



Health Resource Facility  
for Australia's Aid Program

# **Coordination of the Emergency Response to Artemisinin Resistance in the Greater Mekong Subregion**

Independent Mid-Term Review

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## Acronyms

ACTs	Artemisinin-based Combination Therapies
ADB	Asian Development Bank
APLMA	Asia Pacific Leaders Malaria Alliance
APMEN	Asia Pacific Malaria Elimination Network
AR	Artemisinin Resistance
ASEAN	Association of South East Asian Nations
BBINS	Bangladesh, Bhutan, India, Nepal, Sri Lanka Network
BCC	Behaviour Change Communication
BMGF	Bill and Melinda Gates Foundation
CNM	Centre National de la Malaria
DAV	Drug Administration of Vietnam
DFAT	Department of Foreign Affairs and Trade (Australia)
DG	Director General
ECA	External Competency Assessment
ERAR	Emergency Response to Artemisinin Resistance
FDA	Food and Drug Administration
GFATM	Global Fund to Fight AIDS, TB and Malaria
GMP	Global Malaria Programme
GMS	Greater Mekong Subregion
IMTR	Independent Mid-Term Review
LLINs	Long Lasting Impregnated Nets
M&E	Monitoring and Evaluation
MARC	Myanmar Artemisinin Containment Framework
MDGs	Millennium Development Goals
MMECP	Mekong Malaria Elimination Coordination Platform
MMP	Mobile and Migrant Population
MoH	Ministry of Health
MPAC	Malaria Policy Advisory Committee
NCE	No Cost Extension
NDRA	National Drugs and Regulatory Authorities
NIMPE	National Institute of Malaria, Parasitology, and Entomology
NMCP	National Malaria Control Programs
NSP	National Strategic Plan
OR	Operational Research
oAMT	Oral Artemisinin-Based Monotherapy

PMI	Presidents Malaria Initiative
PSI	Population Services International
PSS	Pharmaceutical Systems Strengthening
RAI	Regional Artemisinin Initiative
RBM	Roll Back Malaria
RMTF	Regional Malaria and Other Communicable Disease Threats Trust Fund
RSC	Regional Steering Committee
SDGs	Sustainable Development Goals
SEARO	South East Asia Regional Office (WHO)
SME	Surveillance, Monitoring and Evaluation
TA	Technical Assistance
TES	Therapeutic Efficacy Studies
TMC	Technical Management Committee
TMT	Targeted Mass Treatment
ToR	Terms of Reference
WCO	WHO Country Office
WHA	World Health Assembly
WHO	World Health Organization
WPRO	Western Pacific Regional Office (WHO)

## Executive Summary

### Introduction

The emergence of Artemisinin Resistance (AR) in the Greater Mekong Sub-region (GMS) is an urgent regional public health concern and threatens to undermine progress in reducing malaria cases and deaths in the Asia Pacific. To speed up the response to this situation an Emergency Response to Artemisinin Resistance (ERAR) regional framework for the GMS was announced by the World Health Organization (WHO) in April 2013. The “Coordination of the Emergency Response to Artemisinin Resistance in the Greater Mekong Sub-region” is a jointly funded investment by the Australian Department of Foreign Affairs and Trade (DFAT) and the Bill and Melinda Gates Foundation (BMGF), and implemented by the WHO. The project was designed as a three-year regional initiative (Cambodia, China, Lao Peoples Democratic Republic (PDR), Myanmar, Thailand and Vietnam). WHO was tasked with coordinating regional action, providing technical assistance (TA), strengthening technical leadership and catalysing resource mobilisation. DFAT’s financial contribution to the project is AUD4.5 million under a Partnership Framework between WHO and the Commonwealth of Australia; BMGF’s contribution exceeds AUD10 million.

**Table 1: Project goal and objectives**

Project goal: Preservation of the effectiveness of Artemisinin Combination Therapies by containing and ultimately eliminating artemisinin resistant <i>P. falciparum</i> malaria parasites in the Greater Mekong Subregion	
Project objectives	<b>Objective 1:</b> Strengthened leadership, coordination and oversight mechanisms
	<b>Objective 2:</b> Maintenance and expansion of drug efficacy surveillance networks and acceleration of priority research
	<b>Objective 3:</b> Improved access for migrant and mobile populations to quality services
	<b>Objective 4:</b> Full implementation of the Myanmar Artemisinin Resistance Containment (MARC) framework
	<b>Objective 5:</b> Strengthened response to artemisinin resistance in Vietnam
	<b>Objective 6:</b> Reduced availability of oral artemisinin based monotherapy and substandard and counterfeit antimalarial medicine while improving quality of artemisinin based combination therapies

The independent mid-term review (IMTR) was commissioned to review the progress made by the ERAR project in the first 24 months of implementation and, in doing so, assess the program’s effectiveness, efficiency and sustainability. The IMTR was also invited to comment on whether the original focus/ design of the project and the current governance and management arrangements are optimal in the context of changing national, regional and international malaria elimination strategies. A summary of key findings are provided below, followed by the review team’s recommendations.

### Key findings

Overall, the review team assessed that the project is broadly on track to achieve the desirable results defined in the project framework, although there has been uneven progress towards meeting the different objectives. The key findings against the reviews objectives are outlined below.

### Effectiveness

The ERAR project has been effective in leading the transition from the ERAR framework to an elimination strategy for the GMS. Despite delays in the first year, as of March 2015, the

project has caught up and made considerable progress in its second year. A team of qualified staff has been recruited and the Hub is now established and functioning. Useful situational analyses, assessment surveys, studies and mapping have been completed, albeit to extended timeframes. The project has produced a number of key strategic documents and deliverables in all thematic areas. The Hub has become more active in engaging with partners and facilitating regional workshops, partner meetings, and facilitating cross-border collaborations, data sharing and learning. While there is better awareness on ERAR's role at senior government level and greater momentum for artemisinin resistance (AR) and malaria elimination, stakeholders are of the opinion that the project has failed to respond in an emergency manner due to the late recruitment to key positions (one year delay). While this delay has had an impact on the planned activities, the ERAR Hub effectiveness was also dependent on the timeliness of the Regional Steering Committee/Regional Artemisinin Initiative (RSC/RAI) and the Asian Development Bank (ADB) Regional Malaria Trust Fund (RMTF), which were supposed to provide complementary funding for operations. Delays in the operations of these initiatives may have contributed to a perception of the ERAR being even slower.

The ERAR project is now fully operational. The overall malaria elimination context presents challenges especially with regard to cross-cutting objectives 3 and 6 (see above). While mapping and analysis have been conducted, transforming strategic documents into well targeted, validated and funded interventions will need to be addressed. It is unlikely that significant impact against these two specific objectives will be obtained during the project's lifetime.

## Efficiency

The ERAR Hub operates within a complex hierarchical supervision matrix and multiple WHO reporting lines including WHO Country Offices (WCOs), two regional offices and the Global Malaria Programme (GMP) in Geneva. In addition, the Hub is overseen by a Technical Management Committee (TMC) chaired by the GMP Director. The split in the GMS between two WHO regions (each having their respective governing bodies) means that processes and approval systems for the ERAR project are cumbersome. WHO has developed a modus operandi to enable the Hub Coordinator to operate in a more flexible manner. Although this has improved ERAR Hub efficiency to some extent, processes are still considered unwieldy. Beyond the internal WHO processes through the modus operandi, the project would benefit in having its reporting lines simplified.

In providing 17 additional staff strategically located in country, regional and GMP offices, the donors have enabled WHO to support countries to shift the focus to the next stage of elimination and design more targeted national strategies. Despite these efforts, stakeholders still expect the Hub to provide stronger technical leadership and authoritative guidance than it has had so far. In having additional staff placed in WCOs, the project has also benefited from the WHO core structure. In this respect the ERAR project is still a 'good buy' for the donors.

The first year had a very low financial disbursement rate due to late recruitment. With a complete Hub structure in place as of 31 December 2014, the absorptive capacity was still lower than expected at 40%. Despite initial delays, the project has caught up rapidly and expects to spend the remaining budget in line with annual work plans. Communication between ERAR, DFAT and BMGF is challenging due to the impractical time zone differences. As the BMGF has no permanent office in the region, DFAT is mainly responsible for operational management.

## Relevance

The six objectives of the project are all relevant in addressing AR and malaria elimination. With the exception of objective 3, all objectives fall fully under the core mandate of WHO. The threat of multidrug resistance is now of greater concern than resistance to artemisinin

specifically and clearly of major importance for malaria control and elimination in the region. Just as the transition from control to containment changed the priorities, moving the focus from AR to malaria elimination needs a reorientation. The review team's suggested priorities at regional and national levels are: 1) eliminating the multidrug resistant on the western Cambodia and eastern Thailand border; 2) reducing transmission in the high burden areas in Myanmar's eastern northern and western states and regions; 3) reducing transmission as much as possible in areas of multidrug resistance; 4) flattening the epidemiological landscape by intensified control measures in areas of high transmission; and 5) responding to identified priorities such as measures targeting certain mobile and migrant populations (MMPs).

With the exception of Myanmar, it is anticipated that malaria transmission in the GMS will decline to low levels in the next few years. Funding from external resources especially from the Global Fund may scale down proportionally. GMS countries must be prepared to increase national spending on surveillance and maintain an expanded workforce. This will require raising the profile of the malaria elimination agenda in each country to the appropriate political level and beyond the Ministry of Health (MoH) by: 1) Engaging with non-health actors from the government including ministries of agriculture, finance, foreign affairs, and labour; 2) Engaging with the private corporate sector employing MMPs; 3) Facilitating coordination at a higher level and program level in the GMS; and 4) Supporting national programs to look at their human resources plan at all levels of the system in order to ensure the needed expertise is in place. This will also require looking at malaria elimination through the broader health sector lens by engaging with other health areas (planning, human resources, finance, legal) so the malaria elimination agenda is better embedded within MoH. Looking forward post-2016, the WHO should play a pivotal role in supporting this integration.

## **Sustainability**

Countries are at different phases in malaria control in the GMS and have different health systems capacities. Reduced numbers of malaria cases may lead to a reduced domestic investment in malaria control and elimination. Whilst some momentum for malaria elimination has been established, challenges remain to convince governments and funding organisations to sustain the required effort. Currently, despite an increasing willingness from countries and unprecedented engagement from many actors, the elimination agenda is at risk as it is still more supply than demand-driven. It is unlikely that the agenda will shift during the remaining period of the project and therefore its sustainability is dependent on external funding to maintain operations.

## **Monitoring and evaluation**

The project proposal is guided by the ERAR strategy paper "Regional Framework for Action 2013-2015". Overall, the project framework is considered to be useful to monitor progress. However some of the results specified in the Framework, for example, results under objectives 1, 3 and 6 have weaknesses in terms of the linkages and level of 'SMART'.<sup>1</sup> Objective 1 needs a clearer operational definition for results and performance benchmarks especially for the qualitative variables including political support, strengthened ownership and leadership, and coordination. This lack of clarity in relation to objective 1 contributes to diverse stakeholder expectations and difficulties determining the performance of the project.

## **Private sector engagement and innovation**

Collaboration with the private sector is essential to achieve the project objectives and especially in the context of elimination. Private sector activities in the GMS include working with 1) private practitioners and the private pharmaceutical sector; 2) the private mosquito net sector; and 3) private workplace programs. Areas 1) and 2) above are included in the GMS Malaria Strategy and embedded in Myanmar, Cambodia and to a lesser extent in Lao

<sup>1</sup> SMART – Specific, Measurable, Attainable, Relevant and Time-bound.



PDR national strategies. Area 3) 'private workplace programs', lacks a comprehensive and co-ordinated approach. Development projects attract a large migrant worker population and thus workplace programs for malaria prevention and treatment are critical.

The ERAR investment represents two forms of innovations. The partnership between a private foundation (BMGF) and a traditional government donor (DFAT) is one. Second, the implementing mechanism (ERAR Hub) is an innovative approach for WHO, being established in tandem with its traditional global, regional and sub-regional organisational structures. It should be noted that, while this "hybrid" setting is an innovation in itself, WHO is somewhat limited by its reactive and risk adverse nature and as a consequence is incompatible for dealing with "emergencies".

## **Gender and social inclusiveness**

The ERAR Investment Proposal aims to promote equity by improving access to malaria services for those most at risk. Elimination will not be achieved without equitable access to malaria services. Gender equality is neither an explicit reference nor systematically incorporated in the malaria control and elimination documents at global, regional and national levels. The incorporation of gender issues into strategic documents varies across countries. The Surveillance, Monitoring and Evaluation (SME) Strategy includes reference to pregnant women in indicator descriptors. Clear roles of the ERAR Hub in promoting gender equality and social inclusiveness should be defined and an action plan developed to complement the gaps in current strategic documents.

## **Analysis and learning**

The ERAR project is only a small component of a much larger picture. The complex architecture of malaria presents challenges for WHO to coordinate stakeholders at various levels. Currently, most partners see the ERAR Hub as a complementary body to Asia Pacific Leaders Malaria Alliance (APLMA) and the RSC/RAI. The ERAR Hub is seen as the technical partner, APLMA as the political and advocacy partner, and the RSC/RAI as the wider coordinating/implementing steering mechanism.

There is an on-going need in the GMS for a stronger coordinated response and a better comprehension of what needs to be done and who sets the priorities. This gap is felt by most partners, and a higher political level for decision-making is needed. The RSC is the stakeholder coordination platform in the GMS for AR, but its scope of work is to oversee the implementation of the Global Fund, not the AR and elimination response in the overall region. The APLMA, while having potential to enhance political engagement is to some extent disconnected from implementation activities, and does not currently play this high-level coordination role in the GMS. A national and regional coordination platform in the GMS is needed. It should be nationally owned, bridging between APLMA and the RSC, and the ERAR Hub should pro-actively be playing its normative guidance role.

In a future governance mechanism, WHO could lead on authoritative technical guidance, define priority interventions and allocate resources accordingly across the GMS and monitor key indicators, all aspects of its core mandate. The ERAR project will have to be 'branded' differently to better reflect the malaria elimination agenda. The ERAR project has the potential to be transformed into a more ambitious body to lead the overall elimination strategy. This would provide an opportunity for WHO to expand its role beyond technical guidance and programmatic coordination, and also include non-health actors. While WHO's role in providing technical guidance is undeniable, its capability to build, lead and enhance the coordination of a multi-partner/multi-sectoral strategy is questionable. The review team is of the opinion that unless the ERAR project is financed and staffed appropriately, with a higher level of autonomy, it will not be able to foster such a partnership.



## Review recommendations

Overall, the review team recommends that donors should continue supporting the ERAR project, initially until 2016, and envision re-shaping the project in line with the malaria elimination agenda. The following overarching recommendations are made to support this re-alignment and improve efficiency and effectiveness of the ERAR in its remaining timeframe. Further detail on these recommendations can be found in the recommendation boxes at the end of each report section.

### ***Short to medium term (within the current ERAR project)***

- Grant a no-cost extension aligned with that of BMGF until end 2016 (DFAT).
- Harmonise reporting formats into one single joined format keeping in mind that performance and quality reporting standards should not be diluted (DFAT & BMGF).
- Raise the overall profile of the Hub by (WHO):
  - Revising the Hub coordination terms of reference towards a more strategic and political role (including highlighting the complementarity to the regional offices).
  - Appropriately resourcing the Hub in order to cover both political and technical functions to ensure having the full set of skills required. The political function could be raised as a “Malaria elimination special envoy” reporting to the DG/DDG level in collaboration with the regional offices Directors and the GMP.
- Distinguish the ERAR project into two components (WHO):
  - 1) TA provided to regional and country offices (staff reporting to regional and WCOs);
  - 2) The ERAR project (Hub) in its strategic and political function (Hub reporting to the TMC). Consider increasing frequency of TMC meetings and flexibility so to invite on a case-by-case basis non-WHO stakeholders to be part of the meetings.
- Empower the Hub to (WHO):
  - Be able to engage at a higher political level with health as well as non-health partners.
  - To develop mechanisms to have full control over resource allocation (control over the budget before execution) and also approval of terms of references for consultants to be hired.
- Conduct a Human Resources gap analysis to strengthen regional offices and WCO to match with elimination technical requirements and ambition (WHO).
  - WHO should consider making ERAR positions available to external applicants.
- Strengthen the current project team through (WHO):
  - 1) Upgrading the communication officer position to P4 level;
  - 2) Recruiting an entomologist;
  - 3) Recruiting a data manager;
  - 4) Formalising the current program management officer position (currently consultant); and
  - 5) Urgently addressing ways to strengthen the Myanmar WCO with appropriate staff.
- Revise M&E framework to better track Hub achievements and improve reporting. Consider revising intended results under objective 6 (reduced availability of oAMT, substandard and counterfeit medicines and improve quality ACTs) (WHO).

- Define the communication strategy and conduct a survey to assess the effectiveness of the regional website and the quarterly bulletins (with GMP and regional offices) (WHO).
- Further define the ERAR Hubs approach to gender equality (WHO and DFAT).
- In collaboration with APLMA, develop a comprehensive strategy “embracing private sector for malaria elimination in the GMS” and place specific emphasis on dealing with private pharmaceutical sector and private workplace programs to address objectives 3 and 6. (WHO)
- The ERAR should assess progress and achievements of objectives 3 and 6 and explore ways to expand partnerships (including for objective 6 potentially joining efforts with United States Pharmacopeia (USP)) (WHO).
- Support countries to establish nationally owned multi-sectoral elimination councils linked to health security committees (led by the Government in close collaboration with APLMA, RSC, APMEN, private sector, civil society, and other relevant ministries). These committees should be represented at the regional level (WHO).

### ***Longer term options***

- Commission a joint scoping mission to assess ways to:
  - 1) Re-orient the mandate of the current ERAR project towards a more realistic set of objectives so to be able to lead the technical component of the elimination agenda with a forward looking vision to 2030.
  - 2) Transform the Hub into a broader malaria elimination mechanism in the GMS.
- Consider re-branding the Hub to reflect the elimination agenda in a future phase of the project. The name could be “The Mekong Malaria Elimination Coordination Platform” (MMECP).
- The MMECP should support the establishment of malaria elimination councils integrated within the health security agenda at country level, and be represented at regional level. WHO could be Co-Chair.
- The MMECP should engage with the various MoH departments (human resources, finance, planning) so that the malaria elimination agenda is not only looked at through the NMCP lenses, but in a more integrated way.
- Encourage allocation of resources to enhance surveillance systems and benefit community based malaria services.

## 1. Introduction

### 1.1. Activity background

Over recent decades, the Greater Mekong Subregion (GMS) has recorded significant declines in malaria burden due to effective delivery of proven interventions through strong malaria programs, supported by public health systems and development partners. In 2007, artemisinin resistant (AR) *P. falciparum* malaria was reported in Eastern Cambodia and in 2014, confirmed or suspected AR malaria was identified in five GMS countries (Cambodia, Lao People's Democratic Republic (PDR), Myanmar, Thailand and Vietnam). The continued emergence and spread of AR threatens significant gains made in reducing malaria morbidity and mortality worldwide. The emergence of AR in the GMS is an urgent regional public health concern and threatens to undermine progress in reducing malaria cases and deaths in the Asia Pacific. To speed up the response to this situation an Emergency Response to Artemisinin Resistance (ERAR) regional framework for the GMS was developed by the World Health Organization (WHO) in 2013. The "Coordination of the Emergency Response to Artemisinin Resistance in the Greater Mekong Sub-region" is a jointly funded investment by the Australian Department of Foreign Affairs and Trade (DFAT) and the Bill and Melinda Gates Foundation (BMGF), and implemented by WHO. The project was designed as a three-year regional initiative (Cambodia, China, Lao PDR, Myanmar, Thailand and Vietnam). WHO was tasked with coordinating regional action, providing technical assistance (TA), strengthening technical leadership and catalysing resource mobilisation. WHO provides TA through: in-country training; proposal development for National Malaria Control Programs (NMCP); advocacy with countries' Ministries of Health (MoH); developing action plans and strategies; and facilitating cross-country and regional workshops. DFAT's financial contribution to the WHO partner-led proposal is AUD 4.5 million (governed by an exchange of letters under a Partnership Framework between WHO and the Commonwealth of Australia); BMGF's contribution exceeds AUD 10 million. The project is managed by DFAT's South East Asia Regional Hub (SEARH) in Bangkok and BMGF based in Seattle, United States.

**Table 2: Project goal and objectives**

<b>Project goal: Preservation of the effectiveness of Artemisinin Combination Therapies by containing and ultimately eliminating artemisinin resistant <i>P. falciparum</i> malaria parasites in the Greater Mekong Subregion</b>	
<b>Project objectives</b>	<b>Objective 1:</b> Strengthened leadership, coordination and oversight mechanisms
	<b>Objective 2:</b> Maintenance and expansion of drug efficacy surveillance networks and acceleration of priority research
	<b>Objective 3:</b> Improved access for migrant and mobile populations to quality services
	<b>Objective 4:</b> Full implementation of the Myanmar Artemisinin Resistance Containment (MARC) framework
	<b>Objective 5:</b> Strengthened response to artemisinin resistance in Vietnam
	<b>Objective 6:</b> Reduced availability of oral artemisinin based monotherapy and substandard and counterfeit antimalarial medicine while improving quality of artemisinin based combination therapies

### 1.2. Objectives of the review

The independent mid-term review (IMTR) was undertaken to review the progress made by the ERAR project in the first 24 months of implementation to assess the program's effectiveness, efficiency and sustainability. The IMTR was also invited to comment on whether the original focus/design of the project and the current governance and management arrangements are optimal in the context of changing national, regional and international malaria elimination strategies (see Annex 1 - Terms of Reference).

More specifically, the review team documented, assessed and made recommendations on the following seven objectives of the IMTR:

- Review Objective 1: Current project implications (realistic adjustments to project modality) given the changing national, regional (malaria elimination in the GMS by 2030) and global malaria elimination contexts.
- Review Objective 2: Achievements against the six end-of-project objectives using value judgements, activity progress, key deliverables, project outcomes and evidenced-based observations.
- Review Objective 3: Relevance of the project's modality, the "emergency response" to AR; the project's role in a congested development space; and the capacity and capability of WHO to coordinate the technical and operational ERAR in the GMS and achieve end-of-project objectives given the rapidly changing malaria context.
- Review Objective 4: The extent to which end-of-project objectives will be sustained by government and/or development partners beyond the project end date at both country and regional level.
- Review Objective 5: Improvements to current project governance arrangements (WHO) and operationalisation of monitoring and evaluation (M&E) framework until the project's end date.
- Review Objective 6: DFAT/BMGF co-funding arrangements, including DFAT project management changes, donor M&E requirements and reporting framework/ criteria.
- Review Objective 7: Subsequent priorities a future project could focus on in order to best fit with DFAT, BMGF and other development partners' malaria investments in the region.

The IMTR will strategically inform DFAT and BMGF management actions/decisions in the current project phase until its proposed end date. The review will inform DFAT and BMGF malaria elimination investments in the region, and clarify how the current project complements existing and planned DFAT, BMGF and other stakeholder malaria initiatives in the context of changing national, regional and international malaria elimination strategies.

### **1.3. Methods**

The IMTR is a participatory, forward-looking strategic assessment of the ERAR's performance and design over the first 24 months of implementation. The review methodology aimed to obtain the strongest possible evidence to objectively inform the judgements of the project's performance. At the same time, the IMTR has taken an appreciative, strengths-based approach to acknowledge the complexity of the project, as well as the challenging subject matter it deals with and implementing environment it operates in.

Data were collected through a mixed method rapid appraisal. The review relied on secondary information and quantitative as well as qualitative data from document reviews with primary information obtained through interviewing key program stakeholders (see Annex 5 for a complete list of interviewees).

Full details of the evaluation methodology are at Annex 2 – Evaluation Plan.

### **1.4. Limitations of the review**

An overall picture of the extent to which the program is achieving its results did to a large extent rely on the availability of data and robustness of the program's M&E system. Given the limited time available to consult stakeholders across six countries, the team counted on the full participation of informants and cooperation from WHO as the principal recipient of funding. Due to time constraints, the mission could not visit China (Yunnan province) and therefore made the consultation through teleconference. Given a 12-month delay in

commencing the project, the team was effectively only able to review one year of implementation progress.

## 1.5. Review team

The IMTR was undertaken by a team comprising an independent consultant, Roberto Garcia (team leader), and a DFAT Evaluation Manager operating independently from DFAT's program management team, Le Thi Quynh Nga (M&E team member). Overall, the intellectual approach, documentation and analysis of evidence was a joint effort by the team. The team takes joint responsibility for the key findings, conclusions and recommendations.

## 2. Review findings

### 2.1. Effectiveness and progress against the ERAR program's six objectives

Overall, the project is on track to achieve the desirable results defined in the project framework. Objectives that are WHO's core business have been rapidly implemented. Objectives 3 and 6 have moved more slowly. Despite the adjusted one-year timeline for multiple deliverables as compared with the initial workplan, the Project's progress at this stage is acceptable as it has caught up with the pace and recent dynamics of malaria elimination in the region. The project has contributed to enhanced regional momentum for AR and malaria elimination in the region. Its strategic products and activities provide a regional foundation to support GMS countries to transit to a malaria elimination focus.

