MIDTERM PERFORMANCE EVALUATION OF MYANMAR DEFEAT MALARIA ACTIVITY

February 2019

This publication was produced at the request of the United States Agency for International Development. It was prepared independently by Dr. Katia Peterson, Dr. Ohnmar, and Dr. Thu Naing.
Cover Photo: A health worker takes a blood sample for malaria testing. Credit: K. Peterson
The authors’ views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.
ABSTRACT

The Defeat Malaria Activity is a five-year (2016–2021), $32 million award implemented in Myanmar’s Kayin and Rakhine states and Tanintharyi region. University Research Co., LLC, the prime recipient of the award, works to scale up proven malaria control interventions with the American Refugee Committee, Jhpiego, the Duke Global Health Institute, the Myanmar Health Assistant Association, and the Myanmar Nurse and Midwife Association.

The purpose of this midterm evaluation was to assess Defeat Malaria implementation and performance to date and make actionable recommendations for improvements needed to meet the Activity’s intended objectives. The evaluation used a mixed-method approach that relied on in-depth interviews and document reviews.

The evaluation team found that, overall, Defeat Malaria has demonstrated high performance. It achieved nearly 100 percent household coverage of long-lasting insecticidal nets, although utilization remains sub-optimal among high-risk groups such as migrant workers. Defeat Malaria has built and maintained the capacity of village malaria workers/private providers (VMWs/PPs) to undertake case management at the community level and attained 30 percent coverage of the entire population in activity areas. However, most hard-to-reach villages lack a VMW/PP, though they receive services through other approaches, such as mobile teams. Vector-borne disease control surveillance capacity is low among the townships visited for this evaluation, due in part to inadequate technical capacity and insufficient staffing to carry out activities.

The evaluation team has three priority recommendations that must be addressed during the last three years of Defeat Malaria: increase VMW/PP coverage in hard-to-reach villages, develop a VMW/PP exit strategy, and intensify efforts to increase vector-borne disease control capacity at the township level.
ACKNOWLEDGMENTS

The evaluation team would like to thank GH Pro, particularly Crystal Thompson, Haeli Gustafson, Laurie Chamberlain, and Melinda Pavin, for their resolute support throughout the entire evaluation process.

USAID’s Defeat Malaria agreement officer’s representative, Dr. Feliciano Monti, provided technical knowledge and worked tirelessly to ensure the evaluation team could conduct field visits without impediment. The evaluation would not have been possible without his dedication. The evaluation team also appreciated the assistance of Dr. Pyae Phyo Aung and Dr. Nu Khin from the USAID/Myanmar Office of Public Health. Dr. Phyo managed the evaluation and Dr. Khin assisted with logistics in the field.

Staff at the Defeat Malaria headquarters and in the field were gracious and responsive, and made themselves available, often on very short notice, to assist the evaluation team. They were quick to address the team’s requests and answer follow-up questions. Staff at the township level deserves additional praise for ensuring all travel logistics during the team’s field visits and arranging interviews with local stakeholders. It was evident that a lot of time and effort went into preparing for our visit, and we are grateful for all their work. Defeat Malaria Chief of Party Dr. May Aung Lin, Senior Technical Director Dr. Saw Lwin, and all technical staff were courteous, helpful, and generous with their time. We thank them for their support.

The evaluation team would especially like to acknowledge the cooperation of the many people we interviewed. The evaluation would not have been possible without their insights and perspectives. We thank them for taking time from their busy schedules to share their experiences.
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ACRONYMS

ABER  Annual blood examination rate
ACT   Artemisinin-based combination therapy
ARC   American Refugee Committee
BCC   Behavior change communication
BHS   Basic health staff
DHS   Demographic and Health Survey
DOT   Directly observed treatment
EHO   Ethnic health organization
FY    Fiscal year
GH Pro Global Health Program Cycle Improvement Project
GHSC-PSM Global Health Supply Chain-Procurement and Supply Management program
GoM   Government of Myanmar
GP    General practitioner
hsRDT Highly sensitive rapid diagnostic test
ICMV  Integrated community malaria volunteer
IPC   Interpersonal communication
KNU   Karen National Union
LLIN  Long-lasting insecticidal net
M&E   Monitoring and evaluation
MHAA  Myanmar Health Assistants Association
MNMA  Myanmar Nurse and Midwife Association
MoHS  Ministry of Health and Sports
NMCP  National Malaria Control Program
NSP   National Strategic Plan 2016–2020: Intensifying Malaria Control and Accelerating Progress towards Malaria Elimination
Pf    Plasmodium falciparum
PMI   President’s Malaria Initiative
PP    Private provider
Pv    Plasmodium vivax
RDT   Rapid diagnostic test
TMO   Township medical officer
TPR   Test positivity rate
URC   University Research Co., LLC
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>VBDC</td>
<td>Vector Borne Disease Control Program</td>
</tr>
<tr>
<td>VMW</td>
<td>Village malaria worker</td>
</tr>
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<td>WHO</td>
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EXECUTIVE SUMMARY

EVALUATION PURPOSE AND EVALUATION QUESTIONS

The purpose of this midterm evaluation is to assess the implementation and performance of the Defeat Malaria Activity to date, identify key bottlenecks and constraints, and make actionable recommendations for improvements needed to meet the Activity’s four intended objectives.

- **Objective 1:** Achieve and maintain universal coverage of at-risk populations with proven vector control and case management interventions while promoting the testing of new tools and approaches.
- **Objective 2:** Strengthen the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies.
- **Objective 3:** Enhance technical and operational capacity of the National Malaria Control Program (NMCP) and other health service providers at all levels of service provision.
- **Objective 4:** Promote the involvement of communities, private health care providers, private companies, and state-owned enterprises in malaria control and elimination initiatives.

USAID/Myanmar’s Office of Public Health and USAID’s Defeat Malaria agreement officer’s representative, Dr. Feliciano Monti, developed two multi-part evaluation questions to measure performance against each of the objectives and to examine the overall strategic approach to implementation:

1. How has Defeat Malaria achieved the intended results?
   a) The extent to which and how the project has achieved and maintained universal coverage of at-risk populations with proven vector control and case management interventions, while promoting the testing of new tools and approaches.
   b) The extent to which and how the village malaria workers (VMWs) network has contributed to achieving the coverage target.
   c) The extent to which and how the project has strengthened the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies.
   d) The extent to which and how the project has enhanced technical and operational capacity of the NMCP and other health service providers at all levels of service provision.
   e) The approach to and effectiveness of field monitoring and supervision.
   f) The extent to which and how the project has promoted the involvement of communities, private healthcare providers, private companies, and state-owned enterprises in malaria control and elimination initiatives.

2. What factors have facilitated or constrained project performance and how can these factors be addressed?
   a) What measures have been put in place to contribute to or promote sustainability?
   b) Factors that still need to be addressed.
c) The efficiency and effectiveness of the design and project management arrangements and oversight between the prime recipient and sub-partners (and sub-grantees) for achieving project objectives.

d) Given unavoidable political uncertainties, the extent to which and how the project has put in place risk mitigating measures or contingency plans to minimize impact on project implementation.

ACTIVITY BACKGROUND

Significant progress has been made in decreasing the malaria burden in Myanmar. According to the NMCP, there were 530,027 malaria cases in 2011 and 85,019 cases in 2017, an 84 percent reduction. The number of deaths attributed to malaria has significantly decreased over the past two decades, from 5,000 in 1991 to 31 in 2017. Despite an impressive decrease in 2017, Myanmar accounted for 51 percent of all malaria cases among the six countries of the Greater Mekong Subregion.

Based on 2015 data, the NMCP estimates that 286 of Myanmar’s 330 townships are located in malaria-endemic areas, and that approximately 43 percent of the population lives in areas where malaria transmission occurs (7 percent in high-transmission areas, 12 percent in moderate-transmission areas, and 24 percent in low-transmission areas).

Defeat Malaria is a five-year (2016–2021), $32 million award implemented in Rakhine and Kayin states and the Tanintharyi region, which have some of the highest malaria burdens in the country. At the time of the evaluation, the Activity was being implemented in 31 townships. University Research Co., LLC, the prime recipient of the award, works to scale up proven interventions with three international partners, the American Refugee Committee, Jhpiego, and the Duke Global Health Institute, and two national sub-recipient organizations, the Myanmar Health Assistant Association and the Myanmar Nurse and Midwife Association. Defeat Malaria activities include the following:

- Ensuring adequate coverage and distribution of long-lasting insecticidal nets (LLINs), malaria diagnostics, and quality-assured medicines to the beneficiary populations, health services, and VMWs in the targeted areas.

- Strengthening the malaria surveillance system; improving data management capacity at all levels of the health system, from village to central level; and supporting appropriate information technology to facilitate data collection, reporting, and use in the public and private sectors.

- Improving skills and job performance of staff involved in malaria control, particularly on epidemiology, surveillance, entomology, and vector control, through supportive supervision and training at peripheral and national levels, and building the organizational and technical capacity of community-based and ethnic health organizations.

EVALUATION DESIGN, METHODS, AND LIMITATIONS

The evaluation used a mixed-method approach that relied on primary and secondary data. Primary data was gathered through in-depth interviews with Defeat Malaria implementing partners, stakeholders such as the NMCP and the Vector Borne Disease Control Program (VBDC), VMWs and private providers (PPs), and NGOs working in the field of malaria prevention and control. Secondary qualitative and quantitative data were captured via document reviews. The evaluation covers August 2016 to June 30, 2018 (Quarters 1–3).

The evaluation team conducted interviews with 35 key informants in Yangon, Nay Pyi Taw, and field sites in Rakhine state and the Tanintharyi region during the weeks of August 12 and August 24, 2018. USAID/Myanmar selected these sites based on representativeness of Defeat Malaria activities and those of implementing partners, geographical accessibility, environment/weather, and “political accessibility.”
There were some challenges visiting sites. The government of Myanmar restricted travel to certain areas of northern Rakhine affected by the Rohingya crisis. Due to significant flooding in Tanintharyi Township, the evaluation team was unable to visit sites where the American Refugee Committee was working. The sites visited by the evaluation team were a convenience sample; none was in geographically or politically hard-to-reach areas, which limited generalizations of results to other contexts. The team did not visit sites in Kayin due to time constraints and political volatility.

**FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS**

Defeat Malaria has achieved near 100 percent household coverage of LLINs, although LLIN utilization remains sub-optimal among high-risk groups such as migrant workers. Although the Activity is using behavior change communication (BCC) to increase LLIN utilization, evaluation results indicate that current BCC messages or the way they are being communicated may not be effective. Moreover, language barriers significantly hamper BCC in many villages.

Defeat Malaria data show that although VMWs test the greatest number of individuals, most positive cases have been in Rakhine state. VMWs/PPs are consistently testing following Myanmar’s National Treatment Guidelines. There was overwhelming agreement among respondents that VMWs/PPs were essential to ensuring universal coverage, and that they had high capacity to undertake case management.

Some hard-to-reach villages still do not have a VMW/PP. Although Defeat Malaria mobile teams ensure there is no lack of coverage, this approach may not be appropriate for villages with a high malaria burden. Many of these villages also have a large proportion of mobile populations who risk exporting malaria, threatening the success of Defeat Malaria, NMCP, and other organizations.

There is skepticism that NMCP will be able to provide high-quality, frequent supervision to VMWs/PPs after the Activity ends. Although some stakeholders believe NMCP may be able to afford the quarterly allowances of VMWs/PPs (only if its budget is increased) there is agreement that it will not be able to provide monthly supervision or afford travel allowances and per diems to attend quarterly meetings.

VBDC’s ability to undertake surveillance and use surveillance data for decision-making varies across townships. In the townships included in this evaluation, the program’s overall capacity to undertake surveillance is “low.” In part, this can be attributed to inadequate technical capacity and insufficient staffing to carry out activities. Respondents frequently cited this as an area that would require more intensive efforts from Defeat Malaria.

VMWs/PPs and hospitals have begun real-time case reporting in elimination townships. VMWs/PPs and basic health staff began zero reporting in elimination townships in April 2018; this improved significantly after the introduction of state VBDC notification letters.

The success of Defeat Malaria is due in large part to Senior Technical Director Dr. Saw Lwin’s technical leadership. Partners, stakeholders, and staff at other NGOs view him as the greatest champion for malaria elimination. His technical leadership is the Activity’s greatest asset. However, it is concerning that the Activity’s success relies so much on the technical leadership of one person and that no one is being groomed to assume the senior technical director position.

The involvement of private companies in malaria control has yielded promising results and is an area of untapped potential. The involvement of more companies not only increases geographic coverage of activities but also targets the most at-risk populations (i.e., mobile and migrant) for prevention and treatment. Defeat Malaria’s efforts to engage mining companies and companies controlled by ethnic armies are admirable, but there are many other opportunities for engagement.

There are three priority areas to address during the last two years of implementation: increasing VMW/PP coverage in hard-to-reach villages, developing a VMW/PP exit strategy, and intensifying efforts
to increase VBDC capacity. Overall, the evaluation team finds that Defeat Malaria has demonstrated high performance with no significant shortcomings.

RECOMMENDATIONS

The evaluation team considers the first three recommendations to be of high priority, essential to ensuring the success of malaria control and elimination and, by extension, Defeat Malaria itself. The remaining recommendations, although important, are less critical.

1. **Increase VMW/PP coverage in the geographically hard-to-reach areas**

Defeat Malaria must find a way to recruit and supervise volunteers in hard-to-reach villages. Before it can increase coverage, the Activity must determine current levels of coverage by its own volunteers and volunteers from NMCP and other implementing partners. The first step will be to produce an updated and detailed map of volunteer coverage/non-coverage in all villages/communities/worksites at risk of malaria in Kayin and Rakhine states and the Tanintharyi region. This exercise should be done in conjunction with NMCP and other relevant stakeholders. Based on these results, Defeat Malaria should work with these partners to establish community-based VMWs/PPs. Mobile teams should be available as an alternative, but they are a short-term solution, not a substitute for full-time VMWs/PPs. A community-based volunteer should have ownership in ensuring the health of their own community.

Extending coverage to hard-to-reach areas will require abandoning or significantly modifying current approaches to VMW/PP supervision. For example, it is highly unlikely NMCP will continue monthly supervision after Defeat Malaria concludes, so there is no reason for the Activity to feel beholden to that model. Quarterly supervision visits by mobile teams may be a more sustainable model.

2. **Increase and intensify efforts to build VBDC capacity**

As the entire country transitions to malaria elimination, there is increased urgency to build VBDC capacity to undertake the highly technical demands of surveillance and investigation. The inadequate number of VBDC staff is a formidable challenge, but one that is outside of Defeat Malaria’s control. However, the Activity can intensify and increase capacity building to existing staff, who appear to learn best through a hands-on approach. As such, Defeat Malaria should consider extending more frequent and intensive hands-on learning opportunities. This may involve more hands-on experience with Microsoft Access databases, mock foci and outbreak investigations, and using data for decision-making in response to simulated surveillance data.

3. **Develop an exit strategy for VMWs/PPs**

To avoid the mistakes that other organizations made transitioning volunteers to Defeat Malaria (e.g., gaps in volunteer coverage), the evaluation team recommends that an exit strategy be developed and put in place. Defeat Malaria should assume that NMCP will not be able to absorb all the volunteers and should prepare for slow, controlled phase-out. It should work closely with township-level stakeholders to identify alternative means for testing and treatment, and to start preparing village residents well in advance.

4. **Develop a VMW to ICMV transition plan**

In townships where the NMCP is prepared to fund integrated community malaria volunteers, the Activity should collaborate with the Program to develop a formal transition plan for volunteers. Lessons learned from other organizations demonstrate that the absence of a handover strategy and an insufficient transition period can result in gaps in coverage. By its own admission, NMCP is slow to change, so it would be prudent for Defeat Malaria to initiate discussions about a transition strategy.
Moreover, because all VMWs/PPs do not need to be handed over at one time, the Activity should consider a phased transition.

5. **Increase efforts to engage private companies**

Defeat Malaria may want to consider connecting with more companies via umbrella organizations, such as The Union of Myanmar Federation of Chambers of Commerce and Industry, to increase the number of participating private companies.

6. **Increase annual blood examination rates (ABER) for migrants**

Defeat Malaria should consider increased ABER for populations with a large percentage of migrants and mobile populations, such as palm oil plantations.

7. **Revise BCC messaging for LLIN utilization in high risk-populations**

The current approach of increasing interpersonal communication as a way to increase LLIN is not effective or a good use of resources. Given the time remaining for Defeat Malaria, it is not practical to evaluate the effectiveness of each BCC message for each target population. Moreover, despite concerted effort, some messaging simply does not work with certain populations. The evaluation team encourages the Activity to focus efforts on high-risk groups with low rates of LLIN utilization, such as mobile populations and migrant workers.

8. **Expand real-time notification or increase frequency of notification**

The evaluation team is cognizant of the fact knows that real-time notification in non-elimination townships is not realistic. When real-time notification is not feasible (e.g., where there are many malaria cases), Defeat Malaria should consider weekly phone or text notifications to the local midwife and township medical officer.

9. **Knowledge translation to support decision-making**

Defeat Malaria has an abundance of output-level data that, in its current form, does not inform or clarify outcomes. It should strive to answer the larger question of "What does all this data mean?" One way to do this is through knowledge translation, the process of transforming data into information and, ultimately, into knowledge that can be applied for informed decision-making. The Canadian Institute of Health Research defines knowledge transition as “a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system.” (The World Health Organization also uses this definition.) Adopting a knowledge transition framework will help the Activity tell its “story” within a theory of change and help other organizations adopt and scale up its activities.

10. **Continued engagement and advocacy to ethnic health organizations**

The engagement of ethnic health organizations is essential to achieving elimination and ensuring sustainability. The evaluation team recommends that Defeat Malaria continue efforts in this area and support Back Pack Health Worker Team, which works to provide accessible, high-quality primary health care to all ethnic populations in Myanmar.

11. **Build management and strategic planning capacity of sub-grantees to ensure sustainability**

Defeat Malaria senior leadership should continue to increase sub-grantee involvement in the work planning process with a goal of greater autonomy. In addition, the Activity should look for opportunities to involve sub-grantees in strategic planning.
12. Risk mitigation plan

Defeat Malaria, in conjunction with USAID, should develop a risk mitigation plan for the remainder of implementation. Because the Activity works in the politically volatile areas of northern Rakhine state and Kayin state, a risk mitigation plan is warranted.
I. INTRODUCTION

EVALUATION PURPOSE

The purpose of this midterm evaluation is to assess Defeat Malaria Activity implementation and performance to date, identify key bottlenecks and constraints, and make actionable recommendations for improvements needed to meet the Activity’s four intended objectives.

- **Objective 1**: Achieve and maintain universal coverage of at-risk populations with proven vector control and case management interventions while promoting the testing of new tools and approaches.
- **Objective 2**: Strengthen the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies.
- **Objective 3**: Enhance technical and operational capacity of the National Malaria Control Program\(^1\) (NMCP) and other health service providers at all levels of service provision.
- **Objective 4**: Promote the involvement of communities, private health care providers, private companies, and state-owned enterprises in malaria control and elimination initiatives.

EVALUATION QUESTIONS

USAID/Myanmar’s Office of Public Health and USAID’s Defeat Malaria agreement officer’s representative, Dr. Feliciano Monti, developed two multi-part evaluation questions to measure performance against the four objectives and to examine the overall strategic approach to implementation. (See Annex I for the evaluation scope of work.)

1. How has Defeat Malaria achieved the intended results?
   a) The extent to which and how the project has achieved and maintained universal coverage of at-risk populations with proven vector control and case management interventions, while promoting the testing of new tools and approaches.
   b) The extent to which and how the village malaria workers (VMWs) network has contributed to achieving the coverage target.
   c) The extent to which and how the project has strengthened the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies.
   d) The extent to which and how the project has enhanced technical and operational capacity of the NMCP and other health service providers at all levels of service provision.
   e) The approach to and effectiveness of field monitoring and supervision.
   f) The extent to which and how the project has promoted the involvement of communities, private healthcare providers, private companies, and state-owned enterprises in malaria control and elimination initiatives.

2. What factors have facilitated or constrained project performance and how can these factors be

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\(^1\) The NMCP is part of the Vector Bourne Disease Control Program (VBDC), which operates at the state, regional, district, and township levels. Both programs are under the purview of the Ministry of Health and Sports.
a) What measures have been put in place to contribute to or promote sustainability?

b) Factors that still need to be addressed.

c) The efficiency and effectiveness of the design and project management arrangements and oversight between the prime recipient and sub-partners (and sub-grantees) for achieving project objectives.

d) Given unavoidable political uncertainties, the extent to which and how the project has put in place risk mitigating measures or contingency plans to minimize impact on project implementation.
II. PROJECT BACKGROUND

MALARIA BURDEN

Significant progress has been made in decreasing the malaria burden in Myanmar. According to the NMCP (Figure 1), there were 530,027 malaria cases in 2011 and 85,019 cases in 2017, an 84 percent reduction. The number of deaths attributed to malaria has significantly decreased over the past two decades, from 5,000 in 1991 to 31 in 2017. Despite an impressive decrease in 2017, Myanmar accounted for 45 percent of all malaria cases among the six countries of the Greater Mekong Subregion.

Figure 1. Malaria Cases Reported in Myanmar, 2011–2017

GEOGRAPHIC TRANSMISSION

The NMCP estimates that 286 of Myanmar’s 330 townships are located in malaria-endemic areas, and that approximately 43 percent of the population lives in areas where malaria transmission occurs (7 percent in high-transmission areas, 12 percent in moderate-transmission areas, and 24 percent in low-transmission areas), according to the 2015 stratification.

Both the incidence of symptomatic cases, as reported by the public health information system, and the prevalence of asymptomatic infections, as assessed by active case detection carried out at the community level, have shown a significant and rapid decline in several areas where intensive control measures have been implemented in recent years. The resulting epidemiological picture is becoming increasingly heterogeneous, ranging from nearly malaria-free zones where only imported cases are detected to persistent “hot spots” of high transmission (i.e. isolated villages), high-risk population groups, and areas of difficult geography or “political accessibility” where the deployment of control measures and surveillance systems remains a challenge.

2 The number of reported cases is largely drawn from the public sector and does not include those using self-treatment or seeking care in the private sector, which is estimated to be approximately 30 percent of the total. Government health services and international organizations have limited accessibility to several malaria-endemic areas, particularly in the non-state actor areas and those bordering Thailand and China, further contributing to under-reporting.

