

# The APLMA Leaders' Malaria Elimination Roadmap: A 5-year Review of Progress (2015–2019)





The APLMA Secretariat supports regional efforts to achieve substantial, sustainable progress toward an Asia Pacific Free of Malaria by 2030 by supporting country leadership, benchmarking progress, and brokering policy, technical and financing solutions.



The APMEN Secretariat supports exchange of technical expertise between national malaria programs and technical experts in partner institutions and prioritizes capacity building through South-South and peer-to-peer collaboration.

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### **EXECUTIVE SUMMARY**

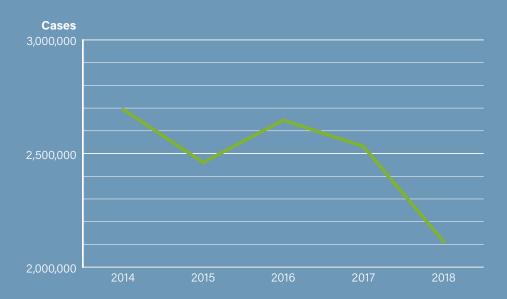
As the world battles a global pandemic, we must not lose sight of malaria, a centuries old disease that has claimed millions of lives and one that is finally on the brink of elimination. Leaders in Asia and the Pacific have consistently championed health security while placing a particular emphasis on malaria as a disease of the rural poor. In 2015, 18 Heads of Government endorsed the Asia Pacific Leaders Malaria Alliance (APLMA) Leaders' Elimination Roadmap at the East Asia Summit. The Roadmap sets the direction for an Asia Pacific becoming free of malaria by 2030 and plays a crucial role in coordinating regional action, supporting effective country leadership and brokering policy, technical and financing solutions to regional and national challenges.

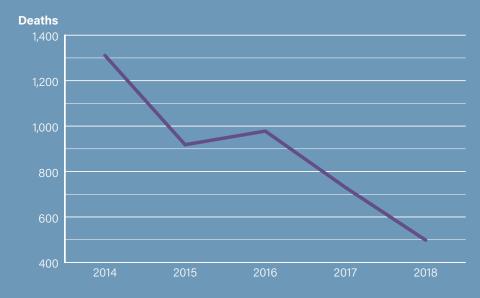
While in recent years global progress against malaria has stalled, five years on, the 22 endemic countries in Asia Pacific have made extraordinary gains. At the 14th East Asia Summit (EAS) in 2019, leaders requested a five-year report on the progress made in the region against the Roadmap's priorities to be submitted to the 15th EAS in 2020.

### The first five years

- Collective action around a shared vision has delivered results. From a neglected issue in 2012, all nations across Asia and the Pacific now have strategies aimed at elimination by 2030 or even sooner. Several countries have set up dedicated high-level task forces to work towards elimination. With domestic resources for malaria increasing from an estimated US\$115 million in 2012 to more than US\$380 million in 2020 and a 31% reduction in cases, there is no doubt that regional leadership has redefined the malaria map.
- Nation states have shown leadership. Sri Lanka was certified malaria-free in September 2016, and China has reported no indigenous cases for the last three years. Since 2018, there have been no human cases in Malaysia and Timor-Leste, no deaths in Vanuatu since 2011 and in Cambodia since 2018 and only a handful of indigenous cases in Bhutan. In addition, seven other countries in Asia Pacific now have fewer than 10,000 indigenous cases. India reported the largest reduction in cases (49%) in one year, among all high-burden countries globally.
- The Greater Mekong Subregion (GMS) is turning the tide. Where drug resistance threatened global progress, an unprecedented investment and rotation between different therapies has drastically reduced the resistance threat. New drugs like artesunate-pyronaridine promise to drive down the most dangerous *P. falciparum* malaria. Thailand became the first country in Asia to register tafenoquine with a view to studying the feasibility of its deployment after quantitative G6PD testing within the health system. This will allow the Ministry of Public Health to decide on whether and how to deploy these new tools once study results are available. With cases declining by 80% since 2012, the subregion offers a model for regional cooperation, data sharing and lesson learning.

FIGURE 1 REDUCTION IN NUMBER OF CASES AND DEATHS IN THE REGION SINCE 2014

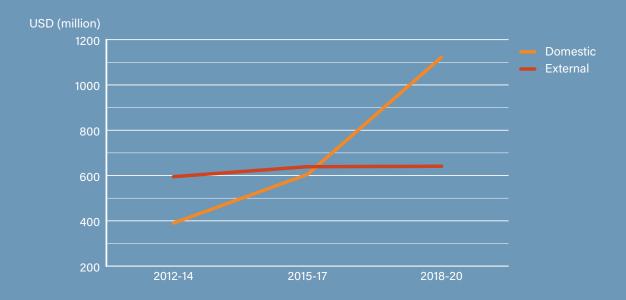




Data source: World Health Organization

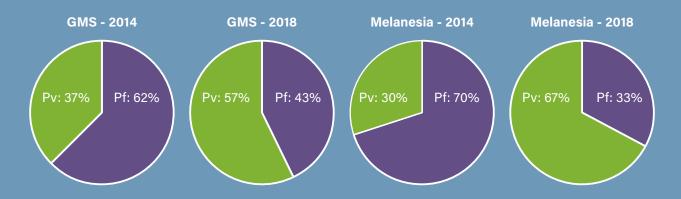
- Across the region, sustained economic growth, and counterpart financing requirements by the Global Fund to Fight AIDS, Tuberculosis and Malaria, have contributed to large increases in domestic funding for malaria. Whilst increasing domestic responsibility for funding remains an urgent priority, the Global Fund's actions have been decisive.
- Asia Pacific now has a network of regulatory authorities working to speed up the introduction of essential commodities to prevent, test and treat the disease. Nevertheless, many agencies remain understaffed with insufficient resources to operate effectively, especially for routinely monitoring the quality of commodities.
- There is uneven progress in tackling key bottlenecks including: the provision of key malaria commodities to vulnerable populations in a timely manner, the development of strong community networks, and continuous capacity development of malaria program managers.
- The Asia Pacific region now leads the world in data-driven responses to malaria elimination. Thailand has a near real-time web platform, with case locations and time-to-follow-up data publicly available. Cambodia has improved transparency and timeliness in providing data through its publicly available website. Malaysia is also deploying advanced solutions that provide accurate data to the front line. At the same time other nations in Asia and the Pacific can still benefit from capacity building and technical support towards tailored solutions that can help accelerate progress on the path to elimination.
- The emergence of the global COVID-19 pandemic in early 2020 massively disrupted daily life and impacted the delivery of routine health services. While responding to COVID-19 outbreaks is of the utmost importance, it is essential that efforts to combat other communicable diseases that cause significant morbidity and mortality, such as malaria, are not diminished or ignored. Alone the COVID-19 pandemic could be disastrous, but its impact will be significantly more devastating if permitted to interrupt health services required to treat other diseases.
- While the immediate focus of governments must be to address COVID-19, this cannot be done at the expense of other health priorities. It cannot be one disease or another. It must be all. Now is the time to step-up leadership, increase financing and strengthen operational support to ensure that robust and resilient health systems and effective health services remain the highest priority. In the time of pandemic disease, these cannot be optional but are critical to lives, economies and communities. In the past decade, Asia and the Pacific has made impressive gains towards eliminating malaria by 2030 and now is the time to guard those hard-earned gains.

