

**Minutes**  
**18<sup>th</sup> RAI Regional Steering Committee (RSC) Meeting**  
15-16 November 2021  
Online Meeting  
Meeting Chair: Prof Arjen Dondorp, RSC Chair

**Contents**

Day 1 – 15 November 2021.....	2
Welcome, Introduction and Objectives .....	2
GMS Epidemiological Update .....	2
RSC Initiatives.....	3
RAI3E Grant Update .....	4
Operational Research Sub-Committee Update .....	5
RSC Independent Monitoring Panel Update.....	7
Update on Implementation in Myanmar.....	9
CSO Platform Update .....	12
Key Findings from Report on GMS Malaria Elimination during COVID-19 .....	13
Day 2 - 16 November 2021 .....	14
Summary of Day 1 and Introduction to Day 2 .....	14
Genetic Surveillance in Attapeu, Lao PDR .....	14
Lao PDR Update .....	15
Cambodia Update .....	15
Aggressive Interventions for Malaria Elimination in Lao PDR and Cambodia .....	16
Vietnam Update .....	17
Thailand Update.....	19
Preparations for a Potential RAI4E .....	21
AOB, Closing Remarks, Next Meeting Plans .....	22
Summary of Decision Points .....	22
Annex I: Meeting Agenda.....	23
Annex II: List of Participants.....	23

## Day 1 – 15 November 2021

### Welcome, Introduction and Objectives

Prof. Arjen Dondorp, RSC Chair

#### Meeting Attendance

- 11 out of 14 RSC Voting Members are present. The quorum is obtained.

#### Presentation of new members

- Dr. Clarisse Veylon-Hervet is the Regional Health Advisor, French Embassy and is proposed as RSC Voting Member for the development partner (bilateral) sector.
- Dr. Megan Counahan, Regional Health Advisor, Australian Embassy is proposed to undertake a second term as RSC Voting Member for the development partners (bilateral) sector.

#### Conflict of interest declaration

- Prof. Arjen Dondorp is the Deputy Director of MORU, which is a sub-recipient under the RAI3E OR package.
- Amita Chebbi is Senior Director at the joint APLMA-APMEN Secretariat, which is part of the consortium led by MORU, a sub-recipient under the RAI3E OR package.

#### Objectives for Day 1

- Present the latest GMS epidemiological update.
- Provide an overview of RAI3E grant implementation and progress.
- Update from the Operational Research Sub-committee.
- Update from the RSC Independent Monitoring Panel (IMP).
- Update on Implementation in Myanmar.
- Update on the activities of the CSO Platform and the main findings of a report on GMS malaria elimination during COVID-19.

## GMS Epidemiological Update

Dr. Luciano Tuseo, World Health Organization, Mekong Malaria Elimination (MME)

#### Presentation

- 2023 is the target for *P falciparum* elimination in the GMS and 2030 is the elimination target for all species.
- *P falciparum* and mixed cases reduced 52 percent and *P vivax* cases reduced 11 percent between 2021 and 2020. Lao PDR and Myanmar have seen some increase in *P vivax* cases comparing Jan-Sept in 2020 and 2021.
- In Cambodia, total cases decreased 69 percent from Jan-Oct 2020 to Jan-Oct 2021. It is important to share these achievements with other regions; it is a unique success during the challenges of COVID-19.
- In Kampong Speu, the effects of the intensification plan are visible, where *P falciparum* cases decreased 79 percent. This was the first province where the intensification plan was implemented.
- In Lao PDR, total tested cases increased 8 percent, total cases increased 18 percent, and *P falciparum* +mix increased 3 percent, with *P vivax* increasing 31 percent from Jan-Oct 2020 to Jan-Oct 2021. There were zero cases in villages targeted with TDA in August-October 2021.
- In Myanmar, the completeness of data is only 38 percent. In Jan-Sept 2021 there was a one percent increase in *P vivax* compared to Jan-Sept 2020.
- Thailand is on track to eliminate *P falciparum* with very few cases in 2021. This is a very good situation.
- Vietnam has also seen enormous progress, particularly in 2020. Total tested cases decreased 25 percent; total cases decreased 74 percent.

- In June 2021, Yunnan, China was certified as malaria free.
- “Last mile” activities are underway in Cambodia; “accelerator strategies” are underway in Lao PDR; similar approaches are under discussion with CSOs in Myanmar; in Thailand and Vietnam, elimination approaches are being discussed.
- Challenges in Lao PDR led to change of the drug from IPTf from ASMQ to Pyramax; this was supported by WHO.
- For next year, MME plans to maintain the same level of staffing in Cambodia aiming at zero cases that year. In Lao PDR, MME will support the same human resources as 2021, supporting aggressive approaches. In Myanmar, human resources for 2022 will be based on needs and the situation. In Thailand, human resources will be similarly based on needs. In Vietnam, MME supports two field staff as well as providing remote technical support.
- MME has produced eight epidemiological summaries and three partner activities summaries so far in 2021, as well as communications products.
- Globally the COVID situation is getting worse; the number of cases and deaths is still increasing. There is not a problem of stock in the region and malaria has still decreased for the region in the COVID-19 period. All the countries have made an enormous effort to keep malaria elimination on track during this period, and MME has provided continuous support.

### Discussion

- The GMS is on track for elimination in Cambodia, Lao PDR, Thailand, and Vietnam. For Myanmar, incomplete reporting hampers accurate analysis, but there are reports that services continue quite well at the village level.
- The MME proposed human resources for 2022 require approval from RSC for a budget adjustment. Based on the efficient use of resource by WHO, this is endorsed by the RSC.
- MME has a team based in Cambodia with several epidemiologists and local staff. It deploys staff directly in the countries according to need and supports the MEDB database for the region. This produces monthly regional reports.
- DECISION POINT - Additional budget is endorsed for human resources to continue the intensification plan which entails deployment of national and international epidemiologists at sub-national level. The proposal and budget are to be shared with the RSC.

### RSC Initiatives

Mr Matteo Dembech, Executive Secretary, RSC Secretariat

### Presentation

- The CCM Evolution programme is an initiative to improve governance of the RSC. The Executive Committee has been proposed as the Task Force for this work. The first step was to complete a survey. A consultant will use this to understand the capacity of the RSC and select priority interventions to improve governance. The RSC Secretariat will soon share the name of the Consultant who will be working on this task. This Evolution has been piloted elsewhere with success and has been expanded to other RCMs and CCMs. The overall goal of this initiative is to improve the health governance of the RSC.
- The RSC Secretariat has also shared a RAI3E Executive Summary booklet which has been shared with the RSC Constituencies for their use.
- The RSC Secretariat is working on the RSC website and some branding, including a proposed logo for the RSC, with colours and style generally aligned to the overall branding of the

Global Fund. The logo is included here as a footnote for RSC members to share any comments before it is finalised in early December.<sup>1</sup>

- The RSC Secretariat is also working on media outreach activities to create visibility for the progress made under the RAI grants, including reaching out to journalists and organizing some interviews with RSC Members. As needed a media expert will be hired. Communicating the impressive elimination progress done so far would also be important in view of the next replenishment of the Global Fund.

#### Discussion

- **DECISION POINT** – The RSC endorses the appointment of the Executive Committee to support the CCM Evolution process.
- **DECISION POINT** – The RSC endorses the proposed media outreach and advocacy activities, including potential invitation of selected RSC Members for media interviews. The logo will be finalised in early December.

## RAI3E Grant Update

Dr. Eisa Hamid, UNOPS and Dr. Faisal Mansour, UNOPS

#### Presentation

- 2021 is the first year of implementation for the RAI3E grant. In Jan-June 2021, 340,000 LLINs/LLIHNs have been distributed; 35,000 malaria workers have supported community case management; 2.47 million suspected malaria cases have received parasitological tests; 29,365 positive malaria cases have been detected with 87 percent treated according to national treatment guidelines; 62 percent of confirmed malaria cases in low endemic areas were investigated; and 83 percent of active foci received response within seven days.
- Targets for testing have been reached or exceeded in Cambodia, Lao PDR, Vietnam, and Thailand, and missed in Myanmar due to the ongoing difficulties there with the political situation and COVID-19. Myanmar has also seen a large increase in cases while the other four countries have not.
- The target percentage of confirmed active foci investigated and classified in which an appropriate response was initiated within seven days was achieved only by Thailand. The other countries achieved around half of their target.
- The presentation also included various programmatic achievements per country, as well as a summary of procurement in 2021 and 2022 per country.
- Challenges to procurement include the temporary Suspension of TANA Netting FZ-LLC (TANA) and Moon Netting FZE (Moon Netting) causing delays to the delivery of LLINs under the Lao PDR 2021 requirement; the COVID-19 pandemic impact and current political situation in Myanmar causing limited availability of freight and constraints in application of TEC application process and custom clearance; the reduction in Cambodia's malaria caseload, meaning ACT order requirements do not meet manufacturer's minimum order threshold.
- Overall budget absorption of the RAI3E is 30 percent in Jan-Jun 2021 of the total for the year. The target for that period is just over 50 percent. Vietnam's budget absorption is



around 5 percent. Resilient and Sustainable Systems for Health module has the lowest budget absorption at 20 percent. Restrictions on travel are a major reason for under absorption. National Programmes have lowest absorption in the period, with UNOPS the highest and WHO around 40 percent. COVID-19, political issues in Myanmar, and a major delay in approval of RAI financing procedures in Vietnam are the main factors explaining under absorption in this period.