3 Areas in Myanmar are classified as malaria-free (stratum 1), those with potential transmission (stratum 2), and those with current transmission (stratum 3). Stratum 3 is subdivided into high-transmission (3a), moderate-transmission (3b), and low-transmission (3c) areas.
THE NATIONAL STRATEGIC PLAN

The National Strategic Plan 2016–2020: Intensifying Malaria Control and Accelerating Progress towards Malaria Elimination (NSP) aims to reduce by 2020 the reported incidence of malaria to fewer than one case per 1,000 in all states/regions, including areas where Defeat Malaria is working (Rakhine state, Tanintharyi Region, and Kayin State). It also aims to prevent the emergence of artemisinin-based combination therapy (ACT)-resistant Plasmodium falciparum (Pf), to eliminate Pf malaria by 2025 (in line with the urgent action required against multidrug resistance), and to eliminate all malaria from Myanmar by 2030. The NSP comprises three key interventions: case detection and effective management, disease prevention, and malaria case and entomological surveillance.4

Elimination will not be possible without intensive efforts to decrease transmission in high-burden areas. Malaria transmission remains high along Myanmar’s forested border areas, hard-to-reach “hot spots,” and among migrant and mobile populations. The continued high malaria burden in these areas/populations can be attributed to the following factors:

- A relatively large portion of the population lives in or near forested areas or has occasional exposure to forested areas.
- High-risk mobile and migrant populations have low access to preventive and treatment services.
- Topography and climatic conditions are favorable for transmission of malaria, as is the presence of different species of efficient vectors (e.g., sandflies and mosquitoes).
- Limited information is available for areas controlled by non-state actors, which the NMCP cannot access. Service delivery is further complicated by different languages and cultural beliefs related to health.
- There is an insufficient supply of personal protection tools, such as long-lasting insecticidal nets (LLINs) for high-risk groups, particularly for those working in forests.
- Heavy rains and flooding during the malaria transmission season in most Activity areas can interfere with implementation.

Targeting communities and individuals in high-burden areas/populations is a key priority of the NMCP to first achieve better malaria control and, ultimately, elimination.

DEFEAT MALARIA

The Defeat Malaria Activity is a five-year (2016–2021), $32 million award implemented in Rakhine and Kayin states and the Tanintharyi region, which have some of the highest malaria burdens in the country. At the time of the evaluation, the Activity was being implemented in 31 townships (Table 1). University Research Co., LLC (URC), the prime recipient of the award, works to scale up proven interventions with three international partners, the American Refugee Committee (ARC), Jhpiego, and the Duke Global Health Institute, and two national sub-recipient organizations, the Myanmar Health Assistant Association (MHAA) and the Myanmar Nurse and Midwife Association (MNMA). Jhpiego provides technical assistance on policy-level advocacy, capacity building, and training at different levels. The Duke Global Health Institute supports operational research on highly sensitive rapid diagnostic tests (hsRDTs).

Table 1. Defeat Malaria Coverage as of June 30, 2018

<table>
<thead>
<tr>
<th>State/Region</th>
<th>Townships Covered</th>
<th>Villages Covered</th>
<th>Total Population</th>
<th>Total Covered Population</th>
<th>% Population Covered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanintharyi</td>
<td>10</td>
<td>587</td>
<td>1,408,401</td>
<td>313,711</td>
<td>22.3%</td>
</tr>
<tr>
<td>Northern Rakhine</td>
<td>10</td>
<td>565</td>
<td>1,108,828</td>
<td>439,509</td>
<td>39.6%</td>
</tr>
<tr>
<td>Southern Rakhine</td>
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<td>1,003</td>
<td>740,797</td>
<td>443,218</td>
<td>59.8%</td>
</tr>
<tr>
<td>Kayin</td>
<td>4</td>
<td>190</td>
<td>1,297,935</td>
<td>133,765</td>
<td>10.3%</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>2,345</td>
<td>4,555,961</td>
<td>1,330,203</td>
<td>29.2%</td>
</tr>
</tbody>
</table>

Defeat Malaria activities include:

- Ensuring adequate coverage and distribution of LLINs, malaria diagnostics, and quality-assured medicines to the beneficiary populations, health services, and VMWs in the targeted areas.
- Strengthening the malaria surveillance system; improving data management capacity at all levels of the health system, from village to central level; and supporting appropriate information technology to facilitate data collection, reporting, and use in the public and private sectors.
- Improving skills and job performance of staff involved in malaria control, particularly on epidemiology, surveillance, entomology, and vector control, through supportive supervision and training at peripheral and national levels, and building the organizational and technical capacity of community-based and ethnic health organizations (EHOs).
III. EVALUATION METHODS AND LIMITATIONS

METHODOLOGY

The evaluation used a mixed-method approach relying on primary and secondary data. Primary research data was gathered through in-depth interviews with Defeat Malaria implementing partners; stakeholders such as the NMCP and the Vector Borne Disease Control Program (VBDC); NGOs working in malaria prevention and control; VMWs and private providers (PPs); and USAID staff. Secondary qualitative and quantitative data were captured via document reviews. The evaluation covers the period from August 2016 to June 30, 2018 (Quarters 1–3).

Site and sample selection

The evaluation team conducted interviews with 35 key informants in Yangon, Nay Pyi Taw, and field sites in Rakhine state and the Tanintharyi region during the weeks of August 12 and August 24, 2018. USAID/Myanmar selected these sites based on representativeness of Defeat Malaria activities and those of implementing partners, geographical accessibility, environment/weather, and “political accessibility.”

The team visited Defeat Malaria Activity sites in Toungup, Thandwe, and Ann townships in Rakhine, and Dawei, Yebu, and Kawthaung townships in Tanintharyi region. The team did not visit sites in Kayin due to time constraints and political volatility.

Interviews with Ministry of Health and Sports (MoHS) and NMCP stakeholders were conducted in Nay Pyi Taw the week of August 27. Interviews with implementing partners, United Nations agencies, and NGO stakeholders were conducted in Yangon. Key informants who were not available for an in-person interview were contacted by Skype. Annex II presents a list of organizations and individuals interviewed.

In-depth interviews

The interview guides were semi-structured, which allowed the responses to be structured enough to meet evaluation objectives yet flexible enough to solicit new perspectives. (See Annex III for the interview guides.) Developed by the evaluation team, the guides were consistently revised through an iterative process as data collection proceeded to ensure questions remained relevant and solicited the most useful information. Interview probes and requests for examples were used to best capture how activities were implemented and received at the field level.

All interviews were conducted in person with at least one evaluator and one notetaker. Two interviews were conducted by Skype with respondents who were not in Myanmar at the time of data collection. Interviews were conducted one-on-one or in a group format. Generally, higher-level stakeholders (e.g., government officials) were interviewed individually and partners and NGO stakeholders were interviewed in groups. Group interviews usually occurred with constraints to time and respondent availability. Each interview lasted approximately one hour and was digitally recorded (only when interviewees granted permission.

Document reviews

Qualitative and quantitative data were extracted from background documents provided by USAID, URC, and other Defeat Malaria stakeholders. Key documents included Defeat Malaria work plans and quarterly and annual reports (including sub-grantees); the Activity’s funding notice and standard

5 PPs are health care providers who work in their own private clinic or for a private company (e.g., a palm oil company). They may have a health-related certificate or degree, or not have any type of medical license. Defeat Malaria recruits PPs to serve as malaria volunteers at companies that work with the Activity.

6 Some areas of Myanmar are controlled by ethnic armed organizations, which often restrict or prohibit non-residents from entering.
operating procedures; the Myanmar Demographic and Health Survey (DHS); the NSP; and the Control and Prevention of Malaria Project's final evaluation. See Annex IV for a list of documents reviewed.

**Data analysis**
Data from the in-depth interviews was analyzed using a mix of deductive and inductive thematic analysis. During the deductive analysis coding, interview data were analyzed to identify the key findings for each evaluation question. Next, the inductive analysis coding identified any emerging themes within the context of each key finding. These findings were triangulated with data from other interviews and, when possible, with information from the document reviews. Information extracted from the documents was used to provide background, context, and a triangulation of in-depth interviews.

**Ethical considerations and human subject protection**
Prior to each interview, the interviewer read an informed consent script aloud (in English or Burmese) and requested oral consent before proceeding. The evaluation team stressed confidentiality and strove to maintain anonymity. If there was any chance that a person’s identity could be determined from the information they provided, their responses were heavily paraphrased or aggregated with other responses. Separate permission was sought to record interviews for notetaking purposes. Interview notes and recordings were stored on a password-protected cloud drive and were accessible to only evaluation team members and certain GH Pro staff.

**LIMITATIONS**
There were challenges visiting sites in Rakhine and the Tanintharyi region, but this did not affect findings. The Government of Myanmar (GoM) restricted travel to certain areas of northern Rakhine affected by the Rohingya crisis; however, Defeat Malaria activities in those areas had been suspended since August 25, 2017. In April 2018, the GoM allowed MHAA to distribute commodities such as LLINs, rapid diagnostic tests (RDTs), and ACTs through the public health system (i.e., Rural Health Centers) over a two-week period. Currently, the GoM permits quarterly distribution of commodities—though only through the Rural Health Centers—but prohibits VMWs/PPs from conducting supervision visits. Given these restrictions, townships in northern Rakhine were not considered in the evaluation.

Flooding prevented the evaluation team from visiting sites where ARC was working in Tanintharyi Township. Instead, a member of the evaluation team visited Kawthaung in southern Tanintharyi region.

The sites visited were a convenience-based sample and likely not representative of more geographically and politically hard-to-reach villages. The evaluation team interviewed VMWs easily accessible by the main road and who lived in villages not affected by conflict. These volunteers had reliable and continuous access to Defeat Malaria resources and support. The evaluation team did not visit VMWs in geographically and politically hard-to-reach villages, which limits the generalization of the findings to those contexts.

As noted above, the team did not visit Kayin. The Karen National Union (KNU) governs large areas of Kayin, also known as “Karen State,” and does not recognize the GoM. Its military, the Karen National Liberation Army, provides security for the areas under the Union’s control. The KNU significantly restricts entry into its borders and prohibits most local and foreign NGOs from operating in its territory. The KNU has its own system of social services, including for health care. Given the unique context (i.e., that Defeat Malaria operates in Kayin), the evaluation team urges caution when making generalizations from findings from Rakhine state and the Tanintharyi region to Kayin State.
IV. FINDINGS

EVALUATION QUESTION 1

How has Defeat Malaria achieved the intended results?

Evaluation Question 1a: What is the extent to which and how has the project achieved and maintained universal coverage of at-risk populations with proven vector control and case management interventions, while promoting the testing of new tools and approaches?

A core component of Defeat Malaria includes LLIN distribution, increasing LLIN usage, and interpersonal communication (IPC) related to malaria prevention and control. The Activity is testing new tools, such as hsRDT, a “malaria case classification calculator and appropriate timing for response for Pf and Pv” tool, and forest-goer kits. It is also testing new approaches such as real-time reporting.

Distribution of LLINs

Defeat Malaria distributes LLINs and measures LLIN coverage according to NMCP policy, which is based on World Health Organization (WHO) and Global Fund recommendations. Target household coverage is set at one LLIN per 1.8 people, with mass distribution at the village level every three years. NMCP allows continuous distribution of LLINs to high-risk groups such as forest-goers, pregnant women, mobile and migrant populations (e.g., seasonal plantation workers), and people who live and/or work in high endemicity areas (stratum 3a and 3b townships). NMCP does not permit continuous distribution at the village level and allows “top-ups” only in certain circumstances, such as flooding. However, it will not allow top-ups within 1.5 years of distribution, even if coverage is inadequate.

Defeat Malaria receives LLINs via USAID’s Global Health Supply Chain-Procurement and Supply Management program (GHSC-PSM), procured on behalf of the President’s Malaria Initiative (PMI). Between August 2016 and August 2018, Defeat Malaria distributed approximately 181,000 LLINs in 730 villages, 91 worksites, and 197 Rural Health Centers, covering approximately 350,000 people.

LLIN household coverage in villages at the time of distribution routinely reaches 100 percent. Defeat Malaria monitors LLIN coverage using a lot quality assurance system sampling approach. Villages classified as having inadequate coverage are included for top-up distribution. Defeat Malaria’s own surveillance data of LLIN ownership six months after distribution in Sa Htone Village in Rakhine state’s Toungup Township indicates ownership dropped significantly. At the time of distribution, 100 percent of households had adequate coverage (<2 person/net); after six months, 77 percent of households reported having adequate coverage, but only 64 percent could show the net to the data collector. Furthermore, only 57 percent of households had a net with no holes, tears, or dust. Defeat Malaria personnel confirmed that the results from Sa Htone were not unusual, adding that ensuring net ownership after distribution was a constant challenge.

Some reasons for decreased ownership include new village residents not having an LLIN; returned migrants not having a net; nets being given away as gifts; a household member departing the village with the LLIN, leaving the household uncovered; and nets getting lost during travel. Defeat Malaria staff are very knowledgeable about the local context; although this knowledge was essential for understanding the reasons net ownership declined over the six-month period after distribution, none of those reasons was formally documented. Without documentation of important lessons learned and the context in

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7 Forest-goers work in a forest, usually cutting timber.
8 “Adequate coverage” exists if ≥ 15 of 21 interviewed households own an adequate number of LLINs. Even though NMCP guidelines state that adequate coverage is approximately 2 people/net, 1 LLIN for 2.5 people can also be considered adequate if there are children under 5, as they usually sleep with their parents.
which they were learned, all of that important knowledge will depart with the staff member if they stop working with the Activity.

**LLIN usage**

The overall level of knowledge about the importance of LLINs and how to use them is relatively good in Defeat Malaria implementation sites. This is largely attributable to behavior change communication (BCC) VMWs deliver through IPC while they test people for malaria. Though many people know that sleeping under an LLIN can prevent malaria, actual net utilization is low in some communities and among certain high-risk populations. Mobile and migrant workers, for example, have low utilization due to the nature of their jobs and shelter, and forest-goers work at night, so sleeping under a net is not practical and in many cases they have no way to hang a net.

The percentage of those who slept under an LLIN the previous night ranged from 45 to 80 percent in Fiscal Year (FY) 2017. Among high-risk populations, the percentage ranged from 0 to 62 percent. (It should be noted that 10–32 percent of people sleep under an ordinary bed net not treated with insecticide.) Utilization data was reported in the Activity’s 2017 annual report, but no explanation was given for why utilization was so low. When the evaluation team asked VMWs/PPs what they had observed, their insightful answers included that people preferred softer fabric (some nets are coarser than others) or preferred to sleep under a net made of CYC fabric because it can keep out sandflies (LLINs cannot), and that sleeping under an LLIN is hot. Defeat Malaria had not documented any similar information, or at least not documented for a wider audience. The Activity’s Year 3 work plan calls for evaluating and revising BCC messages and materials.

**IPC for behavior change**

Defeat Malaria has reached more than 100,000 people with IPC messaging about malaria prevention and treatment. VMWs/PPs attend two-day BCC training, which includes communication and listening skills, and deliver messaging during testing and case-finding activities. BCC knowledge and skills are reinforced during Defeat Malaria supervision visits. The team was able to observe only one VMW delivering IPC after they had been trained on BCC. Although Defeat Malaria reports on the number of IPC contacts, there is no information on the effectiveness of IPC as it relates to behavioral outcomes such as dose response between exposure and recall and message recall.

Defeat Malaria staff and VMWs reported that language barriers were a significant challenge, especially for IPC. For example, Rakhine Township has a large population of Chin who do not speak Burmese, but there are no Chin VMWs, and the Mon in Kayin and Tanintharyi do not speak Burmese and there are no Mon-speaking VMWs. Staff report that recruiting VMWs from specific ethnic groups is a challenge because many cannot meet basic qualification standards, such as the ability to read and write.

**Case management**

Since the end of the first quarter of Defeat Malaria implementation in October 2016, VMWs found 65 percent of all malaria cases. The majority of positive cases were found in northern Rakhine, followed closely by southern Rakhine. Tables 2 and 3 summarize case finding and management from June 2016 to August 2018.

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9 A fabric with a tight weave that is not treated with insecticide.
Table 2. Summary of Case Finding and Management by Different Case Detection Agents (August 2016–June 2018)

<table>
<thead>
<tr>
<th>Approach</th>
<th>Tested</th>
<th>Total Positive</th>
<th>Pf</th>
<th>Pv*</th>
<th>Mix</th>
<th>TPR † %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile teams</td>
<td>60,012</td>
<td>326</td>
<td>242</td>
<td>83</td>
<td>1</td>
<td>0.54%</td>
</tr>
<tr>
<td>VMWs</td>
<td>165,405</td>
<td>3,979</td>
<td>2,278</td>
<td>1,601</td>
<td>100</td>
<td>2.41%</td>
</tr>
<tr>
<td>PPs</td>
<td>20,369</td>
<td>557</td>
<td>338</td>
<td>208</td>
<td>11</td>
<td>2.73%</td>
</tr>
<tr>
<td>General practitioners (private practice)¹⁰</td>
<td>16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>NMCP (collaborative activity in elimination townships¹¹ only)</td>
<td>8,255¹²</td>
<td>66</td>
<td>51</td>
<td>13</td>
<td>2</td>
<td>0.80%</td>
</tr>
<tr>
<td>Total</td>
<td>254,057</td>
<td>4,928</td>
<td>2,909</td>
<td>1,905</td>
<td>114</td>
<td>1.94%</td>
</tr>
</tbody>
</table>

*Pv=Plasmodium vivax (malaria)
†TPR=test positivity rate

Table 3. State/Region Summary of Case Finding and Management (August 2016–June 2018)

<table>
<thead>
<tr>
<th>State / Region</th>
<th>Tested</th>
<th>Total Positive</th>
<th>Pf</th>
<th>Pv</th>
<th>Mix</th>
<th>TPR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanintharyi region</td>
<td>81,739</td>
<td>979</td>
<td>272</td>
<td>698</td>
<td>9</td>
<td>1.20%</td>
</tr>
<tr>
<td>S. Rakhine state</td>
<td>81,337</td>
<td>1,476</td>
<td>1,306</td>
<td>157</td>
<td>13</td>
<td>1.81%</td>
</tr>
<tr>
<td>N. Rakhine state</td>
<td>69,583</td>
<td>1,927</td>
<td>1,224</td>
<td>643</td>
<td>60</td>
<td>2.77%</td>
</tr>
<tr>
<td>Kayin state</td>
<td>21,398</td>
<td>546</td>
<td>107</td>
<td>407</td>
<td>32</td>
<td>2.55%</td>
</tr>
<tr>
<td>Total</td>
<td>254,057</td>
<td>4,928</td>
<td>2,909</td>
<td>1,905</td>
<td>114</td>
<td>1.94%</td>
</tr>
</tbody>
</table>

NMCP—and by extension Defeat Malaria—have emphasized early testing and treatment. VMWs/PPs interviewed did not indicate that the Activity was not emphasizing early testing and treatment. Some VMWs reported that some villagers attempted to treat their fever before seeking testing, but the number doing so had significantly decreased. One VMW said she stressed the importance of early testing and treatment during IPC, and that this was effective in decreasing delayed testing. One villager the evaluation team spoke with said the VMW regularly stressed the importance of early testing and that he heeded that advice. Previously, he tried traditional medicine (tea) to treat his fever, but now he knows that ACTs are safe and effective.

As part of case management, VMWs/PPs advise patients to stay under LLINs for three days to cut the chain of transmission during the treatment period. If a person with malaria shares an LLIN or does not have an LLIN, the VMW/PP gives them a new one; if there is a shortage of LLINs, the VMW/PP borrows a net from a nearby village. However, VMWs/PPs interviewed said it was not realistic to recommend staying under a net during treatment and that this approach had not been successful. One villager said he understood the importance of staying under a net but could not afford to stop working for three days. A PP at a private company shared a similar experience, saying workers feared lost wages and/or supervisor disapproval.

¹⁰ Elimination townships only.
¹¹ Toungup, Ramree, and Munaung.
¹² Includes number tested by basic health staff, hospitals, and the Defense Medical Services.
In one village with persistent malaria driven by forest-goers, the Activity requested the VMW to maintain a list of workers to ensure they were tested before they went into the forest (and to identify forest-goers who should receive insect repellant to help prevent malaria). The VMW said this was not effective because forest-goers or migrants did not want to get tested when they did not have a fever. The results of this approach have been mixed, with only a few forest-goers agreeing to be tested.

VMWs/PPs are consistently treating malaria according to National Treatment Guidelines. Defeat Malaria reports indicate that when deviations from the Guidelines do occur, they are minor and have no adverse outcomes. The Activity is implementing directly observed treatment (DOT) to prevent artemisinin resistance and prevent onward transmission. DOT is conducted according to standard operating procedures approved by PMI. VMWs/PPs perform a three-day DOT regimen for ACT in uncomplicated Pf malaria. Defeat Malaria has also commenced DOT for primaquine in the treatment of Pv malaria (once a week for eight weeks).

VMWs/PPs demonstrated capacity to conduct DOT, but a significant proportion of malaria cases did not meet the inclusion criteria for DOT (e.g., four of 12 cases reported in June 2018 in Kawthaung Township). There are four inclusion criteria: the case must be uncomplicated; a VMW must be available and capable of administering DOT; the VMW and patient must agree on the DOT schedule; and the patient (or guardian) must be willing and able to report incomplete doses. It should be noted that the NMCP does not recommend DOT except “in the final stages of elimination when the number of cases fall to a point at which DOT become manageable.”

Defeat Malaria is supporting NMCP’s approach to ensuring the sustainability of VMWs through an integrated community malaria volunteer (ICMV) strategy. Practicing VMWs will be trained as ICMVs, expanding their role from malaria testing and treatment to testing and referring for other communicable diseases such as tuberculosis, HIV, dengue hemorrhagic fever, filariasis, and leprosy. Defeat Malaria, through activities led by Jhpiego, is supporting NMCP with a “Training of ICMV Trainers,” due to conclude at the end of 2018.

**New tools and approaches**

One component of Objective 1 is to promote the testing of new tools and approaches in vector control and case management. Defeat Malaria has developed/adopted four tools and approaches:

- **Malaria case classification calculator and appropriate timing for response for Pf and Pv:** In elimination townships, all positive cases of malaria must be classified as either locally contracted or imported. Classification is made based on the incubation period, travel history (i.e., local or imported), and date of onset of fever, and informs the appropriate intervention within a specific time. To ensure quick, accurate classification and timely response, Defeat Malaria’s Senior Technical Director Dr. Saw Lwin and Monitoring and Evaluation (M&E) Coordinator Dr. Saw Naung Naung developed the “Malaria case classification calculator and appropriate timing for response for Pf and Pv” tool for VBDC and Defeat Malaria staff in elimination townships to aid classification during case-investigation. One township medical officer (TMO) said the tool was very helpful and asked the Activity to send more. NGOs working in malaria control also requested the tool, which is now being adapted as a mobile phone application. (See the tool in Annex VI.)