Detailed analysis against the six objectives of the ERAR project is presented below. A table summarizing key achievements, issues and challenges can be found in Annex 3.

#### 2.1.1. Objective 1: Strengthen leadership, coordination and oversight mechanisms

##### **Overall performance**

The overall performance of objective 1 against the project framework is satisfactory. Thirteen out of seventeen planned activities in the 2014 workplan and all key milestones during this year have been accomplished or are ongoing. All seven expected results of the project framework have been either achieved or are in progress.

Despite recruitment delays that severely restricted activity in the first year, the ERAR Hub has been able to catch up rapidly according to its workplan. The Hub has become more active in engaging with partners and senior government staff. It has taken a lead in conducting the malaria elimination feasibility study and developing the GMS Malaria Elimination Strategy. Multiple GMS strategies on various thematic topics are to be finalised following the Malaria Elimination Strategy, following which National Strategy/Action Plans will be updated. The ERAR GMS indicator matrix and online database will also be finalised. Cambodia, Lao PDR and Vietnam have been supported to mobilise additional funding under the Regional Malaria Trust Funds (RMTF) managed by the Asian Development Bank (ADB) and implemented in 2015.

However, implementation of the initial work plan was delayed by one year. The ERAR Hub's emergency response and authoritative leadership has not been optimal. The supply of data and information on resistance, epidemiology, policies and progress at regional level has been slow. Information and advocacy does not appear to be well targeted to different stakeholder groups. Reduced national budgets and various levels of commitment, the heterogeneous landscape of malaria and unique legal framework for data management has influenced timely data sharing, which risks the achievements of outcomes under this Objective.



## **Achievements**

The ERAR Hub has successfully steered the development of a study to assess the feasibility of *P.f* Malaria Elimination in the GMS. The recommendations of the Technical Expert Group were validated by the Malaria Policy Advisory Committee. Subsequently, a number of consultations were conducted to obtain relevant inputs for the development of a GMS malaria elimination strategy. The strategy is currently being finalised and will be presented for approval by the World Health Assembly (WHA) in May 2015. Though not expected at the program's outset, the ERAR Hub has led this technical transition in a relatively short time period. It demonstrates the potential strategic technical leadership capacity of the Hub and its flexibility and ability to bring stakeholders together around this agenda

Though delayed, parallel progress has also been made in WHO's work planned outputs. Regional thematic analyses such as Behaviour Change Communication (BCC) and Surveillance, Monitoring and Evaluation (SME) strategies have now been developed. National malaria strategies are being updated to be ready in 2015. Based on the final regional thematic strategies, the ERAR Hub will support each country to develop their national action plans with an updated approach in those thematic areas in line with the elimination requirements.

The Hub has engaged with various stakeholders through multiple channels and events. A Stakeholder Mapping document<sup>2</sup> has been developed, which will be incorporated in the regional SME strategy and regularly updated. The Hub supported the establishment and functioning of National Coordination Committees of NMCPs for AR in all affected countries, thus informing countries on the emergency nature of AR and maintains momentum. The Hub was also involved in a number of events organised by donors and partners, including the Myanmar/ BMGF and the Vietnam/ BMGF partner convening meetings.

The ERAR Hub's participation in these events has facilitated the leadership role of the Hub whilst ensuring malaria elimination message consistency. By December 2014, the ERAR Hub Coordinator had completed a round of consultations with senior government officials and partners in all six GMS countries. In Cambodia, support was provided to the NMCP to organise meetings of the national coordination bodies. In Lao PDR, WHO provided intensive TA to the NMCP for advocacy and orientation to MoH leaders and partners on the GMS *P.f* malaria elimination strategy including preparation for a malaria elimination partnership workshop. It also supported the NMCP with updating the National Strategic Plan (2015-2020) to include elimination aspects and support for the epidemic in southern Lao PDR. In China, a key activity has been the coordination of the activities in cross-border areas in particular on the China-Myanmar border.

A draft Advocacy Strategy has been developed and is being finalised by WHO Headquarters (HQ) to target MoH and other Ministries for mobilising national funds. The Hub has supported Cambodia, Lao PDR and Vietnam with grant applications to mobilise additional funding under the RMTF managed by the ADB. As an evidenced outcome of ERAR TA, these grants have now been approved and implementation is due to start during 2015.

Multiple useful assessments, mapping and studies in IEC/ BCC (Information, Education, Communication/Behaviour, Change, Communication), private sector engagement, and migration have been completed or are under finalisation under the Hub's leadership. In consultation with the countries and technical working groups these assessments have informed the development of BCC, SME and mobile and migrant population (MMP) strategies. ERAR Hub staff and country/regional focal points have used these outputs to communicate with the Regional Steering Committee (RSC) of the Global Fund's Regional Artemisinin Initiative (RAI), and countries have streamlined funding for priority activities, which have since been included in the RSC/ RAI reprogramming. The ERAR Hub chaired the selection panel appointed by the RSC. This will ensure that the strategic focus on

<sup>2</sup> ERAR Stakeholder Mapping document, 30th of May 2014.

supporting cross-border activities is maintained and in line with evidence-based recommendations.

The ERAR Hub has completed a SME assessment, partners' profile and an ERAR GMS Indicator Matrix. The Indicator Matrix includes a scorecard, surveillance indicators, MMP+ indicators and the regional Malaria Indicator Framework, which contains data on malaria morbidity and mortality, policy and management, prevention, IEC/ BCC, case management and rapid diagnostic tests, Engaging Vulnerable Populations, and Strategic Information. In consultation with ERAR countries, the Matrix is being updated to include elimination indicators to be aligned with the Elimination Strategy. In June 2014, a SME technical working group with defined Terms of Reference (ToR) was established, with membership from six countries and partners. The Group is expected to provide advice and TA to countries to strengthen SME systems at all levels, facilitate data sharing and advocate data use among countries, partners and stakeholders, and promote the linkage of NMCPs and ERAR Hub with other related sectors. The Group has met twice (August 2014 and February 2015) and is currently reviewing the malaria indicator framework. As data sharing requires time and consensus building, it is not possible to pinpoint key outcomes at this stage. Under the impulse of the ERAR Hub and the RSC/RAI, the process is on-going.

The ERAR Hub acts as the Secretariat for the technical working group, which is collaborating with the Asia Pacific Leaders Malaria Alliance (APLMA) on Scorecards and the RSC/ RAI on harmonising indicators. The scorecards focus on national progress in malaria morbidity and mortality and the indicators in key thematic areas. The ERAR Scorecard 2013 was established and shared with wider audiences in August 2014. To respond to the evolving needs for data as countries move towards malaria elimination, selected scorecard indicators are being revised such as the percentage of oral artemisinin-based monotherapy (oAMT) licences suspended, the percentage of health facilities without stock-outs of first-line antimalarial medicine for at least three days within the past three months; and the percentage of facilities surveyed without counterfeit or substandard antimalarial drugs. The scorecard is useful for the Technical and Management Committee (and regional partners) to monitor progress, and will be shared with each country annually. The ERAR Scorecard 2014 is expected to be finalised in April-May 2015. Consultations on the revised scorecard with NMCPs are in progress. The scorecard is to be finalised along with the SME strategy.

An online database has also been established in accordance with the Matrix, to align with national SME systems. For various reasons; mainly the one-year delay, but also the lack of a data manager; the uniqueness of the SME system; and the capacity of each country, the database is not yet fully operational. Only designated staff from the NMCPs (M&E focal points) are able to access the database which will allow them to see trends of the selected indicators at regional and national level. It is recognized that after WHO's facilitation at the Consultation Workshop in Phuket, Thailand in August 2014, that NMCPs agreed to share data on a limited number of indicators on a monthly basis.

Interviews with staff at WCOs, the Hub and in the regional offices identified that NMCP collaboration and timely data submission has improved. The Hub's presentation of national data at the above mentioned meeting in Phuket, Thailand in August 2014, provided countries with an opportunity to share experiences in quality data collection. For example, representatives from Cambodia and Myanmar were asked how the NMCP collects number of people in the at-risk-population groups (esp. MMPs) reached with specific malaria interventions. Thailand at the beginning did not submit data; yet, after the workshop, started doing so, following the example set by other countries. The Hub's M&E officer provided mentoring to the SME Unit of the National Malaria Control and Prevention Institutes in Lao PDR and Cambodia to incorporate the MMP+ indicators and revise the M&E plan to align with the GMS Malaria Elimination Strategy and updated National Action Plan.

To support dissemination of information and creation of awareness to a wider audience, a regional website linked with the Global Malaria Program (GMP) was established in late 2013.



Key regional and national strategies, plans and tools and the ERAR Hub's key deliverables are uploaded onto the website. Google analysis showed that between 1 December 2013 and 11 March 2015, more than 2,000 people visited the site for a total of 4,770 unique page views.<sup>3</sup> This analysis does not provide specific information about the origin of the connection or the interest taken, so it is difficult to assess if the targeted audience has been reached. A survey among the website's visitors might be able to fill this information gap. Although bi-annual updates of the website were envisaged in the design document, this is clearly an inappropriate frequency for a responsive emergency communication mechanism and more regular updates have been encouraged throughout program meetings, and largely adopted.

Three quarterly bulletins have been published to date (two in 2014 and one in 2015). These provide key updates on outbreaks and information on new relevant publications from WHO. The bulletins were mailed to more than 100 stakeholders from WHO, governments of affected countries, partners, donors, academics, NGOs, consultants and observers. The bulletins appear to be providing good information for malaria specialists. The format of the bulletins would need to be changed if they were intended to be accessible to a non-specialist audience. There has been no recent assessment of how these bulletins are perceived. The review team didn't identify clear strategic thinking behind what the bulletins intend to deliver, except to provide information about the AR issue and progress of the ERAR. It may be worth defining more clearly what the Hub wants out of these bulletins – whether it is to provide information to specialists, visibility for WHO and donor partners, information to the general population or resource mobilisation. We recommend that a concept paper is developed to address this issue and adjust the content/format accordingly. The concept paper could include conducting a survey among the readers to better assess the bulletin's usefulness so far.

### **Analysis**

Objective 1 is about coordination to drive the agenda of AR elimination, influence national strategies to adapt to the emergency of the situation and gain political awareness and support. The Hub's capability to provide technical coordination in this respect has increased gradually as the team became established. The outputs described above illustrate a growing capability of the Hub to facilitate and coordinate a set of activities as per the project plan. It is too early to assess outcomes of such efforts at this stage. While the ERAR project has shown good progress in 2014 as described above, stakeholders are of the opinion that the Hub has not led the response in an emergency mode as it was expected. It took a year to recruit the Hub's coordinator and other key positions, which impeded the required rapid emergency response. The review team could not fully identify why recruitment processes have taken so long. However, it is most probably due to a mix of factors including 1) recruitment decisions are not only based on technical criteria; 2) many staff selected for appointment are existing WHO staff and unable to leave their positions at short notice; and 3) ERAR positions are professionally interesting, attracting high levels of applicants that leads to high levels of competition.

Stakeholders agree on WHO's role to provide technical guidance to the MoH, but when issues go beyond the scope of the MoH (for example, migration-related issues and pharmaceutical counterfeit drugs – two of the project's objectives), WHO is not currently equipped to lead in an optimal manner. This applies to areas that require engagement with non-MoH partners, including private sector and other ministries such as agriculture, labour, finance and foreign affairs.

To support the ERAR Hub's technical regional coordination role of eliminating AR and ultimately malaria, strategic communication could be enhanced to meet the different information needs of various stakeholders, especially the WHO's non-traditional audiences

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<sup>3</sup> "Unique page views" means that each page seen during a single visit is only counted once. The analysis of the page viewers in February–March 2015 indicates that people from the United States, Australia and the United Kingdom account for 57.2%; the rest are from Cambodia (14.3%), Myanmar (14.3%) and Thailand (14.3%).

such as politicians, private sector, customs, and military in the region and in countries. Consistent messages across the thematic teams with appropriate format and languages are needed. The ERAR Hub has developed an advocacy strategy, but it is yet to be finalised by WHO HQ.

Untimely supply of data and information on resistance, epidemiology, policies and progress at regional level has limited countries' and partners' access to information. This information will be provided on an annual basis. This was done during the first partner forum in February 2015 and an annual report is being finalised and will be posted on the ERAR website in May 2015. In theory, partner access to information should be available operationally on a regular basis through the ERAR website and regional SME database, and reported annually to stakeholders (and potentially bi-annually to donors).

The establishment of a regional database and cross-country data sharing have faced multiple challenges due to unique SME requirements, regulation and the various stages of development of the system in each country (e.g. China and Yunnan province only have quarterly data). Data submission from ERAR countries was delayed initially due to some countries questioning the purpose and utility of a regional database and concerns about data confidentiality. The Technical Working Group has not operated efficiently yet because of its large membership (while the Global Fund also established an Indicator Harmonisation Working Group). The Hub was not able to produce a Bulletin in March 2014 using monthly data, and the Scorecard 2014 was delayed. The interviewees from countries commented that regional data flows are not yet operational. Monitoring on progress of the containment, control and elimination efforts in all countries at regional level thus has not been as timely as expected.

Finally, while the APLMA coordinates the advocacy role across the Asia Pacific region (as discussed in section 2.8), partners expect the ERAR Hub to provide a stronger and more pro-active authoritative guidance in technical issues, resource allocation and programmatic coordination.

### **Way forward**

The GMS Elimination Strategy was launched on the 22<sup>nd</sup> May 2015 after approval from the WHA. The most critical milestone in 2015 will be to support countries to develop and/or finalise their own specific strategies and action plans. The ERAR Hub will reinforce its structure and work with countries and stakeholders to secure support from policy decision-makers and donors/stakeholders to establish an effective governance structure for malaria elimination. It will strengthen advocacy networks and increase visibility of the ERAR Hub. The Hub will also strengthen its link with APLMA and other stakeholders to put in place a fundraising strategy in support of malaria elimination efforts.

#### **Objective 1 - Recommendations**

- Develop a strategic concept paper to define the purpose of the bulletins and related targeted audience. Assess the usefulness of the bulletins.
- Assess the reach and effectiveness of the regional website. Specifically consider the frequency of updates of the website.
- Enhance strategic communication to meet the different information needs of various stakeholders, especially the WHO's non-traditional audiences such as politicians, private sector, customs, and military in the region and in countries.
- Consider ways to harmonise data efforts and address constraints in regional data flows.

## **2.1.2. Objective 2: Maintain and expand drug efficacy surveillance networks and acceleration of priority research**

### ***Overall performance***

Performance against this objective can be rated as good. Most of the planned activities for 2014 have been accomplished as of March 2015, noting that timelines for the deliverables were adjusted (in consultation with donors) due to the delay in the first year. All four results of this objective have achieved concrete progress and are on track. Therapeutic Efficacy Studies (TES) are the WHO's core business. The Hub has coordinated and enabled regional collaboration in conducting TES and the use of its results to inform national policy to adjust treatment protocols.

As transitioning to malaria elimination, it is worth considering surveillance more broadly. Current information on the burden of disease, its distribution and on malaria control operations is not sufficiently complete, accurate and detailed to plan and manage the implementation of malaria elimination. It is worth noting multiple challenges including the heterogeneous malaria landscape, country variances in surveillance systems, weak health systems especially at grassroots level in remote areas with a shortage of health personnel, and the difficulties in case management and follow up of the mobile patients/migrants.

### ***Achievements***

Three networks for the surveillance of therapeutic efficacy have been established and conducted their annual meetings in 2014: the Mekong TES network in May, the Pacific TES network in June, and the BBINS (Bangladesh, Bhutan, India, Nepal, Sri Lanka) Network in December. During these meetings, national focal points, programme managers and technical partners met to share the latest available TES country data, discuss technical and operational issues, and plan TES studies to be implemented during the next two years.

The strategic information generated through regular TES have been used to update the tier map to assess the spread/emergence of AR and guide the overall emergency response, resource allocation and prioritisation in the GMS. The two TES officers provided technical support for studies across the GMS and neighbouring countries. TES are ongoing in several sites in the GMS countries: Cambodia (3); Yunnan, China (2); Lao PDR (3); Myanmar (8); Thailand (6); and Vietnam (4). All countries have been monitored in the past 12 months. Filter paper blood spots from the 2012 TES studies from GMS countries have been sent to reference laboratories and processed for presence of Kelch 13 (K13) mutations.<sup>4</sup>

WHO also continues to monitor TES results, malaria diagnosis and treatment in North East India, Bangladesh and Nepal and other countries in South East Asia with other financial support. The samples from Bangladesh and Nepal were all classified as wild type (no K13 mutations detected). Country visits to monitor TES implementation, to validate results and to plan future TES activities took place in Malaysia, Papua New Guinea and the Philippines. The network provided TA for updating of the national malaria treatment policy in the Philippines. TA was also provided to write the TES proposal of Indonesia, which started implementation in November 2014 after a TES training workshop and refresher on microscopy. TES samples from the Philippines and Indonesia have been sent to Institute Pasteur Cambodia for K13 assays.

To strengthen national microscopy capacity, WHO organised microscopy refresher training and conducted a post-training external competency assessment (ECA) in Lao PDR. The Level 1 and 2 expert microscopists from Lao PDR currently function as slide validators and monitors in the on-going TES in 3 sites of Lao PDR, and provide on-the-job training on-site to local TES microscopists.

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<sup>4</sup> K13 mutations were present in >50% of isolates tested from 3 sites in Vietnam, in 64% of isolates from Yunnan, in >20% of isolates in 2 sites in northern Myanmar, >70% of isolates in 1 site in southern Laos (Champasack) and in 66% of isolates in Cambodia.

The Hub has provided support to Thailand to conduct a situational analysis of the malaria microscopy quality assurance. Subsequently, WHO conducted instruction skills development or training of trainers, followed by a refresher microscopy course for Thai microscopists, and provided TA to the quality assurance program in Thailand. With TA from Western Pacific Regional Office (WHO) (WPRO)/ACTMalaria and other external support, the National Institute of Malaria, Parasitology, and Entomology (NIMPE) in Vietnam and Bureau of Vector Borne Disease in Thailand have established a national slide bank to be used for regular retraining and assessment/grading of competency of microscopists. The slide bank workshop was facilitated by ACTMalaria together with the WHO Collaborating Center for Malaria Diagnosis in Manila in October 2014, and had participants from Cambodia, Myanmar and Thailand.

The ERAR Hub has also facilitated cross-country information sharing on operational research (OR) between researchers and national programmes. In November 2014, WHO organised a meeting between national programmes and researchers conducting studies of targeted mass treatment (TMT) for malaria elimination. The TMT studies are ongoing on the Myanmar-Thailand border and in Vietnam, and are planned in Myanmar and Lao PDR. A coordination group will be established with WHO as secretariat comprising one or two national focal point(s) appointed by the National Malaria Programme Managers, and representatives from research groups, such as the Mahidol Oxford Research Unit, implementing studies on TMT.

In Cambodia, the Hub supported the establishment of an OR working group and a Centre National de la Malaria (CNM) Research Network in July 2014 to provide a forum to share information and discuss research results and needs. All researchers are required to share their research protocol with the national body of the OR working group to ensure alignment of the research with national malaria control/ elimination strategies. This change is significant as it addresses the past issue of academics bypassing national bodies before publishing their research findings. Cambodia plans to use ORs to inform the country treatment process.

### **Analysis**

There are no major issues in terms of completing the workplan and achieving the results of the objective in the project framework. However, given the transition to malaria elimination, it is useful to look more broadly to the surveillance system as a whole and not just the TES (see section 2.8). This project supports approximately 20 per cent of all TES conducted in the region.

### **Way forward**

Priorities in 2015 include TES network meetings and establishment and maintenance of national malaria slide banks in all GMS countries. Analysis of the current status and identification of the gaps in quality assurance of microscopy in Myanmar is planned in the second quarter of 2015. WHO will continue to track progress in key research areas and support the exchange of information between researchers and NMCPs.

### **Objective 2 - Recommendations**

- Consider the role of the ERAR hub in supporting improved information on the burden of disease, its distribution and on malaria control operations in order to support planning and management of malaria elimination.

### **2.1.3. Objective 3: Improved access for migrant and mobile populations to quality services**

#### **Overall performance**

Three out of five results in the project framework have made initial progress but progress in actual interventions targeting MMPs remains limited. The defined targets as per the project



framework are: 1) "People are tested for malaria through special interventions targeting migrant/mobile populations" and 2) "Interventions for improving access for migrant/mobile populations are adapted based on experience (learning by doing) and are integrated into national strategies, plans and proposals for containment, control and elimination" are unlikely to be achieved by the end of the project. This is due to the complexity and dynamics of cross-country migration and limited actual interventions on the ground so far. The project outcome of "improved access of mobile and migrant populations to quality services" is difficult to measure as there is neither comprehensive data of the service access of MMPs nor a baseline.

Approximately 75 per cent of the planned activities in the 2014 work plan have been carried out or are ongoing. Two out of three key milestones for 2014 have been achieved and one is ongoing.

It is noted that this objective requires a multi-sector and cross-country collaborative approach that is beyond WHO's core business and technical capacity. It is over-ambitious for the project's timeframe, given the increasingly complex and evolving issue of migration in the GMS. High level political engagement is needed to produce national policy and cross-border multi-sector collaboration decisions and policy enforcement at the ground. There are likely to be multiple political, economic and legislative obstacles in various sectors, including trade, customs, border military, transport, industrial production, tourism and labour protection. It is particularly difficult to provide services in hard-to-reach villages. There is concern as to whether WHO is the best-suited organisation to lead this component.

### **Achievements**

The ERAR project has completed a situational analysis on MMPs. A MMP strategy for GMS countries has been drafted in consultation with countries. Additional activities to improve access for MMPs were discussed at two sub-regional meetings in Yangon, Myanmar and Hanoi, Vietnam, with wide country participation. National consultations were subsequently conducted in each GMS country in July-August 2014 to fine-tune country priority activities and identify cross-border complementary approaches. The outputs of these consultations were further discussed in a meeting in Thailand (August, 2014). Based on these discussions, an action plan on MMP was finalised in the fourth quarter of 2014. The RSC of the Global Fund RAI had agreed to consider funding this plan during the upcoming reprogramming of the RAI grant but requested more details on what was already in the RAI country grants.

Cross-border collaboration workshops were organised, resulting in cross-border agreements between Laos and Thailand, and between China (Yunnan province) and Myanmar. In October 2014, an agreement between two provinces in Thailand (Ubon Ratchathani) and Lao PDR (Champasack) was reached on common data variables to be shared based on the ERAR M&E framework and a data sharing platform between the two provinces initially. This was followed by the development of a dynamic mapping resource tool.<sup>5</sup> The next steps include further development of the tool for incorporation in the ERAR online database and possibly extending it to other key border areas. In December 2014, China (Yunnan province) and Myanmar (Kachin and Shan North states) reached a joint plan of action and agreement on specific areas of collaboration. The Director General (DG) MoH Myanmar also attended. Both meeting reports are in the process of country clearances and WHO ERAR will take up the agreed action points in collaboration with other partners and donors.

The ERAR project has also developed a malaria elimination package of activities targeting MMP and the military. The package is being finalised with protocols on surveillance, migrant surveys, private sector engagement, vector control and prevention and migrant policies as useful guides for program managers. It will also provide a good reference for other partners/donors, i.e. RSC/ RAI on technical areas and decision-making tools.

<sup>5</sup> <http://203.151.96.55/vallaris/application/who>

## Analysis

In the last two decades, numerous meetings on how to provide quality health services to MMPs have been organised in the GMS. Despite these efforts, limited progress has been made in developing a comprehensive strategy and carrying out actual interventions benefitting MMPs, particularly the cross-border migrants in informal sectors. With increasing economic integration of the region and establishment of the Association of South East Asian Nations (ASEAN) Economic Community at the end of 2015, the dynamics of cross-border migration will evolve and become increasingly complex. Necessary high-level political engagement to produce national policy and cross-border multi-sector collaboration decisions has not yet been reached. Even after these policy decisions are made, enforcement of the policies on the ground can be very challenging. Many hard to reach areas are out of partner government's reach and the ERAR framework is dependent on the full range of stakeholders to reach target groups. Hard-to-reach villages are usually not covered with quality malaria health services. Given the complexity of the issue, and while WHO and the ERAR project, together with IOM and civil society have made progress under this funding to map the issue, the review team remains sceptical on the potential of this initiative in its current form to have an impact within the lifetime of the project. There is also a concern as to whether WHO is the best-suited organisation to lead this component. While WHO together with the MoH must play a pivotal role in providing technical guidance, it would need to be part of a larger reflection involving other partners at the appropriate level. Bringing new partners from outside the health arena with new ways of thinking may be needed. At this stage, the ERAR project has been able to convene regional meetings to map the situation, and is also currently helping countries to develop an action plan. The key ongoing questions for consideration are:

- Is the ERAR Hub in a position to negotiate with the appropriate sectors/ industries employing MMPs (sectors that need to be actively engaged)? Which agency(ies) should take the lead in implementing a multi-country, multi-sector plan? What governance structure and mechanism should be developed to support its implementation for all relevant sectors and countries at indicated levels?
- Will the proposed action plans developed under this project be manageable and/ or fundable, and if yes, what impact will they have?

