



MOVING STEADILY TOWARDS MALARIA ELIMINATION IN TIMES OF COVID-19

A case study: Greater Mekong Subregion

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Abbreviations

ACT	Artemisinin-based Combination Therapy
API	Annual Parasite Incidence
APLMA	Asia Pacific Leaders Malaria Alliance
APMEN	Asia Pacific Malaria Elimination Network
ASMW	Artesunate Mefloquine
CCSA	Centre for Covid-19 Situation Administration
CHAI	Clinton Health Access Initiative
CHWs	Community Health Workers
CNM	National Centre for Parasitological Entomology and Malaria Control
Covid-19	Coronavirus disease of 2019
CSO	Civil Society Organisation
DAMN	District Anti Malaria Nuclei
DDC	Department of Disease Control
DFAT	Department of Foreign Affairs and Trade
DHIS	District Health Information Software
DMHTT	Distance, Mask Wearing, Handwashing, Testing and Thai-Chana
EOC	Emergency Operation Centres
eCDS-MMS	Electronic Communicable Disease System-Malaria Management System
GF	Global Fund
GMS	Greater Mekong Sub-Region
HIV	Human Immunodeficiency Virus
HPA	Health Poverty Action
ICMV	Integrated Community Malaria Volunteer
IEC	Information Education and Communication
IMP	Independent Monitoring Panel
IMPE	Institute of Malariology, Parasitology, and Entomology
Lao PDR	Lao People's Democratic Republic
LLIN	Long Lasting Insecticidal Nets
LLIHN	Long Lasting Insecticide-treated Hammock Net
LMIC	Lower and Middle-Income Countries
MAM	Medical Action Myanmar
MDA	Mass Drug Administration
MEAF	Malaria Elimination Action Framework
MIS	Malaria Information System
MME	Mekong Malaria Elimination
MMP	Mobile Migrant Population
MMWs	Mobile Malaria Workers
MoH	Ministry of Health
MoPH	Ministry of Public Health
MOTs	Mobile Outreach Teams
NCLE	National Centre of Laboratory and Epidemiology
NGO	Non-Government Organisation
NIMPE	National Institute of Malariology, Parasitology, and Entomology
NMCP	National Malaria Control Program
PAT	Project Advisory Team
Pf	Plasmodium falciparum
PHEOC	Public Health Emergency Operation Centres
PMI	U.S President Malaria Initiative
PPE	Personal Protective Equipment
PSI	Population Services International
SOP	Standard Operating Procedure
RAI	Regional Artemisinin-resistance Initiative
RAI2E	Regional Artemisinin Initiative 2 Elimination
RAI3E	Regional Artemisinin Initiative 3 Elimination
RDT	Rapid Diagnostic Test
RSC	Regional Steering Committee
TB	Tuberculosis
TDA	Targeted Drug Administration
UNOPS	United Nations Office for Project Services
USAID	United States Agency for International Development
USD	United States Dollars
VBDC	Vector Borne Disease Control
VHVs	Village Health Volunteer
WHO	World Health Organization



1. Executive Summary

As COVID-19 continues to disrupt economies and lives, governments across the world are working to contain the damage and protect people with immediate priority. From implementing strict lockdowns, forming task forces, strengthening surveillance efforts to raising awareness around prevention, governments are implementing measures to ensure that the spread of the virus is contained. The pandemic and government's response to curb the spread has led to the disruption of health services to combat other life-threatening diseases including malaria. Countries in the Greater Mekong Subregion (GMS) had reported low number of COVID-19 cases in 2020. However, several countries in the region are facing a surge of cases April 2021 onwards.

The GMS has made unprecedented progress towards malaria control and elimination. The region has made a commitment to eliminate *Plasmodium falciparum* by 2023 and all forms of malaria by 2030. Whilst it is too early to measure the full impact of the COVID-19 pandemic on malaria cases and deaths, data suggests that Cambodia, Thailand, Laos PDR and Vietnam are continuing to stay on course towards malaria elimination. Overall, the GMS region has reported a 27% decline in malaria cases in 2020 compared to 2019. The political situation in Myanmar, on the other hand, is threatening the progress made. The military governed in Myanmar since February 2021 and the subsequent civil disobedience movement have affected the public health delivery system. In addition, Myanmar is facing a surge in COVID-19 cases July 2021 onwards which further exacerbates the situation.

Countries in the GMS have moved fast to adapt its strategies and guidelines for malaria service delivery, training and program implementation. There are several factors which have contributed to countries maintaining the momentum towards malaria elimination, despite the challenges posed by the pandemic.



1. Political commitment- Leadership and whole of government efforts are critical in the fight against malaria and other public health threats. Thailand and Cambodia have formed task forces at national levels to steer the ship and ensure effective leadership. Cambodia has also formed provincial and district level task forces to review the COVID-19 and malaria situation and oversee the implementation of activities as per the Malaria Elimination Action Framework. While political commitment to end malaria has also led to increases in domestic financing for malaria, additional and sustained financing is required to maintain malaria programs without the support of external funding.



2. Leveraging the network of community health workers/volunteers- Countries with strong community-based workforce are continuing to drive malaria control activities. Some countries, such as Thailand, are leveraging this network to respond to the pandemic. In Cambodia and Myanmar, Community Health Workers have been trained to provide integrated health services and these cadre of workers serve as reliable sources for information for the community – be it on malaria or COVID-19.

3. Readjustment and intensification of malaria interventions- All countries in the GMS have adapted their mode of operations to ensure the continuance of program activities despite the challenges posed by the pandemic. Mode of trainings have shifted from face-to-face meetings to meetings through virtual forums or social media platforms. Distribution strategy for bednets have shifted from collection at point to door-to-door. Amidst the pandemic, countries have continued implementing intensification of malaria control efforts. Laos is piloting accelerator strategies in five villages of one province with an aim to scale the pilot to 19 villages in 8 provinces by 2022. Cambodia is also implementing Intensification Plan to administer aggressive approaches towards malaria control in six provinces.

4. Continued donor support for malaria and COVID-19-

Donor investments in malaria benefit the health system and is critical to fighting current and future diseases. Grants allocated by Global Fund under The Regional Artemisinin-resistance Initiative (RAI) has been key to malaria control efforts in the GMS. Between 2014 and 2019, 27.8 million people tested for malaria; more than 700,000 people treated for malaria; 21.4 million insecticide-treated bed nets were distributed and more than 33,000 volunteers were trained. There has been additional funding under RAI to support countries during the pandemic. USAID, Australian Department of Foreign Affairs and Trade (DFAT) and Bill and Melinda Gates Foundation (BMGF) have also supported malaria elimination and health system strengthening projects in the GMS.

5. Role of global, regional and local partners-

In addition to donors, technical and implementation support partners continue to support malaria programs through various projects. Civil Society Organizations (CSOs) have been critical in ensuring that malaria services reach the most vulnerable population, particularly the Mobile and Migrant population and those living in remote areas. CSOs are also helping governments in the implementation of their COVID-19 response. The Regional Malaria CSO Platform

has been actively engaged in coordinating the work of the CSOs in the region, conducting risk assessments and publishing guidelines to support CHWs.

6. Supply chain responsiveness-

With support from UNOPS, countries have closely monitored stock outs for malaria commodities. Procurement through the RAI grant is on track for countries. However, there have been delays in the procurement process in Myanmar due to the political situation.

7. Strong surveillance systems-

Countries are ramping up their surveillance systems to facilitate faster responses to malaria outbreaks. While Thailand has rolled out REVEAL mHealth system for foci management system countrywide, Cambodia has developed Management Information System (MIS) that facilitates integration of data from all levels. Vietnam has integrated malaria data into a wider communicable disease management system and Laos is piloting a SMS reporting system that reduces the timeline for reporting cases from monthly to weekly.

8. Private sector initiatives-

Private sector organizations in the GMS have also stepped up their game to support governments in their COVID-19 and malaria control efforts through donations and campaigns.

In light of the recent COVID-19 outbreaks in all the GMS countries, the impact of malaria cases and services need to be regularly monitored and assessed. Against the backdrop of the ongoing pandemic, it is imperative that leaders and policy makers, national malaria programs, civil society organizations and global health partners take action to prevent gains made towards eliminating malaria over the past decade from being jeopardized.





