

THE MEKONG MALARIA ELIMINATION PROGRAMME

# Countries of the Greater Mekong making inroads in the race towards elimination

BULLETIN #6

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## RECENT PROGRESS

In recent years, countries of the Greater Mekong Subregion (GMS) have hastened their efforts to prevent, diagnose and treat malaria. Enhanced surveillance systems are enabling the collection and sharing of more timely data on trends in the disease.

Between 2012 and 2016, the reported number of malaria cases in the GMS fell by 74% (Figure 1). Malaria deaths fell by 91% in the same period (Figure 2). Mid-year estimates for 2017 point to a further decline in cases.

Achieving these impressive results are the six countries of the subregion: Cambodia, the People's Republic of China (specifically Yunnan Province), the Lao People's Democratic Republic (Lao PDR), Myanmar, Thailand and Viet Nam. Together, they are making significant headway towards a common target: eliminating malaria by the year 2030.

However, since 2008, the presence of multidrug-resistant malaria parasites in the subregion has been a growing concern. Continued spread of multidrug resistance within the GMS could prove a challenge on the road towards malaria elimination.

# 74%

**DROP IN THE  
NUMBER OF  
MALARIA CASES  
BETWEEN 2012  
AND 2016**

FIGURE 1.  
**Malaria cases in the six GMS countries**

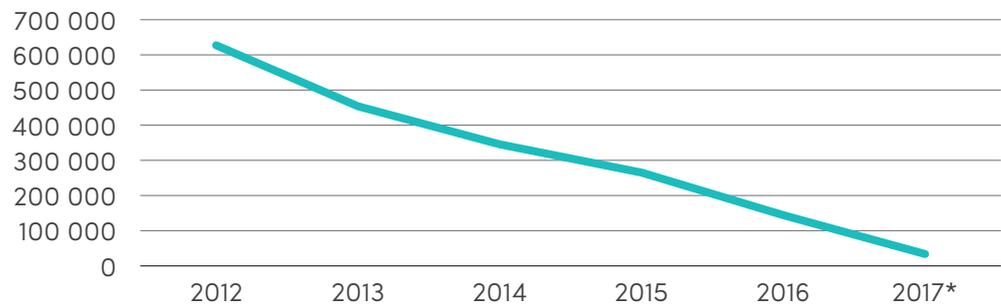
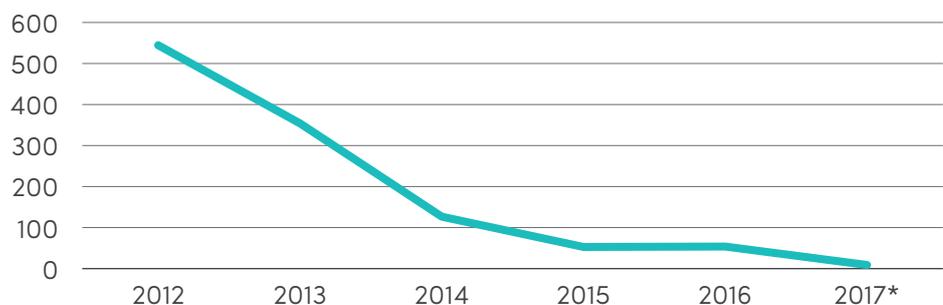


FIGURE 2.  
**Malaria deaths in the six GMS countries**



\* 2017 covers the period January to June.

## WHO response in the GMS – accelerating elimination

In 2013, WHO launched the *Emergency response to artemisinin resistance* (ERAR), a high-level plan of attack to contain the spread of drug-resistant parasites and provide life-saving interventions for all GMS populations at risk of malaria. But even as this work was under way, resistance to artemisinin – the core compound of the most effective antimalarial medicines – emerged in new geographic areas of the subregion. A new approach was needed to keep pace with the changing malaria landscape.

In collaboration with national malaria programmes and partners, WHO led the development of the *Strategy for malaria elimination in the Greater Mekong Subregion (2015–2030)*. Urging immediate action, the strategy calls for the elimination of all species of human malaria across the GMS by 2030, with priority action targeted to areas where multidrug-resistant malaria parasites have been identified.

Antimalarial drug efficacy is assessed through therapeutic efficacy studies (TES). Such studies at regular intervals at the same sites allow for the early detection of declines in drug efficacy, providing evidence for guiding national malaria treatment policies. To improve the response to multidrug resistance in the GMS, countries, with the support of WHO and partners, continually collect and analyse quality data at sentinel sites across the subregion.

With technical guidance from WHO, all GMS countries have developed national malaria elimination plans. As countries implement these plans, WHO is providing ongoing technical support through its six GMS country offices, regional offices in New Delhi and Manila, and the Organization's Geneva headquarters.