FIGURE 2 INCREASE IN DOMESTIC AND EXTERNAL FUNDING SINCE 2012-14



Data Source: Unpublished data from The Global Fund (as of March 2020). This data excludes Republic of Korea, Malaysia, Vanuatu and China.

FIGURE 3 RISING COMPARATIVE BURDEN OF VIVAX MALARIA IN GMS AND MELANESIA IN 2018 COMPARED TO 2014



Data source: World Health Organization

#### **Looking Forward**

#### **DECISIVE LEADERSHIP**

Leaders both at the national and sub-national level must identify with, and drive malaria elimination as an historic endeavour with far-reaching benefits.

- As case numbers decline, the region is entering the most critical and vulnerable phase. Sustained leader-level engagement, sufficient financing both from donor and domestic sources, and continuous collaboration are all critical to attaining elimination by 2030. The COVID-19 pandemic is a reminder that the world is interconnected. To root out any disease whether a new pandemic or malaria countries must mobilise the whole of society and collaborate across borders.
- Leadership is critical. Going forward, leaders should personally identify with malaria elimination as an historic endeavour that can have far-reaching benefits. Sri Lanka has shown how transformational malaria elimination can be; with malaria-free certification came global recognition, a boost to tourism, and the ability to deploy malaria resources towards other health priorities. A whole of society approach, coordinated at the national level with programs managed at lower levels of government, can galvanise action and bring all stakeholders on board.

#### SUSTAINED FINANCING

Mobilise additional domestic resources; integrate vertical disease programs in health systems; ensure that all health funding is recorded on budget; and, continue exploring alternative financing mechanisms.

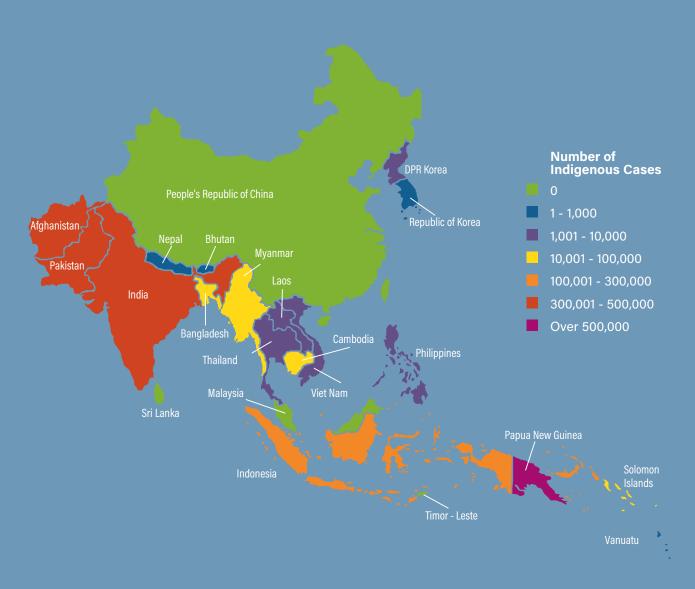
Financing must be sustained and investing now can make history. Despite large increases in domestic resource allocations for malaria, most countries are still dependent on external grant funding. They must continue to mobilise additional domestic resources, integrate vertical disease programs in their health systems, ensure that all health funding is recorded on budget, and continue to explore alternative financing mechanisms.

#### **UNIVERSAL COVERAGE**

No one left behind, with strong, data-driven strategies to tackle malaria everywhere it is a threat; and strong systems to bring new commodities and the private sector into the fight.

Strengthening the region's malaria response goes hand in hand with improving Universal Health Coverage and health security. Stronger, integrated health services, surveillance, and data systems, private sector and community engagement, financial protection for vulnerable populations, and investments in strengthening program management capacities will contribute to strengthening Asia Pacific's health systems. New tests and treatments must be expedited through collaborative registration processes to ensure that the region is better equipped to respond to infectious disease threats, including emerging pandemics.

FIGURE 4 MAP OF REGION HIGHLIGHTING NUMBER OF INDIGENOUS MALARIA CASES



Data source: World Health Organization



### INTRODUCTION

The East Asia Summit (EAS) has consistently championed regional health security. Leaders have placed particular emphasis on malaria as a disease of the rural poor where treatment strengthens community health systems for everyone. In 2015, 18 EAS Heads of Government endorsed the Asia Pacific Leaders Malaria Alliance (APLMA) *Leaders' Elimination Roadmap*. The document set the direction for an Asia Pacific free of malaria by 2030 with six priority actions for Leaders to drive.

#### **ROADMAP PRIORITY ACTIONS:**

- 1 Unite national efforts and regional actions
- 2 Map, prevent, test and treat the disease everywhere
- 3 Ensure high-quality malaria services, tests, medicines, nets and insecticides
- 4 Improve targeting and efficiency to maximise impact
- 5 Mobilise domestic financing and leverage external support
- 6 Innovate for elimination

By benchmarking progress against these priorities, the Roadmap plays a crucial role in APLMA's work of coordinating regional action, supporting effective country leadership and brokering policy, technical and financing solutions to regional and national challenges.

The Roadmap was intended to serve as a catalyst for both regional collaboration and national acceleration, driven by a coordinated response across multiple agencies. The 18 East Asia Summit leaders have reaffirmed their endorsement of the Roadmap every year since 2015. In addition, Heads of Government from Pakistan, Papua New Guinea, Solomon Islands, Timor-Leste, and Vanuatu have also endorsed the Roadmap. In 2019, in order to ensure the region remains on track to meet its goals for 2030, leaders requested a 5-year report on the progress made in the region to be submitted to the 15<sup>th</sup> East Asia Summit in 2020.