## Way forward

The evaluation of current best practices in improving access to diagnosis/treatment and prevention for MMPs in the GMS needs to be carried out. Following the situational analysis, a MMP strategy will be formulated and documentation and dissemination of malaria and migration trends in the GMS will be undertaken. Mapping of health facilities, services and mobile migrant routes in Yunnan province (in China on Myanmar border), Kachin state (in Myanmar on China border) will be also carried out in 2015. The ERAR should commission an independent team with private sector, sociological and legal expertise, to assess the way this component is being conducted and what impact can reasonably be expected. It could fall under a larger analysis followed by a clear strategy on how to engage the private sector from all angles to reach elimination (see section 2.6 and final recommendations).

### Objective 3 - Recommendations

- Identify and document current best practices in improving access to diagnosis/treatment and prevention for MMPs in the GMS.
- Consider commissioning a review (with private sector, sociological and legal expertise), to assess the way this component is being conducted, what impact can reasonably be expected and what future program adjustments may be required.
- Develop a clear strategy on how to work with other sectors, particularly the private sector, to reach elimination.

## 2.1.4. Objective 4: Full implementation of the MARC framework

### **Overall performance**

This objective is on track to achieve results under the project framework. All activities in the 2014 work plan have made progress. All milestones of the year 2014 have been either accomplished or are ongoing. It is noted that timelines for both milestones have been adjusted (in consultation with donors to account for realistic deliverable timeframes) as compared with original dates.

### **Achievements**

The ERAR has supported the management and coordination of the MARC framework. Surveillance and monitoring have been enhanced and containment of AR is increasingly integrated in overall malaria control efforts through various interventions including the endorsement of the revised National Strategic Plan (NSP) in September 2014 followed by a submission to the Health Sector Coordinating Committee. It also organised the coordination meetings for AR containment and the development of integrated work plans, the revision of the National Malaria Treatment Guidelines (to be finalised and endorsed in 2015), the development of surveillance protocol, data entry, and analysis. The project also helped map coverage of interventions, supported the implementation of the three Millennium Development Goals (MDGs), and the RAI. Finally, the project conducted a baseline survey for Long Lasting Impregnated Nets (LLINs) coverage among MMP and organised the Roll Back Malaria (RBM)/APLMA meeting on private sector engagement in malaria.

### **Analysis**

While the ERAR Hub has been instrumental in helping Myanmar review strategies, the WCO (Myanmar) has been chronically weak, and continues to be under-staffed with regard to malaria expertise. Two international technical officer positions under the Global Fund and under USAID funding were vacant at the time of the review. The review team were unable to ascertain the reasons underlying challenges in recruitment and retention of staff at the WCO. The approval of staff proposed to the government seems to be particularly long in Myanmar. Successfully dealing with AR can only occur if WHO operates as one WHO (the project complements the WCO with two program funded NPO's, but the wider response is dependent on reinforced, global, regional and country capacities. This will be even more important for the elimination context and that WHO operates in unison. The staffing issue in Myanmar should be urgently addressed with WHO regional offices.

### **Way forward**

The way forward includes supporting Myanmar to develop the NSP 2016-2020 and strengthening the ongoing activities such as coordination of containment/*P.f* elimination activities and surveillance and monitoring. WHO will continue to support the NMCP to coordinate implementing partners at all levels and the newly established Food and Drug Administration (FDA) under MoH.

### **Objective 4 - Recommendations**

- DFAT, BMGF, and also GFATM and PMI should discuss with WHO the staffing issue in Myanmar.
- Explore opportunities to expand/support key ERAR positions in Myanmar.

## 2.1.5. Objective 5: Strengthen the response to artemisinin resistance in Vietnam

### **Overall performance**

Progress of this objective is reasonably good with nearly 70 per cent of the expected results achieved. All 2014 milestones have been either accomplished (six milestones) or are ongoing (another six milestones). Fourteen out of eighteen planned activities in the 2014



work plan have been achieved or are ongoing. The project has supported Vietnam to finalise the national plan for the response to AR. The National Artemisinin Resistance Containment committee was established and is operating. A number of activities on TES and MMPs have been carried out.

However, it should be noted that the original timelines were adjusted (in consultation with donors) when it was evident that due to recruitment delays, outputs would not be delivered on time. Progress reports and the SME system do not include data to assess progress of the result measurement "Proportion of malaria cases receiving direct observed treatment in tier 1 increases to 95% by 2015". The result "200 private practitioners/drug sellers trained annually on new guidelines and drug resistance" is unlikely to be achieved within the current project timeframe. So far, there have not been any training courses for private practitioners/drug sellers. Systematic engagement of the private sector is required, however, the 2015 workplan does not indicate an approach or activity for engagement.

### **Achievements**

In the first 24 months of implementation, the ERAR project has supported the NIMPE to finalise its national plan for the response to AR. In August 2014, an expert group meeting was held to review all activities and incorporate containment into the overall strategy. A comprehensive work plan based on the national strategic plan and draft GMS *P.f* elimination strategy was developed with support of WHO, and a financial as well as programmatic gap analysis was completed. This will be used for resource mobilisation in future.

A National Artemisinin Resistance Containment committee was established in May 2014. Three taskforce meetings have been held and will continue quarterly in 2015. The meetings were held with the participation of the NIMPE, the two regional Institutes for Malariology, Parasitology, and Entomology, the MoH, the General Department of Preventive Medicine, the Drug Administration of Vietnam (DAV) and personnel from other ministries. In these meetings the drug resistance status was discussed and reviewed (especially *P.f* resistance to artemisinin derivatives), as well as implementation of ERAR activities, the malaria *P.f* elimination strategy, and development of a national workplan. There have been no initial outcomes yet.

The ERAR project has also supported regular TES and updated AR maps, developed and revised reporting forms, case investigation forms and forms for directly observed treatment, and provided malaria services to MMP. The ERAR project has also helped establish 31 malaria posts at strategic places in central and southern provinces of Vietnam with diagnosis, treatment and procurement of 160,000 LLINs. An evaluation of these malaria posts will be done in mid-June 2015 which will be followed by a plan to expand these malaria posts to other provinces. A proposal for estimation of G6PD deficiency<sup>6</sup> among ethnic populations has been finalised and ethical clearance from WPRO is ongoing.

Despite the delay in the first year, there has been impressive progress and catch up in the second year. This is partly due to the effective collaborative relationship between the WCO staff and NIMPE, as well as the recruitment of an experienced technical officer with knowledge and experience of a successful elimination campaign.

### **Analysis**

Due to the late recruitment of the ERAR Pharmaceutical Officer based in China, pharmaceutical related activities under objective 5, specifically work with the DAV to monitor pharmaceutical producers will only get underway in late 2015.

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<sup>6</sup> Glucose-6-phosphate dehydrogenase deficiency (G6PD deficiency) is a hereditary disease which can cause jaundice in newborn babies and haemolytic anaemia (when red blood cells break up) throughout life, usually triggered by an infection or exposure to certain foods or chemicals. One of the chemicals that can trigger severe symptoms in people with G6PD deficiency is primaquine, the only drug currently available to clear the relapsing life stages of the *Plasmodium vivax* parasite (one of the two major parasites causing malaria in humans) from the liver.

Other areas still to be progressed include:

- Meetings with other ministries and representatives of relevant sectors such as rubber plantations and development partners;
- M&E of the effectiveness of vector control in foci response in some malaria elimination provinces; and
- Evaluation of the efficacy of alternative measures for personal malaria protection in seasonal mobile populations.

The 2015 work plan does not indicate how the project will engage the private sector to train private practitioners/drug sellers and/or provide direct observed treatment in tier 1 to malaria cases. However, this is already being factored into the GMS elimination strategy and should be changed with the elimination agenda (the focus will be elimination with priority where there is evidence of resistance or where the incidence is below 1 case per 1,000 population at risk).

It is too early for the review team to have an opinion on whether or not the objective's expected results will be met. However, three of these four areas mentioned above require technical inputs from multiple Hub officers (private sector engagement, pharmaceuticals and MMPs). In this respect, it is necessary that the Hub operate collaboratively with other sectors as much as possible in the Vietnam context.

### **Way forward**

Priorities include monitoring of pharmaceutical producers; distribution of 160,000 LLINs for MMPs; meetings with other ministries and representatives of relevant sectors including rubber plantations; conduct a MMP survey. The additional activities for 2015 are malaria active case detection as a pilot study at the community level implemented in tier 1 Quang Nam province; orientation of provincial and district malaria staff towards *P.f* elimination; establishment of two sentinel sites for monitoring of vector behaviour, vector surveillance and insecticide resistance in tier 1 area; and entomological surveillance in tier 1 provinces (Gia Lai, Khanh Hoa).

There is clear evidence that current and future activities across Hub technical areas will need to capture multi sector/ministry approaches and the private sector. To do this the Hub will need to adapt.

### **Objective 5 - Recommendations**

- Ensure engagement of non-health sectors within the remaining project time.
- The project should further develop key relationships such as with DAV to monitor pharmaceutical producers.

### **2.1.6. Objective 6: Reduced availability of oral artemisinin based monotherapy and substandard and counterfeit antimalarial medicine while improving quality of artemisinin based combination therapies**

#### **Overall performance**

The results defined in the project framework under this objective are unlikely to be achieved within the project timeframe. Due to the late recruitment of the key staff to conduct this activity (August, 2014), most of the activities planned are behind schedule. Approximately 15% of the 2014 work plan has been completed. Only one out of four milestones in 2014 has been achieved and two are ongoing. The first year did not achieve any of the planned annual milestones. The defined results were over ambitious and unrealistic at the design stage, given WHO's core business mandate and the long-term complex multi-country, multi-sector issues of pharmaceutical production and trade. It is recommended the ERAR take a

collaborative approach with various partners in this area to address improvements to the broader pharmaceutical system.

### ***Achievements***

The ERAR project has developed a three-year action plan following a stakeholder meeting on Pharmaceutical Systems Strengthening (PSS) in November 2014. Participants included delegates from medicine regulatory authorities, pharmaceutical law enforcement, NMCPs and other key partners. The action plan aims at strengthening pharmaceutical systems, and ensuring universal access to quality assured malaria commodities in the GMS with primary focus on geographic areas where AR has been detected. The Hub has supported Cambodia, China, Lao PDR, and Vietnam to develop country strategies on how to eliminate oAMTs. Details for operationalisation of the strategies are currently being planned with country teams and partners.

Meetings have taken place with National Drugs and Regulatory Authorities (NDRA) in Cambodia, China and Lao PDR. These meetings helped to further engage the NDRA in malaria programme planning and supply activities, gain their support for stronger coordination among local pharmaceutical stakeholders, discuss budgets for ERAR pharmaceutical-related activities (under RSC/ RAI reprogramming), and ensure that the oAMTs elimination strategy and roadmap are a key priorities, with related targets defined by countries. Vietnam has already issued a ban on oAMT.

### ***Analysis***

The pharmaceutical officer was only recruited in July 2014, so most of the activities have been delayed.

The defined results under this objective appear to be quite unrealistic for a number of reasons:

1. Pharmaceutical trade/ production and drug use are long-term complex multi-country, multi-sector issues.
2. It will not be possible to address availability of quality antimalarial drugs in isolation from improvements to the broader pharmaceutical system, which is beyond a three-year emergency project.
3. Tackling the issue of oAMT, substandard and counterfeit antimalarial medicine requires engagement at the highest political level in the countries from where such drugs are produced. It therefore requires engagement with the health sector and also non-health sectors. In its current structure, the ERAR Hub is not in a position to engage with these non-health sector partners.

The BMGF, DFAT and WHO recognise that addressing this objective as envisioned in the project framework should actually be part of a larger scope covering all pharmaceuticals and not just antimalarials.

Efforts should focus on China and India where such products often originate. Given the emergency situation for the removal of oAMTs, it is necessary to join other regional investments in essential medicine working in this area, like the Presidents Malaria Initiative (PMI) with United States Pharmacopeia. The current plan focuses on collecting information on regional producers of antimalarial drugs, supporting development of Myanmar's strategy for elimination of oAMTs and conducting meetings with NDRA in Myanmar, Vietnam and Thailand. Despite these restrictions, the ERAR Hub has developed a three-year action plan, although this plan is not yet funded.

### ***Way forward***

The Hub should make sure it works in close collaboration with all partners involved in the fight against fake and sub-standard drugs in the region. It should also be noted that the

ERAR project submitted a proposal to the RAI and the RMTF, but at the time of the review was not funded.

#### **Objective 6 - Recommendations**

- Consider revising the results under this objective to be more realistic.
- Develop ways to work collaboratively with other partners in progressing this objective, including with other regional investments working on essential medicines.

## **2.2. Efficiency, including management arrangements and governance**

The ERAR Hub is hosted by WHO and managed by a Coordinator based in the Cambodia WCO. The Coordinator is supported by an M&E officer, a communication officer, and an assistant. The Coordinator reports officially to the Communicable Disease Director based in WPRO. However, for administrative purposes, the Coordinator works under the WCO Representative. The ERAR Coordinator collaborates with Team Leaders in both regional offices (South East Asia Regional Office (SEARO) and WPRO). There are a further 13 staff located in WCOs in Lao PDR, Vietnam, Thailand, China and Myanmar. As a positive reflection of the Hubs value to the WHO structure, stakeholders consulted for this review generally felt that the Hub is strategically positioned in the middle of a triangle (SEARO, WPRO, and WHO HQ) and can facilitate internal communication and coordination.

The work of the ERAR Hub is overseen by a Technical Management Committee (TMC), chaired by the GMP Director, and including regional office Communicable Disease Directors from SEARO and WPRO as well as the six WRs of the GMS. The Hub acts as secretariat for this committee. The GMP coordinator for drug resistance plays a pivotal role. It appears that the TMC is a useful platform for internal WHO coordination and communication (only WHO staff are part of such conferences). Expansion to other key stakeholders such as the Global Fund, APLMA, APMEN DFAT and BMGF, might help for a better flow of information and would also demonstrate WHO's emphasis on transparency. The TMC meets on a quarterly basis – this seems to the review team to be too infrequent. More frequent meetings, with greater flexibility and responsiveness in invitees would seem to be more appropriate to an emergency project and context of malaria elimination.

The Hub Coordinator reports technically on progress to the GMP Coordinator on drug resistance who reports on a six-monthly and annual basis to BMGF and DFAT in two different formats, and this was considered burdensome.

The split in the GMS between two WHO regions (each having their respective governing bodies and offices) meant that processes and approval systems for the ERAR project were cumbersome. To address this, WHO developed a *modus operandi* to enable the Hub Coordinator to operate in a more flexible manner and better respond to the 'emergency' nature of the ERAR. Although this has been an improvement, processes are still considered unwieldy. For example, a key role played by the Regional Hub has been the organisation of regional meetings addressing strategic areas as described in section 2.1. These activities suggest full participation of key staff. Despite the *modus operandi* signed by both RDs delegating authority, in practice, all planning documents have to go to each planning committee in each region and this has created delays in sending invitations. In addition, the *modus operandi* and the organogram suggest that all ERAR staff should be supervised by the Hub Coordinator. In reality, this is the case only for the staff based at the Hub; and this has the potential to impact staff performance and use of project resources. Interviews with key informants at WHO HQ and in the Region suggest that not all the ToRs for recruited consultants were fully discussed and agreed upon between WHO HQ, the Regions (SEARO and WPRO) and the Hub prior to being implemented. It is important that the dispositions of the *modus operandi* be complied with fully and expanded where necessary.

Beyond the internal WHO processes through the *modus operandi*, the question is whether the ERAR Hub should change its reporting lines and be embedded in WHO with a matrix of

collaboration with the regional offices. This possibility was raised during consultations. If the WHO DG were to elevate the profile of the malaria elimination agenda in the GMS (or globally) by sending a strong signal (special envoy at DG or Deputy DG level as was done in relation to Ebola), then the Hub could conceivably report at that level. It would then be beneficial to have the project split into two components, with:

- Component 1: A TA pool provided to strengthen WCOs and regional offices to support the ERAR framework implementation of the NMCP strategies (national and regional objectives). The current pool could be adjusted, by adding wider expertise, and by revising the level of some key positions.
- Component 2: The ERAR Hub in its role of providing regional leadership in key technical areas, sitting at the RSC+ (or any other name that may be selected see sections 2.2 and 2.8). This would require defining the subsidiarity of the ERAR Hub role in addition to the WHO regional offices. The ERAR Hub would have a higher profile than presently, to support the national malaria elimination councils at country level, and its representation at regional level.

The profile of the Hub and its coordinator would have to be raised and his/her level of authority empowered accordingly so as to be able to contact higher level senior national officials directly.

Among stakeholders there is consensus on the need to coordinate the malaria elimination agenda at a higher political level (beyond the MoH) in each country. The entry point could either be the current health security committees - being cautious that this does not dilute the 'emergency' nature and pro-active requirement of the malaria elimination agenda - or by having a multi-stakeholder malaria elimination council/authority (along the lines of structures set up for HIV/AIDS e.g. National Aids Authorities/Councils). This group should be represented at regional level to i) ensure appropriate authoritative technical guidance, ii) define priority intervention and allocate resources accordingly across the GMS, iii) ensure regional programmatic coordination and adequate multi-sectoral collaboration (other ministries and the private sector); iv) monitor key indicators; and v) communicate at a strategic level with a 15-year vision to mobilise resources (bridging with the APLMA that has a broader regional coverage, but is also to some extent a "far away advocacy tool" for the GMS).

This approach was discussed during the last ERAR stakeholder meetings and could take the form of an RSC+ (another name may be more suitable to ensure stronger national ownership), chaired by the countries (possibly co-chaired by the ERAR Hub/ WHO). Should this governance mechanism move forward, the ERAR Hub should play its full role to lead on points i), ii), and iv) which are its core mandate.

At some point, the ERAR project may also need to be 'branded' differently to better reflect the malaria elimination agenda. However, doing this during the remaining lifetime of the project may cause confusion, since the ERAR project is just starting to be recognised in the regional partner landscape. In reviewing any rebranding options, the ERAR relevance and emergency nature of this approach should also be kept in mind



### **Efficiency Recommendations (including management arrangements and governance recommendations)**

- Expand the TMC to other key stakeholders such as the Global Fund, APLMA, APMEN, and possibly BMGF and DFAT to improve information flows and to demonstrate WHO's emphasis on transparency.
- Increase frequency of meetings of the TMC, with greater flexibility and responsiveness in invitees as appropriate to an emergency/elimination project.
- In the longer term, reshape the Hub and consider re-branding the ERAR project to better reflect the malaria elimination agenda (not advisable during the remaining lifetime of the project).
- Distinguish the ERAR project into two components 1) TA provider to regional and country offices; and 2) strategic and political functions of the ERAR hub.
- Appropriately resource the hub in line with the proposed two components above.
- Consider empowering the Hub to have greater input over resource allocation and approval of ToR for consultants to be hired.
- Revise the ToR of the Hub towards a more strategic and political role.
- Support countries to establish nationally owned multi-sectoral elimination councils linked to health security committees.

#### **2.2.1. ERAR Team**

The team is composed of 17 staff of which four positions are based in the regional Hub in Phnom Penh and 13 across the six GMS countries. The positions at the Hub level aim to ensure regional coordination in technical leadership for the ERAR framework, including monitoring and evaluation, communication and project management. From the 13 other positions based in-country, WPRO and GMP, 11 support directly the respective country ERAR strategies, while two are regional and cross-cutting including a medical officer migrant population/malaria advisor based in Thailand and a technical officer pharmaceutical based in China. (Annex 4 provides a list of ERAR positions).

In providing 17 additional staff, the country offices have been able to facilitate the shift of national strategies from a control approach to a more targeted one and to start preparing the NMCPs to the next stage of elimination. With the Hub based in Phnom Penh, the Coordinator and his team have also been able to engage and provide clarity to all stakeholders on the main priorities as per the ERAR framework. Stakeholders interviewed for the review considered that the Hub should be providing stronger leadership than it has so far.

The two cross-cutting regional posts are filled by two dedicated and knowledgeable officers. The work accomplished so far in their respective areas is positive but has not yet been translated into implementable strategies.

In interviews with staff at WCO, the Hub and in the Regions highlighted a number of issues that might have affected a smooth delivery of the project deliverables. There is a consensus on the fact that there is a lack of dedicated human resources for the SME at both regional and national levels. The Hub would benefit from having a data manager to meet an increasing scope of work and demand at country level and to provide support for countries to strengthen their SME system based on findings and identified gaps during the SME assessment.

The current communication officer profile is more appropriate for the coordination and technical support in behaviour change communication targeting beneficiaries at grassroots level. The Hub would benefit from upgrading the communication position to a more senior level (currently P3 to P4). The person should have a good knowledge of the regional and national political issues, a large network, and adequate advocacy capabilities to enable communication at the right strategic level.

The OR/TES medical officer based in WPRO seems not to have been able to lead, follow and help accelerate the OR agenda in the GMS. This is certainly due to the fact that there are multiple initiatives from other organisations and the fact that WHO is not specifically consulted prior to such studies. The respective officer could be more embedded in the Hub so to have more gravitas among the OR dynamics.

It is difficult to form an assessment of the work of the country officers at this stage as most have been on duty for only a year. In Vietnam, the appointment of an experienced malaria elimination officer is commendable. In Myanmar, which has the highest burden of disease, two national project officers are currently in post (funded under the ERAR project). The two international officer positions under Global and PMI budget were vacant during the mission (P4 and P5). While the P4 is expected to commence during the first semester 2015, the P5 position has been re-advertised and might not be filled before the end of 2015. The Myanmar office has been chronically weak. While these positions are not funded by the project, this vacuum has had an impact on the delivery of objective 4.

In the longer term, given the challenges of an elimination agenda and needs at the country level, the project is likely to need to draw on additional expertise including expertise in entomology, pharmaceuticals, the private sector and cross-cutting public health expertise such as health financing and human resources. Although the review team realizes the context of limited resources, recruiting an entomologist would be helpful within the current lifetime of the project. In addition, it would be beneficial for the Hub to formalise the current program management officer position (currently a consultant).

#### **ERAR Team Recommendations**

- Conduct a human resources gap analysis to strengthen regional and WCO.
- Consider creating a position of data manager to meet an increasing scope of work and demand at country level and provide support to strengthen their SME systems.
- Upgrade the communication position to a more senior level (currently P3 to P4).
- Formalise the current program management officer position (currently a consultant).
- In the longer-term, build in ways to draw on broader technical expertise, including entomology.
- Consider ways to further strengthen the Myanmar WCO with the appropriate staff.

#### **2.2.2. To what extent does the Hub integrate, complement and support WCO malaria teams and vice versa?**

According to the regional offices, the ERAR project has been instrumental in providing specific coordination on AR, link with WHO HQ, created new bridges of collaboration between the two regional offices, raised awareness at MoH level as well as providing additional staff in critical positions at country level. In this light, and from a donor/client perspective, the IMTR is of the opinion that the ERAR project is a 'good buy' as through the investment in key additional staff placed in the WCO it also benefits from WHO core budget staff and structure (regional offices).

The communication between regional offices and the ERAR Hub appears to have been smooth and constructive. The regional offices are also of the opinion that given the AR and elimination requirement, the team's expertise should reflect better the challenges and needs ahead (moving from an intervention to surveillance culture). To support this additional key staff in vector control/entomology and surveillance could be considered.

#### **2.2.3. Financial situation**

The project is co-funded for a total amount of USD15,252,484 (BMGF: USD10,595,034, and DFAT: USD4,657,540). DFAT funding does not cover project field activities under objectives



2 and 5, which are primarily funded by BMGF. Funding is still flexible to support the Hub under these objectives through other budget lines (for example direct consultancies).

On the DFAT side, the disbursement rate has been limited due to the first year delays in recruiting (see table below).

**Table 3: DFAT disbursement rate**

TOTAL COSTS BY OBJECTIVE	Actual spent			Projected Year 3	Total	Variance rate (100% - actual spent/approved budget %)		
	Year 1	Year 2	Cumulative			10/4/2013 - 31/12/2013 (based on figures in March 2014 Report)	1/1/2014 - 31/12/2014 (based on figures in March 2015 report)	Cumulative as of 31/12/2014 (based on figures in March 2015 report)
Objective 1	-	630,997	630,997	1,331,728	2,593,722	100%	35%	46%
Objective 2	30,834	175,648	206,482	120,237	533,201	71%	-20%	4%
Objective 3	1,289	396,733	398,022	313,217	1,109,261	99%	-13%	6%
Objective 4	-	17,953	17,953	55,612	91,518	100%	-24%	6%
Objective 5	11,856	38,511	50,367	14,541	115,275	68%	-45%	0%
Objective 6	-	50,724	50,724	424,588	526,036	100%	81%	85%
Project Management	87,829	94,331	182,160	325,010	689,330	34%	43%	34%
GRAND TOTAL COSTS	148,942	1,587,534	1,736,476	2,920,974	4,657,450	87%	25%	38%

Source: Annual financial reports on DFAT's fund. Unit: USD

The above table indicates annually reported disbursement rates. Actual spent/total DFAT funds of Year 1 and Year 2 respectively are 3 per cent (USD 148,942/USD 4,657,450) and 34 per cent (USD 1,587,534/USD 4,657,450). The cumulative disbursement rate for both years is 37 per cent. The program underspent by 87 per cent in year 1 against its approved annual budget. In year 2 financial performance significantly improved although the program still underspent by 25 per cent against its approved annual budget.

