



Sustaining Cambodia's Malaria Response

An Assessment of Donor
Transition Readiness and
Budget Advocacy Opportunities

September 2021



Malaria Elimination
Initiative

UCSF

Institute for Global
Health Sciences

Copyright © 2021 The National Center for Parasitology, Entomology and Malaria Control (CNM) and the UCSF Malaria Elimination Initiative (MEI).

All rights reserved.

Recommended citation

The National Center for Parasitology, Entomology and Malaria Control and the UCSF Malaria Elimination Initiative. (2021). *Sustaining Cambodia's Malaria Response: An Assessment of Donor Transition Readiness and Budget Advocacy Opportunities*. San Francisco: The Malaria Elimination Initiative at University of California, San Francisco and the Cambodia National Center for Parasitology, Entomology, and Malaria Control.

Produced in the United States of America. September 2021.

This is an open-access document distributed under the terms of the Creative Commons Attribution-Noncommercial License, which permits any noncommercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.

Cover image: The wife of a man who contracted malaria the week prior, is tested while her son looks on in Battambang Province, Cambodia. The Global Fund / Quinn Mattingly

Cambodia's National Center for Parasitology, Entomology and Malaria Control (CNM) has been implementing a strengthened and comprehensive malaria program since 2004 following a series of grants received from the Global Fund for HIV/AIDS, TB, and Malaria (Global Fund). CNM, in collaboration with other partners, endeavors to ensure more effective decentralized malaria control operations at provincial and operational district levels and bring down malaria related morbidity and mortality in the country.

cnm.gov.kh

The Malaria Elimination Initiative (MEI) at the University of California San Francisco (UCSF) believes a malaria-free world is possible within a generation. As a forward-thinking partner to malaria-eliminating countries and regions, the MEI generates evidence, develops new tools and approaches, disseminates experiences, and builds consensus to shrink the malaria map. With support from the MEI's highly-skilled team, countries around the world are actively working to eliminate malaria.

shrinkingthemalariamap.org

Foreword

Cambodia has made immense progress in the fight against malaria, achieving an 80% decline in malaria cases from 2000 to 2019 and maintaining zero malaria deaths since 2018. These impressive achievements are the result of the efforts and support of the Royal Government of Cambodia (RGC), and have been lauded by Prime Minister Hun Sen in his statements on World Malaria Day reaffirming Cambodia's commitment to eliminating malaria by 2025.

Cambodia's path to elimination is not a simple one, and the challenges of tackling antimalarial drug resistance and reaching hard-to-reach communities and populations remain. Despite these challenges, the RGC continues to work diligently with international and civil society partners to build a successful elimination program. Our successes in scaling up the malaria response include the introduction of artemisinin-based combination therapies (ACT), the nationwide rollout of *P.vivax* radical cure, the implementation of surveillance activities, increased community ownership of long-lasting insecticide-treated nets, the creation of a 6000-worker strong network of village and mobile malaria workers providing early diagnosis and prompt treatment services to all at-risk communities, the robust surveillance system and investments in health system strengthening.

CNM now has an ambitious National Strategic Plan for malaria elimination, and is aided by many partners including governments, civil society, international

organizations, and the private sector to reach our 2025 goal for elimination. The national malaria response remains largely dependent on the technical and financial support of international partners. Donors provide over 90% of the funding for malaria program activities, including a commitment of over 36 million USD from the Global Fund to support the program from 2021–2024 under the RAI3E initiative. Over the past three decades, Cambodia has undergone significant economic growth, reaching middle-income country status in 2015. This economic transition will impact the future level of support from the Global Fund, which is likely to diminish in the coming years.

The imminent decline in external malaria financing has prompted the need to think critically about how to ensure the ongoing success of the national malaria response as donor support declines. In response, CNM has partnered with the UCSF Malaria Elimination Initiative and the Global Fund to lead a Sustainability and Transitions Readiness Assessment and develop a Malaria Budget Advocacy framework. The assessment findings and advocacy framework presented in this document will guide the malaria program and our partners as we implement a sustainability strategy addressing the areas of finance, governance, human resources, health product management, and health information systems. This document represents the first step in a continued partnership to ensure the long-term sustainability of Cambodia's malaria response and the achievement of a malaria-free Cambodia by 2025.



Dr. Lek Dysoley, CNM Vice Director



Dr. Siv Sovannaro, Malaria Program Manager

Acknowledgments

The development of this report was co-led by the National Center for Parasitology, Entomology and Malaria Control (CNM) and the Malaria Elimination Initiative (MEI) at the University of California, San Francisco (UCSF), under the guidance of Dr. Huy Rekol, CNM Director, Dr. Lek Dymaley, CNM Vice Director and Dr. Siv Sovannaroth, Malaria Program Manager. We would like to thank the UCSF team (Naomi Beyeler, Vanessa Elias, Sara Fewer, Sarath Mak, Kylie Mannion, Chean Men, Sara Rossi, Amandeep Singh) for the design of assessment, conduct of data collection, and development of the

report, and the CNM team for guidance in adapting the assessment tools and developing the findings and recommendations presented herein.

We express our gratitude to the Royal Government of Cambodia, the Global Fund, the RAI Regional Steering Committee, UNOPS, USAID, WHO Cambodia Office, and the many donor, civil society, and international implementing partners who shared their insights throughout the assessment and scoping process.

Acronyms

| | |
|-------------|---|
| API | Annual Parasite Incidence |
| ADB | Asian Development Bank |
| APLMA | Asia Pacific Leaders Malaria Alliance Secretariat |
| APMEN | Asia Pacific Malaria Elimination Network |
| CHAI | Clinton Health Access Initiative |
| CCM | Country Coordinating Mechanism |
| CNM | National Center for Parasitology, Entomology and Malaria Control |
| CMS | Central Medical Store |
| D&D | Decentralization and de-concentration |
| DDF | Department of Drugs and Foods |
| DSMET | District Special Malaria Elimination Taskforces |
| HEF | Health Equity Fund |
| HMIS | Health Management Information System |
| H-EQIP | Health Equity and Quality Improvement Project |
| Global Fund | Global Fund to Fight AIDS, Tuberculosis, and Malaria |
| GMS | Greater Mekong Subregion |
| IEC/BCC | Information education and communication / behavior change communication |
| MBA | Malaria Budget Advocacy |
| MC | Malaria Consortium |
| MEAF | Malaria Elimination Action Framework |
| MIS | Management Information Systems |
| MMP | Migrant and mobile population |
| MMW | Mobile malaria worker |
| MoE | Ministry of Environment |
| MoEF | Ministry of Economy and Finance |
| MoH | Ministry of Health |
| MoI | Ministry of Interior |
| MoND | Ministry of National Defense |
| MoLVT | Ministry of Labor and Vocational Training |
| OD | Operational District |
| ODMS | Operational District Malaria Supervisor |
| OOP | Out of pocket payment |
| NSMET | National Special Malaria Elimination Taskforce |
| PA | Provincial administration |

| | |
|----------|--|
| PFM | Public financial management |
| PHD | Provincial Health Department |
| PMI | President's Malaria Initiative |
| PMS | Provincial Malaria Supervisor |
| POR | Prevention of re-establishment |
| PSM | Procurement and supply chain management |
| PSMET | Provincial Special Malaria Elimination Taskforce |
| RAI | Regional Artemisinin-resistance Initiative |
| RAI3E | Regional Artemisinin-resistance Initiative 3 Elimination |
| RGC | Royal Government of Cambodia |
| RSSH | Resilient and sustainable systems for health |
| SNA | Subnational administration |
| SOP | Standard operating procedure |
| SUSTAIN | Sustainability and Transition Readiness Assessment Tool for Malaria |
| TES | Therapeutic efficacy study |
| UCSF MEI | University of California, San Francisco Malaria Elimination Initiative |
| UNOPS | United Nations Office for Project Services |
| USAID | United States Agency for International Development |
| VHSG | Village health support group |
| VMW | Village malaria worker |
| WHO | World Health Organization |

Contents

| | |
|--|------------|
| Foreword | iii |
| Acknowledgments | iv |
| Acronyms | v |
| Executive Summary | 1 |
| Introduction | 4 |
| Methods | 5 |
| Cambodian Malaria Elimination and Sustainability Context | 7 |
| National Elimination Goals and Political Will | 7 |
| Current Malaria Situation | 7 |
| Cambodia's Public Health Delivery System and Malaria Control Program | 9 |
| Governance Structures and Reforms Relevant for Malaria Program Sustainability | 15 |
| Cambodia's Health and Malaria Financing Structures | 16 |
| Findings of the Sustainability and Transitions Assessment | 19 |
| Finance | 19 |
| Health Workforce for Malaria | 21 |
| Malaria Program Implementation: Decentralization and Integration | 23 |
| Political Will and Leadership | 25 |
| Health Product Management for Malaria | 26 |
| Health Information Systems for Malaria | 27 |
| Sustainability and Transition Planning | 28 |
| Recommendations | 28 |
| Malaria Budget Advocacy Strategy | 30 |
| Theory of Change | 30 |
| Advocacy Implementation and Related Partnerships | 32 |
| Annexes | 35 |
| Annex A: List of Interview Participants | 35 |
| Annex B: Cambodia's Public Financial Management (PFM) Reform Program | 36 |
| Annex C: Cambodia's Two Systems for Annual Planning and Budgeting: Donor-financed and Government-financed Programs | 37 |
| Annex D: Cambodia's Health Budget Sources | 40 |
| Annex E: Stakeholder Map for Malaria Budget Planning and Prioritization in Post-transition, Decentralized Settings | 42 |
| Endnotes | 43 |

Figures

| | |
|--|----|
| Figure 1. Malaria disease burden – API by operational district, 2019 | 8 |
| Figure 2. Malaria cases and deaths in Cambodia, 2010–2020 | 9 |
| Figure 3. Malaria service delivery in the Cambodia public health system | 11 |
| Figure 4. RAI-supported implementing partners | 14 |
| Figure 5. Cambodia's Subnational Administration (SNA) structure | 15 |
| Figure 6. Sources of health financing, 2012–2016 | 16 |
| Figure 7. Malaria program costs by program activity, 2016–2020 | 17 |
| Figure 8. Anticipated malaria program costs by program activity, 2021–2025 | 17 |
| Figure 9. Financing sources for malaria program activities, 2018–2021 | 18 |
| Figure 10: Theory of change for proposed MBA strategy, 2021–2024 | 34 |
| Figure 11: Annual operational planning and budgeting flow process | 39 |

Tables

| | |
|--|----|
| Table 1. Malaria program integration and partnering units/agencies | 12 |
| Table 2. Implementing partner support to the Cambodia malaria response | 13 |
| Table 3. Implementing partner arrangement for RAI3E | 14 |
| Table 4. Donor support to the Cambodia malaria response | 18 |

Executive Summary

The Royal Government of Cambodia (RGC) has committed to eliminating indigenous transmission of *Plasmodium falciparum* malaria by 2023 and zero new indigenous cases of all malaria by 2025. Achieving malaria elimination and preventing re-establishment (POR) over the long-term will require a sustainable, domestically financed and managed malaria response that can maintain and accelerate necessary activities according to local needs, regardless of the availability for donor financing. Anticipated reductions in donor finance for malaria, as well as changes to the governance and financing of the Cambodia health system, will present new challenges and opportunities for elimination.

From January to June 2021, the National Center for Parasitology, Entomology and Malaria Control (CNM) and the University of California, San Francisco's (UCSF) Malaria Elimination Initiative (MEI) partnered to conduct a sustainability and transition assessment and scoping review for malaria budget advocacy. The purpose of the partnership was to:

- Identify potential transition and sustainability risks and opportunities across all domains of the health system by conducting a transition readiness assessment, as recommended by the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) Technical Review Panel for Regional Artemisinin-resistance Initiative (RAI) countries
- Develop robust strategies that aim to mitigate financing risks through advocacy for additional domestic investments in local malaria responses

With leadership from CNM, UCSF MEI conducted a scoping review and transition readiness assessment, based on UCSF MEI's Sustainability and Transition Readiness Assessment Tool for Malaria (SUSTAIN) and Malaria Budget Advocacy (MBA) Framework framework. Findings from these tools were used to summarize the sustainability context in Cambodia ([Cambodian Malaria Elimination and Sustainability Context](#)); identify the risks and opportunities anticipated with transition from donor to domestic financing and management, and develop strategies to mitigate these ([Findings of the Sustainability and Transitions Assessment](#)); and develop a malaria budget advocacy strategy to build subnational

leadership and financing for elimination ([Malaria Budget Advocacy Strategy](#)).

Finance

Key Findings: The malaria program currently has sufficient financing to provide all activities and services outlined in strategic plans and policies. However, donors provide the large majority of financing for malaria program activities, and donor funding for these activities is uncertain beyond 2023. To effectively plan for transition and mobilize sustainable public finance for malaria elimination, there is a need for more and better data on the financial resources required to achieve and maintain elimination, and the size of the potential funding gap following the end of the Global Fund's Regional Artemisinin-resistance Initiative 3 Elimination (RAI3E) grant. Further, there is a need for stronger financial management capabilities at both the national and sub-national levels, as well as more active engagement by the malaria program and Ministry of Health (MoH) in domestic advocacy for political support and resource mobilization for essential malaria activities.

Opportunities

1. Carry out longer-term financial planning reflecting both pre- and post-elimination phases
2. Proactively engage donors in preparing for the financial transition
3. Develop resource mobilization strategies at the national and subnational level
4. Identify strategies for embedding malaria activities within MoH and the Ministry of Economy and Finance's (MoEF's) management structures to prepare for transition from current administrator of donor funds (e.g., Principal Recipient)
5. Leverage prior experiences mobilizing government funding for health and expanding public finance for donor-funded programs

Health Workforce for Malaria

Key findings: The majority of the malaria health workforce is supported by the government, but key positions remain donor funded, particularly the village malaria workers (VMW) and mobile malaria workers

(MMW) which comprise the largest cadre of malaria program staff. Non-government organizations also play an essential role in bringing services to high-risk groups and hard-to-reach areas. Ensuring the maintenance of malaria expertise and capacity, especially in rural and remote areas, is a threat that must be addressed during the transition period. Technical partners provide critical support to the malaria program at both the national and sub-national levels, and systems must be put in place to embed critical capacities within government systems prior to transition.

Opportunities

1. Develop a human resources plan for malaria elimination
2. Develop a POR plan to identify the future needs of the program
3. Explore opportunities for social contracting with implementing partners
4. Strengthen human resource and management capacities within government agencies to prepare for the transition of financial administration of the malaria program

Malaria Program Implementation: Decentralization and Integration

Key Findings: Malaria program activities are increasingly integrated into the public health system; however, the level of integration varies across programmatic areas. Malaria policy, planning, strategy, and technical guidance remain largely vertical due in large part to the role of donors and implementing partners in supporting these functions. As the country further decentralizes the health system, governors are increasingly important partners in the provincial malaria response and resource allocation. Subnational advocacy and capacity building will be critical to long-term sustainability.

Integration of the village and mobile malaria workforce is an essential part of the path to transition and must be executed with caution given their critical role in the malaria response. Strong leadership by the MoH and collaboration across MoH, MoEF, and CNM will be needed to ensure the success of the malaria response in an increasingly integrated and decentralized health system.

Opportunities

1. Develop a cross-cutting integration plan, including a dedicated strategy and timeline for VMW/MMW integration

2. Build CNM leadership as central technical body
3. Bolster capacity of subnational malaria teams on key malaria strategies and develop subnational capacity among local leaders for the planning, budgeting, financial management, and implementation of malaria elimination activities

Political Will and Leadership

Key findings: High-level government leaders have stated their commitment to achieve malaria elimination by 2025. Multiple national and subnational committees support the malaria program and goal of malaria elimination, yet these efforts remain nascent and are reliant on external partners for funding and operation. Donors and other external partners including Asia Pacific Malaria Elimination Network (APMEN)/ Asia Pacific Leaders Malaria Alliance Secretariat (APLMA), World Health Organization (WHO), and the RAI Regional Steering Committee serve an important role in assisting political commitment for elimination and supporting key governing bodies for malaria elimination.

Opportunities

1. Identify and leverage advocacy and financing opportunities that may emerge as a result of the COVID-19 pandemic
2. Increase country ownership and responsibility for Global Fund malaria grants
3. Work with regional partners to highlight the importance of sustained investment to achieve malaria elimination and POR

Health Product Management

Key findings: External partners support health product management, including forecasting, quantification, purchasing, and quality assurance. Donor financing supports the large majority of procurement of essential malaria health products, with government financing the procurement of second-line treatments. The MoH Central Medical Store (CMS) currently manages storage and distribution, however capacity to handle emergency procurement and distribution remains limited.

Opportunities

1. Establish a clear plan for transitioning health product management responsibilities to government agencies
2. Assist CNM and CMS capacity for forecasting and quantification, including at the subnational level

3. Engage MoEF to prepare for the step-wise increased financial need related to health product management for essential malaria commodities.

Health Information Systems for Malaria

Key findings: The malaria surveillance and information systems are currently undergoing constant upgrades with the financing and support of the Global Fund. The program currently utilizes two parallel systems, which is costly to manage (management information systems (MIS), funded by the Global Fund, and health management information systems (HMIS)). It will be necessary to harmonize and integrate these two systems in a manner fit for purpose for elimination, as well as to build the capacity of national and subnational health staff to better utilize available data for malaria program and policy decision making. Strategies implemented to enhance surveillance systems must account for the changing role of VMWs/MMWs, who currently collect the majority of malaria surveillance data, in an integrated program model.

Opportunities

1. Conduct a feasibility assessment detailing risks and opportunities for a single merged surveillance system
2. Expand training and capacity building at CNM and subnational level on the usage of MIS and HMIS to improve the use of data for decision-making

Strategies to Support Sustainability and Transition

The sustainability and transition assessment and scoping exercises identified four priority next steps to facilitate the above-described opportunities. These include:

1. Develop a sustainability and transition plan that outlines the timeline, costs, and partner roles and responsibilities for implementation of priority sustainability strategies
2. Establish a Sustainability and Transition Working Group
3. Adopt and implement a malaria budget advocacy strategy to increase sub-national ownership of malaria elimination activities and strengthen domestic financing for elimination
4. Engage the whole of government and key partners in sustainability and transition planning and implementation

Introduction

The RGC has made impressive progress in controlling and eliminating malaria, demonstrated by the achievement of a 71% decline in malaria cases from 2011 to 2019. In 2018, Cambodia reported zero malaria deaths for the first time in the country's history and has maintained zero malaria deaths since then, despite the threat of growing drug resistance. This has prompted the government to commit to an ambitious agenda to achieve elimination of indigenous transmission of *Plasmodium falciparum* malaria by 2023 and zero new indigenous cases of all malaria by 2025. Reaching the last cases of malaria in Cambodia will require an innovative and targeted approach for the 'last mile' of malaria elimination in the country, to reach the national malaria elimination goal by 2025 and the regional commitments to eliminate malaria in the Greater Mekong Subregion (GMS) by 2030.