1. Introduction

While COVID-19 has directly impacted the economy, lives and livelihood of millions, it has led to a domino effect on health outcomes for other communicable diseases such as malaria, HIV and Tuberculosis. A modelling study published in the Lancet Global Health predicts that Lower- and Middle-Income Countries (LMICs) could see an increase in death due to HIV, Tuberculosis and Malaria by up to 10%, 20% and 36% as a result of COVID-19. [1] Another modelling exercise undertaken by the World Health Organization for Sub Saharan Africa show that if Insecticide Treated Net campaigns were cancelled and access to treatments was severely disrupted, malaria cases would go up by 23% and deaths would increase by 102%. [2] The pandemic has created additional stress on healthcare systems which operate in resource limited settings, hindering countries' ability to respond to existing communicable disease threats effectively. The ongoing pandemic and countries efforts to contain its spread have disrupted the delivery of essential health services and commodities. According to Global Funds biweekly survey across 100 countries it invests in, 85% of HIV, 78% of tuberculosis, and 73% of malaria programmes are being disrupted. [3]

Health systems are stretched thin while responding to COVID-19 and this has impacted its capacity to deliver

essential health services. Responses to contain the pandemic such as travel restrictions and social distancing requirements limits community health workers from accessing patients-which may lead to diseases going undetected and untreated. [4] The pandemic also exposed the weak links in the pharmaceutical supply chains, which might impact the access to essential medicines and other health commodities. [5] In the early days of the pandemic, antimalarial drugs Chloroquine and Hydroxychloroquine gained premature publicity as a possible treatment for COVID 19, leading to shortages of that drug due to hoarding out of fear in several countries. A severe downturn in economic activities increases the risk that funds will be diverted from communicable disease programs to address the global pandemic or to rescue economies. [6]

Amidst this crisis, countries have continued to innovate and adapt their existing strategies for provision of essential health services. More than a year and half into this pandemic, this case study looks at how countries in the Greater Mekong subregion (GMS) in particular are continuing to respond to the pandemic while sustaining efforts for malaria control and elimination. The case study also highlights the factors which were critical to maintaining the momentum towards malaria elimination in the GMS.



2. Progress towards malaria elimination in the GMS

Countries of the Greater Mekong Sub-Region (Cambodia, Laos, Myanmar, Vietnam, Thailand) have made great strides toward elimination of malaria. As seen in Figure 1, according to the World Health Organization's 2020 World Malaria Report, malaria cases in the GMS declined by 86% and deaths due to malaria declined by 97% in the period

2010-2019. [7] As reported by WHO Mekong Malaria Elimination (WHO MME) Programme, the Annual Parasite Index is decreasing year on year (shown in Figure 2). GMS reported API of 0.32 in 2020 (individual country APIs shown in Table 1) compared to 0.44 in 2019. [8]

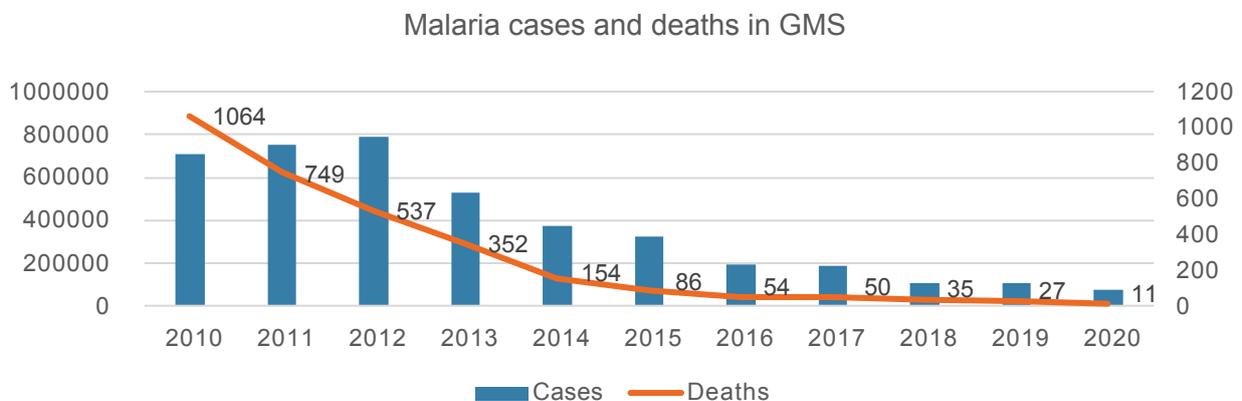


Figure 1: Malaria cases and deaths in the GMS (Source: WHO)

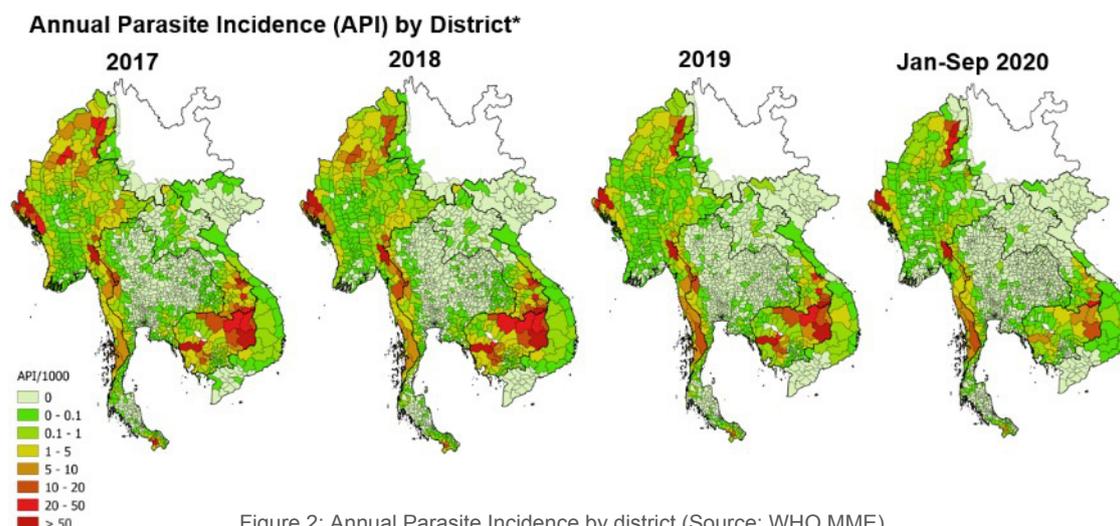


Figure 2: Annual Parasite Incidence by district (Source: WHO MME)

	API (2020)
Cambodia	0.61
Laos	0.48
Myanmar	1.06
Thailand	0.05
Vietnam	0.01

Table 1: API by country (2020 data)

Once the hotbed of antimalarial drug resistance, countries in the GMS have committed to eliminating *Plasmodium falciparum* (Pf) by 2023 and to eliminating all other forms of malaria by 2030. Thailand and Cambodia have committed to elimination of all forms by 2024 and 2025 respectively, as outlined in Table 2. [9]

	Target to eliminate Pf	Target to eliminate all forms malaria
Cambodia	2023	2025
Laos	2023	2030
Myanmar	2023	2030
Thailand	2023	2024
Vietnam	2023	2030

Table 2: Elimination timelines for GMS countries

During the World Health Assembly in May 2018, Health Ministers and Senior representatives from GMS countries signed the Ministerial Call for Action to Eliminate Malaria in the GMS, where they reconfirmed their commitment to eliminate malaria before 2030 and emphasized the adoption of “one region, one strategy” approach. In April 2021, Thailand has also joined WHO’s E-2025 initiative. [10]

Progress to date towards eliminating malaria has been facilitated by active case detection, community-level rapid testing and –in some countries—treatment, long-lasting

insecticide-treated net and hammock distribution and strengthened surveillance. Support from external partners as well as domestic financing has been critical to supporting effective malaria programming across the region. Environmental changes such as deforestation and urbanization also contributed to reducing forest coverage and therefore malaria risk. Malaria in the GMS has retreated to smaller remote geographical areas and there has been a shift in strategy from nationwide interventions to more foci-based approaches. [11][12]



3. COVID-19 situation in GMS

Cambodia: Cambodia had successfully controlled the COVID-19 situation in 2020 but has seen a surge of COVID-19 cases and related deaths since March 2021. In March 2020, the government closed all educational institutions, entertainment venues, forbade religious gatherings and cancelled the Khmer new year celebrations. Schools were gradually opened up in September 2020. In February 2021, the Government of Cambodia established an inter-ministerial working group to oversee the implementation of COVID-19 vaccinations and operations. From April 2021 onwards, strict lockdowns and curfews were implemented in various provinces in response to the outbreaks. In April 2021, Cambodia reported over 10,000 cases of COVID-19. As of October 2021, the total number of cases and deaths stand at 118,522 and 2,788 respectively. Cambodia started its vaccination drive in February 2021 and as of October this year, 76.77% of the population has been fully vaccinated [13]. The Ministry of Health (MoH) approved the use of antigen rapid tests by registered public and private health care providers (based on eligibility criteria as per the guidelines issued) across the country in April this year and the MoH has been engaged in conducting supervisory visits to provinces which have been affected. WHO is supporting MoH in rolling out of contract tracing in all provinces.