#### **ABOUT THIS REPORT**

This report presents an informed view on challenges and opportunities for Asia Pacific in the next 5-year phase of elimination. By looking at progress to date measured against the targets set by the Roadmap, countries and their development partners can review achievements. More importantly, they can see what remains to be done, what shorter term targets are needed, and how progress can be monitored to keep the elimination goal on track.

Country-specific case studies shine a spotlight on India (Odisha), Indonesia, Myanmar, Sri Lanka, Thailand and Vanuatu (Tafea). All are at different stages of progress towards elimination and have valuable lessons to offer the rest of the region.

The information in this report was compiled using comparative analyses of data from the APLMA Leaders' Dashboard, 2019 World Malaria Report, The Global Fund to Fight AIDS, Tuberculosis and Malaria (published and unpublished data), bilateral country consultations and contributions from the Asia Pacific Malaria Elimination Network (APMEN), as well as consultations with malaria experts and other key informants.

# THE CASE FOR ELIMINATION IS AS RELEVANT AS EVER

The Roadmap supports nations in moving as a region towards the 2030 malaria elimination commitment. It highlighted elimination as one of the best buys in public health as well as the risks of complacency, including the 75 resurgences of malaria globally since the 1930s.<sup>1</sup> The Roadmap also argued for the need to urgently contain the threat of drug and insecticide resistance. Lastly, it argued that health systems and health security generally can be strengthened by targeting malaria.

Five years on, so much has been achieved. At a time when there have been increases in malaria in many high-burden countries in Africa, Asia Pacific is making unprecedented gains. Once plagued by the disease, the Greater Mekong Subregion (GMS) has seen an 80% reduction in cases and 95% reduction in deaths since 2012. Notably, Myanmar has more than halved cases in just three years, and India reported the largest reduction in cases (49%) in one year, among all high-burden countries globally.

#### STAYING THE COURSE

Many countries in Asia are approaching the finish line. There have been only a handful of indigenous cases in Bhutan, and no indigenous cases in China for the last three years. There have also been no human cases in Malaysia or Timor-Leste since 2018. Cambodia, Nepal, Bhutan, Democratic People's Republic of Korea, Republic of Korea and Vanuatu have experienced no malaria-related deaths in recent years. We see that despite the disease becoming less visible, countries have remained committed and largely on-track for elimination by 2030.

There is a growing sense of common purpose and increased funding across the region reflected in a near tripling of domestic financing. This has resulted in a 31% reduction of the disease burden since 2012.

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As recently noted by the Lancet Commission on Malaria Eradication, Asia Pacific remains the test case for regional malaria elimination and success in this region is a prerequisite for global malaria eradication. This ultimate goal offers a massive return on investment with every dollar spent returning up to US\$60 for the wellbeing of countries and their populations.<sup>3</sup>

<sup>1</sup> Nafo-Traore F. (2014) Managing Malaria in Times of Change. The Lancet Global Health Blog.

<sup>2</sup> Cohen et al. (2012) Malaria resurgence: a systematic review and assessment of its causes. Malaria Journal 11:122.

<sup>3</sup> The Lancet Commissions (2019). Malaria eradication within a generation: ambitious, achievable, and necessary. The Lancet https://doi.org/10.1016/S0140-6736(19)31139-0.



#### **Sharing experiences**

The region is diverse and success uneven. There are multiple stages on the journey to elimination, and many nations have geographic areas in different stages. Fortunately, national programs further along the elimination continuum are increasingly assisting their peers with technical expertise and support. Important platforms such as the Asia Pacific Malaria Elimination Network (APMEN), the RAI Regional Steering Committee<sup>4</sup>, and the South Asia Regional Coordinating Mechanism can broker support. As countries move from broad-based disease control strategies to targeted elimination, learning from peers working in similar contexts is proving invaluable.

<sup>4</sup> The Regional Artemisinin-resistance Initiative (RAI) grant covered five GMS countries from 2014-2017, in a single region grant of unprecedented scale. The RAI2-Elimination (RAI2E) program, a \$243 million regional grant to accelerate elimination of P. falciparum malaria in the GMS from 2018 to 2020, is the second phase of this initiative. It supports increased malaria service coverage for remote populations in border areas and other at-risk populations, as well as case management through health volunteers and strengthening of national surveillance systems. See https://raifund.org/en.

# 1 THE FIRST FIVE YEARS



The Roadmap calls for a multi-agency effort with leaders empowering agencies and officials to see it through. In addition, it specifically directs each endemic country to form a multi-sectoral National Malaria Elimination Task Force (or similar body) chaired by a senior central agency official.

#### **RESULTS AT FIVE YEARS**

The last five years have shown how collective action around a shared vision delivers results. From a neglected issue in 2012, all 22 endemic nations across Asia and the Pacific have now moved to time-bound elimination strategies, aimed at 2030 or even earlier. With domestic financing almost tripled and cases halved, there is no doubt that this new leadership has redefined the malaria map.

Each year since 2014, the East Asia Summit has reaffirmed commitment to an Asia Pacific free of malaria by 2030. Since then, the Prime Ministers of Pakistan, Papua New Guinea, Solomon Islands, Timor-Leste, and Vanuatu have all added their commitment. India's decision to move immediately to launching a National Malaria Elimination Framework, followed swiftly by numerous state-level commitments, shows that regional commitments can lead directly to substantial country action.

Leadership is coming strongly from the frontline. Bhutan, Cambodia, China, India, Indonesia, Malaysia, Myanmar, Philippines, Republic of Korea and Thailand have set up national level elimination task forces to provide oversight on strategy, maintain momentum and monitor progress. Sri Lanka went further with substantial multi-sector district mobilisation.

#### **M2030 Defeating Malaria Together**

Elimination requires that people from all sectors of society, from business leaders to ordinary citizens, come together and show they care. M2030 engages business leaders as malaria elimination Champions to sustain political momentum to end the disease. M2030 was established by APLMA in 2018. It is both a brand and movement. M2030 corporate partners use the brand for campaigns and for branding select products and services. In return, the partners raise awareness of malaria with consumers and mobilise funds to fight the disease.

M2030 partners work with the Global Fund to Fight AIDS, Tuberculosis and Malaria and directly with NGOs.

M2030 partners with far-reaching businesses and foundations in Southeast Asia. Since early 2019, M2030 partners have rolled out consumer-focused malaria campaigns, and business leaders have engaged with policy makers across the region to advocate for sustained funding for malaria programs.



