APMEN | Asia Pacific Malaria Elimination Network



From Collaboration to Impact

A Decade of Technical Leadership and Regional Action for Malaria Elimination (2017–2026)

Asia Pacific Malaria Elimination Network (APMEN)

FORWARD

A Decade of Partnership for Malaria Elimination



Malaria elimination is one of the Asia Pacific region's most ambitious public health goals. Over the past decade, countries across the region have shown that remarkable progress is possible when national leadership, scientific innovation, and regional collaboration unite behind a common purpose.

At the heart of this progress has been the Asia Pacific Malaria Elimination Network (APMEN), a unique country-led platform connecting national malaria programmes, technical experts, and partner institutions. By facilitating collaboration, sharing practical experience, strengthening technical capacity, and translating evidence into action, APMEN has helped countries overcome increasingly complex challenges on the path to elimination.

Since 2017, the Asia Pacific Leaders Malaria Alliance (APLMA) has had the privilege of hosting the APMEN. Together, APLMA and APMEN have demonstrated the value of combining political leadership with technical excellence. While APLMA has sustained regional commitment and political advocacy, APMEN has provided the technical expertise, peer learning, and operational support needed to accelerate progress.

The past decade has brought significant achievements. Countries have strengthened surveillance systems, expanded access to innovative tools, advanced approaches to *Plasmodium vivax* malaria, enhanced vector control, and deepened collaboration on border malaria, climate change, zoonotic malaria, and prevention of re-establishment. The malaria-free certification of China and Timor-Leste demonstrates what sustained commitment can achieve.

Yet the final mile remains the most challenging. Continued investment, innovation, regional partnerships, and political commitment will be essential to sustain progress and strengthen regional health security.

On behalf of APLMA, I extend my sincere appreciation to APMEN Country Partners, Partner Institutions, Working Groups, Interest Groups, donors, technical experts, and Secretariat colleagues. Together, we have built not only a network, but a community united by the shared vision of a malaria-free Asia Pacific.

Dr Sarthak Das

Chief Executive Officer

Asia Pacific Leaders Malaria Alliance

PREFACE

Reflecting on Ten Years of Progress

This report was developed to document and celebrate a significant chapter in APMEN's history. Covering the period from 2017 to 2026, it captures a decade of technical collaboration, partnership, learning, and collective action in support of malaria elimination across the Asia Pacific region.

Since APLMA began hosting APMEN in 2017, the network has expanded its reach, strengthened technical platforms, broadened partnerships, and adapted to the evolving malaria landscape. As APMEN prepares for its next chapter, this milestone provides an opportunity to reflect on achievements, lessons learned, and the enduring value of regional collaboration.

Within these pages, you will find the story of APMEN's evolution as a country-led network, the growth of its Working Groups and Interest Groups, the contributions of its Secretariat and partners, and examples of how technical collaboration has supported countries at different stages of the malaria elimination continuum. The report also highlights the broader regional context, key milestones, emerging challenges, and opportunities that will shape the future of malaria elimination efforts.

This publication has been informed by a wide range of sources, including APMEN governance documents, strategic plans, annual reports, case studies, technical publications, donor reports, communication products, Working Group records, and reflections from partners across the network. While no single report can fully capture the contributions of everyone who has been part of APMEN's journey, we have sought to present a comprehensive account of the network's development and impact during this important period.



Finally, I would like to express my sincere gratitude to APMEN Country Partners, Hosting Institutions, Partner Institutions, Working Group and Interest Group leaders, experts, donors, researchers, development partners, and former Secretariat colleagues. The achievements reflected in this report are the result of their commitment, expertise, and belief in the power of collaboration.

As we look toward the future, may the experiences and partnerships documented here continue to inspire and inform the next phase of the journey toward a malaria-free Asia Pacific.

Dr Phone Si Hein

Associate Director

Asia Pacific Malaria Elimination Network





APMEN AT A GLANCE

The Asia Pacific Malaria Elimination Network (APMEN) is a country-led regional network bringing together 22 Asia-Pacific countries and 55 partner institutions to accelerate and sustain malaria elimination across the region. APMEN connects national programmes with technical expertise, translates evidence into policy and practice, and strengthens national capacity through its technical Working Groups and special Interest Groups. Its work is grounded in country ownership, peer-to-peer collaboration, and responsiveness to diverse elimination contexts, with a shared commitment to regional health security.

The first formal political commitment came on 25 September 2008, when Australian Prime Minister, the Honourable Kevin Rudd, announced the establishment of APMEN during the Millennium Development Goals Malaria Summit at the United Nations General Assembly in New York. APMEN was launched in February 2009 in Brisbane with ten founding countries, establishing one of the world's first regional platforms dedicated to malaria elimination.

Initially, the APMEN Secretariat was jointly hosted by the School of Population Health at the University of Queensland and the Global Health Group at the University of California, San Francisco (UCSF). Since 2017, APLMA has hosted the APMEN Secretariat. APMEN's work has been supported by the Gates Foundation, Australian Government/DFAT, U.S. CDC, Sumitomo Chemical, New Venture Fund, and RAI, alongside partners contributing expertise and resources to advance malaria elimination.

Aligned with the regional goal of eliminating malaria in the Asia Pacific, APMEN's mission is to accelerate and sustain malaria elimination by strengthening national programmes through technical advocacy, capacity development, evidence generation, and knowledge exchange. Working closely with governments, research institutions, WHO, civil society, and policy bodies, APMEN supports the translation of evidence into action and contributes to sustained progress towards malaria elimination and broader regional health security.

APMEN has grown to 22 official Member States across the Asia Pacific that have formally committed to malaria elimination: Afghanistan, Bangladesh, Bhutan, Cambodia, China, DPR Korea, India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Vanuatu, and Viet Nam.

A DECADE IN NUMBERS

A decade of connecting countries, strengthening capacity, advancing evidence into action and responding to emerging malaria threats.

18
NEW MEMBERS
4 Country Partners
14 Partner Institutions



4,090
PROFESSIONALS TRAINED
124 countries
38 training programmes



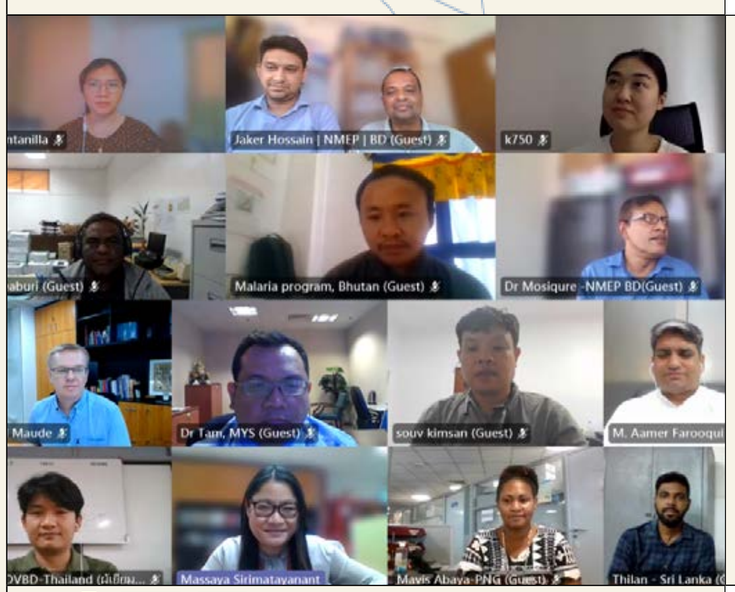
1,670
EXPERTS ENGAGED
46 meetings & workshops
5 cross-country learning exchanges



15,923
WEBINAR ATTENDANCES
143 countries
70 APMEN webinars

APMEN
Asia Pacific Malaria Elimination Network





30
RESEARCH & INNOVATION INITIATIVES
Studies, assessments, surveys, and innovation
18 APMEN case studies

5
CATALYTIC GRANTS
Supporting 3 national malaria programmes

175
YOUTUBE VIDEOS
Part of APMEN's digital knowledge ecosystem



Group photo from APMEN's 7th MVSE Course, Malaysia, 29 June–10 July 2026

APMEN Newsletter: July 2026

Asia Pacific Malaria Elimination Network (APMEN)
3,810 followers

Millions
REACHED DIGITALLY
2 websites
Monthly newsletters
3 social media channels

EXECUTIVE SUMMARY

The Asia Pacific has made substantial progress towards malaria elimination over the past decade, with transmission declining in most countries. Yet progress remains uneven, and the final stages of elimination are increasingly complex. Countries must sustain gains where malaria has declined, accelerate progress where transmission remains high, and strengthen surveillance and preparedness to prevent re-establishment.

This report documents the evolution, achievements and contributions of the APMEN from 2017 to 2026, a decade in which the network strengthened its role as a country-led regional technical platform. Under the hosting of the APLMA, APMEN connected national malaria programmes with research institutions, technical experts, development partners and policymakers to address shared challenges and translate regional knowledge into practical country action.

Through its Working Groups and Interest Groups, regional meetings, peer-to-peer exchanges, training programmes, operational research, technical support and knowledge-sharing platforms, APMEN strengthened technical capacity, facilitated the exchange of country experience, generated and applied evidence, and supported countries in addressing persistent and emerging challenges. Its technical agenda expanded to encompass surveillance and response, vector control, case management, outdoor and residual transmission, cross-border and zoonotic malaria, climate and environmental change, prevention of re-establishment, digital innovation and geospatial approaches.

The report highlights how regional collaboration was translated into country action. Across different stages of the elimination continuum, countries drew on regional expertise and peer experience to strengthen programmes, inform policy, develop practical solutions, build institutional capacity and respond to challenges that increasingly extend beyond conventional malaria programmes.

Beyond individual activities and outputs, the decade demonstrates APMEN's broader contribution: building a regional technical community in which countries can learn from one another, access specialised expertise, translate evidence into action, and collectively address challenges that extend beyond national boundaries.

As the Asia Pacific moves towards a malaria-free future, the relationships, expertise and collaborative mechanisms built during this decade provide a strong foundation for sustaining progress, addressing persistent and emerging challenges, and strengthening regional preparedness for the next phase of malaria elimination.



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ACRONYMS AND ABBREVIATIONS

APLMA	Asia Pacific Leaders Malaria Alliance
APMEN	Asia Pacific Malaria Elimination Network
CSO	Civil Society Organization
DFAT	Australia's Department of Foreign Affairs and Trade
DPR Korea	Democratic People's Republic of Korea
G6PD	Glucose-6-Phosphate Dehydrogenase deficiency
GIS	Geographic Information System
IRS	Indoor Residual Spraying
JIPD	Jiangsu Institute of Parasitic Diseases
Lao PDR	Lao People's Democratic Republic
LSM	Larval Source Management
MMV	Medicines for Malaria Venture
MORU	Mahidol Oxford Tropical Medicine Research Unit
OAT	Options Assessment Toolkit
ORENE	Online Resource Exchange Network for Entomology
P. knowlesi	*Plasmodium knowlesi*
P. vivax	*Plasmodium vivax*
PMWG	Programme Management Working Group
PNG	Papua New Guinea
RAI	Regional Artemisinin-resistance Initiative
RBM	RBM Partnership to End Malaria
SRWG	Surveillance and Response Working Group
UCSF	University of California, San Francisco
U.S. CDC	United States Centers for Disease Control and Prevention
VCWG	Vector Control Working Group
VxWG	Vivax Working Group
WHO	World Health Organization

CHAPTER 1. A DECADE OF MALARIA ELIMINATION IN ASIA PACIFIC

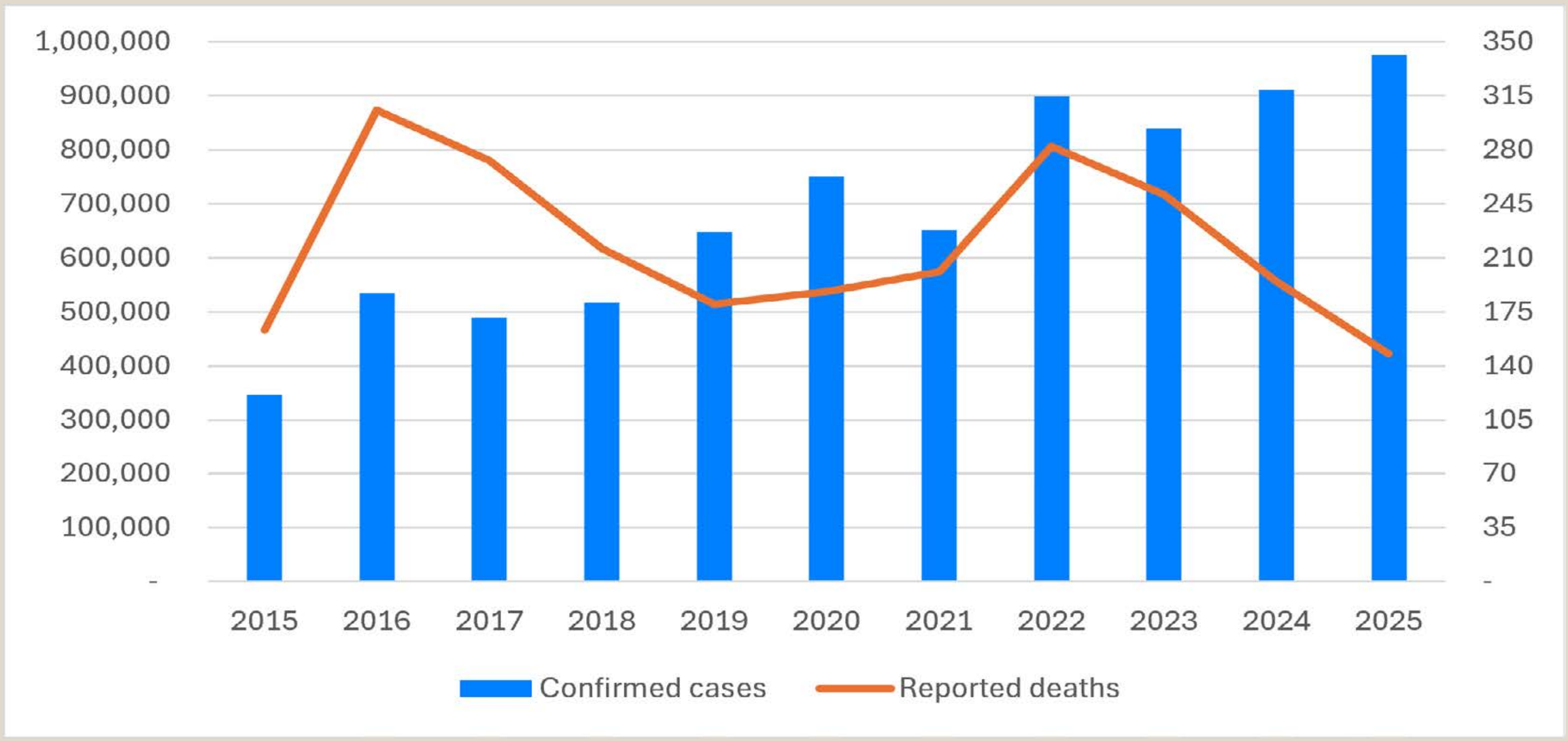




1.1 Regional Progress: Advancing Toward a Malaria-Free Asia Pacific

The past decade has been a period of remarkable progress and transformation for malaria elimination in the Asia Pacific. Countries have strengthened surveillance systems, expanded access to quality diagnosis and treatment, scaled up vector control interventions, and increasingly adopted targeted approaches to reach populations at greatest risk. Supported by sustained political commitment and regional collaboration, these efforts have accelerated progress towards the shared goal of a malaria-free Asia Pacific.