- **Real-time reporting:** Defeat Malaria has introduced real-time malaria case reporting for VMWs/PPs by phone to the Activity’s township coordinators. Notification is followed by case investigation, foci investigation, and foci response in collaboration with VBDC. Real-time reporting ensures cases are followed up sooner for treatment (decreasing loss to follow-up) and cuts the chain of transmission. TMOs and VBDC staff in elimination townships told the evaluation team that real-time reporting was satisfactory. Notably, one respondent in a non-elimination township that does not require real-time reporting said Defeat Malaria should implement real-time reporting in areas at risk of an outbreak, such
as after flooding. “We are an impending outbreak township,” they explained. “URC should do real-time reporting to the township health department and inform BHS [basic health staff] immediately if they found any positive cases so there can be a quick response.”

**hsRDTs:** The purpose of hsRDTs is to detect lower levels of parasitemia in low-transmission settings. URC and Duke Global Health Institute are conducting operational research in Ann Township to compare the performance of an hsRDT (SD Bioline) with conventional RDT. Using polymerase chain reaction confirmatory testing, the “gold standard” for testing, their research is designed to determine if hsRDTs can be used to accelerate efforts to achieve elimination in low-transmission areas. At the time of the evaluation, confirmatory PCR testing was still underway at Duke University in Durham, North Carolina, with results expected in November 2018.

**Forest-goer kit for malaria prevention:** Preventing malaria in forest-goers is a priority because they can import malaria back to receptive villages. The kits include one LLIN, mosquito repellent, two long-sleeve shirts, printed BCC materials, a flashlight, and a backpack. In FY 2017, approximately 500 kits were distributed to three villages near high-transmission forested areas in Dawei Township in Tanintharyi region. An additional 480 kits were distributed to four other villages in Tanintharyi region and two villages in Kayin state. At the time of the evaluation, Defeat Malaria was analyzing data from a utilization and acceptability survey conducted six months after distribution, and preliminary results indicated that the kit was well-received. One forest-goer told the evaluation team that he liked the repellent because it kept both mosquitoes and sandflies away, and another said he liked the long-sleeve shirts because they kept sandflies from biting.

**Evaluation Question 1b: What is the extent to which and how has the VMWs network contributed to achieving the coverage target?**

**VMW/PP Capacity**

VMWs tested the greatest number of people under Defeat Malaria (Table 4). Although PPs, most of whom are volunteers at private companies, tested fewer patients, their TPRs are comparable to VMWs’ (Table 5). There are several reasons for this. First, because PPs tested fewer people (i.e., a smaller denominator) than VMWs, even a small increase in positive cases can result in a high TPR. Second, a PP may work in an area with high malaria transmission and/or where the population may be more vulnerable to malaria (e.g., migrants). Third, the location the PP services may have high malaria endemicity. As many PPs are volunteers at worksites in malaria-endemic areas with large high-risk populations, it is reasonable to assume that their high TPR is not due only to a smaller test population.

**Table 4. VMW Testing and TPR (August 2016–June 2018)**

<table>
<thead>
<tr>
<th>State / Region</th>
<th>Number Tested</th>
<th>Number Positive</th>
<th>TPR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanintharyi region</td>
<td>40,003</td>
<td>726</td>
<td>1.8</td>
</tr>
<tr>
<td>S. Rakhine state</td>
<td>49,115</td>
<td>973</td>
<td>2.0</td>
</tr>
<tr>
<td>N. Rakhine state</td>
<td>59,600</td>
<td>1796</td>
<td>3.0</td>
</tr>
<tr>
<td>Kayin state</td>
<td>16,687</td>
<td>484</td>
<td>2.9</td>
</tr>
<tr>
<td>TOTAL</td>
<td>156,405</td>
<td>3979</td>
<td>2.4</td>
</tr>
</tbody>
</table>

13 The Asia Pacific Health Observatory defines BHS as “health staff deployed in the peripheral part of the health system (townships and below) to reach more of the population. They are mostly made up of, but not limited to, Health Assistant, Lady Health Visitor, Midwife and Public Health Supervisors.”
Table 5. PP Testing and TPR (August 2016–June 2018)

<table>
<thead>
<tr>
<th>State / Region</th>
<th>Number Tested</th>
<th>Number Positive</th>
<th>TPR %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanintharyi region</td>
<td>8,860</td>
<td>171</td>
<td>1.9</td>
</tr>
<tr>
<td>S. Rakhine state</td>
<td>6,809</td>
<td>292</td>
<td>4.3</td>
</tr>
<tr>
<td>N. Rakhine state</td>
<td>4,258</td>
<td>42</td>
<td>1.0</td>
</tr>
<tr>
<td>Kayin state</td>
<td>441</td>
<td>52</td>
<td>11.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>20,368</strong></td>
<td><strong>557</strong></td>
<td><strong>2.7</strong></td>
</tr>
</tbody>
</table>

NMCP, VBDC, and TMO respondents with pertinent knowledge rated VMW/PP capacity very high. On average, VMWs/PPs routinely treat according to the National Treatment Guidelines more than 95 percent of the time. Deviations from the Guidelines are minor, usually restricted to how VMWs refer patients to hospitals. Every respondent stated unequivocally that malaria prevention and control would not be possible without VMWs/PPs; two respondents went a step further, saying malaria elimination would not be possible without VMWs/PPs. These opinions are not unfounded. The reality is that the MoHS does not have enough community-level volunteers (e.g., community health workers) to conduct testing and treatment on the same scale as VMWs/PPs.

The VMWs/PPs the evaluation team interviewed expressed dedication to their work and were motivated by seeing the positive impact they had on the health of their villages. One VMW said he was motivated to become a volunteer after suffering from a severe case of malaria as a child and had to drop out of school. VMWs receive quarterly incentives (50,000 kyats) in addition to their travel allowance and travel per diems (9,000 kyats). One interviewee thought VMWs who treated more cases should receive additional compensation for their time; she thought it was unfair that a VMW who lived in a village without a case of malaria in more than a year or that did not have a population of forest-goers to monitor should receive the same incentive as a VMW who had to work much harder. The evaluation team observed that VMWs enjoyed a slightly elevated social status in villages because residents viewed them as partially responsible for ensuring the health of the community. This elevated social status functions as additional incentive.

**VMW/PP coverage**

As of June 2018, Defeat Malaria covered approximately 30 percent of the population in its implementation areas. Villages not covered either do not have a VMW or are covered by a volunteer from another implementing partner. In 2017, the Activity led a mapping study of implementing partner volunteer coverage of all villages in Rakhine and Kayin states and Tanintharyi region to identify villages without coverage and villages with overlap. Implementing partners included NCMP, NGOs, and Defeat Malaria itself. The results indicated that 24 percent of villages in Southern Rakhine, 17 percent in Northern Rakhine, 20 percent in Kayin, and 31 percent in Tanintharyi region were not covered by a VMW. There was volunteer overlap in 1 percent of villages in Rakhine, 25 percent in Tanintharyi region, and 15 percent in Kayin. The results also revealed wide variation in coverage gaps within each state/region. For example, in Rakhine, 47 and 40 percent of villages in Kyaukpyu and Sittwe, respectively, did not have volunteer coverage. When evaluating coverage based on the percentage of the population covered, villages in Gwa Township had the greatest proportion without volunteer coverage (35

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14 The TPR should be interpreted with caution due to the very small number of people tested.
15 Munaung Township had the greatest percentage of villages lacking volunteer coverage (72 percent); however, there was only one case of malaria in 2018. Activities in Munaung focus on surveillance to detect imported cases.
percent), while Minbya, Mrauk-U, and Ponnagyun had less than a 10 percent gap in coverage (village and population level).

It is important to note that the gap in coverage is somewhat inflated because some villages should have been excluded from the calculation because they would not have been eligible for a volunteer. A village may be ineligible due to any of the following reasons:

- It has very few households (i.e., a VMW is not practical or cost-effective).
- It is unknown to the MoHS or local authorities.
- It has been abandoned due to conflict.
- It is inaccessible for security reasons or due to military secured zones.
- It is covered by a VMW in a neighboring village.
- It is close to a town classified as an urban ward by the local government.
- It has worksites with temporary workers.

The inclusion of ineligible villages may have inflated the gap in coverage, but not enough to invalidate the overall results. Generally, NMCP, local VBDC staff, and other organizations said the mapping study results were “very helpful.” Defeat Malaria staff in Rakhine and Tanintharyi region who saw the results said they took measures in 2018 to decrease overlap, while local-level staff reported they were working to further address the issue in a small number of villages that still experienced overlap.

Villages that do not have a VMW/PP still receive services from Defeat Malaria mobile teams, including LLIN distribution, case management, and BCC activities. In this sense, no villages go without services, even when there is not a VMW/PP. Coverage by a mobile team may not always be appropriate, as the purpose of an activity largely dictates the speed at which it must be implemented to be successful. For example, the success of BCC messaging is not affected by a delay of a few days or even weeks, so a mobile team approach would be satisfactory. However, the prevention of onward transmission is heavily dependent on immediate testing and treatment, so a delay of even a few days may have an impact.

The evaluation team knows it is not practical, logistically and financially, to establish a VMW/PP in every village (e.g., if a village meets any of the ineligibility criteria listed above). However, this “practicality argument” loses merit for hard-to-reach villages with a high burden of malaria, as they cannot afford to be without a volunteer and a mobile team approach is not feasible. These villages require a full-time VMW/PP who can implement prevention activities and quickly identify and treat cases. A mobile team cannot respond in the time that a village-based volunteer can. Defeat Malaria must find a way to ensure coverage, even at the expense of volunteer coverage in low-burden and/or easy-to-access villages.

Several geographically hard-to-reach, high-malaria burden villages not under Defeat Malaria are not covered by a volunteer from NMCP or another organization. For example, the Boke Chaung area, covered by the Sa Khan Maw Regional Health Center in northern Ann Township in Rakhine state, has 18 villages in its catchment area. Defeat Malaria supports only two of these, meaning 16 villages are not covered by a volunteer from any organization.¹⁶ A majority of the residents in these villages belong to ethnic minority groups with very little or no education, which means they are ineligible to serve as VMWs. The villages are not accessible at all in the rainy season and only on foot during the dry season. BHS midwives reported a high malaria burden in the villages, but said they could not travel there only for malaria prevention and treatment. During their routine visits, if time allows, they will offer malaria prevention messages and treatment. Moreover, several midwives stated that language barriers were a

¹⁶ Defeat Malaria works only in areas permitted by NMCP. NMCP allowed the Activity to work in only two villages in the Boke Chaung area.
significant barrier to BCC messaging in these villages, compounding challenges associated with very low education and literacy rates.

A high-level United Nations stakeholder made it clear that the lack of coverage of hard-to-reach villages is a challenge for the entire country, not only Defeat Malaria:

“In each region, focus should be made on the townships that need the most assistance. For example, Pa Let Wa Township in Chin State has so many malaria cases and more than 300 villages in remote settings. For some villages, you can only get there by boat or by walking. That is the sort of setting we are talking about. We really need to invest and focus on townships like Pa Let Wa and the approach will need to be a little bit different from other townships. Local needs are different. That’s sort of prioritization that should be led by the National Malaria Control Program. All funding agencies should invest in hard to reach villages.”

At the time of the evaluation, NMCP did not have a formal strategy for volunteer coverage in hard-to-reach villages. However, in lieu of a VMW system and at the request of NMCP, Defeat Malaria dispatches four or five mobile teams to some villages three to four times a year to conduct testing, treatment, messaging, and, when appropriate, to distribute LLINs.

**Evaluation Question 1c: What is the extent to which and how has the project strengthened the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies?**

**Evaluation Question 1d: What is the extent to which and how has the project enhanced technical and operational capacity of the NMCP and other health service providers at all levels of service provision?**

We discuss Questions 1c and 1d together because the malaria surveillance systems are under the purview of NMCP and VBDC.

The capacity of VBDC to undertake surveillance and use surveillance data for decision-making was a topic of much discussion. Many respondents felt this needed the most improvement and attention from Defeat Malaria before implementation ends. Other factors related to surveillance included the introduction of real-time case reporting, implementing a zero reporting policy for VMWs/PPs in elimination townships, and the use surveillance data for decision-making.

**Real-time malaria case reporting system**

In elimination townships, VMWs/PPs report in real time to Defeat Malaria field team coordinators at the township level. Health care providers in private practice have also recently begun reporting to these coordinators in real time. Defeat Malaria and/or VBDC follows up to investigate each case. A number of BHS in non-elimination townships said they would like the Activity to notify them (in real time) when a VMW found a case of malaria. Midwives interviewed in a group interview told the evaluation team that they could be more observant of their patient population if they knew there was a case in their catchment area.

In April 2018, Defeat Malaria began working with public hospitals and general practitioners (GPs) in private clinics in the three elimination townships to encourage real-time reporting. Staff ambivalence was the greatest challenge, but the Activity held education sessions to build awareness about the importance of real-time reporting. Defeat Malaria staff said reporting increased after these sessions.

In non-elimination townships, where real-time reporting is not required, some TMOs indicated that they would like to be notified of cases more than once a month, which is the current practice. For example,
when there is a risk of an outbreak, such as after flooding, some TMOs said that real-time reporting from Defeat Malaria would allow closer tracking of cases and aggressive foci investigation. Most of these TMOs said a phone call would be sufficient.

**No zero reporting by VMWs and BHS**

In elimination townships, the Activity has initiated a zero reporting policy among its volunteers and NMCP volunteers. It monitors all volunteers to ensure an annual blood examination rate (ABER) greater than 10 percent and that 100 percent complete monthly reports. If a volunteer does not meet these targets, Defeat Malaria sends an official letter to the state assistant director (i.e., state-level VBDC), copying the local TMO (see Annex VII), listing which villages/worksites have not reported. Though the letters are supposed to motivate volunteers to meet the ABER and reporting targets, the approach does appear to be working. For example, in January 2018, respectively, 32 percent, 29 percent, and 52 percent of reporting units in Toungup, Ramree, and Munaung did not report (including zero-tested villages/worksites). In June, this had decreased to 12 percent, 8 percent, and 1 percent, respectively.

**Use of the surveillance data in decision-making**

The capacity of VBDC staff to monitor and observe monthly surveillance data for trends has increased, but most respondents with knowledge of VBDC capacity said there was room for improvement. Their capacity to undertake surveillance and investigation varies greatly. In some townships, VBDC reports it can conduct routine surveillance and investigation as long as there are not a lot of cases (i.e., a non-outbreak setting). In other locations, it is common for VBDC to be unable to conduct basic surveillance or investigation without significant Defeat Malaria support because it has low capacity or does not have a malaria supervisor and/or enough staff. Though the Activity is working with VBDC staff to increase their capacity to undertake surveillance and interpret data, low education among malaria supervisors is a formidable challenge. As one TMO explained,

> “Malaria assistants who are non-officer level are very loyal and hardworking to the program and have sense of ownership, but their educational background [is low], i.e. most of them have not passed matriculation. When approaching to elimination, surveillance is more pronounced. To come up with that kind of advanced surveillance, their capacity, i.e. education background, is a challenge, an issue. For example, we are currently developing data system, access database, but training and retraining them is very challenging.”

When respondents were asked for recommendations to improve Defeat Malaria, nearly all said that more effort should be made to increase the capacity of VBDC staff. One interviewee said “more funding flexibility and reprogramming for increasing the capacity of VBDC to undertake surveillance” was the “key message I want to convey to USAID/PMI.” An example of greater funding flexibility would be to using Defeat Malaria funds to support VBDC travel expenses to the hardest-to-reach areas to conduct surveillance and case and foci investigation. An example of increasing capacity includes building the skills of VBDC to interpret surveillance data to identify unusual trends that may be indicative of an outbreak. The evaluation team observed that the concerns about VBDC capacity were more pronounced in elimination townships, where surveillance and investigation requirements are more technical and require more resources.

The evaluation team was able to deduce that VBDC staff who said they had increased their capacity to collect and use surveillance data benefitted from Defeat Malaria mentorship, hands-on training, and strong interpersonal working relationships. Formal training did not necessarily lead to increased capacity.
Evaluation Question 1e: What is the approach to and effectiveness of field monitoring and supervision?

The high capacity of VMWs/PPs and, in turn, their effectiveness is due in large part to Defeat Malaria’s approach to the supervision of volunteers.

Monitoring and supervision of VMWs/PPs

Defeat Malaria staff hold monthly supervisory meetings for VMWs for training/refresher training on testing, treatment, and IPC. Staff also replenishes RDTs and ACTs to prevent stockouts and monitor for expiration dates. If a VMW/PP misses two consecutive meetings, a Defeat Malaria supervisor visits them to discuss their interest in continuing as a volunteer. Supervisors also visit VMWs/PPs in villages two times a year. It is difficult to objectively measure the effectiveness of the Activity’s approach to supervision because there is not a counterfactual.

A majority of NMCP staff interviewed and respondents with knowledge of NMCP believed the Program would not be able to continue monthly supervision, travel allowances, and per diems without continued support from Defeat Malaria. Opinion was mixed on whether NMCP could even afford to provide quarterly incentives to VMWs/PPs after closeout. One NMCP respondent said the Program would probably not be able to afford quarterly incentives but could provide RDTs and ACTs; another felt that NMCP could absorb VMWs/PPs and provide their quarterly allowances because the MoHS budget had been doubled. However, there was no indication that this increase would result in greater funding for NMCP, especially because malaria cases are decreasing. No respondent believed NMCP could offer monthly supervision; if it could, respondents believed it would provide it to its own volunteers.

Defeat Malaria leadership

Many Defeat Malaria staff, MoHS and NMCP stakeholders, and organizations implementing malaria control programs attributed much of the Activity’s success to Senior Technical Director Dr. Saw Lwin’s technical leadership and his championing of malaria elimination. Under his leadership in three pilot elimination townships (Ramree, Munaung, and Toungup), BHS were trained on malaria elimination, senior VBDC staff members received a five-day “Master Mentor Training,” and all VBDC staff in Defeat Malaria states/regions received a one-day “General Trainers Training.” Moreover, the Activity’s senior technical experts conducted on-site refresher training for NMCP volunteers in Launglon Township. Respondents external to the Activity and GoM stakeholders said they regularly sought Dr. Saw Lwin’s advice and guidance. “Our authority for consultation is Dr. Saw Lwin, our teacher,” said one GoM stakeholder. Dr. Saw Lwin conducts field visits and is very knowledgeable of field-level activities and challenges.

There is, however, one concern about relying too heavily on Dr. Saw Lwin’s leadership: Should he depart, there does not appear to be anyone to take over his role.

Evaluation Question 1f: What is the extent to which and how has the project promoted the involvement of communities, private healthcare providers, private companies and state-owned enterprises in malaria control and elimination initiatives?

Involvement of private health care providers

Defeat Malaria is recruiting more PPs to serve as malaria volunteers in private companies. Six PPs work at palm oil companies in Tanintharyi, ranging in experience from auxiliary midwife (low-level cadre) to health assistant (mid-level cadre). In elimination townships, the Activity is training GPs on malaria elimination activities. It is also compiling a list of unlicensed providers (referred to as “quacks”) at the township level who will be included in training on elimination activities. There has been concern about recruiting unlicensed private practitioners for malaria case management, though one person at NMCP
believed these people could conduct integrated community case management in the hardest-to-reach areas.

In three elimination townships, GPs at the community level received one-day orientation training on malaria elimination in April 2018. Defeat Malaria data show that the number of participating GPs in each township has been growing, and the number of those testing and reporting has also steadily increased. It is too soon to evaluate the success of engaging GPs, and the evaluation team notes that testing by GPs does not contribute to the township ABER. The purpose of GPs doing testing is to prevent onward transmission. Few GPs are reporting in real time, but that is improving. However the initiative is new and Defeat Malaria township coordinators are engaging GPs on an individual basis to provide motivation.

One Defeat Malaria staff member noted that GPs wanted to be recognized for their contribution to elimination activities. Staff are exploring the possibility of offering GPs small in-kind incentives to increase their participation, such as phone credit and performance feedback. The Activity is continuing to work with the Defense Medical Services in Toungup and Munaung townships to submit data about case findings. Engaging these malaria workers to report case findings will be essential to elimination, but efforts to date have been unsuccessful. Currently, the Defense Medical Services reports only the total number of positive cases, not their TPR or location (though one physician who operates a private practice submits data about case findings).

**Involvement of private companies**

Many private companies in Tanintharyi region employ migrants, including palm oil plantations. A large company may employ more than 1,200 permanent office staff and 5,000 non-permanent workers. Most of the non-permanent workforce are migrants. Companies often have their own medical clinics and private health care providers, such as health assistants or auxiliary midwives.

During interviews, administrative staff at private companies said they were willing to decrease the burden of malaria by collaborating with Defeat Malaria. (See Annex V for a list of companies working with the Activity as of June 2018.) Administrative staff work with Defeat Malaria to identify and recruit private practitioners or staff within the company who want to serve as malaria volunteers. The companies must agree to allow VMWs/PPs to attend monthly meetings and to report malaria cases to the Defeat Malaria township field coordinator or a regional health center.

**PROFILE OF A PRIVATE PROVIDER**

Aung is an auxiliary midwife from a township far away from the large palm oil company where she works. She is 19 years old and has an 8th grade education. She is was recruited by the former private practitioner at the company and has volunteered there for a little more than a year.

She once found four positive cases in one month. When she found a positive case (Pv) case among 16 forest-goers, she gave that person three key messages and performed DOT. When the company provided her with a car, a driver, and another staff member (although no staff from ARC), Aung could travel to where the first case was found, 30 minutes away. When she tested approximately 20 out of 50 workers in the vicinity, she found four more positive cases. They were daily wage workers who did not get paid for the days they could not work. Two did not have LLINs, but Aung managed to get some from coworkers. She advised them to stay under LLINs for three days while they took the antimalarials she supplied. She could not do blood tests for the other workers, who were not in the village when she was there, but a few workers visited her clinic the following day for a blood test and health education.

