UNITED STATES of AMERICA

PMI Evolve
Evolving Vector Control to Fight Malaria

The PMI Evolve Project

Year 3 Annual Report

January 1, 2025 – December 31, 2025

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Acronyms

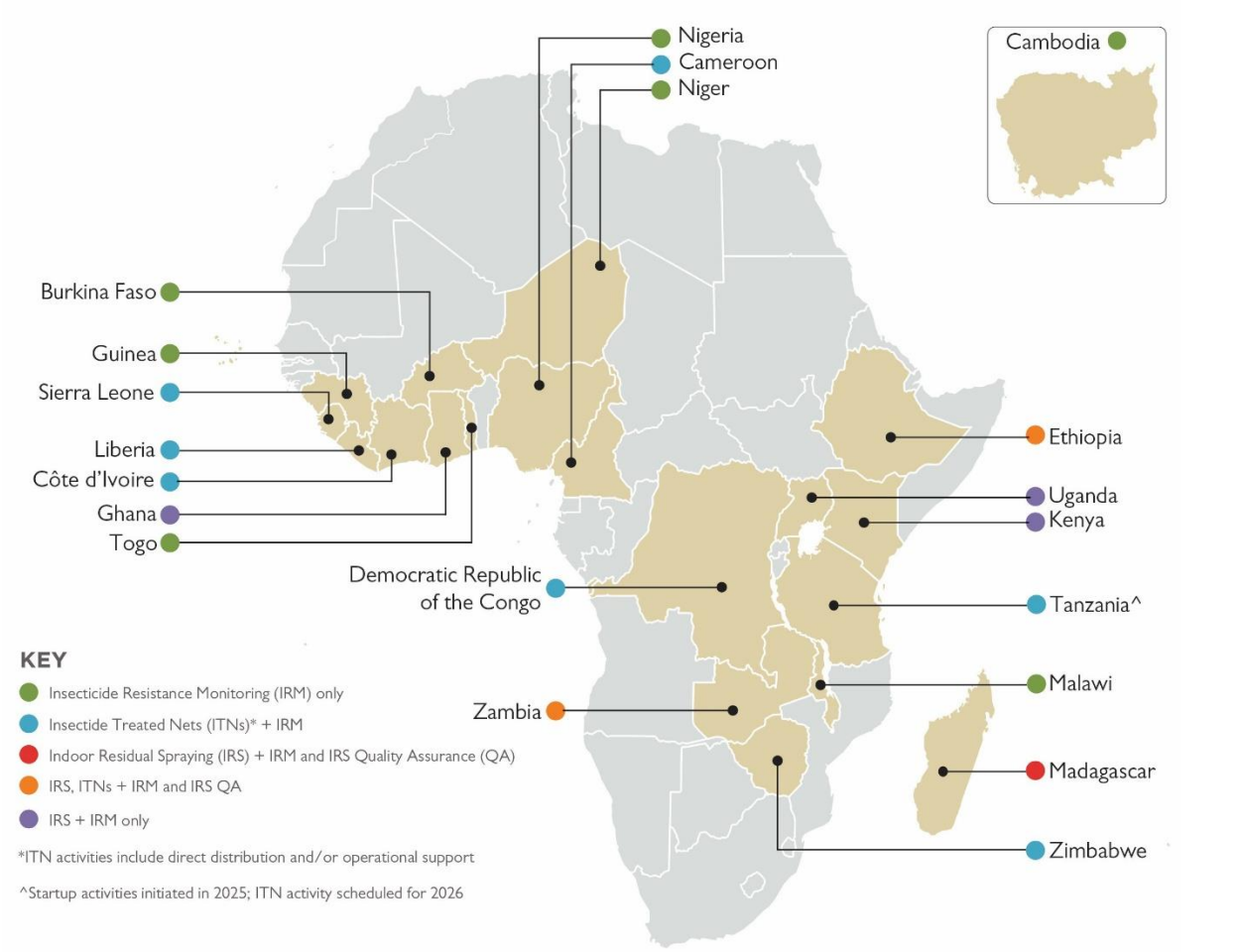
AI	Active Ingredient
ANC	Antenatal Care
CC	Curative Care
CD	Continuous Distribution
CNM	Center for Parasitology, Entomology and Malaria Control (Cambodia)
EPI	Expanded Program on Immunization
GHSC-PSM	Global Health Supply Chain-Procurement Supply Management
IRM	Insecticide Resistance Monitoring
IRS	Indoor Residual Spraying
ITN	Insecticide-treated Net
IVC	Integrated Vector Control
LSM	Larval Source Management
MEL	Monitoring, Evaluation, and Learning
MOH	Ministry of Health
MOH-NMED	Ministry of Health's National Malaria Elimination Division (Uganda)
NMP	National Malaria Program
NMEC	National Malaria Elimination Center (Zambia)
PCR	Polymerase Chain Reaction
PBO	Piperonyl Butoxide
PHSK	Public Health School of Kinshasa
PMI	U.S. President's Malaria Initiative
PSI	Population Services International
SBD	School-Based Distribution
SEA	Supplemental Environmental Assessment
USG	United States Government

1. Executive Summary

The U.S. President's Malaria Initiative (PMI) Evolve Project was awarded to Abt Global on December 19, 2022. The purpose of this contract is to support PMI with the planning, implementing, and monitoring of malaria vector control programs, including insecticide-treated mosquito nets (ITNs), indoor residual spraying (IRS), and essential entomological monitoring required to make vector control decisions. PMI Evolve strengthens the capacity of host governments and local entities to prevent and manage malaria, contributing to more stable and resilient health systems in ways that support U.S. priorities of fostering strong, reliable partnerships and a healthier, more secure global landscape.

In its third year of implementation (January–December 2025), the PMI Evolve project navigated an exceptionally complex operating environment while continuing to deliver life-saving malaria vector control interventions across 19 countries in sub-Saharan Africa as well as in Cambodia.

Figure 1: PMI Evolve Countries in Year 3



Despite a U.S. Government Stop-Work Order and significant funding delays that paused activities for nearly four months, PMI Evolve rapidly adapted to ensure the continuity of IRS, ITN distribution, and essential entomological monitoring in priority countries.

PMI Evolve conducted IRS operations in six countries—Ethiopia, Ghana, Kenya, Madagascar, Uganda, and Zambia—protecting 8,694,443 million people from malaria. Countries adjusted timelines, staffing models, and operational strategies to overcome the compressed preparation window, rainy-season constraints, and logistical challenges. Spray coverage across campaigns remained high, with multiple countries achieving rates above 95%. The project partnered with many local organizations and strengthened government ownership by training thousands of national, provincial, and district-level personnel.

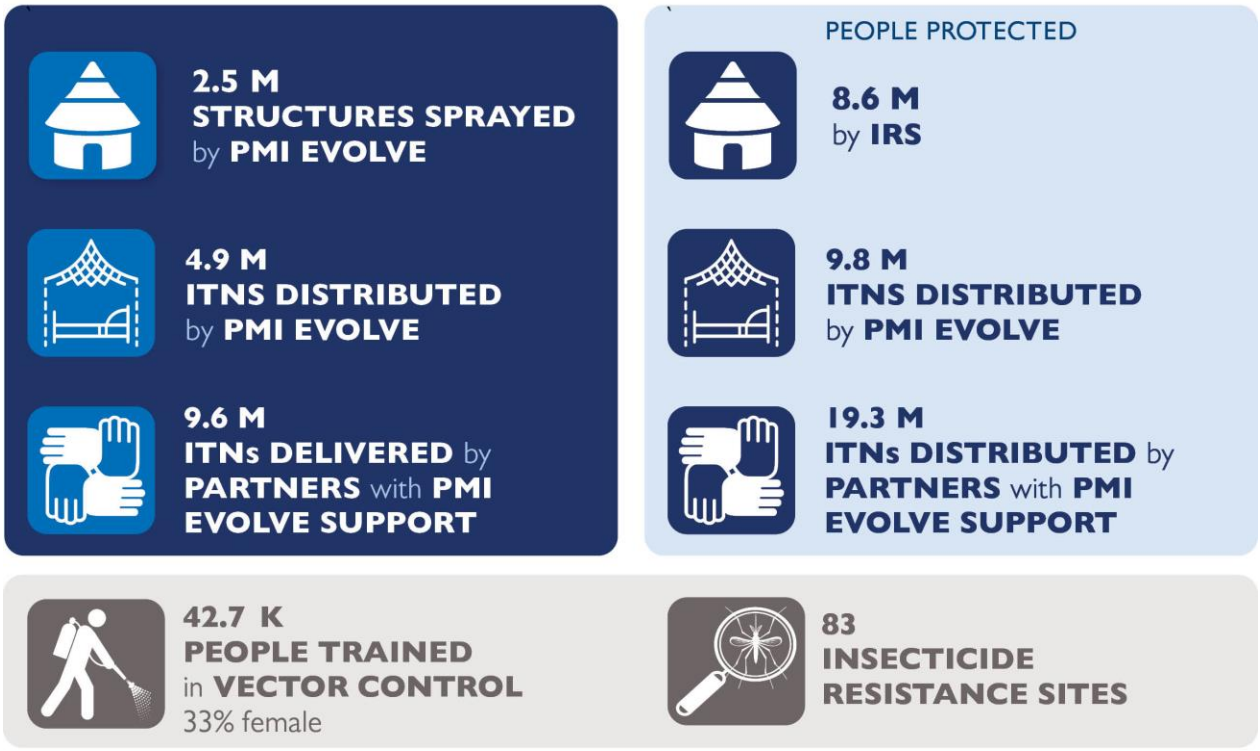
In 2025, PMI Evolve supported ITN distribution in seven countries—Cameroon, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Sierra Leone, Zambia, and Zimbabwe—through mass campaigns, routine antenatal care (ANC)/Expanded Program on Immunization (EPI) channels, school-based distribution, and continuous community distribution. The project directly delivered 4.9 million ITNs, protecting an estimated 9.8 million people, and provided technical and operational support for government-led campaigns distributing an additional 9.6 million ITNs, estimated to protect an additional 19.3 million people from malaria. Across these settings, the project provided extensive operational support, supporting product selection, quantification, supply chain management, microplanning, and digital data systems. This ensured ITNs reached millions of people through door-to-door household registration and distribution, health-facility-based routine channels, school platforms, and community-based delivery models.