In 2017, WHO launched the Mekong Malaria Elimination (MME) programme – a new initiative that evolved from the ERAR. The MME subregional team in Phnom Penh, Cambodia, supports the GMS malaria elimination strategy by facilitating coordination and dialogue among partners, communicating with external stakeholders, and coordinating cross-border initiatives.

## Subregional action and funding

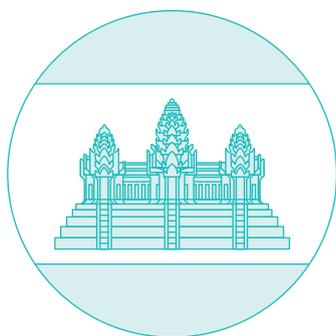
Across the subregion, GMS countries are collaborating in a number of areas to address common challenges. All countries in the subregion have engaged in cross-border initiatives in an effort to reduce transmission, particularly in high burden areas. These initiatives have focused, for example, on strengthening the malaria drug supply chain – an important step to ensure that effective antimalarial medicines are available to patients where and when they need them.

GMS countries are also strengthening their systems for tracking malaria cases and deaths; such information helps them monitor changing disease patterns and determine which areas or population groups are most affected. Strong malaria surveillance systems also help countries design effective health interventions and evaluate the impact of their malaria control programmes.

The fight to eliminate malaria in the GMS is supported through generous contributions from a number of donors, including: the Australian Department of Foreign Affairs and Trade, the Bill & Melinda Gates Foundation, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), the UK Department for International Development and the US Agency for International Development.

In response to the emergence of artemisinin resistance in the Greater Mekong subregion, the Global Fund launched the Regional Artemisinin-resistance Initiative (RAI) in 2013. Funding provided through this initiative has enabled countries to purchase and distribute commodities such as long-lasting insecticidal nets (LLINs), rapid diagnostic tests and quality-assured drugs. Earlier this year, the Global Fund announced an expansion of the RAI, committing an additional US\$ 242 million for the period 2018 to 2020.

WHO is working with GMS countries and the Global Fund to optimize the use of this funding in the subregion. A new data sharing platform, for example, launched in 2016 by WHO with financial support from the Global Fund, is helping countries map and analyse their disease burden and identify gaps in coverage of key malaria control tools. The platform will serve as an important tool for aligning and harmonizing malaria surveillance and response strategies across the subregion, and globally.



## **CAMBODIA: SCALING UP COMMUNITY HEALTH SYSTEMS**

Between 2012 and 2016, Cambodia successfully reduced its total number of malaria cases by 42%, with a 31% drop occurring between 2015 and 2016. While malaria has declined in 16 provinces in 2017, a recent increase of cases reported from six provinces is being investigated.

In 2016, the Cambodian Government endorsed an ambitious plan to reduce malaria transmission in areas with a high malaria burden and to eliminate multidrug resistance. In the same year, results from therapeutic efficacy studies prompted a change in first-line antimalarial treatment, with artesunate-mefloquine replacing dihydroartemisinin-piperaquine as the most effective regimen for the country.

Cambodia's highest malaria burden is in the north-eastern region of the country along the forested shared border areas with Viet Nam, Lao PDR, and Thailand. In recent years, the country's Ministry of Health has strengthened community health systems and engaged both village malaria workers (VMWs) and mobile malaria workers (MMWs) to expand malaria prevention, early diagnosis and treatment for mobile and migrant populations who face the highest risk of malaria and have the least access to formal health centres. MMWs set up "outposts" in remote areas, bringing urgently needed education and services to the migrants who work there.

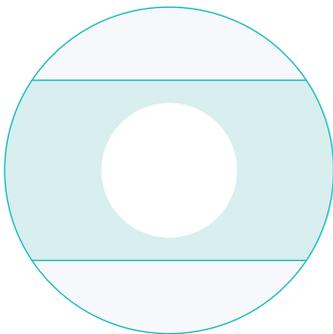


## CHINA: COLLABORATION ACROSS BORDERS AND MANAGING IMPORTED CASES

With only three indigenous malaria cases in 2016, China is now on the cusp of malaria elimination. Between 2012 and 2016, the country reported a 99% drop in cases of the disease.

China has made a strong political commitment to achieving malaria-free status and has embraced the WHO concept of subnational verification of malaria elimination. An official province-by-province verification process has commenced and will contribute to documenting malaria-free areas within China's borders. The process confirms that the chain of local transmission of all human malaria parasites has been interrupted in each province and, ultimately, nationwide, a critical step towards earning a malaria-free certification from WHO.