Between 2017 and 2026, several countries achieved historic milestones in their elimination journeys. China was certified malaria-free by the World Health Organization (WHO) in 2021, followed by Timor-Leste in 2025, joining Sri Lanka, which achieved certification in 2016. These achievements demonstrate that malaria elimination is possible across diverse epidemiological, geographic and health system contexts when supported by sustained leadership, strong surveillance and long-term investment.



Beyond these landmark achievements, several countries have made substantial progress towards elimination. Bhutan, Cambodia, India, Lao PDR, Malaysia, Nepal and Viet Nam have significantly reduced malaria transmission while strengthening systems to detect, investigate and respond to cases. As transmission declines, programmes are increasingly shifting from broad control strategies towards more targeted approaches focused on surveillance, prevention of re-establishment, and the management of imported and residual transmission.[i]

Yet progress across the region remains uneven. While many countries are approaching elimination, others continue to face persistent transmission driven by complex ecological, social and operational factors. Conflict, population displacement, environmental change and health system disruptions have contributed to localized increases in transmission in some settings. Recent experience demonstrates that malaria gains remain fragile and require sustained vigilance and investment to maintain.

The malaria landscape itself has also changed considerably over the decade. As transmission declines, the remaining burden is increasingly concentrated among remote communities, mobile and migrant populations, border areas, forest-going populations, and settings affected by environmental and climatic change. The challenge is therefore no longer simply to reduce case numbers, but to identify and address increasingly focal and complex patterns of transmission while protecting the gains already achieved.

At the same time, malaria elimination is becoming increasingly interconnected with broader health and development priorities. Countries are navigating emerging threats such as zoonotic malaria, insecticide and drug resistance, climate-related risks and financing constraints while seeking to build more resilient and integrated health systems. These challenges reinforce the importance of regional cooperation, technical innovation and shared learning.

As the region advances towards its malaria elimination goals, the lessons, innovations and partnerships developed over the past decade provide an important foundation for the next phase. The progress achieved demonstrates that elimination is possible, but also that sustaining it requires continued country leadership, political commitment, technical excellence and collaboration across borders.

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i https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2025

Milestones on the Path to Elimination

China: A Landmark Achievement

Following decades of sustained investment and innovation, China was certified malaria-free by WHO in June 2021. Its success, including the widely recognised “1-3-7” surveillance and response strategy, demonstrated how timely case notification, investigation and response can support elimination and prevention of re-establishment. China’s experience has since provided valuable lessons for other countries pursuing elimination.[ii]

Timor-Leste: The Region’s Newest Malaria-Free Country

Timor-Leste achieved WHO malaria-free certification in July 2025 after reducing reported malaria cases from more than 223,000 in 2006 to zero indigenous cases from 2021 onwards. Its achievement demonstrated the impact of sustained national commitment, strengthened surveillance and coordinated action, and marked another significant milestone for malaria elimination in the Asia Pacific.[iii]

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ii https://www.who.int/news/item/30-06-2021-from-30-million-cases-to-zero-china-is-certified-malaria-free-by-who
iii https://www.who.int/news/item/24-07-2025-timor-leste-certified-malaria-free-by-who



1.2 Emerging Challenges: Navigating a Changing Malaria Landscape

The Challenges of the Last Mile
As malaria transmission declines in most of the countries, the nature of the challenge is changing. The remaining burden is increasingly concentrated among populations and settings that are difficult to reach using conventional approaches, requiring more targeted, innovative, and integrated strategies.

Plasmodium vivax
P. vivax remains the dominant malaria parasite in many countries approaching elimination. Its ability to remain dormant in the liver and cause relapses presents unique challenges for diagnosis, treatment, and surveillance, making radical cure and G6PD testing essential components of elimination strategies.

Drug and Insecticide Resistance
Resistance to antimalarial medicines and insecticides continues to threaten hard-won gains. Sustained surveillance, evidence-based resistance management, and investment in new tools remain critical to safeguarding progress toward elimination.

Border Malaria and Population Mobility
Cross-border movement, migration, and mobile populations remain important drivers of malaria transmission. Effective elimination increasingly depends on regional coordination, cross-border collaboration, and shared surveillance efforts.

Outdoor and Residual Transmission
In many settings, malaria transmission increasingly occurs beyond the reach of conventional indoor interventions such as insecticide-treated nets and indoor residual spraying (IRS), as vectors bite outdoors. Outdoor and residual transmission are particular concerns among forest-going and occupationally exposed populations.

Zoonotic Malaria
Human infections caused by *Plasmodium knowlesi* and other zoonotic malaria parasites are emerging as an important challenge in parts of Southeast Asia, highlighting the need for stronger surveillance and One Health approaches.

Climate and Environmental Change
Climate variability, extreme weather events, environmental change, and shifting vector habitats are increasingly influencing malaria transmission patterns across the region. Climate resilience has therefore become an important component of malaria elimination planning.

1.3 Regional Collaboration: Why It Matters More Than Ever

The final stages of malaria elimination demand solutions that extend beyond national borders. Countries face many common challenges, including imported cases, border malaria, zoonotic transmission, surveillance in low-transmission settings, and maintaining political commitment as malaria becomes less visible. No single country can address these challenges in isolation.

Regional collaboration enables countries to share evidence, technical expertise, operational lessons, and innovative approaches. It supports coordinated responses to cross-border transmission, accelerates the adaptation of emerging tools and strategies, and strengthens collective advocacy for sustained investment in malaria elimination. As transmission declines, the value of technical networks that facilitate peer learning, capacity building, and collaborative problem-solving becomes increasingly evident.[i]

The Asia Pacific's malaria elimination journey over the past decade has demonstrated both the potential of collective action and the fragility of progress. Countries that have achieved elimination must continue to prevent re-establishment, while those with persistent transmission face increasingly complex and targeted challenges. Regional collaboration provides the connections, expertise, and shared experience needed to navigate these different stages together.[ii]

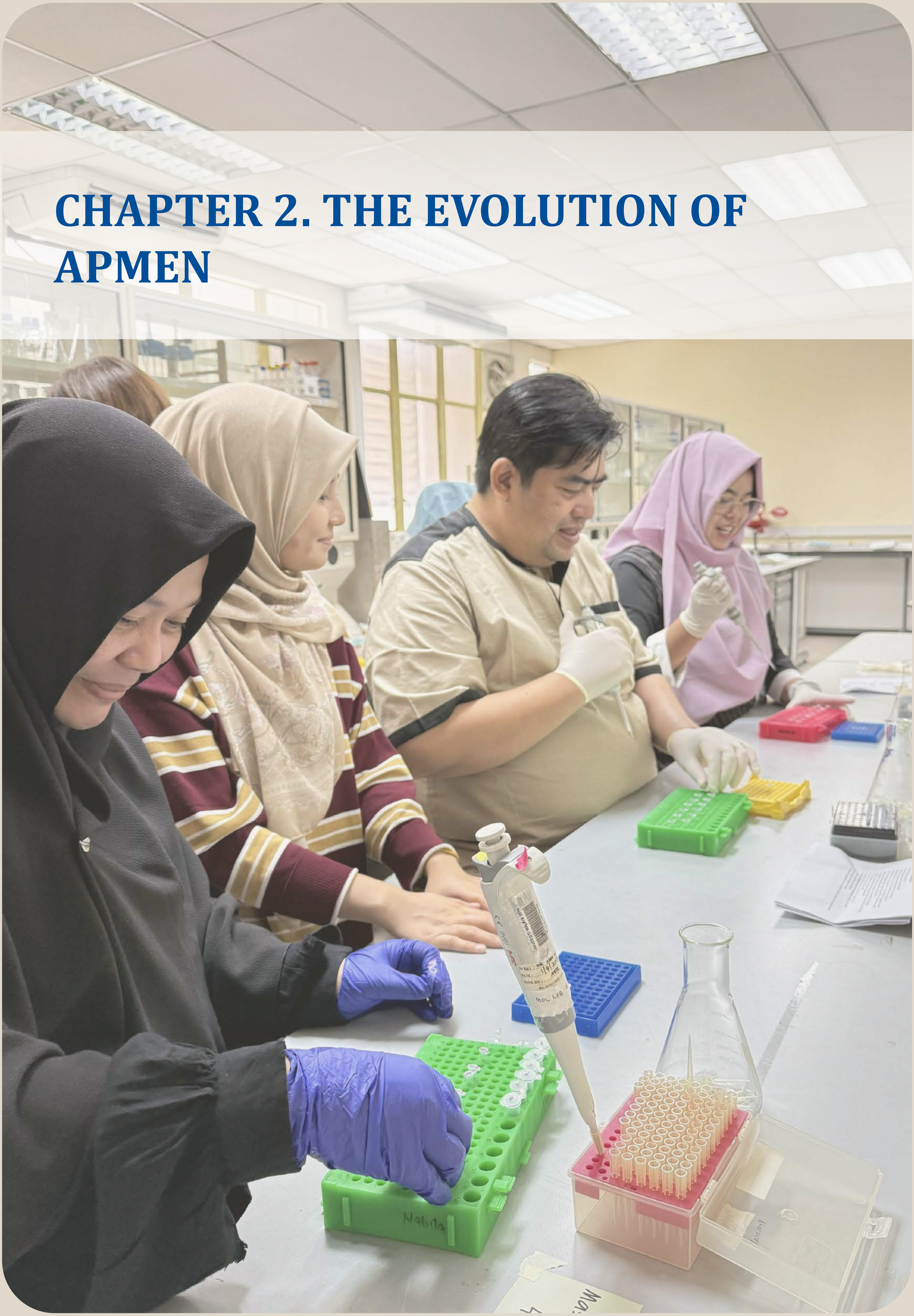
The experience of the past decade therefore reinforces a central lesson: malaria elimination may be achieved nationally, but sustaining and advancing regional progress requires countries to learn, adapt, and act together.

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i https://apmen.org/sites/default/files/all_resources/APMEN%20Annual%20Report%202025.pdf
ii https://apmen.org/sites/default/files/all_resources/Asia%20Pacific%20Leaders%27%20Malaria%20Elimination%20Roadmap%20-%20A%2010%20Year%20Review%20of%20Progress.pdf



CHAPTER 2. THE EVOLUTION OF APMEN





2.1 From Regional Vision to Technical Network: Laying the Foundations (2009–2016)

APMEN was established in 2009 in response to a growing recognition that countries pursuing malaria elimination shared common technical and operational challenges and could benefit from stronger regional collaboration. As programmes transitioned from malaria control to elimination, they required greater access to specialised expertise, operational experience, and opportunities to learn from countries at different stages of the elimination continuum.

From its inception, APMEN was established as a country-led network bringing together National Malaria Programmes, research institutions, universities, technical experts, development partners, and the WHO. Guided by an Advisory Board and supported by a dedicated joint Secretariat, the network promoted country ownership, peer-to-peer learning, and evidence-informed decision-making through annual Business and Technical Meetings and a collaborative governance model responsive to country priorities.[i]

During its first seven years, APMEN established the technical platforms. The Vivax Working Group (VxWG) and Vector Control Working Group (VCWG), both established in 2009, provided regional leadership on two of the most significant challenges to malaria elimination. The Surveillance and Response Working Group (SRWG), established in 2013, further strengthened collaboration on surveillance systems and programme responses essential for achieving and sustaining elimination.[ii]

Recognising that malaria elimination depends on strong national capacity, APMEN invested in developing malaria professionals through the Fellowship Programme, technical trainings, operational research, and over 30 technical development programmes and research grants. These initiatives strengthened programme capacity, fostered collaboration between national malaria programmes and research institutions, and reinforced APMEN's role as a bridge between research and implementation. At the same time, the network cultivated a regional community of practice that encouraged South-South collaboration, and the exchange of practical experience across diverse epidemiological settings. [iii]

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i https://apmen.org/sites/default/files/2020-10/RBM_APMEN_P%26I.pdf
ii https://apmen.org/sites/default/files/2020-10/APMEN%206%20Year%20Report_Web.pdf
iii https://apmen.org/sites/default/files/2020-10/APM0012%2BFELLOWSHIP%2BREPORT%2BONLINE.pdf

The impact of these efforts was reflected in several important milestones. In 2016, Sri Lanka became the first APMEN Country Partner to be certified malaria-free by the WHO, demonstrating that malaria elimination was achievable within the Asia Pacific region. During this period, an independent evaluation also affirmed APMEN's value as a unique country-led network that strengthened regional collaboration, generated practical evidence, and supported countries in addressing increasingly complex elimination challenges.[iv]

By 2016, APMEN had evolved into a respected regional technical network with an expanding membership, strong partnerships, mature governance, and well-established technical platforms. These achievements laid a solid foundation for the network's next phase under APLMA hosting, enabling it to broaden its regional reach while remaining true to its founding principles of country ownership, partnership, technical excellence, and shared learning.

iv https://apmen.org/sites/default/files/2020-10/APM0003%2BEVALUATION%2BREPORT%2BONLINE.pdf

The APMEN Community

Country Partners

Country Partners form the foundation of APMEN. National malaria programmes provide strategic direction for the network and ensure that activities remain grounded in country priorities and operational realities. From the outset, APMEN's governance and workplanning processes have been built around country ownership, ensuring that technical support and knowledge-sharing activities respond directly to programme needs.

Over time, the network expanded to include countries across South-East Asia, the Western Pacific, South Asia, and Melanesia, creating one of the region's most extensive communities focused specifically on malaria elimination. Together, these countries represent a wide range of epidemiological settings and elimination experiences, allowing valuable lessons to be shared across diverse contexts.