The first year had a very low disbursement rate due to late recruitment of Hub positions resulting in delays to all project activities. In Year 2, with a full structure of the Hub, financial absorptive capacity is still lower than expected. The projected disbursement rate for Year 3 is 63 per cent (USD 2,920,974/ USD 4,657,450). This unrealistic year 3 disbursement rate, combined with improved financial disbursement and program performance validates a program need for a no cost extension (NCE) to forward plan funds.

Aligned with the assessment on the progress of each objective, objective 6 has had a low financial absorptive capacity across the two years. The absorptive capacity for objective 1 has improved to 65 per cent (from 0 per cent). The Hub has been able to speed up with the remaining objectives, as the actual spent amounts exceeded the approved figures (minus variance rates for these objectives). One of possible reasons for this situation is over ambitious planning in Year 2 for objective 1 and 6, exacerbated by the late recruitment of staff.

On the BMGF side, USD 5,217,687 has been disbursed to WHO as of December 2014 - approximately 50 per cent of the budget. Detailed assessment of BMGF's investment was not made under this review.

Overall and according to the GMP co-ordinator, the cumulative disbursement rate from both DFAT and the BMGF was approximately 40 per cent as of 31 December 2014. This disbursement rate was not optimal, however, despite the first year delays; the project seems to be catching up rapidly and is expected to be able to spend the remaining budget as per the work plan. The BMGF has provided a no-cost extension until December 2016. Currently for DFAT the project will end in December 2015. By granting a no-cost extension, DFAT would further align with BMGF's arrangements, as well as with the end date of the RSC/ RAI.

#### 2.2.4. DFAT/ BMGF co-funding partnership

DFAT's innovative partnership with the BMGF has highlighted M&E and reporting differences. Outcome data has proved difficult to extract under BMGF reporting/M&E criteria and investments annual/progress reports have not met DFAT M&E standards. DFAT's Evaluation and Organizational Learning under the overarching Global Partnership Framework with WHO defined the use of BMGF criteria for annual reports, and six monthly progress report criteria were largely undefined. As a result, the ERAR project has to report in two different formats. While there is merit in what DFAT is requesting, the double reporting has been rather time consuming and little in line with the aid effectiveness agenda. For these reasons, DFAT negotiated a common understanding with WHO GMP and intends to formalise clearer progress report criteria through an agreement amendment. As the project evolves having a single agreed-upon reporting format suitable for DFAT and BMGF would be more efficient.

Field activities under objectives 2 and 5 are only supported by the BMGF, although DFAT funds are indirectly used across all objectives.

Communication between all parties can be challenging because of impractical time zone differences. In addition, as BMGF has no permanent office in the region, DFAT is mainly responsible for operational management due to geographical proximity. Due to distinct operating procedures, in 2014 BMGF independently granted a NCE until end-December 2016, while DFAT deferred a NCE decision until improved program and financial performance was reported.

#### DFAT-BMGF Co-funding Partnership Recommendations

- It is recommended that both donor partners (DFAT and BMGF) look at harmonising their reporting system whilst keeping to quality standards, and also align decision making processes in the future.

### 2.3. Relevance

#### 2.3.1. The approach to AR has rapidly evolved since the design of the project

The project was designed in an era when the approach to fight AR was to contain it. Since then, the identification of a molecular marker for AR has made its detection more straightforward and is likely to lead to detect more foci of resistance. While the focus has been on AR, equally of concern is the increasing evidence of resistance to the partner drugs used in Artemisinin-based Combination Therapies (ACTs). The threat of multi drug resistance including ACT resistance is now of greater concern than resistance specifically to artemisinin and clearly of enormous importance for malaria control and elimination efforts in the region and worldwide. Routine monitoring of the therapeutic efficacy of ACTs, as per objective 2 of the project, remains essential to detect early changes in *P.f* sensitivity and guide timely changes to treatment policies.

The scientific community, WHO and GMS countries have embraced the consensus to move towards elimination of *P.f* malaria as rapidly as possible. Just as the transition from control to containment changed priorities, there needs to be a reorientation, when moving the focus from containment to elimination. The local presence of multidrug resistance to antimalarial medicines is an impediment to elimination (and control). The magnitude of this threat is related to the geographical extent of resistance, transmission intensity, the size and mobility of the affected populations, the degree of resistance and the number of therapeutic agents affected. In addition, areas of high transmission and malaria burden are likely to be important exporters of parasites. If a high burden area is located near a low burden area, then an early reduction of transmission in the high burden area will make it easier to achieve elimination in both areas; this is because at any given time, the area with higher burden poses a greater risk of parasite importation to the low burden area than vice versa.

Therefore, within the GMS, the suggested priorities at regional level are:

- Eliminating (or at least interrupting transmission) in the multidrug resistant area on the border between western Cambodia and eastern Thailand, where resistance is more advanced than anywhere else, and the disease is becoming untreatable;
- Reducing transmission in the high burden areas in Myanmar's eastern northern and western states and regions.

The priorities suggested at country level are:

- Reducing transmission as much as possible in areas of multidrug resistance;
- Flattening the epidemiological landscape by intensified control measures in areas of high transmission (sometimes referred to as hotspots);
- Responding to local analysis that may identify additional priorities such as measures targeting certain mobile populations.

### **2.3.2. Relevance of the current objectives**

The six specific objectives of the project are all relevant in addressing AR, and remain valid in the context of elimination. Except for objective 3, all objectives fall under the core mandate of WHO. For objective 1, while WHO is legitimately expected to provide strong technical leadership, it is less able to provide leadership when this requires engaging with non-health partners. This is especially the case for objectives 3 and 6, for which WHO should therefore not be expected to lead delivery of the full response, but rather facilitate on the technical level.

### **2.3.3. What is the challenge ahead of the ERAR project in the elimination agenda?**

As currently set, the ERAR project is designed to tackle AR in the region, which is one step towards elimination.

The role of the WHO regional offices (SEARO and WPRO) mainly consists of supporting WCO and NMCPs. This is done through TA in identifying the needs of WCO and NMCPs, helping them mobilise resources predominantly through traditional donors, negotiating grants, supporting implementation and participating in regular M&E.

The current ERAR Hub together with the WHO regional offices, has been able to help shape the policy agenda from malaria control to malaria elimination. Regional offices and WCO are supporting the national programs in this direction. Programs still continue to receive important financial resources through traditional donors. While regional offices also work at strategic level, they are often overwhelmed with programmatic priorities. As observed in countries that reached pre-elimination phase and failed to eliminate malaria (such as Sri Lanka in the 1960s), a reduced number of malaria cases may result in a loss of focus from decision-makers and less funding. It is crucial for any country aiming for elimination to ensure adequate financial resources are made available during all phases of the elimination strategy with a 15-year view. With the exception of Myanmar, the GMS countries could see their burden of disease reduced to low or very low levels of transmission soon. Their income classification will also change. In this context, the funding from external resources and, more particularly from the Global Fund, may scale down. The Global Fund's current funding model allocates funding to countries based on their gross national income per capita and disease burden. As a consequence, the recipient countries will still be eligible for funding but their level of counterpart financing will have to increase proportionally as the Global Fund to fight AIDS, TB and Malaria (GFATM) funding landscape changes and the elimination response intensifies.

By 2017, both Myanmar and Cambodia are expected to be classified upwards from low-income to lower lower middle income (LMIC) status, increasing the restrictions on Global Fund applications and the required counterpart financing. By 2020, Lao PDR and Vietnam

are both expected to move to upper LMIC status. Thailand is already classified as an upper middle income country and may be considered as non-eligible by 2017. China is no longer supported financially by the Global Fund. All in all, the ERAR Hub has to deal with a complex regional picture of countries at different funding levels; demonstrating the need for sustained financial support to countries transitioning over significant periods of time.

Looking ahead, the future funds available through the Global Fund are unknown. After 2016-2017, the continuation of strong support for malaria control and elimination will be contingent on the priorities set by the Global Fund's donors. If these resources decrease significantly, considering GMS countries' reliance on Global Fund disbursements for their malaria control efforts, countries must be prepared to increase national spending on surveillance and their workforce to at least maintain control of malaria.

While investment from governments will inevitably need to increase while approaching the malaria elimination phase, external funders should remain mobilised to support the common long-term objective. Elimination of malaria in the GMS is a regional public good – and since addressing drug resistance is one driver and outcome of the elimination programme, it can also be seen as a global public good; as such, it merits continued support from both international partners, and emerging regional development partners.

Shifting from an era of high disease burden to low and very low transmission, the biggest uncertainties will be political and financial. While countries should continue to stay focused, the Hub should also provide stability and technical leadership towards malaria elimination in the GMS by 2030. In this context the Hub should provide additional strategic and political guidance from a forward-looking perspective.

The main challenge will be to raise the profile of the malaria elimination agenda beyond the MoHs. This could be achieved with the following:

- Engaging with non-health actors from governments including ministries of agriculture, finance, foreign affairs, and labour;
- Engaging with the private corporate sector employing MMPs;
- Facilitating coordination at a higher level and program level in the GMS;
- Supporting national programs to look at their human resource plans from central to grassroots level in order to identify and ensure essential expertise. This requires looking at malaria elimination through the MoH lens meaning engaging with other health departments of the ministries (planning, human resources, finance, legal) so the malaria elimination agenda is better embedded in the MoH.

In its current form, the ERAR Hub is not equipped or sufficiently empowered to meet its malaria elimination ambition – and therefore changes are recommended post-2016.

#### **2.3.4. Relevance of the project for each donor**

Combating drug resistant malaria fits within DFAT's second regional strategy objective of addressing priority transboundary development challenges, including the spread of communicable diseases. It featured prominently in DFAT's Health Portfolio Review. Combating drug resistant malaria protects Australia from emerging health threats, promotes prosperity, reduces poverty and enhances stability in Australia's national interest. The threat of AR in the GMS is a significant obstacle to partner governments' achievement of MDG6, specifically to halt, and begin to reverse incidences of malaria by 2015. In early 2012 Australia led a strategic assessment of AR in the GMS. Recommendations from this assessment included strengthening leadership as well as coordination and oversight mechanisms. The "Coordination of the ERAR in the GMS" directly responds to these recommendations.

The BMGF joined the group of direct financial partners in the GMS in 2007. The BMGF is the leading philanthropic funder of malaria research including basic research, diagnosis, drug

development and support to molecular surveillance. Particular focus is on evidence-based interventions and innovative projects to push for new approaches. Special emphasis is placed on pursuing global malaria eradication. The BMGF has committed significant funds for malaria programmes in the GMS, with the total amount invested to date stands at USD111 million, of which approximately two thirds will be invested from 2014 to 2016. The ERAR project success is key to the BMGF agenda.

## 2.4. Sustainability

Countries are still at different phases in malaria control in the GMS and also have different health system capacities. In this context, having a unique legal framework is challenging especially with regards to the implementation of cross-border collaboration. In addition, with the reduction of malaria cases, reduced attention may be a natural reaction from the authorities and could see a reduction in domestic investment for malaria. The momentum and determination for malaria elimination has clearly been announced, but the challenges remain to convince funding organisations to support and sustain the required effort. Currently, despite an increasing willingness from countries and unprecedented focus by many actors to eliminate malaria in the GMS, it is the opinion of the review team that the elimination agenda is still more supply-than demand-driven. The review team think that it is unlikely that national governments will financially support the ERAR beyond 2016.

The review team concur with the AQC report of DFAT, as described below.

Donor funds (DFAT and BMGF) directly support technical and non-technical staff salaries under the ERAR Hub. The sustainability of this resource is therefore dependent on external sources to maintain operations. Despite increased project performance over 2014, it is too early to judge if the ERAR mechanism, activities, or wider outcomes will be maintained following the investments end date. The contribution to long term outcomes will develop over time. Key milestones and activities which are likely to contribute to sustainability include: partner country technical capacity building (technical trainings, experience sharing forums, regional and cross-border workshops), priority research outputs, networks and technical working groups established, regional strategies drafted (GMS malaria elimination feasibility study and Malaria Elimination strategy, SME, Advocacy, and Communications), action plans (MMP), in-country technical support groups (TSG), as well as steps towards a functioning regional data sharing platform. Sustainability of project benefits will depend on how the project is perceived by stakeholders, and the extent to which the ERAR Hub steers efficiently and effectively to support a coordinated regional response. In this context, it's a reasonable assumption to say that a regional technical assistance mechanism will need to be sustained to support a more intensified response for the duration of the GMS's elimination strategy by 2030. The current investment was intended to be a short term (3 years) emergency response project. After the initial delayed start-up, the project has now started to demonstrate results. In line with the BMGF, a one year no-cost extension will provide necessary time to consider the sustainability/transition/exit of this investment in the context of GMS Malaria Elimination.

## 2.5. Monitoring and evaluation

The SME system consists of two elements:

- M&E plan and tools to keep track on progress of the project's results such as project framework (at the design stage), annual work plan, annual milestones and annual/bi-annual progress reports; and
- ERAR GMS indicator matrix for monitoring progress of the containment, control and elimination efforts in all countries at regional level to support objective 1 (assessed under Effectiveness section - Objective 1).

The project proposal was guided by the "ERAR in the GMS: Regional Framework for Action 2013-2015" and based on recommendations of the joint assessment of the response to AR



in the GMS, conducted between November 2011 and February 2012. A project framework was developed that identified an overall goal and six objectives with results, result measurements, assumptions and activities under each objective.

Overall, the project framework is considered to be useful to monitor progress of the project for those objectives that have clear links between its various layers and specific and measurable results, i.e. objectives 2, 4 and 5. It has weaknesses in terms of the links and level of 'SMART'<sup>7</sup> in objectives 1, 3 and 6. Objective 1 needs clearer operational definitions of the defined results and performance benchmarks especially for the qualitative variables of the desirable outcomes such as political support, strengthened leadership, and coordination. This gap may contribute to the diverse range of stakeholders' expectations and gaps in communication, as well as difficulties in determining success of the ERAR Hub's performance under this objective. Solutions to this ambiguity are linked with defining the Hub's roles and positions in technical leadership as recommended in the Efficiency and Sustainability sections. The Hub's coordinator indicated that stakeholders' access and requests for support to the Hub had increased however; systematic records have not been kept. Keeping track of these activities could be useful to demonstrate the result measurement "the regional Hub is available for support and responses to request for technical assistance" in the Project Framework. The result measurement "the issue of antimalarial drug resistance is on the agenda of key meetings" can list out the potential meetings at a specific level and targeted senior political positions to engage in each event.

For objective 3, the result measurement "people tested for malaria through special interventions targeting migrant/mobile populations" needs specific performance benchmark and baselines. This indicator itself is not included in the SME indicator matrix. The Scorecard 2013 includes a proxy indicator "number of population at risk (MMPs) that had access to a malaria intervention" but 2013 data were only available in Cambodia and Myanmar. The Revised Scorecard includes "percentage of suspected malaria cases that have had a diagnostic test". This measurement and "national strategies, plans and proposal for containment, control and elimination encompassing activities for increasing access to services for MMPs" are ambitious within the project timeframe; the defined key activities look simplistic but improving access to quality services for MMP is a complex and challenging issue, and not one of WHO's core functions.<sup>8</sup> Similarly, unless there is a co-financing mechanism in place, expected results and result measurements under objective 6 are unrealistic as it is necessary to address the pharmaceutical system as a whole, not only in relation to oAMT.

At the design and inception stage, a comprehensive M&E plan including clear operational definitions, baselines, data sources and means of verifications for the developed Results/ Result Measurements in the project framework were not developed, and only selected baseline data were included in the Scorecard 2013. The lack of a comprehensive M&E plan to track project performance systematically could be one reason why progress reports missed including routine Result Measurements; for example, the "Proportion of malaria cases receiving direct observed treatment in tier 1 increases to 95% by 2015" (under Objective 5) and "People tested for malaria through special interventions targeting migrant/mobile populations" under Objective 3. The GMS ERAR indicator matrix only includes proxy indicators.

All of the tools such as annual work plans, key annual milestones and progress reports containing narrative and tabulation of milestone completion are useful to keep track of progress especially in terms of activity completion. These tools have been developed operationally with DFAT guidance. These reports reflect that the work plan and project activities feed into the project framework. Multiple activity reports, including meeting/consultation workshop reports, consultants' reports, traveling reports, and products

<sup>7</sup> SMART – Specific, Measurable, Attainable, Relevant and Time-bound.

<sup>8</sup> WHO's six core functions on page 7 of 32 of the Project Proposal.

of the completed activities provide details that are very useful to capture a full picture of the thematic issues, activity achievements, stakeholders' views, challenges and solutions. These details inform the ERAR Hub's planning process. These activity reports and products should be published in a timely manner to keep stakeholders updated. While waiting for publication of these materials, progress reports should provide key details especially on usefulness of the materials/ events, key decisions, challenges and follow-up actions.

### **Recommendations to improve reporting on project's performance\***

#### **Short-term**

- Clarify and ensure a common understanding on ERAR Hub's technical leadership in AR containment.
- Add necessary details especially on usefulness of the materials/events, key decisions, challenges and follow up actions in progress reports.
- Keep consistent result measurement indicators in the Project Framework and GMS ERAR Indicator matrix for the indicators on malaria testing under Objective 3 and malaria treatment under Objective 5.
- Include reporting on progress against all results of the project framework so as to track performance systematically.

#### **Long-term**

- Develop a M&E plan with clear operational definitions, baselines, performance benchmarks, milestones and data verification sources.
- Get consensus among stakeholders/donors on reporting requirements at the earliest stage of a project to meet information needs.

(\*): Recommendations for SME are presented in the Effectiveness section.

## **2.6. Private sector engagement and innovation**

### **2.6.1. Private sector**

Private sector activities in the GMS can be divided into three broad areas:

1. Private practitioners and the private pharmaceutical sector;
2. The private mosquito net sector; and
3. Private workplace programs<sup>9</sup>.

The ERAR Hub objectives did not include a specific focus on the private sector at design. However, collaboration with the private sector is essential to achieve most of the project's objectives (except for objective 2). It could also enhance the project's value in the future.

The first two broad areas are included in the GMS Malaria Strategy. There are examples of collaboration with private practitioners and the private pharmaceutical sector in Myanmar, Cambodia and to a lesser extent in Lao PDR, although efforts must be intensified. For example, various actors with national malaria programs (e.g. Population Services International (PSI)) have worked with private suppliers to improve malaria case management at service delivery level. There is an agreement that elimination in the GMS cannot be achieved without having the private sector play a bigger role, and in this respect, additional work needs to be conducted at private service delivery level.

The third area, workplace programs, appears to lack a comprehensive and coordinated approach, though Cambodia, Thailand and Myanmar all have some experience in developing "workplace programs" for malaria. Industrial development projects attract a large migrant worker population, often in heavily forested areas, and thus workplace programs for malaria prevention and treatment are critical. The most important workplace programs may be related to major development projects, for example, the Dawei Deep-sea Port Project, an

<sup>9</sup> Private companies employing migrant workers.



\$8 billion construction project in Tanintharyi State across from Kanchanaburi Province Thailand.

This is not to say the Hub has ignored the private sector completely, but has engaged the issue through other initiatives. As an example, the ERAR Coordinator facilitated a meeting on opportunities for corporate sector engagement in malaria control in the Asia-Pacific organised by RBM, APLMA and the Myanmar Health and Development Consortium in September 2014. This meeting discussed possible joint collaborations with the APLMA and RBM on high-level advocacy involving Asia-Pacific business leaders in APLMA's Malaria Champions Group. The ERAR Coordinator joined the APLMA Advocacy Steering Committee chaired by the APLMA Executive Secretary to prepare relevant communication that was later endorsed and reflected in the East Asian Summit Declaration of a Malaria Free Asia by 2030. It remains unclear how these discussions will result in specific actions, and unclear if the Hub in its current form is equipped to engage at this level.

While APLMA has been working on ways to embrace the private sector and engage them in the elimination agenda, there is currently no overall private sector engagement strategy partners can refer. Analysis and diagnostics of the issues to be dealt with are regularly flagged in reports and meetings, and what needs to be done is well documented. How to make it happen remains problematic. Given this limitation and the difficulties WHO has in engaging private entities, the development of a comprehensive private sector engagement strategy in which both objective 3 and 6 could fall under (see section 2.8) would be extremely beneficial. The ERAR Hub could play a more active role in this respect.

### **2.6.2. Innovation**

This investment represents two forms of innovation. The partnership between a private foundation (BMGF) and a traditional government donor (DFAT) is one form of innovation. Second, the implementing mechanism (ERAR Hub) is an innovative approach for WHO, being established in tandem with its traditional (global, regional and sub-regional) organisational structures.

The investment does not specifically engage the private sector in its design or governance, but has engaged private sector foundations, businesses and companies in the delivery of select components under objective 3 (MMP) and objective 6 (pharmaceutical). In line with the DFAT's AQC report, the review team agrees with the fact that the investment has the potential to evolve and leverage new funding partnerships, private sector engagement, as well as incorporate the use of innovative technologies under a coordinated regional malaria elimination response. However, innovative approaches require expectations to be managed. Innovation in practice implies an acceptance of risk and failure within a learning environment. Innovation does not always translate to increased efficacy and time and space is required to adapt to new ways of operating and introducing new mind sets. The investment is results-based, with clear objectives, key deliverables and monitored activities.

It should be noted, that while there is some innovation in this project, WHO is a rather reactive and risk-adverse organisation. Even though donors as well as WHO knew this when partnering on this project, these limitations can be an obstacle when tasked to respond to an emergency with pro-activeness and innovation.

## **2.7. Gender and social inclusiveness**

The ERAR Investment Proposal aims to promote equity by improving access to malaria services for those most at risk, as neither containment nor elimination will be achieved without equitable access to malaria services. While improving access to quality malaria services for MMPs is a specific objective (objective 3) of the project, gender equality was not incorporated as an explicit program objective at design. The proposal indicates that at the minimum, collected data are stratified by gender and the prioritised target groups in gender

sensitive interventions are MMPs<sup>10</sup>. Neither the design document nor the inception report outlines how this requirement is to be met.

Gender equality<sup>11</sup> is neither an explicit reference nor systematically incorporated in the malaria control and elimination documents at global, regional and national levels. A number of the national strategic documents focus on pregnant women, while other reports have incorporated gender assessment findings on vulnerability.<sup>12</sup> ERAR products including the draft GMS Malaria Elimination Strategy, draft BCC Strategy, draft Advocacy Strategy, draft SME Strategy, BCC/ IEC products, and workshop and travel reports<sup>13</sup> neither explicitly refer to gender nor specific groups such as male/female or men/women. Most documents do not present data separately for males and females. The SME Strategy and the Workshop report to review and plan Therapeutic Efficacy Studies (TES) to monitor antimalarial drug resistance in the GMS in Hanoi, Vietnam (20-21 May 2014) include information that is sensitive to gender issues. The SME Strategy includes reference to pregnant women in indicator descriptors. The consultation workshop report in Hanoi mentioned WHO strategic direction on migrants' health (WHO61/2008/REC/1) i.e. raise cultural and gender sensitivity to migrant health issues.

The SME system at regional level does not include gender-disaggregated indicators, nor does the GMS Scorecard baseline in 2013 or the revised GMS Scorecard. Gender-disaggregated malaria data at regional level are not available. The Hub's M&E officer reported that gender disaggregated data at the national level are not available from national health information systems. The desk review identified that only a couple of documents at national levels<sup>14</sup> have data reported separately for males and females. The review team views it as unrealistic to have gender-disaggregated data reported in all countries given the limited remaining time of the project and scope/scale of the issue

Stakeholder consultations indicate a perception that males are at the highest risk of malaria exposure. Most of the national strategic documents in GMS countries include data that support this perception. However, it is worth noting that while seasonal workers harvesting rubber are mostly made up of men, the ones harvesting coffee close to the forest are made up of men and women as pointed out in the Lao National Strategy for Malaria Control and Pre-elimination. The MARC includes a statistic in 2009 that among adult cases, 61% were males and 39% females. Among women, only pregnant women are paid attention as targeted through LLINs and antenatal screening because infected pregnant women tend to be serious cases.

According to the draft 2015 AQC report, DFAT has encouraged the ERAR Hub to review its gender approaches in drafted strategies (GMS Malaria Elimination, SME, Advocacy, Communication and MMP) and advised WHO to consider how this could be further operationalised as the GMS moves towards malaria elimination over the next 15 years. SEARH Gender Specialist advice has been shared with the Hub. Gender dynamics have been discussed in program meetings and raised in report feedback.

With the evolving cooperation frameworks of the ASEAN countries such as the establishment of ASEAN Economics Community by end of 2015, dynamics and complexity

<sup>10</sup> The team assessed performance on gender equality of the project based on the minimum requirement indicated in the project proposal.

<sup>11</sup> Reference to gender equality includes either or all "male", "female", "men", "women" and "gender" terms that are mentioned in a reviewed document.

<sup>12</sup> People's Republic of China's "From Malaria Control to Elimination: A Revised National Malaria Strategy 2010-2015"; Laos' National Strategy for Malaria Control and Pre-Elimination 2011-2015; and Strategic Framework for the MARC 2011-2015.