As Cambodia moves toward elimination, Cambodia's MoH and its national malaria control program, CNM, will face changes to the malaria program's financing and programmatic structure. The robust external funding and vertical program implementation that have propelled Cambodia to reach this point may soon shift to more domestic, decentralized, and integrated financing, management, and operations.

For nearly twenty years, The Global Fund has been the largest external financier of malaria activities in Cambodia, and many of Cambodia's malaria program activities are funded by international investments. The Global Fund also provides a large proportion of the regional malaria and health system strengthening activities in the GMS through the RAI. In addition, the United States Agency for International Development President's Malaria Initiative (PMI), provides significant funding to the malaria response and other donors, such as the Bill & Melinda Gates Foundation, finance implementing and technical partners that support the malaria program. As its malaria burden decreases and economic growth continues, Cambodia can expect to progressively move away from donor financing toward a domestically funded malaria response.

As Cambodia's systems for governance and health decentralize, malaria transmission becomes more heterogeneous and focal, and preparation for transition from donor assistance begins, strong leadership and public financial management (PFM)

capacities at provincial and operational district (OD) levels will be critical to ensure a resilient and sustainable malaria response. To sustain the malaria program and accelerate to elimination, the RGC must proactively plan for transition and mitigate transition-related risks, including mobilizing sustainable domestic financing for malaria through engagement of local leaders and budgetary authorities.

Without adequate support, donor transition – no matter how gradual the pace – can leave countries at risk of service interruptions and even malaria resurgence. To ensure a well-planned and successful transition to a nationally owned and managed malaria response, and promote long-term sustainability of the malaria program, CNM initiated efforts to prepare for transition by: (a) conducting a transitions readiness assessment, as recommended by the Global Fund Technical Review Panel for RAI countries, to identify future transition and sustainability risks and opportunities across all domains of the health system; and (b) developing robust strategies that aim to mitigate financing risks through advocacy for additional domestic investments in local malaria responses.

Ending malaria in Cambodia by 2025 is within reach but will not be achieved with a business-as-usual approach, especially when considering potential future changes to the country's health system and financing. To this end, CNM has partnered with the MEI at UCSF, which specializes in advocacy, financing, and sustainability support to malaria-eliminating countries.

The purpose of this report is to present the findings and recommendations of a sustainability and transition readiness assessment, including a draft advocacy strategy highlighting near- and medium-term opportunities and strategies for improving the sustainability of Cambodia's malaria response. The report is structured into four sections:

- **Introduction**
- **Cambodian Malaria Elimination and Sustainability Context**
- **Findings of the Sustainability and Transitions Assessment**
- **Malaria Budget Advocacy Strategy**

UCSF MEI is honored to accompany CNM, at their invitation, on their journey to malaria elimination and long-term financial and programmatic sustainability.

Methods

The UCSF MEI Advocacy, Finance, and Sustainability portfolio aims to support countries in building a resilient and sustainable malaria response for successful elimination and prevention of re-establishment (POR). The MEI Sustainability Model includes two complementary approaches:

- Transition assessments and planning: Build country preparedness to transition from donor to country financed and managed programs.
- Malaria budget advocacy: Strengthen domestic financing for malaria through subnational leadership and advocacy.

These approaches are guided by two tools from the MEI's toolkit: *SUSTAIN: Sustainability and Transitions Readiness Assessment Tool* and the *Malaria Budget Advocacy Framework*. More information about these tools and the MEI's approach can be found at shrinkingthemalariamap.org.

With guidance and leadership from CNM, UCSF MEI led the implementation of the SUSTAIN tool and Malaria Budget Advocacy Framework in Cambodia, following a three-phase process that included 1) a scoping review, 2) the SUSTAIN Assessment, and 3) malaria budget advocacy strategy development.

Scoping Review

From mid-2020 to early 2021, UCSF MEI partnered with CNM to conduct a stakeholder consultation and desk review process designed to determine the context, opportunities, and potential impact of enhancing the sustainability of the malaria response through transition and budget advocacy approaches. Scoping was conducted using the pre-assessment module of the SUSTAIN tool and the situational analysis module of the Malaria Budget Advocacy framework, each of which were tailored to the Cambodian context and stakeholder landscape.

Stakeholder consultations were conducted by UCSF staff and consultants. Consultations were conducted in-person when feasible; however, due to COVID-19, scoping consultations were primarily conducted virtually. Scoping activities were designed to identify preliminary risks and challenges related to sustainability, as well as strategies and opportunities for responding to these. This included exploration of the health system context, institutional and policy context of the malaria program, program financing

and advocacy needs, budget policy and planning processes, and sub-national financing and leadership opportunities. In total, Interviews were conducted with government officials from CNM, the MoH, the MoEF, the Ministry of Interior (Mol), the Ministry of Environment (MoE), the Ministry of Defense, the Provincial Health Departments (PHD) in Battambang, Kampong Speu, Mondulkiri, Siem Reap, and Steung Treng provinces, international implementing and technical partners, and Cambodian civil society and NGOs. The scoping exercise resulted in an initial set of priority risks and opportunities that were explored in greater detail in the SUSTAIN assessment and in the development of the malaria budget advocacy strategy, described below.

SUSTAIN: Sustainability and Transitions Readiness Assessment

The Cambodia Sustainability and Transitions Readiness Assessment was conducted using the UCSF MEI's *SUSTAIN Transition Readiness Assessment Tool for Malaria*. The SUSTAIN tool supports national malaria programs and their donors and partners to anticipate and respond to financial and health systems challenges that may impact the sustainability of the malaria response during or after the end of donor support. The SUSTAIN tool uses a mixed methods approach to examine a range of program and health system indicators that relate to transition, including malaria financing, leadership and management, the health workforce for malaria, supply chain, malaria program integration, and specific program activities including services for high-risk populations.

During a joint kick-off meeting in January 2021, CNM and UCSF MEI agreed on the objectives, scope, and workplan for the assessment. This was followed by dialogues to customize the SUSTAIN tool, including adapting indicators, questions, and key informant list to be relevant to the health system and key actor landscape.

The SUSTAIN data collection included document review, collection and analysis of secondary and programmatic data, and in-depth key informant interviews. (See [Annex A](#) for list of participants.) Interviews were conducted in-person and virtually, in English and Khmer. The UCSF MEI team developed the interview recordings and field notes into transcripts, and translated these from Khmer to English as needed. The transcripts were coded using Nvivo software and analyzed to identify themes and data on the context, challenges associated with sustainability and transition, and potential opportunities to support these processes moving forward. Secondary data collection included donor

and government budgets and financial data, workplans, health and malaria workforce information, and other program data from both the national program and sub-national health offices.

Malaria Budget Advocacy Strategy Development

Using the UCSF MEI's Malaria Budget Advocacy (MBA) Framework, a strategy for sustainable subnational domestic financing was developed by the UCSF team, drawing upon the findings from scoping interviews, secondary analysis, and the SUSTAIN assessment. While UCSF typically holds multi-day participatory workshops to co-create theories of change with national malaria programs and other stakeholders, it was not feasible to bring all concerned stakeholders together in person due to COVID-19 restrictions. Instead, UCSF gathered multiple perspectives through a series of asynchronous interviews (i.e., scoping), then clustered and consolidated responses to create a draft theory of

change. A theory of change is a tool for participatory design that visualizes how a proposed initiative will lead to its intended impact through a sequence of logical steps. An accompanying narrative was developed to further explain the rationale for each step, or interim outcome, in the theory of change.

Validation Process

Following completion of the scoping and SUSTAIN assessment activities, UCSF facilitated a validation process with CNM and key program partners including the Global Fund, the United Nations Office for Project Services (UNOPS), and USAID. During this consultative process, partners were presented with preliminary findings and a draft malaria budget advocacy strategy and were asked to provide feedback on the identified challenges, opportunities, and proposed solutions outlined in the draft sustainability report. This report reflects the findings of UCSF MEI's analysis in addition to the inputs from the validation process.

Cambodian Malaria Elimination and Sustainability Context

National Elimination Goals and Political Will

In 2014 at the 9th East Asia Summit, His Excellency Hun Sen, Prime Minister of Cambodia, committed to the goal of a malaria-free Asia Pacific by 2030, and the following year he endorsed the APLMA Leaders' Malaria Elimination Roadmap along with the heads of state from 17 other Asia Pacific countries.

Though the malaria elimination goal for the Asia Pacific region is 2030, Cambodia is targeting malaria elimination by 2025. Under the leadership of the MoH, mandated by the RGC, and with technical support from partners, the National Center for Parasitology, Entomology, and Malaria Control (CNM) leads malaria elimination efforts in Cambodia.

CNM is responsible for implementing the National Strategic Plan for Elimination of Malaria in the Kingdom of Cambodia 2011–2025, which was endorsed by Prime Minister Sen, and the 5-year Malaria Elimination Action Frameworks (MEAF), covering 2016–2020 and 2021–2025, which were endorsed by Cambodia's Minister of Health, Professor Mam Bunheng.

In Cambodia's Health Strategic Plan 2016–2020, malaria is listed as a priority population health need, and the MoH acknowledges the need for the government to maintain attention to communicable diseases, including malaria, as external funding decreases.

Malaria elimination in Cambodia is viewed by the regional and global malaria community as critical and urgent because of the rise of drug-resistant malaria parasites, which first emerged along the Thai-Cambodia border in 2008 and have subsequently been detected in all five countries in the GMS. Drug resistance could jeopardize global progress if it were to spread further. Cambodia is active in the Global Fund's RAI grant for malaria, along with its neighbors in the GMS – Lao PDR, Myanmar, Thailand, and Vietnam. The overall goal of the RAI program is to accelerate elimination of falciparum malaria from the GMS, and to prevent the emergence or spread of artemisinin resistance to new areas.

Cambodia has domestic political structures to support malaria elimination, including a National Special Malaria Elimination Taskforce (NSMET), chaired by the Minister of Health, Provincial Special Malaria Elimination Taskforces (PSMETs) and District Special Malaria Elimination Taskforces (DSMETs). These committees were formed and coordinated with support from RAI, and members include representatives from various departments, including Ministry of Education, Youth and Sports, Ministry of National Defense (MoND), MoI, MoE, Ministry of Labor and Vocational Training (MoLVT), Department of Drugs and Foods (DDF), and CMS. Provincial and District Governors or Deputy Governors chair Provincial and District committees, respectively, and PSMET and DSMET committee members are also drawn from the same departments represented at the national level.

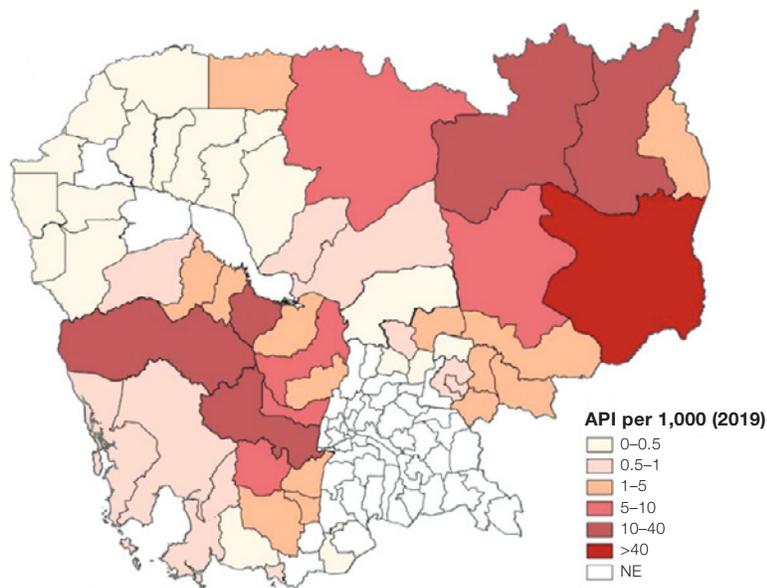
These committees can play an important role in generating and sustaining support for malaria elimination activities. Their mandate includes setting provincial priorities for malaria elimination according to the national malaria elimination strategy, monitoring implementation of the provincial malaria elimination strategy, mobilizing and allocating resources for the provincial malaria elimination strategy, strengthening collaboration between governmental ministries and departments, and developing partners within the province.

With the threat of drug-resistant malaria looming as well as rapid progress putting malaria elimination within sight, there is increasing resolve and motivation among national and subnational leaders to continue to eliminate malaria. District health authorities in Cambodia have universally adopted a 1-1-7 surveillance strategy instead of the initially planned 1-3-7 strategy. The purpose of this is to accelerate case investigation to within 1 day of case detection, reflecting malaria teams' motivation to see cases stay at zero in their districts. Since 2020, malaria has been a notifiable disease in Cambodia.

Current Malaria Situation

Epidemiology

Malaria in Cambodia is endemic in 21 of its 25 provinces as well as the municipality of Phnom Penh, and over 60% of the population remains at-risk

Figure 1. Malaria disease burden – API by operational district, 2019

Source: Malaria Elimination Action Framework 2021–2025

for malaria. The seven provinces with the highest transmission are responsible for approximately 80% of Cambodia's malaria cases, with transmission particularly concentrated in 10 ODs out of 55 malaria-endemic ODs nationwide (Figure 1). The transmission intensity varies significantly across different geographic regions and ecological zones, with forested areas in the northeast and southwest experiencing the highest Annual Parasite Incidence (API). The Mondulkiri province has the highest incidence rate of malaria in the country, with an API of 49/1000 population in 2019.

The highest rates of transmission are amongst groups living or traveling around the forest fringe or in the dense evergreen and semi-evergreen forest areas to the north and northeast bordering Vietnam and Lao PDR and in the deciduous forest areas in the west of the country bordering Thailand. Malaria transmission is seasonal and peaks during the rainy season which lasts from June to November.

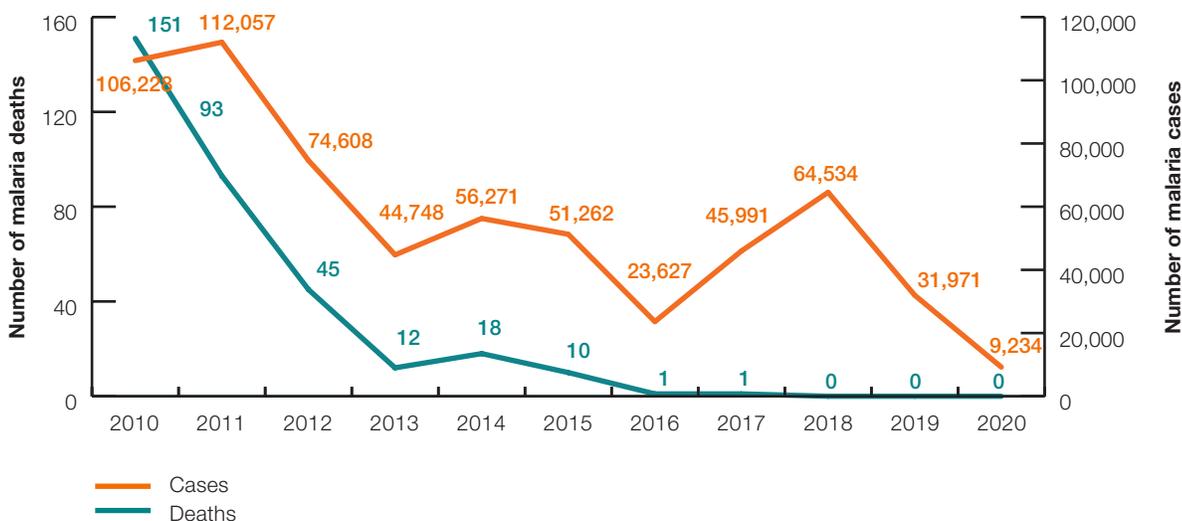
Malaria in Cambodia is principally a disease of adult men with more than 75% of all malaria cases occurring among men aged 15–49 years. Despite deforestation, the forest still represents an important source of income for many Cambodians and forest-going migrant and mobile populations (MMPs) have been identified as the primary risk group for malaria in Cambodia. Forest-going MMPs include seasonal agricultural laborers, military patrols, workers in the formal sector (police, border guards, forest/wildlife

protection services), workers in the informal sector (hunters, small-scale gem/gold miners, people gathering forest products including precious timber, construction timber, rattan, and bamboo), and people in transient or mobile camps associated with commercial projects. It is estimated that over 90% of malaria cases in Cambodia are contracted in forested areas among MMPs and far from health centers.^{1,2}

There were approximately 80,000 migrant workers in Cambodia in 2019, primarily from Vietnam and Thailand.² There is also cross-border mobility between Cambodia and Vietnam. MMPs with undocumented legal status or involvement with illegal economic activities may be reluctant to seek care, contributing to ongoing malaria transmission.

Disease burden

Cambodia's annual malaria caseload has fluctuated over the last 5 years, but the country recorded its lowest number of confirmed cases in 2019, with a total of 31,971 confirmed cases (Figure 2), and an API of 1.95/1000 population in comparison to 3.88/1000 the previous year. This progress is attributed to scale-up of improved interventions, including case management by VMWs and surveillance, in recent years. (See 'National Malaria Program' section on p10 for more information on the role of VMWs in Cambodia's malaria response.) In 2019, Cambodia had the second-highest national malaria burden in the GMS, after Myanmar.

Figure 2. Malaria cases and deaths in Cambodia, 2010–2020

Source: Malaria Elimination Action Framework 2021–2025

In 2019, *P. vivax* accounted for 85% of cases, and *P. falciparum* accounted for 15% of cases. *P. falciparum* has decreased substantially over the past several years. Conversely, *P. vivax* has not experienced the same declines and is now the dominant species, highlighting the importance of the safe radical cure of *P. vivax*, for which pilots began in late 2019.

In 2010, malaria was responsible for over 150 deaths in Cambodia, a figure that has steadily declined. In 2018 and 2019, there were no recorded deaths from malaria in Cambodia, achieving the country's goal to halt malaria mortality by 2020. Overall, progress demonstrates that the ambitious target to eliminate *P. falciparum* malaria by 2023 and all forms of malaria by 2025 is within sight.