Partner Institutions

Alongside Country Partners, APMEN has built a strong network of Partner Institutions drawn from research organisations, universities, public health institutions, development and donor agencies, and technical partners. These institutions contribute expertise, operational experience, training opportunities, and evidence generation to support malaria elimination efforts throughout the region.

By fostering collaboration between national programmes and technical partners, APMEN has helped ensure that countries are able to access the most relevant evidence, innovations, and best practices while simultaneously shaping research agendas around programme priorities. This unique combination of scientific expertise and operational leadership has become one of APMEN's defining strengths.

Technical Community

A wider community of technical experts, scientists, researchers and practitioners who have contributed to APMEN through research, training, technical meetings, peer exchanges and knowledge-sharing activities, extending APMEN's technical network beyond its formal Country Partners and Partner Institutions. This builds on APMEN's earlier recognition of "Observers" and "Friends of APMEN" in its governance documents.



2.2 APMEN under APLMA Hosting: Strengthening the Network (2017–2026)

Over time, APMEN evolved from a platform primarily focused on research collaboration, evidence generation, and technical exchange into a broader regional network supporting the translation of evidence into policy and practice. Building on the strong foundations established during its early years, the network increasingly emphasized implementation-focused solutions, capacity strengthening, peer-to-peer learning, and operational support to help countries accelerate progress towards malaria elimination.

In 2017, Secretariat hosting transitioned from the University of Queensland and the UCSF to APLMA. This transition represented an important step in the continued evolution of the network, while maintaining APMEN's identity as a country-led platform for collaboration, technical exchange, and partnership.

Under APLMA hosting, APMEN continued to expand its support to countries through the REACH Approach, focusing on strengthening regional collaboration, generating and translating evidence, advancing technical capacity, supporting country action, and promoting knowledge exchange. The network broadened its engagement with national malaria programmes, researchers, implementing partners, policymakers, and development agencies, creating new opportunities for collaboration across technical, operational, and policy domains.

Between 2017 and 2026, APMEN diversified its technical portfolio and adapted to emerging challenges across the malaria elimination continuum. This included strengthened work on *P. vivax* elimination, surveillance and response, vector surveillance and control, and programme management through its four Working Groups, alongside three special Interest Groups addressing outdoor transmission, border malaria, and climate, environmental change and malaria.

Throughout this period, APMEN remained guided by its founding principles of country ownership, regional collaboration, technical excellence, and shared learning, while continuing to evolve through greater emphasis on peer-to-peer collaboration, responsiveness to diverse elimination contexts, and regional health security.

2.3 Country Leadership: Building a Community of Practice

Country ownership has remained the cornerstone of APMEN since its establishment. National malaria programmes guide the network's strategic priorities, ensuring that activities respond to operational needs and remain relevant to countries at different stages of malaria elimination. This commitment to country leadership has enabled APMEN to remain responsive to emerging challenges while fostering a strong sense of collective ownership among its members.

Over time, APMEN has evolved into a diverse regional community comprising government agencies, research organisations, universities, public health institutes, development agencies, donors, the private sector, and technical experts. Collectively, these partners contribute complementary expertise in epidemiology, entomology, surveillance, case management, operational research, vector control, health systems, and implementation science.

The Secretariat plays an enabling and coordinating role in sustaining APMEN as a country-led community of practice. It provides programmatic, operational, administrative, and fiduciary support, including accountability for donor funding and grant commitments, while facilitating partnerships, technical activities, and network priorities. Working with Country Partners and Working Groups, the Secretariat connects countries with technical expertise, promotes peer learning and collaboration, and supports the effective coordination and delivery of APMEN activities.

APMEN has evolved into a vibrant community of practice. The chairs of the Working Groups are nominated from among senior officials of APMEN Member States, with a maximum of two consecutive terms, totalling four years. Through Working Groups, Interest Groups, operational research collaborations, trainings, and webinars, the network has strengthened regional expertise. The annual technical meetings and exchange visits have remained the network's principal forum for governance, strategic planning, and technical exchange. South-South collaboration has been a defining feature of this community, enabling countries to learn directly from one another's successes and challenges while adapting practical solutions to their own contexts.

This country-centred collaborative model has created an environment where evidence, innovation, and operational experience are shared openly, reinforcing APMEN's role as a trusted regional platform for continuous learning and collective problem-solving.





2.4 Technical Collaboration: Evolving with Country Needs

Technical collaboration has been central to APMEN's mission since its inception. As the malaria landscape evolved, so too did the network's technical architecture, ensuring that countries continued to receive support aligned with emerging priorities and operational realities.

At the core of this architecture are APMEN's Working Groups, which bring together national programme managers, researchers, and technical experts to generate evidence, develop practical guidance, strengthen capacity, and promote peer learning in priority areas of malaria elimination. The Working Groups have each played a pivotal role in advancing regional expertise, translating research into practice, and supporting countries in addressing some of the most persistent challenges to malaria elimination.

Recognising that malaria elimination is shaped by an increasingly complex set of biological, environmental, and social factors, APMEN has also expanded its technical portfolio through specialised Interest Groups focused on emerging issues, including climate and environmental change, border malaria, and outdoor transmission. These multidisciplinary platforms have enabled countries and technical partners to jointly explore innovative approaches, exchange operational experience, and anticipate future challenges.

Through these platforms, APMEN has invested in operational research, professional trainings, webinars, and regional learning initiatives that strengthen individual and institutional capacity. These activities have transformed the network from a forum for knowledge exchange into a dynamic ecosystem that connects evidence generation, technical collaboration, capacity strengthening, and programme implementation.

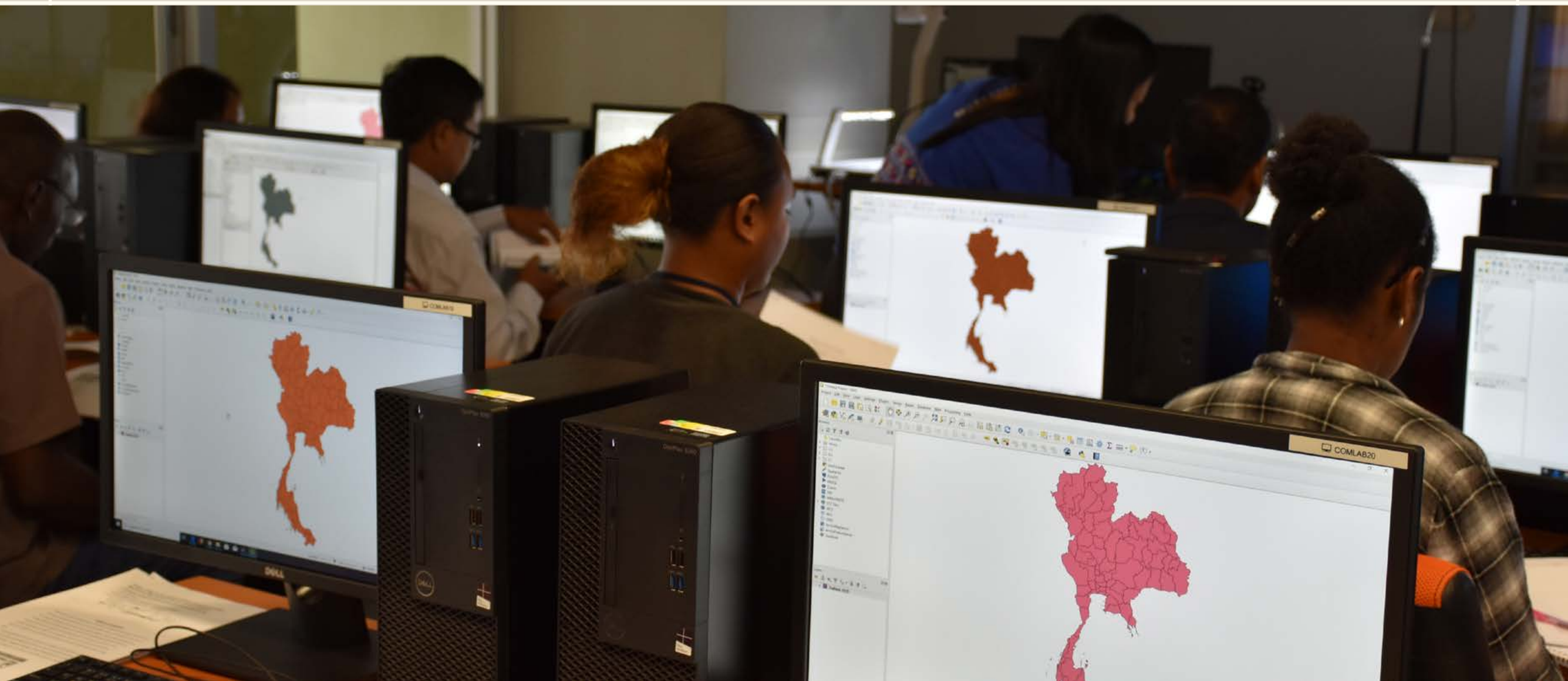
The achievements presented throughout the following chapters demonstrate how these technical platforms have translated collaboration into tangible outcomes, supporting countries to address longstanding challenges while remaining responsive to emerging threats across the malaria elimination continuum.

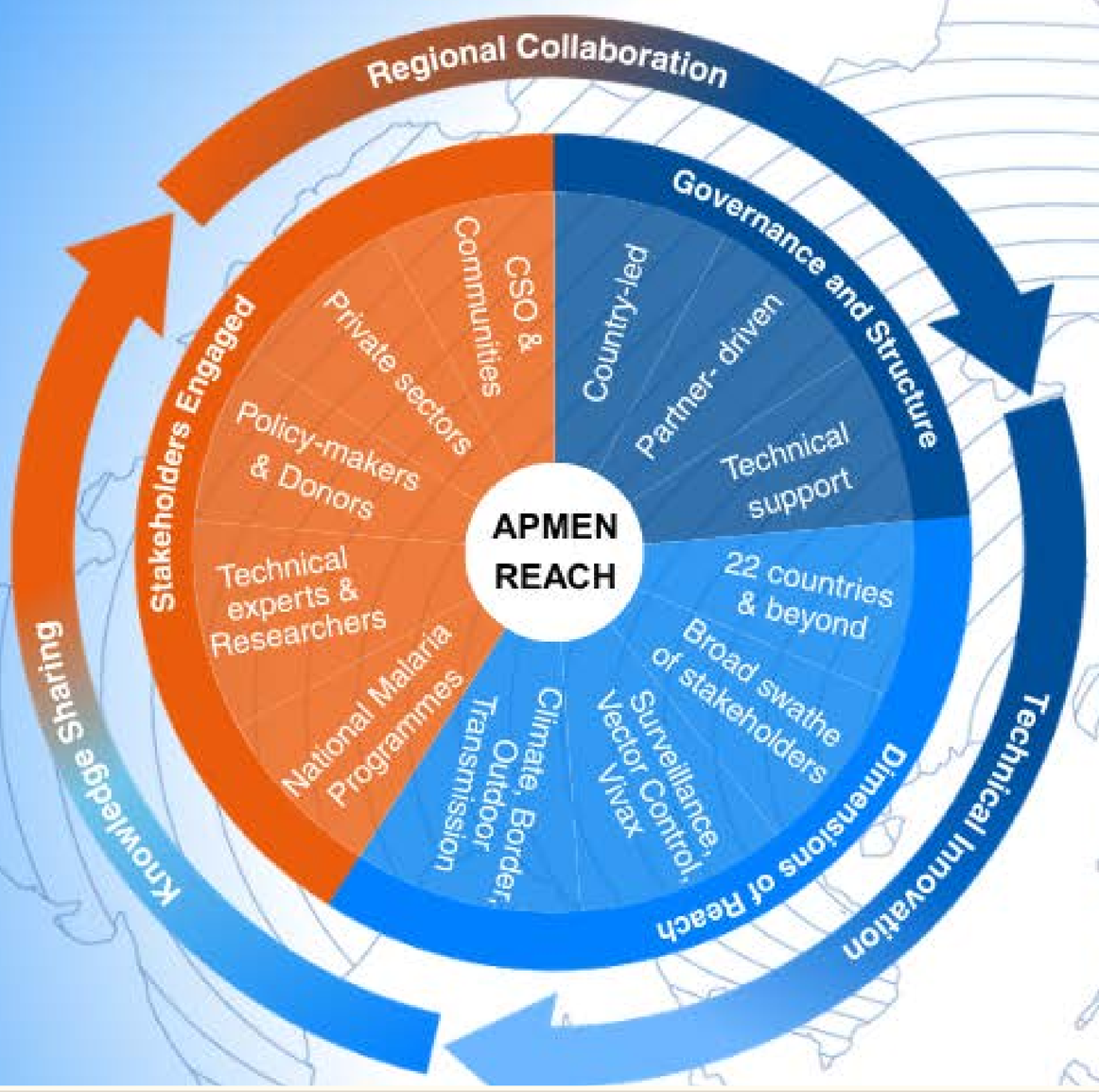
APMEN Working Groups and Interest Groups

Working Group/ Interest Group	Focus Area
Vector Control Working Group (VCWG)	Strengthening vector surveillance, entomology capacity, vector control strategies, and insecticide resistance monitoring.
Vivax Working Group (VxWG)	Advancing evidence, policy, and operational approaches to address the challenge of *P. vivax* malaria.
Surveillance and Response Working Group (SRWG)	Supporting data quality and dashboards, surveillance systems, geospatial tools, and rapid response approaches.
Program Management Working Group (PMWG)*	Strengthening leadership, programme effectiveness, operational management, and implementation capacity for malaria elimination.
Climate, Environmental Change and Malaria Interest Group**	Examining the impacts of climate variability, environmental change, and ecological factors, and developing adaptation and mitigation strategies.
Border Malaria Interest Group**	Promoting regional cooperation and practical solutions to address malaria transmission across international borders and among mobile populations.
Outdoor Transmission Interest Group**	Generating evidence and identifying strategies to address residual and outdoor transmission beyond the reach of conventional indoor interventions.

**PMWG was established in 2017 and operated for approximately three years only due to resource limitations.*

***Interest Groups have formed in 2023 under the administrative management of Working Groups such as Climate Change and Outdoor Transmission are under VCWG while Border Malaria is under SRWG. Each Interest Group was managed by a single chairperson from partner institution.*





APMEN | Asia Pacific Malaria Elimination Network

CONNECTING COUNTRIES, PARTNERS, AND TECHNICAL INNOVATIONS

2.5 The REACH Approach: Country-Led, Partner-Driven, Technically Anchored

Drawing on nearly two decades of experience supporting malaria elimination across the Asia Pacific, the APMEN REACH Approach articulates the network's unique value as a regional platform for collaboration, technical exchange, and innovation. It reflects APMEN's ability to connect countries, partners, and expertise to translate regional cooperation into country-level action and impact, while remaining firmly grounded in national priorities and needs.