### Discussion

- Now that Vietnam has approvals for financing procedures, there should be some catch-up effect in terms of absorption. For Myanmar, there should also be payments to volunteers increasing the absorption overall. Some activities such as travel will still see savings; but others will see increased absorption at the end of the year.
- RAI is 60 percent funded through the catalytic package; the discussion on this component of the Global Fund is underway for the 2024-2026 cycle. Implementation effectiveness will be one of the criteria for this discussion and future allocations.
- UMFCCI activities have moved to Rakhine and have picked up activities so improved results are expected in time for the next RSC meeting
- The LLIN issue in Lao PDR has been resolved.

## Operational Research Sub-Committee Update

Dr. Pascal Ringwald, RSC Operational Research Sub-Committee Chair

### Presentation

- Three studies were completed under RAI2E.
- For IPC, the objectives were to develop a network of forest goers trained to become malaria workers (FMWs) to control/eliminate malaria from inside the forest; and to evaluate MSAT with RDTs and continuous passive detection in forest-going populations.
- Under the IPC project, the key conclusions were that IPC was successful in developing a network of forest-goers trained to become malaria workers for their peers; RDT-based interventions have not had a significant impact on the incidence of forest malaria in Cambodia; RDTs are not suitable to conduct MSAT among forest-goers; PCR-based MSAT has significant logistic and economic disadvantages; PCR remains useful in cross-sectional approaches to measure prevalence; and whether low parasitaemia can result in malaria transmission affects whether RDT-based interventions can and should be used to eliminate malaria.
- The OR Sub-committee review of the IPC project found that the strategy tested had little implementation feasibility, given the low sensitivity of RDTs; MSAT with PCR is challenging and impractical, but too insensitive with RDTs; low RDT sensitivity may also decrease asymptomatic FGs' trust in both the FMWs and the RDTs themselves; the use of GPS-enabled devices to track the FMWs is a clear ethical issue and may also impact the FGs' trust given the illegality of many forest activities; FMWs may be a useful addition to national malaria programmes in the future; FMWs may be most useful in provinces where incidence is higher and where malaria is very concentrated in remote forested areas; the clear decline in malaria cases was also probably related to a general decrease in forest activities due to government strengthening of sanctions and the impact of the COVID-19 pandemic; and that chemoprevention activities will have a higher impact on decreasing malaria incidence than MSAT, however, acceptance and risk of use of the first line ACT needs to be evaluated.
- For MORU, the objective was to assess the efficacy, acceptability, and feasibility of antimalarial prophylaxis for high-risk forest goers.
- Under the MORU project, the key conclusions were that the proportion of forest goers with malaria infections was 3 percent in the group receiving AL chemoprophylaxis compared to

17 percent in the control arm receiving multivitamins. Adherence was 95 percent with a whole package of community engagement, including a financial incentive of five dollars to compensate travel costs. It showed that the approach of chemoprophylaxis in forest goers is very effective and that many elements of the community engagement can be used as a template for implementation of IPTf. AL was very well tolerated. The number of adverse events reported was low and almost the same as in the multivitamin control group.

- The OR SC review of the MORU project found that weekly administration of chemoprophylaxis is impractical and raises the issue of sustainability; weekly prophylaxis with AL is off-label, and therefore cannot be recommended by WHO; the pharmacokinetic profile of AL is not suitable for MDA; the trial's community engagement strategy helped build trust, encourage participation, and overcome potential ethical and practical challenges; it was very effective as evidenced by high levels of enrolment, compliance with follow up, adherence to prophylaxis, and feedback from communities and participants during the trial; however, this investment in community engagement has to be sustainable and replicable in the future and in other settings; the use of incentives has reportedly led to consequences for the NMCP, as community members have complained that they are not offered incentives for NMCP activities; individual randomisation and the strong indirect protective effect of AL on the control group may have resulted in slight underestimation of the prophylactic protective effect of AL; the antimalarial regimen used in this study for prophylaxis did not include 8-aminoquinolines required for the prevention of *P vivax* relapse; PQ should be added to the tMDA regimen to clear mature *P falciparum* gametocytes.
- For SMRU, the objective was to improve understanding of how environmental conditions influence malaria transmission in Eastern Myanmar to improve active surveillance systems.
- Under the SMRU project, the key conclusions were that associations between specific malaria dynamics and agriculture type could be related to different agricultural practices or a difference in vector diversity or abundance related to specific farm/forest interfaces; investigating local-scale environmental and meteorological variables linked to malaria transmission requires a dedicated environmental surveillance system; the web environmental malaria surveillance system is an added value for malaria elimination in Kayin State to interpret signals in malaria surveillance data alongside environmental dynamics; after subnational level stratification, microenvironments can be used to target surveillance to high-risk zones in selected areas.
- The OR SC review of the SMRU project found that the study had developed an important proof-of-concept, but there is a real risk that the important work done in this project is not developed further; it is unclear how the ambitious targets for impacts of the system will be reached. It is unclear which actor(s) will or should be involved in maintaining the system, including the impact of interventions or expanding the system to other geographies; if countries did choose to move forward with the tool, it would probably take a long time to build up the capacity to use it to its greatest effect and also carry significant opportunity costs; the system could perhaps be useful as a predictive model for re-introduction of malaria into "eliminated" subnational areas; however more work may be needed to assist users to attain this potential; the experience with this project raises the question whether RSC grants should be used to fund projects that are not open-source as the research outputs should be global common goods.
- The Final reports prepared by the OR Sub-Recipients have been shared with all RSC Members. You are invited to analyse them and discuss the findings within your Constituency to improve current operations.
- Four projects are underway under RAI3E: Sustaining village health worker programmes with expanded roles in the GMS (MORU); *P vivax* elimination in the GMS: targeting the hypnozoite reservoir, expanding access to radical cure treatments and enhancing safe and effective case management (IPC); Personal protection packages for reducing residual malaria

transmission in forest-going mobile and migrant populations in the Greater Mekong Subregion (GMS): Stepped-wedge trials with nested mixed methods study (BI); and Optimizing reactive surveillance and response strategies to achieve malaria elimination across the Greater Mekong Subregion (BI).

- The four operational research projects supported by the RAI3E grant are well designed and have commenced within the expected timeframe. Ethical approvals have been obtained or are expected to be obtained with little to no difficulties.
- Research components that do not take place in the field, such as literature reviews, training, and surveys, have started and begun to deliver results. Field components, such as clinical trials and community interviews/focus group discussions, will likely be delayed due to COVID-19.
- Although the RAI3E projects have only just started, there is a moderate risk that COVID-19 will result in significant delays to project completion and publication.
- As a result, there is a risk that the findings from RAI3E will not be available in time to shape the next RAI grant in 2024-2026.

### Discussion

- The OR Sub-committee intends that RAI3E results will be completed on time. Given some of the circumstances, particularly in Myanmar, there may be a need to seek an extension, but the key interim information should be available on time. Some of the issues that delayed the RAI2E projects have been avoided; now the main issues are COVID-19 and political dynamics in Myanmar.
- The slides summarising the MORU study were missing key information regarding the differences in malaria infections between the study arms, adherence and observations on community engagement. Updated information is reported in the above summary.

## RSC Independent Monitoring Panel Update

Dr. Jim Tulloch, IMP Chair

### Presentation

- Unfortunately, Sean Hewitt was unable to attend this meeting. The work of the IMP as it ideally should be (as in-country work) has been severely disrupted by COVID-19. The IMP has tried to compensate for that.
- The IMP undertook a review of 8AQ treatment for *P vivax* at the request of the RSC. Vivax is the dominant species of malaria in the GMS. The full report of this activity was shared with all RSC members and is available at the link at the top of this document. The document reflects the available literature on 23 questions, along with comments from peer reviewers, as well as the view of the IMP. The document includes a section explaining how it should be read.
- The IMP has also begun work on operational research tracking with the objective of drawing attention to research findings of possible relevance to the RAI; ensuring the RAI strategies take research into account; stimulating rapid approval of interventions for RAI where appropriate; suggesting gaps in operational research; and suggesting where further operational research is not needed. It also seeks to find out whether RAI is an appropriate mechanism for funding OR and how it can complement other OR.
- Under this work stream, an OR database has been updated based on a 2020 desk review by the OR Sub-committee. It contains 210 relevant operational studies from 2012 to November 2021, including 82 in 2020-2021, and three quarters of the studies conducted partially or fully in the GMS. The presentation included examples on the topics of diagnosis and treatment, MDA/MSAT, and forest-goer behaviour.