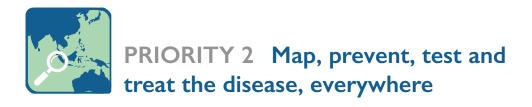
Strong political commitment has been key in Sri Lanka's malaria elimination efforts, achieving WHO certification as malaria-free in 2016. Sri Lanka's ongoing whole of government approach and intersectoral collaboration, especially with the armed forces, the police and other organisations dealing with migration, was critical in achieving and remains critical in maintaining Sri Lanka's

malaria-free status. To keep malaria at bay, Sri Lanka has increased surveillance at ports of entry, provides prevention medicines to people travelling to malaria endemic countries, provides prompt testing and treatment to imported cases, and conducts awareness exercises for public and medical health professionals.

#### THE ROAD AHEAD

There have been outstanding examples of leadership initiating action. However, in some areas success is proving uneven, transient and difficult to sustain. Indeed, in some parts of Asia, malaria risks becoming an invisible disease, located in the geographic and societal margins, far from the thriving capitals and influential voters. Sustaining the momentum demands a shift to innovative surveillance and response, with data reported transparently, as in the case of Thailand. Service delivery must be tailored to the reality of these contexts, engaging new actors such as the military, community organisations and private sector.

Leadership is crucial to ending malaria, but is not sufficient alone. The process of making that vision a reality requires that countries also step up programmatic interventions outlined under Priority 2.



The Roadmap calls for a focus on universal access to malaria tests, treatments, and prevention tools. It specifies targeted approaches, rapid response to outbreaks, and tracking ongoing malaria transmission. It also includes a call for robust, real-time information systems for reporting disease data and medical supply levels. It calls for making malaria a notifiable disease, meaning that every case is reported within 24 to 48 hours of detection, to ensure that everyone in need receives uninterrupted malaria prevention, testing and treatment.

#### **World Health Organization**

The WHO has provided countries with crucial guidance, technical and operational support, and has supported responses for malaria control and elimination efforts across Asia and the Pacific. Key contributions include:

- Providing guidance documents that helped shape the regional and national response against malaria, including:
  - Global Technical Strategy for Malaria 2016-2030, endorsed by the World Health Assembly in 2015 (Resolution WHA68.2)
  - Technical documents on malaria diagnosis, treatment, drug resistance, insecticide resistance, vector control, control of *P. vivax* malaria, surveillance and elimination.
- Providing technical and operational support at the global, regional and national levels, including efforts related to coordinating the conceptualization and drafting of Global Fund grants and planning and implementation in each country.
- Conduct bi-regional and national trainings on malaria elimination, quality assurance and quality control of malaria microscopy, vector control management, and surveillance.
- In the Greater Mekong Subregion, the Southeast Asia and Western Pacific regional offices, the Global Malaria Program, and WHO country offices work jointly to collaborate with Member

States, donors and implementing partners to eliminate malaria as guided by the Strategy for Malaria Elimination in the Greater Mekong Subregion 2015-2030.

- Supporting countries to monitor the efficacy of medicines in response to drug resistance, a major biological threat in the fight against malaria.
- Supporting a global database and malaria threats map to make available all relevant information on drug resistance.
- The Global Vector Control Response 2017-2030 provides a new strategy to strengthen vector control through increased capacity, improved surveillance, better coordination and integrated actions across sectors and diseases.
- Reaching the Unreached was developed as one of four thematic priorities in the Western Pacific Regional vision For the Future, unanimously endorsed by Member States in 2019.
- The Western Pacific Regional Office has supported the development of minister-endorsed malaria elimination Roadmaps for the Solomon Islands and Vanuatu.
- The Western Pacific Regional Office has supported the development of National Malaria Elimination Plans for all ten malaria endemic countries.
- Developed and disseminated Tailoring Malaria Interventions in the COVID-19 Response.

#### **Spotlight on Vanuatu**

#### A malaria-free Vanuatu is within reach

Vanuatu's malaria burden plummeted from over 15,000 cases in 2003 to 644 cases in 2018, partly due to the successful elimination of malaria in the southern province of Tafea, which was declared malaria-free in November 2017. Effective partnerships for technical and programmatic support, in particular with the World Health Organization and the Pacific Malaria Initiative Support Centre, played a key role, along with access to adequate funds, with major financial contributions by the Global Fund to Fight Aids, Tuberculosis and Malaria and the Australian Government.

Preventing re-establishment of transmission in Tafea has relied on maintaining surveillance capacity and rapid response; the model will need to be adapted to different resource settings in other provinces of Vanuatu and countries of the Pacific. Funding constraints have hampered efforts to properly implement interventions that proved successful in Tafea. Renewed commitment from both the Government of Vanuatu and development partners is critical to reverse the downward trend in external financing and enable full implementation of a new elimination strategy.

#### **RESULTS AT FIVE YEARS**

Thirteen countries now have legislation in place making malaria a 'notifiable disease'. In recent years, Bangladesh, Indonesia, Lao PDR, Philippines, Vanuatu and Viet Nam have enacted such laws. However, much of the region falls short in terms of data transparency and real-time reporting of cases from all sectors. In particular, malaria case reporting from the private sector and non-health public agencies has been inconsistent, leading to an incomplete understanding of the disease burden and transmission foci.

#### THE ROAD AHEAD

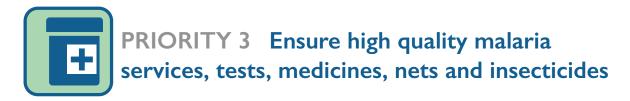
In many countries, there is more than a one-year time lag on reporting national malaria figures. All countries should move toward transparent real-time reporting, following the examples of

Cambodia, Malaysia, Sri Lanka and Thailand. Innovation in information technology and strong program management can lead to more targeted, nimble and impactful malaria programs.

More robust disease surveillance systems should be put in place to provide reporting across sectors, down to the last mile, in real time. Improving health service delivery by involving community and private sector health workers would ensure that all patients have access to healthcare where and when they need it. These factors are vital if countries are to achieve their Universal Health Coverage targets.

In order to track, test and treat every case, and prevent spread of the disease, countries need access to all elimination tools, including medicines, nets and insecticides outlined in Priority 3.

Better integrated health care services are needed to improve responsiveness to health security threats, particularly diagnosis and reporting of febrile illnesses other than malaria.

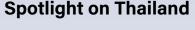


The Roadmap calls for effective, affordable and safe products for diagnosing and treating malaria and for controlling mosquitoes. It further advocates for strong regulatory systems to make sure that substandard and falsified products are not in circulation and to ensure that the right quality tests, drugs and vector control tools are available in even the most hard-to-reach communities.