Entomological monitoring remained a cornerstone of PMI Evolve's technical support. The project conducted insecticide resistance monitoring in 15 countries, evaluating up to seven insecticides per country to guide evidence-based vector control decisions. The project also carried out molecular species identification for vector characterization in 10 countries and completed spray quality assurance assessments in Ethiopia, Madagascar, and Zambia. PMI Evolve also streamlined its monitoring, evaluation, and learning (MEL) plan to align with the adjusted project scope and continued enhancing VectorLink Collect as the primary system for managing IRS and entomological data. See Figure 2 for Year 3 vector control and entomological highlights.

Despite disruptions, Year 3 demonstrated PMI Evolve's ability to adapt, prioritize life-saving interventions, and reinforce country capacity to implement effective, evidence-based malaria vector control. The project sustained high-quality operations protecting millions of people through IRS and ITNs, and continued to generate and apply critical entomological evidence to guide malaria control strategies worldwide.

This report covers the reporting period of January 1 through December 31, 2025. Population Services International (PSI) and BAO Systems, together with many local organizations (including governments, research institutions, non-governmental organizations and private sector actors), continue to support project activities and help PMI Evolve achieve its objectives. Section 5 highlights programmatic results from PMI Evolve country programs.

Figure 2: PMI Evolve Year 3 Highlights



2. Project Overview

2.1 Introduction

The U.S. President's Malaria Initiative (PMI) Evolving Vector Control to Fight Malaria Project, PMI Evolve, supports PMI and the Department of State in planning, executing, and monitoring integrated vector control interventions that save lives. PMI Evolve focuses on proven life-saving strategies such as indoor residual spraying (IRS) and insecticide-treated nets (ITNs), complemented by entomological monitoring to guide evidence-based decisions and ensure high-quality implementation. Working in close partnership with national malaria programs and local institutions, the project contributes to reducing malaria transmission and protecting vulnerable populations, particularly pregnant women and children under five.

2.2 Project Changes

The past year was one of profound transition and resilience for PMI Evolve. Early in 2025, a U.S. Government Stop-Work Order and subsequent funding delays halted operations for nearly four months, disrupting IRS and ITN campaigns and suspending entomological monitoring across all project countries. During this period, a limited humanitarian waiver enabled IRS implementation in Kenya and Uganda, allowing the project to protect millions of people despite compressed timelines and resource constraints. Following the resumption of funding in May, PMI Evolve rapidly mobilized to restart essential life-saving activities while simultaneously implementing requested downsizing measures.

The project footprint shifted significantly. Entomology-focused project offices closed in Mozambique and Niger in March, followed by additional closures in Burundi, Guinea, Liberia, Malawi, Nigeria, and Togo by June. In many of these countries, essential entomological monitoring activities continued by transitioning to a model that relies on regional short-term technical assistance and local consultants.

Rwanda discontinued IRS activities for 2025 and closed its office in August. Meanwhile, Zimbabwe and Tanzania initiated start-up operations in preparation for ITN distributions planned for the end of 2025 and the coming year. Organizationally, the Global Support Team was substantially reduced to align with the revised scope, and partnerships were restructured to phase out subcontractors whose mandates were no longer supported.

The scale and scope of entomology activities decreased substantially, with the project narrowing its focus to two functions; specifically, insecticide resistance monitoring (IRM) across all countries, and spray quality assurance at T0 in IRS countries.

3. Integrated Vector Control

3.1 IRS Implementation

In Year 3, PMI Evolve sprayed approximately 2.5 million structures across six countries and protected more than 8.6 million people from malaria through IRS campaigns. All IRS-implementing countries achieved high coverage and ensured life-saving protection for vulnerable populations.

Kenya and Uganda implemented their IRS campaigns under a limited humanitarian waiver, which significantly shortened the time available for preparation and implementation. Despite these constraints, both programs adapted rapidly—reducing training days, adjusting mobilization approaches, and revising spray calendars—to spray across 13 sub-counties in Kenya and seven districts in Uganda, maintaining high coverage and protecting communities at risk.

Ghana and Ethiopia also experienced delayed campaigns and compressed preparation timelines due to the project funding and authorization delays but completed their campaigns with more than 95% coverage for each. Both countries rapidly revised training and operational plans to fit within the shortened preparation window, demonstrating strong collaboration with national and district health teams.

Zambia and Madagascar delivered similarly strong campaigns with consistently high coverage. Zambia sprayed 450,885 structures, protecting 1,653,441 people, and achieved a coverage rate of 98.7% across 10 districts. Madagascar sprayed 146,627 structures, protecting 729,066 people, and achieved 98.2% coverage using four different insecticides tailored to district-specific resistance profiles.

In all countries, PMI Evolve relied on the participation of the national, provincial, and district staff in all aspects of IRS planning, resource quantification, supervision, monitoring, and evaluation, which served as a platform for strengthening the capacity of the government counterparts.

3.2 ITN Implementation

In 2025, PMI Evolve directly distributed 4.9 million nets and supported distribution of another 9.6 million nets through support to government-led campaigns across seven malaria-endemic countries, sustaining population-level protection and advancing the transition toward next-generation ITNs. Working in close partnership with National Malaria Programs (NMPs), PMI Evolve supported ITN delivery through mass campaigns, routine health facility channels (ANC/EPI), and school-based distributions, reinforcing ITNs as the foundation of malaria prevention across most transmission settings. As a result, PMI Evolve protected an estimated 9.8 million people through direct distribution efforts, with an

additional 19.3 million people estimated to have ITN protection through government-led distributions across channels with project support. These efforts prioritized operational efficiency, country ownership, and data-driven targeting, verifying that U.S. government resources were deployed where they could have the greatest impact.

A defining feature of PMI Evolve's 2025 ITN portfolio was the continued scale-up of next-generation ITNs, specifically dual active ingredient (dual-AI) and piperonyl butoxide (PBO)-synergist ITNs, in order to ensure ITN effectiveness amid widespread pyrethroid resistance. Building on resistance monitoring data and global guidance, PMI Evolve supported NMPs in transitioning away from conventional pyrethroid-only ITNs, particularly in high-burden and post-IRS settings. Across multiple countries including Cameroon, Côte d'Ivoire, DRC, Ethiopia, Sierra Leone, Zambia, and Zimbabwe, PMI Evolve, in collaboration with local partners, provided operational support for product selection, quantification, supply chain management, and campaign readiness, helping governments adopt innovative ITN strategies while maintaining high coverage.

PMI Evolve's operational role in 2025 extended beyond distribution volumes to include strengthening national systems and improving delivery efficiency. In several countries, the project supported NMPs in integrating ITN delivery with broader health services; streamline logistics from port-of-entry to last-mile distribution; and adapt allocation strategies based on sleeping spaces, household composition, and local epidemiology. Where needed, PMI Evolve helped mitigate supply constraints and timing challenges by coordinating across partners and procurement mechanisms, reinforcing resilience in national supply chains.