Laos: The COVID-19 pandemic was well-managed by Lao PDR with 41 imported cases in 2020 and no local transmission. However, Laos had an outbreak in April 2021 with 555 cases reported in 15 provinces. The country locked down its capital from 22nd April to 5th May and further extended till September 2nd. Lao PDR also closed its international borders with an aim of controlling the community transmission. As of October 2021, Laos has reported 40,271 cases and 65 deaths and 91.7% of the total population is fully vaccinated. [13] Lao PDR is conducting case investigations for identifying close contacts. In addition, there are public announcements regarding high-risk places through press releases, hotlines and social media. Teams led by the National Centre of Laboratory and Epidemiology (NCLE), with support from the World Health Organisation, deployed to southern provinces are supporting and strengthening data management, case investigation, enhanced surveillance and multisource surveillance. The National level Public Health Emergency Operating Centres (PHEOC) has been activated and is being convened every day. The PHEOC staff at subnational levels are trained to respond to public health emergencies. During COVID-19 crisis, the PHEOCs were able to collate, analyse and integrate information from across the health system and present a comprehensive picture of public health needs, including for ventilators, isolation wards, beds for intensive care cases etc. A Dashboard was developed for Ministry of Health Senior officials, with support from WHO to track testing, points of entry, quarantine facilities, treatment capacity and COVID-19 vaccination status.Z

Myanmar: Myanmar had reported negligible cases till August 2020 but was hit by a major surge of infections September 2020 onwards. The second wave of infections resulted in enforcement of lockdown in Yangon, Rakhine state and 11 townships in Mon, Ayeyarwaddy, Bago and Mandalay. To ease the economic hardship of people, the previous government implemented several relief measures such as unemployment benefits to registered workers, targeted cash assistance, and a one-time food distribution to households without a regular income. Soft loans were extended to farmers, roadside vendors and microfinance sectors. [14] Following the elections in November 2020, on February 1 2021, a military seized power, detained and deposed the democratically elected members of the country's ruling party and declared a state of emergency for a year. The current political and security crisis in Myanmar have led to the collapse of the public health system and the population is relying on the delivery of health services through the private sector and civil society network. As of October 2021, there have been 500,073 confirmed cases of COVID-19 and 18,697s deaths reported.¹ The United Kingdom had warned the United Nations Security Council that by August 2021, nearly half the population of Myanmar would have been infected with COVID-19. [15] Only a meagre 8.35% of the population is fully vaccinated as of October 2021 [13]. Some state/regional Vector Borne Disease Control (VBDC) offices and most of the township VBDC offices are not functional.



¹ COVID-19 case numbers may be underreported due to political situation

Thailand: With approximately 7,000 cases, Thailand was relatively successful in containing the pandemic in 2020 and the country's robust public health infrastructure including its strong surveillance systems played a critical role. However, the country started seeing a steep spike in cases April 2021 onwards, with over a thousand cases reported per day. A state of emergency was declared by the Prime Minister of Thailand on 26th March 2020 and curfew implemented on 3rd of April 2020- which was gradually eased as cases decreased by mid-May. Owing to the recent outbreak, the government has imposed restrictions such as ban on dine-ins, limitations on gatherings, closure of construction sites and sealing of workers' campus in Bangkok and several other provinces. As of October 2021, Thailand reported 1,912,024 cases and 19,205 deaths and 41.62% of the population has been fully vaccinated as of October this year [13]. The government focused on strengthening surveillance and initiated contact tracing to control the spread. Centre for COVID-19 Situation Administration (CCSA) was established to coordinate the government's response, working in conjunction with the Department of Disease Control. Thailand has also focused on implementing mass testing for migrant workers and travel restrictions from affected provinces.

Vietnam: With a total of 1,465 COVID-19 cases reported in 2020, Vietnam was described as one of the most successful

nations in curbing the pandemic. However, since April 2021, Vietnam's fourth wave has generated a steep rise in cases and deaths. As of October 2021, 921,122 cases and 22,083 deaths have been reported. The government initiated the vaccine rollout in March 2021 as of October 2021, less than 22.65% of the population had been vaccinated. The Government of Vietnam has been aggressive in combating the outbreak – enforcing nationwide lockdowns, strict mass quarantining, contact tracing, suspension of school and outdoor activities were some of the measures implemented. Several other measures were implemented to ensure that the spread of the virus is contained- such as strengthening and streamlining existing surveillance system, incorporating multisource surveillance, reviewing actions, strengthening capacities in health care facilities, updating and supporting implementation of national guidelines, procuring necessary equipment, working with other development partners in building capacity for laboratory testing and better communication in case of wider community transmission. The Government of Vietnam has also restricted incoming travellers to repatriation cases and essential expatriates. National Steering Committee on COVID-19 Prevention and Control was formed and meets at periodic and ad-hoc basis to review the evolving outbreak situation and to discuss the response.



4. Impact of COVID-19 on malaria control efforts in GMS

While up until mid-2021, the GMS was not as affected by COVID-19 as other countries, recent outbreaks are the most serious to date and the absence of reliable COVID-19 testing data from Myanmar is also cause for concern. The provision of malaria and other primary health services has been affected as governments in the GMS and across the world focus on responding to the pandemic. Within the GMS, displacement caused by the political situation in Myanmar together with COVID-19 related border closures have put mobile and migrant populations at a greater threat of infectious diseases. COVID-19 prevention and control guidelines have interrupted face-to-face training and post-training supportive supervision activities, vector control distribution campaigns and community engagement efforts in several countries. In several cases, community health workers as well as community members shared hesitancy to report, refer or seek care for malaria services in COVID-19 times due to fear of COVID-19 transmission, screening and/or containment.

During the initial months of the pandemic, there was a shortage of protective kits such as Personal Protective Equipment (PPE), masks and sanitisers for health workers

involved in malaria and other health programs. According to the Global Rheumatology Alliance Patient Experience Survey, 21.4% in Southeast Asia who were prescribed antimalarial drugs for their rheumatic diseases experienced an insufficient supply during the first wave of the COVID-19 pandemic. The format of malaria outreach worker monthly meetings changed to online meetings, individual/smaller group meetings or telephone check-ins. Foci investigation for detected cases was also affected by travel restrictions. Coordination with outreach workers and verification of malaria data collected at community level was also challenging during restricted travel periods. Some stakeholders theorize that mobile and migrant populations may have retreated to forested areas during lockdowns, increasing risk of malaria and other community illnesses. All countries in the GMS are implementing approaches to target the MMPs more intentionally, with support from Civil Society Organizations (CSOs). While the malaria case data reported for 2020 and the first half of 2021 does not reflect an increase it is possible that the public health system is not detecting all cases in pandemic times.

The political situation in Myanmar with civil disobedience movement have also led to a 70% decline in the malaria testing rate in Jan-Mar 2021 when compared to 2020 for the same time period. In addition to malaria testing, treatment, reporting and case investigation activities have been severely impacted. At the central level, malaria and other national health program offices are not functional. Reduced internet connectivity has led to significant issues with coordination, communication and collaboration for CSOs involved in sustaining malaria services while the public health system remains non-functional. Difficulties in withdrawing money from banks in Myanmar also affected malaria implementation.

While the 8000 Integrated Community Malaria Volunteers (ICMVs) under the malaria program in Myanmar are facing difficulties in accessing supplies and incentives, Civil Society Organizations (CSOs) in Myanmar are continuing to implement malaria activities at the community level with the remaining 11,500 Integrated Community Malaria Volunteers (ICMV) as of early 2021. Continuing political unrest as well as safety concerns and disruptions in cash flow are causing unprecedented challenges for CSOs delivering malaria and other essential health products and services to communities at risk in Myanmar.

Despite the difficulties posed by the COVID-19 pandemic, all countries in the GMS have continued the fight against malaria. Overall, the GMS region has shown a 27% decline in malaria cases in 2020 compared to 2019 [16]. Figure 3 shows that all countries in the GMS recorded a decline in malaria cases during 2020, despite the pandemic's impact on some elimination program activities. Figures 4,5,6,7 and 8 compares the monthly trend of COVID-19 and malaria cases for all countries of the GMS for 2020 till August 2021.