An administrator in one company stated that she works with Defeat Malaria township coordinators to ensure that new migrant workers have LLINs and information on malaria prevention. She also said she provided transportation to the PP to travel into the plantation to test people who live/work in the vicinity of someone who tested positive for malaria. A review of Defeat Malaria documentation and
interviews with PPs showed that they regularly attended monthly supervision meetings, except for certain times such as the long public holiday in April and during fertilizer application, an important period when everyone is expected to work. Defeat Malaria field coordinators at the township level try to schedule monthly meetings to facilitate VMW/PP attendance, and have a system to follow up with anyone who did not attend a meeting. VMW/PP turnover is low. One Defeat Malaria respondent said turnover was low where they worked because the company’s administrative staff identified and selected the most appropriate VMWs/PPs (e.g., ones with adequate educational background).

Activity staff, company administrative staff, and PPs cited several challenges they face implementing activities:

- The high turnover rate of mobile and migrant forest-goers (estimated to be 20 percent at one company), coupled with a shortage of LLINs available through Defeat Malaria, results in poor coverage of these high-risk groups. The high turnover requires continuous LLIN distribution. Moreover, ABER does not take into account turnover among migrant workers.
- Volunteers are absent from the worksite for much of April (during the yearly water festival) and during critical business operation periods, such as fertilizer application.
- Even though administrative staff are generally supportive of their work, some volunteers expressed concern that their immediate supervisor may not be as supportive as they could be, especially when volunteer activities encroach upon work.
- Case investigation by Defeat Malaria can be difficult due to the large geographic area of the worksite and employees’ work hours. Workers often do not return to their lodgings until late in the day, close to or after dark. Volunteers are permitted to conduct contact tracing during the day; however, due to the time it takes to travel to the sites and conduct the tracing, volunteers sometimes returned after dark.
- There is inadequate mobile phone service coverage. One volunteer reported having to travel 30 minutes to get phone service to call in a case.

The Activity faces formidable challenges to engaging with private companies in areas with a high malaria burden. Many mines, for example, are in high-transmission areas and employ migrant workers who are at risk of transmitting malaria. Many companies, particularly gold and gem concerns, do not permit access to outsiders, often because the mines are controlled by ethnic armies and ethnic groups that do not trust the government or Defeat Malaria partners. Furthermore, these companies fear divulging their business operations, which are often illegal. It is unlikely that NMCP or Defeat Malaria will ever gain access to these areas.

**Involvement of state-owned enterprises**

According to interviewees, very few state-owned enterprises employ workers with a high risk of malaria, one exception being the Ministry of Construction. In interviews and documents, the evaluation team could find no clear evidence of engagement with state-owned enterprises for malaria control and elimination.
EVALUATION QUESTION 2

What factors have facilitated or constrained project performance and how can these factors be addressed?

Evaluation Question 2a: What measures have been put in place to contribute to or promote sustainability?

Sustainability

Defeat Malaria does not have a sustainability plan, though it will commence work on a formal exit strategy in April 2019. The Activity has put in place approaches to ensure sustainability or to assist NMCP in its efforts to promote sustainability, such as a “Training of ICMV Trainers” conducted by Jhpiego. The goal is to prepare VMWs to become ICMVs by the time the Activity ends, with a handover to NMCP. The rationale behind ICMVs is to maintain the cadre of malaria volunteers, even as the number of cases decreases, by increasing their ability to address other causes of morbidity and mortality from infectious disease at the community level. In addition to malaria, ICMVs will raise awareness and knowledge about tuberculosis, HIV, dengue hemorrhagic fever, filariasis, and leprosy. The results of the training-of-trainers, which was scheduled to conclude at the end of 2018, are unknown. One interview respondent felt that ICMVs would not have the capacity to manage six diseases.

Defeat Malaria is using a hands-on approach to build the capacity of VBDC (e.g., in using Microsoft Access for reporting, as NMCP does). A number of NMCP and VBDC staff and TMOs have expressed reservations that the Activity’s “high frequency, low dose training” may not be the best approach for VBDC teams, which have low general capacity. One TMO said that many older staff with low education and limited computer skills might need “very high frequency and very low dose” training to learn and retain skills. Another respondent expressed concern that the sustainability of activities might be hampered by local governments’ inability to provide effective leadership, coordinate stakeholders, and manage malaria control and elimination activities. He recommended that Defeat Malaria consider measures to ensure the sustainability of both technical activities and management capacity, such as the ability to undertake long-term budgeting for elimination activities.

Evaluation Question 2b: What factors that still need to be addressed?

Six key factors to be addressed

These factors will be covered in more detail in the “Recommendations” section.

Real-time notification: Real-time reporting is not realistic in areas with high transmission; however, even in non-elimination townships that have few cases of malaria, TMOs would like to be alerted more than once a month if a case does arise. Midwives also want to be notified so they can be on the lookout for additional cases.

VMW/PP coverage: Increasing VMW/PP coverage in hard-to-reach areas requires more intensive efforts. Alternative models of supervision will be required.

VMW/PP exit strategy and VMW-ICMV transition plan: Defeat Malaria will need to develop a volunteer exit strategy to prevent an abrupt and chaotic end of testing and treatment services. Similarly, a VMW-ICMV transition plan is needed to ensure that volunteers have commodities during the transition period. Many volunteers were left without commodities when they transitioned to Defeat Malaria from the Myanmar Medical Association.

Data for decision-making and knowledge translation: Although Defeat Malaria did use data for decision-making, there is room for improvement. The Activity does not systematically analyze data in a way that transforms it into information that has programmatic meaning.
Engaging EHOs: Elimination will not be possible without the full engagement of EHOs, which has been difficult due to armed conflict, challenges with sub-grant processes, and lower educational levels and technical capacity. The Activity has engaged EHOs via Back Pack Health Worker Team, which works to provide accessible, high-quality primary health care to all ethnic populations in Myanmar. It trained the organization on malaria epidemiology, treatment, BCC messaging, and data collection forms and formats. In 2017, Defeat Malaria provided 42,400 LLINs, 31,800 RDTs, 3,182 ACTs, 44,200 doses of primaquine, and 50 VMW manuals, and allocated 33,920,000 kyats for the cost of delivering malaria commodities. Defeat Malaria should continue its efforts to reach out and engage EHOs and Back Pack Health Worker Team in control and elimination activities.

Increased emphasis on building surveillance capacity: A word-tree search in NVivo revealed that “surveillance” was cited most often in the context of needing more intensive capacity building and was an activity most respondents feared would not be sustainable after Defeat Malaria. The Activity has already noted that surveillance will need more focus and support during the second half of the award.

Capacity building of sub-grantees: Sustainability of Defeat Malaria activities will in part depend on the capacity of sub-grantees, specifically local sub-grantees, to carry on the work. To discern if these partners were developing strategic planning and management capacity to one day become prime award holders, the evaluation team focused on work planning, an important aspect of strategic planning and management capacity. Sub-grantees are involved in work planning under the guidance of Defeat Malaria senior leadership, and their contributions to the process have increased since the second year of implementation (FY 2017–18). We encourage URC senior leadership to continue to increase their involvement and responsibility in planning. When the evaluation team asked sub-grantee respondents to describe the work planning process, they said their involvement in strategic planning was more limited, even though URC senior leadership did seek their input. “Activity planning has increased,” one respondent explained, “but there should be more participatory involvement [by sub-grantees] in formulating future strategy and work planning processes.”

Evaluation Question 2c: What is the efficiency and effectiveness of the design and project management arrangements and oversight between the prime recipient and sub-partners (and sub-grantees) for achieving project objectives?

Management of sub-grantees

URC’s Center for Human Services overall management of sub-grantees (MHAA, MNMA, and ARC) is adequate and supportive. Sub-grantees stated that being housed with URC (in the Yangon office only) makes management and support more efficient.

Data quality control

URC is implementing new data quality control measures among sub-grantees based on the results from a 2017 data quality assessment, which showed a discrepancy of 8,625 (~14.8 percent variance) between the number of RDTs reported and verified (109,375 vs. 118,000). Defeat Malaria reports show that approximately 98 percent of VMWs reported RDT results, which means this discrepancy likely led to an underestimate of the number of positive malaria cases. The results also indicated that sub-grantees needed to increase their capacity to monitor and validate commodity reporting. The Activity’s central M&E team is building sub-grantees’ capacity to monitor and validate commodity reporting and conduct routine data quality assessments and onsite data verification visits to ensure the validity and reliability of commodity reporting at the township level. The evaluation team did not investigate the effectiveness of routine assessments in improving data quality.

17 The sub-grant process between URC and the Karen Department of Health and Welfare was cancelled in 2017 due to a disagreement about the funding mechanism. To date, ongoing negotiations have not yielded results.
**Evaluation Question 2d:** Given unavoidable political uncertainties, to what extent and how has the project put in place risk-mitigating measures or contingency plans to minimize has impact on project implementation?

Defeat Malaria does not have a risk mitigation plan or any risk-mitigating measures to minimize impact on implementation.
V. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Overall, Defeat Malaria has performed well across its four objectives. It performs consistently well in ensuring adequate LLIN coverage, though this achievement is tempered by low rates of LLIN ownership six months after distribution and low rates of LLIN utilization in some communities. Although the Activity is using BCC to increase LLIN utilization, evaluation results indicate that current BCC messages or the way they are being communicated may not be effective for some populations, such as migrant workers. (Defeat Malaria will re-evaluate BCC messages and material in Year 3.) Moreover, BCC is significantly hampered in many villages due to language barriers. Defeat Malaria data show that although VMWs test the greatest number of individuals, PPs have higher TPRs. Both VMWs and PPs are consistently testing and treating according to the National Treatment Guidelines.

There was overwhelming agreement that VMWs/PPs were essential to ensuring universal coverage. Every respondent with pertinent knowledge rated VMW/PP capacity in Defeat Malaria-supported areas as “high” from the central level to the township level. VMWs/PPs received high praise for their dedication and their consistent quality of service delivery. There are approximately 70 hard-to-reach villages without a volunteer from Defeat Malaria or another organization. Many of these villages have a high burden of malaria and large mobile populations who risk exporting malaria and threatening the success of NMCP, Defeat Malaria, and other organizations. Respondents were skeptical about NMCP’s ability to provide high-level, frequent supervision to VMWs/PPs after closeout. Although some stakeholders believed NMCP might be able to afford VMW/PP quarterly allowances if its budget was increased, there was agreement that NMCP would not be able to provide monthly supervision or afford travel allowances and per diems to attend quarterly meetings.

Defeat Malaria has rolled out new tools, such as the “malaria case classification calculator and appropriate timing for response” tool. This was positively received at the township level because it helped ensure quick, accurate classification of malaria cases. Furthermore, a study of an hsRDT (SD Bioline) has concluded and polymerase chain reaction confirmatory testing is underway at Duke University’s laboratory in the United States. The preliminary results are positive, although the test’s utility is limited because it can diagnose Pf only, it must be refrigerated, and it is more expensive than conventional RDTs. Another tool, a forest-goer kit, is undergoing a feasibility and acceptability study; initial results are promising, with workers saying they like the long-sleeve shirts and mosquito repellent. VMWs/PPs are conducting DOT among patients who meet eligibility criteria. Data indicate that VMWs/PPs have the capacity to conduct DOT, though testing is limited in scope because it is used in the final stages of malaria elimination and for control of resistant Pf.

VBDC’s capacity to undertake surveillance and investigation activities and to use resultant data for decision-making varies across townships. In the townships the evaluation team visited, overall VBDC capacity has improved but is inadequate to meet the demands of malaria elimination activities. Low capacity is attributed in part to technical capacity and inadequate number of staff to carry out activities. Respondents frequently cited this as an area that will require more intensive efforts from Defeat Malaria.

VMWs/PPs and hospitals are undertaking real-time case reporting in elimination townships. TMOs in those townships said they would like to be notified in real time, not through monthly reports. Zero reporting among VMWs/PPs and BHS in elimination townships commenced in April 2018 and has improved significantly after state VBDC notification letters were introduced.

The success of Defeat Malaria is due in large part to Senior Technical Director Dr. Saw Lwin’s technical leadership. Partners, stakeholders, and staff at other NGOs view him as the greatest champion for malaria elimination. His technical leadership is the Activity’s greatest asset. However, it is concerning
that the Activity’s success relies so much on the technical leadership of one person and that no one being is groomed to step into the senior technical director role.

The involvement of private companies in malaria control has yielded promising results and is an area of untapped potential. Getting more companies involved will increase the geographic coverage of Defeat Malaria activities while targeting the most at-risk populations (i.e., mobile and migrant) for prevention and treatment. Admirably, the Activity has worked with mining concerns and companies controlled by ethnic armies, but there are many others it could engage.

The sustainability of Defeat Malaria activities will rest not only with building NMCP/VBDC capacity but also with Defeat Malaria sub-grantees, specifically local sub-grantees. Senior URC leadership is working to increase sub-grantee management capacity through greater involvement in work planning. Looking to the future, sub-grantees will need more hands-on experience in strategic planning.

To summarize, the evaluation team identified the following key priorities to be addressed during the remaining three years of implementation:

- Expanding real-time notification or weekly reporting to TMOs in non-elimination townships with low numbers of malaria cases
- Increasing VMW/PP coverage in hard-to-reach villages
- Developing an exit strategy for VMWs/PPs based on the assumption that NMCP will not be able to absorb Defeat Malaria volunteers
- Developing a formal VMW-ICMV transition plan and commencing implementation in townships where NMCP is prepared to support those volunteers
- Increasing data for programmatic decision-making
- Continuing to engage EHOs
- Intensifying efforts to increase VBDC capacity to conduct surveillance and investigation
- Increasing the management capacity of local governments to plan and budget for malaria elimination and control activities
- Increasing the capacity of sub-grantees to take on a greater role in work planning

Overall, the evaluation team found that Defeat Malaria has demonstrated high performance with no significant shortcomings that pose a major threat to its overall success. There are some challenges that should be addressed to help ensure continued success. The evaluation team encourages Defeat Malaria to adopt the recommendations outlined below.

RECOMMENDATIONS

The evaluation team considers the first three recommendations to be of high priority, essential to ensuring the success of malaria control and elimination and, by extension, Defeat Malaria itself. The remaining recommendations, although important, are less critical.

1. Increase VMW/PP coverage in the geographically hard-to-reach areas

Defeat Malaria must find a way to recruit and supervise volunteers in hard-to-reach villages. Before it can increase coverage, the Activity must determine current levels of coverage by its own volunteers and volunteers under NMCP and other implementing partners. The first step will be to produce an updated and detailed map of volunteer coverage/non-coverage in all villages/communities/worksites at risk of malaria in Kayin and Rakhine states and Tanintharyi region. This exercise should be done in conjunction
with NMCP and other relevant stakeholders. Based on the results, Defeat Malaria should work with these partners to establish community-based VMWs/PPs. Mobile teams should be an available alternative, but they are a short-term solution, not a substitute for full-time VMWs/PPs. A community-based volunteer should have ownership in ensuring the health of his/her own community.

Extending coverage to hard-to-reach areas will require abandoning or significantly modifying current approaches to VMW/PP supervision. For example, it is highly unlikely NMCP will continue monthly supervision after Defeat Malaria concludes, so there is no reason for the Activity to feel beholden to that model. Quarterly supervision visits by mobile teams may be a more sustainable model.

2. Increase and intensify efforts to build VBDC capacity

As the entire country transitions into malaria elimination, there is increased urgency to build VBDC capacity to undertake the highly technical demands of surveillance and investigation. The inadequate number of VBDC staff is a formidable challenge, but one that is outside of Defeat Malaria’s control. However, the Activity can intensify and increase capacity building to existing staff, who appear to learn best through a hands-on approach. As such, Defeat Malaria should consider extending more frequent and intensive hands-on learning opportunities. This may involve more hands-on experience with Access databases, mock foci and outbreak investigations, and using data for decision-making in response to simulated surveillance data.

3. Develop an exit strategy for VMWs/PPs

To avoid the mistakes that other organizations experienced transitioning volunteers to Defeat Malaria (e.g., a gap in volunteer coverage), the evaluation team recommends that an exit strategy be developed and put in place. Defeat Malaria should assume that NMCP will not be able to absorb all the volunteers and should prepare for a slow—and controlled—phase-out. It should work closely with township-level stakeholders to identify alternative means for testing and treatment, and to start preparing village residents well in advance.

4. Develop a VMW to ICMV transition plan

In townships where the NMCP is prepared to fund ICMVs, the Activity should collaborate with the Program to develop a formal transition plan for volunteers. Lessons learned from other organizations demonstrate that the absence of a handover strategy and an insufficient transition period run the risk of a gap in coverage. By its own admission, NMCP is slow to change, so it would be prudent for the Activity to commence discussions about a transition strategy. Moreover, because VMWs/PPs do not need to be handed over at one time, Defeat Malaria may wish to consider a phased transition.

5. Increase efforts to engage private companies

Defeat Malaria may want to consider connecting with more companies via umbrella organizations, such as The Union of Myanmar Federation of Chambers of Commerce and Industry, to increase the number of private companies that participate in the Activity.

6. Increase ABER for migrants

Defeat Malaria should consider increased ABER for populations with a large percentage of migrants and mobile populations (e.g., palm oil plantations).

7. Revise BCC messaging for LLIN utilization in high risk-populations

The current approach of increasing IPC as a way to increase LLIN is not effective or a good use of resources. Given the time remaining for Defeat Malaria, it is not practical to evaluate the effectiveness of each BCC message for each target population. Moreover, despite all attempts, many are immune to
messaging. The evaluation team encourages the Activity to focus its efforts on high-risk groups with low rates of net utilization, such as mobile populations and migrant workers.

8. **Expand real-time notification or increase frequency of notification**

The evaluation team is cognizant of the fact that real-time notification in non-elimination townships is not realistic. When real-time notification is not feasible (e.g., where there are many malaria cases), Defeat Malaria should consider weekly phone or text notifications to the local midwife and township medical officer.

9. **Knowledge translation to support decision-making**

Defeat Malaria has an abundance of output-level data that, in its current form, does not inform or clarify outcomes. It should strive to answer the larger question of “What does all this data mean?” One way to do this is through knowledge translation, the process of transforming data into information and, ultimately, into knowledge that can be applied for informed decision-making. The Canadian Institute of Health Research defines knowledge transition as “a dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve health, provide more effective health services and products, and strengthen the health care system.” (The World Health Organization also uses this definition.) Adopting a knowledge transition framework will help the Activity tell its “story” within a theory of change and help other organizations adopt and scale up its activities.

10. **Continued engagement and advocacy to ethnic health organizations**

The engagement of ethnic health organizations is essential to achieving elimination and ensuring sustainability. The evaluation team recommends that Defeat Malaria continue efforts in this area and provide support to Back Pack Health Worker Team, which works to provide accessible, high-quality primary health care to all ethnic populations in Myanmar.

11. **Build management and strategic planning capacity of sub-grantees to ensure sustainability**

Defeat Malaria senior leadership should continue to increase sub-grantee involvement in the work planning process with a goal of greater autonomy. In addition, the Activity should look for opportunities to involve sub-grantees in strategic planning.

12. **Risk mitigation plan**

Defeat Malaria, in conjunction with USAID, should develop a risk mitigation plan for the remainder of implementation. Because the Activity works in the politically volatile areas of northern Rakhine state and Kayin state, a risk mitigation plan is warranted.
ANNEX I. SCOPE OF WORK

Global Health Program Cycle Improvement Project (GH Pro)
Contract No. AID-OAA-C-14-00067

EVALUATION OR ANALYTIC ACTIVITY STATEMENT OF WORK (SOW)
Date of Submission: 2/9/2018
Last update: 6/18/2018

TITLE: Midterm Performance Evaluation of Defeat Malaria Activity

I. Requester / Client
☐ USAID Country or Regional Mission
Mission/Division: _______ USAID / _______ Myanmar _______

II. Funding Account Source(s): (Click on box(es) to indicate source of payment for this assignment)
☐ 3.1.1 HIV  ☐ 3.1.4 PIOET  ☐ 3.1.7 FP/RH
☐ 3.1.2 TB  ☐ 3.1.5 Other public health threats  ☐ 3.1.8 WSSH
☐ 3.1.3 Malaria  ☐ 3.1.6 MCH  ☐ 3.1.9 Nutrition
☐ 3.2.0 Other (specify): GH-C 2017/2018

III. Cost Estimate: $300,000 (Eval+Assm’t) (Note: GH Pro will provide a cost estimate based on this SOW)

IV. Performance Period
Expected Start Date (on or about): July 23, 2018 (Evaluation will begin first, with the Assessment in the field started by September 17, 2018)
Anticipated End Date (on or about): February 28, 2019

V. Location(s) of Assignment: (Indicate where work will be performed)
Both the Assessment and the Evaluation will be done in Myanmar with travels to states and regions, including Tanintharyi, Rakhine and/or Kayin and Nay Pyi Taw (The capital), and Yangon (Former capital city). Final site selection for data collection will be determined in consultation with USAID/Myanmar.

VI. Type of Analytic Activity (Check the box to indicate the type of analytic activity)
EVALUATION:
☐ Performance Evaluation (Check timing of data collection)
☐ Midterm  ☐ Endline  ☐ Other (specify): .
Performance evaluations encompass a broad range of evaluation methods. They often incorporate before–after comparisons but generally lack a rigorously defined counterfactual. Performance evaluations may address descriptive, normative, and/or cause-and-effect questions. They may focus on what a particular project or program has achieved (at any point during or after implementation); how it was implemented; how it was perceived and valued; and other questions that are pertinent to design, management, and operational decision making.
Impact Evaluation (Check timing(s) of data collection)
☐ Baseline  ☐ Midterm  ☐ Endline  ☐ Other (specify):

Impact evaluations measure the change in a development outcome that is attributable to a defined intervention. They are based on models of cause and effect and require a credible and rigorously defined counterfactual to control for factors other than the intervention that might account for the observed change. Impact evaluations in which comparisons are made between beneficiaries that are randomly assigned to either a treatment or a control group provide the strongest evidence of a relationship between the intervention under study and the outcome measured.

