

# ANNUAL REPORT

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## 2023

A Malaria Free Vanuatu



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Project Summary Information	
<b>Project Title</b>	A malaria free Vanuatu, contributing to the good health and well-being of the population.
<b>Project ID</b>	00123611
<b>Project Duration</b>	2021-2023
<b>Location</b>	Vanuatu
<b>CPD/UNSDCF/RPD/SP Outputs</b>	<p><b>United Nations Pacific Sustainable Development Cooperation Framework (UNSDCF) 2023 – 2027</b></p> <p><b>Outcome 2: STRATEGIC PRIORITY: PEOPLE</b></p> <p>By 2027, more people, particularly those at risk of being left behind, benefit from more equitable access to resilient, and gender-responsive infrastructure, quality basic services, food security/ nutrition and social protection systems.</p> <p><b>Multi-country programme document for the Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Palau, Republic of the Marshall Islands, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu (MCPD): 2023-2027</b></p> <p><b>OUTPUT 3.1:</b> Governance institutions are accountable and have improved capacities for service delivery.</p> <p><b>Sustainable Development Goals</b></p> <p><b>GOAL 3: Ensure healthy lives and promote well-being for all at all ages.</b></p> <p><b>Target 3.3:</b> End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.</p> <p><b>GOAL 5: Achieve gender equality and empower all women and girls.</b></p> <p><b>TARGET 5.6:</b> Ensure universal access to sexual and reproductive health and reproductive rights as agreed in accordance with the Programme of Action of the International Conference on Population and Development and the Beijing Platform for Action and the outcome documents of their review conferences.</p>
<b>Gender marker</b>	<p><b>Gen 2: Gender equality as a significant objective</b></p> <p>The programme actively promotes universal health coverage and is reflected in its interventions and targeted approach of reaching key and vulnerable populations.</p>
<b>Digitalization marker</b>	Output partially enabled through digital technology.
<b>Implementing Partner</b>	Vanuatu Ministry of Health
<b>Total budget</b>	USD 2,968,368
<b>Donors (funding sources)</b>	The Global Fund (000327)
<b>Budget (annual budget)</b>	USD 1,290,532
<b>Expenditure recorded for the reporting period</b>	USD 1,111,877.01 (inclusive of commitment)
<b>Expenditure recorded for the total project</b>	USD 2,789,714.01 (inclusive of commitment)
<b>Project Manager name:</b>	Gayane Tovmasyan

## Contents

1. Executive summary	5
2. Progress review	7
3. Communications, visibility, and partnerships	19
4. Project risks and mitigation measures	20
5. Lessons learned	21
6. Way forward	22

# 1. Executive Summary

The year 2023 marked the completion of the implementation for the grant cycle 2021 to 2023. In 2023, a Mid-term Review (MTR) was carried out to evaluate the progress towards the goals of the National Strategic Plan for Malaria Elimination (2021-2026). The primary findings of the MTR demonstrate that it is unlikely to reach the target of zero malaria cases in all provinces by the end of 2023 and to obtain WHO certification of malaria-free status by 2026. The challenges identified were due to increase in cases in four provinces of Vanuatu which was caused by interruptions in implementation during COVID-19 closed borders, leading to a redirection of funding and malaria focal staffs to COVID-19 operations. Furthermore, progress against malaria in 2023 was disrupted by various circumstances. The simultaneous occurrence of Category 4 and 5 Tropical Cyclones Kevin and Judy in early 2023 impeded regular health services and the response to cases in the affected provinces. The post-disaster response resulted in a redirection of health services in the impacted provinces. Unforeseen weather patterns, unregulated population migration, and remote populations in isolated geographical provinces persist as obstacles to achieving elimination in the program.

The outcome of the MTR led in the revision of the National Strategic Plan for Malaria Elimination (2021-2026). The revised goals are achieving zero indigenous malaria cases in all provinces of Vanuatu by the end of 2026 and receive WHO certification of malaria-free status in 2029.

The total number of reported cases decreased from almost 2,000 in 2016 to 322 in 2021 but then increased to 1,143 in 2022 and continue to increase to 1,995 in 2023. The continuous increase was due to treatment compliances, climate change related factors as mentioned above, and other contributing factors such as damaged facilities during natural disasters and population migration in high to moderate to low endemic areas. Other hard-to-reach areas for case-based surveillance and response were also a challenge.

The programme based on the performance of its coverage indicators is currently an overall of 76% on the average indicators rating. The indicators on LLIN distribution through mass campaign has been reached by 90% and continuous distribution indicator has reached only by 70%. According to the National Malaria Programme, the LLIN distribution follows a 3-year replacement cycle, which is backed by the LLIN Stratification Plan. Hence, achieving the fixed target indicators annually may not be essential due to variations in population and household sizes across different planned areas. Furthermore, some households have relocated to islands or locations beyond the distribution zones, but UNDP continues to advocate for a 100% LLIN coverage on mass and continuous distribution. In year 2024 onwards, UNDP in coordination with the Ministry of Health, Malaria Programme will collaborate with the Area Council to obtain updated population numbers and make necessary adjustments to the performance framework targets. Moreover, having a full time UNDP Programme Specialist based in Vanuatu in year 2024 will provide regular monitoring of strategic acceleration based workplans of programmatic targets on quarterly basis.