Confirmed cases of malaria in GMS (2020 vs 2019)

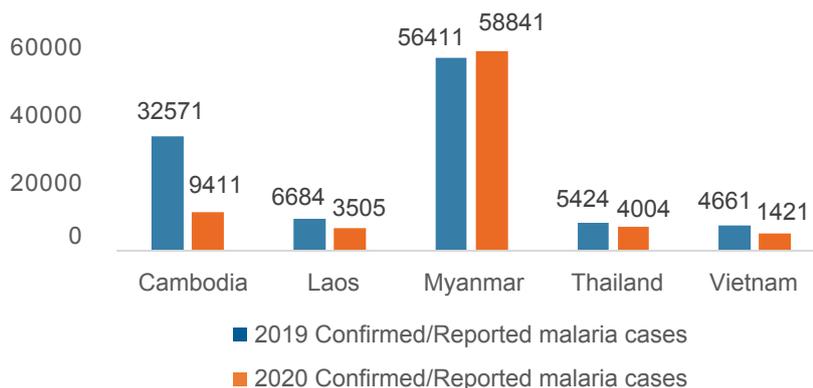


Figure 3: Confirmed cases in GMS in 2019 compared to 2020 (Source: WHO MEDB)

Cambodia

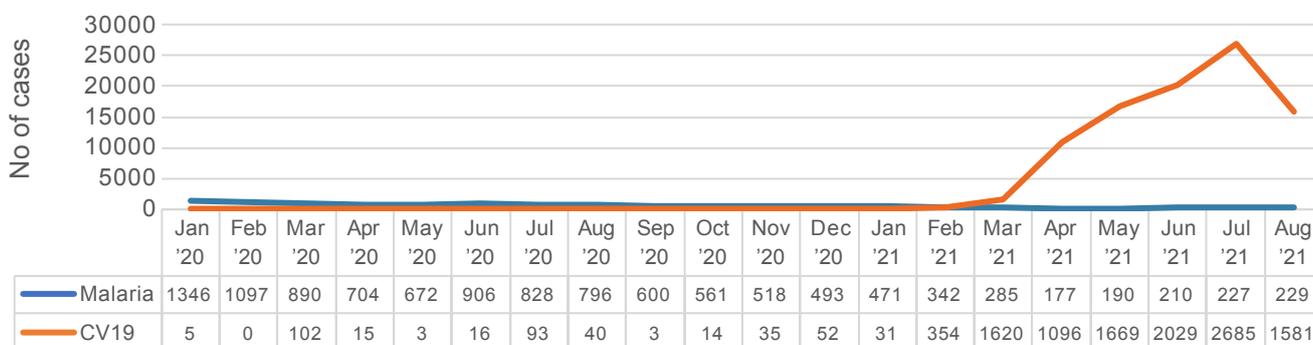


Figure 4: Malaria and COVID-19 cases in Cambodia in 2020 and 2021 (Source: WHO MME and Our World in Data)

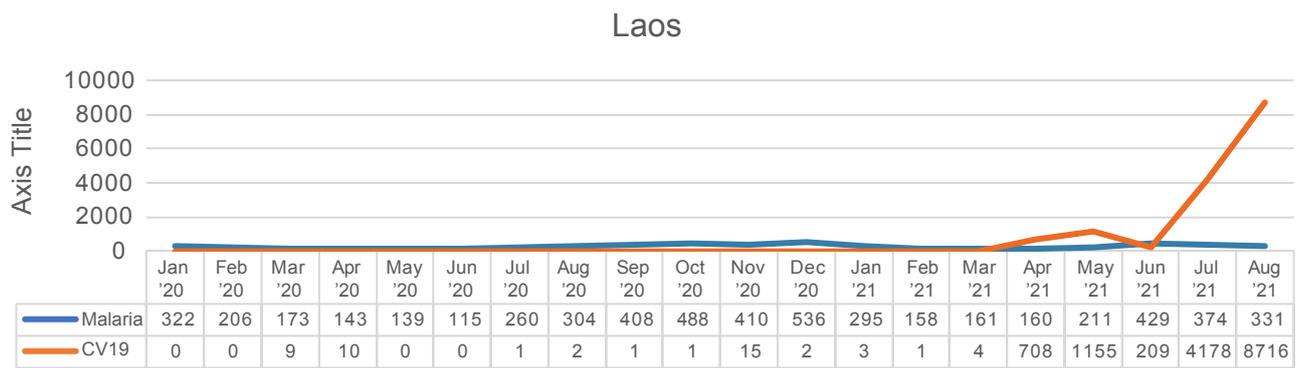


Figure 5: Malaria and COVID-19 cases in Laos in 2020 and 2021 (Source: WHO MME and Our World in Data)

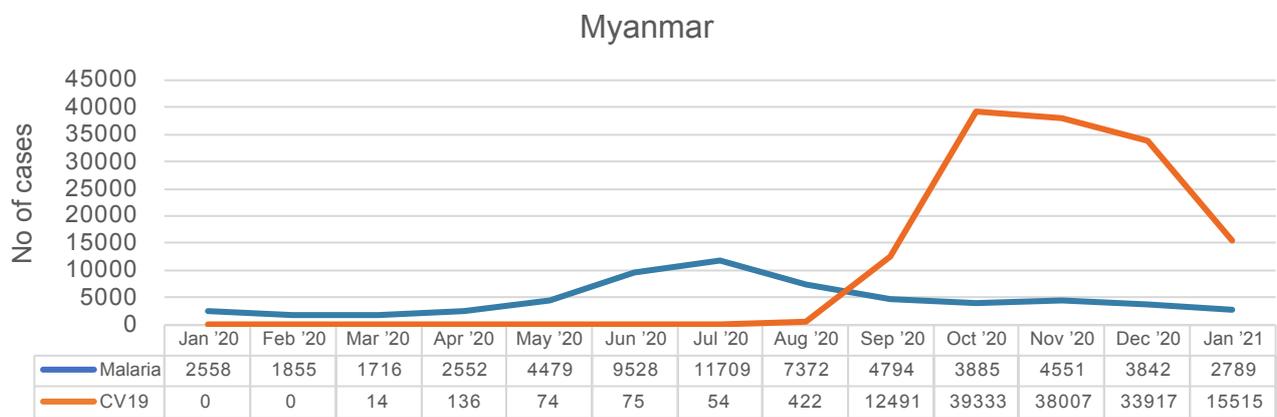


Figure 6: Malaria and COVID-19 cases in Myanmar in 2020 and Jan 2021 (Source: WHO MME and Our World in Data)²

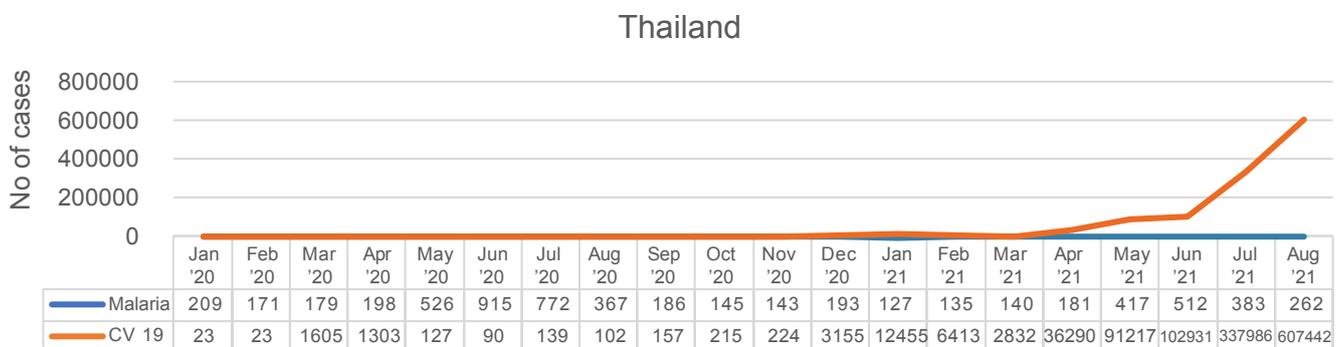


Figure 7: Malaria and COVID-19 cases in Thailand in 2020 and 2021 (Source: WHO MME and Our World in Data)

² Since the political situation happened in Myanmar in Feb 2021, partial data on malaria and COVID-19 is available. The graph therefore doesn't capture data Feb 2021 onwards

Vietnam

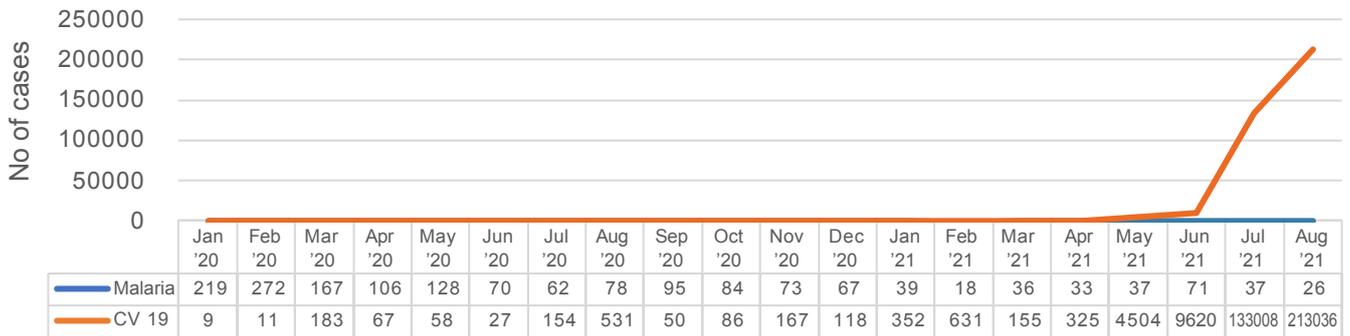


Figure 8: Malaria and COVID-19 cases in Vietnam in 2020 and 2021 (Source: WHO MME and Our World in Data)

Figure 9 and Figure 10 show that countries (except for Laos and Myanmar³) have reported a decline in cases for both *P. falciparum* and *P. vivax* in the period January-June 2021 when compared to the same period in 2020. The decrease in cases could also be due to the decreased rate of testing. There was a 34% drop in tests conducted in January-June 2021 compared to the same period in 2020. Laos reported 82% increase in Pf+mixed cases in the period Jan-Jun 2021 compared to the same period in 2020. [17]. The jump in cases in Laos was attributed to early rainfall leading to an early start of the cultivation period typically associated with increases in malaria incidence and low supervision by district staff. In light of Myanmar's political condition and the 2021 COVID-19 outbreaks in all countries of the GMS, the potential impact of COVID-19 on malaria will need to be continually assessed during 2022.