PEPFAR EVALUATIONS (PEPFAR Evaluation Standards of Practice 2014)
Note: If PEPFA-funded, check the box for type of evaluation

☐ Process Evaluation (Check timing of data collection)
☐ Midterm  ☐ Endline  ☐ Other (specify):

Process Evaluation focuses on program or intervention implementation, including, but not limited to access to services, whether services reach the intended population, how services are delivered, client satisfaction and perceptions about needs and services, management practices. In addition, a process evaluation might provide an understanding of cultural, socio-political, legal, and economic context that affect implementation of the program or intervention. For example: Are activities delivered as intended, and are the right participants being reached? (PEPFAR Evaluation Standards of Practice 2014)

☐ Outcome Evaluation

Outcome Evaluation determines if and by how much, intervention activities or services achieved their intended outcomes. It focuses on outputs and outcomes (including unintended effects) to judge program effectiveness, but may also assess program process to understand how outcomes are produced. It is possible to use statistical techniques in some instances when control or comparison groups are not available (e.g., for the evaluation of a national program). Example of question asked: To what extent are desired changes occurring due to the program, and who is benefiting? (PEPFAR Evaluation Standards of Practice 2014)

☐ Impact Evaluation (Check timing(s) of data collection)
☐ Baseline  ☐ Midterm  ☐ Endline  ☐ Other (specify):

Impact evaluations measure the change in an outcome that is attributable to a defined intervention by comparing actual impact to what would have happened in the absence of the intervention (the counterfactual scenario). IEs are based on models of cause and effect and require a rigorously defined counterfactual to control for factors other than the intervention that might account for the observed change. There are a range of accepted approaches to applying a counterfactual analysis, though IEs in which comparisons are made between beneficiaries that are randomly assigned to either an intervention or a control group provide the strongest evidence of a relationship between the intervention under study and the outcome measured to demonstrate impact.

☐ Economic Evaluation (PEPFAR)

Economic Evaluations identifies, measures, values and compares the costs and outcomes of alternative interventions. Economic evaluation is a systematic and transparent framework for assessing efficiency focusing on the economic costs and outcomes of alternative programs or interventions. This framework is based on a comparative analysis of both the costs (resources consumed) and outcomes (health, clinical, economic) of programs or interventions. Main types of economic evaluation are cost-minimization analysis (CMA), cost-effectiveness analysis (CEA), cost-benefit analysis (CBA) and cost-utility analysis (CUA). Example of question asked: What is the cost-effectiveness of this intervention in improving patient outcomes as compared to other treatment models?
VII. Background

Project being evaluated:

<table>
<thead>
<tr>
<th>Project/Activity Title:</th>
<th>Defeat Malaria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Award/Contract Number:</td>
<td>AID-482-A-16-00003</td>
</tr>
<tr>
<td>Award/Contract Dates:</td>
<td>August 2016 – August 2021</td>
</tr>
<tr>
<td>Project/Activity Funding:</td>
<td>$31,936,197</td>
</tr>
<tr>
<td>Implementing Organization(s):</td>
<td>University Research Corporation (URC)</td>
</tr>
<tr>
<td>Project/Activity AOR/COR:</td>
<td>Feliciano Monti, Office of Public Health, USAID/Myanmar</td>
</tr>
</tbody>
</table>

Background of project/program/intervention (Provide a brief background on the country and/or sector context; specific problem or opportunity the intervention addresses; and the development hypothesis)

Although significant progress has been made in recent years, the malaria burden in Myanmar remains the highest among the six countries of the Greater Mekong Subregion (GMS), accounting for 51% of the total malaria cases reported in the GMS in 2017. The NMCP reported 480,586 in 2012, 333,871 in 2013, 205,658 in 2014, 182,452 in 2015, 110,146 in 2016, and 79,654 in 2017 which represents an 83% reduction from 2012 levels.

The number of deaths attributed to malaria has progressively fallen in the past two decades from a peak of more than 5,000 in 1991 to 1,261 in 2007, 788 in 2010, 96 in 2014, and 31 in 2017. However, it should be noted that the reported cases largely represent only the public sector and do not include those using self-treatment or seeking care in the private sector, which are estimated to represent about 30% of the total. Several malaria-endemic areas, particularly in the non-state actor areas and those bordering Thailand and China, have limited accessibility by government health services and international organizations, further contributing to under-reporting.

The National Malaria Control Program (NMCP) estimates that 286 out of the total 330 townships are located in malaria endemic areas, and that approximately 43% of the population lives in areas where malaria transmission occurs (7% in high transmission, 12% in moderate transmission and 24% in low transmission areas), according to the 2015 stratification. Both the incidence of symptomatic cases, as reported by the public health information system, and the prevalence of asymptomatic infections, as assessed by active case detection carried out at community level, have shown a significant and rapid decline in several areas where intensive control measures have been implemented in recent years.

The resulting epidemiological picture is becoming increasingly heterogeneous ranging from nearly malaria-free zones where only imported cases are detected to persistent hot spots of high transmission, population groups at high risk, and areas of difficult geographic or “political” accessibility where the deployment of control measures and surveillance systems remains a challenge.

The national malaria program is implementing a new National Strategic Plan (NSP) 2016-2020 which aims to accelerate progress towards malaria elimination. Implementation of the NSP is guided by the new epidemiological stratification no longer relying on socio-ecological risk factors only, but based primarily on level of transmission estimated by annual parasite incidence (API). The different areas of the country are classified into malaria free (stratum 1), with potential transmission (stratum 2), and with current transmission (stratum 3), and each area of stratum 3 is further stratified as high transmission (3a), moderate transmission (3b), and low transmission (3c).

In 2015, with PMI and 3MDG co-funding, the first-ever national Malaria Indicator Survey (MIS) was carried out in collaboration with the NMCP, from August to October 2015 during the peak rainy and malaria seasons. A total of 4,731 households and 20,638 household members were included in the survey, with blood samples collected and analyzed from 13,726 individuals. The prevalence of malaria was very low overall (0.74% by PCR) but there was considerable variation (range: 0.2% to 11%).
Mosquito net ownership was high (99%), but only 18.8% of households owned at least one insecticide-treated net (ITN) and only 10.4% of respondents used an ITN the previous night.

Despite a drastic reduction in morbidity and mortality, persistent malaria transmission remains particularly along forested border areas, hard-to-reach hot spots and among migrant and mobile populations. The continued high malaria burden in these areas/populations can be attributed to a number of factors which include:

- A relatively large portion of the population lives in or near forested areas or has occasional exposure to forested areas;
- Mobile and migrant populations at high risk have low access to preventive and treatment services;
- Topography and climatic conditions are favorable for transmission of malaria, and presence of different species of efficient vectors also enhances transmission;
- Limited information is available for areas controlled by non-state actors which are not accessible by the NMCP. Service delivery is further complicated by differing languages and cultural beliefs related to health;
- Insufficient personal protection tools for groups at high risk of malaria transmission, particularly for those working in the forests;
- Heavy rains and flooding during the malaria transmission season in most project areas can interfere with project implementation of activities.
- University Research Co., LLC (URC), the prime recipient of Defeat Malaria award, works to scale up proven interventions together with three international partners, namely American Refugee Committee (ARC), Jhpiego, Duke Global Health Institute, and two national organizations, namely Myanmar Health Assistant Association (MHAA) and Myanmar Nurse and Midwife Association (MNMA) as sub-recipients.

In FY 2017:

- 5 townships from Kayin State and 3 townships from Tanintharyi Region are covered by ARC;
- 2 townships from Southern Rakhine and 3 townships from Northern Rakhine States are covered by MNMA and MHAA respectively;
- URC works in 7 townships of Tanintharyi Region, 4 townships of Southern Rakhine and 7 townships of Northern Rakhine State;
- Jhpiego provides technical assistance on policy-level advocacy, capacity building and training at different levels;
- Duke Global Health Institute supports operational research and surveillance efforts using high sensitive molecular diagnostics as well as gene mapping of artemisinin resistant marker in selected areas.

**Theory of Change of target project/program/intervention**

If malaria control interventions are appropriately and adequately implemented in the areas covered by Defeat Malaria, there will be a significant reduction of malaria burden.
The goal of Defeat Malaria is to reduce the malaria burden and control artemisinin-resistant malaria in the target areas, and contribute to the long-term national goal of eliminating malaria in Myanmar.

This goal is rendered more urgent by artemisinin resistance, which has already been confined throughout the GMS. To address the emergence and spread of drug-resistance which can undermine global progress to date, accelerated efforts in malaria case reduction are needed and elimination of malaria is considered the long-term sustainable solution.

Defeat Malaria aims to strengthen the capacity of local partners, from national to peripheral level, to lead, manage and implement malaria control interventions. Defeat Malaria will also engage communities and promote the involvement of the private sector. As control measures are scaled up and optimized, innovative approaches and new tools will need to be tested.

Defeat Malaria is working both to reduce malaria burden in high transmission areas as well as piloting tools for malaria elimination in low transmission areas. In a setting of rapidly changing malaria epidemiology, the need for the project to adjust, refine, and transition its strategy from burden reduction to addressing artemisinin resistance and malaria elimination is critical and this midterm evaluation should provide the evidence to make necessary course corrections.

Defeat Malaria has four main objectives:

- **Objective 1**: Achieve and maintain universal coverage of at-risk populations with proven vector control and case management interventions, while promoting the testing of new tools and approaches.
- **Objective 2**: Strengthen the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies.
- **Objective 3**: Enhance technical and operational capacity of the NMCP and other health service providers at all levels of service provision.
- **Objective 4**: Promote the involvement of communities, private healthcare providers, private companies and state-owned enterprises in malaria control and elimination initiatives.

Defeat Malaria activities include:

- Ensuring adequate coverage and distribution of LLINs, malaria diagnostics, and quality-assured medicines to the beneficiary populations, health services and village malaria workers (VMWs) in the targeted areas;
- Strengthening the malaria surveillance system, improve data management capacity at all levels of the health system, from village to central level, and support appropriate information technology to facilitate data collection, reporting, and use in both public and private sectors;
- Improving skills and job performance of staff involved in malaria control, particularly on epidemiology, surveillance, entomology and vector control, through supportive supervision and training at peripheral and national levels, and building the organizational and technical capacity of community-based and ethnic health organizations.

The efficacy of the planned key interventions - vector control through the use of LLINs and community-based early diagnosis and treatment – in reducing malaria transmission is already well proven, therefore the main evaluation questions concern the programmatic implementation and impact of these interventions at field level.

The midterm evaluation of Defeat Malaria will examine both the overall strategic approach as well as the quality and impact of implementation of its activities.
What is the geographic coverage and/or the target groups for the project or program that is the subject of analysis?

The coverage map of Defeat Malaria Project is shown as below –

VIII. Purpose, Audience & Application

A. Purpose: Why is this evaluation/assessment being conducted (purpose of analytic activity)? Provide the specific reason for this activity, linking it to future decisions to be made by USAID leadership, partner governments, and/or other key stakeholders.
The primary purpose of this midterm evaluation is to assess activity implementation and performance to date, identify key bottlenecks and constraints, and make actionable recommendations for improvements needed to meet the activity's intended objectives. In addition, given the rapid reduction of reported malaria morbidity and mortality in both activity areas and countrywide, there would be a specific assessment aimed to analyze and document the contributing factors leading to this rapid decline and to better identify the project's contributions to this overall reduction of malaria burden.

This Statement of Work (SOW) comprises of two analytic activities:

1) **Component A: Defeat Malaria Midterm Performance Evaluation** to assess project implementation, quality, and performance and progress towards intended results in project areas. The findings will be used to provide feedback to partners and USAID/Myanmar on the strengths of the project, areas for improvement, and any course corrections required for the remainder of the project. The evaluation will also provide evidence and learning for adapting future programs and activities alike.

2) **Component B: Malaria Burden Reduction Assessment** to document the significant and rapid reduction of malaria burden throughout Myanmar. The purpose of this assessment is to understand how this reduction was achieved and the factors that contributed to it in order to inform future projects, USAID/PMI management, and other stakeholders on programmatic and strategic efforts to eliminate malaria.

**B. Audience:** Who is the intended audience for this analysis? Who will use the results? If listing multiple audiences, indicate which are most important.

The primary audience of this evaluation is USAID/Myanmar Office of Public Health. The secondary audiences will be Ministry of Health and Sports Myanmar and its related departments, the implementing partners of Defeat Malaria and other stakeholders and donors working towards malaria elimination in Myanmar.

**C. Applications and use:** How will the findings be used? What future decisions will be made based on these findings?

The findings of the midterm performance evaluation of Defeat Malaria will be used to provide feedback to partners and USAID/Myanmar on the strengths of the project, areas of improvement, and any course corrections required for the remainder of the project. The evaluation will also provide evidence and learning for adapting future programs and activities alike.

The findings of the assessment of malaria burden reduction will help to identify key factors which contributed to this reduction and will provide a basis of comparison between the project and overall malaria burden reduction in the country. These factors that can be identified can be further enhanced in the implementation of Defeat Malaria as well as other malaria projects supported by different donors. Additionally, the assessment can suggest alternative and/or complementary approaches and interventions which could amplify our intended results and impact.
IX. Activities

List the expected activities, such as Team Planning Meeting (TPM), briefings, verification workshop with IPs and stakeholders, etc. Activities and Deliverables may overlap. Give as much detail as possible.

<table>
<thead>
<tr>
<th>Both the Evaluation and the Assessment will implement the same activities, unless otherwise noted. These activities are designed to meet USAID’s needs and to answer the Evaluation/Assessment Questions.</th>
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</table>

**Background reading** – Several documents are available for review for this analytic activity. These include Defeat Malaria proposal, annual work plans, M&E plans, quarterly progress reports, and routine reports of project performance indicator data, as well as survey data reports (i.e., DHS and MICS). This desk review will provide background information for the Evaluation and Assessment Teams, and will also be used as data input and evidence for the evaluation.

**Team Planning Meeting (TPM)** – A four-day team planning meeting (TPM) will be held at the initiation of this assignment and before the data collection begins. The TPM will:

- Review and clarify any questions on the evaluation SOW
- Clarify team members’ roles and responsibilities
- Establish a team atmosphere, share individual working styles, and agree on procedures for resolving differences of opinion
- Review and finalize evaluation/assessment questions
- Review and finalize the assignment timeline
- Develop data collection methods, instruments, tools and guidelines
- Review and clarify any logistical and administrative procedures for the assignment
- Develop a data collection plan
- Draft the evaluation/assessment workplan for USAID’s approval
- Develop a preliminary draft outline of the team’s report
- Assign drafting/writing responsibilities for the final report

**Briefing and Debriefing Meetings** – Throughout the evaluation/assessment the Team Lead will provide briefings to USAID. The In-Brief and Debrief are likely to include all Evaluation/Assessment Team experts, but will be determined in consultation with the Mission. These briefings are:

- **Evaluation launch**, a call/meeting among the USAID, GH Pro and the Team Lead to initiate the evaluation/assessment activity and review expectations. USAID will review the purpose, expectations, and agenda of the assignment. GH Pro will introduce the Team Lead, and review the initial schedule and review other management issues.
- **In-brief with USAID**, as part of the TPM. At the beginning of the TPM, the Evaluation/Assessment Team will meet with USAID to discuss expectations, review evaluation questions, and intended plans. The Team will also raise questions that they may have about the project/program and SOW resulting from their background document review. The time and place for this in-brief will be determined between the Team Lead and USAID prior to the TPM.
- **Workplan and methodology review briefing**. At the end of the TPM, the Evaluation/Assessment Team will meet with USAID to present an outline of the methods/protocols, timeline and data collection tools. Also, the format and content of the Evaluation/Assessment report(s) will be discussed.
- **Ethical Review**. If required, the contractor must submit the evaluation design and protocol for approval by the Ministry of Health and Sports (either Department of Medical Research (DMR) or Department of Public Health Ethical Review Committee). For DMR see the
guidance at http://www.ercdmrlm.org/document/index. Based on the approved evaluation design and plan, the contractor must submit the draft package for the Ethical Review to USAID for approval before submission to Ethical Review Committee and support to get the ethical clearance from the review committee in consultation with the mission.

- **In-brief with Defeat Malaria (Evaluation only)** to review the evaluation plans and timeline, and for the project to give an overview of the project to the Evaluation Team.
- The Team Lead (TL) will brief the USAID weekly to discuss progress on the evaluation/assessment. As preliminary findings arise, the TL will share these during the routine briefing, and in an email.
- A **final debrief** between the Evaluation Team and USAID will be held at the end of the field work to present preliminary findings to USAID. During this meeting a summary of the data will be presented, along with high level findings and draft recommendations. For the debrief, the Evaluation/Assessment Team will prepare a **PowerPoint Presentation** of the key findings, issues, and recommendations. The Evaluation/Assessment Team shall incorporate comments received from USAID during the debrief in the report. (Note: preliminary findings are not final and as more data sources are developed and analyzed these finding may change.)

**Fieldwork, Site Visits and Data Collection** – The Evaluation/Assessment Team will conduct site visits to for data collection. Selection of sites to be visited will be finalized during TPM in consultation with USAID. The Evaluation/Assessment Team will outline and schedule key meetings and site visits prior to departing to the field.

**Evaluation and Assessment Reports** – Each Team, Evaluation and Assessment, under the leadership of the two Team Leads will develop a report with findings and recommendations (see Analytic Report below). Report writing and submission will include the following steps:

1. Team Lead will submit draft evaluation report to GH Pro for review and formatting
2. GH Pro will submit the draft report to USAID
3. USAID will review the draft report in a timely manner, and send their comments and edits back to GH Pro
4. (Evaluation only) USAID will manage implementing partner(s)’s (IP) review of the report and compile and send their comments and edits to GH Pro. (Note: USAID will decide what draft they want the IP to review.)
5. GH Pro will share USAID’s comments and edits with the Team Lead, who will then do final edits, as needed, and resubmit to GH Pro
6. GH Pro will review and reformat the **final Evaluation and Assessment Reports**, as needed, and resubmit to USAID for approval.
7. Once Evaluation and Assessment Reports are approved, GH Pro will re-format it for 508-compliance and post it to the DEC. (Both reports will be posted on the DEC.)

The **Evaluation Report** excludes any **procurement-sensitive** and other sensitive but unclassified (SBU) information, as this is a public report. This information will be submitted in a memo to USAID separate from the Evaluation Report.

**Data Submission** – All quantitative data will be submitted to GH Pro in a machine-readable format (CSV or XML). The datasets created as part of the evaluation and assessment must be accompanied by a data dictionary that includes a codebook and any other information needed for others to use these data. It is essential that the datasets are stripped of all identifying information, as the data will be public once posted on USAID Development Data Library (DDL).

Where feasible, **qualitative** data that do not contain identifying information should also be submitted to GH Pro.
### Component A: Defeat Malaria Midterm Performance Evaluation

**Eval. 1: Evaluation/Analytic Questions & Matrix:** USAID Evaluation Policy Recommends 1 to 5 evaluation questions.

<table>
<thead>
<tr>
<th><strong>Midterm Evaluation Questions</strong></th>
<th><strong>Suggested Data Sources</strong></th>
<th><strong>Suggested Data Collection Methods</strong></th>
<th><strong>Data Analysis Methods</strong></th>
</tr>
</thead>
</table>
| **Question 1:** How has Defeat Malaria achieved the intended results?  
*In answering this question, the contractor should address the following:*  
  a. The extent to which and how the project has achieved and maintained universal coverage of at-risk populations with proven vector control and case management interventions, while promoting the testing of new tools and approaches.  
  b. The extent to which and how the VMWs network has contributed to achieving the coverage target.  
  c. The extent to which and how the project has strengthened the malaria surveillance system to comprehensively monitor progress and inform the deployment and targeting of appropriate responses and strategies.  
  d. The extent to which and how the project has enhanced technical and operational capacity of the NMCP and other health service providers at all levels of service provision.  
  e. The approach to and effectiveness of field monitoring and supervision.  
  f. The extent to which and how the project has promoted the involvement of communities, private healthcare providers, private companies and state-owned enterprises in malaria control and elimination initiatives.  
  | MEL plans and indicators, work plans, agreements, quarterly, semi-annual, and yearly reports, baseline, mid treaty survey reports, special surveys, routine surveillance data, supervision and monitoring reports, project Standard Operating Procedures, other available data sources in country  
  | Desk review, data collection, secondary analysis, key informant interviews, focus group discussions  
  | Disaggregate by gender, age groups, state/region, malaria transmission strata  
| **Question 2:** What factors have facilitated or constrained project performance and how can these factors be addressed?  
*In answering this question, the contractor should address the following:* | MEL plans and indicators, work plans, agreements, quarterly, semi-annual, and yearly reports, baseline,  
  | Desk review, data collection, secondary analysis, key informant interviews,  
<p>| Disaggregate by gender, age groups, state/region, malaria transmission strata |</p>
<table>
<thead>
<tr>
<th>Midterm Evaluation Questions</th>
<th>Suggested Data Sources</th>
<th>Suggested Data Collection Methods</th>
<th>Data Analysis Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Measures that have been put in place to contribute to or promote sustainability.</td>
<td>midpoint survey reports, special surveys, routine surveillance data, supervision and monitoring reports, project Standard Operating Procedures, other available data sources in country</td>
<td>focus group discussions</td>
<td>malaria transmission strata</td>
</tr>
<tr>
<td>b. Factors that still need to be addressed.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>c. The efficiency and effectiveness of the design and project management arrangements and oversight between the prime recipient and sub-partners (and sub-grantees) for achieving project objectives.</td>
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<td></td>
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<tr>
<td>d. Given unavoidable political uncertainties, the extent to which and how the project has put in place risk mitigating measures or contingency plans to minimize impact on project implementation.</td>
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</table>

**Eval II: Methods:** Check and describe the recommended methods for this analytic activity. Selection of methods should be aligned with the evaluation/assessment questions and fit within the time and resources allotted for this analytic activity. Also, include the sample or sampling frame in the description of each method selected.

**General Comments related to Methods:** The evaluator will propose appropriate and innovative methods in consultation with USAID. The evaluation team should access data from MEL plans and indicators, workplans, agreements, quarterly and yearly reports, baseline, mid-point survey reports. Interviews and other rapid appraisal methods should be used with in country implementing partners and sub-partners.

Whenever relevant, data should be analyzed by gender, age groups and for priority geographic areas of focus for Defeat Malaria and malaria burden.