#### **RESULTS AT FIVE YEARS**

Regulators are collaborating as never before: sharing best practices and resources to speed up the review of key commodities like new medicines, diagnostic tests, and vector control tools. A decade since oral monotherapies were no longer recommended by the WHO for malaria treatment due the risk of drug-resistance, the region has finally limited their circulation.

Despite activities aimed at strengthening the laboratory capacity of national regulatory authorities, a lack of resources means many medicines in circulation remain unchecked for quality. This exposes the most vulnerable to substandard, unregistered or even criminally falsified alternatives that are not effective and can contribute to the emergence of drug resistant malaria.



# Improved access to tests, treatments and prevention tools puts Thailand on the road to elimination

Sustained efforts such as intensive vector control and improved targeting of at-risk populations have led to an impressive decline in malaria incidence in Thailand over the last decade. Civil society organisations have been instrumental in facilitating last mile access to groups at risk of malaria.

Thailand was the first country in Asia to register and assess the feasibility of tafenoquine alongside a quantitative point-of-care G6PD test for potential use as part of the radical cure management of *P. vivax* which currently accounts for the majority of all malaria cases. Thailand is also addressing threats of drug resistance by introducing artesunate-pyronaridine in provinces where other malaria treatments are failing.



#### THE ROAD AHEAD

The comparative burden of relapsing *P. vivax* malaria in the region calls for better use of current tools, or additional tools to be implemented quickly. In the GMS, *P. vivax* represents over 57% of all cases and 67% in Melanesia. From Cambodia to Papua New Guinea the use of existing tools needs refinement and new tools need to be rolled out safely as part of a radical cure. Thailand was the first country in Asia to expedite the registration of tafenoquine. The Thai Food and Drug Administration collaborated with the Australian Therapeutic Goods Administration, and used their dossier review process to inform their decision. The process provides a template for improved collaboration between regulators, saving time and resources and speeding up access for vulnerable populations.

The outlook for relapsing *P. vivax* malaria remains uncertain. The region needs to use existing tools better to address other unique elimination challenges and be ready to introduce new tools to address the current challenges of vectors with increased outdoor biting habits and evolving drug and insecticide resistance. Encouragingly, the research and development pipeline for drugs, insecticides, diagnostics, and vector control tools is robust, and promising new tools are scheduled to roll out over the next decade. However, manufacturers, regulators and disease programs need a better view of the pipeline of new tools, and the best pathways to get them to people in need. Additionally, strengthening regulatory systems remains a priority for the region to ensure timely access to quality essential medicines against all diseases, including during health emergencies.



The Roadmap calls for making the most of resources that are already available, by carefully targeting the supply of products and services to local conditions; using national planning, procurement and reporting systems; and engaging the private sector and community representatives to join the fight. It also calls for large enterprises to support elimination in their areas of operation, and to promote the wider social good.

#### **RESULTS AT FIVE YEARS**

As countries recognise the need to prioritise effective service delivery, there has been a strong push for better use of data to support programmatic and financial decision-making. This includes investments in information systems. These are vital to capture, collate and analyse data for case management, vector surveillance, and procurement and distribution of malaria commodities. Malaysia has, for example, pioneered the use of geospatial tools to observe malaria incidence patterns and has deployed resources according to disease burden.

#### **Spotlight on Indonesia**

#### Tailored technical assistance across Indonesia

Indonesia has more than halved its malaria burden over the last decade. Three out of four Indonesians live in malaria-free areas, and more than half of Indonesia's districts are malaria-free. Success factors include a strong national malaria program and effective on-the-ground implementation, supported by multi-sectoral collaboration and partner cooperation.

However, in low-burden areas, malaria numbers continue to stagnate. Overcoming this problem

requires research to identify the root causes of stagnation, and advocacy with local governments and other stakeholders, to sustain last mile efforts. Decentralisation presents additional challenges for provinces with high burden and low capacity. Leadership must come from the centre to drive this agenda forward. Elimination requires united and synchronised efforts, including strong commitments from local governments; a fragmented response will ultimately fail.





In partnership with some of the most reputable companies, M2030 was launched in Myanmar

In several countries in Asia Pacific, private providers account for a large proportion of the health system. There is growing recognition that malaria elimination will be possible only with strong support and engagement from private sector partners. Leveraging the expertise and comparative advantages of the private sector and forming close partnerships with private healthcare providers will further strengthen performance and stewardship. Myanmar's experience with engaging the private sector offers a template for national malaria programs wishing to develop their own private sector engagement framework. Reaching the most marginalised and vulnerable sections of the population is fraught with challenges, and community engagement has been proven effective to address them. Networks such as the Regional Malaria Civil Society Organisation Platform in the GMS, set up under the RAI program, offer a mechanism for communication, harmonised program interventions, capacity strengthening, and coordinated actions with civil society organisations.

#### THE ROAD AHEAD

As more countries move toward elimination, national malaria programs will face different levels of transmission risk within their borders. They will need to transition their response according to their own context along a continuum, from control to elimination to ultimately prevent reintroduction.

The decentralization of malaria service delivery to sub-national levels in India, Indonesia, Papua New Guinea, Philippines, and Solomon Islands present both opportunities and challenges; weaker central control has in some cases led to stronger local leadership, in others neglect. Countries will need to develop critical elements of successful program management *and* ensure accountability at national, sub-national and community levels.

As malaria recedes from the capital cities and becomes increasingly concentrated among migrant and mobile populations, it is important to ensure access and coverage of interventions to those high-risk populations. Continued investment in innovations that are appropriate to these settings, such as forest packs of nets and repellents to protect forest workers from mosquito-borne illnesses, will be critical. To protect gains made and prevent a resurgence of malaria, it will be more important than ever to ensure that the right level of funding is in place and that these resources are allocated efficiently.

As malaria recedes from the capital cities and becomes increasingly concentrated among migrant and mobile populations, it is important to ensure access and coverage of interventions to those high-risk populations.



The Roadmap calls for support for endemic countries to raise additional financing for malaria elimination. This includes encouraging health ministries to re-prioritise existing resources, to increase domestic budget allocations for malaria elimination for a time-limited period, and to increase external support and technical support particularly to exploit the strengths of major regional powers. It also calls for prioritised investment in elimination of multidrug-resistant malaria in the first five-year phase.

#### **RESULTS AT FIVE YEARS**

Political commitment to end malaria, sustained economic growth, and counterpart financing polices by the Global Fund, have contributed to large increases in domestic funding for malaria as well as new approaches to resource mobilization. These investments have had positive externalities for health security. Investments in malaria can simultaneously build resilient health systems and protect the world from current and emerging disease threats.

Non-communicable diseases, and emerging issues like the rapidly aging population, are increasingly taking precedence in the region, with a risk that other priorities will be pushed aside.

