US\$ 12 million between 2015 and 2017 for malaria, or **an average of US\$ 4 million per year** (Table 1) based on estimates that include human resources and capital costs.

**Table 1. Gaps in financing malaria (in million US\$)**

	2015	2016	2017
Total need	11.86	12.62	13.43
Domestic resources	5.49	6.12	6.77
External resources	2.47	2.47	2.47
<b>Financial gap</b>	<b>3.90</b>	<b>4.03</b>	<b>4.19</b>

**Mobilizing resources**

To meet the financial requirements of maintaining gains and preventing reintroduction, Sri Lanka must increase domestic financing for malaria. Current government funding for malaria in Sri Lanka was only 0.53% of its total domestic health spending in 2015. To support increased domestic funding, the AMC and the UCSF Global Health Group developed an advocacy strategy focused on increasing the malaria allocation in the national budget (available from the AMC). Additional government revenue may be raised through improved fiscal policies to offset any additional public allocations for malaria, as well as innovative and private sector financing mechanisms. In addition, mechanisms for improved programmatic efficiency should be explored.



This briefing was developed by the Malaria Elimination Initiative (MEI) of the Global Health Group at the University of California, San Francisco (UCSF). The UCSF Global Health Group is an 'action tank' dedicated to translating new approaches into large-scale action that improves the lives of millions of people. Launched in 2007, the UCSF Global Health Group's MEI believes that global eradication of malaria is possible within a generation. Working with forward-thinking partners at global, regional and national levels, the MEI accelerates progress by conducting operational research to improve surveillance and response, determining the costs of elimination, and strengthening political and financial commitment to shrink the malaria map. Visit [shrinkingthemalariamap.org](http://shrinkingthemalariamap.org) for more information.