At its core, the REACH Approach is country-led, partner-driven, and technically anchored. Through a governance structure that places countries at the centre of decision-making and engages a broad community of partners and technical experts, APMEN promotes knowledge exchange, capacity strengthening, and operational learning to support malaria elimination efforts across the region.

The REACH Approach extends APMEN's influence across three interconnected dimensions.

Geographic Reach connects 22 country partners across the Asia Pacific while extending APMEN's influence beyond the region. Through regional and global collaboration, the network shares innovations, operational experience, and lessons learned, helping to address transnational challenges and contributing to the broader global fight against malaria.

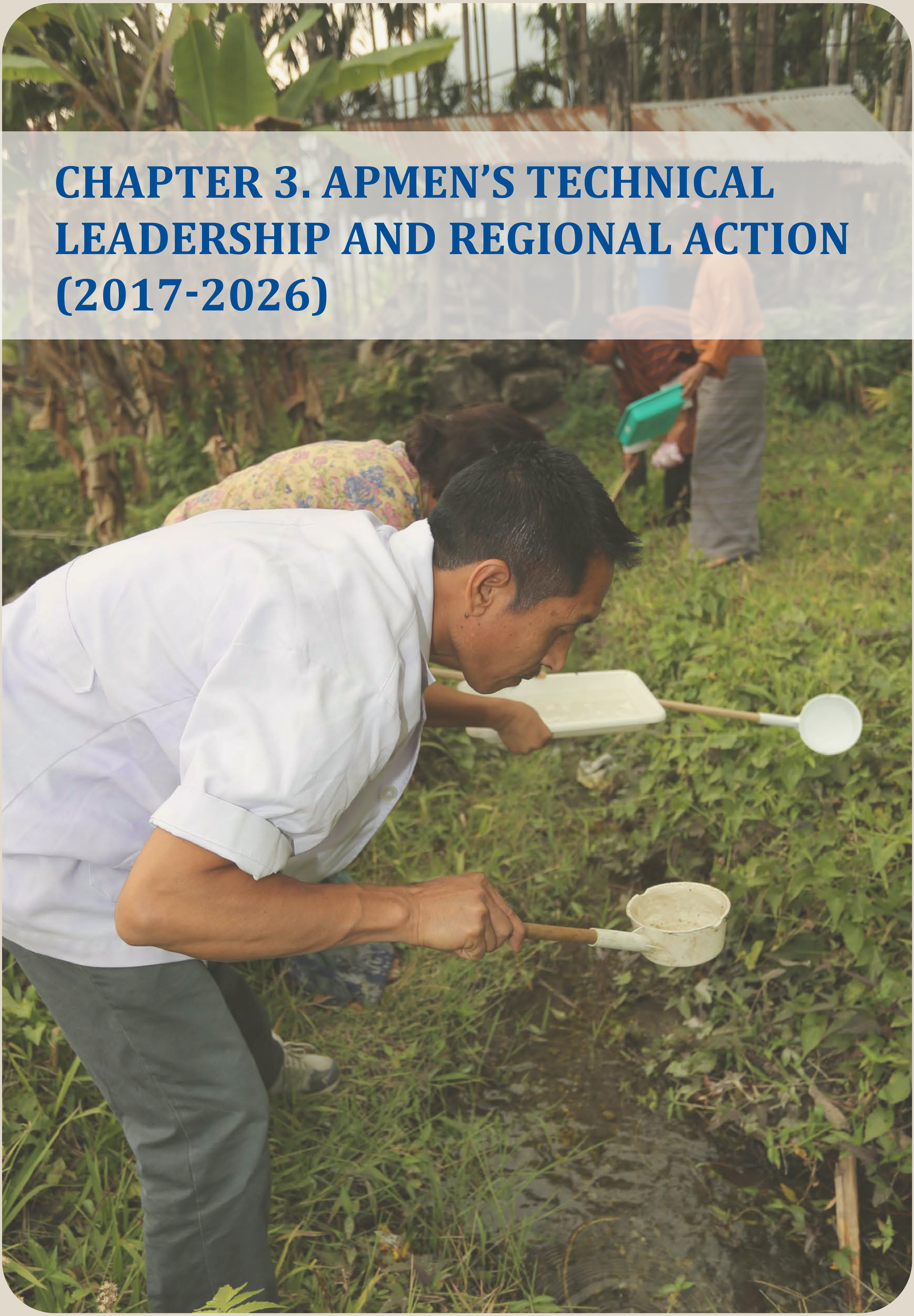
Stakeholder Reach brings together national malaria programmes, policy-makers, researchers, development partners, donors, private sector representatives, and communities affected by malaria. This multi-sectoral engagement ensures malaria elimination efforts are inclusive, contextually grounded, and capable of co-creating solutions that reflect both evidence and local realities.

Technical Reach advances innovation and problem-solving through APMEN's Working Groups and Interest Groups. By facilitating collaboration on malaria surveillance, *P. vivax*, vector control, border malaria, climate-related challenges, and outdoor transmission, APMEN ensures technical solutions are accessible, scalable, and tailored to country and regional needs.

Together, these dimensions enable APMEN to connect people, knowledge, and institutions across borders, strengthening regional cooperation and accelerating progress towards a malaria-free Asia Pacific.[i]

i https://apmen.org/sites/default/files/all_resources/APMEN%20REACH%20-%20Connecting%20Countries%2C%20Partners%2C%20and%20Technical%20Innovations.pdf

CHAPTER 3. APMEN'S TECHNICAL LEADERSHIP AND REGIONAL ACTION (2017-2026)





3.1 Regional Collaboration in Action: From Technical Exchange to Country Impact

When APMEN came under APLMA's hosting in 2017, malaria elimination in the Asia Pacific was entering a new phase. While many countries had made substantial progress in reducing transmission, challenges were becoming more complex and localised. Programmes needed to strengthen case detection and response, address residual and outdoor transmission, reach mobile and remote populations, manage *P. vivax* relapse, and enhance entomological surveillance. Cross-border transmission, zoonotic malaria, climate and environmental change, and emerging drug and insecticide resistance further underscored the need for regional collaboration.

These changing conditions shaped APMEN's work throughout the decade. As a country-led technical network, APMEN provided a regional mechanism through which national programmes could access specialised expertise, share practical experience, generate and interpret evidence, strengthen professional capacity, and collaborate on challenges that were difficult to address in isolation. This model became increasingly focused on translating regional knowledge into practical support for national programmes.

Between 2017 and 2026, APMEN expanded and diversified this work through its Technical Working Groups and Interest Groups, regional meetings and peer exchanges, specialised training, operational research and assessments, catalytic technical support, decision-support tools, and knowledge-sharing platforms. More than 4,000 malaria and public health professionals from 124 countries participated in 38 specialised training, while over 30 research, assessment and innovation initiatives generated evidence for programme decision-making. Five catalytic grants supported national programmes in addressing priority technical and operational challenges, and APMEN's digital platforms extended access to regional knowledge and experience beyond its Member Countries.

Yet APMEN's contribution was rarely a single activity. More often, it was a connected process: a country identified a technical challenge; regional expertise and experience were brought together; evidence was generated or interpreted; an approach was tested, adapted or strengthened; and the resulting experience was shared with others. Through this cycle, regional collaboration became a practical resource for national action.

This chapter traces that journey, from technical leadership and regional convening to capacity strengthening, evidence generation, country action, responses to emerging challenges, and knowledge exchange, showing how APMEN translated collaboration into practical support for malaria elimination across the Asia Pacific.



3.2 Technical Leadership: Connecting Expertise to National Priorities

APMEN's technical leadership during 2017–2026 was grounded in a simple principle: countries facing similar elimination challenges should be able to draw on one another's experience and on the specialised expertise available across the region. The network's Working Groups and Interest Groups provided platforms for national programme leaders, researchers, universities, and technical partners to turn programme priorities into technical discussion, collaborative work, capacity development and practical solutions.

As malaria elimination progressed, APMEN's technical agenda evolved from core programme needs to increasingly specialised and cross-cutting challenges. The APMEN SRWG, VCWG, VxWG and PMWG addressed different dimensions of elimination, while the Interest Groups on Border Malaria, Outdoor Transmission, and Climate and Environmental Change responded to challenges that increasingly crossed conventional programme boundaries. Together, these platforms enabled APMEN to bring relevant expertise around emerging questions facing national programmes.

Technical leadership increasingly came from within APMEN Member Countries. Director Generals and Directors from Bhutan, China, India, Indonesia, Lao PDR, Malaysia, Pakistan and Solomon Islands served as Working Group chairs, shaping regional technical priorities, and bringing national programme perspectives into regional discussions. Health ministers and other senior leaders also participated in APMEN events and media activities, helping to raise the profile of malaria elimination within broader national health agendas. Supported by APMEN technical experts and partner institutions, this country-led approach strengthened national technical leadership while enabling countries to bring malaria priorities into wider health policy discussions.

The technical leadership model became increasingly important as the epidemiology of malaria changed. As transmission declined and became more focal, the questions confronting programmes became more specialised. How can surveillance systems detect every infection? How should programmes respond to residual or outdoor transmission? How can new medicines and tools be introduced safely and effectively? How can countries coordinate surveillance and response across borders? Addressing such questions required not only scientific evidence, but also practical experience from programmes working in comparable settings.

APMEN's technical communities created a space where this experience could be shared and applied. The VCWG advanced work on vector surveillance, insecticide resistance, strategic planning, and integrated vector management. The VxWG focused on *P. vivax* elimination, including radical cure, G6PD testing and newer treatment options. The SRWG strengthened attention to surveillance quality, geospatial approaches, data systems, dashboards and response. The Interest Groups extended this technical agenda to simian malaria, climate and environmental change, border malaria and outdoor transmission.

The value of these platforms was therefore not simply their specialist expertise, but their ability to connect that expertise with programme priorities. National leaders could bring practical challenges from their countries; partner institutions could contribute specialised scientific and technical knowledge; and colleagues from other Member Countries could share approaches tested in similar settings. Through this interaction, regional technical discussion could inform national decision-making, while country experience could in turn shape the wider regional agenda.

This approach also enabled APMEN to respond to emerging priorities without treating each challenge as a separate programme. As zoonotic malaria became increasingly important in parts of Southeast Asia, APMEN connected surveillance, laboratory, entomological and One Health expertise. As climate and environmental change emerged as growing concerns, the network brought malaria programmes into dialogue with climate scientists and public health specialists. For border malaria, APMEN drew on established relationships among ministries of health and national programmes to support practical discussion and collaboration across borders.

APMEN's technical leadership was therefore not about directing national programmes or providing solutions from outside. It was about creating the conditions for national leaders, technical experts and partner institutions to work together, share evidence and experience, and develop solutions that countries could adapt to their own elimination priorities. In this way, APMEN strengthened technical leadership within Member Countries while building a regional community of practice capable of responding collectively to the increasingly specialised challenges of malaria elimination.



APMEN In Action

Bringing National Leadership and Regional Expertise Together

The APMEN Joint Working Groups Meeting 2026, held in Bangkok from 27–30 April, demonstrated how APMEN's country-led technical model brings national leadership, specialised expertise and cross-disciplinary collaboration together. Under the theme "One Network, Integrated Solutions: Driving a Malaria-Free Asia Pacific," the meeting brought together APMEN's three Working Groups and three Interest Groups to address the increasingly interconnected challenges of malaria elimination.[i]

National programme leaders were active not only as participants, but also as technical leaders. The opening featured reflections from the chairs of the three Working Groups, who were senior national leaders from Indonesia, Pakistan and India, as well as opening remarks from Thailand Department of Disease Control. Programme representatives from 18 APMEN Member Countries chaired sessions, presented country experiences and contributed to technical panels throughout the meeting, sharing practical experience across a wide range of elimination priorities, from diagnosis, vector control and surveillance to *P. vivax*, climate change, zoonotic malaria, cross-border collaboration and health-system integration.

Partner institutions complemented this country leadership with specialised evidence and expertise. Researchers and technical partners presented findings on diagnostics, G6PD testing, insecticide resistance, spatial repellents, artificial intelligence, climate modelling, serology, radical cure and surveillance, bringing emerging evidence and innovations into direct discussion with national programmes.

Most importantly, the meeting demonstrated integration in practice. Surveillance discussions considered how data should guide vector control and programme decisions; vector control sessions connected entomological intelligence with surveillance and planning; and *P. vivax* discussions linked treatment innovations with diagnostics, surveillance, regulation and service delivery. Cross-cutting sessions on climate, zoonotic malaria, border malaria and health-system integration further connected the technical agenda across Working Groups and Interest Groups.

The meeting also extended technical exchange beyond the conference setting through a visit to Thailand's Department of Disease Control, where participants gained insight into how national surveillance, laboratory and programme systems support malaria elimination and prevention of re-establishment. The visit connected regional technical discussions with Thailand's practical experience, reinforcing the value of country-to-country learning within APMEN.

The meeting illustrated APMEN's technical leadership model in practice: national programmes defined and shared priorities, partner institutions contributed specialised expertise, and the network connected these perspectives to develop more integrated responses to the final challenges of malaria elimination.

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i https://apmen.org/events/apmen-joint-working-groups-meeting-2026



3.3 Regional Convening: Connecting Countries through Peer-to-Peer Collaboration

Regional convening has been one of APMEN's most visible contributions, but its value extended well beyond the number of meetings and exchanges held. Over the decade, APMEN meetings, technical workshops, leadership dialogues and learning exchanges created trusted spaces where national malaria programmes, researchers, technical experts and partners could compare experience, identify common challenges and work towards practical solutions. As countries moved closer to elimination, however, the value of convening increasingly lay in enabling countries to learn directly from one another.

APMEN's meetings provided the foundation for this regional exchange. The APMEN Annual General Meetings, Working Group and Reference Group meetings, and other technical meetings and workshops brought together national programmes and partner institutions to review emerging evidence, discuss operational challenges and identify priorities for further collaboration. Across the decade, 46 APMEN meetings and workshops engaged 1,670 participants from countries and partners, covering surveillance and response, vector control, *P. vivax* elimination, cross-border malaria, climate and environmental change, outdoor transmission, integration, and prevention of re-establishment.

The model also adapted as circumstances changed. During the COVID-19 pandemic, APMEN moved meetings and technical discussions online, allowing regional collaboration to continue despite travel restrictions. New webinar series and virtual meeting formats expanded opportunities for technical exchange and allowed APMEN to reach wider audiences. When travel resumed, APMEN did not simply return to its previous model. Instead, virtual engagement became a complement to targeted, face-to-face exchanges, combining the broader reach and accessibility of online platforms with the deeper interaction and practical learning enabled by in-person collaboration.