Cambodia's Public Health Delivery System and Malaria Control Program

National public health delivery system

The Cambodian health system comprises both public and private sector providers (including for-profit and non-for-profit health organizations). The public sector is the primary provider of disease prevention and health promotion services and inpatient admissions for curative treatment, while the private sector provides a significant share of outpatient curative treatment. Health system utilization data indicates that approximately 67% of the population seeks services from the private sector for their primary healthcare needs, although 60% of hospitalizations took place in public facilities.^{3,4} Prior to 2018, the

private sector played a more central role in the malaria response; however, in that year the MoH issued a requirement that all suspected malaria cases be referred to the public sector, making the public sector the predominant source of malaria diagnostic and treatment services.

The MoH leads and manages the public healthcare delivery system as well as the regulation of health services provided in the private sector. The Cambodian public health system is organized into three levels: central, province, and ODs (Figure 3). These three levels of administration oversee health facilities and health workforces at their respective levels and serve as management offices for health in their territories.

At national level, the MoH has established relevant departments including:

- Centers for specialized functions such as drug regulation, supply chain, and health promotion, and national training institutions
- National disease programs, including malaria, HIV, vaccines, maternal and child health, and tuberculosis
- National hospitals as tertiary care facilities for provision of highly specialized services

These institutions play varying roles in health policy development, resource mobilization and allocation, routine health administrative functioning, and health service provision and quality assurance.

At provincial level, the country is divided into 24 PHDs and one municipality (Phnom Penh), which are further subdivided into 103 ODs, each governed by their respective PHD or municipality. Government healthcare services are offered at referral hospitals, health centers, and health posts.

National malaria program

CNM, the country's largest disease-specific program, was established by the MoH in 1984, and is responsible for managing the development and roll-out of strategies, technical policies, operational plans, trainings, malaria elimination-specific surveillance, and resource mobilization for the national elimination program from international⁵ and national donors at the central level.

CNM has dedicated units charged with supporting specific technical and operational areas such as epidemiology, entomology, research, vector control, monitoring and evaluation, procurement, laboratory, health education, surveillance, public-private mix, and village malaria workers. CNM's Technical Bureau supports these unit by developing policies, standard operating procedures (SOPs), and guidelines. The Administration Bureau and Finance Bureau support malaria program administrative and finance operations, respectively. The national program was initially implemented vertically, but it has become more decentralized and integrated into the existing public health system.

The full package of Cambodia's malaria elimination program strategies has been rolled out in a phased approach since 2016 (after the development of MEAF 2016–2020) in the malaria-endemic ODs with the support of partners and under the leadership of CNM. At each PHD and OD, there is a Provincial Malaria Supervisor (PMS) or an Operational District

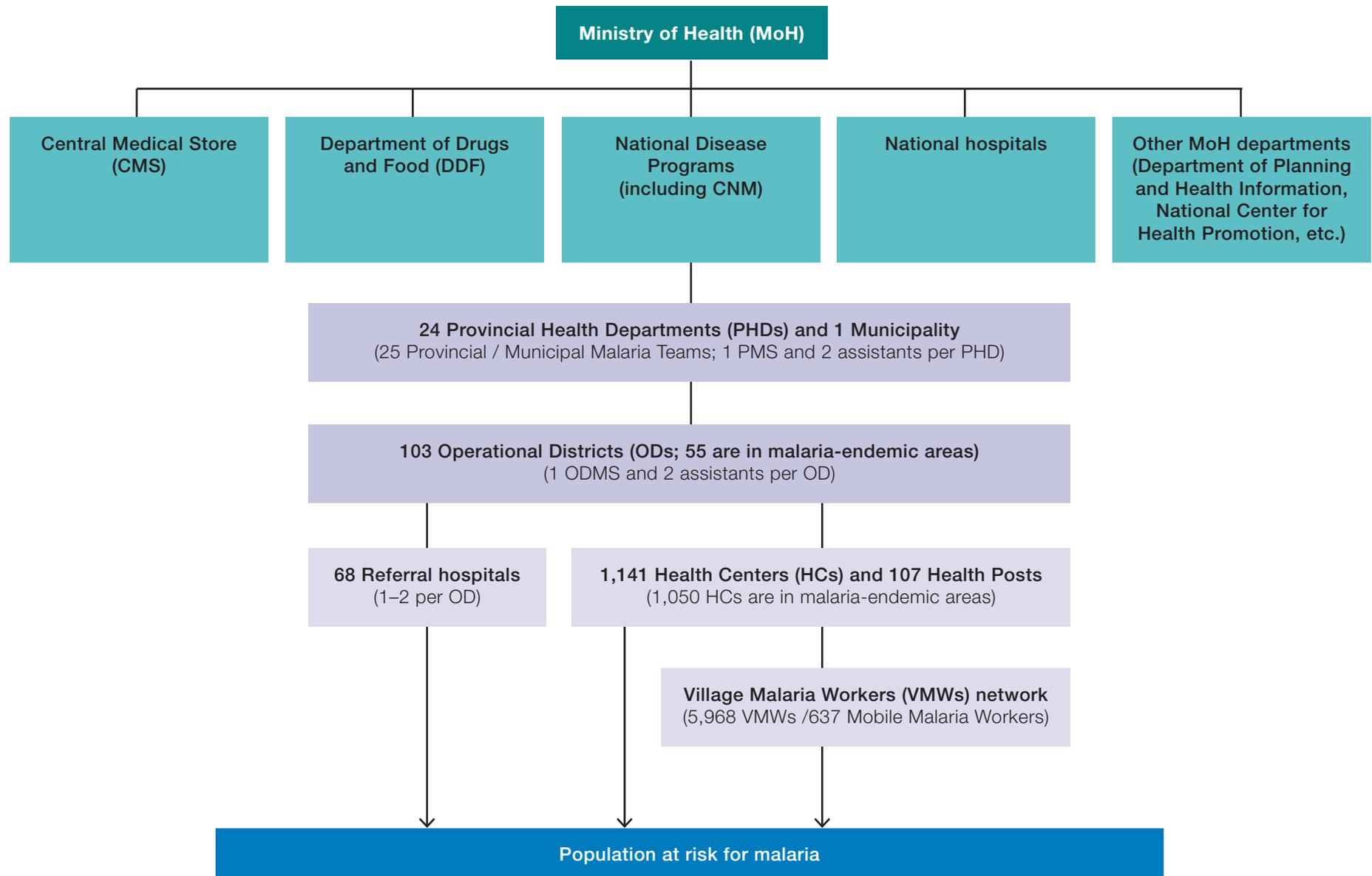
Malaria Supervisor (ODMS) who are responsible for supervising and providing management oversight of health facilities (health posts, health centers, and referral hospitals) that provide testing and treatment services and that perform activities related to surveillance, vector control, and the information education and communication / behavior change communication (IEC/BCC). These offices also ensure the timely collection and reporting of quality malaria surveillance data from health facilities.

With support from CNM on the identification of high-risk villages, according to risk stratification, PMS and ODMS work with health facilities to recruit and oversee a large network of VMWs and MMWs from village and MMP communities to provide quality diagnosis and treatment for malaria.

In 2019, 53% of malaria cases were treated by VMWs. As of October 2019, there were total of 5,968 VMWs active in 2,984 VMW villages (API >5) and 637 MMWs in 318 forest sites in Cambodia who provide diagnosis and treatment services and submit real-time reports using malaria MIS app through mobile phones. VMWs and MMWs attend monthly meetings at health centers to review data reports, restock testing and treatment supplies, and conduct skills-building sessions. The MMWs also conduct active case detection in harder-to-reach areas near the forests and at other MMP locations to serve these high-risk groups.

Besides CNM, other MoH departments and line ministries also contribute to Cambodia's malaria elimination efforts (Table 1). The MoND, MoI, MoE, CMS, and DDF support the malaria program by providing testing and treatment for international forces and rangers, drug quality assurance, and distribution of health products to sub-national levels. Many of these activities are externally funded through RAI.

Figure 3. Malaria service delivery in the Cambodia public health system



Note: The actual staffing may not be as indicated in the illustration above
Source: Adapted from the Malaria Elimination Action Framework 2021–2025

Table 1. Malaria program integration and partnering units/agencies

| Programmatic Area | CNM role | Partnering agencies | Partner role |
|----------------------------------|--|-----------------------------|--|
| Case management | <ul style="list-style-type: none"> • Develop guidelines and SOP • Train healthcare providers • Provide monitoring and supervision • Risk stratification and VMW/MMW allocation • Laboratory accreditation | Ministry of Health | <ul style="list-style-type: none"> • Testing and treatment through MoH facilities (clinics, hospitals) • Subnational supervision of VMW/MMW |
| | | Department of Drug and Food | <ul style="list-style-type: none"> • Supervise private providers • Pharmacovigilance • Manage severe adverse effects |
| | | Ministry of Defense | <ul style="list-style-type: none"> • Testing and treatment for UN Peacekeeping forces |
| Health product management | <ul style="list-style-type: none"> • Quantification of commodity need | Central Medical Store | <ul style="list-style-type: none"> • Distribution of ACTs and RDTs |
| | | Department of Drug and Food | <ul style="list-style-type: none"> • Registration and importation of new products |
| | | UNOPS/PMI | <ul style="list-style-type: none"> • Storage and distribution of LLIN/LLHIN • Quality assurance |
| IEC/BCC | <ul style="list-style-type: none"> • Develop strategy • Train healthcare providers | Ministry of Health | <ul style="list-style-type: none"> • Deliver EC/BCC interventions through Provincial Health Departments, Operational Districts, Health Facilities |
| | | Ministry of Environment | <ul style="list-style-type: none"> • Deliver IEC/BCC interventions to forestgoer populations |
| | | Ministry of Defense | <ul style="list-style-type: none"> • Deliver EC/BCC interventions to the border patrols |
| Surveillance | <ul style="list-style-type: none"> • Manage MIS • Oversee case notification, investigation and response • Develop SOPs • Develop mobile surveillance tools | Ministry of Health | <ul style="list-style-type: none"> • Report data to MIS by PHDs, ODs, and health facilities • VMWs conduct case and foci investigation • Implement mobile surveillance plans • Supervise VMW/MMW |
| Vector control | <ul style="list-style-type: none"> • Create and manage vector management strategy • Entomological surveillance • Monitoring of insecticide resistance | Ministry of Health | <ul style="list-style-type: none"> • Distribute LLIN/LLHIN • Conduct entomological surveillance • Monitor insecticide resistance |

Implementing partner landscape

CNM relies upon technical assistance and financing from several partners at both the national and sub-national levels (Table 2). At the central level, WHO, Clinton Health Access Initiative (CHAI), United Nations Office for Project Services (UNOPS) and PMI assist across multiple domains of program implementation. They are members of technical working groups; assist CNM to develop SOPs and guidelines; support the quantification, procurement, and storage of health products; conduct therapeutic efficacy studies; monitor insecticide resistance; and manage administration of the RAI grant.

Role of non-governmental and civil society organizations

Civil society organizations (CSOs) are key partners in Cambodia's malaria response and have a long history of partnerships with CNM. At the sub-national level, PHDs, ODs, health centers, and VMWs/MMWs are

supported by CSOs that are funded either through the Global Fund or PMI. CSOs working with PHDs, ODs, and health centers under RAI grants are responsible for ensuring the activities of sub-national partners are done in accordance with CNM guidelines and the grant management guidelines set by the Principal Recipient (PR), UNOPS.

Under RAI2E (2018–2020), the Global Fund required that at least 50% of available funding be allocated to CSOs. Cambodia used this investment to help strengthen the role of the PHD in malaria elimination efforts through CSO-led technical assistance. CSOs partnered with PHDs in 14 provinces and were responsible for implementing a core package of malaria services, including vector control, case management, IEC/BCC, and passive surveillance. All CSO-led activities aligned with CNM's national policies, guidelines, and training curricula, used the local health system, and worked together with local health authorities for implementation.

Table 2. Implementing partner support to the Cambodia malaria response

| Implementing Partners | Major Areas of Assistance |
|---|---|
| Catholic Relief Services (CRS) | RAI3E sub-recipient. Project management support at sub-national level |
| U.S. Centers for Disease Control and Prevention (CDC) | Technical assistance in vector control, case management, and surveillance monitoring and evaluation. CDC co-implements PMI program led by USAID in the GMS. |
| Clinton Health Access Initiative (CHAI) | Technical assistance, project management at the central level and in some elimination Operational Districts |
| Malaria Consortium (MC) | RAI3E sub-recipient. Implementation of enhanced testing and treating services in border regions |
| Population Services International (PSI) | Provides technical assistance for Social and Behavior Change Communication activities |
| United Nations Office for Project Services (UNOPS) | RAI3E PR. Provides technical assistance in project management and leads on procurement for majority of health commodities |
| U.S. President's Malaria Initiative (PMI) | Malaria control interventions and distribution of vital commodities through several projects: <ul style="list-style-type: none"> • Cambodia Malaria Elimination Project: Support for case management implementation, surveillance monitoring and evaluation, and social and behavior change communication (SBCC) in six provinces • Global Health Supply Chain Procurement and Supply Management: Pharmacy management systems strengthening, procurement and distribution of RDTs and ITNs • Vector Link: Entomological monitoring |
| World Health Organization (WHO) | Technical assistance at national level and in select Operational Districts |

Note: Table reflects primary actors providing support to CNM and is not a comprehensive list of all partners.

The Global Fund has provided the majority of funding for most CSOs supporting Cambodia’s malaria program. Figure 4 shows the funding allocated to each CSO in Cambodia in RAI2E and RAI3E. For both RAI2E and RAI3E, CSO funding has constituted a significant proportion of Cambodia’s overall grants. However, as malaria has progressively been eliminated in Cambodia, the nature and structure of the partnerships have changed, and there are now fewer CSO working in malaria in Cambodia.

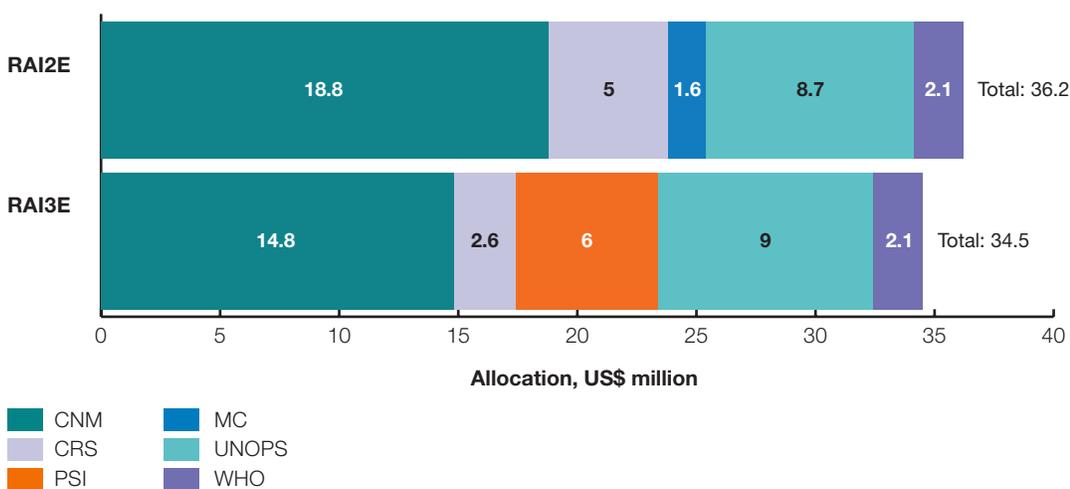
- For RAI2E, 31% of Cambodia’s grant allocation was awarded to CSOs. In addition to this, CNM reallocated some of their awarded budget to Malaria Consortium (MC), specifically for work in the border regions that target hard-to-reach areas and high-risk groups.
- In RAI3E, 18% of Cambodia’s grant was awarded to two CSOs: CRS, who continues to work with higher burden/pre-elimination PHDs as per the RAI2E design, and MC, who are targeting hard-to-reach border areas and ensuring high-risk populations in those areas can access malaria services.

The drop in percentage of the allocation of RAI funding to CSOs from RAI2E to RAI3E, and the number of CSOs being funded by Global Fund, is aligned with the approach of having CNM lead in elimination provinces. As provinces achieve elimination status, they move from a CSO-supported model to being under the direct management of CNM (Table 3).

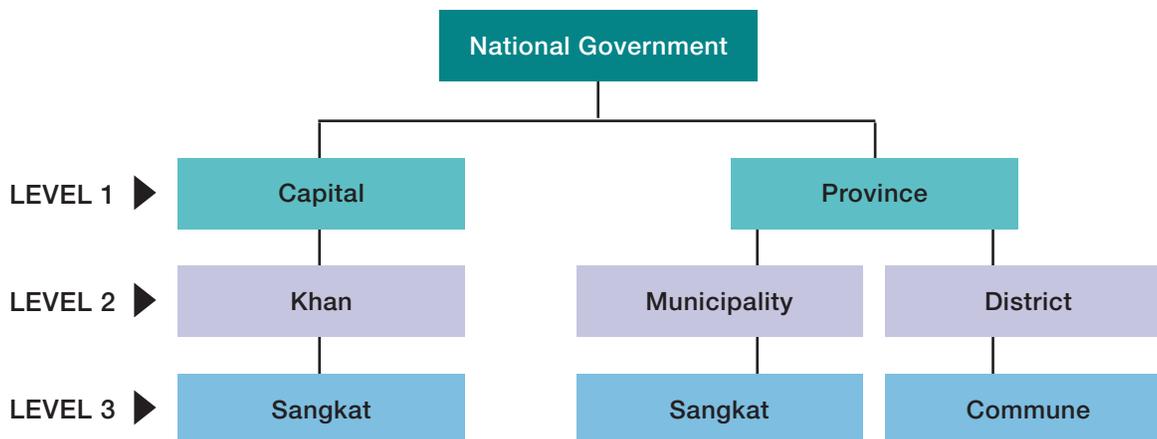
Table 3. Implementing partner arrangement for RAI3E

| Provinces | Partners |
|---|--|
| Beantay Meanchey, Siem Reap, Kampong Thom, Kratie, Kampong Chhnang, Kratie | CHAI |
| Pursat, Battambang, Pailin | URC |
| Ratnakiri, Steung Treng, Preah Vihear, Mondulkiri | CRS |
| Kampot, Koh Kong, Kep | URC (malaria surveillance only) |
| Beantay Meanchey, Preah Vihear, Steung Treng, Ratnakiri, Mondulkiri, Oddar Meanchey | MC (cross-border activities only) |
| Takeo, Kampong Cham, Kampong Som, Oddar Meanchey, Tboung Khmum | None (considered low endemic provinces; CNM leading) |

Figure 4. RAI-supported implementing partners



Source: RAI2E and RAI3E Approved Budget, Global Fund

Figure 5. Cambodia's Subnational Administration (SNA) structure

Governance Structures and Reforms Relevant for Malaria Program Sustainability

Cambodia is a unitary state with a three-tier subnational administration (SNA) system (Figure 5). Level 1 of Cambodia's government comprises the 24 provincial administrations (PA) and 1 capital administration. Level 2 includes 159 rural districts, 26 urban municipalities, and 12 urban khans. Level 3 comprises 1,410 communes in rural areas and 236 sangkats in urban areas.