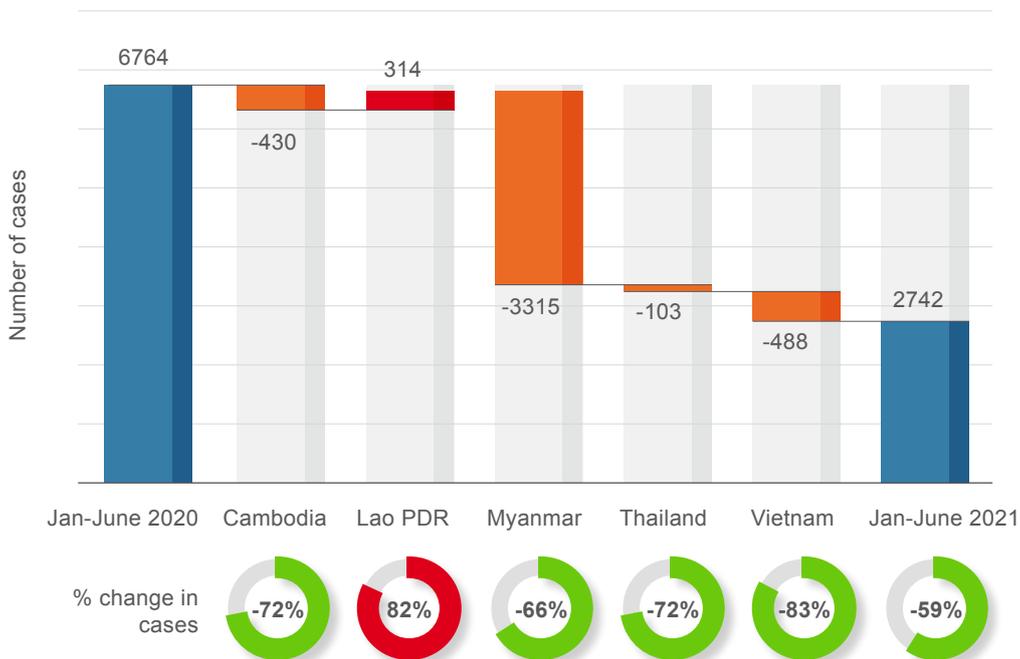


Figure 9: Changes in Pf+Mix cases in the GMS from Jan-Jun 2020 compared to Jan-Jun 2021 (Source: WHO MEDB)

³ Data for Myanmar is partial

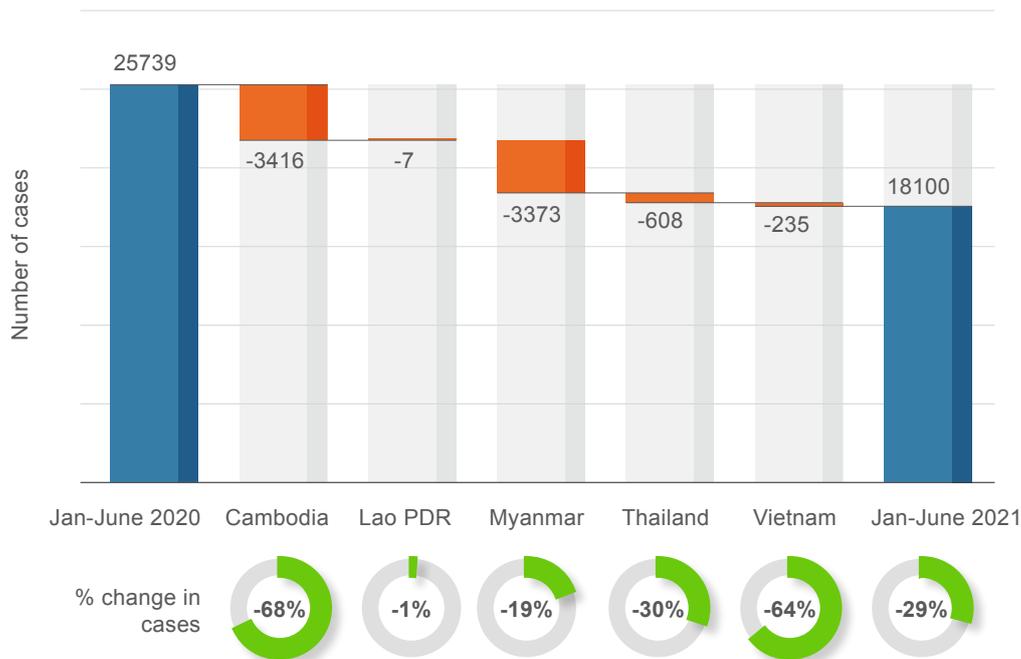


Figure 10: Changes in P.v. cases in the GMS from Jan-Jun 2020 compared to Jan-Jun 2021 (Source: WHO MEDB)



5. Maintaining the momentum for malaria

a. Political Commitment

Over the past decade, domestic budget allocations for malaria have increased in several countries of the GMS. Research shows that there is a strong economic case for investing in malaria elimination in the GMS. Ending local transmission in GMS by 2030 can save over 91,000 lives, avert 23.5 million cases and generate economic benefits of the order of 9 billion USD.[18] An investment case developed for Thailand predicts that elimination would prevent 1.86-3.11 million malaria cases from 2017 to 2036. In addition, every 1 USD spent on the implementation of the national malaria elimination strategy could result in a considerable return on investment, ranging from USD 2 to USD 15. [19] In the coming years, GMS may transition out of donor financing. Other priorities, as well as the economic shock from the COVID-19 pandemic, may also have a negative impact on domestic resource allocations for malaria. Sustained financing and additional investments are crucial for eliminating the disease. Despite the overall increase in domestic financing, there still exists a gap in financial resources needed to achieve/sustain malaria programs without continued donor support. In order to reach the regional elimination goal by 2030, spending on malaria control, elimination, and prevention of re-establishment must be maintained at sufficient levels to prevent resurgence.

Prior to COVID-19, Cambodia, Myanmar (currently inactive) and Thailand have established multisectoral malaria elimination task forces to promote the whole-of-government approach and ensure that national malaria targets are met. While task forces are active, the frequency of meetings and some activities have been impacted by the pandemic. Even though countries have committed to adopting multisectoral approaches for accelerating malaria elimination efforts, countries will need to build strong relationships and design concrete plans to engage with the non-health sectors, both at national and subnational levels.



Maintaining momentum for malaria elimination in Cambodia through malaria elimination task forces

To help maintain the momentum for malaria elimination, Cambodia has formed multisectoral malaria elimination task forces at national, provincial and subnational levels. The objectives of the task forces are:

- Steward the national strategy for malaria elimination
- Advocate for commitment to malaria elimination to secure effective multisectoral engagement
- Ensure effective national leadership and governance to provide full access for people in remote areas
- Determine appropriate approaches to sustain community level services beyond malaria

The deputy chief of National Centre for Parasitological Entomology and Malaria Control (CNM) leads and coordinates the functioning of the provincial task forces. Each member of the secretariat team from CNM is in charge of 4-5 provinces. The National Advisory

Committee of malaria elimination task force chaired by Minister of Health, was established in 2018. The Provincial Multisectoral Malaria Elimination Committee and District Multisectoral Malaria Elimination Task Forces are chaired by Vice Provincial Governor and Vice District Governor respectively. Despite COVID-19, in 2020, the provincial and district task forces met at regularly scheduled intervals through virtual platforms. A COVID and malaria task force was formed which meets every 3 months (virtually) to review the locations for malaria and COVID-19 cases and compare them, undertake risk analysis for implementation of malaria activities at subnational level, discuss the challenges faced due to COVID-19 in furthering the Malaria Elimination Action Framework (MEAF) objectives and possible solutions to tackle them. However, in 2021, owing to the spike in cases, Provincial Multisectoral Malaria Elimination Committee meetings are being partially conducted and District Multisectoral Malaria Elimination Task Force meetings are on hold.