- The IMP asked the RSC whether IMP tracking of OR is useful, how the database could be improved, how the IMP should communicate emerging OR findings, and what the mechanism should be for discussing new findings.
- A third workstream of the IMP is on CSO monitoring, at the request of GF TRP and GAC. So far, IMP has recruited in-country consultants, provided a framework with questions for them to investigate, and focused in on some themes including early diagnosis and treatment; bed nets/right-sizing vector control; surveillance; coordination; and behaviour change communication and social mobilization.
- Among the early observations is that the role of CSOs in malaria elimination in the GMS is very significant, varies across countries in nature and extent. Their presence in remote under-served areas is of particular importance; most CSOs have been able to maintain malaria activities despite COVID-19 disruptions and some significant delay; CSOs have played a critical role in the response to COVID-19; coordination with government services and among CSOs is reported to be good; integration of CSO data seems to have greatly improved.
- The IMP asked the RSC whether it should focus on CSO monitoring and whether there should be more formal reviews of CSOs.

### Discussion

- The IMP sought the RSC's approval to disseminate the *P vivax* document widely, including through RSC members to their constituencies and to those who are engaged in the discussion on radical cure of *P vivax* in the GMS.
- There could be a variety of interpretations of the data used in the *P vivax* report. The goal of the literature review is to inform RSC members and make it available to policy makers and technical agencies to inform their decision. The IMP does not seek to advise on policy and treatment guidelines, which is the role of WHO.
- WHO GMP will soon share a revised policy on Primaquine, and then on Tafenoquine, making the *P vivax* review timely.
- The OR monitoring is a useful exercise, and the means of communication can be discussed in another forum.
- There has been agreement over the years that the CSOs play a very important role; if the IMP can look at the performance of CSOs from their independent angle, that is a good idea. This work will probably require more work and field visits.
- There is a range of competencies among CSOs in Myanmar, but this is territory for further exploration rather than any conclusions at this stage. In the other countries, there are only a few CSOs operating anyway which makes it easier to look at; also, there has already been some process of selection which may indicate those CSOs are providing reasonable services. The IMP is available to analyse these aspects once access to countries eases.
- The CSO platform is available to help unpack these initial findings.
- The role of the IMP is not to make evaluations of individual CSOs as such. Reporting to the RSC will be in terms of general CSO issues across the board. In some cases, it may be apparent which groups these refer to. If there are specific findings on specific CSOs, those will be addressed in a more sensitive way than at the RSC forum. For the findings shared at RSC level, members can share these with their constituents.
- of TDA and IPTfg to get the implementation going well as the activities expand. The IMP is exploring with WHO the possibility of jointly reviewing TDA and IPTfg activities.
- The RSC Secretariat has recently issued a call for applications to join the IMP. Meeting participants were encouraged to help identifying good candidates for the IMP to apply to the vacancy for IMP membership.
- **DECISION POINT** – The RSC endorses the wide sharing of the 8AQ/*P vivax* document produced by the IMP.



## Update on Implementation in Myanmar

Dr. Rattanaxay Phetsouvanh, RSC Vice Chair;

Ms. Izaskun Gaviria, RAI Senior Fund Portfolio Manager;

Dr. Thapa Badri, Scientist (Malaria Control), WHO Myanmar;

Prof. Maxine Whittaker, CSO Platform Representative;

Dr. Tin Me, UNOPS

Prof. Frank Smithuis, Medical Action Myanmar

### RSC Vice Chair Presentation

- ASEAN has developed and adopted the post-2015 Health Development Agenda and endorsed the guiding principles from 2021-2025.
- These apply to Myanmar. Alignment of RAI with ASEAN health sector regional priorities will provide good leverage and opportunities and GF is encouraged to use the ASEAN mechanisms to support activities in Myanmar.
- At the next ASEAN meeting in the Philippines, Myanmar will probably be a part of that.
- There should be continued support to activities in Myanmar, regardless of the challenges there.
- ASEAN Senior Officials Meeting on Health Development (SOHMD) is working to continue its efforts towards Myanmar and leave no country behind. This will include liaising with Myanmar counterparts.

### Global Fund Presentation

- It is very important to understand ASEAN's views and Dr. Rattanaxay can have a critical role in this context given his experience working on RAI for several years.
- As a humanitarian agency, the Global Fund is mandated to speak to all stakeholders involved with delivering humanitarian response. This is pivotal to ensure activities funded by the Global Fund continue to save lives.
- The Global Fund had a meeting recently with a small number of stakeholders on the evolving epidemiological and logistical situation and what can be done to maintain progress towards *P falciparum* malaria elimination. It is working with all stakeholders to develop a joint understanding of the need to collaborate and ensure essential activities can continue.
- A meeting with technical staff of counterparts including on absorption and delivering activities will be organised.
- The participation of CSOs is needed more than ever, given the situation. There are safety issues affecting NGOs and iNGOs which need to be dealt with in the best way possible.
- The Global Fund was in Myanmar in July discussing with all stakeholders and may organize another visit next year.

### WHO Myanmar Presentation

- COVID-19 cases are increasing; there has been a scale-up in testing.
- The political crisis is causing operational difficulties, security issues, travel challenges, and difficulties in communication and coordination.
- This has major impacts on the public health system and COVID-19 response, service delivery, reporting, human resources, and supply chains.
- UN engagement principles following the coup focus on delivering humanitarian assistance and essential health services; new guidance is expected in the coming weeks. UN has started physical offices in Yangon and Nay Pyi Taw, and soon Ayerawaddy and Rakhine.
- There is a decline of 62 percent in malaria testing in Jan-Sep 2021 compared to Jan-Sep 2020. There is an intensity of transmission in the current high positivity rate. Cases are much

higher in 2021 than 2020. There has been some improvement in the number of townships reporting.

- There have been malaria outbreaks in Kachin and Tanintharyi which are now under control, but these indicate risks of possible outbreaks in 2022.
- The ongoing activities are test-treat; continuous LLIN distribution; outbreak responses; online/virtual meetings/ mobile supervisions & data transmission.
- Activities that have suffered are intensification plans; outreach activities; CIFIR (CIFIR through partners); in-person training, supervision and monitoring; reporting,
- Efforts to resume service include a WHO, GF and partners meeting, coordination meetings at Central (M&E), States/Region (Kachin, Tanintharyi), micro-stratification meeting (NMCP, S/R), and planning for NMCP, donors and partners meeting.
- The programme manager from NMCP would like to attend regional meetings. They would be happy to join the next RSC meeting as well. If it is difficult for RSC to communicate, WHO Myanmar can support.

### **CSO Platform Presentation**

- The CSO platform had 12 bilateral meetings with CSOs in Myanmar during September. There are more malaria positive cases than many of the CSOs had in their treatment targets. They are experiencing some shortages of commodities. Some have been able to borrow from other donor projects.
- In some areas, there are increased caseloads compared to expectations due to people moving.
- Transportation difficulties are causing stockouts. Banking and financial constraints as well as internet disruptions are challenges for CSOs monitoring and regular coordination.
- CSOs have tried to innovate to overcome these challenges, including sharing data on social media, delivering online training, using field staff to deliver commodities to field offices. There have also been increased stock provided by the PR to cover 3-6 months if required.
- CSOs would like to ensure consistent and sufficient allocation of essential supplies for malaria program; ensure the safety of health volunteers and healthcare workers; and expand the role of CSOs to cover the service gaps under the public sector.
- They also call for complete COVID-19 vaccinations to frontline healthcare workers and related service providers and support to humanitarian assistance to IDPs and refugees.

### **UNOPS Presentation**

- Around 18,000 reported COVID-19 deaths so far from 500,000 cases in Myanmar.
- Myanmar has received USD 119 million from C19RM. Expenditure to June 2021 is around USD million. It has mostly been spent on case management, COVID-19 diagnostics and testing, and health products and labs.
- Around 30 in-patient and outpatient centres out of 80 planned up and running (in Bago, Kachin, Kayin, Mon, Sagaing & Yangon).
- The in-patient centres from the areas with few Covid cases are converted to out-patient centres as the in-patient care is no longer necessary. These centres will however provide in-patient care services should the cases arise.
- Partners are conducting site readiness activities for the remaining centres.
- Considering the current collapse of health systems in the country, the Global Fund has agreed to support the Covid vaccination through its Sub-Recipients (SRs) who have shown interest in this activity.
- All the vaccines costs are covered by GAVI/UNICEF. The Global Fund will only support the cost at the operational/vaccine deployment level.

- Health facility readiness assessment of our SRs for vaccine deployment was conducted by UNICEF/WHO and the LFA in Q3 2021.
- The SRs' proposal for the operational costs are currently under review by UNOPS.
- These are just the plans contingent upon GAVI/UNICEF vaccines to be received and final approvals of the GF.
- Key Covid surveillance indicators will be reported through a tool developed by WHO. The tool is currently being tested by PSI. WHO is working to modify the tool based on the preliminary feedback.
- The PRs are working to finalize the indicator for other programmatic data to be reported by the SRs on periodic basis.
- Procurement, operational, financial and coordination challenges are causing delayed delivery of products, inaccessibility of services, delays in vaccination of targeted populations, delayed activities, and payments, under absorption, and data incompleteness hampering proper analysis and proper decision-making.