Levels 1 and 2 are led by Mol-appointed boards of governors and are supported by a legislative wing of councilors, who are elected every five years through an electoral college. Since 2002, Level 3 commune councilors have been elected directly democratically every five years under proportional representation from party lists. The Cambodian People's Party has most seats in nearly all communes, although other parties also have held seats in most communes.

The RGC is currently implementing long-term, cross-cutting public sector administration reforms to improve public financial management (PFM) and decentralize governance structures, both of which have strong relevance in the context of sustaining malaria financing and management at the subnational level. For information on the RGC's ongoing PFM reform, see Annex B.

Decentralization and de-concentration

Decentralization and de-concentration (D&D) reforms in Cambodia started in 2002, first focusing on reforming the lowest levels of government. In 2010, the government formulated and released a 10-Year

National Program for Subnational Democratic Development (2010–19, later extended to 2020). This was divided into three 3-year implementation plans. Each plan clarified the strategic vision of the transfer of functions from central to SNAs. In broad terms, this included:

- The gradual transfer of service delivery responsibilities to SNAs. Services previously offered by ministerial offices in districts/municipalities were placed under district/municipality management, including primary education and health, natural resource management, small-scale infrastructure, municipal services, and agricultural extension.
- Communes and sangkats became responsible for providing services (infrastructure and social protection) and linking citizens to higher levels of government. Districts and municipalities are responsible for filling the service delivery gaps at commune and sangkat levels.
- Ministries to develop policies; enforce regulations; supervise; provide support; establish a vision, strategy, and standards but, in most cases, are not a direct service provider (except where services cross SNA boundaries like national roads or river management).
- Provinces to undertake strategic planning and investment and support and supervise districts, municipalities, communes, and sangkats, including coordination with other SNAs, advice and extension, capacity development, and performance monitoring.
- Conditional grants to SNAs will cover the costs of transferring functions and provide a mechanism for ensuring upward accountability of SNAs.

In December 2019, the release of Sub-decree 193 on ‘Decentralization of Health Management Functions and Service Delivery to the Capital and Province Administration’ significantly accelerated implementation by rolling out D&D nationwide for the health sector. The policy is expected to have a profound impact on the way in which health and other public services are financed, managed, and delivered in Cambodia in the long-term. The current D&D context shifts the accountability of health outcomes to the Provincial Governor as the PHDs are integrated into the PA. In the past, PHDs reported to the MoH but once D&D is rolled out for the health sector, the PHD Director will report to the Provincial Governor. However, most of the sources of healthcare financing remain at the central level.

Planning, budgeting and resource allocation for health and malaria in the D&D governance context

Cambodia's government-funded and donor-funded health programs have different annual planning and budget processes. The malaria program, currently funded by the Global Fund and other donors (see ‘Malaria Financing System’ section below), follows a “top-down” approach to planning, resource allocation, and budget execution using separate vertical program mechanisms created by Global Fund. (HIV and Tuberculosis, the other two programs funded by Global Fund, use similar processes).

The process for government-funded health programs, on the other hand, follows a “bottom-up” approach and includes multiple health areas in integrated plans and budgets. The annual planning and budgeting for malaria is not integrated with these annual planning and financing structures of the government-supported health programs. See [Annex C](#) for a detailed description of Cambodia's two systems for annual planning and budgeting.

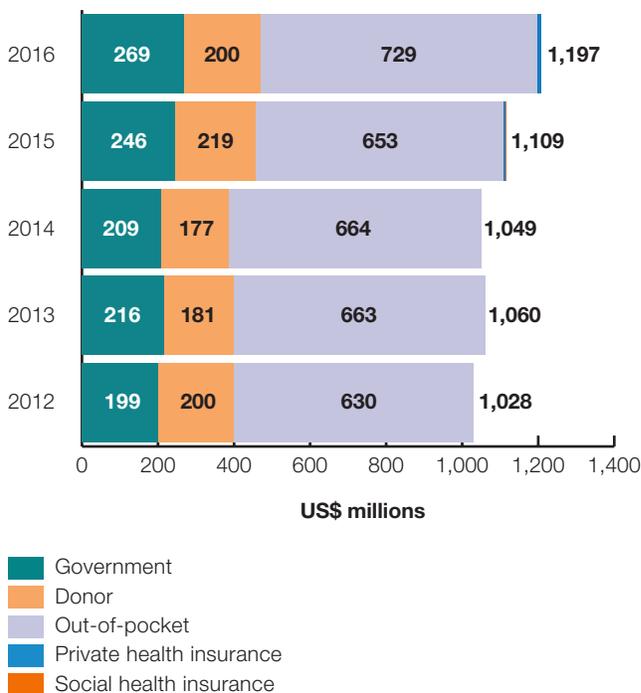
Cambodia's Health and Malaria Financing Structures

Cambodia's health financing system

Cambodia's health sector is financed by three main sources: (1) out of pocket payment (OOP), (2) government financing, and (3) donor financing ([Figure 6](#)). In 2016, OOP made up over 60% of health spending, reflecting the large role of the private sector in providing healthcare services. In that year, government and donor financing accounted for 22.3% and 16.6% of health expenditure, respectively.

Private health insurance and social health insurance funds make up less than 1% of health financing.

Figure 6. Sources of health financing, 2012–2016



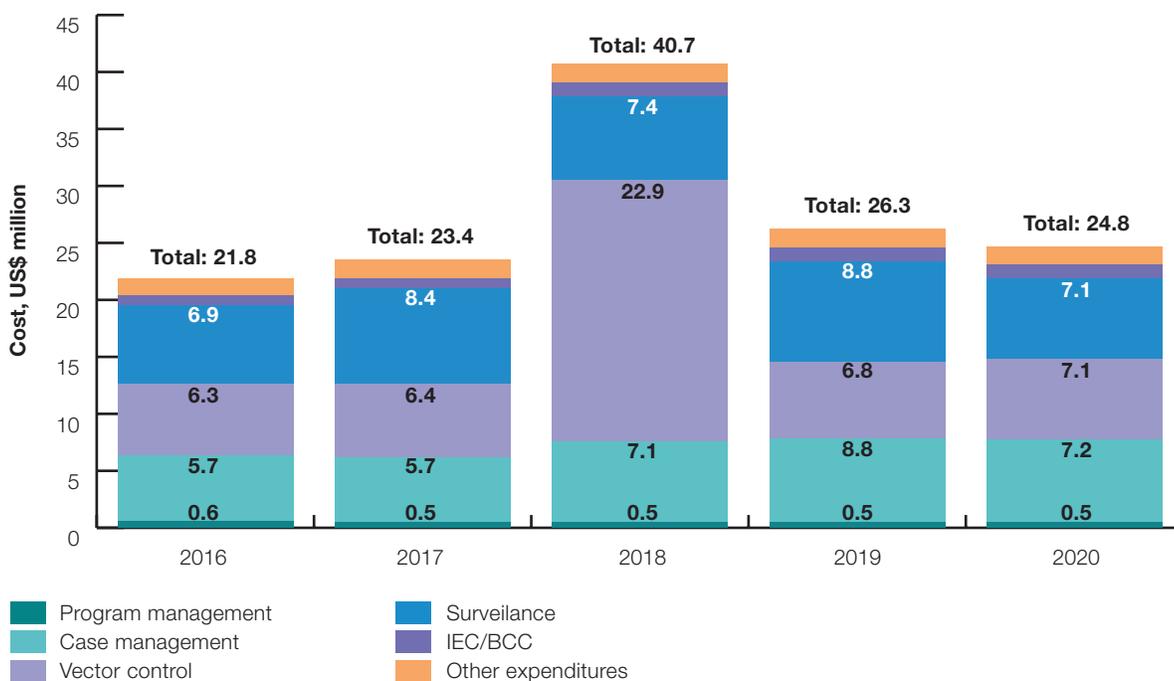
Note: Values that are too small to be displayed in the chart above include those for private health insurance: US\$ 5 million in 2015 and US\$ 8 million in 2016; and social health insurance: US\$ 1 million in 2015 and US\$ 2 million in 2016.

Development partners providing health financing to Cambodia include the World Bank, USAID, Global Fund, Gavi, DFAT, JICA, and KOICA. Outside of donor support, the main funding streams to public health are a combination of government budget, pooled funding under the Health Equity and Quality Improvement Project (H-EQIP), social health protection schemes, and user fees. Each is described in greater detail in [Annex D](#).

Cambodia's Malaria Financing System

The national malaria program is funded through a mix of donor and government funding; however, substantial funding for the program is from external sources, including direct support for malaria program activities as well as funding for implementing partners that support the malaria response. To date, the program has been successful in securing the funds needed for full implementation of the MEAF, primarily through Global Fund and PMI. The average annual budget for the malaria program was approximately US\$ 25 million for the period 2016–2020, with the largest cost categories being case management, vector control, and surveillance ([Figure 7](#)). The MEAF 2021–2025 estimates the malaria program budget needed to be US\$ 79.2 million for the upcoming five-year period ([Figure 8](#)).

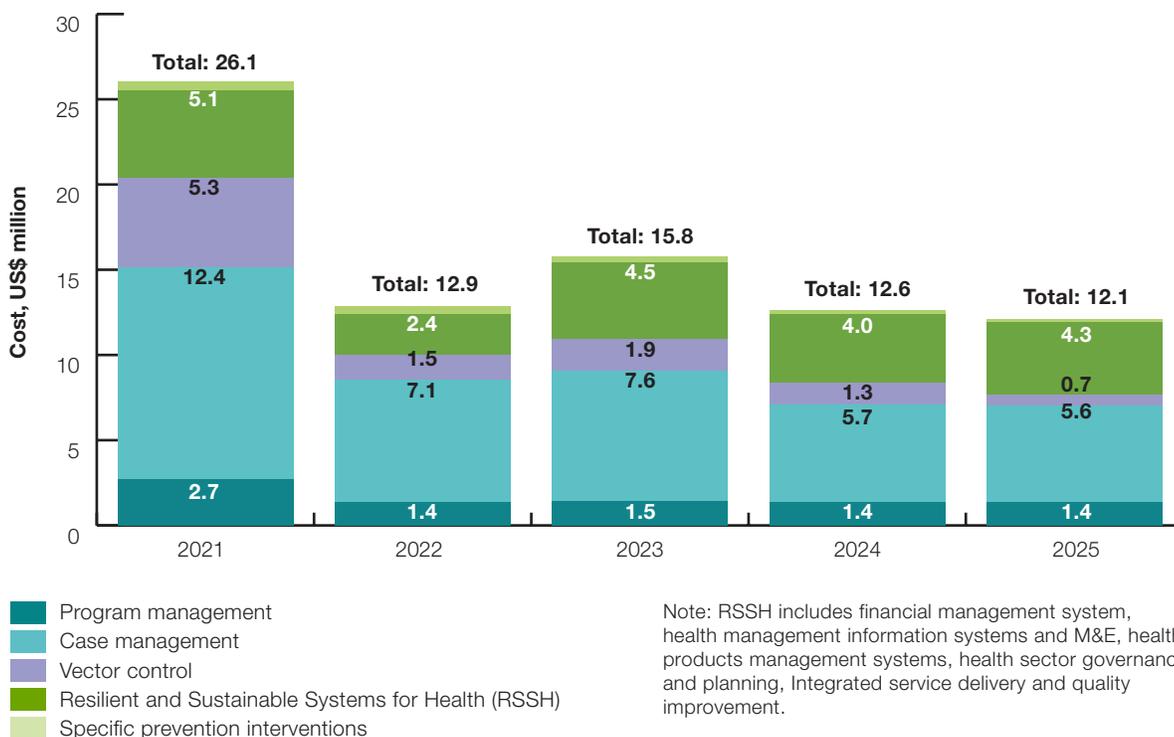
Figure 7. Malaria program costs by program activity, 2016–2020



Note: Values that are too small to be displayed in the chart above include those for IEC/BCC: 1.2 million for 2019 and 2020; and other expenditures: 1.6 million for 2019 and 2020.

Source: RAI and RAI2 Approved Budgets

Figure 8. Anticipated malaria program costs by program activity, 2021–2025



Note: RSSH includes financial management system, health management information systems and M&E, health products management systems, health sector governance and planning, Integrated service delivery and quality improvement.

Values that are too small to be displayed in the chart above include those for specific prevention interventions: 250 thousand in 2024 and 150 thousand in 2025.

Source: Malaria Elimination Action Framework 2021–2025

Donor funding

There are two primary external donors that presently support Cambodia's malaria response: Global Fund through the RAI3E grant and USAID PMI. The Bill & Melinda Gates Foundation (BMGF) and Asian Development Bank (ADB) also provide assistance (Table 4). In the past three years, Global Fund and USAID have provided significantly more funding to the malaria response than the RGC (Figure 9).

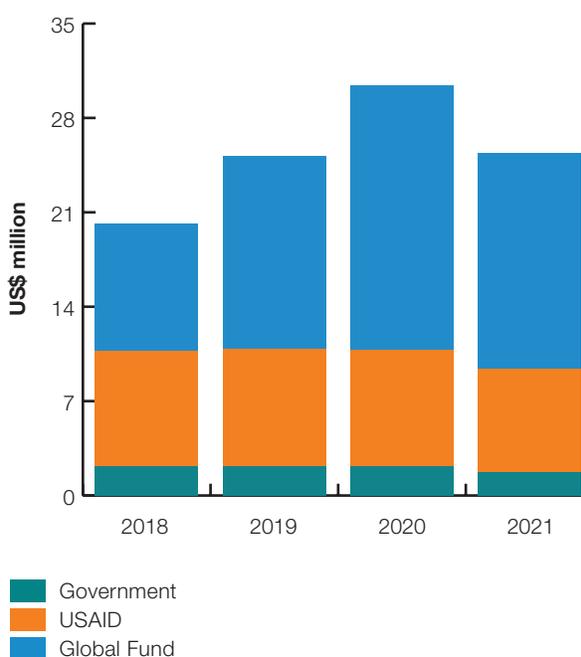
Under RAI3E, Cambodia was allocated nearly US\$ 36.2 million. The current commitment from Global Fund equals 66.1% of the total budget required for 2021–2023 according to the MEAF 2021–2025. PMI funding for the same period is not currently available. For FY 2021, PMI has allocated \$7.7 million, and are in the process of awarding a bid for implementation of a new 5-year project for 2021–2025.

ADB currently provides a US\$ 22.8 million loan to Cambodia's MoH through the 'Greater Mekong Sub-regional (GMS) Health Security Project' project for the period 2017–2022. CNM is one of the 17 implementing agencies for the project, receiving funding to implement malaria, dengue fever, chikungunya, and helminths prevention and control activities. In 2020, ADB support to CNM to implement activities for prevention and control activities was US\$ 106,800.

Table 4. Donor support to the Cambodia malaria response

| Donors | Major Areas of Assistance |
|--|--|
| Asian Development Bank (ADB) | ADB's GMS Health Security Project works to strengthen regional cooperation, communicable disease control, surveillance and response systems, and laboratory services in border regions. Includes some support to the malaria response. |
| Bill & Melinda Gates Foundation (BMGF) | Provides funding to the Mekong Malaria Elimination program and funds CHAI to provide direct support to CNM for technical assistance and capacity building. |
| Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund) | Finances the implementation of the MEAF 2021–2025 through support to CNM and implementing partners. |
| U.S. President's Malaria Initiative (PMI) | Finances the implementation of the MEAF 2021–2025 through support to CNM and implementing partners. |

Figure 9. Financing sources for malaria program activities, 2018–2021



Source: PR-UNOPS

Domestic funding

Government contribution to fulfill the Global Fund co-financing requirement is estimated at approximately US\$ 7 million for the period 2021–2023. This amount will be directed to human resources, primaquine, equipment, facilities, and co-financing of some program activities.

Findings of the Sustainability and Transitions Assessment

This section provides an overview of the key findings from the SUSTAIN assessment and malaria budget advocacy scoping exercises. Findings are summarized in the following sections: finance, political will and leadership, health workforce for malaria, health product management for malaria, and health information systems. For each major theme, findings include a review of key indicators relevant for transition, summary of key challenges and risk areas anticipated with transition, and recommendations on potential strategies and opportunities for mitigating transition challenges.

The level of priority for each identified opportunity should be collaboratively discussed and assigned by CNM and its partners as a next step for Cambodia's malaria sustainability and transition planning.

Finance

Key findings

Finding #1. Current funding for the malaria program approaches the needs as outlined in the MEAF, and this minimal funding gap enables the program to implement activities and services prioritized in strategic plans and policies.

CNM is currently adequately financed to carry out the activities indicated in the MEAF, including programmatic activities, commodities, and implementation support (by CSOs and WHO). Additionally, the program has high absorptive capacity, utilizing over 90% of available donor budget in 2019. Both funding utilization and efficiency have improved in recent years following changes made to financial management and contracting systems made during RAI2E.

Finding #2. Donors provide over 90% of financing for the malaria program apart from salaries, yet donor funding beyond 2023 is uncertain.

The Global Fund is the program's largest funder, with RAI funding covering approximately three-quarters of program activity costs. USAID, the second largest funder, supports the majority of remaining program activity costs through PMI support. Other donors, such as the Bill & Melinda Gates Foundation,

provide funding to organizations providing technical assistance to CNM as well as health systems projects that include malaria components. Government co-financing is estimated at approximately \$7 million over the three-year RAI3E grant and supports salaries for government health workforce personnel (primarily with cross-cutting roles, not malaria-specific) and procurement of second-line treatments. There is no clear commitment from the government at this time regarding their financial commitments to the malaria program following the end of Global Fund support, resulting in concerns that a reduction in donor support for the program will result in funding gaps that could adversely affect the program's continued success during the critical years in which CNM aims to eliminate malaria.