3.3 Environmental Compliance

In Year 3, PMI Evolve supported environmental review and compliance activities across multiple country programs. The project submitted Supplemental Environmental Assessments (SEAs) for Ghana, Ethiopia, and Zambia. In addition, PMI Evolve prepared Pre-Spray Letter Reports for Madagascar, Kenya, and Uganda and developed a Letter Report amendment for Ethiopia to support the donation of larvicides to local governments. The project also prepared an SEA amendment for Ethiopia to include insecticides that contain isocycloseram, such as Sovrenta, as an active ingredient in the approved list of insecticides for IRS in Ethiopia.

Other environmental compliance accomplishments in Year 3 included:

- Revision of environmental compliance requirements to support reduced-budget campaigns while continuing to uphold required environmental and safety standards
- Provision of virtual technical support to all campaigns during the implementation of IRS and ITN activities
- Support to Ethiopia in establishing a cost-neutral recycling mechanism for ITN packaging waste, strengthening environmental sustainability.

4. Data Collection and Analysis to Inform Vector Control Interventions

4.1 Entomology

In Year 3, PMI Evolve conducted insecticide resistance monitoring in 15 countries to support vector control decisions. An additional four PMI Evolve countries planned IRM activities but postponed implementation to early 2026 due to insufficient rainfall during the planned collection period. Across participating countries, up to seven insecticides used in ITNs and IRS implementation were tested against local malaria vectors in an average of five sites per country to inform appropriate ITN and IRS product selection.

The project conducted molecular species identification in 10 countries to characterize the vector population of each test site, providing critical information for tailoring intervention design and vector control strategies.

PMI Evolve performed spray quality assurance assessments in three IRS countries (Ethiopia, Madagascar, and Zambia) during the first week of IRS implementation. Ghana, Kenya, and Uganda were excluded from these assessments due to project modifications at the beginning of the year and the timing of these spray campaigns. The quality assurance data helped determine whether spray operators applied the correct quantities of insecticides to wall surfaces, ensuring high-quality and effective implementation of IRS activities.

4.2 MEL Plan and Systems

PMI Evolve streamlined project reporting with an emphasis on essential data capture and management activities that explicitly support the project's life-saving interventions. The revised PMI Evolve MEL Plan, approved in June 2025, reflects the major scope adjustments to the project, with all countries reporting on revised indicators.

To support data generation activities, PMI Evolve teams continued to use low-cost, accessible solutions, taking advantage of existing tools where possible, to work efficiently and effectively. The PMI VectorLink Collect's DHIS2 continued to be the primary MEL system used to manage data for Evolve-led IRS campaigns and limited insecticide resistance monitoring and laboratory data. For ITN data, PMI Evolve country programs used existing country-owned information systems to manage ITN-related data across supported channels, with the exception of PMI Evolve Ethiopia, where the project used VectorLink Collect to manage ITN mass campaign data in the absence of existing systems.

In Year 3, PMI Evolve prioritized the following activities:

- Expanded the use of VectorLink Collect's molecular resistance data program across all 10 PMI Evolve country programs that performed molecular species identification in 2025.
- Integrated the performance monitoring tracker into VectorLink Collect to support daily reporting from operation sites during the live IRS campaign in two PMI Evolve countries—Ethiopia and Madagascar—including automated email reports to key stakeholders with summary campaign data.
- Optimized VectorLink Collect dashboards for efficient reporting, including revised standard entomological visualizations used to populate standard IRM reports to support interpretation and use of vector control and entomological data.

5. Country Programs

5.1 Burkina Faso

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5

Program Highlights

- PMI Evolve conducted laboratory species identification and insecticide susceptibility testing in collaboration with the *Institut de Recherches en Sciences de la Santé* (Health Sciences Research Institute) in five districts: Banfora, Dédougou, Fada N'Gourma, Kampti, and Kongoussi. The insecticides tested were pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin) and pyrrole (chlorfenapyr), organophosphates (pirimiphos-methyl), neonicotinoids (clothianidin), and meta-diamides (broflanilide).
- All site vectors were highly resistant to all three pyrethroids, except for permethrin in Fada N'Gourma, where resistance was moderate and vectors were susceptible to chlorfenapyr and pirimiphos-methyl. Pre-exposure to PBO partially increased mortality against pyrethroids, implying the involvement of metabolic resistance mechanisms. All site vector populations were resistant to clothianidin. Vectors were susceptible to broflanilide in Dédougou, Fada N'Gourma, and Kongoussi, and resistant in Banfora and Kampti.

5.2 Cambodia

Ento	**Number of entomological sites**	Foci cases responded to: 5		
	Number of people trained in entomology	Total: 60	Male: 53	Female: 7

Program Highlights

- In collaboration with the Center for Parasitology, Entomology and Malaria Control (CNM), conducted five joint entomological investigations in response to reported *Plasmodium knowlesi* (Pk), *P. malariae* (Pm), and *P. vivax* (Pv) cases, including one each in Kampong Speu, Pailin, and Siem Reap, and two in Stung Treng provinces. Surveillance in Pailin and Stung Treng confirmed high receptivity through the identification of three primary vectors: *Anopheles dirus* sensu lato (s.l.), *An. maculatus* s.l., and *An. minimus* s.l., whereas investigations in Kampong Speu and Siem Reap following imported cases indicated a low risk of onward transmission due to the absence of primary vectors.
- Conducted joint capacity-strengthening visits with CNM for 31 members of the malaria rapid response team across eight provinces: Battambang, Kampong Speu, Kampot, Koh Kong, Mondulkiri, Pailin, Pursat, and Stung Treng. These visits aimed to evaluate the long-term impact of previous entomology training.

- Along with CNM, PMI Evolve conducted an intensive five-day training course for 27 national staff, supervisors, and response team members across 22 provinces to enhance essential entomological surveillance skills for malaria elimination.
- Provided technical assistance per CNM's request for national laboratory capacity by processing 2,313 female *Anopheles* samples from five foci investigations: Battambang (40 samples), Kampong Speu (561), Koh Kong (298), Mondulkiri (584), Pailin (420), and Ratanak Kiri (410). While most tested negative for *Plasmodium* sporozoites, seven mosquito specimens belonging to the *Maculatus* species complex from Mondulkiri province were found positive for *Plasmodium falciparum* (*Pf*). Molecular-level identification by polymerase chain reaction (PCR) of these positive specimens revealed the presence of three sibling species: *An. maculatus* s.s. (3), *An. dravidicus* (3), and *An. sawadwongporni* (1).
- Conducted an eight-week molecular entomology training program, at the shared laboratory space of University of Puthisastra, for four staff from CNM and two students from the university to ensure long-term sustainability in circumsporozoite enzyme-linked immunosorbent assay and PCR techniques.
- Updated the national guidelines for entomological surveillance for malaria elimination. Following a series of consultative meetings with implementing partners to identify necessary revisions, the final English version was completed in November 2025, Translation to Khmer began in December 2025.
- Participated in a series of meetings and provided technical reviews and input to the development of national vector control guidelines per CNM's request.
- Participated and provided technical input in daily meetings to track progress and coordinate efforts for the intensification of the malaria elimination campaign in seven active foci of Stung Treng between September and December, as well as to address residual transmission associated with domestically imported cases in 6 forest hotspots and 10 linked villages in Kampong Speu between October and December. Additionally, PMI Evolve supported the survey on intermittent preventive treatment for forest-goers through joint data collection on participant adherence during the campaign in Kampong Speu.
- Participated in a five-day training of trainers organized by CNM in Siem Reap province for provincial and operational district health officials, focusing on malaria case management for the introduction of new malaria Ag P.f./Pan plasmodium test kits for parasite detection.

5.3 Cameroon

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5		
ITN	**ITN distribution channel(s) and dates of distribution**	Mass campaign December 8, 2025—January 13, 2026		
	Number of districts included in distribution	126		
	Number and type of ITNs distributed	Distributed by partners with PMI Evolve support: Total: 9,345,061 Dual AI (9,345,061)		
	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by partners with PMI Evolve support: Total: 18,690,122 Dual AI (18,690,122)		
IVC	**Number of people trained to support vector control**	Total: 1,061	Male: 803	Female: 258

IVC = Integrated vector control.