<sup>13</sup> The draft MMP assessment report was not available for review at the time of in-country missions.

<sup>14</sup> "Tools for surveillance of malaria in Cambodia" (monthly malaria data at village level to identify villages with high incidence and possible transmission with data including all individual (sex and age) simple, severe and death cases, treatments and referrals), Strategic Framework for MARC 2011-2015 (indicators of success and critical milestones – 1.6 Number of people with malaria (by gender and age group) treated with recommended ACT)

of cross-border and in-country migration in the GMS will likely increase. A good understanding of malaria exposure of migrant and mobile males and females and their treatment seeking behaviours is needed. To eliminate malaria in the GMS, it will be critical that MMP, especially those in the informal sector, are able to benefit from malaria elimination interventions. Priority setting should be based on the vulnerability of the sub-population to malaria, and their access to effective prevention and treatment. Whilst females may form a minority of malaria patients, they may also experience greater barriers to accessing effective treatment.

While DFAT gives an importance to gender equality, the review team found limited awareness of the importance of gender-sensitive approaches in the ERAR Hub. Clear roles of the ERAR Hub in terms of gender equality should be defined and well understood by ERAR Hub staff. A specific plan on gender equality, including a gender analysis can complement the gaps in current strategic documents.

The ERAR Hub has a positive gender balance in its staff composition. Half of the 17 supported positions are women, including 5 technical officers. DFAT has also observed gendered approaches in workshops and joint monitoring visits throughout 2014 and 2015.

#### **Gender and social inclusiveness recommendations**

- Define clear roles of the ERAR Hub in terms of gender equality.
- Develop a specific plan on gender equality, including a gender analysis to complement the gaps in current strategic documents.

## **2.8. Analysis and learning**

The fight against malaria in the GMS is at a turning point. The ERAR Hub has been pivotal in an important change of context from control, to AR and now to elimination. At the same time, the world community is shifting from the MDG era in which disease specific funding including malaria was high in the agenda, to the Sustainable Development Goals (SDGs) in which non-high burden disease countries will need to demonstrate very clearly that their strategies are effective to attract donors. Moreover, the landscape of partners involved at all levels is particularly congested in the region and requires finely-tuned coordination to move towards elimination in an effective and sustained manner. This ERAR project is an innovation that can clearly make a difference in facilitating the process towards elimination. In its current form the ERAR will have limited impact unless it reforms itself to be able to provide the adequate authoritative technical guidance to all stakeholders intervening. The following section gives an overview – from the review team perspective - on what is required to technically move to elimination, how governance could improve, and what realistic role WHO could play in order to fulfil its mandate.

### **2.8.1. When looking forward, what lessons can we incorporate in the new malaria elimination agenda?**

Several inter-related factors undermine malaria control in the region:

- Multidrug resistance;
- Counterfeit and substandard antimalarial drugs and irrational drug use in the private sector and communities not covered by public health services or village health volunteers;
- Uneven coverage of core interventions; and
- Widespread population mobility.

For example the potential for antimalarial drug resistance in the region is fuelled by extensive population movements, irrational drug use, and the proliferation of counterfeit drugs. These factors should be overcome as part of the operational approaches.

When assessing the project's achievements and its challenges and limitations, the review team appreciated that the project is only a small component of a much larger picture. The complex architecture of malaria initiatives including fragmented resource allocation and selective donor/partner programming presents challenges to WHO to coordinate stakeholders at many levels.

Currently, most partners see the ERAR Hub as a complementary body to what the APLMA (advocacy) and the RSC/RAI (implementation) are doing in the GMS. The ERAR Hub is seen as the technical partner, APLMA as the political and advocacy partner, and the RSC/RAI as the coordinated implementing steering mechanism. APMEN is also an important technical networking mechanism but the linkages and relationship of APMEN with other entities remains unclear.

### **2.8.2. What seems to be missing in the regional puzzle?**

Despite the above-mentioned complementarity, there still is a need in the GMS for a better-coordinated response and a better comprehension of what needs to be done, and what can be done (technically, financially and politically). This gap is felt at a higher political level than it is currently (main national interlocutors are at technical level). Indeed, a stronger nationally and regionally represented coordination platform specifically for the GMS is needed. The ERAR Hub has not yet been able to foster such coordination. The RSC remain the main multi-stakeholder coordination platform in the GMS, but issues that are brought up during meetings are increasingly beyond the scope of the RSC. The RSC is a mechanism to oversee the implementation of the Global Fund, not the whole AR and elimination response in the region. APLMA, while having the potential of being a great leverage to enhance political engagement is - to some extent - disconnected from implementation activities. Although the review team acknowledges the fact that the malaria space is rather congested, they still see the need for a new coordination platform. As coordination needs to happen at the right place, this platform should be nationally owned, in-between the APLMA and the RSC, and the ERAR Hub should be fully playing its normative guidance role at that level.

### **2.8.3. Where should this nationally owned political coordination take place?**

During the last ERAR partnership meeting in Bangkok (February 2015), for some stakeholders malaria elimination is viewed as just one of a number of communicable disease issues that they would prefer to see managed through a broader communicable diseases body. For some stakeholders, including DFAT, the most salient topic in this regard is regional health security, awareness of which has been raised by avian influenza, SARS and more recently the Ebola outbreak in West Africa. Stakeholders recognise however that a comprehensive governance mechanism for health security may take some time to achieve and that there is an immediate need to improve pro-active coordination around the malaria elimination agenda.

In the Malaria Elimination Feasibility Study for the GMS, it was recognised that elimination will not be achievable without expanding the partnership to new actors (including the private sector) and changing ways of working. Malaria elimination is not just intensified malaria control. It presents many new challenges that need new partners that have skills and networks beyond those normally found in NMCPs. There is considerable potential to expand the breadth and scope of activities by engaging and empowering new partners to carry out specific roles under the coordination of the government authorities. This will only work if adequate funds are allocated to these partners to enable them to play their role. Reliance on the public sector alone to deliver malaria elimination is not likely to work. The challenge to the public sector is to articulate its lead on strategy, policy, planning and evaluation in such a way that other partners are motivated and understand what is expected of them.



#### **2.8.4. Can we expect the ERAR Hub to embrace this required larger coordination role?**

During the last ERAR stakeholders meeting held in Bangkok in February 2015, some partners were of the opinion that the role of the ERAR Hub could be transformed from focusing on the ERAR to supporting the Strategy for Malaria Elimination in the GMS. This would provide an opportunity to expand its role beyond technical guidance to have a much more active role in programmatic coordination. Partners also agreed that the Hub would need to be considerably strengthened to do this – possibly by becoming a multi-partner entity with staff from other malaria initiatives assigned to work in it.

WHO has a mandate to coordinate the international health sector. However, while there is recognition of its role in providing technical guidance, there is less confidence that WHO has the capacity to build, lead and enhance the coordination of multi-partner/multi-sectoral strategy implementation.

The Review Team is of the opinion that the ERAR Hub – in its current structure - might not be the best-suited entity to foster such partnership, unless it is lifted up and appropriately staffed with cross cutting expertise. This would also require that the elimination agenda in the GMS is brought to a higher level within WHO HQ.

#### **2.8.5. How could the ERAR role evolve within the elimination agenda?**

After 15 years of strong vertical support to the NMCPs, which resulted in reaching low levels of malaria transmission (except for Myanmar which started later than the other programs), the overall financing environment is likely to change considerably in the coming two years. The SDGs will replace the MDGs, and the funding for malaria through traditional donors may decrease in low disease burden countries. As a consequence, NMCPs which have previously received support to broadly implement their strategies will need to be much more specific in presenting their approach. They should demonstrate that they know where the parasite is and which targeted interventions must be applied accordingly. Value for money, efficiency and clarity will be key arguments to continue attracting traditional donors, and to attract non-traditional financiers to join the malaria elimination agenda. In this context the NMCPs must be transformed by focusing on the following two pillars:

##### **Surveillance**

Current information on the burden of disease, its distribution and on malaria control operations is not sufficiently complete, accurate and detailed to plan and manage the implementation of malaria elimination. Better information and analysis of trends over time is also needed. Despite progress in micro-stratification, local situational analyses are often not sufficiently detailed to allow differentiation of strategies and approaches. Stratification and mapping of malaria at all levels from community to sub-region should be based on more accurate and up-to-date data. Receptivity assessment also requires better entomological information (and expertise). In the pre-elimination and elimination phase, surveillance systems must include accurate location information for all cases and travel history of cases to allow targeted responses. Malaria should be made a notifiable disease. Surveillance of drug efficacy and insecticide resistance is needed for early warning and to help explain setbacks. There is also a need for better platforms for and willingness to share information through feedback to health services and communication strategies to reach a wider range of stakeholders. These changes in surveillance systems are essential for the elimination phase, but in the heterogeneous malaria landscape of the GMS their implementation should sometimes precede formal reorientations of strategy.

WHO already supports NMCPs in this direction. The ERAR Hub should strategically intensify this support by reinforcing NMCPs to place surveillance as the core intervention of the national strategies while countries move to elimination. It should gradually come to include not only case detection, but also case management and response. More broadly the Hub could effectively operationalise a functioning SME platform that has multiple uses to NMCPs,



regional information exchange, real-time data collection to inform and target responses and monitor and report against indicators to mobilise resources and demonstrate effectiveness or shortcomings.

### ***The role of community-based services is critical and evolving***

Well-managed community-based health or malaria services have proven to be highly effective in all GMS countries to limit morbidity and mortality and reduce the transmission of malaria. Community malaria worker networks should be rapidly expanded where needed and properly managed by local health authorities or non-governmental organisations. Adequate resources need to be allocated to this component. As malaria incidence becomes very low it will be difficult to maintain workers exclusively dedicated to malaria, anecdotal evidence even suggests some have already been tempted to mis-report data in order to ensure jobs. The best solution is that they become community health workers, integrating other health functions and thereby at least partially remove potential perverse incentives. It would also demonstrate to development partners the sustainable value of investing in community health workers. The introduction of integrated community case management of malaria in some countries should be supported, but in a way that maintains a strong malaria component. This supports DFAT's wider interest in broader health system strengthening approaches and is one way partner governments can sustain program benefits.

#### **ERAR's future role recommendations**

- Encourage allocation of resources to benefit community-based malaria services and workers, encouraging a shift from dedicated malaria community workers to multi-purpose community health workers who are equipped to deal with malaria.
- Change of surveillance system (more pro-active, informative, efficient and shared).

## **3. Conclusions**

Despite a slow start, the ERAR project has become an increasingly important actor in providing technical leadership. The project has become an essential partner for the respective governments in their efforts to tackle multi-drug resistance including ACT resistance to ultimately eliminate malaria from the GMS. However, there is still much room for this project to expand and play a more pivotal and pro-active role. Most investors in the GMS expressed their will to have stronger technical authoritative guidance from WHO to inform their investment decisions. All stakeholders involved (including WHO and the donors) should manage expectations and honestly assess what must be done and who is best suited to do it. In this regard, non-technical issues such as migration, but also to a certain extent dealing with pharmaceutical oAMT/counterfeit drugs are cross-cutting issues which WHO has difficulties leading alone. While the project should fully be involved in such issues it should be co-led with other partners.

The unprecedented involvement of a large range of partners is critical to maintain the momentum and support in the region of this noble vision to eliminate malaria in the GMS. The APLMA, RSC, ERAR Hub and APMEN, and bilateral initiatives supported by DFAT, PMI, BMGF, and Clinton Health Access Initiative (CHAI) - while complementary in some respects – are sometimes overlapping platforms, and therefore impede efficient coordination. To manage all these resources and dynamics in an optimal manner, countries need to drive the elimination agenda. Partners have recognised that a nationally owned and regionally represented higher level of decision-making capacity is still to be built. Without this country owned governance platform, the ERAR project will always be limited in providing the required level of leadership and coordination as well as the technical guidance that partners are rightly seeking. WHO should also show stronger willingness to take risks and open up to other non-health actors to work effectively in this area. Finally, the partners who fairly point

out there is a lack of coordination and a need to be better organised, should also agree - in line with their own policies, principles and processes - to dilute their leadership in a multilateral platform under the ownership of the countries. "The essence of leadership is not more governance but more common spirit."<sup>15</sup>

The ERAR project should intensify its efforts to improve its impact during the remaining time of the project and apply the review teams' short to medium term recommendations, while at the same time, start building the next phase of WHO's role in the GMS in order to best support countries to achieve their goals.

### 3.1. Review recommendations

Overall, the review team recommends that donors should continue supporting the ERAR project, initially until 2016, and envision re-shaping the project in line with the malaria elimination agenda. The following specific recommendations are made to support this re-alignment and improve efficiency and effectiveness of the ERAR in its remaining timeframe

#### ***Short to medium term (within the current ERAR project)***

- Grant a no-cost extension aligned with that of BMGF until end 2016.<sup>16</sup> (DFAT)
- Harmonise reporting formats into one single joined format keeping in mind that performance and quality reporting standards should not be diluted (DFAT & BMGF).
- Raise the overall profile of the Hub by (WHO):
  - Revising the Hub coordination terms of reference towards a more strategic and political role (including highlighting the complementarity to the regional offices).
  - Appropriately resourcing the Hub in order to cover both political and technical functions to ensure having the full set of skills required. The political function could be raised as a "Malaria elimination special envoy" reporting to the DG/DDG level in collaboration with the regional offices Directors and the GMP.
- Distinguish the ERAR project into two components (WHO):
  - 1) TA provided to regional and country offices (staff reporting to regional WCO);
  - 2) The ERAR project (Hub) in its strategic and political function (Hub reporting to the TMC). Consider increasing frequency of TMC meetings and flexibility so to invite on a case-by-case basis non-WHO stakeholders to be part of the meetings.
- Empower the Hub to (WHO):
  - Be able to engage at a higher political level with health as well as non-health partners.
  - To develop mechanisms to have full control over resource allocation (control over the budget before execution) and also approval of terms of references for consultants to be hired.
- Conduct a Human Resources gap analysis to strengthen regional offices and WCO to match with elimination technical requirements and ambition (WHO).
  - WHO should consider making ERAR positions available to external applicants.
- Strengthen the current project team through (WHO):
  - 1) Upgrading the communication officer position to P4 level;
  - 2) Recruiting an entomologist;

<sup>15</sup> Feasibility of Plasmodium falciparum elimination in the Greater Mekong Subregion: technical, operational and financial challenges, GMP, September 2014

<sup>16</sup> It is the understanding of the review that the NCE is underway based on a review of effectiveness and efficiency progress reported in annual (March 2015) report.

- 3) Recruiting a data manager;
  - 4) Formalising the current program management officer position (currently consultant); and
  - 5) Urgently addressing ways to strengthen the Myanmar WCO with appropriate staff.
- Revise the M&E framework to better track Hub achievements and improve reporting. Consider revising intended results under objective 6 (reduced availability of oAMT, substandard and counterfeit medicines and improve quality ACTs) (WHO).
  - Define the communication strategy and conduct a survey to assess the effectiveness of the regional website and the quarterly bulletins (with GMP and regional offices) (WHO).
  - Further define the ERAR Hubs approach to gender equality (WHO and DFAT).
  - In collaboration with APLMA, develop a comprehensive strategy “embracing private sector for malaria elimination in the GMS” and place specific emphasis on dealing with private pharmaceutical sector and private workplace programs to address objectives 3 and 6 (WHO).
  - The ERAR should assess progress and achievements of objectives 3 and 6 and explore ways to expand partnerships (including for objective 6 potentially joining efforts with United States Pharmacopeia (USP)) (WHO).
  - Support countries to establish nationally owned multi-sectoral elimination councils linked to health security committees (led by the Government in close collaboration with APLMA, RSC, APMEN, private sector, civil society, and other relevant ministries). These committees should be represented at the regional level (WHO).

### **Longer term options**

- Commission a joint scoping mission to assess ways to:
  - 1) Re-orient the mandate of the current ERAR project towards a more realistic set of objectives so to be able to lead the technical component of the elimination agenda with a forward looking vision to 2030.
  - 2) Transform the Hub into a broader malaria elimination mechanism in the GMS.
- Consider re-branding the Hub to reflect the elimination agenda in a future phase of the project. The name could be “The Mekong Malaria Elimination Coordination Platform” (MMECP).
- The MMECP should support the establishment of malaria elimination councils integrated within the health security agenda at country level, and be represented at regional level. WHO could be Co-Chair.
- The MMECP should engage with the various MoH departments (human resources, finance, planning) so that the malaria elimination agenda is not only looked at through the NMCP lenses, but in a more integrated way.
- Encourage allocation of resources to enhance surveillance systems and benefit community based malaria services.

## Annex 1: Terms of Reference

### Terms of Reference for an Independent Mid-Term Review of the: “Coordination of the Emergency Response to Artemisinin Resistance in the Greater Mekong Subregion”

#### Overview

These Terms of Reference (ToR) provide guidance in conducting an Independent Mid-Term Review of the “Coordination of the Emergency Response to Artemisinin Resistance (ERAR) in the Greater Mekong Subregion (GMS)”, supported by the Australian Government’s Department of Foreign Affairs and Trade (DFAT) and the Bill and Melinda Gates Foundation (BMGF) and implemented by the World Health Organisation (WHO). The independent mid-term review will evaluate the first 24 months of program implementation in order to inform management decisions in the current program phase and given the rapidly changing context towards malaria elimination in the GMS.<sup>17</sup>

#### Background

The continued emergence and spread of Artemisinin Resistance (AR) threatens significant gains made in reducing malaria morbidity and mortality worldwide. Artemisinin based combination therapies (ACTs) are currently the most effective anti-malarial drugs and, in conjunction with vector control, have led to notable successes. The emergence of AR in the GMS is an urgent regional public health concern and also threatens to undermine progress in reducing malaria cases and deaths in the Asia Pacific.

Resistance to anti-malarial drugs historically originated on the Thailand-Cambodia border; *Plasmodium falciparum* parasites resistant to chloroquine, sulphadoxine pyrimethamine, and mefloquine were first detected in Southeast Asia. Neglecting AR in the GMS would lead to a persistent parasite pool that is harder to eliminate, which in turn increases the incidence of severe or prolonged illness and mortality, particularly in low-transmission areas with reduced population immunity to malaria.

Over previous decades, the GMS has recorded significant declines in malaria burden due to effective delivery of proven interventions through strong malaria programs, supported by public health systems and development partners. However, in 2007 AR *P. falciparum* malaria was reported in Eastern Cambodia. In 2014, confirmed or suspected AR had been identified in five GMS countries (Cambodia, Lao People’s Democratic Republic (PDR), Myanmar, Thailand and Vietnam). These countries form the epicentre of AR. Resistance has mainly emerged along the Thailand-Myanmar, Thailand-Cambodia, Vietnam-Cambodia, and Vietnam-Lao PDR borders but has recently been detected in other sites. Due to regional proximity and risk of AR spreading across borders China (Yunnan province) is also included as a program target country.

The “Coordination of the ERAR in the GMS” is jointly funded by DFAT and BMGF, and implemented by WHO to strengthen the response to AR in the GMS. WHO has been tasked with coordinating regional action, providing technical assistance (TA), strengthening technical leadership and catalysing resource mobilisation. WHO provide TA to stakeholders in a variety of forms and platforms, including; in-country training and support to proposal development for National Malaria Control Programs (NMCP); advocacy with countries’ Ministries of Health (MoH); developing ERAR disease management action plans and strategies; facilitating cross-country and regional collaboration (workshops), strengthening

<sup>17</sup> DFAT’s current contribution ends 31 December 2015. DFAT is reviewing a program extension request to 31 December 2016, due to program delays and low financial disbursement in year one. BMGF have independently confirmed a no-cost extension with WHO until 31 December 2016.

therapeutic efficacy studies (TES) and priority research; and coordination of action with donors and implementing partners. Specific activities take place under the six program objectives listed below. WHO provides TA through the ERAR Hub (Phnom Penh, Cambodia), Western Pacific Regional Office (WPRO), South East Asia Regional Office (SEARO), Country Offices and more broadly through the Global Malaria Program (GMP) based in Geneva.

### **Program Goal:**

The preservation of the effectiveness of ACTs by containing and ultimately eliminating AR *P. falciparum* malaria parasites in the GMS.

### **Program Objectives:**

- Strengthened leadership, coordination and oversight mechanisms;
- Maintenance and expansion of drug efficacy surveillance networks and acceleration of priority research;
- Improved access for migrant and mobile populations (MMP) to quality services;
- Full implementation of the Myanmar Artemisinin Resistance Containment (MARC) framework;
- Strengthened response to AR in Vietnam;
- Reduced availability of oral Artemisinin based monotherapy and substandard and counterfeit antimalarial medicine while improving quality of ACTs.

The threat of AR in the GMS is a significant obstacle to the regions achievement of Millennium Development Goal (MDG) six and specific target to halt, and begin to reverse incidences of malaria by 2015. In early 2012 Australia led a strategic assessment of AR in the GMS, recommendations of which included; strengthening leadership as well as coordination and oversight mechanisms. This “Coordination of the ERAR in the GMS” directly responds to these recommendations. Regional efforts to contain the spread of AR (*P. falciparum*) have been guided since March 2013 by the WHO “ERAR in the GMS: Regional Framework For Action 2013-2015”. This outlines the actions required for improved coordination of activities and funding across the GMS. Following country level endorsement of the framework the ERAR Hub officially opened on World Malaria Day (25 April 2013). 17 WHO Technical Officers and support staff are funded under this initiative. Positions have been distributed across WHO offices in the region and are led by an ERAR Coordinator based in Cambodia. A WHO technical/management committee has also been established, consisting of the ERAR Hub Coordinator, six WHO country representatives, communicable disease directors in the two regional offices and the GMP.

The program was designed as a three year (January 2013 – December 2015) regional initiative across the GMS (Cambodia, China (Yunnan Province), Lao PDR, Myanmar, Thailand and Vietnam). Combating drug resistant malaria fits within DFAT’s second regional strategy objective of addressing priority trans-boundary development challenges, including the spread of communicable diseases. It features prominently in DFAT’s Health Portfolio Review and draft regional Aid Investment Plan (AIP) in terms of prioritising investments, protecting Australia from emerging health threats, promoting prosperity, reducing poverty and enhancing stability in Australia’s national interest. DFAT’s financial contribution to the WHO partner-led proposal is AUD 4.5 million (governed by an exchange of letters under the partnership framework between WHO and the Commonwealth of Australia); BMGF’s contribution exceeds AUD 10 million. The program is managed by DFAT’s South East Asia Regional Hub (SEARH) after being transferred from DFAT Canberra’s Health Policy Team in March 2014. This followed agreement that program management would be better situated in the GMS (Bangkok) to take advantage of the SEARH’s regional expertise (including a



Regional Health Specialist, who also has oversight of other relevant sector investments in the region) and proximity to program stakeholders. The program is specifically managed by the DFAT SEARH Regional Program Manager, with technical oversight from the DFAT Regional Health Specialist, and the BMGF Senior Program Manager (based in Seattle, USA).

## Key Program Issues/Developments

Activity progress for the majority of the program's first year was limited due to delays in staff recruitment to key ERAR Hub positions, most notably initial delays in recruitment of the Hub Coordinator. Following a progress report in September 2013, six (6) of the seventeen (17) Hub positions remained unfilled. With the exception of the Pharmaceutical Technical Officer based in China and Malaria Technical Officer in Vietnam all positions were filled by January 2014. Limited progress towards program deliverables under objectives 5 and 6 continued for the first half of 2014. The Hub has operated at full capacity since July 2014. As an interim measure the ERAR Hub hired consultants to temporarily perform key tasks with the support of staff from the WHO Global Malaria Program (GMP) and regional offices. Despite year one recruitment delays a number of key program results have still been achieved and further progress in 2014 has been made against revised work plans.<sup>18</sup>

The program is taking place within a complex architecture of malaria initiatives, which highlights the challenge facing WHO of coordinating stakeholders at a variety of levels, fragmented resource allocation and selective donor/partner programming. DFAT alone directly contributes funds to six separate malaria related programs in the GMS; the Coordination of the ERAR in the GMS; the Asia Pacific Leaders Malaria Alliance (APLMA) and associated task forces (a secretariat hosted by the ADB); the ADB Regional Trust Fund for Malaria and other Disease Threats (RMTF); the Asia Pacific Malaria Elimination Network (APMEN); the GFATM, a key regional malaria component of which is the Regional Artemisinin Initiative (RAI); and the Three Millennium Development Goal (3MDG) Fund in Myanmar. Other initiatives are funded or implemented by BMGF, USAID, US President's Malaria Initiative (PMI), Japanese International Cooperation Agency (JICA), the Private Sector, international and local Non-Governmental Organisations (NGO), as well as government funding of NMCPs.

Since the program's inception in January 2013, the regional approach has moved rapidly from malaria containment towards elimination. Although elimination is incorporated in the initiative's goal, program objectives and activities have largely been directed towards containment. There is now acceptance that containment alone will not be sufficient to remove the threat of AR, leading to a regional push towards malaria elimination by 2030 (consistent with country national malaria elimination targets). WHO endorsement of the technical, financial and political feasibility of malaria elimination in the GMS is expected soon, through the adoption of malaria elimination as WHO policy for the region.