Finding #3. There is a need for more and better data on the financial resources needed to achieve and maintain elimination, and the size of the potential funding gap following the end of RAI3E.

Strategies to advocate for and mobilize public finance for the malaria program are hindered by a number of factors including limited evidence on the program's financial requirements and gaps beyond the RAI3E period. Program costs are anticipated to decline in the coming five years, from around US\$ 26 million in 2021 to US\$ 12 million in 2025, as the malaria burden declines. However, there will be a continued need for funding for surveillance, outbreak response, and other activities to maintain elimination and POR following 2025. The large scale of donor investment is unlikely to be fully absorbed by government, indicating a need to assess opportunities for further efficiencies and re-alignment of the program to meet elimination goals within the feasible government budget. At present, there is insufficient communication between CNM and other government partners, including financing partners, about the future investments that will be needed following elimination to maintain POR.

Finding #4. The current financial management structures may hinder transition and sustainability preparedness.

The Global Fund's malaria grant is administered at the regional level by UNOPS, in contrast to the Global Fund's HIV and TB grants which are administered

at the national level by the Cambodia MoEF. This arrangement brings some operational benefits, yet also presents challenges for sustainability including: (1) lack of embedded administrative capacity for financial management, (2) high administrative costs, and (3) limited visibility into malaria program finance and financial management by MoH and MoEF to support resource mobilization following transition. Transferring financial reporting responsibilities to another government department may be more effective in a transition period.

Finding #5. There is a need for stronger financial management capabilities at the national and sub-national levels.

UNOPS and CHAI provide financial management support to the CNM Finance Unit at the national level, and NGOs work closely with targeted PHD finance staff to support financial management including RAI grant expenditures at the subnational level. At both national and subnational level there is limited capacity to use financial management tools for planning, resource mobilization, and budget management. This silo-ing of malaria financial planning systems rather than integration within health financing systems at the subnational level has resulted in (1) low ownership of malaria program and (2) inefficient use of financing at the subnational level. Subnational health departments will play an increasingly large role in the malaria response as D&D and PFM reforms are rolled out. Consideration of financial management arrangements, including strategies to enhance ownership and financial management capacity, will be critical during the transition period. Efforts to shift donor-financed and vertically administered disease programs to the RGC will need to be managed with significant attention to planning, budgeting, and reporting systems.

Finding #6. Lack of transparency about the sources, amounts, and utilization of available funds within the SNA hinders decision-making.

For health programs funded by the government, subnational technical leads in the health administration do not have complete information on resources available and/or utilized. These leads (e.g., OD-MS and PHD-MS in the case of malaria program) participate in budget preparation but are usually not informed about the amount approved. In addition, there is no system to track budget utilization at subnational level and what is tracked is not done at the program activity level. This impacts the ability to plan and make evidence-informed implementation decisions throughout the year. Subnational administrators do not have regular access or supervisory capacity to monitor the spending of lower

levels of the health system. Although not currently a major concern under the Global Fund-supported malaria program, these constraints may pose challenges following the end of donor support.

Finding #7. The Global Fund supports the implementation of activities targeting high-risk populations.

The Global Fund has supported all the targeted interventions developed by the malaria program to reach high risk groups including expanded screening, treatment and preventive services and special programs such as the Intensification Plan, the Last Mile, and the border projects. In addition, the Global Fund supports the WHO and NGOs to provide technical assistance to ODs with the highest malaria burden.

Finding #8. To date, there have been only minimal domestic advocacy efforts to build political support and mobilize resources for the malaria response.

Due to the scale of donor funding, there have been few efforts to mobilize government funding to support the malaria program or elevate malaria's position within the country's health agenda. Where co-financing commitments have been made, donors and donor funds have been key to mobilizing these commitments, for instance RAI has effectively served as CNM's advocacy platform by raising funds and prioritizing elimination issues. Closing likely funding gaps that will occur with donor transition will require CNM play a more leading role in advocacy and resource mobilization efforts, which may require development of new approaches and skills to secure political will and influence budget outcomes.

Opportunities

1. **Carry out longer-term financial planning reflecting both pre- and post-elimination phases.** Transition planning should include financial planning and financial management capacity building, including consideration of the most effective location within the government health system for these responsibilities to sit and alignment of transition activities with broader health financing reforms. Financial planning must reflect both near term (elimination) and longer term (POR) goals enabling government partners to adequately plan for the level of malaria response required by epidemiological need.
2. **Proactively engage donors in preparing for financial transition.** Enhance donor transparency regarding funding commitments and trajectories (scale and duration) to enable

better planning and more effective advocacy for government investment in the malaria response. Donors can also play a role in advocacy to the MoH and MoEF for domestic finance. For example, the donor community was active in advocacy to the MoEF to provide the required financing for HIV treatments, a success story that could be a model for malaria. A transparent and effective dialogue between the RGC and donor partners is needed to ensure sufficient advance planning is in place to establish the policies, systems, financing, and capacity needed within the national malaria response.

3. **Develop resource mobilization strategies at the national and subnational level**, including identification of subnational health and social welfare funds that may be accessed to support integrated malaria activities. Particular attention should be paid to (1) securing funding to support program activities targeting high-risk populations (e.g. Last Mile and *P.vivax* radical cure on high burden health centers) and (2) the long-term financing of surveillance systems, information systems, and key program components (e.g., case and foci investigation) that must be continued following elimination. At national level, central government will need to allot extra budget for the procurement of malaria commodities. The RGC and donors are investing in structures and programs focused on improving healthcare services delivery, including the National Social Security Fund, the Health Equity Fund (HEF), and the H-EQIP project. These initiatives are currently or are planned to target the same high-risk populations the malaria program will focus on as it nears elimination. Closer collaboration with the MoH, MoEF, and donors to leverage these funds for elimination and outreach to high-risk populations should be prioritized. Parallel efforts to understand opportunities for leveraging subnational finance (e.g., Sangkat Funds, health centers and Commune Council budgets) should also be explored to support integrated community-level services.
4. **Identify strategies for embedding malaria activities within MoH and MoEF's financial management structures and strengthen MoEF's role in malaria program management and financing.** Integrating program management and finance at the highest level offers an opportunity to increase the program's visibility and better position the program for mobilizing future public finance. The malaria program may benefit from the HIV/AIDS and TB experience in which shifting the PR to the MoEF elevated the priority

of these programs within the government system. Enhancing the availability and quality of data on government financing for health will additionally enable stronger budget advocacy activities.

5. **Leverage prior experiences mobilizing government funding for health and expanding public finance for donor-funded programs.** Examples exist of the RGC taking over finance and management of programs from donors. The HEF was initially fully supported by donors, with government increasing its funding responsibility by 10% annually over several years. Likewise, Community Sangkat Funds were launched by donors and later fully assumed by government. Similar models may be feasible to support malaria transition, with sufficient planning and lead time.
6. **Explore external and innovative financing aside from existing funding sources.** Innovative financing could complement the strengthening of domestic financing at subnational levels. Examples could include the establishment of a malaria elimination fund, with contributions from the private sector, or the creation of a tax mechanism that could generate additional revenue for health and malaria.

Health Workforce for Malaria

Key findings

Finding #1. The majority of the malaria health workforce is supported by government, but key positions remain donor funded.

At the central level, 70% of CNM staff are supported by government contribution through government budget and public financing schemes such as the UHC program. The Global Fund no longer provides supplemental salary support to CNM staff, but RAI3E continues to support field missions to conduct training and supervision activities, and there are several contract staff within CNM supported by donor funding (roughly 30% of CNM staff). The government currently contributes 20% of the salary for these contracted staff as part of the co-financing agreements under RAI2E that will be continued under RAI3E.

Finding #2. The capacity of health workforce at both central and subnational level needs to be strengthened.

The malaria program faces challenges with staff retention and has a high degree of staff turnover, posing a challenge for capacity building.

Finding #3. VMWs and MMWs comprise the largest cadre of malaria program staff and are supported with Global Fund funds.

There are approximately 6,000 VMWs and 650 MMWs currently serving the 3,200 villages at risk of malaria, and this cadre of health workers carries out the majority of diagnosis and treatment interventions at the community level. Volunteers are provided a monthly US\$ 10 incentive, which is funded by the Global Fund. An outstanding question is the financial feasibility of maintaining the current VMW/MMW network following the end of Global Fund support and the feasibility of maintaining the operation and quality of this cadre without incentive funding. This is a crucial concern because there are staff shortages at the subnational level and the subnational public health staff do not have the ability to carry out the community-based malaria activities that VMW/MMW conduct and that are critical for reaching high-risk populations.

Finding #4. Recruitment and retention of health staff in rural remote areas is a threat for the malaria program.

Staffing rural areas is a broad challenge for Cambodia's health system strengthening efforts. Financial and other barriers prevent the recruitment and retention of health workers to remote health centers, creating a shortfall of staff to carry out malaria activities in the absence of the VMW/MMW network. Additionally, there are gaps in the malaria technical capacity of sub-national health offices. This poses a particular risk for the malaria program because of the high risk of malaria among rural and remote populations. To adequately provide malaria services to these groups, healthcare providers need time to build trust and understanding of the communities they serve. Retaining qualified and trusted staff will be especially important during transition, as this could possibly coincide with a reduction in the number of VMW/MMW. This is a particular risk for maintaining services for vulnerable and high-risk groups that may be less likely to utilize health centers.

Finding #5. WHO and non-government organizations play an essential role in bringing services to high-risk groups in hard-to-reach areas.

Global Fund financing supports NGOs (particularly CRS and MC) to deliver services in border areas and to mobile and migrant populations in forest regions. At present, there are no social contracting policy arrangements that would facilitate government

partners to maintain this collaboration following donor transition. The extent to which border regions and high-risk populations will need special attention and support should be reviewed in preparing for transition.

Finding #6. Technical partners provide critical support to the malaria program at both the national and sub-national levels.

At the central level, WHO, CHAI, UNOPS and PMI assist the CNM across all program domains from strategy to implementation. At the sub-national level, CSOs and UNOPS provide additional support to PHDs, ODs, health centers and VMW/MMWs, and there is limited planning in place to sustainably transfer these skills and support to government offices. These support roles are predominantly funded by the Global Fund, BMGF and PMI, and it is unclear what role civil society and international organizations will play in the absence of this funding. Therefore, donor transition may result in a rapid reduction in the level of technical and operational capacity support for CNM and subnational program implementation.

Opportunities

1. **Develop a human resources plan for malaria elimination.** This plan should outline the capacity needs at each subnational level and the cadres anticipated to carry out malaria program activities, with a focus on attracting and retaining the required expertise for POR and a strategy for capacitating subnational staff on malaria program guidelines and implementation. The plan should include strategies to strengthen and increase retention. This plan should also consider the ideal role of CNM in an integrated and decentralized system.
2. **Develop a POR plan to identify the future needs of the program.** The program's staffing needs are likely to evolve rapidly in the coming years, both in terms of the scale of the workforce and the skills and capacities required. The POR planning process should be prioritized, with costing and HR assessment included, to enable the program to plan for and make necessary changes. This will then need to be mapped against the current capacities of the programs, to identify any gaps that would have to be addressed in transition period.
3. **Explore opportunities for social contracting** or other arrangements to maintain implementing partner participation in the malaria response following the end of donor support.

Malaria Program Implementation: Decentralization and Integration

Key findings

Finding #1. The MEAF highlights a goal of shifting from a vertical to a more integrated and decentralized program, which will demand enhanced strategic planning and local capacity building.

Subnational authorities, including PHD, OD, and health center teams will take on increasing responsibility for the malaria response under the D&D reforms. Program activities currently carried out by these jurisdictions are principally funded by the Global Fund and USAID and supported by implementing partners. Transition may impact the ability of these partner agencies to continue these activities and limit the ability of the malaria program to draw on other agencies for assistance, and there are concerns regarding the capacity of local government to absorb programmatic costs. A clear integration plan mapping the transition to local ownership is not available at this time.

Finding #2. The centralized and nationalized process for strategic planning is likely to evolve with D&D and transition, driving a change in CNM's role and relationship with subnational leaders.

The current donor-funded system favors vertical program planning and management, with limited inputs from the sub-national level and a high degree of reliance on external technical expertise. During transition it will be critically important to implement strategies ensuring sufficient technical capacity at the PHD and OD levels in terms of planning and delivering services. At the same time, CNM may evolve to play an enhanced role in providing this strategic and technical guidance, and currently donor-supported functions must be embedded accordingly during the transition period.

Finding #3. Integration of the VMW/MMW workforce is an essential part of the path to transition, yet must be done with caution given their critical role in the malaria program.

As Cambodia moves closer to elimination, the need for VMW/MMW is likely to decline, particularly in areas that have achieved or are near to achieving elimination and in areas near a health center. In these areas, community health workers with an expanded scope of practice may better meet community health needs.

The integration of VMWs is part of CNM's strategy to transition from a vertically funded programmatic

approach to a sustainable whole-of-health system approach. CNM has indicated a goal of fully integrating the VMW/MMW network by 2025, beginning with low-risk provinces and rolling out to additional provinces as the country moves towards elimination. However, CNM is cautious not to integrate this cadre too quickly before securing malaria elimination results. The Global Fund RSSH grant is currently supporting the MoH Health Promotion Unit to explore integration of community health workers throughout Cambodia, including analyses of health worker cadres and overlap between these. This could take the form of expanding the scope of practice for VMW/MMW, and/or integrating VMW/MMW with other cadres of health workers such as the village health support groups (VHSG).

CNM is reviewing the role of VMW and exploring the potential to expand the services they provide in the 2021–2023 period. To date, CNM has issued guidance allowing VMWs to provide mebendazole for soil-transmitted helminths and is considering including activities for dengue. If the scope of the VMW/MMW can be expanded, they could continue to play a role in surveillance which will be important, especially in hard-to-reach areas once elimination is achieved and also provide other services to their communities.

Finding #4. There are opportunities to enhance efficiency and integration within the information, surveillance, and supply chain management systems.

At present, the malaria program maintains parallel systems for surveillance (MIS and HMIS), and components of the supply chain management and emergency commodity distribution systems also operate in parallel systems managed by CNM and other MoH agencies. Greater understanding of the feasibility and risks of fully integrated systems will be important as part of the transition process, with a focus on the unique surveillance and supply chain needs of malaria elimination and POR programming and strategies to align these needs with integrated health system platforms.

Finding #5. Efforts to further integrate and decentralize the malaria response will require strong leadership by the MoH and partnership between MoH, MoEF, and CNM.

CNM must be a core partner in efforts to integrate the malaria program, including defining the role and mandate of a central technical body to guide elimination and POR efforts in the long-term. At the same time, this work must be led by the MoH and MoEF to generate the political will and resources essential to the success of an integration effort.

While D&D reforms have been rolled out, associated capacity building and training on new structures and guidelines has rolled out slower than expected, in part due to COVID-19. Receptivity to the D&D reforms has varied at the provincial and OD level, with some subnational leaders more engaged than others in taking on decentralized health sector leadership. Areas of particular risk for malaria program sustainability include: (1) enhancing CNM's stewardship role to focus on policymaking, monitoring and supervision, technical support, financial management, and program and HR administration, and (2) building provincial and district level capacity to implement and manage malaria program activity delivery. The transition period offers an opportunity to engage MoH early in the planning process for integration to ensure critical malaria capacities and activities are not lost during the transition period.

Finding #6. Governors and PHD Directors will likely become more important stakeholders in provincial malaria response and resource allocation.

With the recent scale-up of D&D in the health sector, each province's health budget is now integrated into the overall provincial budget for public programs. Thus, the office of PA, headed by the provincial governor, will have more decision-making power on health budget prioritization and resource mobilization. However, it remains to be seen how attentive and directive governors will be in provincial health budget allocation decisions versus PHD Directors, and the extent to which either stakeholder will prioritize malaria activities when they are not covered with earmarked donor funds and instead are competing with other public health priorities like family planning, immunization, and emergency services. Currently, with long-standing verticalization and external financing of the national malaria program, malaria has been treated as a separate program at both national and sub-national level. With more government resources funding the malaria program in future, the scrutiny by government stakeholders including the provincial governor and the PHD Director will increase and the parameters for prioritizing budget for malaria elimination as part of the overall government health budget will take form. Therefore, it will be important to ensure that the provincial governor and the PHD Director are cultivated as champions for malaria elimination.

Opportunities

1. **Develop an integration plan.** The plan should lay out guidance for the elements of the malaria program that can be integrated, the agencies and cadres to carry out integrated activities, and the required technical, financial, and management capacities to support these activities. The plan should additionally include a timeline and indicators for measuring progress towards the stated MEAF strategic goal of creating an enabling environment for malaria elimination.
2. **Develop a plan for the integration of VMWs into the broader CHW network of the MoH.** Engage the MoH and subnational health departments to develop a dedicated strategy for VMW/MMW integration, including dedicated technical assistance to CNM on integration and CNM's active participation in MoH strategy and review of community volunteer networks to ensure critical malaria capacity is not prematurely lost at the subnational level.
3. **Build CNM leadership as central technical body.** As Cambodia moves closer to elimination, PHD, OD, and health center offices will play a growing role in the malaria response while the role of external partners is likely to decline. The need for a strong technical body will remain at the central level to provide guidance and support to the subnational elimination and POR program. The POR program will require different skills and capacities at all levels of government, and a shift in the role of CNM from implementing program activities to serving as a technical resource for subnational health agencies. This technical function should shift from implementing partners to CNM ensuring the retention of technical expertise for the long term.
4. **Bolster capacity of subnational leaders.** The transition period will need to sustain technical assistance to the sub-national health department teams who are delivering case management services and conducting surveillance, IEC/BCC and vector activities. An additional priority is the development of stronger subnational capacity for the planning and implementation of malaria elimination activities as well as for effective and efficient budgeting and financial management of donor and domestic resources for malaria elimination and health system strengthening. Support should be tailored to the district and provincial level, and include both health system (e.g., PHD Directors) and local government leaders (e.g., provincial governors). The transition period can additionally focus on investments in CNM to serve as a long-term technical resource for a decentralized and integrated malaria response, and targeted TA from select partners toward the same goal.

Political Will and Leadership

Key findings

Finding #1. High level leaders of the RGC have stated their support and commitment to achieve the goal of malaria elimination by 2025.