Program Highlights

- Conducted insecticide susceptibility tests at five sites (Akonolinga, Batouri, Mokolo, Monatele, Yagoua) using pyrethroids (alpha-cypermethrin, deltamethrin, permethrin) and pyrrole (chlorfenapyr) in collaboration with the NMP and three national research institutes (Biotechnology Centre of the University of Yaoundé, Centre for Research in Infectious Diseases, and the Organization for the Coordination of the Fight Against Endemic Diseases in Central Africa). At all sites, vector populations were susceptible to chlorfenapyr and resistant to the diagnostic dose of all pyrethroids tested. Furthermore, pre-exposure of mosquitoes to PBO substantially increased the mortality of the vectors against pyrethroid insecticides but did not restore full susceptibility.
- Supported microplanning, trainings, and supervision of Phase 1 of the ITN mass distribution campaign in seven regions (Adamawa, East, Far North, Littoral, North, South, and West). As of January 2026, an estimated 9,345,061 ITNs have been distributed in six regions (Adamawa, East, Far North, Littoral, North, and West), protecting over 18 million people from malaria.

5.4 Côte d'Ivoire

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5
ITN	**ITN distribution channel(s) and dates of distribution**	CD: EPI/ANC/CC operational support conducted monthly at health facility level from September to November 2025
	Number of districts included in distribution	10

	Number and type of ITNs distributed	Distributed by PMI Evolve: Total: 4,400 PBO (3,200) Dual AI (1,200)	Distributed by partners with PMI Evolve support: Total: 43,601 PBO (12,043) Dual AI (31,558)	
	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by PMI Evolve: Total: 8,800 PBO (6,400) Dual AI (2,400)	People protected by ITNs distributed by partners with PMI Evolve support: Total: 87,202 PBO (24,086) Dual AI (63,116)	
IVC	**Number of people trained to support vector control**	Total: 1,228	Male: 770	Female: 458

Legend: CC= curative care; CD = continuous distribution.

Program Highlights

- Conducted insecticide resistance monitoring in Dikodougou, Odienné, Man, San Pedro, and Yamoussoukro using pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin), pyrrole (chlorfenapyr), and neonicotinoids (clothianidin) in collaboration with the Swiss Center for Scientific Research. At all sites, the vectors were highly resistant to all pyrethroids tested, except in Man where resistance to permethrin was moderate. Across all sites, the vectors were also resistant to clothianidin and remained susceptible to chlorfenapyr.
- Provided ITN routine distribution technical support in 10 districts (Abengourou, Bettie, Boundiali, Kaniasso, Koun-Fao, Kouto, Madinani, Odienné, Tanda, and Tiassalé) and trained 1,228 health facility staff between September and November 2025 on routine ITN guidelines, data recording, reporting, and quality. Distributed 4,400 ITNs directly and supported the distribution of 43,601 ITNs in the targeted health districts.
- PMI Evolve also supported the transportation of 93,500 ITNs from Abidjan to district warehouses across 10 districts to help resolve ITN stock outs.

5.5 Democratic Republic of Congo

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 9
ITN	**ITN distribution channel(s) and dates of distribution**	ITN Mass Campaign (door-to-door) in Kasaï Central province: September 1 through September 20, 2025
	Number of health zones included in distribution	24
	Number and type of ITNs distributed	Distributed by PMI Evolve: Total: 2,960,174 ITNs PBO (969,324 ITNs) Dual AI (1,990,850 ITNs)

	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by PMI Evolve: Total: 5,920,348 PBO (1,951,913) Dual AI (3,968,435)		
IVC	**Number of people trained to support vector control**	Total: 11,112	Male: 9,443	Female: 1,669

Program Highlights

- Conducted insecticide resistance monitoring in nine sites across nine NMP selected provinces: Dibindi in Kasaï Oriental province, Fungurume in Lualaba province, Kabondo in Tshopo province, Kalemie in Tanganyika province, Kamina in Haut Lomami province, Kapolowe in Haut Katanga province, Lodja in Sankuru province, Mikalayi in Kasaï Central province and Mweneditu in Lomami province in collaboration with the Public Health School of Kinshasa (PHSK). The insecticides tested were pyrethroids (alpha-cypermethrin, deltamethrin, permethrin) and pyrrole (chlorfenapyr). At all sites, vector populations were susceptible to chlorfenapyr and resistant to the diagnostic dose of all pyrethroids tested. The pyrethroid resistance was moderate at most of the sites. Furthermore, pre-exposure of mosquitoes to PBO substantially increased the mortality of the vectors against pyrethroid insecticides and even restored full susceptibility to alpha-cypermethrin in three out of nine sites, to deltamethrin in four out of nine sites, and to permethrin in two out of nine sites.
- Conducted and supported an ITN mass campaign in 24 out of 26 health zones in Kasaï-Central Province: Bena Leka, Bena Tshiadi, Bilomba, Bobozo, Bunkonde, Demba, Dibaya, Kalomba, Kananga, Katende, Luambo, Lubondaie, Lubunga, Luiza, Masuika, Mikalayi, Muetshi, Mutoto, Ndekesha, Ndesha, Tshibala, Tshikaji, Tshikula, and Yangala. The Against Malaria Foundation procured the ITNs, and the NMP distributed them with PMI Evolve coordination and operational support.
- Subcontracted with PHSK to lead campaign digitization activities, including household registration and ITN distribution data collection. The project also subcontracted with the *Coordination Nationale de Renforcement du Système Communautaire* (National Committee for Community System Strengthening) to conduct an independent 5% verification exercise required by the Against Malaria Foundation to ensure quality, transparency, and efficiency of distribution. Both subcontractors recruited seasonal workers, including community mobilizers, household registration staff, ITN distributors, independent monitors, and data collectors, to carry out these activities.
- Conducted cascade trainings for 11,112 persons, including provincial and health zone coordination teams and data managers. The project then trained members of the health area development committee *(Comité de Développement de l'Aire de Santé)* and nurses. PHSK, the subcontractor leading campaign digitization, trained independent supervisors, community mobilizers, and distributors in all health zones prior to the start of the campaign. These targeted trainings ensured that coordination, supervision,

mobilization, and distribution teams were fully prepared to support the campaign effectively.

- In line with the NMP's ITN implementation manual, PMI Evolve implemented household registration and ITN issuance simultaneously as a single-phase approach. Although the original plan was to start registration and issuance in all health zones at the same time, the team staggered the start dates due to varying end dates of the vaccination campaign in each health area and logistical challenges (e.g., poor road conditions delayed ITN delivery to Bena Leke, making it the last area to start distribution). A total of 3,976 pairs of community health workers conducted the work: one worker registered the household using a tablet, while the other issued ITNs based on household size. Each pair traveled on foot or by bicycle, when available, carrying a bale containing 50 ITNs and replenishing their stock as needed to continue registration and distribution.

5.6 Ethiopia

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5		
IRS	**Timing of PMI Evolve-supported IRS campaign**	Phase I (Gambela and Oromia): June 20–July 9, 2025 Phase II (Benishangul Gumuz): August 12–30, 2025 17 operational days in each district and 12 days in each refugee camp		
	Number of districts covered by PMI Evolve-supported IRS	15 districts (Abobo, Akobo, Alge Sachi, Bambasi, Darimu, Gambela Zuria, Gog, Itang special, Jikawo, Jor, Lare, Makuye, Menge, Metu Rural, and Wanthoa) 5 refugee camps (Jewi, Pugnido-1, Pugnido-2, Nguenyyiel and Tirkidi)		
	Insecticide(s) and units	Actellic 300CS (29,208 units), and SumiShield 50WG (23,222 units)		
	IRS Results	Structures Sprayed: 263,343	Structures Found: 269,702	Spray Coverage: 97.6%
	Population protected by PMI Evolve-supported IRS	Total: 863,849	Pregnant Women: 44,438	Children < 5: 145,449
	Number of people trained to support IRS in target areas with USG funds	Total: 1,568	Male: 1,229	Female: 339
ITN	**ITN distribution channel(s) and dates of distribution**	Mass Distribution Campaign June 18, 2025–January 5, 2026		
	Number of districts included in distribution	21 (Bero, Bilate Zuria, Boricha, Dembe, Darara, Gomma, Kamashi, Limu Seka, Mao-Komo, Mencho, Menit Shasha, Mizhiga, Nono Benja, Sedal, Seka Chekorsa, Sekoru, Suri, Wondogenet, Wondogenet Town, Zabagazo, Zay)		
	Number and type of ITNs distributed	Distributed by PMI Evolve: Total: 1,171,253 (Dual AI: 1,171,253)	Distributed by partners with PMI Evolve support: Total: 36,336 (Dual AI: 36,336)	

	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by PMI Evolve: Total: 2,342,506 (Dual AI: 2,342,506)	People protected by ITNs distributed by partners with PMI Evolve support: Total: 72,672 (Dual AI: 72,672)	
IVC	**Number of people trained to support vector control (IRS + ITNs + LSM)**	Total: 5,223	Male: 3,345	Female: 1,878

Legend: LSM = Larval source management; USG = United States government.