In 2023, 844 case investigations were undertaken for confirmed cases, obtaining a rate of 42%. Shefa investigated 92% of its confirmed cases, while Malampa investigated 68%. Torba has encountered difficulties in achieving a 33% rate because to a shortage of staff, travel obstacles caused by weather conditions, and delays in accessing funds for prompt case investigations and responses. Sanma has completed only 43% of case investigations because to resource constraints, vast geographical and isolated areas in the highlands, and difficult-to-reach occasional cases. Challenges during case inquiry interventions in endemic areas in the provinces include poor road and weather conditions, busy farming systems in rural areas, and limited access to communication networks. Furthermore, due to the delay in recruitment from Public Service Commission (PSC), Malaria Elimination positions and Deputy Malaria Coordinator were not filled in year 2023. This issue was escalated at various levels by UNDP and OWG during a combined mission in 2023. However, the positions were not filled. Similarly, under the WHO TA plan, there was high staff turnover of the surveillance officers at various provinces which further created a human resource gap in supporting the programme at provincial level.

Case investigations were done in all six provinces of Vanuatu, with the majority occurring in locations with varying levels of transmission in the provinces of Sanma, Torba, Malampa, Shefa, and Penama. Penama had no reported instances until few cases were imported from Sanma in 2023. Case investigations were completed with cooperation from Provincial surveillance staff stationed in these provinces, who are largely responsible for conducting the investigations. Australian Volunteers Initiatives (AVI) was able to support the malaria programme in providing volunteers at some provinces which served as Malaria Support Elimination Officers in three provinces of Sanma, Penama, and Malampa. However, this position was filled in Q3 2023.

While the UNDP continued the grant management/ principal recipient role in the 2021-2023 grant cycle, it also simultaneously worked with the VMOH to secure the establishment of the Program Management Unit within the VMOH aiming at assuming the PR role for the ML grant beyond 2023. For this particular reason the UNDP developed a CD plan for the VMOH to secure the continues capacity strengthening of the VMOH and the / PR transition process from UNDP to the Ministry of Health (MoH). Due to the COVID-19 pandemic, coupled with the natural disasters in the last grant, the PR role has moved to Vanuatu MoH in 2027-2029 grant cycle. In the

current grant, 2024-2026, UNDP will be recruiting an international Programme Specialist that will be based in Vanuatu that will provide capacity development and smooth PR transition role from UNDP to Vanuatu MoH. Furthermore, Vanuatu MoH has confirmed domestic funding to support establishment of PMU. Additionally, there was a gap of WHO TA to support Vanuatu Malaria Programme in year 2023. This position has now been filled and will enhance in partnership, coordination and collaboration with UNDP PMU team and Vanuatu Red Cross (new CSO that is currently being selected to support Malaria advocacy and awareness related activities) to ensure the programme is able to achieve a malaria free Vanuatu contributing to the good health and well-being of the population.

# 2. Progress Review

## Key results achieved

### Programmatic Update

2023 was the last year of implementing the GC6 (2021- 2023). It has been quite a challenging period for the programme implementation, as this was the final year for grant implementation which included realigning National priorities following the C-19 Pandemic in 2021 and 2022 that majorly affected the countries included under the 2021-2023 grant implementation cycle. As part of addressing the implementation challenges caused by the C-19 Pandemic, the PR in close collaboration and partnership with the Vanuatu Ministry of Health Malaria Programme, revisited the priorities, developed revised accelerated workplan and repurposed the savings from 2022 to ensure that the Malaria program is back on track.

For the reporting period, the PR achieved 76% of Malaria 2023 key performance indicator targets. As of the first quarter of 2023, Vanuatu had category 4 and 5 twin cyclones which affected implementation of activities for quarter one and quarter two. As a consequence of this, the movement of health care workers was further restricted to these active foci regions, and the emphasis for the national government was shifted to supporting the disaster response. Moreover, frequent staff turnovers in the Ministries of Health and national malaria programme continue to be one of the leading factors contributing to slow progress of the program implementation. Tremendous efforts by the PR to raise SRs capacity are frequently negated by the staff changes and lack of leadership. Furthermore, Vanuatu MoH failed to recruit 10 Malaria Elimination Officers under the COVID-19 RM grant for Malaria Programme. The reason for the delay in recruitment is due to changes of Government leadership and Public Service Commission in 2023. However, UNDP PMU will be recruiting an international Programme Specialist that will be based in Vanuatu from May 2024 onwards that will strengthen and support the capacity of the local staffs for effective programme management. The WHO Malaria Adviser position was not filled in year 2023 and there was lack of TA support to the Malaria programme. This coupled with lack of positions filled under the regional technical assistance portion of the work.