The Prime Minister and the MoH have stated support for the CNM, with the Prime Minister signing the Malaria National Strategic Plan, and the Minister of Health endorsing both MEAFs. The MEAF has functioned to raise awareness about the malaria program among government partners, and to increase engagement between CNM and other government agencies including the MoI, the MoE, and the MoND. These public displays of commitment are encouraging, but without the ongoing support of donors for malaria activities, it is not clear if malaria will continue to attract such high-level support. It will be important that political will is reflected domestically through strong leadership and advocacy by the Minister of Health and directors of CNM.

Finding #2. Cambodia's nascent subnational elimination committees remain under-developed and reliant on outside support for funding and functioning.

National and subnational committees in place to support the goal of malaria elimination, including the National Malaria Elimination Task Force, PSMET and DSMEC can be better leveraged to mobilize attention and financing for malaria. The presence of these committees signifies an opportunity for local ownership of, and multi-sectoral participation in, malaria elimination within Cambodia's decentralized governance system. However, there is concern that these committees may further weaken without financial support from RAI and coordination support from UNOPS or CSOs, undermining efforts to enhance malaria visibility across the government system.

Finding #3. International partners serve an important role in generating political will for malaria elimination.

External partners, and particularly the RAI, play a crucial role in providing a platform for advocacy on malaria elimination, including hosting many of the key high-level events where political leaders express support for the malaria program. Engagement in APMEN/APLMA and other regional and global efforts has helped to build political commitment for elimination within the country. CNM will need to adopt a more pro-active advocacy strategy and build new partners for advocacy to fill the gap that may be left at the end of RAI. Regional coordination is viewed as

important in maintaining political commitments, and it requires financing and personnel support that is unlikely to be funded from governments.

Finding #4. Enhanced communication between CNM and the broader MoH structure may foster greater support for elimination.

The current system facilitates a more siloed malaria response limiting the visibility of CNM within the broader health system. Building greater communication between government agencies and across levels of government could increase awareness of the malaria program's value and needs, mobilizing needed government support during and after transition.

Finding #5. Unknown impact of COVID-19 on the Cambodia's health system and economy.

As the COVID-19 pandemic continues, it is likely in the near-term that the government may face challenges both in terms of financing and infrastructure to absorb additional non-urgent health priorities. In the longer-term, it is likely that efforts will be made to strengthen and maintain regional health security and surveillance systems, including increased investments in communicable disease programs. This moment presents risks and opportunities for the malaria response, and the program will need to be nimble to ensure elimination remains on the agenda. Continuing monitoring of the impacts of the pandemic and pandemic response will be critical to ensure malaria elimination remains on the agenda and the malaria response is best positioned to leverage any new investments in health system strengthening, health security, and communicable disease programs.

Opportunities

1. **Identify and leverage opportunities that may emerge as a result of the pandemic.**
It is widely believed that new and increased investments will be made in health system strengthening, surveillance systems, and communicable disease programs. The malaria program may be able to leverage these investments for elimination.
2. **Increase country ownership and responsibility for Global Fund malaria grants.**
Success during and after the transition period will require greater collaboration and coordination between CNM and other government partners, particularly the leadership of the MoH and MoEF. The MoEF has taken on a greater role in the health sector in recent years, for instance the Secretary of State of the MoEF chairs the country coordinating mechanism (CCM), and

the MoEF serves as the PR for the TB and HIV/AIDS programs. Engagement of the MoEF in the TB and HIV program grants is considered a strategic opportunity that encouraged the RGC to take greater ownership and responsibility for these programs, increased awareness of the needs of the programs and enabled the programs to achieve more political and financial support. The malaria program should consider a similar mechanism, which in addition to increasing the national ownership, could strengthen government funding for malaria and improve the program's cost-efficiency. However, any steps to change the PR must be done in a manner that does not undermine current progress towards elimination. There is a risk that bringing in new partners at this time who do not understand the history and operations of the program under the UNOPS regional model may slow progress without adequate planning and communication.

3. **Work with regional partners, such as APLMA/APMEN and WHO to highlight the importance of sustained and continued investment to achieve malaria elimination and prevention of reestablishment.** There are concerns that as the country moves closer to elimination, there will be pressure to prematurely end funding and channel resources to other priorities. The program must work with regional and technical partners to make the case for sustained funding for essential elimination and POR activities in the post-elimination era.
4. **Strengthen existing national and subnational platforms for malaria advocacy and assess opportunities for better leveraging local health committees for enhanced community-level malaria response.**

Health Product Management for Malaria

Key findings

Finding #1. CHAI, PMI, and UNOPS play a key role in providing health product management support to the malaria program, including forecasting, quantification, and purchasing.

CNM's internal capacity for health product management, particularly on forecasting and stock management, remains limited, and the national malaria program relies heavily on technical assistance from partners to effectively use data and forecasting tools for procurement planning. UNOPS established the Supply Chain Management Coordination Group to coordinate and share information across key partners,

and, in some cases, coordination platforms remain partially reliant on donor finance and management.

Finding #2. Donor financing supports the large majority of procurement of essential malaria health products.

UNOPS is responsible for procurement, using Global Fund finance, with USAID providing supplemental financing as needed. Under RAI3E, the RGC procures second-line treatment as part of their co-financing commitments. It remains unclear what plans are in place to transfer procurement from UNOPS to government agencies.

Finding #3. Government and external partners jointly support the storage and distribution of supplies and commodities for the malaria program.

The CMS manages storage and distribution of all malaria program supplies and commodities, except for LLIN/LLHIN, which is managed by the Global Fund. These activities are fully managed and financed by the government. However, CSO partners – with funding from the Global Fund – play a key role in last mile distribution and in remote regions with high malaria risk, providing support to ensure VMW/MMW do not experience stock outs. Priorities for the transition period include planning for storage and distribution of LLIN/LLHIN and last mile distribution to high-risk populations.

Finding #4. CMS has limited capacity to manage emergency procurement and distribution outside of routine schedules.

As Cambodia nears elimination, ensuring the availability of RDTs and ACTs in the right place at the right time is increasingly challenging, and there is an increased risk of stock outs and/or stock of expired products. Donors and NGO partners have often stepped in to close any gaps and to manage emergency procurement and distribution, using Global Fund financing and personnel. There is a particular concern regarding the ability of CMS to respond effectively during outbreak scenarios and the implications of this for POR.

Finding #5. Efforts are being made to improve Health Product Management across the whole of the health sector.

The Global Fund and USAID have made investments to develop an integrated health commodity tools and systems (e.g., LMIS) that could support quantification and monitoring of supplies. However, this system is yet to be adopted, and there are concerns that without continued donor support CMS will continue

to rely on off-line systems. In the interim, CNM has upgraded the Malaria Information System (MIS) to include a stock management application, and trained OD and HC teams to use this system, with data now being reliably entered at the sub-national level and monitored at the central level by UNOPS and CNM. This process through the MIS is reliant on Global Fund financing, and even though CNM has developed the tool, not all staff are confident using online systems. Building the capacity of CNM and CMS staff to confidently use online tools during a transition period would help the programs be more efficient.

Finding #6. External partners play a central role in quality assurance, a critical component of the program given high risk of drug resistance.

Funding for quality assurance and pharmacovigilance is provided by the Global Fund, and the quality assurance activities are carried out by several partners including CNM, UNOPS, WHO and DDF, and supported by external partners including APLMA/APMEN, FDA and TGA. The external partners support the national program on the advocacy, registration, and approval of essential health and non-health commodities for malaria. DDF collects samples and sends these to a pre-qualified lab for testing, with both fieldwork and testing paid for by the Global Fund. Given the risk of Artemisinin resistance in Cambodia, Therapeutic Efficacy Study (TES) are conducted by WHO, with funding from USAID.

Opportunities

1. **Establish a clear plan for transitioning health product management responsibilities.** An SOP for malaria products in the context of elimination should include clear roles and responsibilities for CNM and CMS, and clear action plans for addressing stock outs and emergency procurement. This should include an assessment of gaps and opportunities for improving the supply of malaria commodities through the CMS distribution channels. Existing bodies including the Supply Chain Management Coordination Group and PSM Sub Working Group forum can provide a platform for addressing transitions challenges related to health product management.
2. **Build CNM and CMS capacity for forecasting and quantification.** These key functions, which will become increasingly important in an elimination and POR setting, rely heavily on TA from Global Fund supported partners. Enhanced training and capacity building on health product management tools and programs will be needed to strengthen key activities. This should include addressing barriers to the use of online planning tools, drawing on the experience from MIS trainings and uptake.

3. **Engage MoEF to prepare for the increased financial need related to health product management for essential malaria commodities.** Costs are heavily donor subsidized, and efforts need to be made to work with MoEF to absorb these costs in the national budget. A similar effort was successfully undertaken by the HIV program and can serve as a model. Costs should continue to decline in coming years but will need to be maintained even in the POR period. Stronger collaboration between CNM, MoH, CMS, and MoEF will be important to ensuring sustainable finance for essential malaria products.

Health Information Systems for Malaria

Key findings

Finding #1. Parallel surveillance systems (MIS and HMIS) are costly to manage, and there is a need for a clear plan to upgrade and integrate these systems in a way fit for purpose for elimination.

Surveillance data are currently reported into two systems, the Health Management Information System (HMIS, managed by Department of Planning and Health Information), and the Malaria Information System (MIS, managed by CNM). Sustaining both systems is unlikely to be feasible in the long term. The MIS has a high degree of functionality for an elimination program that does not exist within the HMIS. However, funding for the MIS – including upgrades, trainings, hardware, staff incentives for surveillance and monitoring, and other key inputs – is provided by the Global Fund and there are concerns that the MIS system and the quality of data collection will be eroded following Global Fund transition.

Finding #2. VMW/MMW collect the majority of case management data.

Plans to integrate VMW/MMW into the VHSG or other community health worker programs need to take into account the role of VMW/MMW in malaria surveillance activities and ensure these activities are not lost.

Finding #3. Greater attention is needed to enhance the use of data for decision-making.

The MIS is a high-quality surveillance system, but to fully realize the benefits of this system, greater capacity is needed within CNM and subnational governments to use this data for decision-making. While some technical partners have been supporting all levels to use data for decision-making and improved implementation, a transition plan should

be formally developed to equip government staff with skills to interpret and use data to guide malaria policies and program activities.

Finding #4. MEAF outlines a plan for upgrades until 2023 and these upgrades are fully funded by the Global Fund.

At the end of 2023 the MIS will have all the functionality required for an elimination program. Clarity is needed as to what the needs will be beyond 2023, including items such as hardware, monitoring, quality assurance, and refresher training. The government is funding one staff member at CNM to manage the MIS, but any co-financing support from the RGC is dependent on donor co-financing.

Opportunities

- 1. Conduct a feasibility assessment detailing risks and opportunities for a single merged surveillance system.** This assessment should outline the feasibility of upgrading and/or integrating the HMIS or the CDC disease outbreak system to be fit for purpose for malaria elimination; and the feasibility of maintaining the existing MIS system without Global Fund support. The assessment can serve to build consensus on the best approach to sustaining high functioning health information systems and the financing and management requirements for this, and should reflect ongoing efforts within the MoH to upgrade their information and surveillance systems. The assessment can draw on lessons learned from the transition of HMIS from donor to government funding.
- 2. Expand training and capacity building on the usage of MIS and HMIS.**

Sustainability and Transition Planning

The sustainability and transition assessment and scoping exercises generated four recommended strategies to support CNM and the wider community of health donor and partners in Cambodia ensure a smooth transition and strong pathway to sustainability for the country's malaria response. These recommendations reflect immediate next steps that CNM and partners can take to advance the opportunities identified in the above sections.

Recommendations

Recommendation #1: Develop a sustainability and transition plan that outlines strategies and steps needed to support sustainability and transition.

With completion of this report, CNM and partners have achieved an important initial step in preparing for transition. A critical next step is the development of a transition and sustainability plan, as required of RAI countries by the Global Fund Technical Review Panel. The purpose of a sustainability and transition plan is to outline the strategies, actions, and roles needed to prepare for transition and support sustainability. It should build on the assessment findings and provide direction on how the priority challenges and opportunities should be addressed.

There remains a lack of clarity among key malaria stakeholders on the timeline and expectations of transition, as well as concerns that transition will present major risks to the malaria program and threaten the achievement and maintenance of malaria elimination. Preparing a transition plan will provide important guidance for the transition process, including clarifying outstanding questions about the transition timeline and process, the roles and responsibilities of CNM and their partners in transition, and how risks will be mitigated throughout transition to ensure sustainability of critical malaria activities. The plan can also serve as a tool to advance dialogue and decision-making between CNM and partners, and to monitor progress in preparing for transition.

The transition plan should:

- Establish a clear timeline for transition, including anticipated changes to the level of funding, type of funding, or anticipated funding recipients, and a strategy for embedding donor-supported structures and functions into government structures.
- Clearly prioritize identified challenges and opportunities, aligning partners on which actions to address and in which order, at various phases of the transition process.
- Outline the roles, costs, and support needed to implement activities in the transition plan, and detail a plan for securing the needed capacities and resources for implementation.
- Draw on expertise and experience from prior transitions (e.g., Cambodia's HIV transition process, the transition process of other RAI3E countries), including through consultation with the Global Fund, RAI RSC, CCM, and other partners.

Due to the complexity of transition and the challenges of implementing many of the recommended program and policy changes for transition success, it is critical that the transition planning process begin early and leave sufficient time for developing shared understanding of sustainability, transition and integration; building consensus on the priorities

and path for transition; and implementing transition preparedness and sustainability strategies.

Recommendation #2: Establish a Sustainability and Transition Working Group.

This working group can provide leadership and guidance during the transition process, including generating consensus across key stakeholders on the sustainability and transition plan and monitoring implementation of the plan. The Working Group should engage leadership from MoH, MoEF, and other relevant government sectors, as well as stakeholders and technical advisors from national and international organizations.

Recommendation #3: Adopt and implement a malaria budget advocacy strategy to increase sub-national ownership of malaria elimination activities and increase domestic financing for elimination.

The findings presented above highlight the critical importance of increased domestic investment in the malaria response to close financing gaps that will emerge during donor transition, as well as the need to enhance subnational capacity and finance in the context of D&D reforms. A priority next step will be the adoption and implementation of a Malaria

Budget Advocacy plan. The purpose of this plan is to outline a clear roadmap and strategies for mobilizing subnational financing for the malaria program and building subnational leadership in the elimination program. Further information on this recommendation along with a draft MBA strategy are provided in the [Malaria Budget Advocacy Strategy](#) below (see page 30).

Recommendation #4: Engage the whole of government and key partners in sustainability and transition planning and implementation.

A sustainable malaria response and successful transition requires the support and participation of MoH leadership and key departments, the MoEF, and other Ministries and government agencies, as well as collaboration with civil society, implementing partners, and national, regional, and global technical bodies. These partners have a critical role in complementing CNM's technical leadership with policy and financing solutions, and in addition should align their work with the priorities and strategies identified in the transition plan and malaria budget advocacy theory of change. The transition period can lay the groundwork for this collaboration through ensuring endorsement and support for the sustainability and transition plan by high level government leadership across ministries.

Malaria Budget Advocacy Strategy

One of the four key cross-cutting recommendations that emerged from the SUSTAIN assessment ([Findings of the Sustainability and Transitions Assessment](#)) is the importance of strengthening subnational domestic financing and ownership of Cambodia's malaria program, in line with RGC's initiative to progressively decentralize and deconcentrate authority and financing to peripheral levels of government. This will be particularly important post-RAI3E (i.e., 2024 and onwards), but the next three years are a critical time period for understanding opportunities and developing models for local budget advocacy and capacity building support that can be scaled up as donor funding declines in the future.

As an initial step, UCSF MEI developed a proposed strategy for 2021–2024 to support Cambodia's malaria-endemic provinces and ODs to finance and sustain their elimination responses through local leadership and ownership. The strategy focuses on building advocacy and PFM capacity of local malaria program implementers in the next three years so that they have the necessary data, skills, motivation, and relationships to secure sustainable political and financial support from government officials. The malaria elimination goal needs to be prioritized at all levels in order to ensure appropriate malaria services are maintained during the new D&D governance structure and the Global Fund's anticipated decrease in subnational malaria support after RAI3E. [Annex E](#) provides a stakeholder map for malaria budget planning and prioritization, providing a guide for potential malaria budget advocacy targets and efforts at the subnational level.

There is an opportunity to begin with a pilot in a to-be-determined set of provinces and districts to hone the model, before scaling-up successful interventions of the proof of concept.

The strategy below and its implementation requires further discussion, particularly regarding resources and roles for implementation (e.g., costed work plan), as well as an accompanying monitoring and evaluation plan.

Theory of Change

See [Figure 10](#) for the proposed program design, presented as a theory of change. The theory of change maps the required interim outcomes and pathways of influence to achieve the overall objective to strengthen domestic financing at subnational level.

SMART objective

The proposed SMART objective aims to strengthen domestic financing at the subnational level: All malaria-endemic provinces take ownership of their elimination programs in the newly decentralized governance system and effectively advocate for domestic financing from the RGC by 2024.

High-level tactics and approaches

The interim outcomes in the theory of change are categorized as short, medium, or long term. They are also grouped into high-level tactics and approaches:

- **Evidence gathering and evidence-based decision-making:** the outcomes needed to ensure adequate and relevant information is collected and packaged for process mapping, stakeholder identification, documentation of learnings, and budget advocacy
- **Partnership and consensus building:** the outcomes related to developing partnerships with external actors or with decision-makers to ensure sufficient capacity and success of advocacy at subnational level
- **Capacity building and advocacy:** the outcomes that are required for enabling local ownership of and domestic budget allocation for the malaria elimination programs at subnational level

Interim outcomes

SHORT-TERM (1–6 MONTHS)

Evidence gathering and evidence-based decision-making

Priority areas of support for capacity building and target stakeholders for budget advocacy are identified at the provincial and OD level through partner consultations.

A rapid scoping and baseline assessment will be conducted with stakeholders from a sample province's PA, PHD, and OD, as well as CNM and partner organizations, to identify areas of capacity building that are deemed critical for enabling local ownership of malaria elimination and to generate a preliminary stakeholder map of decision-makers, influencers, gatekeepers, and allies for provincial/district budget advocacy.

1–2 provinces are selected based on the local status of malaria elimination, political will at provincial level, partner presence, and program management capacities.