The ERAR is further influenced by the degree to which partner government responses have differed across the region; is defined by varying national level resource commitments and country capacities to respond effectively in the context of ERAR; and characterised by key inter-country challenges, specifically related to improving access to MMPs and addressing the quality of anti-malarial drugs across the GMS.

## Purpose

The purpose of this independent mid-term review is to assess the effectiveness, efficiency and sustainability of the "Coordination of the ERAR in the GMS". Primarily, the review will

<sup>18</sup> Please refer to program six month progress reports, annual reports and internal DFAT Quality at Implementation (QAI) reports for further information.

strategically inform DFAT and BMGF management actions/decisions in the current program phase until its proposed end date.<sup>19</sup> The review will inform DFAT and BMGF malaria elimination investments in the region, and clarify how the current program complements existing and planned DFAT, BMGF and other stakeholder malaria initiatives in the context of changing national, regional and international malaria elimination strategies. Secondary users (other donors and partners) will also benefit through the online dissemination of the final report.

## Objectives

To document, assess and make recommendations on:

- Current program implications (realistic adjustments to program modality) given the changing national, regional (malaria elimination in the GMS by 2030) and global malaria elimination contexts.
- Achievements against the six (6) end-of-program objectives using value judgements, activity progress, key deliverables, program outcomes and evidenced based observations;
- Relevance of the program's modality, the "emergency response" to AR; the programs role in a congested development space; and the capacity and capability of WHO to coordinate the technical and operational ERAR in the GMS and achieve end-of-program objectives given the rapidly changing malaria context;
- The extent to which end-of-program objectives will be sustained by government and/or development partners beyond the program end date at both country and regional level;
- Improvements to current program governance arrangements (WHO) and operationalization of monitoring and evaluation framework until the programs end date.
- DFAT/BMGF co-funding arrangements including; DFAT program management changes, donor monitoring and evaluation requirements and reporting framework/criteria.
- Subsequent priorities a future program could focus on in order to best fit with DFAT, BMGF and other development partners' malaria investments in the region.

## Scope

The focus of this review is primarily at the operational level to capture salient findings and provide initiative managers/senior decision makers (DFAT and BMGF) with realistic and appropriate recommendations to strategically inform management decisions at the program's mid-term point. The review will assess the "Coordination of the ERAR in the GMS" at the regional level; however, GMS country level inputs are vital to provide a complete and informed evidence base, and necessary as regional outcomes are dependent on the quality of country level inputs.

This review is based on the premise that the relevance of the "Coordination of the ERAR in the GMS" will remain high for the foreseeable future, that is to say the ERAR in the GMS will continue to require coordination in some form or other. The relevance of the issue is not therefore part of this reviews scope, however, as indicated above the relevance of the initiatives approach and modality will be explored. This aspect of relevance is further contextualised by changing approaches to malaria elimination nationally, regionally and internationally.

<sup>19</sup> DFAT's current contribution ends 31 December 2015. DFAT is reviewing a program extension request to 31 December 2016, due to program delays and low financial disbursement in year one. BMGF have independently confirmed a no-cost extension with WHO until 31 December 2016.

- The review will cover the first 24 months of program implementation of the “Coordination of the ERAR in the GMS”;
- It will incorporate program inputs and perspectives through key stakeholder interviews (face-to-face/telecon) from WHO GMP (Geneva), Regional (SEARO and WPRO) and ERAR Hub (Cambodia), in addition to key ERAR Hub team members based in country offices;
- It will incorporate DFAT (Canberra and SEARH) and BMGF (Seattle, USA) contributions and program perspectives through key stakeholder interviews (face-to-face/telecon);
- As key beneficiaries of our intervention the review will capture the vital country level NMCP involvement and observations (Cambodia, China (Yunnan), Lao PDR, Myanmar, Thailand, Vietnam);
- Other relevant stakeholder inputs as deemed appropriate by the review team (ADB, PMI, ALPMA, APMEN, GFATM, RAI, 3MDG etc.); and
- The WHO ERAR Hub will assist the review team in facilitating key stakeholder interviews and in-country missions, as appropriate, through the ERAR Hub Coordinator. (Arrangements to be defined and agreed in the review plan.)

## Output

- Review Plan - Detailing review approach/methodology and associated activities, to be consistent with the broad parameters provided by this ToR. The review plan will be developed by the independent Technical Health Expert/Review Lead, supported by the DFAT M&E Team Member (Evaluation Manager). The review plan will be guided by DFAT's M&E Standards and submitted to DFAT SEARH by COB Monday, 16 March 2015.
- Aide Memoire - Key findings feedback to be presented to DFAT SEARH, BMGF and others (as appropriate) by Friday, 10 April 2015 (or the final day of in-country missions) for review.
  - Mid-Term Review Report – “Independent Mid-Term Review of the Coordination of the ERAR in the GMS” (structure and submission dates detailed in section 11).

## Timeframe and input days

Activity	Timeframe	Number of input days (Max): Technical Expert/Review Lead      Health Lead	Number of input days (Max): DFAT M&E Team Member
ToR development, finalisation and approval	February 2015	n/a	n/a
Health Resource Facility (HRF) sourcing and contracting of independent consultant	February 2015	n/a	n/a
Review team verbal briefing	March 2015	0.5	0.5
Document review	March 2015	5	3
Review team submission of mid-term review plan	March 2015	5	3
In-country missions (6 target countries, 2-3 days in each depending on stakeholders), interviews (face-to-face/telecon) and findings feedback (aide memoire presentation)	March/April 2015	20.5 (including travel days)	9
Report drafting and finalisation	April/May 2015	10 (including revisions and finalisation)	5
All financial disbursements completed	May 2015	n/a	n/a
Total		41	20.5

The timeframe above presents an indicative schedule for the independent mid-term review. Specific activities will be conducted according to the review plan. The majority of in-country missions and interviews will be undertaken in March/April 2015, report drafting and finalisation in April/May 2015 (or as soon as practicable after aide memoire presentation). All financial disbursements are to be completed by 30 May 2015.

## Methodology

An appropriate review methodology will be defined by the review team in order to answer the key assessment questions below. The review questions will be refined and finalised in the review plan:

1. To what extent has the current program achieved its objectives? To what extent do these achievements contribute to the overall goal in the long run and how efficiently have they been achieved?
2. What are the lessons learned from the emergency response phase, under each program objective, that will be useful in moving strategically towards malaria elimination?
3. To what extent has an effective monitoring and evaluation framework been operationalised and appropriate indicators used against program objectives and levels (tiers, country and/or regional) and how can it be improved?
4. How does the current program fit with the regional ERAR framework for action/theory of change in relation to malaria elimination, as well as complementing other malaria investments? What changes may be required to improve the complementarity of the program?

5. To what extent will end-of-program objectives be sustained by government and/or development partners beyond the program end date at both country and regional levels? What changes are required to strengthen program sustainability?
6. How relevant and effective is the current modality and what would be an effective mechanism, modality (arrangements) at regional and bilateral levels to move forward strategically toward malaria elimination?
7. How effective have current funding, program management and governance arrangements been and how could a future program address co-funding and program management arrangements effectively?
8. How have approaches to gender and social inclusiveness been effectively incorporated? How can further private sector engagement and innovative program approaches be integrated to support the response in a changed context?
9. What are the gaps to be addressed if the goal of malaria elimination is to be realised? Given these what priorities should a future investment focus on so as to gain the best value for money?

### Composition of review team

The review team will be composed of two (2) team members using the criteria outlined below:

One (1) HRF sourced independent Technical Health Expert/Review Lead responsible for overall review management; the development and implementation of the review plan, in-country missions, aide memoire presentation, report drafting and finalisation. The Technical Health Expert/Review Lead will provide key technical malaria inputs throughout the review process.

The Technical Health Expert/Review Lead should demonstrate the following skills/qualities and adhere to the highest evaluation standards and code of ethics:

1. Excellent M&E skills including; practical experience in monitoring and evaluating complex international development programs; and the ability to present and use relevant quantitative and qualitative evaluation tools to answer key evaluation questions;
2. Excellent technical knowledge and experience of malaria related issues;
3. Exceptional report drafting skills, including the ability to convey complex issues and ideas in simple easy-to-understand forms;
4. Have a practical and realistic approach to program and technical recommendations;
5. Strong cross-cultural, interpersonal, and leadership skills; as well as specific knowledge and experience of the GMS (region and/or country level); and
6. Previous experience of DFAT regional programs, M&E standards and procedures preferred, but not essential.

The Technical Health Expert/Review Lead position is rated category C4 against the DFAT Advisor Remuneration Framework.

One (1) DFAT M&E Team Member, not connected to the program's management (SEARH Evaluation Manager) responsible for contributing to M&E aspects of the review and supporting the Technical Health Expert/Review Lead in the development and implementation of the review plan, in-country missions, aide memoire presentation, report drafting and finalisation.



*The DFAT M&E Team Member should demonstrate the following skills/qualities and adhere to the highest evaluation standards and code of ethics:*

1. Excellent M&E skills including; practical experience in monitoring and evaluating complex international development programs; and the ability to present and use relevant quantitative and qualitative evaluation tools to answer key evaluation questions;
2. Exceptional report drafting skills, including the ability to convey complex issues and ideas in simple easy-to-understand forms;
3. Have a practical and realistic approach to program recommendations;
4. Be a team player with strong cross-cultural and interpersonal skills; as well as specific knowledge and experience of the GMS; and
5. Previous experience of DFAT regional programs, DFAT M&E standards and procedures.

The DFAT SEARH Regional Program Manager and/or BMGF Senior Program Manager may observe/participate in all or select in-country missions (defined in the review plan), and where deemed appropriate so as not to compromise review findings.

### **Reporting and publication requirements**

A draft report will be submitted to DFAT Bangkok in electronic format (Word document) by COB Friday, 08 May 2015 and following review and comments, a final revised report submitted to DFAT by COB Monday, 25 May 2015. The report will reflect the key review objectives outlined in this ToR, the agreed review plan, and not exceed thirty (30) pages in length (excluding annexes). The report will include a concise executive summary, identifying key findings and recommendations in no more than four (4) pages. The report will comprehensively address this ToR while recognising the need for clarity, brevity and usefulness. The review will be commissioned and conducted in a manner which facilitates publication.

### **Reference Group**

A review reference group will be used to appraise and quality assure key review output documents related to this ToR as and when submitted to DFAT SEARH. The DFAT SEARH Regional Program Manager will provide consolidated comments to the review team. The reference group will include members listed below depending on availability. Other individuals may be invited to review key outputs within the reference group, as deemed appropriate.

- Regional Program Manager, DFAT SEARH
- Regional Health Sector Specialist, DFAT SEARH
- First Secretary - Development Cooperation, DFAT SEARH
- Senior Program Officer - Global Health, Malaria and Neglected Infectious Diseases, BMGF

## Annex 2: Evaluation Plan



Health Resource Facility  
for Australia's Aid Program

# **Coordination of the Emergency Response to Artemisinin Resistance in the Greater Mekong Subregion Independent Mid-Term Review Review Plan**

Roberto Garcia and Le Thi Quynh Nga

18 March 2015

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## Acronyms

ADB	Asian Development Bank,
APLMA	Asia Pacific Leaders Malaria Alliance
ASEAN	Association of South East Asian Nations
BMGF	Bill and Melinda Gates Foundation
DFAT	Department of Foreign Affairs and Trade (Australia)
DFID	Department for International Development (UK)
ERAR	Emergency Response to Artemisinin Resistance
GFATM	Global Fund to fight AIDS, TB and Malaria,
GMP	Global Malaria Programme
GMS	Greater Mekong Subregion
IMTR	Independent Mid-Term Review
M&E	Monitoring and Evaluation
MoH	Ministry of Health
PMI	Presidents Malaria Initiative
RAI	Regional Artemisinin Initiative
RSC	Regional Steering Committee
SEARO	South East Asia Regional Office (WHO)
ToR	Terms of Reference
UNOPS	United Nations Office for Project Services
VfM	Value for Money
WHO	World Health Organisation
WPRO	Western Pacific Regional Office (WHO)

## 1. Introduction

The Independent Mid-Term Review (IMTR) ('the review') of the Emergency Response of Artemisinin Resistance (ERAR) will provide the Department of Foreign Affairs and Trade (DFAT), and the Bill and Melinda Gates Foundation (BMGF) with an assessment of the effectiveness, efficiency and sustainability of the "Coordination of the ERAR in the Greater Mekong Subregion (GMS)". The review will evaluate the first 24 months of program implementation in order to inform future program management decisions. DFAT and the BMGF are the primary intended users of information from this review and the review report will be drafted with their information needs in mind. The two primary users of the evaluation findings will be: Richard Lee, Regional Program Manager, Regional Programs - DFAT, and Thomas Kanyok, Senior Program Officer, Global Health, Malaria and Neglected Infectious Diseases - BMGF. In the interest of transparency, the outcomes of the review will also be shared with external stakeholders. An appropriate strategy to communicate the outcomes of the Review to a wider audience will be agreed with DFAT and the BMGF.

The Review Plan is based on the Terms of Reference (ToRs) for the IMTR and has been developed in consultation with DFAT and the Health Resource Facility for Australia's aid program. The ToRs for the IMTR can be found in Annex 1.

## 2. Purpose of the IMTR

The purpose of this IMTR is to assess the effectiveness, efficiency and sustainability of the "Coordination of the ERAR in the GMS". Primarily, the review will strategically inform DFAT and BMGF management actions/decisions in the current program phase until its proposed end date.<sup>20</sup> The review will inform DFAT and BMGF malaria elimination investments in the region, and clarify how the current program complements existing and planned DFAT, BMGF and other stakeholder malaria initiatives in the context of changing national, regional and international malaria elimination strategies. Secondary users (other donors and partners) will also benefit through the dissemination of the final report.

More specifically, the review team will document, assess and make recommendations on the following seven objectives of the IMTR:

1. Current program implications (realistic adjustments to program modality) given the changing national, regional (malaria elimination in the GMS by 2030) and global malaria elimination contexts;
2. Achievements against the six (6) end-of-program objectives using value judgements, activity progress, key deliverables, program outcomes and evidenced based observations;
3. Relevance of the program's modality, the "emergency response" to artemisinin resistance; the programs role in a congested development space; and the capacity and capability of WHO to coordinate the technical and operational ERAR in the GMS and achieve end-of-program objectives given the rapidly changing malaria context;

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<sup>20</sup> DFAT's current contribution ends on 31 December 2015. DFAT is reviewing a program extension request to 31 December 2016, due to program delays and low financial disbursement in year one. BMGF have independently confirmed a no-cost extension with WHO until 31 December 2016.



4. The extent to which end-of-program objectives will be sustained by government and/or development partners beyond the program end date at both country and regional level;
5. Improvements to current program governance arrangements (WHO) and operationalisation of monitoring and evaluation framework until the programs end date.
6. DFAT/BMGF co-funding arrangements including; DFAT program management changes, donor monitoring and evaluation requirements and reporting framework/criteria.
7. Subsequent priorities a future program could focus on in order to best fit with DFAT, BMGF and other development partners' malaria investments in the region.

### 3. Approach and methodology

#### Approach

The IMTR is a participatory, forward-looking assessment of the program's design and performance over the first 24 months of the program. The methodology will use a mixed approach to determine program performance. At the same time, the IMTR will take an appreciative, strengths-based approach to acknowledge the complexity of the program, as well as the challenging subject matter it deals with and implementing environment it operates in.

Key elements of the approach to the IMTR include the following:

a) The IMTR is formative in nature. Its main purpose is to enhance key stakeholders' understanding of the program's performance with a view to inform decision making around future possible re-programming and re-arrangement of the institutional/management modalities. It will therefore have a strong focus on objectives and process. The review will therefore be assessing:

1. the program approach in the light of an evolving regional context moving from an emergency response to artemisinin resistance to a malaria elimination goal in the whole GMS;
2. the institutional and management arrangements and the extent to which these facilitate or impede achievement of results; and
3. how the ERAR program can be improved to optimise implementation during the remaining period.

b) The review will be based on a clear understanding and detailed analysis of the causal chain from inputs to results. In addition to assess whether results are being achieved so far, the review will look at linkages between inputs and expected outcomes to understand why results are likely or not to be achieved. Where information is available, the review will map ongoing regional and national investments and their key outcomes to gain an understanding of how the current ERAR framework can enhance other malaria investments. The review team will also evaluate to what extent the achievements of ERAR as it is currently designed can efficiently contribute to the overall malaria elimination goal.

c) Data will be collected a mixed method, rapid assessment approach. The review team will collect quantitative and qualitative data from primary and secondary sources. Primary data will be obtained through interviewing key program stakeholders. Secondary data will be obtained through reviewing key DFAT, BMGF and ERAR documentation. The review team will validate the information by comparing stakeholder opinions and responses to questions from different

stakeholders, as expressed in interviews and triangulate data from the various sources using an analytical framework similar to that shown at Table 2.

## **Methods of data collection and analysis**

Data collection will be guided by the questions outlined in Table 1. The review team will undertake face to face and teleconference interviews with key stakeholders. Structured written submissions will be sought from stakeholders unable to participate in interviews.

Stakeholders have been identified following discussions with DFAT, BMGF and the ERAR Hub. The review team will also contact any other interlocutors as necessary including beneficiaries of the program and/or key experts that have been involved in the implementation of the ERAR program. A detailed list of informants interviewed will be included as an annex in the final report.

### **3.2.1 Document review**

A range of background documentation has been provided by DFAT which includes the ERAR Regional Framework for Action 2013-2015, ERAR design documentation, inception reporting and progress and annual reports. In addition to this documentation, WHO has provided a range of background material including technical consultant reports, travel reports, thematic documents and background on other regional malaria initiatives.

We understand that the review of documents will continue throughout the review process, since additional documentation normally emerges as fieldwork progresses. It is both the review team's and key program stakeholders' responsibility to manage this. DFAT and the ERAR will ensure that the review team has all the necessary documentation and templates to finalise the evaluation plan, aide memoire and final report, and to conduct the review with insight of essential documentation pertaining to the program. DFAT and the ERAR will jointly identify the "top 20" priority documents to inform the review (a comprehensive list of documents currently with the review team is attached as Annex 2). The review team will be flexible and pragmatic regarding the volume of documentation reviewed, and any additional documentation deemed essential to the review will be incorporated as the review progresses. However, given a tight work plan, there will be an upper limit as to the amount of time that can be devoted to the review of documents. The review team may ask DFAT or the ERAR to advise on relevance of specific documents to the review.

It is the responsibility of the stakeholders to provide the documentation to the review team to ensure that all documents provided are accurate and that these documents are approved by the relevant stakeholders, and that all documents are current and quality-assured. With the exception of validating the accuracy of progress reports, which falls within the remit of the review ToRs, the review team will not verify the accuracy or quality of documents submitted to them by program stakeholders. Data and information in such documents will be used on the assumption that it is accurate and factually correct. If there are inconsistencies found between documents, the team will address this by first contacting the ERAR Hub.

### **3.2.2 Key informant interviews**

The review will include country visits to Cambodia, Thailand, Myanmar, Vietnam, Lao. Due to time and resource constraints, China (Yunan) informants will be contacted through teleconference. The Regional Steering Committee (RSC) of the Regional Artemisinin Initiative (RAI) will meet on 9 April 2015 and this will provide an opportunity for the review team to conduct further stakeholder interviews as needed.

The review team will meet and/or interview a large range of stakeholders involved in malaria elimination in the GMS. In priority, the team will meet with:

1. the two donors of the project: DFAT in Bangkok and Posts in other countries if requested by Post Bangkok and the BMGF;
2. the ERAR Hub project team in Cambodia;
3. WHO/GMP Geneva, WHO regional offices (SEARO and WPRO), WHO country offices;
4. stakeholders in Ministries of Health (MoH) and their relevant national programs in each country;
5. other stakeholders including: Association of South East Asian Nations (ASEAN), Asia Pacific Leaders Malaria Alliance (APLMA), Asian Development Bank (ADB), Global Fund to fight AIDS, TB and Malaria (GFATM), the RSC, DFID, PMI, UNOPS in Myanmar, civil society organisations, private sector representatives.

An indicative list of stakeholders has been provided at Annex 3. This list will be finalised prior to commencement of the review and following any feedback during in-country consultations.

### 3.2.3 Guiding questionnaire

The review questions that will guide the stakeholder consultations are outlined in Table 1 below. These questions include the review questions outlined in the ToRs (Column 1) with the set of more specific sub-questions (Column 2) developed following briefings with DFAT and BMGF and a review of the background documentation. This is not an exhaustive list of all possible questions; nor is it intended to be used as a “checklist” against which detailed evidence will be collected documented against individual questions. These questions will constitute the basis for consultation with key informants and when reviewing documents. Not all questions will be explored with each informant. Rather, Table 1 contains possible questions from which a sub-set of questions will be selected, as appropriate, for individual informant interviews in accordance with their role, responsibility and interest in the program, as well as their knowledge of the program; or the nature of the document being reviewed. Additional questions may be added as they arise based on exchanges with informants. The team will remain flexible and able to include new issues if necessary along the way. The preparation of the interviews is discussed in paragraph 3.2.4.

This flexible approach will ensure that components of the IMTR will not be dealt with in isolation. There are many instances where issues cut across different components and where questions relevant to one component would inform findings related to another component, or where findings from different review processes, themes or questions will have to be integrated in order to arrive at an over-arching analysis regarding the program’s performance and main recommendations for possible changes.

The review team will continue to refer to the seven main objectives of the IMTR ToRs. In order to ensure that the guiding questionnaire is informing the team accordingly, the link between each of the questions and the objectives of the review is included in the indicative table below.

### 3.2.4 Data analysis

The review team will aim to meet at the end of each day to review and document the day’s achievements. The team will also prepare the interview approach for the following days based on the set of stakeholders to be met to ensure that the questions are adapted to the

stakeholders' specific involvement in the ERAR. For example, the questions related to objective 5 will be mainly and specifically be addressed with the Vietnamese stakeholders.

Information collected through interviews and teleconferences will be collated using a large analytical framework so that data from multiple meetings is organised under each nine core questions of the ToRs (page 6). Table 2 below illustrates the grid format for question 1. The review team will populate the grid with key information extracted from stakeholder meetings and written questionnaires. The data summary grid will be in MS Excel format (Annex 4) to allow for a substantial amount of data to be collected.