China is also collaborating with Myanmar to enhance efforts to eliminate malaria along their shared border, where large mobile and migrant populations work. In September 2017, the two countries held their third cross-border collaboration meeting to further coordinate strategies to prevent the reintroduction of malaria into China and to reduce Myanmar's malaria burden. The action plan reviewed at the meeting aims to intensify malaria surveillance and case detection and to decimate the parasite reservoir in an effort to prevent further transmission.



## LAO PDR: ACCELERATING TOWARDS ELIMINATION

From 2012 to 2016, the number of malaria cases in the Lao People's Democratic Republic fell by 76%, with a 69% drop between 2015 and 2016.

Lao PDR has accelerated its rate of distribution of LLINs achieving, in 2016, 100% coverage of high-risk groups. A web-based system known as DHIS2\* to ensure the timely and complete reporting of data from the district level was rolled out at the end of last year. The Ministry of Health is also working to fully computerize the operation of its medication supply chain and stock rotation to avoid gaps in drug delivery.

With the goal of malaria elimination in the southern provinces, Lao PDR has improved access to malaria control services for migrant and mobile populations. Significantly, the Lao Government has closed its forests to logging, a move that will reduce the number of migrant workers in those areas and their exposure to malaria parasites. The Ministry of Health is tackling the challenges of staff rotation and turnover, investing heavily to maintain qualified staffing on the ground.

\* District Health Information System version 2



## **MYANMAR: AGGRESSIVE EFFORTS CURB MALARIA**

Between 2012 and 2016, Myanmar dramatically reduced its malaria cases by 77%, with an accelerated decrease of 40% from 2015 to 2016.

Myanmar owes its progress, in large part, to expanded access to malaria diagnosis and treatment; the country's network of 17 000 village health volunteers has played a critical role in delivering these services to at-risk populations. Increased LLIN coverage has been important in the prevention of new cases of the disease.

Results of therapeutic efficacy studies show that artemisinin-based combination therapies are still highly efficacious. As people also turn to the private sector for malaria diagnosis and treatment, strengthening both the private and public health systems is a priority.

Myanmar is collaborating with both China and Thailand to address the high transmission of malaria among mobile populations along their shared, hard-to-reach borders and in conflict areas that have limited access to national health systems.

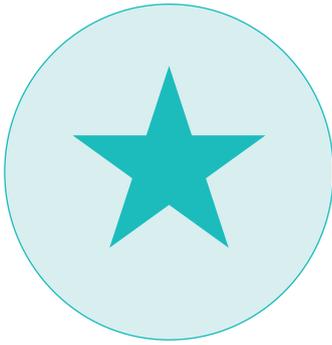


## **THAILAND: STRENGTHENING THE FIGHT AGAINST MALARIA DRUG RESISTANCE**

Between 2012 and 2016, Thailand reduced its malaria cases by 65%, with an accelerated decrease of 44% during the period 2015 to 2016.

While most of Thailand is malaria-free, imported cases in the border region with Myanmar, Cambodia and Lao PDR is a major hurdle to overcome. In 2016, out of a total of 18 758 reported malaria cases, 41% were attributed to indigenous transmission within villages located along Thailand's borders with neighbouring countries. Nine percent of cases were attributed to transmission from outside Thailand's borders.

This year, the national malaria programme began piloting integrated Drug Efficacy Surveillance (iDES) into the routine malaria surveillance system in selected provinces; through this approach, every malaria patient is followed up to ensure they take the full treatment course and that they are fully cured.



## VIET NAM: ON TRACK TO BECOME MALARIA-FREE BY 2030

Viet Nam has been highly committed to controlling malaria and, as the following figures attest, is on the road to elimination. The number of malaria cases fell by 79% between 2012 and 2016, with a 55% drop in 2015–2016 alone. In 2017, there has been a continued steep decline in the number of cases.

Prevention teams are providing support to malaria-affected provinces. Nearly all malaria cases and deaths are concentrated in the Central Highland Region of Viet Nam. Bin Phuoc province carries a particularly high burden of malaria due to a combination of increased movement of migrant workers, poor access to health facilities and resistance to antimalarial drugs.

In recent years, national malaria programmes in the GMS, with support from WHO, have made significant strides in eliminating counterfeit and substandard medicines. The production and marketing of oral artemisinin-based monotherapies (oAMT) have been banned across the subregion. Viet Nam, as a major producer of pharmaceuticals, is key in these efforts.