b. Leveraging The Network of Community Health Workers/volunteers

The vast network of community health workers in the GMS is one of the key reasons for continued delivery of essential health services, without much disruptions. Despite the pandemic, the network of Village Malaria Workers (VMWs) also known as Community Health Workers (CHWs) or Mobile Malaria Workers (MMWs) depending on the country, continued providing services such as testing treatment⁴, distribution of LLINs and reporting to the nearest health facility and, in some countries, directly to national online surveillance systems. PPE kits, masks and sanitizers were provided to healthcare workers. In Cambodia and Myanmar, village health workers provide integrated care for malaria and other health issues. In Cambodia, Village Malaria Workers and Mobile Malaria Workers are equipped to use their mobile device to report case testing and treatment activities to the national surveillance system. Guidelines developed in 2021 were used to train VMWs and MMWs to decide whether to refer community members to the Health Centre for COVID-19 testing. [20] Frontline workers are increasingly using digital tools to report into disease surveillance systems, while also delivering face masks and PPE to rural communities. Some countries, such as Cambodia, utilised savings from GF allocation to purchase protective equipment, masks, sanitisers, mobile phone credits, thermometers, disinfectants and soap and for conducting trainings online. Because CHWs are recruited from within the communities most affected by malaria, they represent trusted sources of information and care for malaria and COVID-19.



⁴ In Cambodia, Myanmar and Laos, malaria treatment can be provided by community health workers

Thailand's Village Health Volunteers at the forefront of COVID response

Thailand is driving integration of services at the community level through the Village Health Volunteers (VHVs). In Thailand more than one million VHVs have been engaged to manage COVID-19 while continuing to implement malaria prevention and outreach activities. Village health volunteers visited more than 14 million households during the period of interprovincial travel restrictions. (March-April 2020). The volunteers identified and monitored 809,911 returnees and 64,552 people at high risk and referred a total of 3,346 symptomatic patients to hospitals by 13 July 2020. Data collected by the health volunteers were used for contact tracing. At quarantine centres, volunteers monitored the health of the people quarantined. They were also critical in carrying out

awareness raising campaigns to promote COVID-19 prevention and care seeking practices. Volunteers went from door to door to inform people about COVID-19 symptoms and prevention measures and distributed masks, sanitisers and informational flyers. They also assisted in reporting suspect cases, delivering drugs to patients' homes, consulting doctors and calling for ambulances. Apart from the physiological health, the pandemic has also had an impact on mental health. VHVs played a key part in allaying fears and anxiety in individuals and in the community as a whole. In addition to their monthly honorarium, each volunteer received an additional 500-baht incentive for engaging in COVID-19 response.

C. Readjustment and Intensification of Malaria Interventions

Readjustment of malaria activities

Risk assessment undertaken by countries helped them develop Standard Operating Procedures (SOPs) and guidelines on how to adapt malaria interventions to the country's COVID-19 situation and response. In some countries such as Laos, Myanmar and Thailand, CHWs and other volunteers were supported through social media or messaging platforms such as Whatsapp and Facebook, rather than in-person meetings. Volunteers were also provided with authorisation letters from their local government so that they could travel from their villages to health facilities in event of implementation of travel restrictions. In-person trainings were changed to online trainings or conducted in small groups so that social distancing measures could be implemented. Cambodia developed video modules for safer training of VMWs during the pandemic. In some places, door-to-door distribution of Long-Lasting Insecticidal Nets (LLINs) along with malaria screening were carried out, to minimize larger gatherings at health facilities or other community venues. Guidelines on COVID-19, malaria testing and COVID-19 prevention measures were developed and shared with health workers.



Intensification of malaria activities

Pre-pandemic, countries adopted intensified malaria outreach efforts targeting forest goers at risk to stay on track. Despite the ongoing pandemic, countries in the GMS carried on with their intensified interventions. In Vietnam, CSOs helped the national program implement targeted interventions with forest goers by deploying mobile teams, conducting contact tracing of co-travellers, and working with the logging transporters on motorbikes to expand access to diagnosis and treatment. CNM Cambodia along with WHO, developed and launched a response plan called Intensification Plan/Last Mile Plan to implement aggressive approaches towards malaria control in six provinces. Active case detection among forest goers, passive case detection at home, distribution of LLINs and Long-Lasting Insecticide-treated Hammock Net (LLIHNs), Targeted Drug Administration (TDA) for adult males, Active Fever Screening, Intermittent Preventive Treatment for forest goers, community engagement and social mobilization is being implemented in hotspot areas [21]. In addition, case investigation and focus investigation response continues in low endemic areas. Laos also plans to implement aggressive targeted strategies to accelerate *Plasmodium falciparum* elimination. These include- village census, community engagement and social mobilization, top-up distribution of LLINs in target villages, targeted distribution of LLIHNs, TDA for population aged 7-49 years; intermittent preventive treatment for all high-risk groups and active house-to-house fever screening every 2 weeks. Since July 2021 a pilot is being conducted in 5 villages in Boualapha province. Towards the beginning of 2022, the pilot will be scaled up to 19 villages in 8 districts, with support of additional funding under RAI3E. Thailand is also conducting pilot implementation of focal Mass Drug Administration (MDA).

d. Continued Donor Support for Malaria and Covid-19

The past decade has seen a record investment in malaria elimination globally, including in the countries of Southeast Asia. The Regional Artemisinin-resistance Initiative (RAI) was launched in 2013, to support an accelerated and well-coordinated regional approach to tackle artemisinin drug resistance and contain its spread. The Global Fund allocated US\$115M in 2013 to establish and support the Regional Artemisinin-resistance Initiative (RAI) for the period 2014-2017. This funding was disbursed to support each of the GMS countries, and included a regional component to promote a multilateral approach. The RAI grants were renewed and expanded in a second phase (2018-2020), RAI 2 Elimination (RAI2E) program, with a US\$243M regional grant to accelerate elimination of *Plasmodium falciparum* malaria in the GMS. In its third phase, The Global Fund has committed US\$230M to extend the GMS efforts through RAI3E (2021-2023).

The RAI grants have supported the national malaria programs in the GMS to increase malaria service coverage for remote populations in border areas and other at-risk populations, as well as improve case management through engagement with community health volunteers and strengthening of national surveillance systems while working to tackle drug resistant strains of malaria in the GMS. Between 2014 and 2019 in the GMS, the RAI/RAI2E programme made significant contributions towards the elimination of malaria, including: 27.8 million people tested for malaria; more than 700,000 people treated for malaria; distribution of 21.4 million insecticide-treated bed nets; and training of more than 33,000 volunteers. [22]

The Global Fund activated funding to support countries in responding rapidly to the pandemic. The RAI sub-recipients had the opportunity to reallocate their savings for an amount of up to 5% of their overall budget to cover COVID-19 response activities and Cambodia and Myanmar have requested support through this. The Global Fund launched the COVID-19 Response Mechanism (C19RM) to support

countries in their response to COVID-19 and mitigate its impact on health systems. All countries within the GMS submitted successful proposals to access this grant.

U.S. President's Malaria Initiative (PMI), led by USAID in partnership with the Centers for Disease Control and Prevention, implements malaria prevention, case management, surveillance, operational research, commodity procurement and distribution activities in Cambodia, Myanmar, Thailand, and Lao PDR. Through its regional and bilateral programs, USAID-PMI has long supported the network of therapeutic efficacy studies and integrated drug efficacy surveillance in the GMS to monitor and respond to antimalarial drug resistance. PMI has also previously supported the "twin city" initiative in Thailand, Cambodia, and Myanmar, focussing on case management and control among migrant and mobile populations. University Research Co., LLC (URC) currently implements the PMI-funded malaria projects in Cambodia (Cambodia Malaria Elimination Project) and Myanmar (Defeat Malaria). The project in Cambodia focusses on providing technical assistance to CNM and developing model elimination packages in prioritized Operational Districts and provinces. The project in Myanmar focuses on bringing together the public and private sectors to ensure universal coverage of at-risk and hard-to-reach populations by implementing vector control and case management interventions. USAID-PMI, Australian Department of Foreign Affairs and Trade (DFAT) and the Bill and Melinda Gates Foundation (BMGF) are funding complementary projects in the region, such as the USAID-PMI funded Digital Community Health Initiative (assessing use of digital health systems and tools in Cambodia, Thailand and Myanmar) and the Gates Foundation-supported Sustainability and Transition project implemented by UCSF MEI in Cambodia, Vietnam and Thailand. BMGF and DFAT are also supporting the establishment of Public Health Emergency Operations Centers (PHEOC) in Laos, Cambodia and Myanmar to prevent disease outbreaks. [23]



e. Role of Global, Regional and Local Partners

While the Global Fund and UNOPS have significantly supported national malaria programs in the GMS, other technical partners, implementing organizations and research institutions have rounded out this support to create a comprehensive platform to support malaria elimination in the GMS.