**Document and Data Review** *(list of documents and data recommended for review)*

This desk review will be used to provide background information on the project/program, and will also provide data for analysis for this evaluation/assessment. Documents and data to be reviewed include but not limited to:

- Defeat Malaria Workplans, MEL Plans, quarterly and annual reports
- Defeat Malaria survey reports
- National Strategic Plan for Malaria Control in Myanmar (2016-2020)
- Myanmar MICS 2009-10 *(http://mics.unicef.org/surveys)*

**Secondary analysis of existing data** *(This is a re-analysis of existing data, beyond a review of data reports. List the data source and recommended analyses)*
Data Source (existing dataset) | Description of data | Recommended analysis
---|---|---
1. Data from the national Malaria Information System of NMCP |  | Determine key factors contributing to the burden reduction. Some modeling of the data may be required, if appropriate.
2. Data from Defeat Malaria and CAP-Malaria database |  | 
3. Data from other malaria partners, sub-recipients of Global Fund |  | 

Key Informant Interviews (list categories of key informants, and purpose of inquiry)

The following key informants will be interviewed for both the evaluation of Defeat Malaria, and to gain information pertaining to reduction of malaria in Myanmar for the assessment:

**MOHS/NMCP officials:**
1. Dr. Aung Thi, Malaria Program Manager
2. Dr. Zaw Lin, Deputy Director of VBDC
3. Dr. Thar Tun Kyaw, former Director General, former Malaria Program Manager
4. Dr. Aye Aye Myint, Chief Entomologist of VBDC
5. appropriate MOHS staff, in particular VBDC, of Tanintharyi, Kayin and possibly Rakhine

**UNOPS (Global Fund’s Principal Recipient):**
6. Dr. Faisal Mansor, Head of Program, UNOPS/Global Fund Principal Recipient
7. Dr. Eisa Hamid, M&E Health Systems Specialist, UNOPS/Global Fund Principal Recipient

**3MDG:**
8. Dr. Aye Yu Soe, Head of Program, 3MDG

**WHO:**
9. Dr. Mushfiqur Rahman, Technical Officer (Malaria), WHO office Myanmar,
10. Dr. Badri Thapa, Scientist (Malaria Control), WHO office Myanmar

**Defeat Malaria:**
11. Dr. May Aung Lin, Chief of Party, URC
12. Dr. Saw Lwin, Senior Malaria Advisor, URC
13. Dr. Myaing Myaing Nyunt, Duke University
14. Dr. Myint Oo, ARC
15. Myanmar Health Assistants Association
16. Myanmar Nurses Midwifes Association

**Others:**
17. Dr. Masatoshi Nakamura, JICA
18. Dr. Marta, Karen Department of Health and Welfare
19. Ms. Antonia Powell, Save the Children Int.

**USAID/Myanmar’s OPH:**
20. Karen Cavenaugh
21. Ben Zinner
22. Feliciano Monti
23. Nu Nu Khin
Focus Group Discussions (list categories of groups, and purpose of inquiry)

Focus Group Discussions will be conducted among representatives from:
- village beneficiaries in Rakhine, Tanintharyi and Kayin
- Village Health Committees

Group Interviews (list categories of groups, and purpose of inquiry)

Key informants may be grouped together when they represent similar category of respondent, as long as all feel free to provide their own opinions and answers.

Client/Participant Satisfaction or Exit Interviews (list who is to be interviewed, and purpose of inquiry)

Satisfaction surveys form clients of services provided by VMWs.

Eval III: Deliverables and Products: Select all deliverables and products required on this analytic activity. For those not listed, add rows as needed or enter them under “Other” in the table below. Provide timelines and deliverable deadlines for each.

<table>
<thead>
<tr>
<th>Evaluation Deliverable / Product</th>
<th>Timelines &amp; Deadlines (estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Launch briefing</td>
<td>July 23, 2018</td>
</tr>
<tr>
<td>In-brief with USAID</td>
<td>August 6, 2018</td>
</tr>
<tr>
<td>Workplan and methodology review briefing</td>
<td>August 10, 2018</td>
</tr>
<tr>
<td>Workplan submitted (must include questions, methods, timeline, data analysis plan, and instruments)</td>
<td>August 11, 2018</td>
</tr>
<tr>
<td>In-brief with Defeat Malaria</td>
<td>August 13, 2018</td>
</tr>
<tr>
<td>Routine briefings</td>
<td>Weekly</td>
</tr>
<tr>
<td>Debrief with USAID with Power Point presentation</td>
<td>September 10, 2018</td>
</tr>
<tr>
<td>IP &amp; stakeholders debrief session with Power Point presentation</td>
<td>September 11, 2018</td>
</tr>
<tr>
<td>Draft report</td>
<td>Submit to GH Pro: October 3, 2018</td>
</tr>
<tr>
<td></td>
<td>GH Pro submits to USAID: October 10, 2018</td>
</tr>
<tr>
<td>Final report</td>
<td>Submit to GH Pro: November 2, 2018</td>
</tr>
<tr>
<td></td>
<td>GH Pro submits to USAID: November 9, 2018</td>
</tr>
<tr>
<td>Raw data (cleaned datasets in CSV or XML with codesheet)</td>
<td>November 5, 2018</td>
</tr>
<tr>
<td>Report Posted to the DEC</td>
<td>January 11, 2019</td>
</tr>
</tbody>
</table>

Other (specify):

Holidays, August – December 2018:
- Sept 3, 2018 ................... Labor Day ................................................................................... US
- Oct 8, 2018 .................... Columbus Day ........................................................................ US
- Oct 24, 2018 .................. Full Moon Day of Thadingyut (End of Buddhist Lent) ..... Myanmar
- Nov 12, 2018 ................... Veterans Day ...................................................................... US
- Nov 22, 2018 ................... Thanksgiving Day ..................................................................... US
- Dec 2, 2018 ..................... National Day ........................................................................ Myanmar
- Dec 25, 2018 ................... Christmas Day ........................................................................ US
Eval. IV: Team Composition, Skills and Level Of Effort (LOE)

Evaluation/Assessment team: When planning this analytic activity, consider:

- Key staff should have methodological and/or technical expertise, regional or country experience, language skills, team lead experience and management skills, etc.
- Team leaders for evaluations/assessments must be an external expert with appropriate skills and experience.
- Additional team members can include research assistants, enumerators, translators, logisticians, etc.
- Teams should include a collective mix of appropriate methodological and subject matter expertise.
- Evaluations require an Evaluation Specialist, who should have evaluation methodological expertise needed for this activity. Similarly, other analytic activities should have a specialist with methodological expertise.
- Note that all team members will be required to provide a signed statement attesting that they have no conflict of interest (COI), or describing the conflict of interest if applicable.

Team Qualifications: Please list technical areas of expertise required for this activity:

<table>
<thead>
<tr>
<th>Overall Team requirements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>All team members will be required to provide a signed statement attesting to a lack of conflict of interest or describing any existing conflict of interest.</td>
</tr>
</tbody>
</table>

The evaluation team shall demonstrate familiarity with USAID’s Evaluation Policy (will be provided as an annex) and guidance included in the USAID Automated Directive System (ADS) in Chapter 201.

Midterm Evaluation Team composition and requirements

Evaluation Key Staff 1 Title: Team Lead & Malaria Specialist

Roles & Responsibilities: The team leader will be responsible for (1) providing team leadership; (2) managing the team’s activities, (3) ensuring that all deliverables are met in a timely manner, (4) serving as a liaison between the USAID and the evaluation team, and (5) leading briefings and presentations.

Qualifications:

- Minimum of 10 years of experience in public health, which included experience in implementation of malaria programs
- Demonstrated experience leading health sector project/program evaluation/assessments, utilizing both quantitative and qualitative methods
- Excellent skills in planning, facilitation, and consensus building
- Excellent interpersonal skills, including experience successfully interacting with host government officials, civil society partners, and other stakeholders
- Excellent skills in project management
- Excellent organizational skills and ability to keep to a timeline
- Good writing skills, with extensive report writing experience
- Experience working in Asia and/or Southeast Asia is required, and experience in Myanmar is highly desirable
- Familiarity with USAID
- Familiarity with USAID policies and practices
Evaluation policy
- Results frameworks
- Performance monitoring plans

Evaluation Key Staff 2 Title: Evaluation Specialist

Roles & Responsibilities: Serve as a member of the evaluation team, providing quality assurance on analytic issues, including methods, development of data collection instruments, protocols for data collection, data management and data analysis. S/He will oversee the training of all engaged in data collection, insuring highest level of reliability and validity of data being collected. S/He is the lead analyst, responsible for all data analysis, and will coordinate the analysis of all data, assuring all quantitative and qualitative data analyses are done to meet the needs for this evaluation. S/He will participate in all aspects of the evaluation, from planning, data collection, data analysis to report writing.

Qualifications:

- At least 8 years of experience in USAID M&E procedures and implementation
- Experience monitoring and/or evaluating health programs - malaria programs is desirable
- At least 5 years managing M&E, including evaluations and/or assessments
- Experience in design and implementation of evaluations and/or assessments
- Strong knowledge, skills, and experience in qualitative and quantitative analytic tools
- Experience implementing and coordinating others to implement surveys, key informant interviews, focus groups, observations and other evaluation and assessment methods that assure reliability and validity of the data.
- Experience in data management
- Able to analyze quantitative data, which will be primarily descriptive statistics and cross-tabulations
- Able to analyze qualitative data
- Experience using analytic software
- Demonstrated experience using qualitative evaluation methodologies, and triangulating with quantitative data
- Experience conducting secondary analysis of existing quantitative datasets
- Able to review, interpret and reanalyze as needed existing data pertinent to the evaluation
- Strong data interpretation and presentation skills
- Experience working in Asia and/or Southeast Asia is required, and experience in Myanmar is highly desirable
- Proficient in written and spoken English
- Good writing skills, including experience writing evaluation and/or assessment reports
- Familiarity with USAID M&E policies and practices
  - Evaluation policies
  - Results frameworks
  - Performance monitoring plans

Local Evaluation Logistics/Program Assistant will support the Evaluation Team with all logistics and administration to allow them to carry out this evaluation. The Logistics/Program Assistant will also serve as translator/interpreter, as needed. S/he will have a good command of English and Burmese. S/He will have knowledge of key actors in the health sector and their locations including MOH, donors and other stakeholders. To support the Team, s/he will be able to efficiently liaise with hotel staff, arrange in-country transportation (ground and air), arrange meeting and workspace as needed, and insure business center support, e.g. copying, internet, and printing. S/he will work under
the guidance of the Evaluation Team Lead to make preparations, arrange meetings and appointments. S/he will conduct programmatic administrative and support tasks as assigned and ensure the processes moves forward smoothly. S/He may also be asked to assist in translation of data collection tools and transcripts, if needed.

Will USAID participate as an active team member or designate other key stakeholders to as an active team member? This will require full time commitment during the evaluation or assessment activity.

☐ Full member of the Evaluation Team (including planning, data collection, analysis and report development) – If yes, specify who:

☑ Some Involvement anticipated – If yes, specify who: The team may be supported by the PMI/Myanmar Resident Malaria Advisor, where possible

☐ No

**Evaluation Staffing Level of Effort (LOE) Matrix:**

Level of Effort in days for each Evaluation/Analytic Team member

<table>
<thead>
<tr>
<th>Evaluation Activity / Deliverable</th>
<th>Evaluation Team</th>
<th>Team Leader / Malaria Expert</th>
<th>Eval Specialist</th>
<th>Logistics / Prog Asst</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Launch Briefing (kick-off) - call</td>
<td></td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 HTSOS Training</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Desk review</td>
<td></td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4 Preparation for Team convening in-country</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>5 Travel to Myanmar</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 In-brief with Mission</td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>7 Team Planning Meeting</td>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8 Workplan and methodology briefing with USAID</td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>9 Eval planning deliverables: 1) workplan with timeline, eval matrix, protocol (methods, sampling &amp; analytic plan); 2) data collection tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 In-brief with Defeat Malaria</td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>11 Data Collection DQA Workshop (protocol orientation/training for all data collectors)</td>
<td></td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>12 Prep / Logistics for Site Visits</td>
<td></td>
<td>0.5</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>13 Data collection / Site Visits (including travel to sites)</td>
<td></td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>14 Data analysis</td>
<td></td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>15 Debrief with Mission with prep</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>16 IP &amp; Stakeholder debrief workshop with prep</td>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>17 Depart country</td>
<td></td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Draft report(s)</td>
<td></td>
<td>7</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>19 GH Pro Report QC Review &amp; Formatting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Submission of draft report(s) to Mission</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
XI. Component B: Malaria Burden Reduction Assessment

Assm’t I. Assessment Questions & Matrix: As with USAID Evaluation Policy GH Pro recommends 1 to 5 assessment questions.

<table>
<thead>
<tr>
<th>Malaria Burden Reduction Assessment Questions</th>
<th>Suggested Data Sources</th>
<th>Suggested Data Collection Methods</th>
<th>Data Analysis Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1: What is the accuracy, degree of intensity, and geographical extent of the declining trend of malaria burden reported in recent years in Myanmar? In answering this question, the offeror should address the following:</td>
<td>Data from NMCP, WHO and other malaria partners, Malaria Indicator Survey (2015) and DHS (2016), reports from malaria partners, health and malaria surveys reports, special surveys reports, published articles, routine surveillance data, supervision and monitoring reports, other available data sources in country</td>
<td>Desk review, data collection, secondary analysis, key informant interviews, focus group discussions</td>
<td>Disaggregate by gender, age groups, state/region, malaria transmission strata</td>
</tr>
<tr>
<td>a. Provide the types and sources of data, indicators, and studies that provide sufficient evidence of the rapid and significant reduction of malaria burden reported in recent years in several parts of Myanmar, including noting a starting point of this declining trend, if possible.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Note geographical areas that have achieved a more rapid and/or significant reduction of malaria burden than others, and provide information about factors that have contributed to their achievements.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Note if the rate of decline in Defeat Malaria areas is different, more or less significant than areas supported by other partners.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 2: What factors (internal or/and external) have contributed to Myanmar’s reduction of malaria burden, and the degree of those contributions?</td>
<td>Data from NMCP, WHO and other malaria partners, Malaria Indicator Survey (2015) and DHS (2016), reports from malaria partners, health and malaria surveys</td>
<td>Desk review, secondary analysis, in country consultations</td>
<td></td>
</tr>
<tr>
<td>a. The extent to which and how there has been an increase in coverage of malaria control interventions, in particular diagnosis and treatment services (public, private, community-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluation Activity / Deliverable</th>
<th>Team Leader / Malaria Expert</th>
<th>Eval Specialist</th>
<th>Logistics / Prog Asst</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 USAID Report Review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Revise report(s) per USAID comments</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>23 Finalize and submit report to USAID</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 USAID approves report</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 Final copy editing and formatting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>26 508 Compliance editing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27 Eval Report(s) to the DEC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total LOE per person</strong></td>
<td>51</td>
<td>43</td>
<td>30</td>
</tr>
<tr>
<td>Malaria Burden Reduction Assessment Questions</td>
<td>Suggested Data Sources</td>
<td>Suggested Data Collection Methods</td>
<td>Data Analysis Methods</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>------------------------</td>
<td>-----------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>based) and vector control measures, contributed to the declining trend.</td>
<td>reports, special surveys reports, published articles, routine surveillance data, supervision and monitoring reports, other available data sources in country</td>
<td>Desk review, secondary analysis, in country consultations</td>
<td>Disaggregate by gender, age groups, state/region, malaria transmission strata</td>
</tr>
<tr>
<td>b. The extent to which and how there has been improvement in the quality of data and reporting, including the benefits of the stratification approach.</td>
<td>Data from NMCP, WHO and other malaria partners, Malaria Indicator Survey (2015) and DHS (2016), reports from malaria partners, health and malaria surveys reports, special surveys reports, published articles, routine surveillance data, supervision and monitoring reports, other available data sources in country</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. The coverage and results of control interventions among those considered as main high-risk groups: underserved communities, forest goers, mobile and migrant populations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Other contextual factors (e.g. housing condition, climate, deforestation, etc.) that have contributed to the declining trend.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 3: How can the factors which enabled this reduction in malaria rates be further enhanced in the implementation of Defeat Malaria?

a. Other factors (approaches/interventions) which should have been included to address significant matters, or were included and addressed minor themes/areas?

Methods: Check and describe the recommended methods for this analytic activity. Selection of methods should be aligned with the evaluation/assessment questions and fit within the time and resources allotted for this analytic activity. Also, include the sample or sampling frame in the description of each method selected.

General Comments related to Methods: The evaluator will propose appropriate and innovative methods in consultation with USAID. The evaluation team should access data from MEL plans and indicators, workplans, agreements, quarterly and yearly reports, baseline, mid-point survey reports. Interviews and other rapid appraisal methods should be used with in country implementing partners and sub-partners.

Whenever relevant, data should be analyzed by gender, age groups and for priority geographic areas of focus for Defeat Malaria and malaria burden.

Document and Data Review (list of documents and data recommended for review)
This desk review will be used to provide background information on the project/program, and will also provide data for analysis for this evaluation/assessment. Documents and data to be reviewed include but not limited to:

- Defeat Malaria Workplans, MEL Plans, quarterly and annual reports
- Defeat Malaria survey reports
- National Strategic Plan for Malaria Control in Myanmar (2016-2020)
- Myanmar MICS 2009-10 (http://mics.unicef.org/surveys)

- **Secondary analysis of existing data** (This is a re-analysis of existing data, beyond a review of data reports. List the data source and recommended analyses)

<table>
<thead>
<tr>
<th>Data Source (existing dataset)</th>
<th>Description of data</th>
<th>Recommended analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Data from the national Malaria Information System of NMCP</td>
<td></td>
<td>Determine key factors contributing to the burden reduction. Some modeling of the data may be required, if appropriate.</td>
</tr>
<tr>
<td>2. Data from Defeat Malaria and CAP-Malaria database</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Data from other malaria partners, sub-recipients of Global Fund</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Key Informant Interviews** (list categories of key informants, and purpose of inquiry)

The following key informants will be interviewed for both the evaluation of Defeat Malaria, and to gain information pertaining to reduction of malaria in Myanmar for the assessment:

**MOHS/NMCP officials:**
1. Dr. Aung Thi, Malaria Program Manager
2. Dr. Zaw Lin, Deputy Director of VBDC
3. Dr. Thar Tun Kyaw, MOHS, former Director General, former Malaria Program Manager
4. appropriate MOHS staff, in particular VBDC, of Tanintharyi, Kayin and possibly Rakhine
5. Dr. Aye Aye Myint, Chief Entomologist of VBDC

**3MDG:**
6. Dr. Aye Yu Soe, Head of Program
7. Mr. Robert Maurice Bennoun, Strategic Advisor-Program Development
8. Ms. Gulshod Allabergenova, M&E Officer

**UNOPS (Global Fund’s Principal Recipient):**
9. Dr. Attila Molnar, Regional Director
10. Dr. Faisal Mansor, Head of Program
11. Dr. Eisa Hamid, M&E Health Systems Specialist

**WHO:**
12. Dr. Leonard Ortega, WHO Geneva, former Malaria Officer at WHO Myanmar
13. Dr. Mushfiqur Rahman, Malaria Technical Officer, WHO office Myanmar
14. Dr. Badri Thapa, Scientist (Malaria Control), WHO office Myanmar

**Defeat Malaria:**
15. Dr. Saw Lwin, Senior Malaria Advisor, URC
16. Dr. Myaing Myaing Nyunt, Duke University
17. Dr. Chris Plaw, Duke University
18. Dr. Myint Oo, ARC
19. Myanmar Health Assistants Association
20. Myanmar Nurses Midwives Association,

Others:
21. Dr. Marta, Karen Department of Health and Welfare (KDHW)
22. Dr. Khin Lin, former Director Dept Medical Research, Pyin Oo Lwin
23. Dr. Masatoshi Nakamura, JICA
24. DFID
25. ADB: Dr. Kyi Thar
26. Dr. Khin Mon Mon, former Malaria Program Manager

Key malaria partners in Myanmar:
27. Shoklo Malaria Research Unit: Dr. Gilles Delmas
28. Medical Action Myanmar: Dr. Frank Smithuis
29. Health Poverty Action
30. Malteser International: Dr. Myo Myint Tun
31. Myanmar Council of Churches: Dr. Khin Maung Wynn

Save the Children:
   a. Ms. Antonia Powell
   b. Dr. Min Min Thein

33. PSI:
   a. Dr. Hnin Su Su Khin
   b. Dr. Phone Si Hein
   c. Dr. Si Thu Thein

34. Myanmar Medical Association
35. World Vision

USAID/Myanmar’s OPH staff:
36. Karen Cavenaugh
37. Ben Zinner
38. Feliciano Monti
39. Nu Nu Khin

Group Interviews (list categories of groups, and purpose of inquiry)

Key informants may be grouped together when they represent similar category of respondent, as long as all are free to provide their own opinions and answers.

Other (list and describe other methods recommended for this evaluation/assessment, and purpose of inquiry)

Analysis of external factors to malaria control interventions which could have contributed to the malaria burden reduction (e.g. housing improvement, increased household purchasing power, transport improvement, socio-economic development, deforestation, better access to general health services, etc.)
Assm’t II. Deliverables and Products
Select all deliverables and products required on this analytic activity. For those not listed, add rows as needed or enter them under “Other” in the table below. Provide timelines and deliverable deadlines for each.

<table>
<thead>
<tr>
<th>Assessment Deliverable / Product</th>
<th>Timelines &amp; Deadlines (estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☑ Launch briefing</td>
<td>September 17, 2018</td>
</tr>
<tr>
<td>☑ In-brief with USAID</td>
<td>September 24, 2018</td>
</tr>
<tr>
<td>☑ Workplan and methodology review briefing</td>
<td>September 28, 2018</td>
</tr>
<tr>
<td>☑ Workplan (must include questions, methods, timeline, data analysis plan, and instruments)</td>
<td>October 1, 2018</td>
</tr>
<tr>
<td>☑ Routine briefings</td>
<td>Weekly</td>
</tr>
<tr>
<td>☑ Out-brief with USAID with Power Point presentation</td>
<td>October 26, 2018</td>
</tr>
<tr>
<td>☑ Draft report</td>
<td>Submit to GH Pro: November 28, 2018</td>
</tr>
<tr>
<td></td>
<td>GH Pro submits to USAID: December 6, 2018</td>
</tr>
<tr>
<td>☑ Final report</td>
<td>Submit to GH Pro: January 7, 2019</td>
</tr>
<tr>
<td></td>
<td>GH Pro submits to USAID: January 14, 2019</td>
</tr>
<tr>
<td>☑ Raw data (cleaned datasets in CSV or XML with codesheet)</td>
<td>January 8, 2019</td>
</tr>
<tr>
<td>☑ Report posted to the DEC</td>
<td>February 2019</td>
</tr>
<tr>
<td>☑ Other (specify):</td>
<td></td>
</tr>
</tbody>
</table>

Holidays, August – December 2018:
- September 3, 2018...........Labor Day................................................................. US
- October 8, 2018.............Columbus Day............................................................... US
- Oct 24, 2018...............Full Moon Day of Thadingyut (End of Buddhist Lent)..... Myanmar
- Nov 12, 2018..............Veterans Day................................................................. US
- Nov 22, 2018...............Thanksgiving Day.......................................................... US
- Dec 2, 2018...............National Day................................................................. Myanmar
- Dec 25, 2018...............Christmas Day............................................................. US

Assm’t III. Team Composition, Skills and Level of Effort (LOE)
Evaluation/Assessment team: When planning this analytic activity, consider:

- Key staff should have methodological and/or technical expertise, regional or country experience, language skills, team lead experience and management skills, etc.
- Team leaders for evaluations/assessments must be an external expert with appropriate skills and experience.
- Additional team members can include research assistants, enumerators, translators, logisticians, etc.
- Teams should include a collective mix of appropriate methodological and subject matter expertise.
- Evaluations require an Evaluation Specialist, who should have evaluation methodological expertise needed for this activity. Similarly, other analytic activities should have a specialist with methodological expertise.
- Note that all team members will be required to provide a signed statement attesting that they have no conflict of interest (COI), or describing the conflict of interest if applicable.