Governments have been doing their part to expand domestic financing for health and prepare for transitioning away from external support. Afghanistan, Thailand and Viet Nam have recently developed and implemented financing sustainability plans to ensure elimination efforts remain on track.



#### **Spotlight on India**

#### Political and financial commitment turned the tide against malaria in Odisha

Odisha has made unprecedented gains against malaria since 2017, with an 80% decline in cases in 2018. The progress in Odisha, which started in mid-2017, played a major role in declines of 24% and 49% in 2017 and 2018, respectively. The most critical drivers of success were political and financial commitment from the Government of Odisha and proactive leadership from the Odisha State Vector Borne Disease Control Programme (VBDCP). The Government made a significant financial commitment toward scaling-up proven interventions in malaria control.

Odisha has turned the tide against malaria through a robust technical strategy, vigorous implementation, and partner contributions. Future success in Odisha will require that proven interventions are scaled-up and sustained for many years to come, as malaria is endemic in Odisha and the majority of the population continues to be at high risk of infection. Odisha's experience illustrates the importance of tackling "hot spots" that have high transmission intensity. Without robust surveillance, these "hot spots" are often missed and such areas can get stuck in a cycle of limited access to malaria services, under-detection, inadequate intervention and continued transmission.

#### Global Fund to Fight Aids, Tuberculosis and Malaria

The Global Fund plays a critical role in supporting countries in fighting malaria. Between 2015 to 2020, the Global Fund committed over US\$1 billion in financing for malaria programs in Asia and the Pacific.

The Global Fund helps drive domestic resource mobilization through counterpart financing requirements, grant negotiations, transition from external grant financing in partnership with other financiers, and the introduction of innovative financing mechanisms.

In 2013, the Global Fund launched the Regional Artemisinin-resistance Initiative (RAI) in response to the emergence of drug-resistant malaria in the Greater Mekong Subregion. RAI has grown to become the largest regional Global Fund grant in the world, serving as an example of how countries and partners can collaborate to address development priorities.

#### THE ROAD AHEAD

Non-communicable diseases, and emerging issues like the rapidly aging population, are increasingly taking precedence in the region, with a risk that other priorities will be pushed aside. As countries approach elimination, it is also possible that external funding will decline. To preserve the gains and ensure the most effective response, it will become increasingly important to mobilise sustained funding for health, integrate malaria programs into national health systems and ensure that all funding is recorded on budget. Spending that money wisely will require new, innovative approaches. The COVID-19 crisis also demands that investments build overall health systems and health security. Recent work indicates that a full one-third of malaria interventions have direct impact for broader health security capacity building<sup>5</sup>.

<sup>5</sup> Mapping Global Fund to Fight AIDS, Tuberculosis, and Malaria Activities to Health Security, A Study of Kenya, Uganda and Viet Nam, March 2019, Georgetown University.



The Roadmap calls for all countries in the region to support the development and roll-out of a pipeline of new approaches and technologies in financing and implementation.

#### **RESULTS AT FIVE YEARS**

The significant decline in malaria burden in many countries in Asia Pacific has been fuelled by innovation. In recent years several countries including Afghanistan, Indonesia, Lao PDR, Timor-Leste, Vanuatu and Viet Nam have developed and implemented innovative approaches such as scaling-up the cadre of village health workers for malaria elimination, private sector engagement, real-time data systems, regulatory harmonisation, establishment of early warning systems and emergency operations centers, and new financing initiatives. However, mechanisms to share and adopt best practices through south-south cooperation have been slow to develop and underutilized when available.

#### THE ROAD AHEAD

Innovative tools that have already reached the market, such as new diagnostic tests or treatments, new products in late stage trials to reduce outdoor transmission of malaria such as spatial repellents, will significantly benefit communities at risk in the region.

The Lancet Commission on Malaria Eradication maps out an ambitious agenda for new innovations that can help realise the 2030 goal, including data hubs, molecular epidemiology, diagnostics, insecticides, and even genetic modification of mosquitos<sup>6</sup>. APLMA's role in collaboration with the Medicines for Malaria Venture, PATH, Unitaid and many other partners, is to broker innovative solutions by building bridges between financiers, the private sector, product development partnerships and regulators to expedite availability. APMEN also provides a unique platform to link national programs both with each other, and with leading academic groups to rapidly scale new techniques and technologies.

#### **Spotlight on Myanmar**

#### Innovative approaches for multisectoral engagement

Myanmar has made outstanding progress with an 86% decline in cases and 95% decline in deaths compared with 2012.

This is the result of high-level leadership from the Myanmar Ministry of Health and Sports and multisectoral engagement, not only with non-traditional government agencies, but also with non-state actors such as civil society and ethnic health organisations, and the private and non-health corporate sector, in achieving universal health coverage. The government leverages community networks to extend support for diagnosis, treatment, prevention and surveillance in hard-to-reach and border areas where there is limited access to public health services.

At a grassroots level, over 40,000 frontline Village Health Volunteers have been trained, of whom 18,000 remain active. These volunteers conduct integrated community case management for malaria and also for tuberculosis, HIV, dengue haemorrhagic fever, filariasis and leprosy.



# 2 LOOKING AHEAD: THE NEXT FIVE YEARS



# ADOPTING A WHOLE OF SOCIETY APPROACH ACCELERATES MALARIA ELIMINATION

The last five years have proved that, where leadership is coordinated at multiple levels towards a shared goal, lives are saved. The extraordinary progress made since endorsement of the Leaders' Roadmap has been no accident. It is the direct result of an alliance of global financiers, Heads of Government and Senior Officials from across agencies, working together with communities, academics and the private sector, uniting to reach a common goal. This is what it takes to eliminate a disease.

The Leaders of East Asia Summit member states have provided a mandate and shared vision. The Global Fund to Fight AIDS, Tuberculosis and Malaria has given countries both financial capacity, and a business model for diverse actors to join together, plan and monitor progress. These cannot be taken for granted and neither will be enough as we face the challenges of the next five years.

# SUB-REGIONAL COOPERATION ENHANCES NATIONAL ELIMINATION EFFORTS

Elimination in the Mekong provides a blueprint for how Senior Officials, academics, community leaders and multilateral organisations can pull in the same direction. This model can be applied to South Asia, Melanesia and potentially the Western South Asian states of Pakistan, Iran and Afghanistan. Such coalitions must be financed and supported by like-minded nation states.