Program Highlights

- Conducted insecticide resistance monitoring of *An. gambiae* s.l. in five districts—Abobo in Gambela Region; Metu Rural, Batu, and Omo-Nada districts in Oromia Region; and Hawassa City in Sidama Region—in collaboration with Jimma and Hawassa Universities. The project used district-specific insecticides, including pirimiphos-methyl, clothianidin, alpha-cypermethrin, deltamethrin, and chlorfenapyr**.** *An. gambiae* s.l. showed resistance to deltamethrin and alpha-cypermethrin but remained susceptible to chlorfenapyr in Batu, Omo-Nada, and Hawassa city. In Abobo, mosquitoes were fully susceptible to pirimiphos-methyl and clothianidin, while in Metu Rural, they showed full susceptibility to pirimiphos-methyl and possible resistance to clothianidin.
- Conducted IRS in 15 districts and five refugee camps across three regions (Gambela, Oromia, and Benishangul-Gumuz) in collaboration with the National Malaria and Other Vector Borne Disease Prevention and Control Desk, Regional Health Bureaus, and zonal and district health offices. The project initially targeted 263,342 structures but found a slightly higher number of structures (269,702) during implementation. The project sprayed 263,343 structures and achieved a coverage rate of 97.6%.
- Deployed two insecticides for IRS—used Actellic 300CS in 10 districts and five refugee camps in Gambela and sprayed SumiShield 50WG in two districts (Menge in Benishangul-Gumuz and Darimu in Oromia). In Alge Sachi and Metu Rural in Oromia and Bambasi district in Benishangul-Gumuz, the project used both Actellic 300CS (remaining from the 2024 campaign) and SumiShield 50WG.
- Evaluated the spray quality of Actellic 300CS within one week of spraying using cone bioassay tests in Gambela Zuria district in Gambela Region in collaboration with Jimma University. Observed 100% mortality of exposed *An. arabiensis* vectors, confirming high-quality implementation of IRS intervention.
- Distributed 1,207,589 dual AI (PermaNet® Dual) ITNs across 21 districts, achieving 98.7% distribution coverage based on microplanning data, and protecting more than 2.3 million people from malaria (106.1% population coverage).
- Trained 2,352 ITN distribution personnel and 591 supervisors, 1,568 spray personnel and 309 LSM personnel to guide and implement high-quality vector control interventions. PMI Evolve project also donated 631 kg of Sumilarv 0.5G and 240 tins (450 grams each) of VectoBac®WDG and provided a two-day refresher training to the

city administration of eight towns conducting larval source management, to help sustain LSM activities.

5.7 Ghana

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5 sites (Bunbuna, Galinkpegu, Nasoni, Zamanshegu, Zarantinga)		
IRS	**Timing of PMI Evolve-supported IRS campaign**	June 16– July 25, 2025 (30 operational days)		
	Number of districts covered by PMI Evolve-supported IRS	10 districts (Bunkpurugu Nakpanduri, Chereponi, East Mamprusi, Gushegu, Karaga, Kumbungu, Mamprugu Moagduri, Tatale-Sanguli, West Mamprusi, and Yunyoo Nasuan)		
	Insecticide(s) and units	Fludora Fusion WP-SB (11,440 units), SumiShield 50WG (55,260 units), Vectron T500 (40,600 units)		
	IRS Results	Structures Sprayed: 488,528	Structures Found: 514,861	Spray Coverage: 94.9%
	Population protected by PMI Evolve-supported IRS	Total: 1,266,632	Pregnant Women: 43,419	Children < 5: 177,162
	Number of people trained to support IRS in target areas with USG funds	Total: 1,195	Male: 864	Female: 331
IVC	**Number of people trained to support vector control**	Total: 3,074	Male: 2,445	Female: 629

Program Highlights

- Conducted insecticide resistance monitoring at five sites (Bunbuna, Galinkpegu, Nasoni, Zamanshegu, and Zarantinga) in collaboration with entomology and data specialist consultants and temporary field technicians that the project hired. The insecticides tested were pirimiphos-methyl, clothianidin, broflanilide, alpha-cypermethrin, deltamethrin, and permethrin. Vectors at all sites showed resistance to pyrethroids and clothianidin, and remained susceptible to chlorfenapyr, pirimiphos-methyl, and broflanilide.
- Conducted IRS in 10 districts spraying 488,528 structures during the 2025 IRS campaign, which officially began on June 16. The start date shifted from April to June due to the Stop-Work Order and project-wide funding delays that compressed the preparation window.
- To fit within the shortened preparation window, the project adjusted both the training duration and the delivery approach for all trainings (e.g., training of trainers from five days to three; Monitoring, Evaluation, and Learning (MEL) and Storekeeper training from three days to two; and Spray Operator training from five days to four). Additionally, to maximize efficiency, the project conducted different training sessions

simultaneously at the same venues using separate halls and a rotating facilitator approach.

- To overcome challenges related to the late start of the campaign, the project implemented several adaptive strategies. These included:
  - Introducing weekend spraying, which was successfully carried out in Gushegu and Tatale-Sanguli
  - Intensifying revisit efforts, especially during the final week
  - Strengthening mobilization by engaging with community opinion leaders and household heads, assigning spray operators to lead mobilization efforts within their own communities, and involving team leaders in both supervision and mobilization
  - Conducting earlier morning visits to reach households before the adults left for daily farming and shea nut collection activities
  - Working closely with community leaders to adjust spray schedules, including securing agreement to spray on weekends.
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5.8 Guinea

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5

Program Highlights

- In collaboration with the NMP, conducted insecticide susceptibility testing at five sites: Boffa and Forecariah in the Maritime region of Guinea, Labe in the Middle of Guinea, Lola in the Forest region of Guinea, and Kankan in the Upper region of Guinea. The insecticides tested included pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin) and pyrrole (chlorfenapyr). Vectors at all sites showed high resistance to all three pyrethroids, with partial involvement of metabolic resistance mechanisms, and remained susceptible to chlorfenapyr.

5.9 Kenya

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 6 (Busia, Bungoma, Homa Bay, Kisumu, Migori, and Siaya)
IRS	**Timing of PMI Evolve-supported IRS campaign**	Busia County: 13 operational days (February 21 to March 10, 2025) and Migori county: 18 operational days (May 6 to May 25, 2025)
	Number of sub-counties covered by PMI Evolve-supported IRS	Number of sub-counties: 13 Busia: 8 sub-counties) Bunyala, Butula, Matayos, Nambale, Samia, Teso central, Teso North, and Teso South) Migori: 5 sub-counties (Awendo, Nyatike, Suna East, Suna West, and Uriri)

	Insecticide(s) and units	Actellic 300CS (64,225), SumiShield 50WG (45,431 sachets)		
	IRS Results	Structures Sprayed: 424,295	Structures Found: 448,783	Spray Coverage: 94.5%
	Population protected by PMI Evolve-supported IRS	Total: 1,423,832	Pregnant Women: 30,688	Children < 5: 211,960
	Number of people trained to support IRS in target areas with USG funds	Total: 3,638	Male: 2,263	Female: 1,375
IVC	**Number of people trained to support vector control**	Total: 7,207	Male: 3,678	Female: 3,529

Program Highlights

- The project conducted insecticide susceptibility tests in six lake endemic counties (Busia, Bungoma, Homa Bay, Kisumu, Migori, and Siaya) using pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin), chlorfenapyr, pirimiphos-methyl, broflanilide, and clothianidin. At all sites, malaria vectors were resistant to all the three pyrethroids tested, and fully susceptible to chlorfenapyr, broflanilide, clothianidin, and pirimiphos-methyl. Pre-exposure of mosquitoes to PBO substantially increased the mortality of the vectors against pyrethroid insecticides and restored full susceptibility to at least one pyrethroid at all sites for *An. gambiae* and one of the two sites for *An. funestus*.
- The project conducted Busia county's IRS campaign under a Limited Waiver for Global Health Life-Saving Humanitarian Assistance. With limited time window and funding approved under the 30-day waiver, the team completed pre-spray preparations in 6 days instead of the usual 15, including mobilizer and spray personnel training; mass mobilization; and distribution of insecticide, equipment, and supplies to operations sites. The team also carried out the campaign in 13 days instead of 24.
- To maximize the number of lives protected from malaria in Busia within the limited timeline and budget, the project:
  - Reduced training days (e.g., spray operators were trained over three days as opposed to the standard five days)
  - Increased the number of mobilizers per sub-location and shortened their mobilization period to four days instead of six to mitigate the lack of mass media outreach while remaining within the limited waiver budget
  - Increased the use of mobile soak pits located within sprayed communities, which substantially reduced the number of vehicles needed to transport spray operators from the permanent operation sites to the field.
- Due to campaign delays, the Migori campaign took place three months later than planned and overlapped with the rainy season, requiring several programmatic adjustments:

- Increased temporary personnel to compensate for fewer spray days and ensure the project reached the target number of structures.
- Advised households to consolidate belongings in one structure, allowing spray teams to spray the remaining prepared structures and return the following day to spray the final room, which reduced refusals from households unable or unwilling to move items during rainy conditions.
- Deployed teams early each morning to complete daily targets before afternoon and evening rains and to avoid impassable roads. The project also reviewed spray calendars daily and reassigned teams to areas where rain had not fallen the prior day.

- Following the NMP's decision to transition IRS from Migori County to Siaya County in 2026, the project held an exit meeting with Migori County leadership and an inception meeting with Siaya County leadership to formally close out and launch activities, respectively. Siaya County has 29% malaria prevalence, the second highest in the lake endemic region based on Kenya's 2020 Malaria Indicator Survey.
- In preparation for Siaya's first IRS campaign, the team completed geographical reconnaissance in September 2025 to map sensitive ecosystems; identify suitable sites for permanent and mobile soak pits, warehouses, and storage facilities; assess structure types; review transportation routes and distances to operational sites; and verify water and electricity availability to support efficient IRS operations.

5.10 Liberia

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5

Program Highlights

- In collaboration with the NMP, the Liberian Institute for Biomedical Research and Tubman University conducted alpha-cypermethrin and chlorfenapyr insecticide susceptibility tests at five sites: Petroken, Putu District-Grand Gedeh County, Pynes Town-Pyne District-Sinoe County, Kanweaken City-Gbeapo District-River Gee County, Zoweinta Town-Kpaai District-Bong County, and Salayea Town-Salayea District-Lofa County. At all sites, vector populations were susceptible to chlorfenapyr and resistant to the diagnostic dose of alphacypermethrin. Pre-exposure of mosquitoes to PBO substantially increased the mortality of the vectors against alphacypermethrin with restoration of full susceptibility in four out of the five sites.
- Conducted a review of the six counties transitioning ITN distribution from EPI to a new distribution channel targeting children aged 15 months receiving the fourth round of the Recombinant protein-based (RTS,S) malaria vaccine (Grand Gedeh, Grand Kru, Maryland, River Gee, Rivercess, and Sinoe). The project completed this review by engaging with the NMP to identify transition challenges and by visiting Rivercess County to identify the status of the transition at the county and health facility level. The project

team discussed the identified challenges with the NMP and stakeholders, and these challenges informed the 2026 workplan.

5.11 Madagascar

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5		
IRS	**Timing of PMI Evolve-supported IRS campaign**	November 17–December 19, 2025 (20 operational days)		
	Number of districts covered by PMI Evolve-supported IRS	4 (Ankazoabo, Ikalamavony, Isandra, and Mandoto)		
	Insecticides and units	Actellic 300CS (15,552 units), Klypson (3,317 units), SumiShield 50WG (32,420 units), Vectron T500 (4,855 units)		
	IRS Results	Structures Sprayed: 146,627	Structures Found: 149,360	Spray Coverage: 98.2%
	Population protected by PMI Evolve-supported IRS	Total: 729,066	Pregnant Women: 22,072	Children < 5: 105,178
	Number of people trained to support IRS in target areas with USG funds	Total: 697	Male: 596	Female: 101
IVC	**Number of people trained to support vector control**	Total: 1,745	Male: 1,350	Female: 395

Program Highlights

- Conducted insecticide resistance monitoring at five sites, including four sprayed sites (Ankazoabo, Ikalamavony, Isandra, Mandoto) and one unsprayed control site (Manja) using pyrethroid insecticides (alpha-cypermethrin, deltamethrin, and permethrin), pyrrole (chlorfenapyr), organophosphates (pirimiphos-methyl), neonicotinoids (clothianidin), and meta-diamides (broflanilide). All site vectors were susceptible to pirimiphos-methyl, clothianidin, broflanilide, and chlorfenapyr, while resistance to pyrethroids was noted at some sites for specific insecticides. Pre-exposure to PBO reverted to susceptibility at all sites where pyrethroid resistance was observed.
- Conducted the 2025 IRS campaign in four districts using four insecticides: Ankazoabo Sud using Vectron™ T500 (broflanilide), Isandra using Actellic® 300CS (pirimiphos-methyl), Ikalamavony using Klypson® 500WG and SumiShield 50WG (clothianidin), and Mandoto using SumiShield 50WG. The project collaborated with the NMP, the Regional Health Directorate, and the District Health Service on all aspects of the campaign, including training of 697 people trained to support IRS in target areas with USG funds. The campaign achieved 98.2% spray coverage, sprayed 146,627 structures out of 149,360 structures found, and protected 729,066 people from malaria.
- Assessed spray quality in all four districts and four insecticides within the first week of the campaign using cone bioassay tests. Observed 100% mortality of exposed *An. gambiae* vectors, confirming high-quality implementation of the IRS intervention.

- Facilitated a joint State Department–NMP visit with the U.S. Department of State Regional Public Health Advisor to Angola and Madagascar, Supervisory Health Assistance Coordinator, and Health Assistance Activity Manager in the new district of Mandoto at the start of the campaign. Conducted joint advocacy in support of community engagement and acceptance of IRS.

5.12 Malawi

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 0*

*Planned 2025 IRM activities are currently in progress at the time of reporting.

Program Highlights

- Collaborated with the Malaria Alert Center at Kamuzu University of Health Sciences in Malawi to conduct insecticide resistance testing on *An. gambiae* s.l. in five districts (Karonga, Nkhata Bay, Nkhotakota, Salima, and Chikwawa) and laboratory analysis of mosquito samples. The project will complete this activity by March 2026, as there were not enough mosquitoes to do the rearing and testing by the end of 2025.

5.13 Niger

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5

Program Highlights

- Conducted insecticide susceptibility testing in five districts, Aguie, Gaya, and Gayi, within the high incidence strata, and Aderbissinat and Diffa in the moderate incidence strata, in collaboration with the *Centre de Recherche Médicale et Sanitaire* (CERMES). The insecticides tested were pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin) and pyrrole (chlorfenapyr).
- Across all sites, vectors showed high resistance to the three pyrethroids, but pre-exposure to PBO substantially increased mortality to pyrethroids. Vectors remained susceptible to chlorfenapyr.

5.14 Nigeria

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 6

Program Highlights

- Conducted insecticide resistance testing on *An. gambiae* s.l. vectors in six states (Akwa Ibom, Bauchi, Ebonyi, Kebbi, Nasarawa, and Oyo) using pyrethroids (alpha-cypermethrin, deltamethrin, permethrin) and pyrrole (chlorfenapyr) in collaboration

with the NMP and the Nigerian Institute of Medical Research. Pyrethroid resistance was observed in Akwa Ibom, Bauchi, Ebonyi, and Kebbi while vectors were susceptible in Nasarawa and Oyo. Pre-exposure of mosquitoes to piperonyl butoxide (PBO) substantially increased the mortality of the vectors against pyrethroid insecticides in Bauchi with full restoration of susceptibility in Ebonyi and Kebbi. Across all sites, vectors remained fully susceptible to chlorfenapyr.