As elimination became more focal and operationally complex, APMEN increasingly complemented regional meetings with peer-to-peer exchanges that allowed countries to learn from practice, not only from presentations. During the decade, five cross-country learning exchanges brought national programmes into direct contact with approaches being implemented in other settings. These exchanges addressed practical challenges including community-based malaria services, cross-border collaboration, integrated surveillance and response, *P. vivax* radical cure and G6PD testing, prevention of re-establishment, and emerging zoonotic malaria.

The distinction was important. A presentation can describe how a programme works, but a peer exchange allows participants to see systems in practice, question the people implementing them, understand operational constraints and consider what could be adapted to their own context. APMEN's exchanges increasingly followed this model, combining technical discussion with field visits, demonstrations, direct dialogue with programme teams and reflection on how lessons might be applied elsewhere.[i]

The APMEN Melanesian Countries' Malaria Learning Visit to Cambodia, hosted by Malaria Consortium, and guided by the National Center for Parasitology, Entomology and Malaria Control (CNM), illustrates this approach. Representatives from Indonesia, PNG, Solomon Islands, Timor-Leste and Vanuatu visited Stung Treng Province and observed Village Malaria Workers, Mobile Malaria Workers, health centres and malaria posts serving forest-goers and other high-risk populations. The purpose was not simply to observe Cambodia's progress, but to understand how community-based service delivery, active case detection and targeted interventions could be adapted to other contexts.[ii]

Thailand provided several examples of how this approach supported countries working through specific technical and programmatic challenges. Peer exchanges on tafenoquine and G6PD implementation, implemented by VxWG and MMV, connected countries with practical experience in introducing new *P. vivax* radical-cure approaches, while a separate exchange on Thailand's integrated malaria systems, hosted by the Department of Disease Control, allowed participants to examine how surveillance, laboratory, pharmacovigilance, entomological and programme functions work together to sustain elimination and prevent re-establishment. These exchanges demonstrated that peer learning was not limited to sharing technical information; it allowed programmes to examine how evidence, policy and implementation come together within a functioning health system.[iii]

The peer-to-peer collaboration was particularly important in areas where malaria transmission, population movement and health service use do not follow administrative boundaries. The APMEN's Indonesia-Malaysia exchanges, co-hosted by SRWG and MORU, provided a practical example, bringing national and subnational stakeholders together to examine shared challenges along the Kalimantan-Sabah-Sarawak border and identify opportunities for stronger collaboration.

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i https://apmen.org/sites/default/files/all_resources/APMEN%20Case%20Study_Peer-to-Peer%20Learning.pdf
ii https://apmen.org/blog/reaching-unreached-south-south-exchange-malaria-elimination-field-visit-perspective
iii https://apmen.org/blog/learning-practice-apmen-peer-peer-exchange-tafenoquine-and-g6pd-implementation-thailand



APMEN In Action

From Cross-Border Dialogue to Joint Action on *Plasmodium knowlesi*

Malaria does not stop at national borders, and this is particularly evident for *P. knowlesi* and other zoonotic malaria risks along the Indonesia-Malaysia border. APMEN used its peer-to-peer model to bring countries together around a shared challenge and support the transition from dialogue to practical action.

From 4–5 August 2025, APMEN SRWG and Border Malaria Interest Group facilitated a cross-border peer exchange bringing together national and subnational stakeholders from Indonesia and Malaysia to examine malaria challenges along the Kalimantan-Sabah-Sarawak border. The exchange created an opportunity for programme leaders and technical teams to compare surveillance approaches, discuss operational challenges and identify areas where closer collaboration could strengthen the regional response. Importantly, the discussion moved beyond information sharing and resulted in a roadmap outlining short- and medium-term actions, including stronger cooperation on zoonotic malaria.[i]

The roadmap provided a basis for continued technical collaboration. From 15–17 April 2026, the Indonesia-Malaysia Technical Exchange on Zoonotic Malaria Surveillance brought together national and subnational malaria programme officers, laboratory experts, epidemiologists and entomologists from Indonesia for focused capacity building at Universiti Malaya and peer-to-peer exchange in Kuala Lumpur. The exchange strengthened Indonesian capacity to address simian malaria and informed the finalisation of Indonesia's *P. knowlesi* surveillance guideline, aligning policy, surveillance systems, operational needs and emerging evidence.[ii]

These two Indonesia-Malaysia exchanges illustrate how APMEN's convening role can extend beyond a single meeting. A regional dialogue created a shared understanding of the challenge; a jointly developed roadmap identified practical next steps; and a subsequent technical exchange began translating those priorities into strengthened capacity and collaboration.

This progression from cross-border dialogue to a shared roadmap and focused technical action demonstrates how APMEN enables countries to build trust, learn from one another and develop practical responses to malaria challenges that cannot be addressed by any country alone.

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i https://apmen.org/blog/apmen-strengthens-cross-border-collaboration-indonesia-malaysia-peer-peer-exchange-malaria
ii https://apmen.org/blog/strengthening-regional-responses-plasmodium-knowlesi-through-peer-peer-collaboration



3.4 Capacity Strengthening: Building Skills for the Final Mile

As malaria transmission declined, the skills required to sustain elimination became more specialised. Programmes needed greater depth of expertise in entomology, surveillance, geospatial analysis, case investigation, *P. vivax* radical cure, climate-informed planning, data systems and programme management. Building this specialised workforce became an increasingly important part of APMEN's role.

APMEN's approach was shaped by country demand rather than a fixed training calendar. A regional training needs assessment conducted in 2021, together with priorities identified by National Malaria Programmes through APMEN meetings and workshops, helped identify technical gaps and guide training activities. The resulting portfolio responded to practical needs raised by countries, including geospatial technologies, vector surveillance and control, molecular identification, G6PD testing, artificial intelligence, climate and health, zoonotic malaria surveillance and digital data systems.

Different learning needs called for different approaches. Intensive in-person courses provided practical skills, field experience and direct interaction with technical experts, while regional and subregional training allowed programmes facing similar ecological or operational challenges to learn together. Online learning extended access to specialised knowledge beyond those able to travel. From 2017 to 2026, 38 regional and national training courses and workshops reached 4,090 malaria and public health professionals from 124 countries.

The Malaria Vector Surveillance for Elimination (MVSE) programme, implemented by APMEN VCWG and Malaria Consortium, became one of the clearest expressions of this approach. Launched in 2018 in response to gaps in practical entomological capacity, the programme combined classroom instruction with laboratory and field-based learning. APMEN also supported longer-term professional development through scholarships, including the Diploma in Applied Parasitology and Entomology (DAP&E) at Malaysia's Institute for Medical Research, helping selected professionals develop specialist expertise to strengthen entomological and parasitological capacity within national programmes.

APMEN's capacity strengthening also extended beyond malaria-specific skills to capabilities that could contribute to broader public health systems. In Timor-Leste, APMEN SRWG and Health GeoLab supported training and technical discussions on using geospatial data and technologies to strengthen integrated public health surveillance. The activity explored how geo-enabled approaches could improve the collection, visualisation and use of spatial information for programme decision-making, while supporting the country's commitment to establish a technical working group on geo-enablement. This illustrated how capacity strengthening could help countries establish new technical capabilities within their health systems.

Online learning subsequently became an important way to extend the reach of specialised training. The online malaria vector surveillance course reached 1,063 participants from 85 countries in 2024, more than 1,700 participants from 104 countries in 2025, and 1,688 participants from 104 countries in 2026. Average knowledge scores also increased substantially, demonstrating that scale could be combined with measurable learning gains.

APMEN further expanded learning beyond scheduled training events. In collaboration with Kasetsart University, the APMEN VCWG developed an online self-paced vector surveillance course comprising five modules and 27 tutorials covering mosquito sampling, insecticide susceptibility assays, vector identification, behaviour, diversity and abundance, and insectary management. Hosted through ORENE, the course allowed practitioners to access specialised learning at their own pace and provided a resource that remained available beyond face-to-face training.

ORENE, the Online Resource Exchange Network for Entomologists, developed not simply as a repository of training materials, but as a continuing regional resource for technical learning and professional connection. Training participants could return to course materials, access additional resources and remain connected to a wider community of practice after completing a course.

Capacity strengthening therefore evolved from delivering individual training events into building a regional learning ecosystem. Intensive field-based courses developed practical expertise; regional and national workshops addressed specific programme needs; online courses extended access across countries; self-paced resources supported continuing learning; scholarships supported longer-term professional development; and ORENE helped preserve and connect knowledge over time. Together, these approaches strengthened the technical workforce that countries increasingly needed to sustain malaria elimination and prevent its re-establishment.



APMEN In Action

Building the Next Generation of Malaria Entomologists

When APMEN's VCWG identified gaps in practical entomological capacity in 2017, the challenge was not simply a shortage of training opportunities. Countries needed professionals who could apply entomological knowledge directly to malaria surveillance and control in their own programme settings. APMEN responded by developing the Malaria Vector Surveillance for Elimination (MVSE) course, launched in 2018 with a strong emphasis on practical, field-based learning.[i]

The first cohort brought together 23 entomologists from 13 countries at the Institute for Medical Research, Malaysia, combining classroom instruction with mosquito sampling, insecticide susceptibility monitoring and surveillance planning. The following year, the second cohort expanded to 30 participants from 20 countries and was co-hosted by Kasetsart University in Bangkok. Rather than establishing a single permanent training location, APMEN subsequently rotated the course across the region to bring learning closer to different programme contexts.

The third cohort was held at Mohanlal Sukhadia University in India in 2022, with a focus on South Asia, followed by IVRCRD in Indonesia in 2023 for participants from the Malay Archipelago, and the PNG Institute of Medical Research in 2024 for professionals from Melanesia. The sixth cohort was co-hosted by Mahidol University and Malaria Consortium in Thailand in 2025, while the seventh returned to Malaysia in 2026. This regional rotation allowed participants to learn not only technical methods but also how vector surveillance is adapted to different ecologies, transmission patterns and operational realities.

By 2026, seven in-person courses had trained 160 entomologists and malaria professionals from 21 APMEN member countries. The programme was complemented by online vector surveillance trainings and other specialised courses, extending access to a much wider global audience.

MVSE demonstrates how APMEN turned an identified regional capacity gap into a sustained, practical learning programme that strengthened specialist expertise across different malaria elimination settings.

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i https://apmen.org/sites/default/files/all_resources/APMEN%20Case%20Study_Capacity%20Strengthening_Vector%20Surveillance_VCWG_0.pdf



3.5 Evidence and Innovation: Turning Programme Questions into Solutions

As programmes approached elimination, the questions facing national malaria programmes became more specific and increasingly difficult to answer through routine programme experience alone. Countries needed evidence on where transmission persisted, which populations remained at risk, how vectors were behaving, whether surveillance systems generated information for action, and how emerging interventions could be introduced safely and effectively. APMEN increasingly used its technical network to help countries turn these questions into evidence and connect evidence with programme decisions.

This approach was already visible in the early years of the decade. The regional roundtable, hosted by APMEN VxWG and Menzies School of Heath Research in 2017 examined challenges to safe and effective radical cure, including G6PD testing, adherence to primaquine and the future introduction of tafenoquine, followed by a 2018 discussion on measuring primaquine effectiveness and improving adherence. These activities established an important feature of APMEN's evidence model: research priorities were grounded in operational problems faced by programmes.

The same principle shaped APMEN's work on vector control. A regional needs assessment conducted with National Malaria Programmes in 2018 and 2024 examined the capacity to implement vector surveillance and control, identifying gaps in human resources, surveillance practices, data collection and the use of vector information for programme decisions. The findings highlighted opportunities to strengthen priority indicators, insecticide resistance monitoring and the integration of vector data into national strategies. Together, these assessments helped APMEN identify where technical capacity and evidence were weakest and where further training, operational research and technical support were needed.

Across the decade, this model expanded to surveillance, geospatial analysis, climate and malaria, cross-border transmission, outdoor transmission, *P. vivax* and digital systems. More than 20 operational research, assessment and innovation initiatives are recorded in the decade's programme portfolio. The emphasis was increasingly on applied evidence: assessing readiness for new interventions, identifying technical gaps, examining whether surveillance systems produced useful information, and testing approaches under real programme conditions. As evidence accumulated, APMEN increasingly used it not only to understand problems but also to develop and adapt practical solutions. Innovation meant turning evidence and programme experience into tools, approaches and systems that could be tested and applied in real-world settings.

The Vivax Radical Cure Options Assessment Toolkit (OAT), which later evolved into Planning Ahead for Malaria (PAM), provides one example of this approach. The tool helped programmes consider epidemiology, diagnostic capacity, safety, health-system readiness, cost and operational feasibility when assessing radical-cure options. Its evolution illustrates how APMEN could turn a shared programme question into a practical decision-support tool and refine it through experience.

Digital innovation followed a similar principle. In Indonesia, APMEN worked with national and provincial partners to improve the visibility and usability of malaria data through the Papua Integrated Dashboard initiative. The work reviewed data from multiple sources and harmonised indicators to make information more accessible for programme planning and decision-making. The objective was not technology for its own sake, but better use of existing programme information.

APMEN also supported evidence generation on emerging vector-control challenges. Studies and technical work examined insecticide resistance, vector behaviour, outdoor transmission and alternative surveillance approaches. In PNG, research on mosquito biting behaviour generated evidence on when and where vectors bite, including outdoor exposure, challenging assumptions that indoor-focused interventions alone could address residual transmission. Such findings provided a basis for considering complementary approaches in settings where conventional interventions leave important gaps.

APMEN further created spaces where emerging evidence could be interpreted collectively. Working Group meetings, technical discussions, webinars and publications connected researchers with national programmes, allowing new findings to be considered alongside operational experience. This helped create a practical pathway from programme question to evidence, from evidence to technical interpretation, and from technical interpretation to programme decision-making. APMEN's contribution to innovation therefore extended beyond developing new tools: it created the regional relationships and processes through which evidence could be generated, tested, adapted and applied to the evolving challenges of malaria elimination.



APMEN In Action

From Options Assessment to Planning Ahead

As *P. vivax* elimination progressed, national malaria programmes faced an increasingly practical question: which radical-cure strategy was most appropriate for their own setting? The answer depended not only on the efficacy of available medicines, but also on the local epidemiology, G6PD testing capacity, safety considerations and pharmacovigilance, health-system readiness, cost and the feasibility of delivering treatment through routine services.