### **MAM Presentation**

- At the end of April 2021, there were major epidemics in India and Nepal which was alarming for Myanmar, where testing was low, and it was difficult to analyse the extent of COVID-19.
- On 2 May, there was a meeting with GF, UNOPS and CSOs to discuss the delta strain's high transmissibility and low vaccination protection, threatening a "perfect storm" against the background of the collapsed healthcare system in Myanmar. Most hospitals were closed due to the strike.
- It was necessary to expect and prepare for many COVID-19 patients. We focused on severe and critical cases. There is almost no intensive care in Myanmar. We focused on the severe cases requiring oxygen therapy from oxygen concentrators.
- On 3 July, MAM started operating COVID-19 treatment centres, with supporting staff, oxygen concentrators, medicine, electricity, transport, beds, food, etc. Many of the centres needed rewiring; 32 full time electricians were hired to ensure uninterrupted power supply.
- MAM also needed to build extra wards as the existing buildings filled up immediately.
- MAM hired new staff and moved existing staff from other projects to COVID-19 treatment centres, working intensive and long shifts.
- MAM supported 19 centres with 805 beds in Yangon, Bago, Kayin, Mandalay, and other areas. To date more than 2000 severe COVID-19 patients have been treated, of which around 80% survived.
- The implementation of C19RM funding faced challenges due to the political situation, healthcare system collapse, deteriorating security, and C19RM administrative rules.

### **Discussion**

- It is important to work with and through ASEAN, which has an important role in the Myanmar situation. There is also a need to re-engage with the right stakeholders and invite them to the RSC meetings. The RSC will take that forward. Since the Myanmar CCM is not functional at the moment, the RSC has an oversight role for this grant in Myanmar. The absorption of the large allocation is not very high at the moment due to multiple and diverse challenges.
- Expenditures under C19RM are anticipated to improve in line with targets.
- The previous rounds of C19RM were targeted on mitigating the impact of COVID-19 on the three diseases. The subsequent rounds had a different approach focusing on testing, treating, and vaccinating for COVID-19. These are parallel structures set up to compensate for the lack of functioning of the public sector.
- PMI Defeat Malaria (URC) reported screening about 50,000 people (with 3 percent positivity) in July-September 2021, with three quarters *P vivax* and one quarter *P falciparum*.

- The enormous challenges brought by COVID-19 pandemic caught all countries and organizations unprepared. This caused the overstretch of health systems throughout the world and required extraordinary measures from all partners working for health outcomes. The contribution of CSOs were tremendous, and MAM has shown the resilience and capacity to operate in extremely difficult environment. The Global Fund has secured over USD 100 million to support the humanitarian response. UNOPS has worked to import goods to the countries dealing with customs and security challenges. MAM re-affirmed how the implementation of C19RM has taught to partners that timeliness is of paramount importance in a pandemic; MAM appealed to global donors for flexibility and agility to help CSOs provide vital services during an emergency.

## CSO Platform Update

Ms Josselyn Neukom, CSO Platform Representative

### Presentation

- Since the May 2021 RSC Meeting, the CSO Platform has
  - Completed country-specific consultations with 31 CSOs (12 in Myanmar & 19 in the other 4 countries) to understand emerging good practices and issues among CSO partners contributing to national malaria programs
  - Planned & facilitated the first “All-CSO” consultation with CNM in Cambodia together with UNOPS, PMI and DFAT partners
  - Reviewed initial efforts in Thailand to develop a Community System Strengthening strategy (CSS) in response to TRP reviewer feedback, to inform a model for CSOs across the region to use
  - Conducted a field-visit with Malaria Consortium in Cambodia to understand CSO efforts to bring malaria care closer to border communities
- The key learnings have been the remarkable adaptation and innovation in response to COVID-19 across the region. In collaboration with APLMA/APMEN, the Platform is documenting and disseminating stories including CSO contributions including:
  - Integrated malaria/COVID-19 trainings
  - Updated programming guidance and COVID-19 action plans developed for use by malaria teams
  - Digital/mobile approaches used to facilitate communication and reporting
  - Smaller group activities and door-to-door LLIN distribution
  - Understanding gendered-aspects of COVID-19 restrictions and how these may have impacted forest goer activity
- Questions Arising from CSO Consultations included:
  - How to facilitate collaboration among partners working at border areas, to encourage information sharing and shared solutions to common challenges?
  - How to minimize the risk of duplication between non-RAI3 and RAI3 funded CSO implementation.
  - What is the process and timeline for reassessing CSO contributions to COVID-19 programming during the program design phase? PPE supplies are reportedly below levels required for RAI3 CSOs in Lao PDR, Thailand & Viet Nam. Across the region, there is scope to leverage CSO coverage of communities at risk of both malaria & COVID-19 beyond what was proposed.
  - Pending from May 2021 RSC: Is an external review and guidance regarding community-level testing policy/practices for malaria and other community health priorities feasible given the variation across and sometimes within countries?
- Insights from the “last kilometre” included:

- Improving community access to G6PD screening and treatment for remote communities at risk of vivax
  - Forest goers who walk 10 kilometres or more to a health facility & find staff or equipment unavailable
  - Soldiers building roads through the forest are unable to leave army camps for care
- Leveraging malaria-focused outreach to address COVID-19 and primary health care needs among communities that are not reached by formal health systems
- Priorities for the quarter ahead are:
  - Replicate the model of “All-CSO” consultations with NMCPs in at least 1 additional country and roll-up learnings and practical tips for use across the region
  - Organize workshop for CSOs working at border areas to share experience, good practices and identify solutions to shared challenges
  - Disseminate CSS guidance to entire CSO network, informed by initial efforts in Thailand
  - Support IMP efforts to review CSO progress as requested
  - Tailor 1:1 CSO consultation approach to minimize duplication with UNOPS and NMP consultations with CSOs

### Discussion

- Continuous coordination and cooperation with other donors funding malaria activities in the region, and funding CSOs is imperative to avoid overlapping. RSC confirmed that all meeting materials are shared with participants, including the Gates Foundation, whenever they are not available to attend virtual meetings, to facilitate coordination and minimize duplication.
- There is a need to include more CSO engagement in the program design process for C19RM, in collaboration with national CCMs. Only in Myanmar is C19RM under the RSC. The CSO Platform—on behalf of CSOs in each country-- provided substantial feedback on C19RM proposals.
- The question on the potential for malaria outreach workers to address a broader range of health needs among communities at risk of malaria is an important point that should stay on the agenda.

## Key Findings from Report on GMS Malaria Elimination during COVID-19

Dr. Amita Chebbi, APLMA

### Presentation

- Whilst it is too early to measure the full impact of the COVID-19 pandemic on malaria cases and deaths, data suggests that Cambodia, Thailand, Lao PDR, and Vietnam remain on course.
- Overall, the GMS region reported a 27 percent decline in malaria cases in 2020 compared to 2019.
- The political situation in Myanmar, on the other hand, is threatening the progress made.
- Given the recent COVID-19 outbreaks in all the GMS countries, the impact of malaria cases and services need to be regularly monitored and assessed
- The GMS can offer lessons to the Asia Pacific region and beyond on how to focus efforts on tackling a pandemic but not at the expense of losing ground against malaria and other health threats.
- There were significant disruptions through COVID. Frontline workers and others were able to come up with creative solutions to adapt.
- The importance of investing in health systems has been highlighted.
- APLMA will host a webinar on 26 November with the CSO Platform to launch this report.

## Discussion

- The RSC could come up with a communications plan to put the good work of RAI out there. The APLMA report may be a good starting point.

## Day 2 - 16 November 2021

### Summary of Day 1 and Introduction to Day 2

Prof. Arjen Dondorp, RSC Chair

#### Meeting attendance

- 8 out of 14 RSC voting members are present. The quorum is obtained.

#### Objectives for Day 2

- Updates from GMS countries on RAI3E progress and C19RM implementation.
- Presentation of genetic surveillance study in Attapeu, Lao PDR.
- Overview of progress and evaluation of aggressive interventions for malaria elimination in Lao PDR and Cambodia.
- Discussion on the next Global Fund grant cycle and a potential RAI4E.

### Genetic Surveillance in Attapeu, Lao PDR

Prof. Olivo Miotto, MORU

#### Presentation

- The presentation focuses on analysis of a malaria outbreak in Attapeu province during the last malaria season. This is part of the GenRe Mekong Project presented at a previous RSC meeting and was done in close collaboration with CMPE.
- CIMPE reported an increase in *P falciparum* cases in late 2020 in Attapeu province. The question was which factors were driving this outbreak.
- There were outbreaks in southern Lao PDR before, for several consecutive years. However, the number of cases had collapsed. The numbers went down in Savannakhet but there was a sudden peak in Attapeu.
- So called genetic barcoding was used to genotype 400 samples. This showed that the genetic diversity in the parasite population reduced dramatically after start of the 2020-2021 outbreak and the majority of parasites belonged to a single parasite strain carrying the R539T resistance marker for artemisinin resistance.
- In Attapeu province, there was a switch from the C580Y mutation to the R539T mutation, which has now become completely dominant.
- The R539T is mostly in Phouvong district in Attapeu province. Data from other provinces will become available in the coming months.
- The implications of these findings are that the outbreak has been driven by the expansion of a single multi-drug resistant strain. These parasites have been identified around 2007 but something changed around 2018, which may mean the strain acquired capabilities it did not have before. It is important to reassess the treatment efficacy of the first-line drug AL and conduct in vitro drug sensitivity testing.
- Genetic surveillance does not only show prevalence of drug resistance, but can also be used to identify the likely causes of a malaria outbreak; all of this has been analysed by routine dried blood spots. Genetic barcodes are an informative, fast, and cheap tool for genetic epidemiology.