5.15 Sierra Leone

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5		
IRS	**Number of structures sprayed by other partners with PMI Evolve support**	20 correctional centers and 1 psychiatric home in 16 districts structures: 43 buildings/581 cells/rooms		
ITN	**ITN distribution channel(s) and dates of distribution**	School Based Distribution June 30–July, 4, 2025		
	Number of districts included in distribution	2 (Bo and Bombali)		
	Number and type of ITNs distributed	Distributed by PMI Evolve: Total: 225,330 PBO (154,750), Dual AI (70,580)		
	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by PMI Evolve: Total: 450,660 PBO (309,500), Dual AI (141,160)		
IVC	**Number of people trained to support vector control**	Total: 1,482	Male: 618	Female: 864

Program Highlights

- Conducted insecticide susceptibility tests on *An. gambiae* s.l. in five districts (Bo, Bombali, Kono, Port Loko, and Western Area) using pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin) and pyrrole (chlorfenapyr) in collaboration with the NMP and Njala University. At all sites, vector populations were susceptible to chlorfenapyr and resistant to the diagnostic dose of all pyrethroids tested. Furthermore, pre-exposure of mosquitoes to PBO increased the mortality of the vectors against pyrethroid insecticides but did not restore full susceptibility.
- Supported the NMP in planning and implementing IRS in 20 correctional facilities across 16 districts and one psychiatric hospital, protecting over 6,024 people at risk of malaria.
- Conducted school-based distribution (SBD) of PBO and Dual AI ITNs to children in grades 1–5 in Bo and Bombali districts, protecting over 450,660 people at risk of malaria. The project implemented digital data collection with support from local partner Informatics Consultancy Firm. Following successful implementation, the MOH/NMP recommended the adoption and expansion of SBD as an alternative routine distribution channel in high malaria burden districts.

- Supported the revision of the national SBD strategy and the development of the National Malaria Elimination Strategic Plan 2026-2030.
- Assessed the ITN routine distribution channel via the Expanded Program on Immunization (EPI) and antenatal care (ANC) in five districts and identified bottlenecks to improve efficiency in the distribution strategy.

5.16 Togo

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 5

Program Highlights

- Conducted insecticide susceptibility testing at five sites: Agomeglozou, Dapaong, and Tchamba within the moderate malaria transmission zone; Niamtougou in the high transmission zone; and Kolokope in the low transmission zone in collaboration with the Laboratory of Ecology and Ecotoxicology. The project tested pyrethroids (alpha-cypermethrin, deltamethrin, and permethrin) and pyrrole (chlorfenapyr). Across all sites, vectors showed high resistance to the three pyrethroids, but pre-exposure to PBO partially increased the mortality of pyrethroids in three of the five sites (Dapaong, Niamtougou, and Tchamba). Vectors remained susceptible to chlorfenapyr.

5.17 Uganda

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 7 districts (Apac, Hoima, Kamwenge, Kanungu, Moroto, Nakaseke, and Tororo)		
IRS	**Timing of PMI Evolve-supported IRS campaign**	February 20–March 15, 2025 (18 operational days)		
	Number of districts covered by PMI Evolve-supported IRS	7 districts (Bugiri, Butaleja, Butebo, Kibuku, Namutumba, Pallisa, Tororo)		
	Insecticide(s) and units	Actellic 300CS (282,984 units)		
	IRS Results	Structures Sprayed: 753,911	Structures Found: 821,751	Spray Coverage: 91.7%
	Population protected by PMI Evolve-supported IRS	Total: 2,757,623	Pregnant Women: 112,872	Children < 5: 493,971
	***IRS TA Only:* Number of structures sprayed by other partners with PMI Evolve support**	946,690 structures sprayed by the Government of Uganda in the nine West Nile districts		
	Number of people trained to support IRS in target areas with USG funds	Total: 5,468	Male: 3,840	Female: 1,628
IVC	**Number of people trained to support vector control**	Total: 7,199	Male: 4,725	Female: 2,474

Program Highlights

- Conducted insecticide susceptibility tests in seven districts (Moroto, Tororo, Hoima, Kamwenge, Kanungu, Nakaseke, and Apac) using pirimiphos-methyl, clothianidin, broflanilide, chlorfenapyr and pyrethroids (alpha-cypermethrin and deltamethrin), in collaboration with the Ministry of Health's National Malaria Elimination Division (MOH-NMED). At all sites, local vector populations were susceptible to pirimiphos-methyl, broflanilide, chlorfenapyr, and clothianidin but resistant to both pyrethroids (alpha-cypermethrin and deltamethrin). Furthermore, pre-exposure of mosquitoes to PBO substantially increased the mortality of the vectors against pyrethroid insecticides and restored full susceptibility at three sites Hoima, Nakaseke, and Tororo.
- In February 2025, the project handed over insectaries to local institutions to ensure continued use and sustainability of these facilities. Handovers included: (1) the insectary at Tororo Regional Referral Hospital transferred to the Infectious Disease Research Collaboration; (2) the insectary and molecular lab at the MOH's Vector Control Division, handed over to the division's lab head; and (3) the insectary at Muni University handed over to the head of the Biology Department. In addition, mosquito colonies at Gulu University were handed over to the university's Biology Department.
- Given a limited waiver to conduct IRS during the Stop-Work Order, conducted an 18-day (February 20-March 15, 2025) life-saving IRS campaign in seven districts (Bugjri, Butaleja, Butebo, Namutumba, Kibuku, Pallisa, and Tororo) in collaboration with MOH-NMED and the district local governments, spraying 753,911 structures and protecting 2,757,623 people.
- A number of adaptive measures were implemented to accommodate the condensed preparation period and the shortened campaign timeline:
  - With only 18 days available for spraying instead of 24, the project revised its target to 87% of original structures and increased seasonal staffing by roughly 20% to meet the adjusted goal.
  - Due to shipment delays, the project obtained critical PPE from the Ministry of Health—including 37,200 nose masks, 1,255 pumps, and 700 helmets—and supplemented these with locally procured gloves, face shields, and additional gumboots to equip the expanded workforce.
  - Spray supervision tools shifted from mobile to paper-based formats, and frequent monitoring and adjustments to the spray calendar were required to meet targets.
  - The project recruited and trained 7,199 seasonal workers in support of the 2025 IRS campaign. Training sessions such as training of trainers and spray operator trainings were condensed to two and three days, respectively, down from six days, focusing solely on essential content.
  - The team accelerated repairs to soak pits and implemented twin wash areas and washing rosters to manage the high number of spray personnel across 153 fixed and 12 mobile soak pit sites; PPE shortages early in the campaign required prioritizing full PPE for spray operators and team leaders, while supervisors

inspected houses only after the two-hour post-spray safety window when full PPE was not available.

- Conducted evidence-based demand creation activities across all seven districts, compressing mobilization from 23 to 12 days to mobilize and sensitize communities on IRS, with support from the Community Development Foundation - Uganda, and in collaboration with the MOH's Health Promotion, Community Health, and National Malaria Control Divisions, as well as district health educators and district IRS teams.
- Recycled a total of 45,403 kg of plastic and 15,280 kg of assorted paper waste and incinerated 6,231.5 kg of contaminated waste from IRS activities.
- Provided technical assistance to the MOH-supported IRS campaign in nine West Nile districts. The project deployed technical staff during September 9-13, 2025, to facilitate training of trainers for district IRS teams identified as needing additional backstopping. During October 5-11, 2025, the MEL team conducted field supervision and documented learning related to the integration of malaria services during IRS implementation in West Nile.
- In collaboration with the MOH-NMED and district authorities, conducted preparatory activities for the 2026 IRS campaign planned in seven districts:
  - Convened micro-planning meetings
  - Recruited 5,438 seasonal workers
  - Conducted trainings of trainers for site supervisors, storekeepers, and monitoring and evaluation assistants
  - Conducted the pre-season environmental compliance assessments across 149 operations sites
  - Completed the Environmental and Social Impact Assessment for the introduction and use of Vectron T500 insecticide in Uganda, through WSS Services, a firm certified by Uganda's National Environment Management Authority
  - Supported ongoing transition from VectorLink Collect to the MOH data system for management of IRS spray data, which will be used for the first time in this campaign.