APMEN's Vivax Working Group, together with technical and research partners, developed the Vivax Radical Cure OAT to help programmes work through these considerations systematically. Rather than prescribing a single solution, the toolkit provided a structured way for countries to compare options against their own programme context and identify the combinations of diagnosis, treatment and delivery approaches that could support effective radical cure.[i]

The development of OAT reflected APMEN's broader approach to innovation. The tool was grounded in evidence and technical expertise, but its purpose was practical: to help national programmes make informed decisions. Country and partner input was incorporated as the tool was developed and tested, allowing the approach to evolve in response to programme needs.

OAT subsequently developed into Planning Ahead for Malaria (PAM), extending the decision-support concept beyond radical cure to broader malaria planning. The evolution demonstrated that innovation does not necessarily begin with a new technology. It can begin by recognising that programmes need a better way to organise complex evidence and make decisions under different epidemiological and health-system conditions.

The OAT-to-PAM journey therefore illustrates a distinctive form of APMEN innovation: turning a shared programme problem into a practical decision-support tool, testing it with users, learning from experience and adapting it for wider application. It connected regional expertise with national decision-making and helped translate complex technical evidence into a form that programmes could use.

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i https://apmen.org/blog/accelerating-vivax-elimination-how-apmen-vxwgs-options-assessment-toolkit-empowering-national



3.6 Country Action: Translating Regional Collaboration into Practice

The value of regional collaboration is ultimately measured by what it enables countries to do. For APMEN, bringing national programmes, technical experts, researchers and partners together was not an end in itself. The purpose was to create a pathway through which a challenge identified in one country could draw on experience and expertise from across the region, be adapted to local circumstances, and return to the national programme as a practical solution.

This became increasingly important as malaria elimination moved into more complex and context-specific stages. Countries faced different epidemiological, geographical and health-system realities, and solutions could not simply be transferred unchanged from one setting to another. APMEN therefore acted as a broker of expertise and experience, connecting countries with peers and technical partners who could help interpret evidence, assess options, strengthen systems and adapt approaches to their own needs. This reflected the network's evolution under APLMA hosting towards greater emphasis on implementation, peer-to-peer learning, capacity strengthening and operational support.

The process often began with a specific country-defined need. APMEN could then connect that need to the appropriate Working Group, partner institution, country experience, evidence or technical resource. Depending on the challenge, this might lead to a peer-to-peer exchange, training, operational study, technical assessment, decision-support tool, catalytic grant or targeted expert support. The critical link was not the activity itself, but its translation into action within a national or sub-national programme.

Importantly, learning also moved in the opposite direction. Countries adapted regional knowledge to their own circumstances, generated new experience and shared lessons back through the network. In this way, APMEN created a continuous cycle of country need, regional collaboration, local adaptation, country action and shared learning.

Across 2017–2026, this cycle became one of APMEN's most distinctive contributions: turning regional collaboration into practical solutions while ensuring that country experience, in turn, strengthened the collective knowledge and capacity of the region.

Country Story: Pakistan

Building Climate-Resilient Approaches to Vector-Borne Diseases

Pakistan demonstrates how APMEN supported countries in responding to the growing intersection of climate change, public health, and vector-borne disease control. Following major flood events and increasing concerns about climate-sensitive disease transmission, APMEN facilitated regional dialogue, technical exchange, and knowledge-sharing on climate-informed preparedness, surveillance, and response. Through an APMENxChange webinar on managing vector-borne diseases during climate emergencies, Pakistan shared lessons from its flood response, enabling other programmes to learn from its experience.

APMEN also supported the development of Pakistan's National Plan of Action for the Management of Vector-Borne Diseases (2024-2028), helping strengthen strategic planning beyond malaria and promote integrated approaches to surveillance, vector control, climate adaptation, and health system resilience. In 2025, Pakistan participated in the regional workshop on Climate Change, Malaria, and Other Vector-Borne Diseases, which brought together government officials and technical experts to identify adaptation priorities and contribute to a draft regional action plan. Together, these initiatives helped position climate resilience as an increasingly important component of vector-borne disease policy and planning.[i]

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i https://apmen.org/sites/default/files/all_resources/APMEN%20Climate%20Workshop%20Report_0.pdf

Country Story: Solomon Islands

Strengthening Surveillance for More Effective Response

In the Solomon Islands, APMEN supported the Government to strengthen malaria surveillance and response in Isabel Province through a catalytic technical support initiative focused on the Bolotei and Buala health zones. The project was designed to address a resurgence of malaria and improve real-time case-based surveillance, treatment follow-up, case investigation, and response at both facility and community levels.

Health workers were trained to use digital tools, including Kobo Toolbox for case investigation and QGIS for spatial mapping, enabling systematic collection and analysis of surveillance data. The initiative strengthened case classification, follow-up, and response planning while supporting weekly data review and community-level engagement in high-burden villages.[ii]

Beyond introducing new technologies, the project generated valuable operational insights into recurrent *P. vivax* infections, treatment adherence challenges, commodity shortages, and gaps in prevention coverage. Surveillance data helped identify local transmission patterns, repeated infections, and priority areas for intervention, informing more targeted programme responses.

The project demonstrated the value of digital, case-based surveillance for malaria elimination and strengthened the capacity of provincial teams to use data for decision-making, outbreak response, and routine programme management.

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ii https://apmen.org/blog/data-action-strengthening-malaria-surveillance-solomon-islands

Country Story: Thailand

Turning Innovation into Practice for *Plasmodium vivax* Elimination

Thailand's experience demonstrates how regional learning can accelerate the adoption of new tools for *P. vivax* elimination. As one of the first countries in the region to introduce tafenoquine alongside quantitative G6PD testing, Thailand provided an important opportunity for neighbouring countries to observe how radical cure can be implemented safely and effectively within routine health services.

Through APMEN's VxWG, in partnership with MMV, programme representatives from Asia Pacific countries visited Wangchan Hospital to understand patient pathways, G6PD testing workflows, tafenoquine administration, counselling, pharmacovigilance, and operational requirements for implementation. These visits complemented regional exchanges on radical cure policy, G6PD testing strategies, and evidence from operational studies.[iii]

By enabling countries to learn directly from real-world implementation experience rather than relying solely on published evidence, APMEN helped bridge the gap between innovation and practice. Thailand's experience provided a practical model that informed policy discussions, programme planning, and readiness for radical cure implementation across the region.

iii https://apmen.org/blog/learning-practice-apmen-peer-peer-exchange-tafenoquine-and-g6pd-implementation-thailand

Country Story: Timor-Leste

Turning Malaria Elimination into Integrated Surveillance Across Programmes

Following Timor-Leste's historic WHO malaria-free certification in 2025, the country's focus shifted towards preventing re-establishment while strengthening integrated disease surveillance. Through the SRWG, APMEN partnered with MORU's Health GeoLab and the Ministry of Health to support the integration of geospatial intelligence into public health surveillance.[iv]

The four-day training, officially opened by H.E. the Vice Minister of Health, brought together 34 participants from malaria, dengue, tuberculosis, HIV, health information systems, surveillance, and maternal and child health programmes. Participants developed practical skills in geospatial data collection, mapping and analysis, demonstrating how geo-enabled information can strengthen planning, surveillance and response across health programmes.

A key milestone was the high-level stakeholder meeting that followed the training, bringing together 46 representatives from government agencies and development partners, including WHO, UNICEF, UNFPA and the World Bank. The dialogue resulted in a commitment to establish a national technical working group on geo-enablement, providing a mechanism for continued coordination and technical development.

The experience demonstrated how APMEN could translate malaria elimination expertise into broader health-system strengthening, helping Timor-Leste sustain its malaria gains while building integrated surveillance capacity for emerging and wider public health challenges.

iv https://apmen.org/blog/elimination-integration-strengthening-future-surveillance-timor-leste

Country Story: Vanuatu

Linking Strategic Planning with Provincial Action

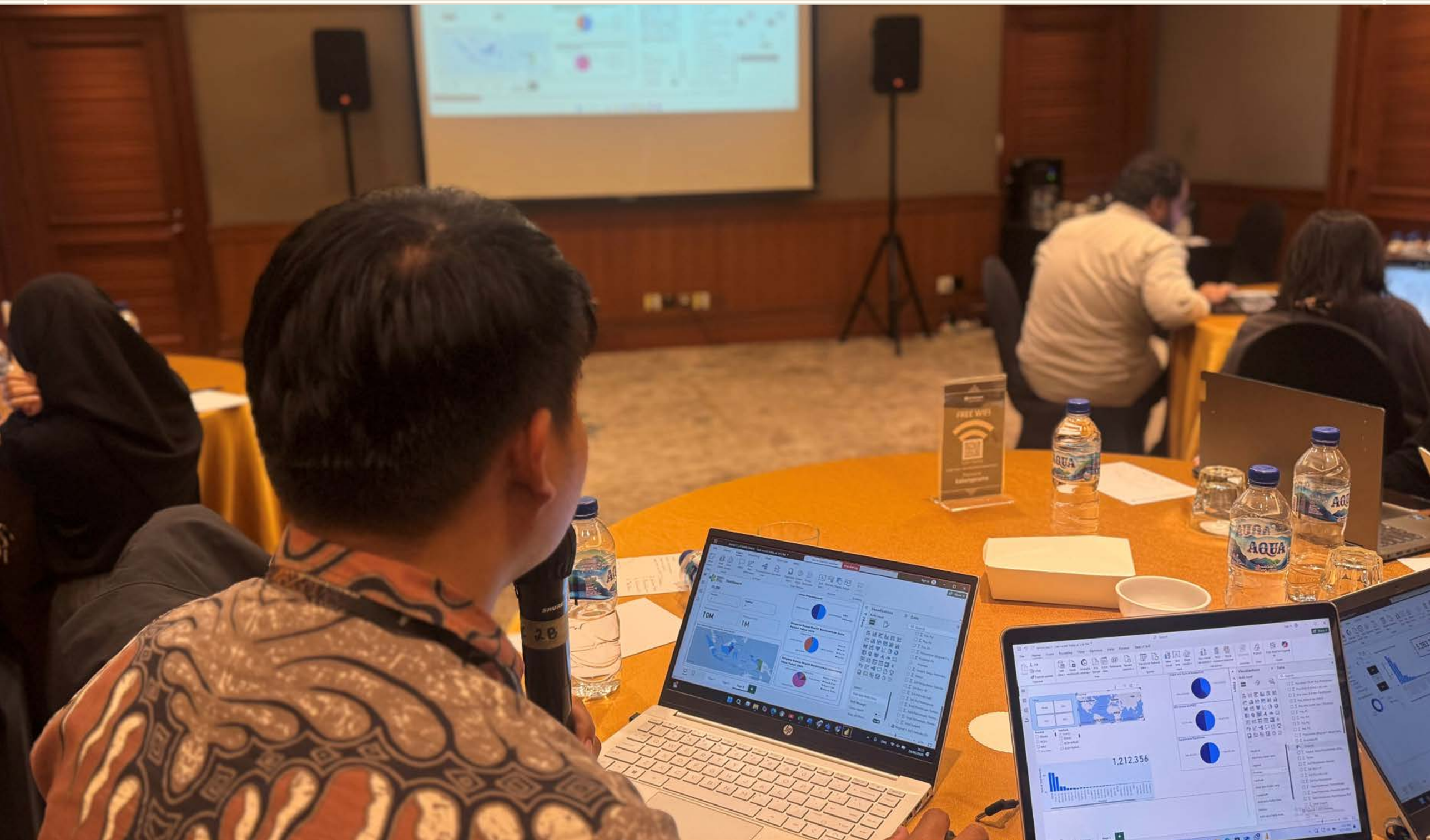
Vanuatu demonstrates how APMEN supported the transition from national strategy to local implementation. Following a resurgence of malaria cases and recognition of capacity gaps, APMEN supported the development of the Vanuatu National Strategic Plan for Malaria Elimination 2026–2030 and facilitated discussions in 2025 on strengthening surveillance, outbreak response, vector control, and community-led elimination approaches. Provincial capacity building in Indoor Residual Spraying (IRS) and Larval Source Management (LSM) was subsequently identified as a priority to support decentralized implementation and strengthen resilience against malaria resurgence and climate-related risks.[v]

In June 2026, APMEN supported a national Malaria Vector Management Workshop in partnership with the Ministry of Health and PacMOSSI, bringing together provincial malaria supervisors, surveillance officers, and national programme staff from across all six provinces. The workshop strengthened competencies in IRS, LSM, surveillance, outbreak preparedness, and operational planning, while also supporting dissemination of the National Strategic Plan for Malaria Elimination. Participants reported improved technical knowledge, enhanced operational readiness, and stronger capacity to mentor frontline health workers at provincial level.

Together, these efforts illustrate APMEN's approach to translating regional expertise into practical, country-led action by strengthening systems, building local capacity, and supporting implementation of national malaria elimination priorities.

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v https://apmen.org/blog/national-priorities-provincial-action-strengthening-malaria-vector-management-vanuatu





3.7 Emerging Challenges: Responding to a Changing Malaria Landscape

Outdoor and Residual Transmission

As malaria transmission declined across much of the Asia Pacific region, a growing proportion of remaining cases occurred among populations who were not adequately protected by conventional indoor interventions. Forest-goers, agricultural workers, security personnel, mobile populations, and communities living in remote areas often experienced mosquito exposure outdoors or during times when insecticide-treated nets and indoor residual spraying provided limited protection. Recognising this challenge, APMEN established the Outdoor Transmission Interest Group to strengthen regional understanding of outdoor malaria transmission and facilitate collaboration on potential solutions.

APMEN helped build a regional community of researchers, programme managers, entomologists, and implementation partners working on outdoor transmission. Through webinars, technical consultations, annual meetings, and World Mosquito Day campaigns, the network promoted knowledge exchange on vector behaviour, surveillance methods, personal protection, spatial repellents, and emerging vector-control technologies. APMEN's TechTalks series brought together international experts to discuss forest-goer malaria, residual transmission, outdoor biting vectors, and innovative approaches for reducing exposure among high-risk populations.

The network also supported evidence generation. The research, led by the APMEN Outdoor Transmission Interest Group and the PNG Institute of Medical Research, in collaboration with James Cook University and IVCC, and supported by the Global Institute for Disease Elimination (GLIDE) and DFAT, investigated malaria mosquito biting behaviour in PNG. The findings highlight increased outdoor and early-evening biting, providing important evidence to inform the development of more effective, next-generation vector control tools. Additionally, the APMEN case study, "Outdoor Biting by Malaria Vectors: What Can We Do to Reduce It?", written by Dr Leo Braack and Dr Michael Macdonald, provides several tools and approaches that can be used to address outdoor-biting mosquitoes.[i]

Through these efforts, APMEN helped elevate outdoor transmission from a relatively under-recognised issue into an important regional technical priority. More importantly, it reinforced a critical lesson for malaria elimination: as transmission becomes increasingly focal, interventions must become more targeted and responsive to the ways people live, work, and interact with their environment.