## Discussion

- This work shows the use of genetic epidemiology. It shows also that drug resistance is one of the main drivers of the outbreak in Attapeu.
- Monitoring the spread of the strain will be important for the neighbouring countries, particularly those using mefloquine, to which the strain is likely also resistant.
- Reduced travel and closed borders have probably helped to protect countries from the spread of this resistant parasite strain, which for now seems to be contained within Attapeu province. Whether it can spread to Cambodia, it is difficult to tell. The border between Cambodia and Attapeu is highly forested so there is not much movement.
- In Cambodia, the R539T kelch mutation is also increasing, whereas the until recently dominant C580Y mutation is decreasing. In Cambodia, the R539T is less associated with mefloquine resistance. The next rounds of TES in Attapeu will be important to check AL treatment efficacy.

## Lao PDR Update

Dr. Viengphone, Deputy Director, CIMPE

### Presentation

- Dr. Viengphone presented an overview of key programmatic updates: training, meetings, surveillance, *P falciparum* elimination acceleration, commodities forecasting, *P vivax* radical cure, case management and vector control.
- Jan-Oct 2021 saw an 8 percent increase in testing compared to Jan-Oct 2020; at the same time, there was a 19 percent increase in total cases, and a 3 percent increase in *P falciparum* +mix. *P falciparum* is focalized in Savannakhet and Attapeu.
- There were *P falciparum* hotspots in Xepone and Nong districts of Savannakhet and Phouvong and Sanxai districts of Attapeu; *P vivax* hotspots were Lamarm in Savannakhet, Taoi in Salavan, and Phouvong, Sanxai, and Saisetha in Attapeu.
- Most of the cases in the elimination areas are in Khammuane.
- The implementation of 1-3-7 is improving with support from central level. Reporting frequency and granularity has been increased.
- For elimination, activities include CE, census, LLIN/LLIHN, TDA, IPTf, and AFS. In the pilot project in Khammuane, the drug was changed from ASMQ to Pyramax due to low tolerability among the community of ASMQ.
- 27 percent of *P falciparum* +mix cases were in Nong and Xepone districts of Savannakhet. Quick action prevented a large-scale outbreak.
- Mitigation activities for COVID-19 include PPE distribution, remote meetings, testing of all fever cases, training within provinces, remote coaching on foci response, and electronic reporting.
- Under the first round of C19RM, 20,000 LLINs and 200,000 RDTs were received. For the second round of C19RM, the first disbursement is in process from MoH.
- The Government co-financing of USD 643,836 has been revised to allocate a greater share to LLINs due to their increased cost.

### Discussion

- None.

## Cambodia Update

Dr. Siv Sovannaroth, Chief of Technical Bureau, CNM

### Presentation

- The RAI3E MoA agreements with PR-UNOPS, SSRs, PHDs have been finalized.
- The PMG has been revised to simplify procurement processes.
- For case management and vector control, there has been new village stratification to determine VMWs and ITNs targets.
- There is ongoing implementation of safe radical cure for *P vivax* to all endemic provinces.
- There has been a ToT for case management.
- For surveillance and elimination, we have revised guidelines and provided training on surveillance in 18 provinces. We have also added additional features to MIS including stock forecasting.
- The priorities for 2022 are iDES, continued last mile activities in new active foci villages, continuous LLIN/LLIHN distribution in targeted villages, e-training on MIS apps, and strengthening *P vivax* radical cure implementation.
- There have been zero deaths from malaria since 2018. The number of *P falciparum*+mix has declined year on year. From Jan-Sep 2021 we had only 230 cases. For *P vivax*, we had only around 3,000 cases in the same period. Test positivity rate has declined year on year from 2018 and is 0.52 in Jan-Sep 2021. API has declined to 0.19 from 3.88 in 2018.
- CNM has been implementing the last mile activities to eliminate *P falciparum*. Challenges include the side effects of ASMQ and challenges to the conduct of community engagement due to COVID-19. Despite that, we have conducted house-to-house community engagement. Whole-village Community Engagement is more effective.
- ASMQ efficacy remains high; ASPYR is recommended as second-line treatment.
- G6PD testing and 14-day Primaquine treatment has been expanded to the whole country. VMW successful referral rate has increased from 20 percent to 50 percent.
- Challenges include low demand for ASMQ failing to meet manufacturer minimums and G6PD intermediate males who cannot be treated according to the current guidelines.
- For COVID-19 mitigation, CNM has issued a strategy and operational plan to ensure continuation of essential malaria services. We have also received USD 216,000 from C19RM through the Ministry of Health.
- A Roadmap to Integration for Village Malaria Workers has been developed for 2021-2025 to align with MEAF-2, including some diseases such as dengue and chikungunya. The long-term goal is to integrate with other community network as guided in MEAF-2 and maintain the VMWs motivation and vigilance as malaria declines.
- CNM implements the RAI3E grant based on the MEAF-2. MoH and Royal Government of Cambodia has increased budget contribution to malaria to meet co-financing requirements. CNM has also worked with UCSF on a sustainability assessment.

### Discussion

- It is great to see that activities continue despite the COVID-19 pandemic. It is an amazing result to have a few hundred *P falciparum* cases this year so far and a few thousand *P vivax*. It is good to see that integration of VMWs is a priority as malaria decreases.
- It is fantastic to see such significant reductions in malaria in Cambodia. Continuing this is critical but what CNM highlighted about sustainability and the integration of VMWs is also very important. It would be good to see a continued strong focus on sustainability work as the work moves forward.

## Aggressive Interventions for Malaria Elimination in Lao PDR and Cambodia

Dr. Giulia Manzoni, World Health Organization, Mekong Malaria Elimination (MME)

### Presentation



- *P falciparum*+mix cases are reducing in most of the ODs in Cambodia. In Lao PDR, some districts have seen increases.
- A first step in Cambodia began in 2018 with the intensification plan entailing deployments of staff at sub-national level. In 2020, foci management including innovative approaches began and expanded to five provinces in 2021.
- In Lao PDR, routine response activities linked to epidemic thresholds began in 2018, FTAT for forest goers began in 2019, and accelerator strategies began in June 2021.
- The steps for accelerating malaria elimination are CE, census, TDA for the at-risk population, distribution of LLINs/LLIHNs, IPTf for at risk population, and active fever screening for the whole population. These interventions are implemented according to foci classification comprising vulnerability and receptivity.
- In Cambodia, there are 80 active foci from seven districts in five provinces, which account for 80 percent of *P falciparum*+mix cases. TDA1 coverage was 73 percent (based on 42 villages); TDA2 coverage was 57 percent.
- In Lao PDR, the target is 45 villages in 8 districts of five provinces accounting for around 70 percent of *P falciparum*+mix cases in 2020.
- The pilot project was implemented in 2021; TDA1 had 89 percent coverage and TDA2 had 48 percent coverage. The major challenge was poor tolerability of ASMQ. This led to a change from ASMQ to Pyramax.
- In Lao PDR, AFS is implemented every two weeks, whereas in Cambodia it is weekly.
- In August 2021, the cases in the five pilot villages fell to zero.
- The scale-up of the project is expected to start in January 2022.
- Monitoring of the activities takes place at village level. Monthly joint visits take place with UNOPS, CNM, WHO, and partners also from the central level.
- Assessment of activities in Cambodia took place using desktop assessment of quantitative indicators (census coverage, LLIN/LLIHN coverage, TDA coverage, AFS, and IPT coverage) and qualitative assessment of satisfaction among key implementers and perceptions of the target population.
- Preliminary results from the four villages show 85 percent decrease in *P falciparum*+mix, 62 percent decrease in *P vivax*, and 60.5 percent decrease in test positivity. These results will be elaborated at the WHO Policy Meeting next week.
- Field visits and monitoring have yielded recommendations to key issues identified. Activities are being adapted accordingly.

### Discussion

- It is great to see that these activities seem to have a positive impact on the malaria burden.
- Lao PDR has much higher TDA coverage than Cambodia. These are results during the COVID-19 crisis period; Cambodia is now reopening so the movement of people will change. The last mile is very important for Cambodia.