WHO's Mekong Malaria Elimination (MME) programme assisted countries in doing a risk assessment of the potential impact of COVID on malaria elimination efforts. MME convened regular meetings with the malaria programs for assessing the impact of the pandemic on health commodity stocks, testing and treatment. WHO is developing an alert service by email whenever abnormal increase in cases are detected at district levels. Alert mechanisms are currently implemented in Laos, Cambodia and Thailand.

Populations Services International (PSI) has been supporting the Laos government to pioneer the PHEOC strengthening project. Encouraged by the success of the project in Laos, similar project is being undertaken in Cambodia and Myanmar⁵. In addition, PSI has been providing access to reliable source of information for COVID-19, helping curb the spread of misinformation, promoting interventions such as handwashing and social distancing, supporting pharmacy staff to provide point-of-care information, accurate COVID-19 risk-counselling,

diagnosis, treatment and case reporting. In Cambodia, Clinton Access Health Initiative (CHAI) supported CNM in quantifying COVID-19 PPE for first-line malaria workers, developed contingency plan in the beginning of the pandemic, and continues to provide technical support to sustain malaria services. CHAI continues to support Cambodia's network of VMWs in 4 provinces. In addition, as part of the PHEOC consortium member, CHAI in Laos is currently leading the establishment of EOC logistics section to ensure logistics contingency plans and stock monitoring mechanisms can be operationalized successfully through the EOCs. This is being undertaken to ensure availability of adequate medicines and medical equipment in health facilities in order to prepare and respond to outbreaks.



Medical Action Myanmar's efforts in leading malaria services in Paletwa township

Myanmar reports the highest number of malaria cases among the GMS countries. As of 2019, 291/330 townships were still malaria endemic. Medical Action Myanmar (MAM) has been providing health services to vulnerable and hard-to-reach populations through volunteers and clinics since 2009. Volunteers affiliated with MAM undertake testing, treatment, LLIN distribution, IEC and surveillance activities.

Paletwa, one of the areas covered by MAM is conflict ridden and has reported the highest number of malaria cases in 2019. In addition, the area is very remote and can be reached by only boat and this hampers access to public health services. MAM built a network of 200 volunteers who are from the community and set up 4 malaria posts. MAM volunteers have continued to undertake targeted malaria screening in 81 villages of Paletwa- 57 villages were covered by MAM mobile teams and the rest were covered by door-to-door screening. Community awareness messages regarding COVID-19 prevention were carried out through distribution of posters and via loudspeakers.

Comparison of health service data from Jan-Jun 2019 and Jan-Jun 2020 shows that COVID-19 has negligible impact on delivery of services. The average rate of testing done by volunteers were 18.8 RDTs per month and 18.7 RDTs per month in 2019 and 2020 respectively. Almost four-fifth of the population were tested in the beginning of 2020. Despite the pandemic, the uptake of health services had remained high [24]. MAM staff at the headquarters supported the staff and volunteers by providing regular updates and operational guidelines. MAM staff stressed on the importance of continuing with the services, specially at a time when government service providers would be preoccupied with COVID-19 response. Years of operating in conflict affected areas has made MAM's systems flexible and responsive to immediate needs and its staff creative and resilient.

In the current scenario however, due to the political situation in Myanmar and the civil disobedience movement, the testing rates have dropped by a large margin and we have partial data from Myanmar.

⁵ The project is on hold in Myanmar at this moment

In the countries of the GMS, civil societies play a vital role in improving access to services in remote areas and among hard-to-reach population, by building trust with the affected communities. The Regional Malaria CSO Platform was established in 2014 with the purpose of bridging the gap between communities, civil society program implementers and donors through the RAI Regional Steering Committee (RSC), in the GMS. The CSO Platform works closely with CSOs and communities in the GMS countries and with the RAI RSC through CSO representatives. The Project Advisory Team (PAT) of the Platform meets regularly to review malaria and COVID-19 related implementation challenges that CSO are facing and the possible solutions to address these. The Platform, in collaboration with WHO, Independent Monitoring Panel (IMP) of RAI2E developed and shared an assessment survey to assess the impact of COVID-19 on disruption in malaria interventions at the community levels. [25] The platform also developed operational guidelines for healthcare workers on how they can maintain services in community whilst

protecting themselves from risk of COVID-19 infection, which was used by CSOs in the region [26].

The CSO Platform's ongoing communication with CSOs and malaria programs in the region highlight the many ways in which CSOs are supporting efforts to sustain community-level malaria and other essential health services while simultaneously integrating COVID-19 prevention and screening activities into their programs at community level. For example, in Thailand, Raks Thai, World Vision and other CSOs supporting malaria elimination activities among migrant communities at the border, are integrating COVID-19 prevention messaging as well as distribution of masks, hand sanitizer and other prevention commodities to outreach workers as well as community members. CSOs in Thailand support the government in implementation of the DMHTT toolkit (or Distances, Mask wearing, Handwashing, Testing, and Thai-Chana or contact tracing application) in the community. At the start of the pandemic, Malaria Consortium conducted a risk assessment exercise and devised a mitigation plan so that Cambodia's mobile malaria workers could carry on with their activities while minimising risks for themselves and the population. Indicators were developed to track performance and these were monitored throughout the pandemic. [27]



In Thailand, the Department of Disease Control (DDC), Ministry of Public Health (MoPH), has collaborated with the World Health Organization (WHO) and CSO partners in translating COVID-19 Migrant Hotline messages into three languages (Cambodian, Lao, and Myanmar) which provides vital COVID-19 information to the migrant population living in Thailand.

Health Poverty Action of Vietnam's role in sustaining malaria services

In Vietnam, Health Poverty Action (HPA) developed "Guidelines for malaria control in the context of the COVID-19 pandemic" in consultation NIMPE, Vietnam General Department of Preventive Medicine and WHO Vietnam. The guidelines outline amended protocols for malaria activities in pandemic times, including home-based malaria test and treatment services as well as use of mobile follow-up with confirmed malaria cases to promote treatment adherence. Following approval by NIMPE in February 2021, the guidelines developed by HPA and other stakeholders are being used to facilitate COVID-19 safe malaria activities, conducted by Mobile Outreach Teams (MOTs) made up of village health workers and community volunteers. HPA has also collaborated with NIMPE to organize three online trainings on the guidelines for staff of the Provincial Center for Disease Control, District Health Center,

Commune Health Center and Village Health Workers. Malaria Outreach Teams of HPA are now providing malaria-related services at home to ensure continuation of essential malaria services. Teams follow 5Ks- Khẩu trang (facemask), Khử khuẩn (disinfection), Khoảng cách (distance), Không tụ tập (no gathering), Khai báo y tế (health declaration) to minimize the risk of COVID-19 transmission for healthcare workers, patients and the community. The malaria home-based service providers screen people with fever for both malaria and COVID-19 and based on symptoms and epidemiological history, refer suspected COVID-19 cases to local COVID-19 prevention steering committees. HPA has also procured and distributed personal protection equipment for MOTs and other community level health and outreach workers in endemic districts of Vietnam.

f. Supply Chain Responsiveness

Countries, with support from partners, monitor commodity levels closely to avoid stock outs. To assist countries with the procurement process, a tracking tool was developed by UNOPS which provides real-time information on product status which is shared regularly with all partners. UNOPS also supports countries in quantification of demand for health commodities and forecasting. During the pandemic, before the current military government, Myanmar malaria program maintained 1-2 years stock at central warehouses and 6-12 months of stock at regional offices VHV sites. Village Health Workers came down to cluster points for restocking. [28] However, due to the current situation in Myanmar, the processing time for clearance of shipment has been delayed and payments disrupted. As reported by WHO MME, this disruption may lead to stockouts of malaria drugs in the health facilities. In Laos, the procurement process for 2022

has already been initiated. In Cambodia, whenever the stock in districts go below the Average Monthly Consumption, the staff will request for immediate distribution of stocks. CNM also developed 'stock base policy' for VMWs to ensure essential anti-malarial commodities are available at the community level based on an analysis of their expected needs. In addition, CNM along with partners also hold regular meetings to identify areas that are at risk of stock out and facilitates quick disbursement of commodities. UNOPS has provided mini labs for quality monitoring of pharmaceutical products including anti-malarial drugs in private sector to prevent counterfeit/substandard drugs from entering the market. In Lao PDR and Thailand, UNOPS and USAID-PMI continue to coordinate closely on the procurement and delivery of malaria commodities to minimize any potential stockouts due to the COVID-19 pandemic.