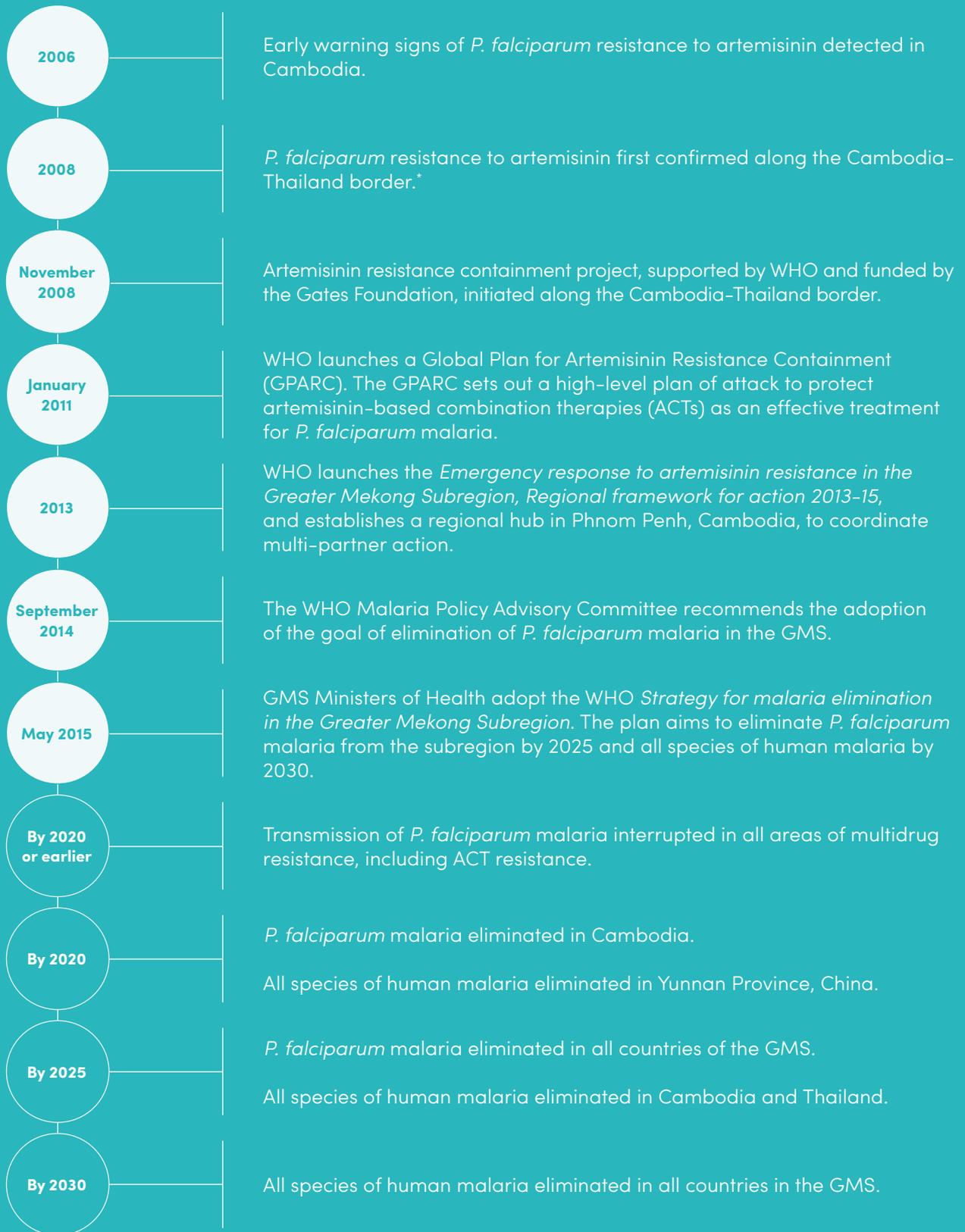
### A TOUGH ADVERSARY

Malaria is a complicated enemy with the ability to elude our best weapons; only through aggressive and relentless efforts will we ultimately defeat it.

The GMS countries and partners know what it will take to eliminate malaria: maximize the impact of vector control and other preventive measures, ensure universal diagnostic testing and high quality treatment for the most vulnerable groups, monitor the safety and efficacy of antimalarial medicines and enhance surveillance systems. The remarkable progress over the past several years in the GMS demonstrates that these malaria interventions work.

Eliminating malaria in the GMS will require country-led efforts to urgently coordinate action in and between affected countries, with support from implementing agencies, funders and other partners. Strong and sustained political commitment and international and national funding is essential to stamp out all malaria parasites in this subregion and to manage the risk of reintroduction of malaria across borders. By deepening cross-border collaboration, the countries of the GMS can accelerate progress towards their shared goal of a malaria-free subregion.

## TIMELINE AND KEY TARGETS



\* Retrospective analysis has shown that artemisinin resistance likely emerged as early as 2001, before the widespread deployment of ACTs.