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i https://apmen.org/sites/default/files/all_resources/APMEN%20Case%20Study_Outdoor%20Transmission%20Reduction_rev.pdf



Cross-Border Malaria

Population movement and shared ecosystems present continuing challenges for malaria elimination throughout the Asia Pacific region. Even where countries achieve substantial reductions in malaria burden, transmission and re-establishment risks may persist where communities, workers, and vulnerable populations move across national boundaries. As elimination progressed, border malaria became increasingly recognised as both a local operational challenge and a regional coordination issue requiring collaboration between countries.

To address this challenge, APMEN established the Border Malaria Interest Group as a platform for countries to discuss practical solutions, share experience, and strengthen regional partnerships. Through webinars, technical meetings, and knowledge products, the network promoted discussion on surveillance, information sharing, population mobility, case notification, outbreak investigation, and coordinated responses across borders. These activities helped create a regional community focused on addressing the unique challenges associated with population movement and malaria transmission.

A particularly important milestone was the Indonesia-Malaysia Peer-to-Peer Exchange conducted in 2025, which brought together national and subnational programme personnel working along the Kalimantan-Sabah-Sarawak border. Participants examined surveillance systems, operational challenges, and opportunities for collaboration, ultimately producing a roadmap for short- and medium-term cross-border engagement. The exchange demonstrated how peer learning could move beyond discussion and contribute directly to practical planning and operational coordination.[i]

APMEN and APLMA subsequently elevated these discussions into broader policy dialogue. Through the development and dissemination of a regional policy paper on cross-border malaria, the network highlighted key priorities including institutionalised collaboration, stronger data-sharing mechanisms, sustainable financing, frontline workforce capacity, and integration of malaria surveillance within wider health systems.

By connecting operational experience with policy dialogue, APMEN helped countries move from recognising border malaria as a shared challenge to identifying practical mechanisms for collective action. The experience reinforced an increasingly important reality for elimination programmes: where malaria risk crosses borders, surveillance, information, and response systems must be capable of crossing them as well.

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i https://apmen.org/blog/apmen-strengthens-cross-border-collaboration-indonesia-malaysia-peer-peer-exchange-malaria



Zoonotic Malaria and *Plasmodium knowlesi*

The emergence and growing recognition of zoonotic malaria, including *P. knowlesi*, represented one of the most significant technical challenges facing malaria programmes. Unlike conventional human malaria, zoonotic transmission involves complex interactions among humans, mosquito vectors, animal reservoirs, and environmental conditions. This complexity presents new challenges for surveillance, diagnosis, response, and elimination, requiring expertise that extends beyond traditional malaria programme structures.

Recognising the regional significance of this issue, APMEN created opportunities for countries to learn from one another's experiences and strengthen preparedness for zoonotic malaria. Through webinars, Working Group activities, and cross-country learning visits, the network facilitated dialogue on diagnosis, molecular surveillance, vector incrimination, epidemiology, and One Health approaches. Malaysia's experience managing *P. knowlesi* alongside conventional malaria elimination efforts became a particularly valuable source of learning for neighbouring countries.

A major example was the Indonesia-Malaysia technical collaboration on zoonotic malaria. In 2026, APMEN SRWG and Universiti Malaya hosted Indonesian national and subnational programme representatives, researchers, laboratory personnel, and public health officials for specialised training and technical exchange. Participants received hands-on experience in molecular diagnostics, parasite identification, surveillance approaches, vector surveillance, and entomological techniques. The exchange strengthened capacity across disciplines and contributed to the finalisation of Indonesia's national *P. knowlesi* surveillance guideline.[i]

Beyond strengthening technical skills, APMEN helped position zoonotic malaria as an emerging regional priority requiring collaboration across sectors and countries. The network demonstrated how regional platforms can help countries respond proactively to changing epidemiological realities rather than reacting after new threats become entrenched. In doing so, APMEN reinforced the importance of multidisciplinary and One Health approaches as malaria elimination enters an increasingly complex era.

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i https://apmen.org/blog/strengthening-regional-responses-plasmodium-knowlesi-through-peer-peer-collaboration



Climate and Environmental Change

Climate and environmental change emerged during the decade as an increasingly important consideration for malaria elimination programmes. Changes in temperature, rainfall patterns, extreme weather events, land use, and ecosystems have the potential to influence mosquito distribution, transmission dynamics, outbreak risk, and programme effectiveness.

In response, APMEN established the Climate, Environmental Change and Malaria Interest Group to help countries explore the implications of climate change and strengthen climate-informed approaches to malaria and vector-borne disease control. Initially focused on awareness raising and knowledge exchange, the initiative progressively evolved towards practical capacity building and policy engagement.

Over the reporting period, APMEN conducted six webinars examining climate and environmental change, malaria prediction, climate-informed surveillance, and health system resilience for malaria elimination. The APMEN network, in collaboration with the Climate, Environment and Health Programme at National University of Singapore, and Centre for Climate Research Singapore, also supported climate-focused training programmes to strengthen the ability of public health professionals to interpret climate information and incorporate it into decision-making. By 2026, more than a thousand people from across the Asia Pacific and beyond had engaged in climate-related learning activities facilitated through APMEN's regional platforms.

A major milestone occurred in 2025 when the Climate, Environmental Change and Malaria Interest Group and the National University of Singapore convened a regional workshop involving government officials and technical experts from nine countries. Participants shared national experiences, examined impacts on malaria and other vector-borne diseases, identified research priorities, and developed a draft regional action plan for climate adaptation. This marked an important shift from understanding climate risks to identifying concrete actions to strengthen programme resilience.[i]

Through these activities, APMEN helped position climate change not as a distant environmental issue but as a practical programme challenge requiring stronger surveillance, better risk assessment, cross-sector collaboration, and adaptive planning. The network's contribution has been to help countries build the knowledge, partnerships, and tools needed to navigate an increasingly uncertain future while maintaining progress towards malaria elimination.

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i https://apmen.org/blog/strengthening-malaria-and-vector-borne-disease-control-changing-climate-and-environment



3.8 Knowledge Exchange: Making Regional Experience Travel

The impact of regional collaboration depends on whether knowledge generated through that collaboration can reach and benefit other programmes. APMEN's knowledge exchange mechanisms turned country experience, technical evidence and practical lessons into a shared regional resource, helping programmes learn faster, adapt proven approaches and respond to the evolving challenges of malaria elimination.

This ecosystem expanded from the network's meetings and Working Groups to include webinars, case studies, peer-reviewed publications, technical reports and policy resources, online learning, newsletters, social media, YouTube, and the websites. Each served a different purpose: some enabled real-time exchange, while others documented and preserved knowledge so that it could be revisited, adapted and shared beyond the original activity.

Webinars became an important part of this ecosystem, particularly during the COVID-19 pandemic, when APMEN introduced virtual formats to maintain regional technical dialogue. Over time, these platforms provided a flexible way for national programmes, researchers and technical partners to share experience and discuss emerging issues with audiences across the region and beyond.

Knowledge exchange also became more durable through documentation and publication. APMEN's case studies captured country achievements, implementation experience and practical solutions, creating an institutional memory that could be accessed by other programmes. Technical reports and policy resources similarly extended the reach of evidence generated through APMEN's activities. Peer-reviewed papers further carried APMEN-supported research and regional experience into the wider scientific community, contributing to the evidence base on malaria elimination, surveillance, vector control, *P. vivax*, outdoor transmission and other regional priorities.

ORENE provided an important digital home for this knowledge, particularly for entomological and vector-control resources. By bringing together technical materials, training resources and learning opportunities, the platform helped practitioners access specialised knowledge beyond formal training events and strengthened connections across the regional technical community.

APMEN's digital presence extended this reach further. Its two websites, monthly newsletters, LinkedIn, Facebook and X channels, 175 YouTube videos, and digital campaigns around World Malaria Day and World Mosquito Day created regular pathways for technical knowledge, country experiences and regional priorities to reach practitioners, policymakers, researchers, partners and wider audiences. Collaboration with national media channels further connected regional work with country-level public health narratives.

Importantly, these channels increasingly worked together rather than functioning as separate communication activities. A training could generate a technical resource; a peer exchange could become a case study; a research finding could be published in a journal, discussed through a webinar and subsequently documented through a blog or technical resource; and country experience could be amplified through social media and newsletters. This created a feedback loop in which experience was documented, shared, discussed and brought back into technical and programme conversations.

APMEN had developed more than a collection of communication channels. It had built an infrastructure for regional learning, helping knowledge generated in one programme reach others while enabling country experience to contribute back to the collective knowledge of the region. In a diverse region where programmes face different epidemiological and health-system contexts, making knowledge travel became itself a technical asset for malaria elimination.

Over the decade, these interconnected efforts helped APMEN develop from a platform for regional exchange into a practical technical community. The network created mechanisms through which expertise could be shared, adapted and applied across different malaria contexts, allowing countries to learn from one another while retaining ownership of their own elimination strategies. In this way, regional collaboration became more than an activity: it became part of the technical infrastructure supporting malaria elimination in the Asia Pacific.



APMEN In Action

Taking Technical Exchange Beyond the Meeting Room

When the COVID-19 pandemic made regional travel and face-to-face meetings difficult, APMEN adapted its approach to ensure that technical exchange continued. The network introduced APMEN TechTalks and APMENxChange, creating virtual spaces where national malaria programmes, researchers, technical experts and partners could continue sharing evidence, experience and practical solutions.

What began as a response to travel restrictions developed into a lasting regional knowledge-sharing mechanism. APMEN TechTalks focused on technical priorities linked to malaria elimination, while APMENxChange provided a broader platform for discussions on policy, partnerships, financing and emerging issues. Together, the webinars enabled experts from different countries and disciplines to share lessons directly with programmes across the Asia Pacific and beyond.[i]

The webinar topics reflected the changing technical demands of malaria elimination, including *P. vivax* radical cure and pharmacovigilance, vector surveillance and insecticide resistance, outdoor transmission, zoonotic malaria, cross-border collaboration, prevention of re-establishment, climate and environmental change, and community engagement. About 300 national programme representatives and technical partners contributed as speakers and panellists, ensuring that discussions brought together scientific evidence and practical programme experience.

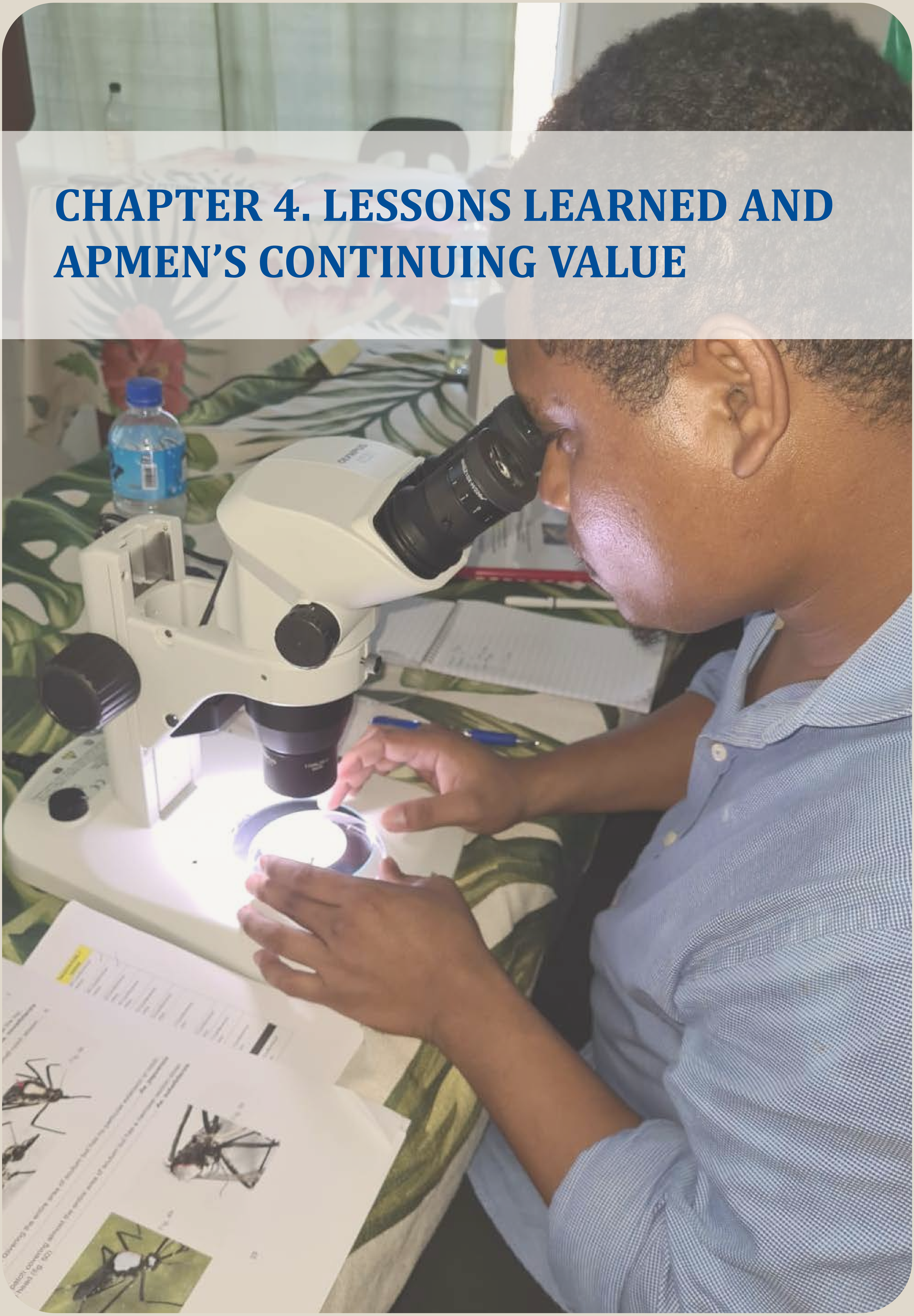
The webinars also extended the value of regional discussions beyond the live sessions. Recordings, presentations and related resources remained accessible through YouTube channel, and APMEN and ORENE websites, allowing participants and colleagues who could not attend to revisit the discussions and share lessons within their own programmes and institutions.

Over the decade, APMEN delivered 70 webinars, reaching 6,038 participants from 143 countries and generating 15,923 cumulative attendances. The evolution of the webinar series demonstrated how APMEN transformed virtual engagement from a response to the pandemic into a lasting mechanism for regional technical exchange, enabling knowledge and experience to travel well beyond the network's physical meetings.