Public Health Emergency Operation Centers (PHEOCs) in Lao PDR at the forefront of malaria and COVID-19 response

The Ministry of Health in Lao PDR set up Public Health Emergency Operation Centers (PHEOCs) at national, provincial and district level in 2014. The EOCs offer a coordinating mechanism to bring together data, systems and people across different parts of a broad public health system to monitor early warning of potential threats and develop a comprehensive response. The Ministry of Health in Lao PDR set up Public Health Emergency Operation Centers (PHEOCs) at national, provincial and district level in 2014. Their purpose was to coordinate and provide guidance to local authorities to formulate efficient and timely response for dealing with disease outbreaks and emergencies. The PHEOCs provided enabling infrastructure for rapid information sharing,

coordinated action and timely response on malaria cases. During COVID-19 crisis, the PHEOCs were able to collate, analyse and integrate information from across the health system and present a comprehensive picture of public health needs, including for ventilators, isolation wards, beds for intensive care cases etc. The PHEOC also works with the Lao Center for Communication Education for Health to generate and distribute risk communication materials. The newly implemented DHIS2 allows EOCs to more efficiently monitor disease surveillance for all 19 notifiable diseases in Laos. PHEOCs will now be replicated in Cambodia and Myanmar.

To mitigate the impact of the COVID-19 pandemic on supply chains and access to antimalarial commodities, the RBM Partnership to End Malaria and the World Health Organization convened malaria partners globally on a fortnightly basis since February 2020. Through these convenings, partners including the Global Fund, USAID-PMI, in consultation with malaria programs flagged possible commodity shortages. Global disruption in Artesunate Mefloquine (ASMQ) production and shipments globally had an impact in Cambodia and Lao PDR. Back-up plans including stock rotation were put in place to mitigate the situation.



g. Strong Surveillance Systems

Centralized systems developed for data management, together with highly devolved systems for case investigation for febrile illnesses has aided in containment of both malaria and COVID-19, in Thailand. Thailand has rolled out the REVEAL mHealth application for foci management countrywide at provincial and district levels⁶. Vietnam has also taken measures to ramp up its surveillance system in hotspot areas. All malaria cases are reported within 48 hours followed by foci investigation and response. To respond and control malaria outbreaks in remote, hard-to-reach areas, the Institute of Malariology, Parasitology, and Entomology (IMPE) Quy Nhon and the National Institute of Malariology, Parasitology, and Entomology (NIMPE) also sent rapid response teams to malaria hotspots, to support the local staff. Vietnam integrated their malaria information system into the wider communicable disease system (eCDS-MMS) to keep the momentum towards malaria elimination and malaria focal points from all health facilities were trained in online reporting. Vietnam revised reporting forms to allow private clinics to report directly into the national information system for the first time. Refresher training was conducted in Q4 of 2020 for high burden malaria provinces and subsequently, the reporting completeness increased to almost 100%. In high burden areas of Laos, cases are reported monthly in the DHIS2 system. Since Jan 2021, Centre for Malaria, Parasitology and Entomology (CMPE) has been piloting a SMS reporting system in high burden areas which reports data in a week compared to the one-month timeline earlier. This has led to faster identification of outbreak and an expedited outbreak response. As per the Malaria Burden Reduction Surveillance Guidelines, in case of an outbreak, facilities at village level should report cases within 24 hours. The health centre must report the information to District Anti Malaria Nuclei (DAMN) within 24 hours, who

verifies if the case numbers at the facility are higher than usual and responds appropriately. In Laos, CHAI is also supporting rollout of the Common Geo-Registry (CGR), an open-source platform designed to host, manage, update, and share geographic information over time and serve as a single source of veracity across multiple information systems and data sources, as a part of the Digital Solutions for Malaria Elimination (DSME) project. Countries also report case data monthly to WHO's Malaria Elimination Database. Cambodia has also developed an online MIS that integrates data from subnational levels, including community-level reports, on a real-time basis.



h. Private Sector Initiatives

The global business community had stepped up its support towards the COVID-19 response in countries. International organisation Google donated USD 1.5 million grant to UNICEF to support COVID-19 response efforts in Thailand, Malaysia, Vietnam, the Philippines and Pakistan. Similarly, businesses in GMS too continued to advocate for not losing focus on malaria, despite ongoing COVID-19 pandemic being everyone's priority. The pandemic has renewed focus of businesses on investing in public health particularly in Myanmar, Thailand and Laos. Dhanin Tawee Chearavanont Foundation, who has been heavily involved in supporting malaria elimination in partnership with the Global Fund and the Asia Pacific Leaders Malaria Alliance is supporting COVID-19 relief efforts in Thailand. The Foundation has contributed over 50 million baht for COVID-19 relief measures. The relief efforts were directed to benefit healthcare workers by providing them with protective wear and equipment. The funds have also

supported the development of a robot "Pinto" which assists healthcare workers in remote medical consultations with patients. The other target group of beneficiaries included low-income families who were adversely impacted by the pandemic. Monetary help, rations and consumer durables were provided as a part of the relief efforts. Yoma Strategic Holdings donated ventilators, masks, PPE sets to the Ministry of Health and Sports of Myanmar for better preparedness. City Love & Hope Foundation in Myanmar also installed hand sanitizer dispensers at all their supermarkets and allowed the people to refill their bottles. Vietnam's Vingroup spent USD 55 million on providing ventilators and other medical equipment to healthcare organisations. Businesses can play a huge role in fighting malaria and pandemics – not only in terms of financial resources, but also in terms of skills, expertise, and networks.

⁶ Thailand's e Division of Vector Borne Diseases has developed a web-based Malaria Online system in order to 1. improve case reporting, analysis, and response planning and 2. monitor implementation of malaria elimination activities.



6. Lessons learnt

Importance of innovations and adaptive strategies-

Countries in the GMS have responded quickly to limit the impact of COVID-19 on malaria services, with support from donors, CSOs and implementing partners. As a result, countries have been able to ensure continuance of malaria activities with minimal disruption. Robust program planning, policy and protocol adaptation, monitoring, active engagement with the communities, adoption of technology for communication and reporting have allowed malaria programs to manage the COVID-19 risks. COVID-19 crisis has also prompted malaria programs and partners to use digital media and technology more widely for follow-up and adherence, counselling, program communication and data collection as well as reporting from community level. As malaria incidence becomes increasingly concentrated among migrant, mobile, remote and vulnerable populations, it is important to ensure and maintain access and coverage of interventions to those high-risk populations. Continued investment in innovative products, services and protocols that are appropriate for communities in these settings will be critical.

Community health workers role in guaranteeing access to health services for all-

Countries that invested in frontline malaria capacity and interventions – particularly through CHWs – are also leveraging them effectively for COVID-19 response. As malaria cases continue to decline in the GMS, an integrated approach is needed to ensure that no malaria and fever cases are missed, and to enable community-based health workers to address multiple priorities. Thailand is in the process of integrating malaria service provision and related program management into the broader public health system. Communities' trust in the CHWs meant that even during the pandemic, they were largely able to continue malaria-related activities, while curbing the spread of misinformation and advocating for adoption of COVID-19 prevention measures at the same time. This experience highlights the potential of integrated approaches at community level.

Sustained and coordinated multisectoral efforts to get to elimination-

Investments in malaria will benefit the broader health system. Investments in the past decade have led to unprecedented progress in the GMS. Continued donor and

domestic funding combined with political commitment are necessary to achieve and sustain elimination. Malaria programs in the GMS need to increasingly engage non-health sectors to ensure complementarity, effectiveness and sustainability. Multisectoral efforts and coordination is particularly important as some countries in the GMS prepare to transition from external funding to domestic financing for malaria elimination. Following lessons from HIV and other health programs, transitioning from donor funded to domestically financed public health programs requires strong support from Ministries of Finance and other stakeholders who influence national budget allocation decisions.



Investing in robust surveillance systems-

Strengthening country capacity to collect, analyze and use real-time quality data, to efficiently target services is critical in responding to health threats such as outbreaks. In the context of COVID-19, surveillance may be difficult due to multiple factors, including restrictions on movements, concerns about health worker exposure, requirements for PPE or resource constraints. [29] But GMS countries, with support from technical partners, have ramped up surveillance efforts using online tools, during the pandemic, especially in malaria hotspot areas. Countries are also investing in developing and rolling out robust surveillance systems that can report and analyse data on real time basis.



7. Conclusion

In order to reach the regional elimination goal, investments in malaria control, elimination, and prevention of re-establishment must be maintained. Against the backdrop of the ongoing global pandemic, gains made towards fighting malaria over the past decade must not be jeopardized. There is also a need for urgent restoration of malaria, COVID-19 and other humanitarian services in Myanmar, which is facing a crisis due to the ongoing political situation. The GMS can offer lessons to the Asia Pacific region and beyond on how to focus efforts on tackling a pandemic but not at the expense of losing ground against malaria and other health threats.

⁷ Myanmar responded to Covid-19 very well and ensured uninterrupted supplies and Services universally. However, the political crisis in the Feb 2021 that has dented its efforts towards elimination.

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