## Vietnam Update

Dr. Nguyen Dinh Nam, RAI3E Coordinator, NIMPE

### Presentation

- Case management update
  - Conducted the case detection, diagnosis, and treatment in the community, public, private health facilities, and malaria posts.
  - Conducted the refresh training on microscopy for technicians.
  - Conducted the iDES and radical cure for *P vivax* with primaquine 14 days
- Vector control update

- Conducted vector surveillance and response.
- Conducted the LLIN continuous distribution
- Conducted the IRS in the foci areas.
- Surveillance and M&E update
  - Conducted the epidemiology and M&E trips by Central/province/district levels.
  - Conducted the case investigation, foci, and response
  - Central staff to support at district level during high peak season
  - Conducted FSAT in villages and at work sites in the forest (including farms) by central staffs
  - Conducted the Intensive case detection and surveillance activities in Lai Chau province
  - Updated the eCDS-MMS in line with the revised surveillance guideline.
- Program management update
  - Collected data, review and evaluate to recognize malaria-eliminating provinces.
  - Developed a plan to accelerate the malaria roadmap with zero indigenous case in 2027.
  - Conducted the audit for year 2020.
  - Developed/submitted the detailed budget and work-plan for 2022 to the MOH for approval.
  - CoPR-SRs monthly meeting.
- International procurement update
  - Primaquine and Pyramax: arrived at Noi Bai airport on 13/11/2021
  - Artesunate injection: waiting for approval by DAV, MOH
  - RDTs and Microscopes: already received.
  - LLINs and LLIHNS: will be received in Q1 2022.
- Plan in Q4 and preparation for 2022 plan
  - Complete the training/refresh training courses as planned.
  - Organize coordination meetings, analyse the disease situation, develop a plan to accelerate the process of malaria elimination.
  - Complete the local procurement packages.
  - Distribute the commodities to project provinces and end users.
  - Sign responsibility contract for 2022 with the provinces for implementation.
- Malaria Trend in 2014 to 2020 period
  - Total reported malaria cases have decreased from almost 16,000 in 2014 to just 1422 in 2020 (and 313 so far in 2021).
  - *P falciparum* accounts for a smaller proportion of cases in 2021 than *P vivax*.
- Bottlenecks and challenges
  - Due to Covid-19, most of training courses, supervision trips have moved to Q3-4 or have carried out virtually.
  - LLINs and LLIHNS will receive in Q1/2022 so that it affects to the target achievement of LLINs distribution.
  - Primaquine late to arrive, stock out of Primaquine since October.
- Resistance updates, changes of treatment regimen, and ACT supply issues.
  - Treatment guideline was updated in 6/2020.
  - Pyramax has been used in provinces with evidence of *P falciparum* resistance to DHA.
  - Currently in 6 provinces: Gia Lai, Đak Lak, Đak Nong, Binh Phuoc, Phu Yen and Khanh Hoa, where most of malaria case happened; willing to expand to other provinces if necessary.

- For *P vivax*: Radical treatment for *P vivax* with low dose of primaquine with 14 days follow up; Coordinate with HPA and PATH to implement the G6PD quantity test to study with high dose like tafenoquine.
- Almost half of the population above 18 has had two shots of a COVID-19 vaccine; there are roughly 8,000 cases per day. C19RM is under implementation, including provision of PPE, equipment and training for health facilities, and COVID-19 screening equipment.

### Discussion

- The progress seen in Vietnam with the dramatic reduction in malaria cases despite the pandemic is very positive; test rates have been kept very high.
- The village malaria workers are integrated into other health activities since several years ago.
- The testing data is presented by public, community, and private channels. This is the first time Viet Nam's RSC update has been presented this way and it is extremely helpful.

## Thailand Update

Dr. Rungrawee Tipmontree, Malaria Program Manager, DVBD

### Presentation

- Key Programmatic Updates:
  - 130,000 LLINs have already been distributed while 90,000 LLINs are being distributed and 50,000 LLINs supported by USAID for next year distribution will arrive in December 2021.
  - mHealth application (REVEAL application) for foci management has been rolled out countrywide. The refresher training will be carried out in November 2021.
  - mHealth components will be linked to Malaria online system by March 2022.
  - POR scheme has been approved by the National Malaria Elimination Steering Committee (March 19, 2021). A pilot project to implement POR plan will be initiated in Si Sa Ket province in December 2021.
  - As plan for 2022, Sub-national verification will be carried out in 5 provinces (Lampang, Chonburi, Nakhon Si Thammarat, Kalasin and Yasothon) where no transmission foci and indigenous case for more than 3 years.
  - The verification activities in Buriram province are postponed due to travel restriction. It is planned to carry out next years. So far, 37 out of 77 provinces are verified as malaria free provinces.
- Current Malaria Situation (Jan 2021 – 26 Oct 2021):
  - 2,588 confirmed cases (28.2% reduced from 2020)
  - 63% Thai and 37% non-Thai
  - 94% *P vivax* (2,444 cases) and 6% *P falciparum* (144 cases)
  - 69% Male, 31% Female and 71% over 15 years of age (29% under 15)
  - 72% indigenous cases
  - 442 active foci (23% reduced from 575 foci)
  - no malaria deaths
- Innovative Approach for Malaria Elimination:
  - Roll out mHealth application (REVEAL-application) for foci management
  - Enhance collaboration with relevant ministries in malaria elimination, especially MOD, MOI and MOE.
  - Improve iDES related activities i.e., supervised treatment & follow-up
  - Develop appropriate POR and outbreak response plans.
  - Implement *P falciparum* elimination activities.
  - Expand implementation of school-based intervention
  - Strengthen Community-based malaria elimination approach (VHVs)

- Resistance Updates and Change of Treatment Regimen & ACT supply issues:
  - The 42-day adequate clinical and parasitological response (ACPR) for DHA-PIP (*P falciparum* cases) is 94.3%
  - The 90-day ACPR for CQ + PQ (*P vivax* cases) is 97.6%
  - Genetic marker results
    - K13 mutation are being analysed. (will be completed in 2022)
    - *P falciparum* plasmepsin2 gene and pfmdr1 gene are being analysed.
  - The radical treatment policy is implemented.
  - Paediatric PQ 7.5 mg. dose is stock out and will be available in November 2021 (USAID-PMI support).
- COVID-19 Impact to Malaria Activities and Implementation of C19Response Mechanism
  - Malaria elimination activities were limited in some areas due to COVID-19 lockdown.
  - In 2021, number of blood examination reduced by 36%, especially among MMP, due to country travel restrictions.
  - Some malaria staff are allocated for COVID-19 prevention and control activities.
  - Current RDT stocks are adequate, and the procurement for new lots are being done.
  - Malaria elimination is on track towards the targets with new normal measures added.
  - Meetings & supervisory visits have been conducted using virtual tools since March 2021.
  - C19RM support is received in August 2021. All health products will be distributed to target areas by November 2021.
- Update on Integration of Services at Community Level:
  - Malaria activities will be integrated into primary health care through village health volunteers (VHVs). MOPH has already included malaria activities for VHV in standard curriculum.
  - VHVs in transmission villages (433 villages) were trained on malaria elimination activities i.e., supervised treatment and follow-up schemes, reactive case detection (RACD) and proactive case detection (PACD) and behaviour change communication (BCC).
  - Community case management services have been implemented through the village-based malaria posts (MPs) and health promoting hospitals (HPHs) at sub-district levels.
- Sustainability issues: Financing Updates and Plans for Transition from Global Fund Financing
  - Co-financing for 2021: 1.6 million USD from
    - DDC budget on malaria elimination through the vertical program.
    - Sub-district Administrative Organizations (SAOs).
    - National Health Security Office (NHSO) through general health services.
  - Transition from GF funding, and programmatic integration
    - Resources for malaria elimination and POR at implementing levels are to be mobilized from Sub-district Administrative Organizations (SAOs) and non-governmental sectors.
    - “Guideline for malaria elimination activities for SAOs and health networks” is widely distributed to all partners. SAOs located in malaria endemic areas have been trained.

## Discussion

- Positive progress shows that few *P falciparum* cases are left, and there are only the last few thousand of *P vivax* cases.

## Preparations for a Potential RAI4E

Prof. Arjen Dondorp, RSC Chair

Mr. Matteo Dembech, RSC Executive Secretary

### Presentation

- Thanks to the RAI grants, the reported incidence and mortality of malaria have been reduced drastically.
- The RAI4E vision is to build on this progress and to try to address the setbacks of COVID-19 and the political turmoil in Myanmar to finish the job of elimination.
- The RAI4E shall continue to fund evidence-based, innovative, and cost-effective interventions for maximum impact with national leadership and regional coordination and harmonization.
- The gains that have been made are fragile and the opportunity to finish the job is now.
- Investing in malaria now saves money through a health dividend, a social dividend, and an economic dividend.
- Proposed high level priorities for the RAI4E are: 1) Focus on Impact; 2) Case-Based Surveillance and Prevention of Reintroduction; 3) Innovative Last-Mile Interventions; 4) Integration of malaria services at community level; 5) Radical Cure of *P vivax*; 6) Regional Harmonisation; 7) Strengthening Civil Society Organisations.