**Table 1: Indicative guiding questionnaire**

Key review questions in the ToR	Sub-guiding questions	Assessment and validation
1. To what extent has the current program achieved its objectives? To what extent do these achievements contribute to the overall goal in the long run and how efficiently have they been achieved?	<ol style="list-style-type: none"> <li>1. <i>Have the ERAR program objectives been achieved? Have they been on time?</i></li> <li>2. <i>Are the objectives and expectation placed on ERAR realistic?</i> <ol style="list-style-type: none"> <li>1. <i>Was the programme implemented in the most efficient way? Was/is there an alternative?</i></li> <li>2. <i>Does progress to date and projections of rate of progress correspond with final outcomes (targets)? Are these projections still realistic?</i></li> <li>3. <i>Are the reasons identified for any program delays? If yes, have there been addressed and resolved?</i></li> <li>4. <i>Is the program likely to deliver the program at its expected end date? (likely to be partially or fully achieved)?</i></li> <li>5. <i>Has the ERAR delivered any unexpected results, and if so what are they?</i></li> </ol> </li> </ol>	<p>Timely achievement of planned outputs and outcomes. Efficiency of implementation. Contribution of the achieved and expected outputs and outcomes to the long-run goal. Challenges in achieving expected outcomes in the light of moving to malaria elimination, classified by types of interventions (surveillance, diagnosis, case management, treatment, vector control, access to quality services by migrants, drug supply and management, coordination, collaboration etc. (for exploration and if possible) and potential solutions.</p> <p>Validation: Results matrix based on M&amp;E framework. A specific table showing results achieved per objective will be attached to the final report.</p>
<b>Links to the objectives of the review: 2, 3, 4</b>		
2. What are the lessons learned from the emergency response phase, under each program objective, that will be useful in moving strategically towards malaria elimination?	<ol style="list-style-type: none"> <li>1. <i>Given the rapid moving context towards malaria elimination what changes have been made to adapt the workplan of activities (especially under objectives 4 and 5)?</i></li> <li>2. <i>To what extent has the ERAR adapted and learnt from the latest development in the approach towards malaria elimination in the region? Were there recommendations made, and if yes, were they taken on board in revising the ERAR framework?</i></li> <li>3. <i>What program lessons are emerging?</i></li> <li>4. <i>Is the landscape of all relevant actors captured by ERAR to ensure it can achieve the program objectives (civil society, private sector, pharmaceutical sector, others)?</i></li> </ol>	<p>Key bottlenecks in the GMS to be resolved. Changes that have been made and/or necessary changes for ERAR in particular as a result of the move to malaria elimination. Lessons learned from the emergency response phase that will be useful for strategic malaria elimination.</p> <p>Validation: Stakeholder interviews and documentation review.</p>
<b>Links to the objectives of the review: 1, 3, 5, 7</b>		



<p>3. To what extent has an effective monitoring and evaluation framework been operationalised and appropriate indicators used against program objectives and levels (tiers, country and/or regional) and how can it be improved?</p>	<ol style="list-style-type: none"> <li>1. <i>Are national programs and partners finding the ERAR useful and are they engaging with it?</i></li> <li>2. <i>At the country level, how are results (outcomes) tracked and monitored, and who is responsible?</i></li> <li>3. <i>Have baselines been established?</i></li> <li>4. <i>To what extent has surveillance data been accessible and useful?</i></li> <li>5. <i>Do all ERAR staff and WHO malaria staff have a clear understanding of their roles, responsibilities and accountabilities in terms of achieving results? Do they know the approach for evaluating ERAR's success? How has ERAR built up M&amp;E capabilities for regional/national staff?</i></li> <li>6. <i>Are resources for M&amp;E activities sufficient?</i></li> <li>7. <i>Does the ERAR provide an adequate framework for monitoring and progress reporting?</i></li> <li>8. <i>Is monitoring linked to program planning and decision-making processes?</i></li> <li>9. <i>How do different stakeholders view the usability of the M&amp;E system?</i></li> <li>10. <i>What is the role of malaria studies and research? Is the ERAR aligned with M&amp;E systems of national programs? To what extent has ERAR utilised the data system in each country?</i></li> <li>11. <i>Is the ERAR harmonised with the other regional initiatives in terms of monitoring progress?</i></li> </ol>	<p>Establishment of baseline and availability of M&amp;E framework and plan.</p> <p>Tracking results (outcomes) and performance issues.</p> <p>Stakeholders' understanding about roles, responsibilities and M&amp;E system.</p> <p>Stakeholders' capabilities, dedication and involvement in M&amp;E</p> <p>Resources allocated for M&amp;E.</p> <p>Building up M&amp;E capabilities for regional and national staffs</p> <p>Link and alignment with regional/national surveillance and M&amp;E systems.</p> <p>Real time data analysis and use.</p> <p>Utilisation and dissemination of M&amp;E, surveillance data and studies to provide evidence for planning and decision making.</p> <p>Validation: M&amp;E framework and plan; Aid Quality Check (AQC) reports, progress reports, stakeholder interview notes.</p>
<p><b>Links to the objectives of the review: 1, 3, 5, 7</b></p>		
<p>4. How does the current program fit with the regional ERAR framework for action/theory of change in relation to malaria elimination, as well as complementing other malaria investments?</p>	<ol style="list-style-type: none"> <li>1. <i>Is the ERAR strategy complementary to the other initiatives (RAI/RSC, MARC, ADB, APLMA...)?</i></li> <li>2. <i>Is there a clear understanding from all stakeholders and/or mapping of the various malaria initiatives in the region?</i></li> <li>3. <i>What are the added values of ERAR in the global and regional malaria elimination efforts?</i></li> <li>4. <i>What is/are the elimination platform(s) of partners and/or mechanism(s) in place to ensure a good coordination and flow of information?</i></li> <li>5. <i>Are the current malaria elimination initiatives</i></li> </ol>	<p>Demand driven approach in planning and implementing interventions.</p> <p>ERAR's complementariness and added values.</p> <p>Harmonisation, collaboration and coordination of various initiatives for malaria containment and elimination.</p> <p>Required changes and mechanism to improve complementariness and coordination.</p> <p>Emerging needs for malaria elimination.</p> <p>Validation: Mapping, TOC, stakeholder interview.</p>

	<p><i>harmonised?</i></p> <p>6. <i>What changes and mechanisms may be required to improve the complementarity of the program?</i></p> <p>7. <i>What are the emerging needs in the malaria elimination era that DFAT can support?</i></p> <p>8. <i>To what extent is the ERAR program driven by demand and need, rather than supply? Does the original rationale for the ERAR still hold?</i></p>	
<b>Links to the objectives of the review: 1, 3, 7</b>		
5. To what extent will end-of-program objectives be sustained by government and/or development partners beyond the program end date at both country and regional levels? What changes are required to strengthen program sustainability?	<p>1. <i>To what extent will the ERAR's results be sustained? Are there any areas of activity that are clearly not sustainable? How should these be dealt with?</i></p> <p>2. <i>To what extent does the program promote sustainability and national ownership?</i></p> <p>3. <i>How is local ownership fostered and promoted across the program, per country and regionally?</i></p> <p>4. <i>What is the prospect of the program becoming self-financing?</i></p> <p>5. <i>Does the program build partners' capacity to become self sustainable?</i></p> <p>6. <i>Are there any issues that will always require outside support?</i></p> <p>7. <i>Are there any actions that can be taken now that will increase the likelihood that program effects will be sustainable?</i></p>	<p>ERAR's approach to sustainability. Prospect of sustainability of ERAR's results; issues and required actions. Fostering national ownership per country and regionally. Prospect of self-finance by national budgets. Platforms and mechanisms for sustaining coordination and collaboration regionally after ERAR. Roles of external supports in strategic response to malaria elimination.</p> <p>Validation: Stakeholder interview.</p>
<b>Link to objectives: 1, 3, 4, 5</b>		
6. How relevant and effective is the current modality and what would be an effective mechanism, modality (arrangements) at regional and bilateral levels to move forward strategically toward malaria elimination?	<p>8. <i>Is the ERAR perceived as the coordinator of the malaria elimination in the GMS? If yes and/or no, explain why, and what do you think is missing?</i></p> <p>9. <i>To what extent are the partnerships forged strategic?</i></p> <p>10. <i>What are the strengths and limitation of the ERAR in its current shape (TA, technical support, coordination, strategic thinking, leadership, communication, other...)?</i></p> <p>11. <i>Does the program have an adequate risk</i></p>	<p>Effectiveness of ERAR's coordination and current arrangement Strengths and weaknesses of ERAR in each role. Risks and risk management. Fostering strategic partnership. Engagement of various actors including civil society, private sector and pharmaceutical sector. Necessary changes and coordination/collaboration mechanisms to move toward malaria elimination.</p> <p>Validation: Stakeholder interviews.</p>

	<i>management strategy to identify and address programming/implementation risks in a timely manner?</i>	
<b>Links to the objectives of the review: 1, 3, 5, 6, 7</b>		
7. How effective have current funding, program management and governance arrangements been and how could a future program address co-funding and program management arrangements effectively?	<p><i>Are the current internal WHO institutional and management arrangements within WHO (GMP, RO, and ERAR) optimal to manage the program?</i></p> <p><i>Is the program's management structure effective and efficient to achieve its objectives?</i></p> <p><i>What could be changed or enhanced to improve?</i></p> <p><i>Is the current reporting mechanism between ERAR and DFAT and BMGF suitable? What could be improved?</i></p> <p><i>To what extent has the current co-financing arrangement helped the ERAR in its implementation and functioning?</i></p> <p><i>What could be changed to improve ERAR in its functionality?</i></p>	<p>Internal WHO program management arrangement: strengths, weaknesses and solutions.</p> <p>Effectiveness and efficiency of current reporting mechanism between ERAR, DFTA and BMGF.</p> <p>Advantages and issues in co-financing.</p> <p>Prospect of co-funding and program management.</p> <p>Validation tool: Stakeholder interview.</p>
<b>Links to the objectives of the review: 3, 5, 6, 7</b>		
8. How have approaches to gender and social inclusiveness been effectively incorporated? How can further private sector engagement and innovative program approaches be integrated to support the response in a changed context?	<p><i>What is the "definition"/concept of equity that applies to the program? Can it be measured?</i></p> <p><i>Is the program helping to develop capacity (donors, partner government, civil society, private sector, affected populations) to understand and promote equity issues pertinent to the program? Is this being approached in a culturally appropriate manner by program implementers?</i></p> <p><i>Is the program helping to promote women's rights?</i></p> <p><i>How does the program develop capacity to understand and promote equitable access and equal rights?</i></p>	<p>ERAR's results to date in gender equality and inclusiveness.</p> <p>ERAR's approach in gender equality and inclusiveness and tracking progress (e.g. ERAR's approach in helping female migrants to access quality health services for malaria diagnosis and treatment).</p> <p>Stakeholders' understanding about and priorities in gender equality and inclusiveness in ERAR and/or malaria elimination.</p> <p>ERAR's roles and contribution in promotion of gender equality and inclusiveness.</p> <p>Validation: ERAR design document, AQC reports, progress reports, stakeholder interviews.</p>
<b>Links to the objectives of the review: 2, 7</b>		
9. What are the gaps to be addressed if the goal of malaria elimination is to be	<ol style="list-style-type: none"> <li>1. <i>Were activities cost-efficient?</i></li> <li>2. <i>How was VfM of the ERAR assessed?</i></li> <li>3. <i>To what extent has this been addressed in the</i></li> </ol>	<p>Things to do more and/or to do less at regional and national level to eliminate malaria.</p> <p>Options for delivery models to gain the best value for money</p>

realised? Given these what priorities should a future investment focus on so as to gain the best value for money (VfM)?	<p>4. <i>current program?</i> <i>What measures were taken by the program to reduce transaction costs and are these measures having the desired effect?</i></p> <p>5. <i>Were appropriate alternative delivery models and available options considered when the program was designed?</i></p>	Validation: Stakeholder interview, desk review, mapping and TOC.
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Links to the objectives of the review: 1, 3, 5, 6, 7

**Table 2: Data summary grid**

<b>Q1: To what extent has the current program achieved its objectives? To what extent do these achievements contribute to the overall goal in the long run and how efficiently have they been achieved?</b>					
	<b>Timely achievement of planned outputs and outcomes</b>	<b>Efficiency of implementation</b>	<b>Contribution of the achieved and expected outputs and outcomes to the long-run goal</b>	<b>Challenges in achieving expected outcomes in the light of moving toward malaria elimination</b>	<b>Potential solutions</b>
<b>Stakeholders consultations</b>					
<b>1. APLMA</b>					
<b>2. ASEAN</b>					
<b>3.</b>					

Before the review team returns home, it will commence analysis of the data collected to that point and identify major findings. The analysis will continue by Skype and email through to the end of the data collection period. The information in the grid will form the basis for discussion. The team will use visual pattern recognition to identify trends in the evidence collected. Team members will select and document memorable quotations to be available to add richness to the final report. In this way, analysis will be based on the evidence collected, rather than solely on impressions held by the team. The process will encourage open discussion within the team to identify patterns and trends. These will lead to formulation of recommendations. If there is not agreement on a particular finding, it will be important to tease out points of disagreement. In this way the findings will be evidence-based, contested by team members and clearly articulated to the end users (DFAT, BMGF, ERAR, MoHs and other relevant stakeholders).

### 3.2.5 Theory of change

A theory of change defines all blocks of objectives/activities required to bring about a given long-term goal. This set of connected blocks referred to as deliverables/results is depicted in the program framework which is the pathway of change.

ERAR progress and analytical reports provide a lot of detail about program achievements at output level. This monitoring information will form a valuable resource for the review. But the review will need also to explore the program's achievements at higher levels in the theory of change to understand progress being made towards the end goal of the program. The risk is that the team becomes engulfed in detail at output level and cannot see the larger picture when trying to understand what has changed as a result of the investment. In order to assess the extent to which the program has delivered against the original program document, the team will further examine the program design: The ERAR inception plan (September 2013) and the Global Health Proposal application form (September 2012) will be used to assess the theory of change. The review team will look at the articulation of the assumptions that WHO and the stakeholders have used to explain the change process expected by the program design. Of particular interest will be the medium-term outcomes and how the assumption per objective, and 2) the overarching assumptions, have played out.



## 4. Review schedule

The mission will be conducted in three phases:

1. Phase 1: Document review and development of the review plan (9-19 March 2015);
2. Phase 2: Country visits, interviews on the phone and Aide memoire delivered (20 March – 11 April 2015);
3. Phase 3: Report drafted and finalised (12 April – 25 May 2015).

**Phase 1:** This phase is on-going. The team is currently reviewing the main documentation provided by DFAT as well as other relevant literature regarding malaria elimination in the GMS. The team will continue reviewing other documents expected to be received by ERAR prior to the in-country visits. The current review plan is based on preliminary reading of available information so far.

**Phase 2:** This phase will start on 20 March 2015 with a visit from the team leader to the WHO Global Malaria Program (GMP) in Geneva and the GFATM team in charge of the Regional Artemisinin Initiative (RAI). The country visits will be conducted jointly by the review team leader and M&E team member in Cambodia, Thailand and Vietnam, and by the team leader alone in Myanmar and Laos. Given the limited time available to cover the six countries, it was agreed that interviews of the main stakeholders in China (Yunan) will be organised through teleconferences during phase 2. The country visits are aimed to have a better understanding of how the ERAR is being perceived, how it supports the national programs and other involved stakeholders to reach their goals and what adjustments could be made to make it more efficient. On the last days of the in-country visit, the team will have a debriefing with the ERAR coordinator on the main findings of the review and an aide memoire will be presented to DFAT in Bangkok. The current country visit schedule is at annex 3.

**Phase 3:** Following delivery of the aide memoire outlining the main findings of the review, the team will prepare a first draft report for the reference group by 8 May 2015. Consolidated feedback will be expected to be received by 15 May so the final version can be delivered by the team no later than 25 May 2015.

## 5. Ethical considerations

The purpose of the review and intended use of information obtained from interviews will be explained to each stakeholder at the onset of interviewing. Interviewing will be voluntary and no informant will be forced to participate. Also, care will be taken that all interview questions and requests for further clarification/explanation are not perceived as “steering” the interview or response in any particular direction. Due to their face-to-face nature, interviews will not be anonymous. However, information obtained during interviews will be aggregated and no reference will be made to any individual respondent as a source of specific information. Information underlying the review findings will not be ascribed to any identifiable informant or respondent. By the time information from stakeholder interviews and submissions is captured in the analytical framework, it will be anonymous. However, it will not be possible to link any information in the report to any of the individual stakeholders listed.

## 6. Limitations of the review

An overall picture of the extent to which the program is achieving its results will, to a large extent, rely on the availability of data and robustness of the program M&E system. The mission will base its analysis on the reports and documentation provided by DFAT and the

ERAR. Given the very limited time available to consult stakeholders across six countries, the team will also count on a full participation of informants and cooperation from WHO as the principal recipient of the funding. It is however anticipated that all parties involved will be fully engaged so to share their views and opinion in a clear and very transparent manner.

## 7. Validation of emerging and preliminary findings

The preliminary findings will be discussed with the ERAR team (Walter Kazadi) and the Drug Resistance Coordinator (Pascal Ringwald) at the end of the phase 2 for discussion and adjustment if needed. An aide memoire will be prepared and presented to DFAT in Bangkok on the last of the country visit. Based on the outcome of the exchange, the review report will be drafted. It is understood that the first aide memoire will be internal for DFAT and BMGF only and should be kept confidential as it may contain some sensitive information. The review team will discuss with DFAT the best way to have a second version for distribution to a selected set of partners as agreed during the meeting.

## 8. Roles and responsibilities

The review will be undertaken by a team of one independent consultant, Roberto Garcia (team leader), and a DFAT in-house staff, Le Thi Quynh Nga, (M&E team member). Overall, the intellectual approach, documentation and analysis of evidence and developing the content of key deliverables will be a joint effort by the team. The team will take joint responsibility for preparing the chapter of the review report that deals with the key findings, conclusions and recommendations. The team leader will undertake the final editing of the report before it is submitted for peer review to the Health Resource Facility, as well as final submission to DFAT. Based on the technical expertise and roles of the respective members of the review team, the internal division of work related to the different aspects of the review will be as follows:

**Table 3: Summary of review teams' roles and responsibilities**

### ***Roberto Garcia (team leader)***

- Plan, guide and lead the overall approach and methodology for the IMTR
- Attend meetings, briefings and debriefings
- Provide overall direction for review activities
- Main point of liaison between the review team and HRF regarding finalisation of review plan
- Provide structure and guidance during country visits to systematise and consolidate emerging data and information in accordance with the objectives of the review
- Co-draft the aide memoire following the country visit
- Synthesise information from different sources, with input and assistance from the M&E team member, to provide a preliminary overview of the ERAR program performance and key findings to DFAT by 8 May 2015
- Consolidate all information and inputs into the review report, in accordance with the agreed structure, and ensure overall quality of reporting.

### ***Le Thi Quynh Nga (M&E team member)***

- Provide technical leadership in all aspects of the review on issues pertaining to

#### monitoring and evaluation

- Attend meetings and briefings
- Participate, with the team leader, in stakeholder consultations in country and conference calls remotely as per the schedule
- Co-draft the aide memoire following the in-country visits with the team leader
- Develop a framework to assess the program performance in accordance with the agreed evaluation plan and questionnaire
- Assist the team leader during evaluation activities, provide quality inputs into all review deliverables and co-draft the final report especially for the sections related to program performance and M&E.

## Appendix 1: Terms of reference (provided in Annex 1)

## Appendix 2: Documents reviewed

### Documents provided by DFAT

1. ERAR Regional Framework for Action 2013-2015.
2. Proposal Application Form 2012, BMGF.
3. Inception plan (May 2013).
4. Progress report, September 2013.
5. Progress report, 03 April 2014.
6. Report analysis 04 April 2014.
7. Progress report, September 2014.
8. Quality implementation report, 25 February 2014.
9. Workplan 2014.
10. Workplan 2015.

### Documents provided by the ERAR Hub

1. Strategy to Eliminate Malaria in the Greater Mekong Subregion (2015 – 2030)
2. The progress report on the development of the ERAR-GMS Malaria web-based database
3. Final report, Emergency Response to Artemisinin Resistance – Greater Mekong Subregion 19 January 2013 – 18 April 2013
4. ERAR Project milestones February 2014
5. ERAR Project milestones March 2014
6. ERAR revised workplan 2014
7. ERAR Bulletin 1 2014
8. ERAR Bulletin 2 2014
9. ERAR Bulletin 1 2015
10. ERAR Project Information Flier
11. ERAR Website Analytics
12. Feasibility of Plasmodium falciparum elimination in the Greater Mekong Subregion: technical, operational and financial challenges, September 2014
13. ERAR stakeholder mapping
14. ERAR consultation reports
15. ERAR scorecard indicators and report
16. ERAR workshop reports
17. BMGF and DFAT donor reports
18. ERAR technical management committee meeting notes

19. ERAR team meeting minutes
20. Terms of Reference for the GFATM RSC RAI
21. ERAR team travel reports

Other documents

1. Feasibility of Plasmodium falciparum elimination in the Greater Mekong Subregion: technical, operational and financial challenges, Global Malaria Programme, September 2014
2. WHO. From malaria control to malaria elimination: a manual for elimination scenario planning. (2014).
3. Moonen, B. et al. Operational strategies to achieve and maintain malaria elimination. Lancet 376, 1592–603 (2010).
4. Moonen, B. et al. A framework for assessing the feasibility of malaria elimination. Malar. J. 9, 322 (2010).
5. O'Shannassy, T. O. Greater Mekong Subregion (GMS): context. Southeast Asian J. Trop. Med. Public Health 44 Suppl 1, 1–45; discussion 306–7 (2013).
6. Taylor, W. R. J. Malaria research in the Greater Mekong Subregion: an overview. Southeast Asian J. Trop. Med. Public Health 44 Suppl 1, 231–48; discussion 306–7 (2013).
7. Hewitt, S., Delacollette, C. & Chavez, I. Malaria situation in the Greater Mekong Subregion. Southeast Asian J. Trop. Med. Public Health 44 Suppl 1, 46–72; discussion 306–7 (2013).
8. Delacollette, C. et al. Malaria trends and challenges in the Greater Mekong Subregion. 40, (2009).
9. Cui, L. et al. Challenges and prospects for malaria elimination in the Greater Mekong Subregion. Acta Trop. 121, 240–5 (2012).
10. PMI. PRESIDENT'S MALARIA INITIATIVE Greater Mekong Subregion Malaria Operational Plan FY 2014. (2014).
11. PMI. PRESIDENT'S MALARIA INITIATIVE Greater Mekong Sub-Region Malaria Operational Plan FY 2013. (2013).
12. MALARIA CONTROL IN THE GREATER MEKONG SUBREGION: AN OVERVIEW OF THE CURRENT RESPONSE AND ITS LIMITATIONS. 44, (2013).
13. RBM / UNDP. Multisectoral Action Framework for Malaria. (2013).
14. O' Shannassy, T. Mekong Malaria III: Towards malaria elimination in the Greater Mekong Subregion. Southeast Asian J. Trop med Public Health 44, 1–45 (2013).
15. ADB / IOM. Facilitating safe labor migration in the Greater Mekong Subregion. (2013).
16. ADB / IOM. Forecasting Migration Flows: The Relationships among Economic Development, Demographic Change and Migration. (2010)
17. Gueye, C.S, et al. The challenge of artemisinin resistance can only be met by eliminating Plasmodium falciparum malaria across the Greater Mekong Subregion. Malar. J. 13, 286 (2014).



## Appendix 3: List of informants

Location	People	Title/ Organisation
Geneva (RG) 20 March 2015	Pedro Alonso	Director, WHO-GMP
	Pascal Ringwald	Coordinator, Drug resistance, WHO-GMP
	Urban Weber	Head, High Impact Asia, GFATM
	Izaskun Gavira	Senior Fund Portfolio Manager, GFATM
Cambodia (RG/NGA) 24-26 March 2015		MoH, Minister
	Walter Kazidi	WR, WHO
	Jaap van Hierden	Director, UNOPS
	Siv Sovannaroeth	Chief of Technical Bureau, CNM
	Aranzazu Roca-Feltrer	Epidemiologist - Country Technical Coordinator, Malaria Consortium
	Song Ngak	Deputy Country Director, FHI
	Henrietta Allen	Malaria Technical Advisor, PSI
	Kheang Soy Ty	Chief of Party/ Regional Director, URC
	Brett Dikson	Project Coordinator Migration Health Program, IOM
	Nicolas Steenkeste	South East Asia Representative, Fondation Mérieux
Thailand (RG/NGA) 23 March, 27-30 March, 10 April 2015	Richard Lee	DFAT, Regional Program Manager, Bangkok
	Eleanor Cupit,	DFAT First Secretary – Development Cooperation, Bangkok),
	Michael O'Dwyer,	Regional Health Specialist, Bangko
	Yonas Tegegn	WR, WHO
	Deyer Gopinath	WHO
	Chanwit Tharathep	Deputy Permanent Secretary, MoPublic Health (on behalf of Chair of CCM)
	Wichai Satimal	Senior Expert, Department of Disease Control, MoPH at the Bureau of Vector-Borne Disease, MOPH
	Chawalit Tantinimitkul	National Program Officer, WHO
	Arjen Dondorp	Chair of the RSC
		Director, Office of Public Health, USAID
	Wayne Stinson	PMI Regional Malaria Advisor USAID/PMI
	Promboon	Executive Director, Raks Thai Foundation
	Jaime Calderon	Regional Migration Health Adviser, IOM
	Montira Inkochasan	Senior Regional Migration Health Program assistant, IOM
		Conseiller Régional Santé, French Embassy
Myanmar (RG) 31 March - 4 April 2015		MoH, Minister
		WR, WHO
	William Slater	Director, Office of Health, USAID

	Mya Sapal Ngon	Health Program Officer, USAID
	Frank Smithius	Executive Director, MAM
	Myo Min	Project Manager, MMA
	Amber Cernovs	First Secretary, DFAT
	Eamonn Murphy	UNAIDS Coordinator, CCM Secretariat
	Sandii Lwin	Director, MHDC
	Attila Monar	UNOPS PR Director
	Sanjay Mathur	Director and Representative, UNOPS Myanmar
Vietnam (RG) 5-7 April 2015		MoH, Minister
	Trinh Thi Ngoc Linh (on behalf of Nguyen Bich Dat, CCM Chair, Vietnam) (by questionnaire)	CCM Focal Point, CCM Vietnam
	Gawrie Nirdoshi	Technical Officer, Malaria, WHO
Lao PDR (RG) 7-9 April 2015	Ly Tou Bouapao	Deputy Minister of Education and Sports and Chair, GFATM CCM
	Bounlay Phommasack	Director General, Department of Disease Control
	Bouasy Hongvanthong	Director, Centre of Malariology, Parasitology and Entomology, MoH
	Juliet Fleischl	Representative, WHO
		Director, Pasteur Institute, Lao PDR
	Seshu Babu	Technical Advisor, WHO
	Wang Bangyuan	Country Director, Health Poverty Action
China by teleconference (RG/NGA)		WHO, YIPD, NIPD/CDC, NFHPC and CFDA
By teleconference (RG/NGA)	Marc Jacobs	Director CD, WPRO
	Eva Christophel	Team Leader Malaria and other Vector-borne and Parasitic Diseases, WPRO
	Alan Magill	Deputy Director, BMGF
	Tom Kanyok	Senior Program Officer, Infectious Diseases, BMGF
	Chris White	BMGF
	Tom Hurley	Deputy Director, UNICEF/WHO partnership, BMGF
	Leonard Ortega	Regional Malaria Advisor, SEARO
	Susann Roth	Social Protection Team, Poverty Reduction, Gender and Social Development Division, ADB
	Louis da Gama	Director, Malaria Advocacy & Communications, Global Health Advocates
	Lizzie Smith	Senior Regional Health Adviser, DFID
	Sylvia Meek	Technical Director, Malaria Consortium
	Ferdinal Fernando	Assistant Director/ Head of the Health and Communicable Diseases Division, ASEAN
	Bernard Nahlen	Deputy Coordinator, PMI, USAID

	Ben Rolph	Executive Secretary, APLMA
	Jim Tulloch	Deputy Coordinator, PMI, USAID
	Allan Shapira	
	Mikhail Ejov	
	Desmond Chavasse	PSI

**Review team inputs:**

Roberto Garcia (RG) = 23 days including 5.5 days of travel.