# WHOLE OF GOVERNMENT COORDINATION IS NEEDED AT NATIONAL LEVEL

Successful elimination strategies have been underpinned by strong, whole of government approaches, particularly the establishment of National Malaria Elimination Task Forces. The WHO Strategic Advisory Group on Malaria Eradication notes that national and subnational leadership, community ownership, co-planning, and ongoing collaboration are integral to the processes essential for success. Of the 12 countries that have reduced their burden by more than 50% since 2012, six have national task forces in place. Going forward, every country in the region should adopt a *whole of government and society* approach to malaria elimination. Following Sri Lanka's example, task forces must not only include government agencies, but should call on experts from academia, communities and private sector to support the fight. Everyone has a role to play going forward.

**Heads of Government** can use their unique position to drive an agenda that will mark a milestone in the history of humankind, issuing calls to action that hold each actor accountable for progress.

**Ministries of Health** must ensure their programs are empowered and accountable. Ensuring a balance of efficiency gains through the integration of services at community level, whilst maintaining the exceptionalism required for an elimination agenda.

**Ministries of Foreign Affairs** will need to work together to maintain regional momentum. Just as mosquitoes do not respect borders, COVID-19 has shown the importance of global coordination and solidarity in fighting disease.

**Academia** must align more closely with programs themselves, jointly driving evidence-based responses.

**Community health workers** are the front-line as transmission takes place in communities, not health centres. These workers need active support through civil society coalitions and should be financed to have a seat at the decision-making table.



#### **INVESTING NOW CAN MAKE MALARIA HISTORY**

Adequate health financing is a prerequisite for reaching and sustaining the 2030 malaria elimination goal. Despite large increases in domestic resource allocations for malaria, most countries are still dependent on external grant funding for reaching key populations. The region also faces a sizeable gap between available funding and needs.

With positive economic growth, and declining malaria rates, many countries in the Asia Pacific region are entering an epidemiological and health financing transition. A failure to manage this transition carefully, may jeopardise the elimination goal. The increasing focus on Universal Health Coverage, and the pursuit of harmonisation and people-centred service delivery means that malaria financing must be fully integrated into national budgets.

#### Malaria Elimination in Melanesia and Timor-Leste Initiative

In June 2019, the Global Fund set aside USD 25 million of additional funds for malaria elimination in four countries: Papua New Guinea, Solomon Islands, Timor-Leste and Vanuatu. The Malaria Elimination in Melanesia and Timor-Leste Initiative (MEMTI) intends to incentivise additional contributions from donors, multi-lateral development banks and implementing governments to achieve the goal of malaria elimination.

This initiative, expected to launch funding in 2021, will serve as a test case for engaging multi-lateral development banks in malaria elimination in Asia and the Pacific. The tenet behind MEMTI is that, by collaborating and offering financial incentives to both lenders and countries, broader health sector investments, financed through other sources, may lead to better alignment of such investments with the malaria elimination goal. In this manner, MEMTI may also serve to accelerate the integration of malaria specific programs into the general health system.



With these changes, the region must continue to increase and sustain domestic resources for health, build financing leadership at national, provincial and local levels of government, prepare for transitioning from grant financing, use available grant funding effectively, and continue to explore alternative financing mechanisms.

#### MOBILISE ADDITIONAL DOMESTIC RESOURCES FOR HEALTH

Domestic resource mobilisation for health is the top financing priority. All malaria financing must be on budget and fully integrated into broader health financing strategies, including those at subnational levels. Equally important, the region must continue to finance targeted surveillance and response systems in order to reach zero malaria cases. Such systems may fall outside of Universal Health Coverage financing but are required to eliminate malaria and control other infectious and communicable diseases that affect key populations.

#### TRANSITION FROM GRANT FINANCING

Countries must assess their readiness to sustain malaria services; this goes beyond mobilising additional domestic resources. Transition assessments should be tailored to each country and address common challenges, such as procurement of low quantities of commodities, and social contracting of civil society organisations working with key populations. Partnerships such as the World Bank Multi-Donor Trust Fund for Integrating Donor-Financed Health Programs, supported by Gavi, WHO and the Global Fund and bilateral donors, should be expanded to support additional countries.

#### **USE GRANT FUNDING EFFECTIVELY**

The Global Fund is the largest grant maker for malaria in Asia Pacific, covering close to 40% of all expenditures. It is an indispensable partner in supporting the elimination agenda, facilitating the transition from grants, incentivising domestic funding and bringing new partners into the fight. Over the last 10 years, allocations by the Global Fund have remained stable. This may change in the future. It will become increasingly important to use the Global Fund financing to bring in new partners and innovate.

#### **ALTERNATIVE FINANCING**

Alternative financing consists of a range of mechanisms that aim to raise additional funds for malaria or other health issues beyond traditional sources of funds, as well as to enhance the efficiencies and impact of investments. Although small in scale, such mechanisms can make important contributions by crowding in new actors (e.g. MEMTI and M2030), improving the visibility of malaria (e.g. M2030), and preparing countries for future transitioning from grant financing (e.g. the Cash on Delivery model in the Solomon Islands).

Going forward, it will be critical to continue experimenting with existing and new mechanisms and to learn from early experiences. Development partners and countries should continue to take calculated risks and to innovate, without losing focus on the mobilisation of traditional domestic resources for health.



# With the right services and access for all, we can eliminate malaria in a decade

# STRONG, DATA-DRIVEN AND GENDER SENSITIVE STRATEGIES TO FIND AND TREAT EVERY CASE

Malaria elimination requires strong, surveillance-based strategies that allow programs to identify and respond to each and every malaria infection. Going forward, the region should build the evidence base and share best practices on the optimal surveillance strategies across diverse contexts.

In addition, more granular, geo-enabled and near real-time data can inform a more targeted response. Better visibility of the disease will encourage improved access to services and commodities down to the last mile. This will help identify gaps in coverage, especially among mobile and migrant populations. Timely reporting of stockouts in malaria commodities will ensure that no one is left behind. Disease programs and organisations working in the region must collect and report gender disaggregated data, which will help design better gender responsive framework for delivery of interventions, especially in areas which are malaria endemic.

#### PRIVATE SECTOR AND COMMUNITY ENGAGEMENT

Due to the perceived accessibility and quality of private providers, the private sector serves as the first-line point of care for many rural communities. An effective elimination strategy requires that all cases be detected, reported and treated whether in the public or the private sector. In spite of this, the private sector is not routinely included in the design, planning and implementation of malaria elimination programming in Asia Pacific. Programs should look at existing approaches that enable engagement with the private sector to achieve elimination.