5.18 Zambia

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 0[a]
IRS	**Timing of PMI Evolve-supported IRS campaign**	September 23–October 31, 2025 (28 operational days)
	Number of districts covered by PMI Evolve-supported IRS	10 districts (Chadiza, Chipanagali, Chipata, Kasenengwa, Katete, Lusangazi, Mambwe, Nyimba, Petauke and Vubwi)
	Insecticide(s) and units	Fludora Fusion WP-SB (122,070 units)

	IRS Results	Structures Sprayed: 450,885	Structures Found: 456,659	Spray Coverage: 98.7%
	Population protected by PMI Evolve-supported IRS	Total: 1,653,441	Pregnant Women: 43,29	Children < 5: 221,814
	Number of people trained to support IRS in target areas with USG funds	Total: 1,736	Male: 1,049	Female: 687
ITN	**ITN distribution channel(s) and dates of distribution**	CD[b]		
	Number of districts included in distribution	EPI/ANC: 57 Districts in the five provinces; Copperbelt (10), Eastern (15), Luapula (12), Muchinga (8), and Northern (12)		
	Number and type of ITNs distributed	Distributed by PMI Evolve: Total: 0 Pyrethroid-only (0) PBO (0) Dual AI (0)	Distributed by partners with PMI Evolve support: Total: 245,337[b] Pyrethroid-only (0) PBO (245,337) Dual AI (0)	
	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by PMI Evolve: Total: 0 Pyrethroid-only (0) PBO (0) Dual AI (0)	People protected by ITNs distributed by partners with PMI Evolve support: Total: 490,674[b] PBO (490,674) Dual AI (0)	
IVC	**Number of people trained to support vector control**	Total: 2,038	Male: 1,216	Female: 822

Legend: CD = continuous community distribution; NMEC = National Malaria Elimination Center.
[a] Planned 2025 IRM activities are currently in progress at the time of reporting.
[b] At the time of reporting, Zambia health information system data were available for the period of June-September 2025. Result will be updated once data through December 2025 are available.

Program Highlights

- Collaborated with NMP to collect *Anopheles* mosquitoes from five sites in two districts for insecticide resistance monitoring to inform the selection of vector control interventions. The project will complete this activity by March 2026, as there were not enough mosquitoes to do the rearing and testing.
- Conducted IRS in 10 districts of the Eastern Province—Chadiza, Chipangali, Chipata, Kasenengwa, Katete, Lusangazi, Mambwe, Nyimba, Petauke, and Vubwi, using Fludora Fusion, spraying 450,885 structures and protecting over 1.65 million people.
- Provided central-level operational support to NMEC in IRS monitoring, supervision, and coordination of virtual meetings.
- Supported strong community mobilization for the 2025 IRS campaign by working with district teams, faith-based organizations, and local stakeholders to lead demand-

creation efforts, strengthen community awareness, and guide spray teams to targeted villages and neighborhoods ahead of spray operations.

- Implemented environmentally responsible waste management, including recycling used flashlight batteries and sending uncontaminated cardboard boxes to local organizations, one of which repurposes materials into mobility and specialized equipment for children with disabilities.
- Conducted the spray quality assessment of Fludora Fusion using cone bioassays within 48 hours of spraying in Katete, Chipata, and Mambwe districts. The project observed 100% post-exposure mortality of *An. gambiae* vectors across all sites, confirming high-quality implementation of the IRS intervention.
- Conducted on-site supervision and mentorship visits to assess ITN continuous distribution (CD) performance in 173 health facilities across five provinces (Copperbelt, Eastern, Luapula, Muchinga, and Northern). The project then held virtual performance reviews with each province to discuss the findings and develop a roadmap to address identified gaps.
- Trained 114 district program officers from the five targeted provinces on adherence to CD guidelines, data management, and ITN issuance across the various CD channels.
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5.19 Zimbabwe

Ento	**Number of entomological sites**	Insecticide resistance monitoring sites: 0*		
ITN	**ITN distribution channel(s) and dates of distribution**	ITN Mass Distribution Campaign Bindura district: 1-12 December 2025 Mazowe District: 5-20 December 2025 Murewa District: 21 November-4 December 2025		
	Number of districts included in distribution	3 districts (Bindura, Mazowe, Murewa)		
	Number and type of ITNs distributed	Distributed by PMI Evolve: Total: 542,801 Pyrethroid-only	Distributed by partners with PMI Evolve support: Total: 0	
	Number of people protected by ITNs (estimate)	People protected by ITNs distributed by PMI Evolve: Total: 1,085,602	People protected by ITNs distributed by partners with PMI Evolve support: Total: 0	
IVC	**Number of people trained to support vector control**	Total: 1,397	Male: 308	Female: 1,089

*Planned 2025 IRM activities are currently in progress at the time of reporting.

Program Highlights

- Completed country start-up activities by October 2025, including securing and furnishing office space in Harare, hiring staff, establishing administrative and financial systems, and finalizing local registrations and compliance requirements.
- Recruited a subcontractor, Africa University, to lead insecticide susceptibility testing at six sites, Burma Valley, Chakari, Maramba, Nyamapanda, Old Mazowe Bridge, and Premier, which will start in early 2026 to coincide with the rainy season.
- Facilitated in-country orientation meetings with the U.S. Department of State and Provincial Medical Directorates of Manicaland, Mashonaland Central, and Mashonaland East to introduce the PMI Evolve project and plan for the 2025 ITN mass campaign.
- Conducted an ITN mass distribution campaign in three districts (Bindura, Mazowe, and Murewa) to include both household registration and last-mile distribution of 542,801 pyrethroid-only ITNs, protecting 1,085,602 people and resulting in an ITN coverage of 100.3% of the household registration targets. This included mobilizing Village Health Workers for community engagement, managing last-mile transportation using hired vehicles, conducting supportive supervision, and collaborating with the Global Health Supply Chain-Procurement Supply Management (GHSC-PSM) project for delivery from central warehouses to district holding points.
- Ensured data quality by training 1,397 people (308 males and 1,089 females), including provincial and national-level staff as well as village health workers, to conduct and support ITN mass distribution activities. Also conducted district-level data validation sessions for DHIS2 to ensure reporting accuracy.
- At the conclusion of the campaign, collected, packed, and weighed ITN waste (bales, straps, and single-package plastics) for recycling.

Annex A. MEL Results Summary

Table 1. PMI Evolve Year 3 Summary Results for Integrated Vector Control Activities

Country	IRS						ITN			
	Structures Sprayed by Evolve	Spray Coverage (%)	People Protected by IRS	People Protected by IRS: Pregnant Women	People Protected by IRS: Children <5	Structures Sprayed by other partners with Evolve Support	ITNs Distributed by PMI Evolve	People Protected by ITNs distributed by PMI Evolve (Estimate*)	ITNs Distributed by other partners with PMI Evolve support	People Protected by ITNs Distributed by other partners with PMI Evolve support (Estimate*)
Cameroon	---	---	---	---	---	---	---	---	9,345,061	18,690,122
Côte d'Ivoire	---	---	---	---	---	---	4,400	8,800	43,601	87,202
DRC	---	---	---	---	---	---	2,960,174	5,920,348	---	---
Ethiopia	263,343	97.6	863,849	44,438	145,449	---	1,171,253	2,342,506	36,336	72,672
Ghana	488,528	94.9	1,266,632	43,419	177,162	---	---	---	---	---
Kenya	424,295	94.5	1,423,832	30,688	211,960	---	---	---	---	---
Madagascar	146,627	98.2	729,066	22,072	105,178	---	---	---	---	---
Sierra Leone	---	---	---	---	---	43	225,330	450,660	---	---
Uganda	753,911	91.7	2,757,623	112,872	493,971	946,690	---	---	---	---
Zambia	450,885	98.7	1,653,441	43,295	221,814			0	245,337	490,674
Zimbabwe	---	---	---	---	---	---	542,801	1,085,602	---	---
Total	**2,527,589**	**95.0**	**8,694,443**	**296,784**	**1,355,534**	**946,733**	**4,903,958**	**9,807,916**	**9,670,335**	**19,340,670**

*Calculated based on approved PMI Evolve Monitoring, Evaluation and Learning Plan performance indicator definition (ITNs Distributed by PMI Evolve*2)

Table 2. PMI Evolve Year 3 People Trained to Support Vector Control

Country	People Trained to Support VC		
	Total	Male	Female
Cameroon	1,061	803	258
Côte d'Ivoire	1,228	770	458
DRC	11,112	9,443	1,669
Ethiopia	5,223	3,345	1,878
Ghana	3,074	2,445	629
Kenya	7,207	3,678	3,529
Madagascar	1,745	1,350	395
Sierra Leone	1,482	618	864
Uganda	7,199	4,725	2,474
Zambia	2,038	1,216	822
Zimbabwe	1,397	308	1,089
Total	**42,766**	**28,701**	**14,065**

Table 3. PMI Evolve Year 3 Entomological Sites

Country	Entomological Sites Insecticide Resistance Monitoring
Burkina Faso	5
Cambodia	0
Cameroon	5
Côte d'Ivoire	5
DRC	9
Ethiopia	5
Ghana	5
Guinea	5
Kenya	6
Liberia	5
Madagascar	5
Malawi	0*
Niger	5
Nigeria	6
Sierra Leone	5
Togo	5
Uganda	7
Zambia	0*
Zimbabwe	0*
Total	**83**

*Planned 2025 IRM activities are currently in progress at the time of reporting.