Le Thi Quynh Nga (NGA) = 7 days including 1 day travel.

## Appendix 4: Analytical framework

The analytical framework is summarised in the below table. The full analytical framework is available from the Regional Program Manager, Department of Foreign Affairs and Trade, Bangkok, Thailand.

Review questions	Research area
1. To what extent has the current program achieved its objectives? To what extent do these achievements contribute to the overall goal in the long run and how efficiently have they been achieved?	Realistic objectives
	Timely achievement of planned outputs and outcomes
	Efficiency of implementation
	Contribution of the achieved and expected outputs and outcomes to the long-run goal
	Challenges in achieving expected outcomes in the light of moving toward malaria elimination
	Potential solutions
2. What are the lessons learned from the emergency response phase, under each program objective, that will be useful in moving strategically towards malaria elimination?	Key bottlenecks in the GMS to be resolved to eliminate malaria
	Changes that have been made and/or necessary Changes for ERAR in particular and malaria elimination approach in general at regional level to move toward malaria elimination
	Lessons learned from the emergency response phase that will be useful for strategic malaria elimination phase
3. To what extent has an effective monitoring and evaluation framework been operationalised and appropriate indicators used against program objectives and levels (tiers, country and/or regional) and how can it be improved?	Establishment of baseline and availability of M&E framework and plan
	Tracking results (outcomes) and performance issues
	Stakeholders' understanding about roles, responsibilities and M&E system
	Stakeholders' capabilities, dedication and involvement in M&E
	Resources allocated for M&E
	Building up M&E capabilities for regional and national staffs
	Link and alignment with regional/national surveillance and M&E systems
	Real time data analysis and use; Utilisation and dissemination of M&E, surveillance data and studies to provide evidence for planning and decision making
	Demand driven approach in planning and implementing interventions
4. How does the current program fit with the regional ERAR framework for action/ theory of change in relation to malaria elimination, as well as complementing other malaria investments?	ERAR's complementariness and added values
	Harmonisation, collaboration and coordination of various initiatives for malaria containment and elimination
	Required changes and mechanism to improve complementariness and coordination

	Emerging needs for malaria elimination
5. To what extent will end-of-program objectives be sustained by government and/or development partners beyond the program end date at both country and regional levels? What changes are required to strengthen program sustainability?	ERAR's approach to sustainability
	Prospect of sustainability of ERAR's results; issues and required actions
	Fostering national ownership per country and regionally
	Prospect of self-finance by national budgets
	Platforms and mechanisms for sustaining coordination and collaboration regionally after ERAR
	Roles of external supports in strategic response to malaria elimination
6. How relevant and effective is the current modality and what would be an effective mechanism, modality (arrangements) at regional and bilateral levels to move forward strategically toward malaria elimination?	Effectiveness of ERAR's coordination and current arrangement
	Strengths and weaknesses of ERAR in each role TA, (technical support, coordination, strategic thinking, leadership, communication)
	Risks and risk management
	Fostering strategic partnership
	Engagement of various actors including civil society, private sector and pharmaceutical sector
	Necessary changes and coordination/collaboration mechanisms to move toward malaria elimination
7. How effective have current funding, program management and governance arrangements been and how could a future program address co-funding and program management arrangements effectively?	Effectiveness of ERAR's coordination and current arrangement
	Strengths and weaknesses of ERAR in each role TA, (technical support, coordination, strategic thinking, leadership, communication)
	Risks and risk management
	Fostering strategic partnership
	Engagement of various actors including civil society, private sector and pharmaceutical sector
	Necessary changes and coordination/collaboration mechanisms to move toward malaria elimination
8. How have approaches to gender and social inclusiveness been effectively incorporated? How can further private sector engagement and innovative program approaches be integrated to support the response in a changed context?	ERAR's results to date in gender equality and inclusiveness (outcomes, policy influence etc.)
	ERAR's approach in gender equality and inclusiveness and tracking progress (e.g. ERAR's approach in helping female migrants to access quality health services for malaria diagnosis and treatment)
	Stakeholders' understanding about and priorities in gender equality and inclusiveness in ERAR and/or malaria elimination
	ERAR's roles and contribution in promotion of gender equality and inclusiveness
9: What are the gaps to be addressed if the goal of malaria elimination is to be	Things to do more and/or to do less at regional and national level to eliminate malaria
	Options for delivery models to gain the best value for money



realised? Given these what priorities  
should a future investment focus on so as  
to gain the best value for money (VfM).

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### Annex 3: Summary of Performance Assessment by Objectives as of March 2015

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
<b>Project goal:</b> Preservation of the effectiveness of Artemisinin Combination Therapies by containing and ultimately eliminating artemisinin resistant P. falciparum malaria parasites in the Greater Mekong Subregion				
Artemisinin resistance does not spread beyond the GMS.  Decreased malaria burden in the GMS.	Confirmed or suspected resistance (as defined by WHO) has not been detected in therapeutic efficacy studies (TES) conducted outside the GMS. (Source: TES reports)  Falling prevalence/ incidence of confirmed falciparum malaria cases in every country in the GMS. (Source: survey and surveillance data)	Project on track except for Objective 6 and partly Objective 3. Progress in relation to Objectives 2 and 4, as core business of WHO, has been more rapid than progress in relation to other objectives.  Project has caught up with the pace and recent dynamics of malaria elimination in the region.  Contributed to enhancing awareness of ERAR and maintaining regional momentum for AR and malaria.  Strategic products and activities provide a regional foundation to support the GMS countries to transit to malaria elimination.  WHO has continued monitoring prevalence/incidence of confirmed Falciparum malaria cases in GMS through survey and surveillance.  Suspected resistance cases outside the GMS are continued monitoring through TES.	Need to translate the developed strategies, plans and tools into interventions targeting beneficiaries at regional and national levels.  National ownership likely to be critical for successful achievement of the project goal.  WHO's technical coordination and support likely to be critical. This is because of differing stages of malaria containment/elimination, resources available, levels of commitments, and priorities of the affected countries and increased dynamics in regional integration. WHO's technical co-ordination and support should be in areas of WHO's core business.	Risks:  Reduced funding from national budgets (and traditional donors) given the decline in malaria cases in most GMS affected countries.  Wider emergence of artemisinin resistance and multi-drug resistance.

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
<b>Objective 1: Strengthened leadership, coordination and oversight mechanisms</b>				
<p>Regional hub created to coordinate and give technical support to countries in the fight against antimalarial drug resistance.</p> <p>Increased awareness and political support in the affected countries.</p> <p>Progress of the containment, control and elimination efforts in all countries continually monitored.</p> <p>Progress on containment reported annually.</p> <p>Countries and partners have access to information on resistance, epidemiology, policies and</p>	<p>Activities listed showing that regional hub is available for support and responses to request for technical assistance.</p> <p>The issue of antimalarial drug resistance is on the agenda of key meetings.</p> <p>Regional database developed containing data on resistance, epidemiology, policies and programme implementation for containment, control and elimination.</p> <p>Annual progress report.</p> <p>Website created and regularly updated (data updated minimum every 6 months<sup>21</sup>)</p> <p>Funds mobilised for artemisinin resistance containment.</p> <p>Meetings of the national bodies established for coordinating the response to artemisinin resistance.</p>	<p>All seven expected results in the Project Framework either achieved or in progress.</p> <p>76.5% of 2014 Workplan completed or ongoing; all key milestones in 2014 achieved or ongoing.</p> <p>Initial delays in Y1 but project has caught up.</p> <p>Increased engagement by hub with partners and senior government level documented through progress/activity reports. Stakeholder consultations were made to provide valuable inputs to the regional strategies and plans. The Hub has taken a lead in conducting the malaria elimination feasibility study and developing GMS Malaria Elimination Strategy.</p> <p>Completed multiple useful assessments, studies, mappings: BCC, MMP, SME, Private sector engagement, stakeholder mapping informing development of relevant GMS strategies: SME,</p>	<p>Stakeholders have been concerned about timeliness of the project's deliverables. The project deliverables including multiple assessment reports have been delayed. The online database is yet to be operational</p> <p>ERAR Hub's emergency response and lead has not been optimal (noting ambiguous operational definition of the Results regarding effective coordination, gaining political support and confused position and coordination mechanism of the Hub in relation with other stakeholders).</p> <p>Required enhanced strategic advocacy communication to meet specific information needs of each group of stakeholder.</p> <p>Ongoing delays to the supply of data and information on resistance, epidemiology, policies and progress at regional level.</p>	<p>Risks:</p> <p>Reduced national budget for malaria control and elimination leading to gaps in availability of malaria resources at grassroots level, affecting right-time real-time reporting of individual geo-located cases</p> <p>Various levels of commitment, heterogeneous landscape of malaria and unique legal framework for data management influencing timely data sharing.</p>

<sup>21</sup> This is clearly an inappropriate measure for a responsive emergency communication mechanism and more regular updates have been encouraged throughout program meetings that WHO have broadly adopted.

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
<p>progress.</p> <p>Funds mobilized through technical support and support for proposal development.</p> <p>National bodies established coordinating the response to artemisinin resistance.</p>		<p>BCC, Advocacy, GMS ERAR Framework.</p> <p>Developed ERAR GMS Indicator Matrix; established online database (yet to be operational); monthly data of GMS countries collected to produce Scorecard 2013. Scorecard 2014 still to be produced.</p>		
<b>Objective 2:</b> Maintain and expand drug efficacy surveillance networks and accelerate priority research				
<p>Strong regional therapeutic efficacy surveillance networks supporting high quality studies informing national treatment policies.</p> <p>Updated information on the geographical extent of artemisinin resistance.</p> <p>Fast-tracking of priority research supported.</p> <p>Research results used to inform</p>	<p>Study and meeting reports showing that at least 80% of the studies planned at meetings in the networks are conducted as planned.</p> <p>Study reports showing that confirmatory studies have been conducted in all foci where suspected resistance have been identified.</p> <p>Priority research tracked.</p> <p>Updated national guidelines.</p>	<p>All four Results of this Objective are on track.</p> <p>Most of the planned activities in 2014 accomplished (noting adjusted timelines for the deliverables due to the delay in Y1).</p> <p>The Hub has enabled regional collaboration in conducting TES and the use of results to inform national policy to adjust treatment protocols.</p>	<p>TES is the WHO's core business. However as transitioning to malaria elimination, it is worth looking at surveillance more broadly.</p> <p>Current information on the burden of disease and its distribution and on malaria control operations is not sufficiently complete, accurate and detailed to plan and manage the implementation of malaria elimination.</p> <p>Multiple challenges including heterogeneous malaria landscape, country variances in surveillance systems, weak health systems especially at grassroots level in remote areas with a shortage of health personnel and the difficulties in case</p>	<p>Risks:</p> <p>Reduced national budget affecting TES studies, confirmatory studies and research and implementation of recommendations.</p>



Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
national guidelines.			management and follow up of the mobile patients/migrants.	
<b>Objective 3: Improved access for migrant and mobile populations to quality services</b>				
<p>Support given for initiation and expansion of interventions for increasing access for mobile and migrant populations.</p> <p>Situational analysis on migrant/mobile populations completed for all Mekong countries addressing the social and political context.</p> <p>Annual review of activities for mobile/migrant populations and plans of priority action.</p> <p>Interventions for improving access for migrant/mobile populations are adapted based on experience (learn while doing) and are</p>	<p>People tested for malaria through special interventions targeting migrant/mobile populations.</p> <p>Situational analysis developed and shared.</p> <p>Annual review of ongoing activities targeting mobile and migrant populations and plan of action developed and shared.</p> <p>National strategies, plans and proposal for containment, control and elimination encompassing activities for increasing access to services for migrant and mobile populations.</p> <p>Annually, contact will be made with at least three industries employing migrant and mobile populations in each of the countries with suspected/ confirmed resistance. At least one promising approach to working with employers will be followed up and implemented.</p>	<p>Limited progress, unlikely to achieve all results, especially the outcome on actual service provision to MMPs due to multiple challenges (next column).</p> <p>Approximately 75% of the planned activities in 2014 Workplan achieved. Two out of three key milestones in 2014 achieved and one ongoing ( to obtain outcome in service provision is still challenging).</p> <p>Completed MMP situation analysis (but delayed finalisation and clearance for publication by WHO Head Quarter for a year).</p> <p>Drafted MMP strategy and stakeholder consultations.</p> <p>Developed malaria elimination package tool for program managers.</p> <p>Unlikely to achieve interventions targeting MMPs and integration of MMP interventions into national strategies, action plans (given the progress so far, the</p>	<p>Unknown progress in the result measurement on testing for malaria for MMP due to data unavailability (detailed analysis in the M&amp;E section)</p> <p>Limited progress in developing a comprehensive strategy and carrying out interventions benefitting MMPs, especially the cross-border migrants in informal sectors. Industries employing migrant and mobile populations in GMS countries have not been engaged. No approach to working with them has been developed. Necessary high level political engagement to produce national policy and cross-border multi-sector collaboration decisions and policy enforcement at the ground.</p> <p>Possible multiple political, economic and legislative obstacles in various sectors including trade, customs, border military, transport, industrial production, tourism and labour protection. Hard-to-reach villages are especially difficult to provide services.</p> <p>Emerging concern as to whether WHO is the best-suited organisation to lead</p>	

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
<p>integrated into national strategies, plans and proposals for containment, control and elimination.</p> <p>Increased number of industries in relevant sectors (including mining, construction and forestry) offering malaria services to workers.</p>		<p>issues/challenges in this area as listed in next column.</p>	<p>this component, given WHO's core functions and requirement of cross-border multi-sector collaboration decisions and policy enforcement at the ground.</p>	
<b>Objective 4:</b> Facilitate the full implementation of the MARC framework				
<p>Targets for key indicators for the management and coordination objective in the MARC framework reached.</p> <p>Integrated annual operational plans for containment, control and elimination developed for states/regions where artemisinin resistance has been identified ensuring that containment</p>	<p>Key indicators for the management and coordination objective in the MARC framework.</p> <p>Surveillance data are shared and consolidated among partners.</p> <p>Surveys are carried out as planned, and results are analysed and disseminated.</p> <p>MARC task force meeting organized.</p> <p>Annual operational plans finalized and shared.</p>	<p>On track to achieve results.</p> <p>ERAR's support in management and coordination of the MARC framework as follows:</p> <p>Surveillance and monitoring enhanced and containment of AR increasingly integrated in overall malaria control efforts.</p> <p>Endorsement of the revised NSP.</p> <p>Coordination meetings for AR containment and development of integrated work plans.</p> <p>Revised National Malaria Treatment Guidelines (to be</p>	<p>WHO Country Office (WCO) chronically weak and under-staffed in regards to malaria expertise.</p>	

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
activities are increasingly integrated into the overall malaria control efforts.		<p>finalised and endorsed in 2015).</p> <p>Developed surveillance protocol, data entry, and analysis.</p> <p>Mapping coverage of interventions, implementation of three MDGs MARC program and RAI program.</p> <p>Baseline survey for LLIN coverage among migrant mobile population.</p> <p>RBM-APLMA meeting on private sector engagement in malaria.</p>		
<b>Objective 5:</b> Strengthen the response to artemisinin resistance in Vietnam				
<p>Containment activities are strengthened and integrated into the overall malaria control efforts through the development of a national artemisinin resistance response plan.</p> <p>The response to national artemisinin resistance response plan improved through the</p>	<p>National artemisinin resistance response plan finalized and shared.</p> <p>National Artemisinin Resistance Containment committee meetings.</p> <p>Biannually malaria surveillance and programme data includes data by tier from containment areas.</p> <p>Malaria surveillance data showing that the proportion of malaria cases receiving direct observed treatment increases to 95% by 2015.</p> <p>Distribution data showing that</p>	<p>Reasonably good progress.</p> <p>Nearly 70% of the expected Results achieved.</p> <p>77.8% planned activities of the 2014 workplan achieved or ongoing.</p> <p>Finalised national plan for the response to AR.</p> <p>Comprehensive workplan with financial and programmatic gap analysis.</p> <p>Established National Artemisinin Resistance Containment committee with task force</p>	<p>No data in the GMS ERAR data set/2013 scorecard to access “Proportion of malaria cases receiving direct observed treatment in tier 1 increases to 95% by 2015” (but proxy indicator included).</p> <p>Unlikely to achieve “200 private practitioners/ drug sellers trained annually on new guidelines and drug resistance” in project timeframe due to slow progress in engagement with private sector and delay in work with the Drug Administration of Vietnam to monitor of pharmaceutical producers as a consequence of late recruitment of the pharmaceutical staff based in</p>	<p>Risk:</p> <p>Reduced national budget, given a very low malaria cases risking sustainability of the achievements in malaria containment and achievement of malaria elimination.</p>

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
<p>establishment of National Artemisinin Resistance Containment body.</p> <p>Information on malaria burden and progress available from containment areas.</p> <p>Proportion of malaria cases receiving direct observed treatment in tier 1 increases to 95% by 2015.</p> <p>110,000 LLINs distributed to populations in endemic areas in tier 1 and 2.</p> <p>200 private practitioners/drug sellers trained annually on new guidelines and drug resistance.</p>	<p>110000 LLINs were distributed to populations in endemic areas in tier 1 and 2.</p> <p>Training reports showing 200 private practitioners/drug sellers trained annually on new guidelines and drug resistance.</p>	<p>meetings held.</p> <p>Regular TES and updating of AR maps, developed and revised reporting form, case investigation form and forms for directly observed treatment.</p> <p>31 malaria posts at strategic places in central and southern provinces with diagnosis, treatment.</p> <p>Procurement of 160,000 LLINs.</p>	<p>China.</p> <p>Significant amount of work needs to be carried out with engagement of non-health sectors within the remaining project time.</p>	
<b>Objective 6:</b> Limit the availability of oral artemisinin-based monotherapy, substandard and counterfeit antimalarial medicine while improving quality of ACTs				
Reduced availability of oral artemisinin-based monotherapy	Surveys in the containment areas showing fall in availability of oral	Unlikely to achieve within the project timeframe.	Only approximately 15% of the 2014 Workplan completed.	Risk: High regional political

Results	Result measurements	Performance: achievements	Key remaining issues/ challenges	Validation of assumptions/ risk
<p>(oAMT) in the containment areas.</p> <p>Data available on drug quality of artemisinin-based combination therapy (ACT) shared annually.</p> <p>Reduced number of companies producing oral artemisinin-based monotherapy.</p> <p>Countries are enforcing a ban on oral artesunate monotherapies.</p>	<p>artemisinin-based monotherapy.</p> <p>Meeting report showing available data shared on drug quality.</p> <p>Company survey showing reduced number of companies producing oral artemisinin-based.</p> <p>Number of countries in GMS started enforcing the ban on oral artesunate monotherapies.</p>	<p>Developed a 3-year action plan through a Stakeholder meeting on Pharmaceutical Systems Strengthening participated by medicines regulatory authorities, pharmaceutical law enforcement, NMCPs and key partners.</p> <p>Supported Cambodia, China, Lao PDR, and Vietnam to develop country strategies on how to eliminate oAMTs. Details for operationalization of the strategies being planned with the country teams and partners.</p> <p>Meetings with national drugs authorities in Cambodia, China and Lao PDR to further engage the national drug regulatory authorities (NDRAs) in malaria program planning and supply activities, gain their support for stronger coordination among local pharmaceutical stakeholders, discuss budgets for ERAR pharmaceutical-related activities (under RAI reprogramming) and ensure oAMT elimination strategy and road map to be a key priority with related targets.</p>	<p>Only one out of four milestones in 2014 achieved and two are ongoing.</p> <p>Need to address availability of quality anti-malaria drugs through improvements to the broader pharmaceutical system which is beyond a 3-year emergency project</p> <p>Three-year plan not fully funded.</p> <p>Need to look at an alternative so the objective is maintained, for example, looking at other regional investments in essential medicine for co-financing, given the emergency situation for the removal of oAMTs</p>	<p>commitment of the regional authorities not obtained and lack of funding to improve broader pharmaceutical system.</p> <p>Low enforcement of oAMTs bans of each country.</p>



## Annex 4: List of ERAR positions and status

No.	Position	Location	Status
1	ERAR coordinator	Regional Hub, Cambodia	Post filled (Dec. 2013)
2	Technical officer, M&E	Regional Hub, Cambodia	Post filled.
3	Technical officer, Advocacy and Communication	Regional Hub, Cambodia	Officer resigned from January 2015. Consultant is hired and will remain until staff position has been filled
4	Assistant	Regional Hub, Cambodia	Post filled.
5	NPO Malaria	Cambodia	Post filled.
6	Technical officer, Pharmaceuticals	China	Post filled.
7	NPO malaria	China	Vacant since March 2015. New NPO should expected in May 2015
8	Technical officer, Reporting and M&E	Global Malaria Programme, HQ	Post filled.
9	NPO malaria	Laos	Post filled.
10	NPO M&E	Myanmar	Post filled.
11	NPO containment	Myanmar	Post filled.
12	Medical officer, MMP.	Thailand	Post filled.
13	Assistant	Thailand	Post filled.
14	NPO malaria	Viet Nam (Hanoi)	Post filled.
15	Medical officer, Malaria	Viet Nam (Hanoi)	Post filled.
16	NPO containment	Viet Nam (Ho Chi Minh)	Vacant. New NPO should expected in June 2015
17	Medical officer, TES/Research	WPRO/ Manila	Vacant. New NPO should expected in June 2015

## Annex 5: List of informants

People	Title/ Organisation
Pedro Alonso	Director, WHO-GMP
Pascal Ringwald	Coordinator, Drug resistance, WHO-GMP
Urban Weber	Head, High Impact Asia, GFATM
Izaskun Gavira	Senior Fund Portfolio Manager, GFATM
Walter Kazidi	ERAR coordinator, WHO
Sanjai Mathur	Director and Representative, UNOPS Myanmar, India, Indonesia, and East Timor
Siv Sovannaroth	Chief of Technical Bureau, CNM
Kheang Soy Ty	Chief of Party/ Regional Director, URC
Brett Dikson	Project Coordinator Migration Health Program, IOM
Richard Lee	DFAT, Regional Program Manager, Bangkok
Eleanor Cupit,	DFAT First Secretary – Development Cooperation, Bangkok),
Michael O'Dwyer,	Regional Health Specialist, DFAT, Bangkok
Yonas Tegegn	WR, WHO Thailand
Deyer Gopinath	WHO Thailand
Chanwit Tharathep	Deputy Permanent Secretary, MoPublic Health (on behalf of Chair of CCM)
Wichai Satimal	Senior Expert, Department of Disease Control, MoPH at the Bureau of Vector-Borne Disease, MOPH
Chawalit Tantinimitkul	National Program Officer, WHO
Arjen Dondorp	Chair of the RSC
Promboon Panitchpakdi	Executive Director, Raks Thai Foundation
Eric Fleutelot	Conseiller Régional de coopération en santé, French Embassy
	MoH, Minister
Dong-il AHN	WR, WHO Cambodia
Mya Sapal Ngon	Health Program Officer, USAID
Frank Smithius	Executive Director, MAM
Myo Min	Project Manager, MMA
Eamonn Murphy	UNAIDS Coordinator, CCM Secretariat
Sandii Lwin	Director, MHDC
Attila Monar	UNOPS PR Director
Sanjay Mathur	Director and Representative, UNOPS Myanmar
Trinh Thi Ngoc Linh (on behalf of Nguyen Bich Dat, CCM Chair, Vietnam) (by questionnaire)	CCM Focal Point, CCM Vietnam

Gawrie Nirdoshi	Technical Officer, Malaria, WHO Vietnam
Ly Tou Bouapao	Deputy Minister of Education and Sports and Chair, GFATM CCM
Bouasy Hongvanthong	Director, Centre of Malariology, Parasitology and Entomology, MoH
Juliet Fleischl	WR, WHO Lao
Seshu Babu	Technical Advisor, WHO Lao
Wang Bangyuan	Country Director, Health Poverty Action
Marc Jacobs	Director CD, WPRO
Eva Christophel	Team Leader Malaria and other Vector-borne and Parasitic Diseases, WPRO
Bruno Moonen	Deputy Director Malaria, BMGF
Tom Kanyok	Senior Program Officer, Infectious Diseases, BMGF
Chris White	Senior Program Officer, Malaria, BMGF
Tom Hurley	Deputy Director, UNICEF/WHO partnership, BMGF
Leonard Ortega	Regional Malaria Advisor, SEARO
Susann Roth	Social Protection Team, Poverty Reduction, Gender and Social Development Division, ADB
Louis da Gama	Director, Malaria Advocacy & Communications, Global Health Advocates
Ferdinal Fernando	Assistant Director/ Head of the Health and Communicable Diseases Division, ASEAN
Ben Rolfe	Executive Secretary, APLMA
Jim Tulloch	Independent consultant

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