There are important lessons from the RAI2E-supported Regional Malaria Civil Society Organisation (CSO) Platform in the GMS around using a network of civil society partners to coordinate 'last mile' response in hard-to-reach areas, strengthen technical capacity of non-government actors, and strengthen the voice of communities affected by malaria. CSO partners also have an important role to play in advocating for domestic resources for continued malaria service delivery, particularly in countries that will transition from Global Fund support in the coming years.

#### **EFFECTIVE PROGRAM MANAGEMENT**

Countries recognise that effective management of malaria services is critical for elimination. The Lancet Commission on Malaria Eradication noted that a key lesson from the Global Polio Eradication Initiative was that suboptimal local management on occasion stalled progress. Learning from this experience, capacity building can both improve delivery and mitigate challenges associated with decentralisation of programs.

The key building blocks can include: leadership and supervision at all levels; sustained political and financial commitment; reliable supply and control of physical resources; effective management of data and information; and appropriate incentives and consistent accountability.

Networks like APMEN offer a platform for sharing best practices and disseminating information on malaria programs' implementation experiences. These platforms provide a pathway for taking controlled pilot studies to scale and developing innovative models for effective targeting of interventions.

#### INNOVATIVE TOOLS EXPEDITED WITH CAUTION

Key decision makers should adopt an urgency in introducing innovations that respond to the region's challenges, from tests to detect asymptomatic malaria, to radical cures for relapsing malaria, or non-pyrethroid based insecticides. These tools all show promise.

Repeated relapse of *P. vivax* malaria is a major cause of morbidity in the region and increases the risk of ongoing transmission. However, the uptake of existing treatment options has presented significant challenges to achieving the 2030 goal. The safe and expedited introduction of more effective use of existing treatments, as well as new tools will be essential to the fight against relapsing malaria.

Controlling mosquito populations and preventing transmission is a fundamental component of malaria elimination. One challenge for Asia Pacific is its high diversity of vectors, with 19 different *Anopheles* species or species complexes in the region, compared to just seven in Sub-Saharan Africa. This requires tailoring of vector control strategies for maximum effectiveness. A landscaping study conducted in the region, shows that the focus should be more on outdoor transmission in largely forested rural areas. <sup>7</sup> The region needs to introduce a better adapted set of mosquito-control tools such as spatial repellents<sup>8</sup> and forest packs for forest goers to stay protected on site.

The region also needs a better view of the pipeline of innovations and a clearer understanding of how the suite of commodities can support the region's malaria response. Unless some of the key access and regulatory bottlenecks are addressed, there will be delays in the registration of game-changing innovations and missed opportunities to detect and treat remaining cases. Pathways for these tools to reach patients need to be clarified through a systematic exchange of ideas between manufacturers, product development partnerships, disease programs and regulatory authorities. In addition, better reporting, strong regulatory systems and increased awareness of the threat posed by poor-quality antimalarials, are key to elimination as well as to health systems strengthening.

#### MALARIA ELIMINATION: A KEY PART OF A BIGGER PICTURE

Malaria elimination efforts are often part of a larger integrated health system, that require robust surveillance and response systems to maintain efficiency and effectiveness. For health systems to be truly robust, they must be supported by leadership at the national level, appropriate health financing, strong data driven surveillance and response systems, as well as access to innovative tools. The drive to strengthen health systems and collaborate across borders has not come a moment too soon; the COVID-19 pandemic is a reminder that the world is interconnected and effective disease response requires whole of society engagement and strong cross-border cooperation.

<sup>7</sup> Technical landscaping studies conducted by the Innovative Vector Control Consortium in 2018 and funded by the Australian Government's Indo Pacific Centre for Health Security.

<sup>8</sup> Spatial Repellents have been identified by the Technical landscaping study conducted by the Innovative Vector Control Consortium in 2018 as a promising tool for Asia Pacific. Spatial Repellents are currently under review by the WHO Vector Control Advisory Group.

# **CONCLUSION**

At the 10<sup>th</sup> East Asia Summit in 2015, 18 Heads of Government endorsed the APLMA Leaders' Malaria Elimination Roadmap to set forth a plan for the region and provide guidance to countries for delivering on the leaders' joint commitment to eliminating malaria across Asia and the Pacific by 2030. Since 2015, the Roadmap priority actions have been implemented, resulting in significant progress towards regional 2030 goal.



Collective and country led actions around the shared vision of an Asia Pacific free of malaria by 2030 have accelerated regional efforts and delivered results.





Collective and country led actions around the shared vision of an Asia Pacific free of malaria by 2030 have accelerated regional efforts and delivered results. These efforts have led to increased funding across the region, including a near tripling of domestic financing, and have resulted in a 31% reduction of the disease burden across Asia and the Pacific since 2012. Enhanced efforts in the GMS to mitigate the spread of antimalaria drug resistance have demonstrated 80% reduction in malaria cases and 95% reduction in deaths over the same period.

Leaders are enacting united national efforts against malaria by promoting whole of government and whole of society approaches. In countries that have taken a whole of society approach to elimination, including through malaria elimination task forces, there is an acceleration in the decline of malaria cases and related deaths. In supporting these holistic approaches, governments are finding new streams of health financing, new community and private sector partners to support health service delivery, and working multilaterally to streamline regulatory processes to ensure safe and swift delivery of the desperately needed new and innovative medicines and commodities for malaria elimination.

There is no doubt that increased financing, national leadership, regional collaboration, and improved access to health services for everyone have redefined the malaria map in Asia and the Pacific. Since 2018, Malaysia and Timor-Leste have seen no local human malaria transmission. Bhutan, Cambodia, Democratic People's Republic of Korea, Nepal, Republic of Korea and Vanuatu have had no malaria-related deaths in recent years.

However, with only a decade left to reach the regional elimination goal, we must redouble efforts to maintain the significant gains and build off them. There is still a great deal more to be done.

There is no doubt that increased financing, national leadership, regional collaboration, and improved access to health services for everyone have redefined the malaria map in Asia and the Pacific. China, with no local malaria transmission since 2017, is set to be certified malaria free in 2020.



In 2015, the Asia Pacific Leaders Malaria Alliance (APLMA) Leaders' Malaria Elimination Roadmap set the direction for the region and gave countries guidance on how to play their part in supporting and facilitating the elimination of malaria across Asia Pacific by 2030. In order to ensure the region remains on track, leaders requested a 5-year report on the progress made in the region towards 2030 to be submitted to the East Asia Summit in 2020.

This report, based on analysis by the APLMA Secretariat and broad consultations across the region, outlines achievements made to date, and presents an informed view on key challenges facing Asia Pacific in the next 5-year phase of elimination, and keeping the 2030 elimination goal on track.