### Discussion

- It is important to make the economic argument for a RAI4E grant. Sustaining surveillance is important even after elimination. The community health worker network needs to be maintained and integration with the rest of the health system will be crucial. Last mile interventions will still be needed for the last few cases. For *P vivax*, there will be a need for better G6PD testing and treatment.
- Investments in malaria now can also strengthen overall health systems to tackle other diseases and respond to the next pandemic. The economic argument will be very important. It is important to highlight the supply chain, which doesn't need to be its own priority, but there will need to be a focus on ensuring that malaria commodities are available in places that have eliminated malaria. Reintroduction will occur and there are already procurement problems caused by low demand.
- Integration of malaria services into broader government communicable disease operations at subnational level will also be critical for sustainability once elimination is achieved.
- Strengthening essential public health functions by creating a workforce of highly skilled health centre staff, VMWs and MMWs and improving the integration between programs and transform health services will be essential to maintaining zero cases prevent the re-establishment of malaria.
- Given the impact of COVID-19 in other places, there needs to be a strong case in order to receive Catalytic Funding. The focus should be on making an evidence-based approach to explain why the GMS should get more than the normal allocation this time. Some countries will hopefully have already eliminated *P falciparum* before the next grant, according to their targets. The Catalytic Fund is under discussion now and the decisions will depend on how much money is received from the donors overall. The RSC should present a business case to justify the use of resources in an effective and sustainable way; that is the most important thing.
- The next phase of the RAI programme will have transition as a key theme. Capacities need to be built within the national programmes for a smooth transition.
- Priority number 7 could refer to integration of CSOs into strengthening the overall health system or may take a focus on communities.

- Myanmar will be a high priority under RAI4E to protect the progress made there.
- The support of the IMP may also be called upon to make the economic case.
- DECISION POINT - The next steps will be for the presentation to be shared with RSC members; the RSC Secretariat will draft a second set of documents including a RAI4E investment case for RSC members comments; Then, an ad-hoc RSC meeting may be convened.

## AOB, Closing Remarks, Next Meeting Plans

Prof. Arjen Dondorp, RSC Chair

- After two very interesting days of discussion, it is great to see how successfully malaria elimination is progressing. There are major concerns about Myanmar and that will deserve a lot of the RSC's attention.
- The meeting has also included updates on how the C19RM has contributed to countering the pandemic.
- The next meeting is still under discussion. Hopefully this will be in person.

## Summary of Decision Points

- DECISION POINT - Additional budget is endorsed for human resources to continue the intensification plan which entails deployment of national and international epidemiologists at sub-national level. The proposal and budget are to be shared with the RSC.
- DECISION POINT – The RSC endorses the appointment of the Executive Committee to support the CCM Evolution process.
- DECISION POINT – The RSC endorses the proposed media outreach and advocacy activities, including potential invitation of selected RSC Members for media interviews. The logo will be finalised in early December.
- DECISION POINT – The RSC endorses the wide sharing of the 8AQ/P *vivax* document produced by the IMP.
- DECISION POINT - The next steps will be for the presentation to be shared with RSC members; the RSC Secretariat will draft a second set of documents including a RAI4E investment case for RSC members comments; Then, an ad-hoc RSC meeting may be convened.

## Annex I: Meeting Agenda

15-16 NOVEMBER 2021

### AGENDA 15 November 2021

Time in Geneva	Time in Phnom Penh	Item
07:45-08:00	13:45-14:00	Access to online Zoom platform
08:00-08:15	14:00-14:15	<b>Welcome, Introductions, and Objectives (RSC Chair)</b> <ul style="list-style-type: none"> <li>Quorum, Conflict of Interest declarations, membership updates.</li> </ul>
08:15-08:40	14:15-14:40	<b>GMS Epidemiological update (WHO MME)</b>
08:40-09:15	14:40-15:15	<b>RAI3E Grant Update (UNOPS)</b> <ul style="list-style-type: none"> <li>Update on RAI3E progress and financial overview.</li> </ul>
09:15-09:35	15:15-15:35	<b>Operational Research Sub-committee update (OR Chair)</b> <ul style="list-style-type: none"> <li>Overview of key findings from RAI2E studies and practical implications for RAI3E implementation.</li> </ul>
09:35-09:45	15:35-15:45	Break
09:45-10:30	15:45-16:30	<b>RSC Independent Monitoring Panel update (IMP Chair)</b> <ul style="list-style-type: none"> <li>Brief on IMP work including of CSO monitoring, Pv review, and mapping of emerging operational malaria research.</li> </ul>
10:30-11:15	16:30-17:15	<b>Update on Implementation in Myanmar</b> <ul style="list-style-type: none"> <li>RSC Vice-Chair ASEAN</li> <li>Global Fund</li> <li>WHO</li> <li>CSO Platform</li> <li>C19RM (UNOPS)</li> </ul>
11:15-11:45	17:15-17:45	<b>CSO Platform Update (CSO Platform)</b>
11:45-11:55	17:45-17:55	<b>Key findings from report on GMS malaria elimination during COVID-19 (APLMA)</b>
11:55-12:00	17:55-18:00	<b>Wrap Up (RSC Chair)</b>

### AGENDA 16 November 2021

Time in Geneva	Time in Phnom Penh	Item
07:45-08:00	13:45-14:00	Access to online Zoom platform
08:00-08:10	14:00-14:10	<b>Update on Implementation in Myanmar (continued)</b> <ul style="list-style-type: none"> <li>COVID-19 Clinics (MAM)</li> </ul>
08:10-08:15	14:10-14:15	<b>Summary of Day 1 and Introduction to Day 2 (RSC Chair)</b>
08:15-08:45	14:15-14:45	<b>Lao PDR Update (NMCP 15', Discussion 15')</b> <ul style="list-style-type: none"> <li>Including implementation of C19RM and progress towards integration of services at community level.</li> </ul>
08:45-09:00	14:45-15:00	<b>Genetic Surveillance in Attapeu, Lao PDR (CIMPE/MORU)</b> <ul style="list-style-type: none"> <li>Relevant findings for RAI3E</li> </ul>
09:00-09:30	15:00-15:30	<b>Cambodia Update (NMCP 15', Discussion 15')</b> <ul style="list-style-type: none"> <li>Including implementation of C19RM and progress towards integration of services at community level.</li> </ul>
09:30-09:45	15:30-15:45	<b>Aggressive Interventions for Malaria Elimination in Lao PDR and Cambodia (WHO MME)</b> <ul style="list-style-type: none"> <li>Progress to date, evaluation and future plans.</li> </ul>
09:45-10:00	15:45-16:00	Break
10:00-10:30	16:00-16:30	<b>Vietnam Update (NMCP 15', Discussion 15')</b> <ul style="list-style-type: none"> <li>Including implementation of C19RM and progress towards integration of services at community level.</li> </ul>
10:30-11:00	16:30-17:00	<b>Thailand Update (NMCP 15', Discussion 15')</b> <ul style="list-style-type: none"> <li>Including implementation of C19RM and progress towards integration of services at community level.</li> </ul>
11:00-11:20	17:00-17:20	<b>Preparations for a Potential RAI4E (RSC Chair)</b> <ul style="list-style-type: none"> <li>Preliminary discussion on the new grant cycle.</li> </ul>
11:20-11:30	17:20-17:30	<b>AOB and Closing Remarks, Next Meeting Plans (RSC Chair)</b>

## Annex II: List of Participants

<b>Name</b>	<b>Title</b>	<b>Organization</b>	<b>Role</b>	<b>Day-1</b>	<b>Day-2</b>
Dr. Khampheng Phongluxa	Head of Coordination and Research-Information Management Division	Ministry of Health, Lao PDR	Voting-Member	Yes	Yes
Dr. Preecha Prempreee	Deputy Director General	Ministry of Health, Thailand	Voting-Member	Yes	No
Prof. Maxine Whittaker	CSO Platform Representative	CSO Platform	Voting-Member	Yes	Yes
Dr. Josselyn Neukom	CSO Platform Representative	CSO Platform	Voting-Member	Yes	Yes
Prof. Arjen M. Dondorp (Chair)	Deputy Director, Mahidol Oxford Tropical Medicine Research Unit	Faculty of Tropical Medicine Mahidol University	Voting-Member	Yes	Yes
Dr. Rattanaxy Phetsouvanh (Vice-Chair)	Director General of the Dept of Communicable Disease Control	ASEAN	Voting-Member	Yes	No
Mr. Rikard Elfving	Social Development Specialist ADB	Asian Development Bank	Voting-Member	Yes	No
Dr. Pascal Ringwald	Coordinator, Drug Resistance and Containment, Global Malaria Programme	World Health Organization	Voting-Member	Yes	Yes
Dr. David Sintasath	Regional Malaria Advisor	PMI / USAID	Voting-Member	Yes	Yes
Dr. Megan Counahan	Regional Health Adviser, Australian Embassy, Phnom Penh	Development Policy Division Department of Foreign Affairs and Trade (DFAT)	Voting-Member	Yes	Yes
Dr. Clarisse Veylon-Hervet	N/A	French Embassy	Voting-Member	Yes	Yes
Ms. Amita Chebbi	Senior Director	Asia Pacific Leaders Malaria Alliance (APLMA)	Voting-Member	Yes	Yes
Dr. Huy Rekol	Director, National Centre for Parasitology, Entomology and Malaria Control	Ministry of Health, Cambodia	Non-Voting Member	Yes	Yes
Dr. Viengphone Sengsavath	Deputy Director of CMPE	Ministry of Health, Lao PDR	Non-Voting Member	No	Yes
Dr. Rungrawee Tipmontree on behalf of Dr. Chantana Padungtod	Malaria Programme Manager	Ministry of Health, Thailand	Non-Voting Member	Yes	Yes
Prof. Tran Thanh Duong	Director of NIMPE and National Malaria Program	Ministry of Health, Viet Nam	Non-Voting Member	Yes	Yes
Dr. Xiao Ning	Deputy Director, National Institute of Parasitic Diseases	Chinese Centre for Disease Control and Prevention	Non-Voting Member	Yes	Yes