Team Qualifications: Please list technical areas of expertise required for this activity:
Overall Team requirements:

All team members will be required to provide a signed statement attesting to a lack of conflict of interest or describing any existing conflict of interest.

The assessment team shall demonstrate familiarity with USAID’s Evaluation Policy (will be provided as an annex) and guidance included in the USAID Automated Directive System (ADS) in Chapter 201.

Assessment Team composition and requirements

Assessment Key Staff 1 Title: Team Lead & Malaria Specialist

Roles & Responsibilities: The team leader will be responsible for (1) providing team leadership; (2) managing the team’s activities, (3) ensuring that all deliverables are met in a timely manner, (4) serving as a liaison between the USAID and the assessment team, and (5) leading briefings and presentations.

Qualifications:

- Minimum of 10 years of experience in public health, which included experience in implementation of malaria programs
- Demonstrated experience leading health sector project/program evaluation/assessments, utilizing both quantitative and qualitative methods
- Excellent skills in planning, facilitation, and consensus building
- Excellent interpersonal skills, including experience successfully interacting with host government officials, civil society partners, and other stakeholders
- Excellent skills in project management
- Excellent organizational skills and ability to keep to a timeline
- Good writing skills, with extensive report writing experience
- Experience working in Asia and/or Southeast Asia is required, and experience in Myanmar is highly desirable
- Familiarity with USAID
- Familiarity with USAID policies and practices
  - Evaluation policy
  - Results frameworks
  - Performance monitoring plans

Assessment Key Staff 2 Title: Assessment and M&E Specialist

Roles & Responsibilities: Serve as a member of the assessment team, providing quality assurance on analytic issues, including methods, development of data collection instruments, protocols for data collection, data management and data analysis. S/He will oversee the training of all engaged in data collection, insuring highest level of reliability and validity of data being collected. S/He is the lead analyst, responsible for all data analysis, and will coordinate the analysis of all data, assuring all quantitative and qualitative data analyses are done to meet the needs for this assessment. S/He will participate in all aspects of the evaluation, from planning, data collection, data analysis to report writing.

Qualifications:

- At least 8 years of experience in USAID M&E procedures and implementation
- Experience assessing, monitoring and/or evaluating health programs - malaria programs is desirable
- At least 5 years managing M&E, including evaluations and/or assessments
- Experience in design and implementation of evaluations and/or assessments
Strong knowledge, skills, and experience in qualitative and quantitative analytic tools
Experience implementing and coordinating others to implement surveys, key informant interviews, focus groups, observations and other evaluation and assessment methods that assure reliability and validity of the data.
Experience in data management
Able to analyze quantitative data, which will be primarily descriptive statistics and cross-tabulations
Able to analyze qualitative data
Experience using analytic software
Demonstrated experience using qualitative evaluation methodologies, and triangulating with quantitative data
Experience conducting secondary analysis of existing quantitative datasets
Able to review, interpret and reanalyze as needed existing data pertinent to the evaluation
Strong data interpretation and presentation skills
Experience working in Asia and/or Southeast Asia is required, and experience in Myanmar is highly desirable
Proficient in written and spoken English
Good writing skills, including experience writing evaluation and/or assessment reports
Familiarity with USAID M&E policies and practices
  - Evaluation policies
  - Results frameworks
  - Performance monitoring plans

Local **Evaluation Logistics/Program Assistant** will support the Assessment Team with all logistics and administration to allow them to carry out this evaluation. The Logistics/Program Assistant will also serve as translator/interpreter, as needed. S/he will have a good command of English and Burmese. S/He will have knowledge of key actors in the health sector and their locations including MOH, donors and other stakeholders. To support the Team, s/he will be able to efficiently liaise with hotel staff, arrange in-country transportation (ground and air), arrange meeting and workspace as needed, and insure business center support, e.g. copying, internet, and printing. S/he will work under the guidance of the Assessment Team Leader to make preparations, arrange meetings and appointments. S/he will conduct programmatic administrative and support tasks as assigned and ensure the processes moves forward smoothly. S/He may also be asked to assist in translation of data collection tools and transcripts, if needed.

*Will USAID participate as an active team member or designate other key stakeholders to as an active team member? This will require full time commitment during the evaluation or assessment activity.*

☐ Full member of the Evaluation Team (including planning, data collection, analysis and report development) – If yes, specify who:

☑ Some Involvement anticipated – If yes, specify who: The team will be supported by the PMI/Myanmar Resident Malaria Advisor, and other members of the PMI country team

☐ No

**Assessment Staffing Level of Effort (LOE) Matrix:**

Level of Effort in **days** for each Assessment Team member
<table>
<thead>
<tr>
<th>Assessment Activity / Deliverable</th>
<th>Team Leader / Assessment Specialist</th>
<th>Malaria Expert 1 (int’l)</th>
<th>Malaria Expert 2 (local)</th>
<th>Logistic s / Prog Asst</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Launch Briefing (kick-off) - call</td>
<td>0.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 HTSOS Training</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Desk review</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4 Preparation for Team convening in-country</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Travel to Myanmar</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 In-brief with Mission</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>7 Team Planning Meeting</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>8 Workplan and methodology briefing with USAID</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>9 Assessment planning deliverables: 1) workplan with timeline, assessment matrix, protocol (methods, sampling &amp; analytic plan); 2) data collection tools</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Data Collection DQA Workshop (protocol orientation/training for all data collectors)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>11 Prep / Logistics for Site Visits</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>2</td>
</tr>
<tr>
<td>12 Data collection / Site Visits (including travel to sites)</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>13 Data analysis</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>14 Debrief with Mission with prep</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>15 Depart country</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 Draft report(s)</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>17 GH Pro Report QC Review &amp; Formatting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Submission of draft report(s) to Mission</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>19 USAID Report Review</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20 Revise report(s) per USAID comments</td>
<td>3</td>
<td>1.5</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>21 Finalize and submit report to USAID</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>22 USAID approves report</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23 Final copy editing and formatting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>24 508 Compliance editing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 Assessment Report(s) to the DEC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total LOE per person</strong></td>
<td><strong>46</strong></td>
<td><strong>41</strong></td>
<td><strong>38</strong></td>
<td><strong>25</strong></td>
</tr>
</tbody>
</table>

**HUMAN SUBJECT PROTECTION**

The Analytic Team must develop protocols to insure privacy and confidentiality prior to any data collection. Primary data collection must include a consent process that contains the purpose of the evaluation/assessment, the risk and benefits to the respondents and community, the right to refuse to answer any question, and the right to refuse participation in the evaluation/assessment at any time without consequences. **Minors cannot be respondents to any interview or survey, and cannot participate in a focus**
group discussion without going through an IRB. The only time minors can be observed as part of this evaluation/assessment is as part of a large community-wide public event, when they are part of family and community in the public setting. During the process of this evaluation/assessment, if data are abstracted from existing documents that include unique identifiers, data can only be abstracted without this identifying information.

An Informed Consent statement included in all data collection interactions must contain:
- Introduction of facilitator/note-taker
- Purpose of the evaluation/assessment
- Purpose of interview/discussion/survey
- Statement that all information provided is confidential and information provided will not be connected to the individual
- Right to refuse to answer questions or participate in interview/discussion/survey
- Request consent prior to initiating data collection (i.e., interview/discussion/survey)

XII. Analytic Plan
Describe how the quantitative and qualitative data will be analyzed. Include method or type of analyses, statistical tests, and what data it to be triangulated (if appropriate). For example, a thematic analysis of qualitative interview data, or a descriptive analysis of quantitative survey data.

All analyses will be geared to answer the evaluation/assessment questions. Additionally, the evaluation will review both qualitative and quantitative data related to the project/program’s achievements against its objectives and/or targets.

Quantitative data will be analyzed primarily using descriptive statistics. Data will be stratified by demographic characteristics, such as sex, age, and location, whenever feasible. Other statistical test of association (i.e., odds ratio) and correlations will be run as appropriate.

Thematic review of qualitative data will be performed, connecting the data to the evaluation questions, seeking relationships, context, interpretation, nuances and homogeneity and outliers to better explain what is happening and the perception of those involved. Qualitative data will be used to substantiate quantitative findings, provide more insights than quantitative data can provide, and answer questions where other data do not exist.

Use of multiple methods that are quantitative and qualitative, as well as existing data (e.g., project/program performance indicator data, DHS, NMCP data, etc.) will allow the Team to triangulate findings to produce more robust evaluation results.

The Evaluation and Assessment Reports will describe analytic methods and statistical tests employed in this evaluation.

Estimated USAID review time
Average number of business days USAID will need to review a Report? 10 Business days per round of review

If overseas, is a 6-day workweek permitted
■ Yes  ☐ No

Travel anticipated: List international and local travel anticipated by what team members.

Possible travel regions - Tanintharyi region, Kayin State and Nay Pyi Taw (The capital), and Yangon (Former capital city)
XIII. Logistics

Visa Requirements

List any specific Visa requirements or considerations for entry to countries that will be visited by consultant(s):

The visa application for international consultants could be applied as visa-on-arrival or regular business visa application. The visa-on-arrival is eligible for 30 days and regular business visa is eligible for 3 months.

List recommended/required type of Visa for entry into counties where consultant(s) will work

<table>
<thead>
<tr>
<th>Name of Country</th>
<th>Type of Visa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Myanmar</td>
<td>☐ Tourist</td>
</tr>
<tr>
<td></td>
<td>☐ Tourist</td>
</tr>
<tr>
<td></td>
<td>☐ Tourist</td>
</tr>
<tr>
<td></td>
<td>☐ Tourist</td>
</tr>
</tbody>
</table>

Clearances & Other Requirements

Note: Most Evaluation/Analytic Teams arrange their own work space, often in conference rooms at their hotels. However, if a Security Clearance or Facility Access is preferred, GH Pro can submit an application for it on the consultant’s behalf.

GH Pro can obtain Facility Access (FA) and transfer existing Secret Security Clearance for our consultants, but please note these requests, processed through AMS at USAID/GH (Washington, DC), can take 4-6 months to be granted. If you are in a Mission and the RSO is able to grant a temporary FA locally, this can expedite the process. FAs for non-US citizens or Green Card holders must be obtained through the RSO. If FA or Security Clearance is granted through Washington, DC, the consultant must pick up his/her badge in person at the Office of Security in Washington, DC, regardless of where the consultant resides or will work.

If Electronic Country Clearance (eCC) is required prior to the consultant’s travel, the consultant is also required to complete the High Threat Security Overseas Seminar (HTSOS). HTSOS is an interactive e-Learning (online) course designed to provide participants with threat and situational awareness training against criminal and terrorist attacks while working in high threat regions. There is a small fee required to register for this course. [Note: The course is not required for employees who have taken FACT training within the past five years or have taken HTSOS within the same calendar year.]

If eCC is required, and the consultant is expected to work in country more than 45 consecutive days, the consultant may be required complete the one week Foreign Affairs Counter Threat (FACT) course offered by FSI in West Virginia. This course provides participants with the knowledge and skills to better prepare themselves for living and working in critical and high threat overseas environments. Registration for this course is complicated by high demand (consultants must register approximately 3-4 months in advance). Additionally, there will be the cost for additional lodging and M&E to take this course.
Check all that the consultant will need to perform this assignment, including USAID Facility Access, GH Pro workspace and travel (other than to and from post).

☐ USAID Facility Access (FA)
   Specify who will require Facility Access: ________________________________

☐ Electronic County Clearance (ECC) (International travelers only)
   ☐ High Threat Security Overseas Seminar (HTSOS) (required in most countries with ECC)
   ☐ Foreign Affairs Counter Threat (FACT) (for consultants working on country more than 45 consecutive days)

☐ GH Pro workspace
   Specify who will require workspace at GH Pro: ________________________________

☐ Travel -other than posting (specify): ________________________________

☐ Other (specify): ________________________________

Specify any country-specific security concerns and/or requirements

There are some geographic areas with travel restrictions. As we move forward for evaluation design and site selection, this issue could be discussed later.

XIV. **GH Pro Roles and Responsibilities**

GH Pro will coordinate and manage the evaluation/assessment team and provide quality assurance oversight, including:

- Review SOW and recommend revisions as needed
- Provide technical assistance on methodology, as needed
- Develop budget for analytic activity
- Recruit and hire the evaluation/assessment team, with USAID POC approval
- Arrange international travel and lodging for international consultants
- Request for country clearance and/or facility access (if needed)
- Review methods, workplan, analytic instruments, reports and other deliverables as part of the quality assurance oversight
- Report production - If the report is public, then coordination of draft and finalization steps, editing/formatting, 508ing required in addition to and submission to the DEC and posting on GH Pro website. If the report is internal, then copy editing/formatting for internal distribution.

XV. **USAID Roles and Responsibilities**

Below is the standard list of USAID’s roles and responsibilities. Add other roles and responsibilities as appropriate.

<table>
<thead>
<tr>
<th>USAID Roles and Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>USAID</strong> will provide overall technical leadership and direction for the analytic team throughout the assignment and will provide assistance with the following tasks:</td>
</tr>
<tr>
<td><strong>Before Field Work</strong></td>
</tr>
<tr>
<td>- <strong>SOW.</strong></td>
</tr>
<tr>
<td>- Develop SOW.</td>
</tr>
</tbody>
</table>
Peer Review SOW
- Respond to queries about the SOW and/or the assignment at large.

Consultant Conflict of Interest (COI). To avoid conflicts of interest or the appearance of a COI, review previous employers listed on the CV’s for proposed consultants and provide additional information regarding potential COI with the project contractors evaluated/assessed and information regarding their affiliates.

Documents. Identify and prioritize background materials for the consultants and provide them to GH Pro, preferably in electronic form, at least one week prior to the inception of the assignment.

Local Consultants. Assist with identification of potential local consultants, including contact information.

Site Visit Preparations. Provide a list of site visit locations, key contacts, and suggested length of visit for use in planning in-country travel and accurate estimation of country travel line items costs.

Lodgings and Travel. Provide guidance on recommended secure hotels and methods of in-country travel (i.e., car rental companies and other means of transportation).

During Field Work
- Mission Point of Contact. Throughout the in-country work, ensure constant availability of the Point of Contact person and provide technical leadership and direction for the team’s work.
- Meeting Space. Provide guidance on the team’s selection of a meeting space for interviews and/or focus group discussions (i.e. USAID space if available, or other known office/hotel meeting space).
- Meeting Arrangements. Assist the team in arranging and coordinating meetings with stakeholders.
- Facilitate Contact with Implementing Partners. Introduce the analytic team to implementing partners and other stakeholders, and where applicable and appropriate prepare and send out an introduction letter for team’s arrival and/or anticipated meetings.

After Field Work
- Timely Reviews. Provide timely review of draft/final reports and approval of deliverables.

XVI. Analytic Report
Provide any desired guidance or specifications for Final Report. (See How-To Note: Preparing Evaluation Reports)

The Evaluation/Assessment Final Report must follow USAID’s Criteria to Ensure the Quality of the Report (found in Appendix I of the USAID Evaluation Policy).

- The structure of the report should follow the Evaluation Report template, including branding found here or here.
- Draft reports must be provided electronically, in English, to GH Pro who will then submit it to USAID.
- For additional Guidance, please see the Evaluation Reports to the How-To Note on preparing Evaluation Draft Reports found here.

USAID Criteria to Ensure the Quality of the Evaluation Report (USAID ADS 201):
- Evaluation reports should be readily understood and should identify key points clearly, distinctly, and succinctly.
- The Executive Summary of an evaluation report should present a concise and accurate
Evaluation reports should adequately address all evaluation questions included in the SOW, or the evaluation questions subsequently revised and documented in consultation and agreement with USAID.

Evaluation methodology should be explained in detail and sources of information properly identified.

Limitations to the evaluation should be adequately disclosed in the report, with particular attention to the limitations associated with the evaluation methodology (selection bias, recall bias, unobservable differences between comparator groups, etc.).

Evaluation findings should be presented as analyzed facts, evidence, and data and not based on anecdotes, hearsay, or simply the compilation of people’s opinions.

Findings and conclusions should be specific, concise, and supported by strong quantitative or qualitative evidence.

If evaluation findings assess person-level outcomes or impact, they should also be separately assessed for both males and females.

If recommendations are included, they should be supported by a specific set of findings and should be action-oriented, practical, and specific.

**Reporting Guidelines:** The draft report should be a comprehensive analytical evidence-based evaluation/assessment report. It should detail and describe results, effects, constraints, and lessons learned, and provide recommendations and identify key questions for future consideration. The report shall follow USAID branding procedures. **The Evaluation and Assessment reports will be edited/formatted and made 508-compliant as required by USAID for public reports and will be posted to the USAID/DEC [Evaluation report only].**

The findings from the evaluation/assessment will be presented in a draft report at a full briefing with USAID and at a follow-up meeting with key stakeholders. The report should use the following format:

- Abstract: briefly describing what was evaluated, evaluation questions, methods, and key findings or conclusions (not more than 250 words)
- Executive Summary: summarizes key points, including the purpose, background, evaluation questions, methods, limitations, findings, conclusions, and most salient recommendations (2-5 pages)
- Table of Contents (1 page)
- Acronyms
- Evaluation/Analytic Purpose and Evaluation/Analytic Questions: state purpose of, audience for, and anticipated use(s) of the evaluation/assessment (1-2 pages)
- Project [or Program] Background: describe the project/program and the background, including country and sector context, and how the project/program addresses a problem or opportunity (1-3 pages)
- Evaluation/Analytic Methods and Limitations: data collection, sampling, data analysis and limitations (1-3 pages)
- Findings (organized by Evaluation/Analytic Questions): substantiate findings with evidence/data
- Conclusions
- Recommendations
- Annexes
  - Annex I: Evaluation/Analytic Statement of Work
  - Annex II: Evaluation/Analytic Methods and Limitations ((if not described in full in the main body of the evaluation report)
  - Annex III: Data Collection Instruments
  - Annex IV: Sources of Information
- List of Persons Interviews
- Bibliography of Documents Reviewed
- Databases
- [etc.]
  - Annex V: Statement of Differences (if applicable)
  - Annex VI: Disclosure of Any Conflicts of Interest
  - Annex VII: Summary information about evaluation team members, including qualifications, experience, and role on the team.

The evaluation methodology and report will be compliant with the USAID Evaluation Policy and USAID Evaluation report requirements.

--------------------------------

The Evaluation Report should exclude any potentially procurement-sensitive information. As needed, any procurement sensitive information or other sensitive but unclassified (SBU) information will be submitted in a memo to USAID separate from the Evaluation Report.

--------------------------------

All data instruments, data sets (if appropriate), presentations, meeting notes and report for this evaluation/analysis will be submitted electronically to the GH Pro Program Manager. All datasets developed as part of this evaluation/assessment activity will be submitted to GH Pro in an unlocked machine-readable format (CSV or XML). The datasets must not include any identifying or confidential information. The datasets must also be accompanied by a data dictionary that includes a codebook and any other information needed for others to use these data. Qualitative data included in this submission should not contain identifying or confidential information. Category of respondent is acceptable, but names, addresses and other confidential information that can easily lead to identifying the respondent should not be included in any quantitative or qualitative data submitted.