Pilot provinces are identified for establishing the capacity building and advocacy support at subnational level. Factors such as the local malaria transmission, partner landscape, existing capabilities for planning and budgeting, and commitment to achieving malaria elimination within the PA are assessed for the selection of provinces. The aim is to hone the model during the first phase for future scale-up to other malaria-endemic areas, so CNM and partners may wish to select province(s) that demonstrate receptivity to the proposed support for maximum likelihood of uptake and success.

Decision-making stakeholder maps, understanding of malaria situation, and the annual planning and budgeting process at provincial level for RGC-funded programs are assessed in detail for pilot provinces.

Once the pilot provinces are selected and official approval is obtained to work in the province(s), this step is designed to gain a clear understanding of the local malaria situation, health system organization and priorities, financing sources and flows, budget cycle, and stakeholder dynamics at all relevant sub-national levels (PA, PHD, OD, communes, HCs), building on the preliminary work done in step 1 and the January–June 2021 scoping but at a more granular level.

Partnership and consensus building

The commitment of PHD and OD Directors to malaria elimination goal and budget needs in the pilot provinces is confirmed; support areas

related to planning, budget advocacy, financial management are agreed upon.

Official agreements are reached with sub-national leadership, in cooperation with CNM, for the planned support, including scope of the proposed capacity building and budget advocacy intervention.

Critical PA stakeholders who have yet to commit to the goal of malaria elimination – including governor, deputy governor, finance staff, and the provincial council – are identified and relationships are initiated.

The power and influence of new stakeholders from the PA in the decentralized governance system are assessed in order to design the optimal provincial engagement strategy for budget advocacy. Mechanisms for PA-PHD dialogue and collaboration are created or identified, depending on whether they already exist in the pilot provinces.

MEDIUM-TERM (7–18 MONTHS)

Capacity building and advocacy

The sub-national support role of CNM in the post-transition phase is facilitated for the pilot provinces.

With the anticipated transition of malaria program financing to the RGC in the coming years, malaria program management will be integrated into the management systems used for the government-financed programs. CNM will continue to play a critical support role in policy-setting, strategies, and procurement but these support activities will need to be embedded within broader government systems. Plans for post-transition roles and responsibilities, coordination, and communication practices between CNM and their subnational malaria counterparts will be facilitated through a series of dialogues and workshops.

PAs, PHDs, and ODs in the pilot provinces are capacitated on planning, budgeting, and financial management for the malaria elimination program.

In collaboration with CNM, MoH, and MoEF, SOPs and training materials are developed according to the scope agreed upon in the short-term steps above, and building upon previous subnational capacity building and budget advocacy support programs provided by UCSF in other malaria-eliminating settings, as appropriate. Trainings are conducted for the target stakeholders in the PA, PHD, and ODs of the pilot provinces. In addition to these trainings, these stakeholders receive individualized, ongoing coaching during at least one annual cycle

of planning and budgeting to strengthen leadership, management, and advocacy capacity.

Evidence gathering and evidence-based decision-making

The strategy, operations, and resource needs for malaria elimination are understood in detail at technical and leadership level across PHDs, ODs, and PAs as required in the pilot provinces.

In cooperation with CNM, costed 5-year elimination plans at provincial level will be developed/updated in a consultative manner and line with commune election cycles – detailing elimination targets, necessary activities, and associated expenses – to inform annual budget requests.

Malaria expenditures are tracked and analyzed to ensure expenditures align with program strategies and integration efforts.

Provincial malaria program implementation progress and budget allocation/utilization are tracked and discussed during routine meetings of the malaria elimination task forces at PHD and OD levels. Responsibilities are redefined and data sharing agreements are established to ensure malaria program leads have complete visibility on budget availability and utilization, thereby allowing them to plan effectively on regular basis.

Partnership and consensus building

The PA in the pilot provinces is knowledgeable of the resource needs and is committed to prioritizing malaria elimination as part of the provincial health agenda.

The PA leadership, who are the new stakeholders bearing responsibility for provincial health outcomes in the recently rolled-out D&D governance structure, will be regularly engaged in strategy, planning, and budgeting processes to ensure they support malaria elimination as an important part of provincial health goals. The PA will be supported with evidence-based advocacy messages to support justification and defense of budget needs to the MoEF.

LONG-TERM (19–36 MONTHS)

Evidence gathering and evidence-based decision-making

Lessons from the subnational capacity building and advocacy pilot are documented and disseminated.

The methods, results, and learnings of the pilot, including SOPs, planning and budgeting tools, training

materials, redefined processes and revised roles & responsibilities, are documented and discussed in cooperation with PAs, PHDs, and ODs from the pilot provinces and CNM, MoH, and MoEF at the central level as a model for potential scale-up across the country.

Partnership and consensus building

CNM and partners are supported at the central level to extend the support to rest of the target provinces.

CNM, MoH, and MoEF will be supported at the central level to extend similar support to more malaria-endemic provinces for ensuring strong local ownership and sustainability of a domestically financed malaria elimination program. The communication and coordination channels between central and subnational level will be strengthened and CNM will be capacitated to support all target provinces.

Capacity building and advocacy

PA, PHDs, and ODs in all target provinces are supported to own their malaria elimination program strategies and operations, and advocate for the resource needs from the MoEF.

By 2024, key stakeholders in all target provinces that have received the capacity building and advocacy support possess strengthened evidence, capabilities, motivation, and relationships to plan, cost, advocate for, and mobilize resources, implement effectively, and track budget utilization on a regular basis.

Advocacy Implementation and Related Partnerships

CNM will co-lead the implementation of the subnational capacity building and advocacy strategy to secure sustainable domestic budget allocations for malaria elimination activities in light of future donor transition in Cambodia. It will be strategic to engage with other key partners and task forces as allies for advocacy collaborations because advocacy from a broader coalition of actors, especially ones with aligned interests in advancing the goal of malaria elimination, can increase the advocacy's reach and effectiveness. If efforts are not coordinated between competing campaigns and coalitions advocating on the same issues, the overall message will be more fragmented and less impactful. CNM can provide messaging to partners and coordinate opportunities to engage key decision-makers through joint advocacy efforts. Additional advocacy implementation support may be available from other partners,

including UCSF MEI and APLMA/APMEN. Advocacy partnerships that should be considered include the following organizations and groups:

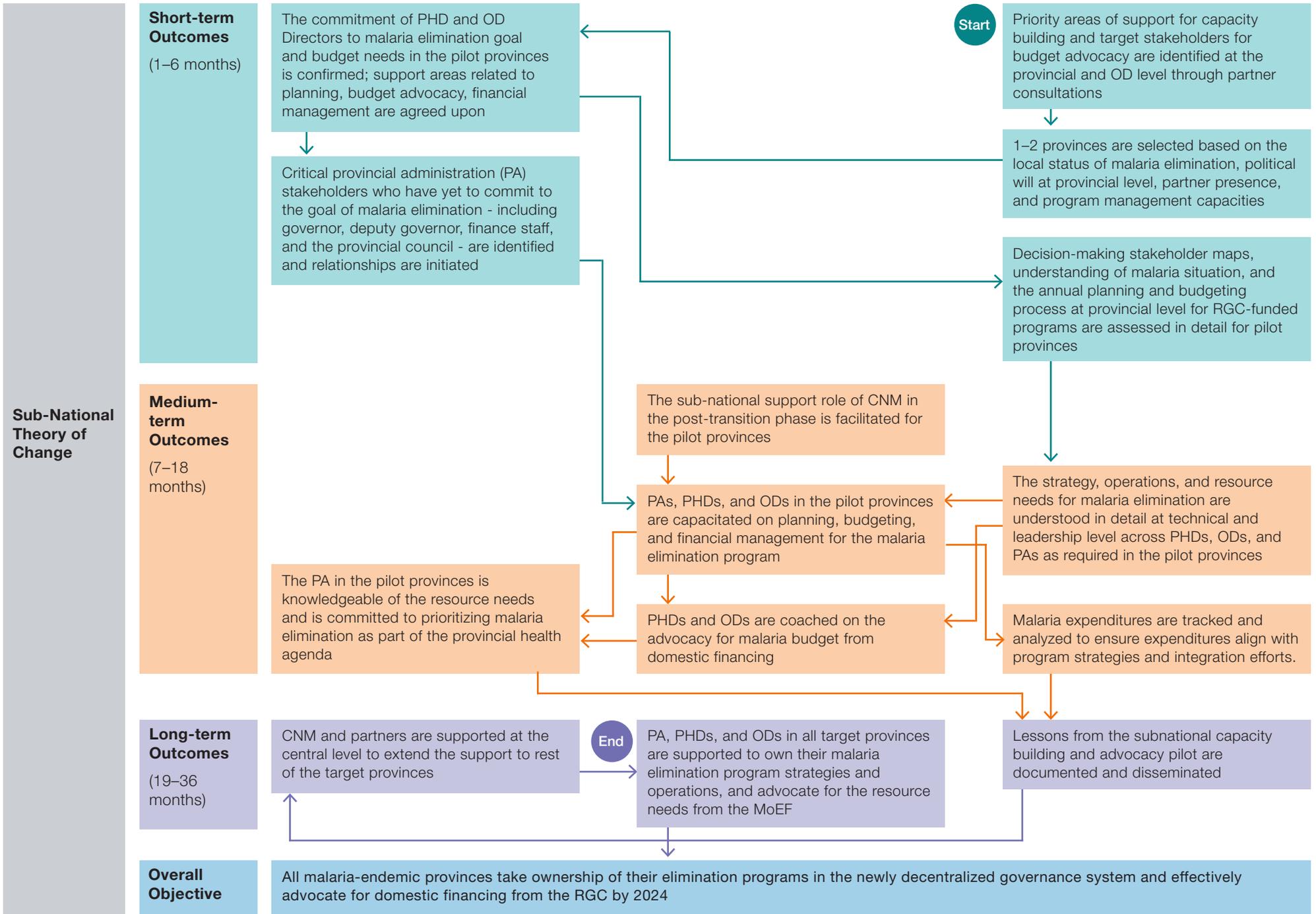
- **NSMET Committee:** The NSMET has high-level representation from diverse stakeholders, including many respected malaria experts and decision-makers from sub-national (e.g., governors and PHD leaders) and national levels. The committee is chaired by Minister of Health. The committee meets twice per year and acts as a key advisory group to the CNM by monitoring and following up on the implementation of the MEAF/NMES, and have the potential to be a positive force for the malaria program. Further focusing of the Committee's actions and advocacy efforts on the objectives of this strategy would leverage their respected authority and expertise and would ensure the advocacy strategy is implemented in an effective and timely manner.
- **WHO Country Office:** As a respected UN organization, the WHO Country Office provides technical guidance and advice to the CNM/MoH. The WHO Country Office in Cambodia could further the goals of the budget advocacy strategy by engaging with key decision-makers at the MoH on the importance of sustaining the malaria program, particularly its surveillance functions, as a part of health system strengthening. The WHO Country Office could also take forward messages to other multi-sector actors with whom it engages.
- **Global Fund Country Coordinating Mechanism:** Cambodia's CCM brings together multiple stakeholders to collectively identify country needs, design programming, and oversee the PR and PR-PIP's implementation of Global Fund-supported projects for the three diseases – HIV, tuberculosis, and malaria. The CCM includes membership from government, NGOs, civil society, and affected communities. The CCM model also enshrines the principle of participatory governance where CSOs are involved in the whole process of resource mobilization, resource allocation, and program implementation. As such, the CCM platform/network could be leveraged to engage a broader coalition of partners in resource mobilization efforts, and the unique perspectives of each constituency can be incorporated into advocacy messaging.
- **PMI:** USAID's malaria team provides technical assistance to the CNM for the development of new guidelines and setting priorities as well as capacity building and training to CNM and relevant sub-national and national health staff. PMI also continue to fund a malaria elimination project called 'CMEP' which is implemented in six malaria-endemic provinces. PMI is one of the two main funders for malaria elimination in Cambodia along with Global Fund.
- **UNOPS:** UNOPS Cambodia is the PR of the Global Fund malaria grant. The UNOPS Cambodia team oversees the whole implementation of malaria elimination activities funded by the Global Fund and they provide technical support on program management, budget management, and other aspects of the malaria elimination program. Partnership with UNOPS will be useful to learn from their sub-national experience and ensure smooth transition of financial management controls to the MoEF.
- **CHAI:** CHAI provides technical and management support on strategic and operational planning, financial management, case management, and surveillance at both central and subnational level. In the short term, CHAI could provide helpful costing and budget inputs to strengthen subnational domestic financing requests, alongside the capacity strengthening proposed in the malaria budget advocacy strategy. Given CHAI's strategic and operational planning support, CHAI would be well placed to link microplanning and other routine planning exercises with advocacy strategies and collaborations.
- **World Bank:** World Bank is engaged in providing support to the RGC on the cross-cutting public sector reforms and is a key partner in the H-EQIP MDTF. Their experience in public sector service delivery, including health, will be helpful to facilitate transition of the malaria program to the RGC.
- **GIZ:** GIZ, the German official development assistance agency, provides technical support to the MoH and Mol on D&D in health, transferring responsibilities from MoH to PAs. GIZ also provide technical support to NCDD/Mol to develop training materials and curricula and other related guidelines and instructions for building capacity of PA offices for smooth implementation of D&D at sub-national level.

Figure 10: Theory of change for proposed MBA strategy, 2021–2024

High-level Tactics/Approaches: **Partnership and Consensus Building**

Capacity Building and Advocacy

Evidence Gathering and Evidence-based Decision-making



Annex A: List of Interview Participants

This list reflects all individuals who participated in virtual or in-person discussions with the UCSF team, for preliminary consultation or as part of the SUSTAIN assessment, between June 2020 and May 2021.

National Level

Dr. Lek Dysoley, CNM
Dr. Huy Rekol, CNM
Dr. Siv Sovannarath, CNM

Dr. Sok Kanha, MoH-DPHI
Dr. Touch Sok Neang, MoH-HR
Dr. Teng Srey, MoH-CDC
Dr. Sung Vinttak, MoH-DIC

Somuny Raksa, MoI

Subnational Level

Dr. Voeung Bunreth, Battambang Province, MoH

Kong Chantha, Kampong Speu Province, MoH
Ph. Say Savy, Kampong Speu Province, MoH
Dr. Chea Sokkheng, Kampong Speu Province, MoH

Dr. Teng Bontheoun, Mondulkiri Province, MoH
Dr. Pen Kimheng, Mondulkiri Province, PMS
Dr. Bun Sour, Mondulkiri Province, MoH

Dr. Sam Oeun, Siem Reap Province, MoH
Dr. Sothy, Siem Reap Province, MoH

Dr. Ung Soviet, Steung Treng Province, MoH

Global Health Partners

Mony Srey, Abt Associates

Jon Cox, BMGF
Yang Hu, BMGF

Inessa Ba, CHAI
Paola Blendl, CHAI
Chhun Bunmeng, CHAI
Sokun Chea, former CHAI
Bunmeng Chhun, CHAI
Rose Martersteck, CHAI
Agrima Nagpal, CHAI
Michelle Pahl, CHAI
Lalit Sharma, CHAI
Aaron Tjoa, CHAI

Dr. Sok Pun, CRS

Megan Counahan, DFAT

Bart Jacobs, GIZ
Dr. Vanny Peng, GIZ
Dr. Him Phannary, GIZ

Rosie Ameyan, Global Fund
Izaskun Gaviria, Global Fund

Roberto Garcia, Independent Consultant
Sean Hewitt, Independent Consultant
Kylie Mannion, Independent Consultant
Kamini Mendes, Independent Consultant

Mark Debackere, Malaria Consortium
Rattanak Soun, Malaria Consortium
Lieven Vanaeve, Malaria Consortium
Meu Yom, Malaria Consortium

Shreehari Acharya, Malaria Free Mekong

Louis Da Gama, Malaria Free Mekong

Arjen Dondorp, Oxford Tropical Medicine Research Unit

Matteo Dembech, RAI RSC Secretariat

Saad El-Din Hassan, PMI
Dr. Rida Slot, PMI
Michael Thigpen, PMI

Socheat Chi, PSI
Eric Seastedt, PSI
Kemi Tesfazghi, PSI

Dr. Sokomar Ngoun, URC

Linda Amadadi, UNOPS
Mohammad Naeem Durrani, UNOPS
Attila Molnar, UNOPS
Hazel Gyagenda Natukunda, UNOPS
Syed Muhammad Sohaib Ahmed, UNOPS

Ziauddin Hyder, World Bank
Bhavesh Jain, World Bank
Elena Pradhan, World Bank
Anne Marie Provo, World Bank
Sophinith Sam Oeun, World Bank

Mai Mo, WHO
Jean-Olivier Guintran, WHO
Luciano Tuseo, WHO

Annex B: Cambodia's Public Financial Management (PFM) Reform Program

Cambodia's PFM Reform was launched in 2004 to tackle issues in the public sector financial management system. The PFM reform is a sector-wide multi-stage approach, implemented by the MoEF, to install high standards of management and accountability in the mobilization of government resources and ensure the effective and efficient use of those resources. The implementation of the PFM reform has been staggered in the following phases:

Phase 1: Budget Credibility

The first three-year period, 2005–2008, focused on enhancing the reliability and predictability of the RGC's annual budget. In addition to improving tax collection capacity, it focused on improving the accuracy of aggregate accounting and budgeting information through the establishment of a central-level financial management information system, and improved cash management via the creation of a Treasury Single Account and elimination of most off-budget and off-record bank account procedures.

Phase 2: Financial Accountability

Between 2008–2015, the PFM reform focused on improving internal controls and financial accountability at central level. Accountable management and use of financial resources were seen as a prerequisite for establishing better links between resource allocation and performance.

Phase 3: Linkages between Budget and Policies

This ongoing reform phase, started in 2016, aims to strengthen linkages between budgets and program policies. It involves the development of a medium-term fiscal framework at the aggregate level and the rolling out of a more flexible program-based budgeting strategy to all line ministries based on outputs, not inputs, thereby transferring some of the responsibilities to budget owners. This approach is also expected to improve the flexibility in program spending.

Phase 4: Accountability for Performance

The fourth phase (2021–2025), will focus on accountability for results. The strategic goal is that by 2025 the Cambodia budget system will be based on programs that are linked to policy and incorporate mechanisms for performance accountability. The model adopted for budget reform is "Performance Informed Budgeting," in which funding is allocated according to performance, with the aims of (a) enhance the transparency of budget allocation and expenditure, and (b) improve the performance of public sector health providers in the long-run through result-based budgeting. The MoH is among the pilot ministries to implement PFM reforms in its central and sub-national administrations.