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i https://apmen.org/sites/default/files/all_resources/Strengthening%20Malaria%20Elimination%20Insights%20from%20APMEN%20Webinar%20Series_APMEN%20Case%20study.pdf

CHAPTER 4. LESSONS LEARNED AND APMEN'S CONTINUING VALUE





4.1 Lessons Learned: What a Decade of Regional Collaboration Reveals

The decade from 2017 to 2026 demonstrated that malaria elimination depends not only on effective interventions, but also on the ability of countries to learn, adapt and solve problems together. As malaria transmission declined across much of the Asia Pacific, the technical questions facing programmes became more specialised, geographically concentrated and interconnected. No single country or institution could hold all the expertise required to address these challenges. APMEN's experience during this period offers important lessons about how a regional technical network can help countries navigate this changing landscape while keeping national programmes at the centre of decision-making.

Country ownership as the foundation of effective regional collaboration

A decade of APMEN experience showed that regional collaboration works best when it begins with country priorities. National malaria programmes brought their operational realities, implementation challenges and emerging technical questions into the network, helping shape where regional exchange and technical support could add the greatest value. APMEN provided a country-centred platform through which programmes could access relevant expertise, learn from countries and partners, and adapt approaches to their own contexts. The lesson from the decade is clear: country ownership provides the foundation, while regional collaboration strengthens national leadership, priorities and action.

Technical leadership strengthened when national and external expertise work together

One of APMEN's distinctive features was its ability to bring senior national programme officials into direct dialogue with researchers, universities, technical institutions and specialised experts. The most productive exchanges were not those in which expertise moved in only one direction. National programmes contributed knowledge of their epidemiology, health systems and operational constraints, while partners contributed specialised methods, evidence and perspectives. Together, they could examine whether an approach was technically sound and practically feasible. This interaction helped strengthen national technical leadership while also ensuring that regional expertise remained grounded in programme realities.

Peer-to-peer learning most powerful when addressing practical problems

Over the decade, APMEN moved beyond convening countries simply to exchange information. Cross-country exchanges increasingly focused on specific questions that programmes were trying to solve, such as how to implement radical cure, strengthen vector surveillance, esablsh the community-based appraoches, address cross-border transmission or respond to zoonotic malaria. Seeing another programme's systems in practice allowed participants to examine details that are difficult to capture in guidelines or presentations. The Indonesia–Malaysia collaboration on border and zoonotic malaria illustrated how an initial regional exchange could lead to a roadmap, followed by a more focused technical exchange and practical follow-up. Such experiences showed that the value of peer learning lies not simply in sharing what works, but in helping countries determine what might work in their own context.

Capacity strengthening evolving with the epidemiology of malaria

As transmission declined, the skills required to sustain progress changed. Programmes increasingly needed specialised expertise in entomology, surveillance, geospatial analysis, radical cure, climate-informed planning and other areas that become more important during the final stages of elimination. APMEN's experience demonstrated that capacity strengthening therefore cannot be treated as a one-time investment. It needs to evolve with programme needs, combine practical and digital learning, and provide opportunities for professionals to continue developing expertise after formal training has ended. The expansion of specialised courses, peer exchanges, online learning and professional resource platforms reflected this changing requirement.

Evidence most valuable when connected to programme decisions

A further lesson was the importance of linking research and innovation to the questions programmes actually need to answer. APMEN's work increasingly focused on applied evidence, including assessments of vector surveillance capacity, data and geospatial systems, intervention readiness, *P. vivax* treatment options and emerging transmission risks. Decision-support tools such as OAT and PAM illustrated how evidence could be translated into practical frameworks for programme decision-making. Similarly, operational research on vector behaviour and outdoor transmission helped challenge assumptions and identify where conventional approaches might leave important gaps. The experience reinforced that evidence generation and programme implementation should not operate as separate processes.

Regional collaboration most valuable when challenges cross boundaries

Some of the most difficult issues encountered during the decade could not be addressed within a single technical discipline or national programme. Border malaria required coordination between neighbouring countries; zoonotic malaria required links among epidemiology, laboratory science, entomology and wider One Health perspectives; climate and environmental change required malaria programmes to engage with climate scientists, and expertise beyond the traditional malaria sector. APMEN's Working Groups, Interest Groups and partners provided spaces where these connections could be made. This demonstrated the particular value of a regional network: it can create relationships and mechanisms for collaboration where conventional programme structures may stop at institutional, disciplinary or national boundaries.

Taken together, these lessons point to a central conclusion from APMEN's decade under APLMA hosting: regional collaboration is most effective when it is country-led, technically grounded, practically oriented and connected to action. APMEN's contribution was not simply to create opportunities for countries and partners to meet. It was to build the relationships, communities of expertise and mechanisms through which countries could learn from one another, test ideas, strengthen capacity and adapt solutions to their own circumstances. These foundations provide important context for understanding what made the APMEN model effective and why regional technical collaboration remains relevant as the Asia Pacific moves into the next phase of malaria elimination.



4.2 The APMEN Approach: What Made It Work

APMEN's experience over 2017–2026 suggests that the effectiveness of a regional technical network depends not simply on the number of activities it delivers, but on the way the network connects people, institutions, knowledge and decision-making. APMEN's model worked because it occupied a distinctive space between national malaria programmes and the wider technical community. It did not replace national leadership, provide conventional technical assistance, or function only as a forum for information exchange. Instead, it created the structures and relationships through which countries could access relevant expertise, interpret evidence in context and translate regional experience into practical action.

A Technical Network, Not a Parallel Programme

A defining feature of APMEN was its role as a regional technical network rather than a parallel implementation programme. National malaria programmes retained responsibility for their own strategies, policies and interventions, while APMEN created the connections through which countries could access peer experience, specialised expertise, evidence and technical resources.

This positioning allowed APMEN to support countries with different epidemiological contexts, health systems, capacities and stages of elimination without prescribing a single regional approach. Its role was not to make decisions for countries, but to strengthen the relationships, knowledge and technical connections that enabled countries to make informed decisions and adapt solutions to their own contexts.

In this way, APMEN provides a regional mechanism through which knowledge, expertise and experience could move across countries and institutions.

A Deliberate Combination of National and External Expertise

APMEN's technical model brought together expertise that would rarely sit within one institution. National programme leaders contributed knowledge of implementation, policy and operational constraints. Universities and research institutions contributed scientific evidence and specialised methods. Technical partners contributed experience, tools and broader perspectives. The Secretariat provided coordination and continuity.

The strength of the model came from the combination, rather than from any one group alone. Technical expertise became more useful when tested against programme realities, while country experience gained greater value when connected to evidence and expertise from elsewhere.

This also helped APMEN avoid a one-way model of knowledge transfer. The direction of learning was not simply from researchers or international experts to countries. Experience generated within countries could also become a regional resource, allowing practical innovations and solutions to travel to other settings.

An Architecture That Connected Different Technical Areas

Another strength was the network's ability to connect specialised areas without requiring them to become a single technical discipline. Malaria elimination increasingly involves questions that sit between conventional programme areas. Surveillance affects vector control; vector behaviour affects case detection and response; *P. vivax* treatment depends on diagnostics and health-system readiness; climate information can influence surveillance and operational planning.

APMEN's Working Groups and Interest Groups provided specialised spaces for these areas while allowing connections between them. This created a form of distributed technical capacity: expertise could remain specialised, but the network could bring different expertise together when a problem required a broader response.

This architecture became increasingly valuable as countries moved from broad malaria control towards more precise and integrated elimination and prevention of re-establishment strategies.

Relationships as Regional Infrastructure

The most important infrastructure created by a technical network is not necessarily digital or physical. It is the set of professional relationships that allows knowledge and support to move when they are needed.

APMEN created connections among national programmes, researchers, universities, public health institutions and technical partners across the region and beyond. These relationships provided continuity between activities and helped transform individual encounters into longer-term professional connections.

This meant that APMEN's value extended beyond formal outputs. A meeting could establish a relationship; a technical exchange could build confidence between counterparts; a Working Group could create a community of specialists who continued discussing an issue between formal activities. Over time, these connections formed a regional technical infrastructure that could be activated around emerging or persistent challenges.

A Model That Could Grow Without Losing Its Core Purpose

APMEN also demonstrated the value of institutional flexibility. The network's basic purpose remained consistent, but the mechanisms through which it operated could change as circumstances changed. New technical areas could be brought into the network, digital platforms could extend participation, and different forms of collaboration could be combined according to need.

This flexibility was particularly important during a decade in which malaria programmes faced major changes in both epidemiology and the wider operating environment. The network could accommodate new questions without requiring its fundamental structure to be redesigned each time.

At the same time, flexibility was balanced by continuity. The Working Groups, Interest Groups, partner institutions, Secretariat and accumulated relationships provided an institutional memory through which experience could be carried forward rather than recreated from the beginning.

The Value of the Model

Taken together, these characteristics explain why APMEN was able to function as more than a collection of meetings, technical groups and knowledge products. Its effectiveness came from the architecture of connection it created: between national and regional levels, between programme experience and technical expertise, between specialised disciplines, and between knowledge and decision-making.

This was perhaps APMEN's most important contribution during its decade under APLMA hosting. The network demonstrated that regional collaboration can add value without becoming another layer of programme management. By creating a trusted space in which countries, experts and institutions could work alongside one another, APMEN helped make regional knowledge a practical resource for national malaria elimination.

And that is what distinguishes the APMEN approach: it did not seek to centralise solutions; it created the connections through which countries could develop, adapt and share them.



4.3 Continuing Value: Why APMEN Matters to the Region

The experience of 2017–2026 demonstrates that regional technical collaboration remains important even as countries move closer to malaria elimination. In fact, declining transmission can make collaboration more, rather than less, important. As malaria becomes increasingly focal and less visible, programmes face more specialised technical questions, fewer opportunities to maintain practical expertise, and challenges that increasingly extend beyond individual programmes and national borders.

Sustaining technical capacity as malaria declines

A defining feature of APMEN was its position as a network. The final stages of elimination require sustained technical capability even when the number of malaria cases is small. Surveillance must remain sensitive enough to detect residual transmission and prevent re-establishment; specialised expertise in entomology, diagnostics, and data analysis must be maintained; and programmes need access to current evidence as interventions and technologies evolve.

Regional collaboration provides a way to sustain this technical capacity collectively. Countries do not need to develop every area of specialised expertise independently. A regional network can connect programmes with peers and institutions that have relevant experience, while preserving and sharing knowledge that might otherwise become concentrated within a small number of individuals or institutions.

This is particularly valuable for countries at different points along the elimination pathway. Experience from one setting can remain relevant to another, while countries that have already achieved elimination can continue contributing to regional efforts to prevent re-establishment.

Responding to challenges that cross boundaries

The next phase of malaria elimination will also be shaped by challenges that cannot be fully addressed within conventional programme boundaries. Population movement and border transmission connect neighbouring countries; zoonotic malaria requires attention to human, animal and environmental systems; and climate and environmental change can alter transmission risks and operational conditions.

These challenges reinforce the value of having a regional space in which countries can examine shared risks, compare approaches and coordinate technical responses. Regional collaboration does not replace national action. Rather, it helps countries recognise where national action needs to be complemented by collaboration with neighbouring programmes, other sectors or specialised technical communities.

The experience of APMEN demonstrates that such collaboration is most useful when it remains closely connected to programme realities. Regional platforms add value when they help countries address practical questions rather than simply create another layer of discussion.

Preserving a trusted regional mechanism

Perhaps the most enduring value demonstrated by the past decade is the importance of a trusted mechanism through which countries can continue to exchange experience and access technical expertise. The structures, relationships and knowledge accumulated through APMEN represent a regional resource built over years of collaboration.

As the hosting arrangement changes, the institutional setting of APMEN may evolve. The experience of 2017–2026 nevertheless provides a clear indication of the value of maintaining the underlying regional function: connecting countries, expertise and experience around the technical challenges of malaria elimination.

The continuing relevance of this function does not depend on replicating every activity or structure of the past decade. Its value lies in retaining the principles that made regional collaboration useful: country leadership, technical credibility, practical exchange, openness to emerging challenges and the ability to turn regional knowledge into solutions that countries can use.

For a region approaching a malaria-free future, this is not simply an institutional asset. It is part of the technical infrastructure needed to sustain progress, respond to new risks and ensure that the experience gained from one country’s journey can continue to benefit others.

This architecture became increasingly valuable as countries moved from broad malaria control towards more precise and integrated elimination and prevention of re-establishment strategies.

CLOSING REFLECTION: A DECADE OF CONNECTING COUNTRIES, EXPERTISE AND ACTION

The decade from 2017 to 2026 was a period of significant change for malaria elimination in the Asia Pacific. While most countries achieved substantial reductions in transmission, several high-burden countries continued to face persistent case burdens, reflecting the region's diverse malaria contexts and priorities.

APMEN's contribution was to provide a trusted regional platform through which countries could connect their priorities with technical expertise, evidence and practical experience. The national malaria programmes, researchers, universities, technical institutions and partners worked together to address shared challenges, strengthen capacity and translate knowledge into action.

The experience documented in this report demonstrates that the value of APMEN lies not simply in the activities it delivered, but in what those activities enabled countries to achieve. A technical discussion could lead to a peer exchange; an exchange could inform a national guideline; training could strengthen institutional capacity; evidence could shape programme decisions; and experience from one country could become a practical resource for another. Over time, these connections built a regional technical community grounded in country leadership, shared expertise and mutual learning.

These relationships are among APMEN's most enduring outcomes. They have connected programme leaders, technical experts, researchers and partners across countries and institutions, creating channels through which knowledge and experience can continue to travel. For countries at different stages of elimination, this community provides a foundation for learning from one another while responding to their own priorities and challenges.

As the Asia Pacific continues towards a malaria-free future, this collaborative capacity will remain essential. Countries will need to sustain gains where transmission has declined, accelerate progress where malaria remains a high burden, and remain prepared for resurgence and emerging threats.

APMEN's decade leaves a strong foundation: countries connected by trust, expertise strengthened through collaboration, evidence translated into action, and experience shared across borders. Its greatest contribution may therefore be not only what the network delivered, but what it enabled countries to achieve together.





APMEN | Asia Pacific Malaria Elimination Network

The Asia Pacific Malaria Elimination Network (APMEN) is a country-led regional network bringing together 22 Asia-Pacific countries and over 50 partner institutions to accelerate and sustain malaria elimination across the region. APMEN connects national programmes with technical expertise, translates evidence into policy and practice, and strengthens national capacity through its Technical Working Groups and Special Interest Groups. Its work is grounded in country ownership, peer-to-peer collaboration, and responsiveness to diverse elimination contexts, with a shared commitment to regional health security.

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