XVII. USAID Contacts

<table>
<thead>
<tr>
<th>Primary Contact</th>
<th>Alternate Contact 1</th>
<th>Alternate Contact 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Pyae Phyo Aung</td>
<td>Feliciano Monti</td>
</tr>
<tr>
<td>Title:</td>
<td>M&amp;E Specialist</td>
<td>Malaria Advisor</td>
</tr>
<tr>
<td>USAID Office/Mission</td>
<td>Program Development Office, USAID/Burma</td>
<td>Office of Public Health, USAID/Burma</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:ppaung@usaid.gov">ppaung@usaid.gov</a></td>
<td><a href="mailto:fmonti@usaid.gov">fmonti@usaid.gov</a></td>
</tr>
<tr>
<td>Telephone:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cell Phone:</td>
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</tr>
</tbody>
</table>

List other contacts who will be supporting the Requesting Team with technical support, such as reviewing SOW and Report (such as USAID/W GH Pro management team staff)

<table>
<thead>
<tr>
<th>Technical Support Contact 1</th>
<th>Technical Support Contact 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td></td>
</tr>
<tr>
<td>Title:</td>
<td></td>
</tr>
<tr>
<td>USAID Office/Mission</td>
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<tr>
<td>Email:</td>
<td></td>
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<tr>
<td>Telephone:</td>
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<tr>
<td>Cell Phone:</td>
<td></td>
</tr>
</tbody>
</table>
XVIII. Other Reference Materials
Documents and materials needed and/or useful for consultant assignment, that are not listed above

XIX. Adjustments Made in Carrying out This SOW after Approval of the SOW
(To be completed after Assignment Implementation by GH Pro)
ANNEX II. LIST OF PERSONS INTERVIEWED

MTE OF DEFEAT MALARIA KEY INFORMANTS

MOHS/NMCP officials
1. Dr. Aung Thi, Malaria Program Manager of VBDC
2. Dr. Zaw Lin, Deputy Director of VBDC
3. Dr. Thar Tun Kyaw, former Director General, former Malaria Program Manager
4. Dr. Aye Aye Myint, Chief Entomologist of VBDC
5. Dr. San Kyawt Khine, Assistant Health Director VBDC Rakhine State
6. TMOs/VBDC of Thandwe, Yaybyu, Ann, and Dawei Townships (Rakhine State and Tanintharyi Region)
7. Basic Health Staff, Sakanmaw Rural Health Center (Rakhine)

UNOPS (Global Fund’s Principal Recipient)
8. Dr. Faisal Mansor, Head of Program, UNOPS/Global Fund Principal Recipient
9. Dr. Eisa Hamid, M&E Health Systems Specialist, UNOPS/Global Fund Principal Recipient

3MDG
10. Dr. Aye Yu Soe, Head of Program, 3MDG

WHO
11. Dr. Mushfiqur Rahman, Technical Officer (Malaria), WHO office Myanmar
12. Dr. Badri Thapa, Scientist (Malaria Control), WHO office Myanmar

Defeat Malaria
13. Dr. May Aung Lin, Chief of Party, URC
14. Dr. Saw Lwin, Senior Malaria Advisor, URC
15. Dr. Kyaw Myint Tun, M&E Specialist, URC
16. Dr. Myaing Myaing Nyunt, Duke University
17. Dr. Myint Oo, Project Manager, ARC
18. Dr. Zaw Tun Lin, Project Manager, Myanmar Health Assistants Association
19. Daw Kyan Khaing, Myanmar Nurses Midwives Association
20. Defeat Malaria staff in Thandwe, Ann, Toungup, Dawei, and Kawthaung Townships
21. Village Malaria Workers (VMW)/PPs (names withheld)

Others
22. Dr. Masatoshi Nakamura, Chief Advisor, Malaria Elimination Project in Myanmar, JICA
23. Dr. Ed Marta, Director, Karen Department of Health and Welfare
24. Ms. Antonia Powell and malaria program staff, Save the Children Int.
25. Dr. Hnin Su Su Khin, Operations Director, Medical Action Myanmar
26. Dr. Yu Yu Lwin, Health Poverty Action
27. Dr. Peter Nay Win, Assistant Project Manager, Myanmar Council of Churches
28. Dr. Myo Myint Tun, Country Technical Coordinator, Malaria/PHC, Malteser International
29. Dr. Si Thura, Executive Director, Community Partners International
30. Drs. Hein Pyae Aung and Thinzar Kyaw, Myanmar Medical Association
31. Dr. Kyi Min, Myanmar Health and Development Consortium
32. Administrative staff, Yuzana company

**USAID/Myanmar’s OPH**

33. Dr. Feliciano Monti, Senior Malaria Adviser and AOR Defeat Malaria
34. Dr. Nu Nu Khin

**USAID/PMI**

35. Dr. David Sintasath, Regional Malaria Advisor
ANNEX III. INTERVIEW GUIDES

I. INTERVIEW GUIDE FOR URC

Activity Support

1. Please describe URC’s overall approach to ensuring the performance of sub-grantees?
   a. How are problems with sub-grantee performance identified and addressed? *Probe: ask for specific examples.*
   b. Are there any specific sub-grantees that require closer supervision? Why? *Probe: is it the type of activity, location, capacity of the organization? How are they more closely supervised?*

2. What are the procedures when sub-grantees do not meet performance expectations or miss targets? For example: active case detection in Bokpyin is consistently low (0.36% as of March 2018). How is URC working with ARC to identify and address those problems?
   a. What procedures, if any, are implemented to monitor in the future sub-grantees with performance challenges?

3. What was your experience collaborating with non-state actors (EHOs) like the Karen Department of Health Welfare (KDHW) before the collaboration ceased?

4. What are the new tools and approaches initiated or implemented during the period of Defeat Malaria activity that you feel are particularly important? *Probe: real time reporting, testing, onsite investigation and development of supporting guidelines for new tools/approaches.*
   a. Specifically how has URC supported the development and/or promoted new tools and approaches.
   b. What have been some successes and challenges using new tools and approaches? How have challenges been addressed?
   c. How does URC share those tools and approaches with partners and stakeholders?

5. What are the ways in which URC is supporting NMCP to carry out surveillance activities? Are there any unforeseen challenges? *Probe: human resource availability and capacity, politics, etc.* If so, how have these challenges been addressed?

6. In Defeat Malaria implementing sites with a high number of migrant workers we see that household net coverage is often reported as 100%. What steps are you taking to ensure 100% coverage at all times?

7. How do your sub-grantees identify private and state owned companies to implement treatment, control, and prevention activities among workers in hard to reach or conflict affected areas?
   a. Do they approach implementation differently depending on if the company is private or state owned? If yes, how so and why?
   b. Are there barriers that are unique to working with companies as opposed to working directly with communities? *Probe: differences between private and state owned companies.*
      i. How have you helped your sub-grantees overcome their challenges? *NOTE: Probe to understand if URC assistance is more reactive or proactive.*
   c. What factors, if any, make it easier to work with companies opposed to communities? *Probe: ask for examples.*

Program Management

1. Please describe how you collaborate with, and oversee, your sub-grantees? What has worked well in how you collaborate? Why? What have been some challenges? Why?
a. Do you have plans to change the way in which you collaborate and/or oversee sub-grantees?
   If yes, how so and why?

2. Based on your own experience what areas of program management do you feel URC has done well and why? Specifically, how has this facilitated your achievements to date? Please give examples.
   Probe: sub-grantee reporting, risk management, compliance.

3. Based on your own experiences, what areas of program management do you feel needs improvement and why? Please give examples.

4. How will URC apply lessons learned from successes and shortcomings during the remainder of the award?

5. Defeat Malaria in Rakhine State has distributed bednets in townships mostly in Ann, Gwa, Kyaukphu, Ramree, Toungup and Thandwe townships. What is the status regarding bednet distribution in remaining townships with high test positive rates (Minbya, Pauktaw, Mrauk-U, Rathedaung, Maungdaw and Buthidaung)?

6. What are the lessons learned from the pilot elimination activities in Southern Rakhine State: Toungup, Ramree and Aunaung?

Risk management

1. What do you consider the greatest risks to project implementation and long-term achievements?
   Why? Probe for internal and external risks.

2. What measures does URC currently have in place to mitigate those risks? Note: ask to see evidence of those measures.

3. What measures does URC have planned to mitigate risks? Probe: expected date measures will be put in place.

4. What have you done to help your sub-grantees put risk mitigation plans in place? What have been some barriers to developing and/or implementing those plans?

Sustainability

5. What sustainability approaches/activities are currently in place to ensure the sustainability of Defeat Malaria activities after the end of the award?

6. What sustainability approaches/activities are planned to ensure the sustainability of Defeat Malaria activities after the end of the award? When will those approaches/activities be implemented?
   a. Are there barriers you expect implementing those sustainability approaches/activities? If so what are those barriers and what can be done to decrease those barriers? Probe: are those approaches dependent on the resources (human, financial, material) of a stakeholders or sub-grantee?

Conclusion

7. Is there anything that I did not ask you that you would like me/us to know that you feel is important to this evaluation?

Before we end this interview would you like to ask me any questions?
II. Interview guide for sub-grantees (American Refugee Committee (ARC), Myanmar Health Assistants Association (MHAA), Myanmar Nurse and Midwife Association (MNMA))

Activity Implementation
1. What are some of the barriers or challenges your organization has faced with implementation? 
   Probe: (conflict affected areas, hard-to-reach areas; townships in control phase vs elimination phase; VMWs; URC and/or government).
   a. How have these barriers been addressed if at all?

2. What are some factors that have made implementation of your activities easier? Why? 
   Probe: (human capacity, financial resources, program management, capacity building, support of URC and/or government).

3. How do you monitor and supervise field activities?
   a. What challenges do you face with monitoring and supervision? How have you addressed these challenges? How successful have your efforts been? (Probe: support role of URC).
   b. Are there any approaches to monitoring and supervision that you would like to implement but have unable to do so? If so, what are they and what gap would they address?

4. In what ways, and to what extent, has Defeat Malaria promoted the involvement of communities, VMWs, private and state owned companies, and health care providers in vector control/elimination, treatment, and testing? 
   Probe: ask for examples.

Management support
5. Overall, do you feel URC has been supportive in helping your agency/organization achieve its targets?
   a. Is there a type of support that has been particularly helpful? Please give an example of how their support helped you achieve your goals. 
      Probe: communication, troubleshooting, providing resources.
   b. Are there areas of support they can improve upon? Why? Please give an example when better support was required.

Sustainability
6. What sustainability approaches/activities are currently in place to ensure the sustainability of Defeat Malaria activities after the end of the award?

7. What sustainability approaches/activities are planned to ensure the sustainability of Defeat Malaria activities after the end of the award? When will those approaches/activities be implemented?
   a. Are there barriers you expect implementing those sustainability approaches/activities? If so what are those barriers and what can be done to decrease those barriers? 
      Probe: human, financial, material resources; political will?

Conclusion:
8. Is there anything that I did not ask you that you would like me/us to know that you feel is important to this evaluation?

Before we end this interview would you like to ask me any questions?

Thank you for your time.
III. Interview guide VMWs, Mobile Teams, and Private Providers

1. What have been some of the most significant changes you have seen since the start of Defeat Malaria? Suggestion: have respondents tell the change as they would a story. Ask them to start at the point when DM commenced and to outline the changes, good and bad, they have seen over time. *Probe for: improved vector control, malaria awareness, RDT, stock-outs, treatment.*

2. What activities, if any, are the most challenging to implement? Why? *Probe: reporting, BCC, distribution of commodities.*
   a. What resources or support can help address those challenges?

3. Are there any populations that are more or less difficult to work with? Why? And how has this impacted your achievements?

Capacity Building

4. Are there any trainings you received from Defeat Malaria that have helped you carry out your job (probe: BCC, treatment, testing, distribution of LLINs)? If yes, which trainings and please give an example how they were helpful?

5. Are there any trainings you received that were not helpful? Why not?

6. Is there a training you would like to receive that would help you carry out your job? Why?

Supportive Supervision

7. Do you find supportive supervision visits helpful? Why or why not? Please give an example.

8. What SOPs, and to what degree, [ask URC for some examples to show VMWs] are you using?
   a. Are these SOPs helpful? If so, can you give me an example of how they helped? If not, please explain why.

Closing

9. Is there anything I have not asked you that you think it is important for me to know?

10. Do you have any recommendations on how Defeat Malaria can be improved to help you achieve your goals?
IV. Interview guide Defeat Malaria stakeholders (NMCP, VBDC/TMOs, other NGOs working in malaria control, WHO, 3MDG, UNOPS, USAID)

1. In what capacity, or type of collaboration, do you engage with Defeat Malaria?

2. What is your perception the effectiveness Defeat Malaria has achieved and maintained universal coverage of at-risk populations with proven vector control and case management interventions, while promoting the testing of new tools and approaches? Why? Please give examples.
   
   a. Are there certain things DM has done particularly well? Please give an example?
   
   b. Are there things they have not done particularly well? Please give an example?

3. What is your perception of the effectiveness of VMWs helping to achieve universal?

4. What is your perception of the effectiveness of Defeat Malaria’s efforts to strengthen surveillance systems?

5. Are you familiar with some of the new tools and approaches Defeat Malaria uses in its work? (e.g. GIS methodology)? If so which ones?
   
   a. Do they share these tools with you? If so, how do they share these tools and for what purpose?

6. What is your perception of how Defeat Malaria is managed by URC?

7. What is your perception URC’s local implementing partners (ARC, MNMA, MHAA)?

8. Is there anything else you would like to tell me about your experience with Defeat Malaria?

9. Do you have any recommendations how Defeat Malaria can be improved moving forward?
ANNEX IV. DOCUMENTS REVIEWED

1. DM workplans, quarterly, and annual reports
2. DM Notice of Funding (NOFO)
3. CAP-Malaria final report
4. DM Standard Operating Procedures (SOPs)
5. Routine Data Quality Assessment (RDQA) tools
6. Behavior Change Communication (BCC) material
7. Myanmar Demographic Health Survey (DHS) 2015-16
8. DM Cost Analysis report
9. DM meeting minutes with local stakeholders
10. NMCP National Strategic Plan (NSP)
## ANNEX V. LIST OF COMPANIES WORKING WITH DEFEAT MALARIA AS OF JUNE 2018

<table>
<thead>
<tr>
<th>Township</th>
<th>Company name</th>
<th>Total population</th>
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<tbody>
<tr>
<td>Kawthoung</td>
<td>Dagon Timber company</td>
<td>1,420</td>
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<tr>
<td></td>
<td>Htoo Htoo Toe company</td>
<td>201</td>
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<td></td>
<td>Po Kaung company</td>
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<td></td>
<td>Pyi Thaung Naing company</td>
<td>1,846</td>
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<tr>
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<td>TZK company</td>
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<td>U Phain company</td>
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<tr>
<td></td>
<td>Nyaung Wi (east) village</td>
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<td>Nyaung Wi (west) village</td>
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<td></td>
<td>Se Eain Su village</td>
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<td></td>
<td>Yuzana company</td>
<td>6,019</td>
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<tr>
<td>Tanintharyi</td>
<td>U Kyauk Sein (Rubber Plantation)</td>
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<tr>
<td></td>
<td>Kyein Chaung (Lead Mine)</td>
<td>779</td>
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<tr>
<td></td>
<td>Iron-Wood worksite</td>
<td>151</td>
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<tr>
<td>Bokpyin</td>
<td>National Development Oil Palm Plantation</td>
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<td></td>
<td>Shwe A Hone Oil Palm Plantation</td>
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<td>South Dagon Oil Palm Plantation</td>
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<td>Yuzana Oil Palm Plantation</td>
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<td>Pein Hne Chaung (U Kin Sein Rubber Plantation)</td>
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<tr>
<td></td>
<td>Aung Myat Thein Rubber Plantation</td>
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<td></td>
<td>Boke Chaung (Thai-Myanmar Rubber)</td>
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<tr>
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<td>Thein Kone (U Myo Lin’s Mining Site)</td>
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<td>Sin Kyan Village(Shwe Pyi Tar Salt Production)</td>
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<td>Dawei</td>
<td>Chauk Chaung/U Kyaw Swar</td>
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<td>Thae Chaung Thar/U Aye Naing</td>
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<td>Sone Sin Phyar/U Aung Myo Lwin</td>
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<td>Ka Lay Wa Rubber Plantation</td>
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<td></td>
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<td>30 Mile (Factory 2, Rubber Plantation)</td>
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<td>20 Mile (Naing Win Zaw, Mining Site)</td>
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<td>United Master Peace Mining Co.Ltd</td>
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<td>Ka Mar Aing Beach</td>
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<td>Si Taw Gyi Beach</td>
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<td><strong>Total</strong></td>
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ANNEX VI. MALARIA CASE CLASSIFICATION CALCULATOR AND APPROPRIATE TIMING FOR RESPONSE FOR PF AND PV
ANNEX VII. LETTER OF “ZERO REPORTING”

Page 1. Letter to Rakhine State VBDC office
Page 2. List of villages with no reporting

<table>
<thead>
<tr>
<th>No.</th>
<th>Village Name</th>
<th>Reporting District</th>
<th>District Office</th>
<th>Reporting Agency</th>
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ANNEX VII. DISCLOSURE OF ANY CONFLICTS OF INTERESTS

GLOBAL HEALTH PROGRAM CYCLE IMPROVEMENT PROJECT

USAID NON-DISCLOSURE AND CONFLICTS AGREEMENT

<table>
<thead>
<tr>
<th>USAID Non-Disclosure and Conflicts Agreement- Global Health Program Cycle Improvement Project</th>
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<tbody>
<tr>
<td>As used in this Agreement, Sensitive Data is marked or unmarked, oral, written or in any other form,</td>
</tr>
<tr>
<td>&quot;sensitive but unclassified information,&quot; procurement sensitive and source selection information, and</td>
</tr>
<tr>
<td>information such as medical, personnel, financial, investigative, visa, law enforcement, or other information</td>
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<td>which, if released, could result in harm or unfair treatment to an individual or group, or could have a</td>
</tr>
<tr>
<td>negative impact upon foreign policy or relations, or USAID’s mission.</td>
</tr>
</tbody>
</table>

Intending to be legally bound, I hereby accept the obligations contained in this Agreement in consideration |
of my being granted access to Sensitive Data, and specifically I understand and acknowledge that:

1. I have been given access to USAID Sensitive Data to facilitate the performance of duties assigned to |
me for compensation, monetary or otherwise. By being granted access to such Sensitive Data, |
special confidence and trust has been placed in me by the United States Government, and as such it is |
my responsibility to safeguard Sensitive Data disclosed to me, and to refrain from disclosing |
Sensitive Data to persons not requiring access for performance of official USAID duties.

2. Before disclosing Sensitive Data, I must determine the recipient’s "need to know" or "need to access" |
Sensitive Data for USAID purposes.

3. I agree to abide in all respects by 41, U.S.C. 2101 - 2107, The Procurement Integrity Act, and |
specifically agree not to disclose source selection information or contractor bid proposal information |
to any person or entity not authorized by agency regulations to receive such information.

4. I have reviewed my employment (past, present and under consideration) and financial interests, as |
well as those of my household family members, and certify that, to the best of my knowledge and |
belief, I have no actual or potential conflict of interest that could diminish my capacity to perform my |
assigned duties in an impartial and objective manner.

5. Any breach of this Agreement may result in the termination of my access to Sensitive Data, which, if |
such termination effectively negates my ability to perform my assigned duties, may lead to the |
termination of my employment or other relationships with the Departments or Agencies that granted |
my access.

6. I will not use Sensitive Data, while working at USAID or thereafter, for personal gain or |
detrimentally to USAID, or disclose or make available all or any part of the Sensitive Data to any |
person, firm, corporation, association, or any other entity for any reason or purpose whatsoever, |
directly or indirectly, except as may be required for the benefit USAID.

7. Misuse of government Sensitive Data could constitute a violation, or violations, of United States |
criminal law, and Federally-affiliated workers (including some contract employees) who violate |
privacy safeguards may be subject to disciplinary actions, a fine of up to $5,000, or both. In |
particular, U.S. criminal law (18 USC § 1905) protects confidential information from unauthorized |
disclosure by government employees. There is also an exemption from the Freedom of Information |
Act (FOIA) protecting such information from disclosure to the public. Finally, the ethical standards |
that bind each government employee also prohibit unauthorized disclosure (5 CFR 2635.703).

8. All Sensitive Data to which I have access or may obtain access by signing this Agreement is now and |
will remain the property of, or under the control of, the United States Government. I agree that I must |
return all Sensitive Data which has or may come into my possession (a) upon demand by an |
authorized representative of the United States Government; (b) upon the conclusion of my |
employment or other relationship with the Department or Agency that last granted me access to |
GLOBAL HEALTH PROGRAM CYCLE IMPROVEMENT PROJECT

Sensitive Data; or (c) upon the conclusion of my employment or other relationship that requires access to Sensitive Data.

9. Notwithstanding the foregoing, I shall not be restricted from disclosing or using Sensitive Data that: (i) is or becomes generally available to the public other than as a result of an unauthorized disclosure by me; (ii) becomes available to me in a manner that is not in contravention of applicable law; or (iii) is required to be disclosed by law, court order, or other legal process.

ACCEPTANCE
The undersigned accepts the terms and conditions of this Agreement.

Signature Date

Katia Peterson Consultant
Name Title

June 15 2018
GLOBAL HEALTH PROGRAM CYCLE IMPROVEMENT PROJECT

Sensitive Data; or (c) upon the conclusion of my employment or other relationship that requires access to Sensitive Data.

9. Notwithstanding the foregoing, I shall not be restricted from disclosing or using Sensitive Data that: (i) is or becomes generally available to the public other than as a result of an unauthorized disclosure by me; (ii) becomes available to me in a manner that is not in contravention of applicable law; or (iii) is required to be disclosed by law, court order, or other legal process.

ACCEPTANCE
The undersigned accepts the terms and conditions of this Agreement.

Signature: ___________________________ Date: 4 April 2018

OHNMAR

Name: ___________________________ Title: Dr
GLOBAL HEALTH PROGRAM CYCLE IMPROVEMENT PROJECT

Sensitive Data; or (c) upon the conclusion of my employment or other relationship that requires access to Sensitive Data.

9. Notwithstanding the foregoing, I shall not be restricted from disclosing or using Sensitive Data that:
   (i) is or becomes generally available to the public other than as a result of an unauthorized disclosure by me; (ii) becomes available to me in a manner that is not in contravention of applicable law; or (iii) is required to be disclosed by law, court order, or other legal process.

ACCEPTANCE
The undersigned accepts the terms and conditions of this Agreement.

______________________________
Signature

13.07.2018

Date

Dr. Thu Naing

Name

Logistic Coordinator

Title

Page 114 of 131
ANNEX VIII. SUMMARY BIOS OF EVALUATION TEAM

Dr. Katia Peterson Ph.D., MPH, evaluation team lead, has more than 15 years of experience designing and implementing research and evaluation studies of health systems strengthening interventions, including human resources for health capacity building and health information systems. Dr. Peterson’s core competencies include mixed-method approaches; outcome and performance evaluations; programmatic and policy reviews; literature and systematic reviews, including meta-analysis; qualitative and quantitative data analysis; and knowledge translation for evidence-informed decision-making. In addition to her work with USAID, multilateral organizations, NGOs, and governments, she is an adjunct faculty member at the School of Public Health at The George Washington University in Washington, DC. As evaluation team lead, Dr. Peterson provided overall managerial and technical leadership. In collaboration with other team members, she developed the evaluation work plan, data collection tools, and analysis framework. She participated in data collection in Yangon, Rakhine state, Tanintharyi region, and Nay Pyi Taw.

Dr. Ohnmar, evaluation specialist, has more than 15 years of experience in epidemiology, statistics, and community program evaluation. She is an expert in designing and implementing surveys using a mixed-methods approach and in M&E of malaria intervention programs. She also has expertise in epidemiology for malaria elimination, malaria surveillance systems, data management, and M&E of forest-goers, mobile and migrant populations, and other groups. She was principal investigator for several other community-based malaria intervention studies, including one for a village malaria workers system. She has experience working with NGOs and governments, and was country technical coordinator at the Malaria Consortium after serving as head of the epidemiology research division in its Department of Medical Research. She has a bachelor of medicine, bachelor of surgery and an MSc and Ph.D. in epidemiology from Prince of Songkla University in Thailand. For this evaluation, Dr. Ohnmar coordinated key stakeholder organizations working on malaria, facilitated interviews to gather qualitative data, and was involved in content analysis to identify key findings to support the team leader in answering questions.

Dr. Thu Naing, local evaluator, has five years of project management and technical experience control and prevention of malaria program on the Thailand-Myanmar border. He also has experience in malaria research, project monitoring, program development, data management, project proposals, budgets, and evaluating the malaria program. He has worked with the Community Development Association, the International Organization for Migration, and John Snow, Inc. along the Thailand-Myanmar border. He received a bachelor of medicine, bachelor of surgery and a master’s in primary health care management from Mahidol University in Thailand. Dr. Naing supported the evaluation team with all logistics and administration, took notes during interviews, and assisted in the translation of data collection tools and transcripts.
For more information, please visit
http://ghpro.dexisonline.com/reports-publications