Dr. Luciano TUSEO	Coordinator, Mekong Malaria Elimination (MME) programme	World Health Organization	Non-Voting Member	Yes	Yes
Mr. Matteo Dembech	Executive Secretary	RSC Secretariat	Non-Voting Member	Yes	Yes
Ms. Izaskun Gaviria	Senior Fund Portfolio Manager, RAI	The Global Fund	Observer	Yes	Yes
Dr. Urban Weber	Head, High Impact Asia unit	The Global Fund	Observer	Yes	No
Ms. Estrella Lasry	Senior Malaria Advisor	The Global Fund	Observer	Yes	Yes
Ms. Anna Sarkissian	Senior Program Officer	The Global Fund	Observer	Yes	Yes
Ms. Rosie Ameyan	Senior Program Officer	The Global Fund	Observer	Yes	Yes
Ms. Sandra Kuzmanovska	Senior Specialist, Public Health and M&E	The Global Fund	Observer	No	Yes
Ms. Doungkamon Oeuvray	N/A	The Global Fund	Observer	Yes	Yes
Dr. Mohamed Farag	Health Products Management Specialist	The Global Fund	Observer	Yes	Yes
Mr. Frederic Suzanne	Programme Support Officer	UNOPS	Observer	Yes	No
Mr. Maysandi Htin Aung	M&E Specialist	UNOPS	Observer	Yes	Yes
Mr. Zaw Win Tun	Public Health Officer	UNOPS	Observer	Yes	Yes
Mr. Frederic Suzanne	Programme Support Officer	UNOPS	Observer	Yes	No
Ms. Yamon Thit	Communications Specialist	UNOPS	Observer	Yes	Yes
Dr. Young Hee	Programme Management Advisor	UNOPS	Observer	No	Yes
Ms. Christine Nyagaya	N/A	UNOPS	Observer	Yes	Yes
Dr. Attila Molnar	Programme Director, RAI PR	UNOPS	Observer	Yes	Yes
Dr. Faisal Mansoor	Head of Programme Unit	UNOPS	Observer	Yes	Yes
Dr. Eisa Hamid	Monitoring and Evaluation Specialist	UNOPS	Observer	Yes	Yes
Mr. Naeem Durrani	Senior Program Coordinator	UNOPS	Observer	Yes	Yes
Dr. Min Min Zin	Monitoring and Evaluation Officer (Malaria)	UNOPS	Observer	Yes	Yes

Dr. Myat Yi LWIN	Programme Management Specialist	UNOPS	Observer	Yes	Yes
Dr. Ioana Badescu	Program Coordinator	UNOPS	Observer	Yes	No
Dr. Tin Me Me Aung	Programme Management Advisor	UNOPS	Observer	Yes	No
Dr. Zaixing Zhang	Medical Officer (MVP)	WHO Cambodia	Observer	Yes	Yes
Dr. Matthew Scott Shortus	Medical Officer (MVP)	WHO Lao PDR	Observer	Yes	Yes
Ms. Giulia Manzoni	STC - Malaria Intensification Response Plan - Project Specialist	WHO MME	Observer	Yes	Yes
Mr. Try Rady	Technical Officer (Database Manager)	WHO MME	Observer	Yes	Yes
Ms. Rita Reyburn	N/A	WHO MME	Observer	Yes	No
Dr. Thapa Badri	Scientist (Malaria Control)	WHO Myanmar	Observer	Yes	Yes
Dr. Tet Toe Tun	National Professional Officer	WHO Myanmar	Observer	Yes	Yes
Dr. San Kyawt Khine	N/A	WHO Myanmar	Observer	Yes	Yes
Dr. Yin Yin Mon	National Professional Officer	WHO Myanmar	Observer	Yes	Yes
Mousumi Rahman	Technical Officer	WHO Myanmar	Observer	No	Yes
Dr. Deyer GOPINATH	Medical Officer (Malaria and Border Health)	WHO Thailand	Observer	Yes	Yes
Dr. Maria Dorina Bustos	Malaria Technical Officer	WHO Thailand	Observer	Yes	Yes
Ms. Kallayanee Laempoo	Programme Associate	WHO Thailand	Observer	No	Yes
Dr. Tran Dong Dai	Technical Officer (Malaria)	WHO Vietnam	Observer	Yes	Yes
Dr. Mya Sapal Ngon	Medical Officer	WHO Vietnam	Observer	Yes	Yes
Dr. James Kelley	Technical Officer for MVP	WHO WPRO	Observer	Yes	Yes
Mr. Jake Acker	Malaria Regional Manager	CHAI	Observer	Yes	Yes
Dr. Yang Hu	Deputy Regional Manager	CHAI	Observer	Yes	Yes
Dr. Julia Dunn	Epidemiologist, Technical Advisor	CHAI	Observer	Yes	Yes

Ms. Warisala Chatuchinda	Project Officer	CSO	Observer	Yes	Yes
Dr. Louis Da Gama	Director, Princess of Africa Foundation South Africa	CSO	Observer	Yes	Yes
Dr. Sok Pun	Platform Focal Person for Cambodia	CSO Cambodia	Observer	Yes	Yes
Dr. Viengkhone Souriyso	Platform Focal Person for Lao PDR	CSO Lao PDR	Observer	Yes	Yes
Dr. Pyae Phyo Htoon	Country Steering Committee Member for Myanmar Nominated by Platform Focal Person for Myanmar	CSO Myanmar	Observer	Yes	Yes
Mr. Shreehari Acharya	CSO Platform coordinator	CSO platform, Regional	Observer	Yes	Yes
Mr. Wasurat Homsud	Platform Focal Person for Thailand	CSO Thailand	Observer	Yes	Yes
Ms. Nguyen Hoang Yen	Platform Focal Person for Vietnam	CSO Vietnam	Observer	No	Yes
Dr. Prayuth Sudathip	Deputy Director of DVBD	Department of Disease Control, Thailand	Observer	Yes	Yes
Ms. Qi Cui	Senior Fund Portfolio Manager	Global Fund	Observer	Yes	No
Dr. Jim Tulloch	IMP Chair	IMP	Observer	Yes	Yes
Dr. Masatoshi Nakamura	Chief Advisor	JICA Malaria Elimination Project in Myanmar	Observer	Yes	Yes
Lieven Vernaeve	Program Manager	Malaria Consortium Cambodia	Observer	No	Yes
Prof. Frank Smithuis	Director	Medical Action Myanmar	Observer	No	Yes
Dr. Naresh Gill	Deputy Director, National Vector Borne Disease Control Programme	Ministry of Health and Family Welfare Government of India	Observer	Yes	No
Dr. Nouannipha Simmalavong	RAI3E Coordination Officer	Ministry of Health, Lao PDR	Observer	Yes	Yes
Dr. Boualam Khamlome	Deputy Director	Ministry of Health, Lao PDR	Observer	Yes	Yes
Prof. Olivo Miotto	Associate Professor, Nuffield Department of Medicine, University of Oxford	MORU	Observer	Yes	Yes
Dr. Siv Sovannaroeth	Chief of Technical Bureau/Malaria Program Manager	National Center for Parasitology, Entomology & Malaria Control	Observer	Yes	Yes

Dr. Nguyen Dinh Nam	RAI3E Coordinator	Ministry of Health Vietnam	Observer	Yes	Yes
Mr. Jan de Jong	LFA Team Leader	PricewaterhouseCoopers	Observer	Yes	Yes
Mr. Harry Gibbs	RSC Secretariat	RSC Secretariat	Observer	Yes	Yes
Ms. Phakny So	RSC Secretariat	RSC Secretariat	Observer	Yes	Yes
Ms. Caitlin Pley	RSC Secretariat	RSC Secretariat	Observer	No	Yes
Dr. Aung Ye Myint	Project Coordinator	Save the Children	Observer	Yes	Yes
Dr. Min Min Thien	Head of Malaria (PR-GFATM)	Save the Children	Observer	No	Yes
Dr. Drew McCracken	N/A	APLMA	Observer	Yes	Yes
Ms. Kieu Thi Mai Huong	Project manager	SCDI	Observer	No	Yes
Dr. Pooja Jain	N/A	APLMA	Observer	No	Yes