Annex C: Cambodia's Two Systems for Annual Planning and Budgeting: Donor-financed and Government-financed Programs

Annual Planning and Budgeting for Malaria (Donor-financed Vertical Program)

The planning processes and cycles for Cambodia's malaria program have gone through iterations in recent years. Here we document the processes used during and since the RAI2E grant period (i.e., from 2018 onward). Annually, CNM and UNOPS organize and provide support for five different annual/semi-annual operational plan (AOP) development workshops with PHD, OD, and HC staff of malaria-endemic provinces for the Global Fund-financed elimination program. This system follows a top-down approach for annual planning in line with the funding cycle scope and workplan. For example, the 2021 workplan will be developed based on the detailed plan and targets committed under the 2021–2023 funding cycle. The five different workshops target different levels of the national health system and are covered in the RAI budget.

Draft AOP development at PHD and OD levels (x1)

Every year during November/December, CNM organizes workshop to develop the malaria AOP for each endemic province for the next Global Fund grant year. Typically, 3 staff from PHD (PMS, PHD Drug Store, PHD Accountant), 3 staff from ODMS, OD Drug Store, OD Accountant), and representatives from UNOPS sub-recipient implementing partners are invited to attend a two-day workshop. The workshop covers the progress achieved in the last year, the AOP tool and format, detailed activities (and associated activity-level budget) to be implemented during the next year, and orientation/refresher training on the grant management guidelines for the implementation of Global Fund RAI grants. There are break-out sessions in the workshop during which the provinces develop their budgets and the UNOPS sub-recipient implementing partners at subnational level provide support to their respective provinces. During the two days, PHDs and ODs get the opportunity to provide feedback on implementation challenges and the allocated budget for implementation. Any changes, if valid, are approved retrospectively after the workshop. The expected output from the workshop is a draft annual malaria work plan at PHD and OD level, supported by Global Fund, for the upcoming year.

Semester (6-month) work plan development at OD level with HCs (x2)

Following the AOP workshop at central level, the ODs use the draft work plan to organize a semester work plan workshop during January/February with their respective HCs. Typically, three staff (HC chief, HC malaria, HC drug store) per HC are invited to attend a two-day semester development workshop at the OD level. The workshop follows similar format of the central level workshops with detailed workplan development at OD and HC level in the Global Fund work plan template, the allocated activity-level budget, and orientation on any relevant grant management guidelines at HC level. The outputs of these OD-level workshops are detailed OD-HC workplans and budgets for the semester. The workshop for the following semester takes place in June–July. See below for a sample AOP work plan template from Global Fund.

Finalization of the semester work plan at PHD level (x2)

After ODs finalize their semester work plans with relevant HCs, the PHDs organize a mini workshop during January/February to review and finalize the entire semester workplan of the province with relevant ODs. These finalized semester workplans are then submitted to UNOPS and CNM. The workshop for the next semester takes place between June–July.

With the recent roll-out of D&D for health, these processes have gone through some recent changes, described below.

Annual Operational Planning and Budgeting Cycle for Government-financed Programs

For health programs that are primarily funded by the government, health budgeting and planning process is tied to Cambodia's political election cycles at subnational level. After the subnational government is elected, a 5-year plan is developed by the provinces, which is supported by a rolling 3-year plan, updated every year, and an annual operational plan (AOP). Note that this does not apply to health programs that are donor funded, such as malaria (see 'Annual planning and budgeting for malaria (donor-financed

vertical program)' section above). The process and timeline for this cycle is described below:

Planning and budget requests

Health budgeting for government-funded programs follows an annual cycle (Figure 5), with PA submitting their annual health budget to the MoEF in the mid-second quarter of the current year for the upcoming year. In January–February, the annual planning begins at health facility level using the AOP tool provided by the MoEF. The budget for a HC, referral hospital, or provincial hospital has a maximum limit in line with the range and level of services provided at each type of health facility (see 'National Public Health Delivery System' and 'H-EQIP' sections).

The ODs consolidate these HC annual plans with that of the district-level referral hospital and their own OD office under one plan and submit it to PHD by end of February. The PHD develops and adds their annual plan as well as that of the provincial hospital and submits it to the PA office of the governor by end of April. These plans are developed according to the format and guidelines prescribed by the MoEF and follows the program-based budgeting method as per the ongoing PFM reforms (see 'PFM Reform Program' section). The transition to output-based budgeting is planned, however the practices are weaker, and budgeting is based on historical estimates.

The provincial health budget, which is categorized into salaries, operating costs, and program implementation (not broken out by health program), is added into the overall provincial budget which also includes plans of other decentralized line ministries and programs. The provincial council members then review and give their approval followed by submission to the MoEF by June. With the recently roll-out of D&D, it is observed that the MoH receives the budget at the same time when it's submitted to the MoEF compared to the past where in the MoH received the draft AOP and provided feedback before the submission to the MoEF. In the current settings, the MoH may provide feedback after this submission before the budget defense but the guidelines on the newly evolved roles of MoH in annual planning at subnational level are not clear yet.

The PA office may receive feedback from the MoEF on the submitted budget for the upcoming year by August. During this time, typically in July, the provincial governor is invited to defend the submitted budget in front of the MoEF. Depending on the feedback and the submitted budget, the PHD director may join the governor to justify the health budget. The MoH is also present in these meetings and helps the PHD in defending the budget. After the MoEF, the

budget is sent for review by the council of ministers in November before approval by the national assembly in December.

An annual 5–10% increase in the government budget is allowed compared to the last year as per guidelines. However, in practice only a 2–4% increase is generally approved. This further gets affected by unexpected health emergencies which must be managed from within the allocated budget.⁶ For example, the 2022 budget for the health sector is expected to increase by 4% compared to 2021, in light of the COVID-19 pandemic.

Disbursement

As a result of the recent D&D reforms, the budget for the PHD is now part of the PA office budget as the PHD is now restructured to be part of the governor's office. The provincial treasury acts as the extended agency for MoEF for the PA. On a monthly basis, HC and referral hospital budget requests for operations management and program activities are consolidated at OD level and submitted to PHD. The PHD combines this with its own activities and submits the monthly provincial health budget request to the provincial treasury for approval.

Upon approval, the funds are disbursed directly from the MoEF to the bank accounts of different health facilities and sub-national budget offices including PHDs, ODs, and referral hospitals. (The budget of district referral hospitals and HCs is part of the OD budget and is disbursed via ODs). Having multiple budget disbursement lines from the MoEF to different subnational levels and facilities avoids placing complete responsibility at provincial or PHD level for financial management, reflecting weaker financial management capacities at provincial level. The budget is typically disbursed on a quarterly basis except for salaries, which follow a monthly schedule. However, some ODs and PHDs indicated they receive monthly disbursements in addition to salaries during the research conducted for this assessment.

Budget execution and expenditure tracking

HCs and referral hospitals complete Excel spreadsheets for their monthly reports and submit to the OD level where these reports are reconciled along with that of the OD. The compiled report from OD is submitted to PHD in a similar fashion. At PHD, these reports are reconciled, compiled, and submitted to MoEF in similar Excel sheets. Financial management supervision is done as part of routine supervision by the PHD on a quarterly basis and is a function of the available budget. The system allows for high flexibility to move budget across program areas and activities as per evolving needs and situations.

Figure 11: Annual operational planning and budgeting process

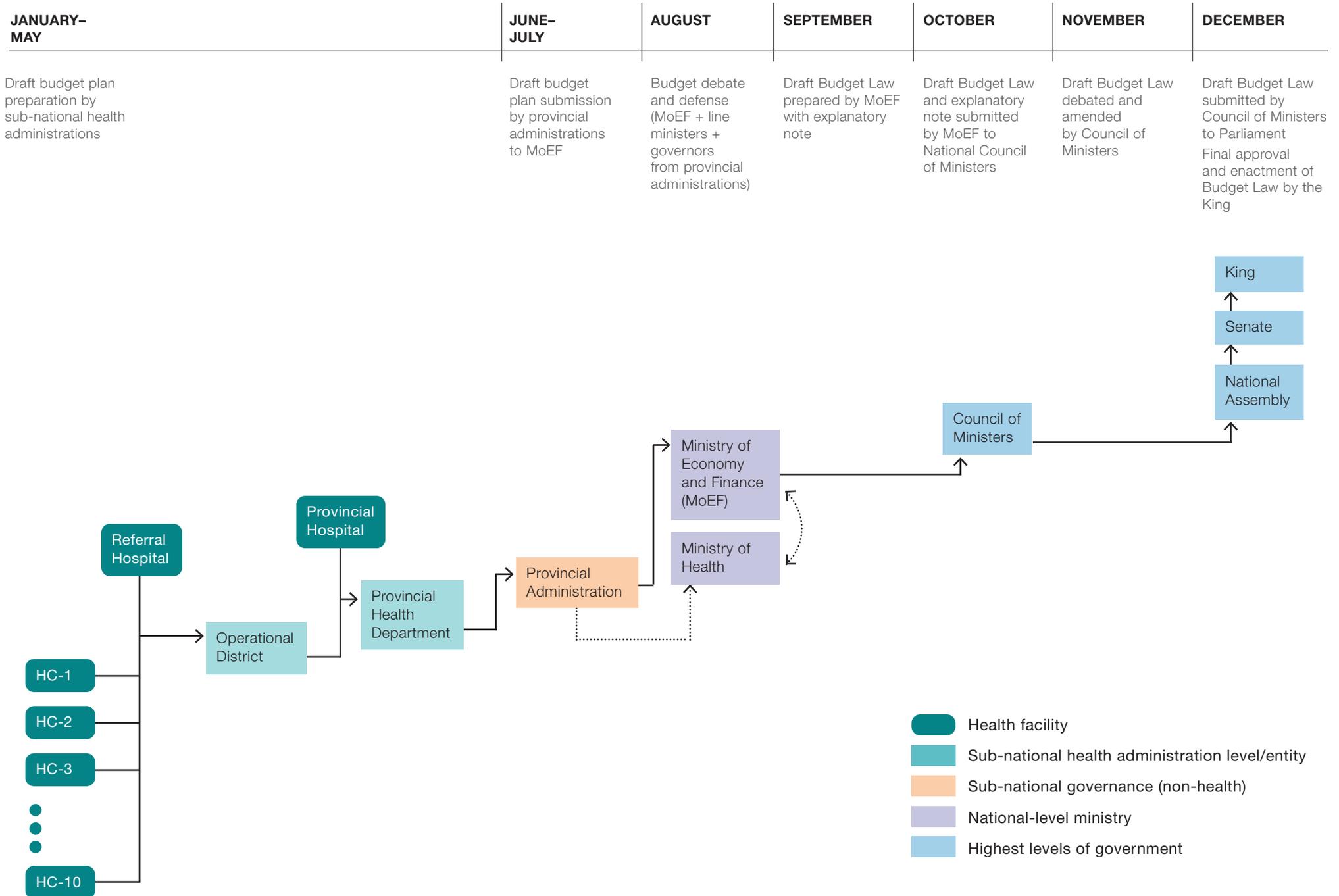


Figure 11: Annual operational planning and budgeting process

Annex D: Cambodia's Health Budget Sources

Government Budget

The government reserves budget for health as part of the country's public sector budget. The government health budget is primarily used for health workforce salaries, operational expenses, and select commodities. Note that annual operational planning and budgeting includes pooled funds from H-EQIP, described below. In their annual budget plans, subnational health program managers will tag different budget line items as H-EQIP or government funded.

Health Equity and Quality Improvement Project (H-EQIP)

Since 2016, the Cambodian public health system has been supported through the multi-donor-financed H-EQIP, which funds both demand- and supply-side interventions to improve equity and quality of care. H-EQIP includes total co-financing of approximately US\$ 194.2 million from the RGC (~US\$ 94 million), the World Bank (US\$ 45 million), and a Multi Donor Trust Fund (MDTF) including Australia, Germany, and Korea (US\$ 57 million) for the period of 2016–2021. H-EQIP uses two incentive mechanisms: (1) performance-based payments, and (2) fixed service delivery grants to health facilities.

H-EQIP's demand-side interventions aim to remove financial barriers to access and increase utilization of health services by the poor through Cambodia's HEF scheme. The HEF is a notable health financing system that purchases services from public health facilities on a pay-for-performance (output) basis, through a reimbursement of user fees on behalf of the poor, that has improved access to health services for the poor, leveraged quality improvements, and provided a major source of flexible revenue within the health system.

Under the HEF scheme, the RGC allocates a fixed amount to each public health facility, which is determined by the health facility classification. The allocation must be used for operating expenses and

cannot be used for health staff incentives. In 2016, each HC and CPA1, CPA2, and CPA3 referral hospital received approximately US\$ 3,000, US\$ 25,000, US\$ 37,500, and US\$ 50,000, respectively.

As of mid-2018, the HEF system had reached nationwide coverage to reach over 1,200 health facilities, including all Health Centers, all former District Hospitals, all Referral Hospitals, and six of the eight National Hospitals. The HEF system has grown from a series of small NGO-run pilots in the early 2000s to a government-owned, nationwide social health protection and health financing mechanism providing comprehensive coverage to about 3 million poor people in Cambodia.

Service Delivery Grants (SDGs) are a key government supply-side financial instrument and are comprised of fixed lump-sum grants and performance-based grants. The fixed lump-sum grants are allocated to all government health facilities at subnational level throughout the country in fixed amounts for operational expenditures in addition to operational budgets defined in their AOPs. The performance-based grants are co-financed by the RGC, the World Bank, and the MDTF and are provided to all government health facilities at subnational level based on their quarterly performance scores as assessed using a systematic IT-enabled tool. Up to 80% of performance-based grants can be spent on staff incentives. At least 20% of performance-based grants are eligible for any other SDG-eligible expenditures. Both fixed lump-sum grant, and performance-based grant payments are made directly to each health facility.^{7,8}

Social Health Protection Schemes

In Cambodia, there are currently three statutory social health protection schemes:

- Civil servants and formally employed workers are covered by the National Social Security Fund (NSSF) under the Ministry of Labor.
- The HEF (as described in the previous section), established to provide free access to healthcare for the lowest income communities, is operated by a semi-autonomous Payment Certification Agency under the MoH. This fund pays the user

fees for those healthcare services on behalf of the participants, including out-patient services (including birth delivery) and in-patient services (including surgeries). The HEF also covers the cost of referring the patients to the hospitals, food allowances, one caregiver in case the patient needs to stay in the hospital and funeral allowance.

- The above schemes are complemented by a limited number of voluntary community-based health insurance (CBHI) schemes, offering health insurance to those employed in the informal sector and vouchers for specific target groups. Many of these schemes have been piloted under the management of CSOs and are under evaluation for possible future adoption and scale-up.

Presently, the MoH estimates that these schemes collectively cover about 4.7 million Cambodians, or 30% of the population. As per the National Social Protection Policy (NSPP) Framework 2016–2025, the RGC aims to protect all citizens and includes the development and expansion of health coverage schemes to achieve universal health care. The 2020 coverage target was set at 8.12 million or 50% of the population but the progress and any updated coverage targets are unclear at the time of this report development.^{9,10}

User Fees

Another source of funds for public health facilities is generated as income in the form of user fees from incoming patients. The generated income remains substantially with the health facilities – 60% for staff incentives and 39% for operational expenses. A 1% tax is levied by the national treasury. As user fees are not set at cost-recovery level, they are not intended to replace government funding for health.¹¹

Annex E: Stakeholder Map for Malaria Budget Planning and Prioritization in Post-transition, Decentralized Settings

The table below lists key stakeholders in the malaria budget planning and prioritization process at national, provincial, district, and health center levels. These stakeholders' future roles are considered in light of decentralization and donor transition (when RGC funding will become an important source of subnational malaria program financing, and planning/budgeting will be subject to RGC systems). The color assignments in the matrix below reflect the assessment team's characterization of each stakeholder's anticipated level of influence and decision-making in a post-D&D roll-out, post-transition scenario.

| Level | Province | | | | | | | Operational District | | Health Center | National | | | |
|-------|--|---------------------|----------|-------------------|--------------|---------------------|---------------------------|-------------------------------|-------------|-----------------------|-------------|----------|----------|--------|
| | Stakeholder | Provincial Council* | Governor | Deputy Governor** | PHD Director | PHD Deputy Director | Chief of Technical Bureau | Provincial Malaria Supervisor | OD Director | OD Malaria Supervisor | HC Chief*** | CNM | MoH | MoEF |
| Role | Final decision on budget request to national level | Strong | Strong | | | | | | | | | | | |
| | Influence on budget request at OD/PHD/HC level | | | Strong | Strong | Strong | Strong | Strong | Strong | Moderate | Unknown | Strong | | |
| | Final decision on malaria program priorities | | | | Strong | Strong | Strong | Strong | Strong | Strong | Moderate | Moderate | Moderate | |
| | Influence on setting malaria program priorities | | | | | | | Strong | | Strong | Moderate | Unknown | Strong | |
| | Final decision on budget allocated at national level | | | | | | | | | | | | | Strong |

Strong level of influence/decision-making
 Moderate level of influence/decision-making
 Unknown – new role

*The provincial council reviews and approves all annual plans of provincial administration

**The distribution of responsibilities between governor and deputy-governor may vary from province to province. If deputy governor is responsible for the overall health sector, s/he has an important role that may help PHD submit increased budget requests.

***CNM will have a critical role to play in influencing the prioritization and budgeting. However, it is unclear how this will play out in the future.

Endnotes

1. 2019 Malaria Program Review.
2. United Nations, Department of Economic and Social Affairs, Migration Profile: Cambodia 2019.
3. Cambodia's Rural Health Markets and Quality of Care, Knowledge Brief, 2014, The World Bank.
4. Cambodia Demographic and Health Survey 2014, September 2015, The Royal Government of Cambodia and ICF International.
5. Except for Asian Development Bank, that works through the MoH for any malaria-related investments.
6. Directive on strategic and budget planning in the public sector for 2022-2024, The Royal Government of Cambodia.
7. Impact Evaluation of Service Delivery Grants to Improve Quality of Health Care Delivery in Cambodia, April 2019, The World Bank.
8. Health Equity and Quality Improvement Project - Phase 2, Project Information Document, Dec 2020, The World Bank.
9. Comparing Social Health Protection Schemes in Cambodia, 2019, Health Policy Plus, USAID.
10. National Social Protection Policy Framework 2016-2025, 2017, The Royal Government of Cambodia.
11. A role for user charges? Thoughts from health financing reforms in Cambodia, World Health Report, 2010.