Despite all the challenges, the 2023 significant achievements are:

- The mid-term review of the National Malaria Elimination Strategic Plan (NMESP 2021-2026). The review was supported through UNDP's support. There were adjustments and recommendations in the review due to increase in the number of cases in the country. As such, timelines for elimination in the endemic provinces were reviewed and adjusted accordingly. This was communicated during the Annual Malaria Meeting in Santo, Sanma Province on how to improve and progress towards the elimination road map for active foci areas. The priority plans and interventions that they will respectively implement in 2024 onwards active foci management plans were discussed and presented after the group work session.
- The development of the new grant proposal (2024-2026) with a consultant supported through partners. This included country dialogue with stakeholders, technical partners, Health Director General and Public Health Director, and in-country PIRCCM representative.
- Continuation of routine program response activities to twin category 4 & 5 TC Judy and Kevin in early 2023.
- Consultations with Provincial Health Managements in the establishments of Malaria Elimination Committee in targeted active foci areas
- Annual Malaria Meeting resolutions in designing malaria elimination roll out plans in targeted active foci areas in 2024.
- Despite of the population migration and hard to reach areas over 65% of cases have been fully investigated and classified across 5 provinces.
- Maintaining zero (0) Plasmodium falciparum (Pf) or Mix infections since 2022.
- 52,907 LLINs distributed in targeted health zones in 2023 during mass distributions, achieving 92% of the indicator targeted.
- 8,379 LLINs distributed to target risk groups through continuous distributions, achieving 60% of the indicator targeted.
- There were Indoor residual spraying (IRS) activities been conducted as part of integrated outbreak response particularly in the provinces of Sama and Torba in 2023. Torba has achieved 85% of the total structured

sprayed, protecting 395 households. This is part of vector control interventions in reducing the number of confirmed cases in high active foci areas in the targeted provinces.

- A refresher DHIS-2 training using tracker was conducted in 2023 with all the Malaria Information Officers (MIS) in the provinces. The purpose was to refresh and to inform on additional fields on case-based surveillance as part of improvements in information management. All training participants were issued with recognition certificates at the end of the DHIS-2 training workshops.
- The Case Management refresher training conducted in 2023 were 5 in total, with each training in Malampa, Sanma, Tafea, and in Shefa. Additionally, there were spot refresher trainings conducted at selected health facilities in some of the Provinces by the Provincial health during supervisory visits. Sixty seven (67) participants were trained for the sessions. All refresher trainings addressed G6PD testing procedures, primaquine treatment guidelines, and the importance of treatment compliance. Surveillance, M&E feedback, and way forward improvements were also packaged into the training module.
- Health promotion and community engagement activities accompanied emergency response, screening and treatment, indoor residual spraying, and bed net distributions in 2023. An Advocacy, Communication and Community Mobilization plan developed through a consultant will begin to implement in 2024. The communication plan focuses on three main pillars such as on; 1) Advocacy, 2) Social Mobilization, 3) Behavior Change Communication (BCC). Nonetheless, the National and Provincial teams continue to advocate on three key messages: 1) Sleep under treated nets every night, 2) Go to a nearest health facility for blood test if experiencing fever, 3) If you have malaria, ensure to complete all your prescribe malaria treatments. Additionally, posters and brochures were developed on LLIN use, testing every fever, blood tests, and treatments. These IEC materials were used in the provinces during field interventions and post disasters responses in the affected provinces.
- Maintaining zero (0) death since 2012.

## Finance Update

In the reporting period, the 2023 budget was \$1,290,532 while the delivery was \$980,276 which is 76% of the budget. However, if the commitment of \$131,601.01 is considered, delivery is 86% of the budget. This accomplishment underscores the team's diligent efforts in financial management and allocation across the program, supported 1 sub-recipient in Vanuatu and bilateral partners (WHO Vanuatu).

The finance team's ensured timely disbursement of advances and acquittals to sub-recipient in alignment with the approved work plans for 2023. In overall the sub-recipient achieved the efficient utilization of allocated funds in comparison to budgeted expenditure.

Additionally, the team facilitated the spot check which were completed successfully, and any findings identified were promptly addressed, demonstrating the team's commitment to transparency and accountability in financial management and closing the spot check findings.

In the last quarter of the grant, the team was actively involved in the closure of the GC6 grant, ensuring that all expenditures were accurately recorded before grant closure. Simultaneously, preparations for the GC7 grant were underway, showcasing the team's proficiency in multitasking and strategic planning for future grant cycles.

## Procurement Update

The UNDP PR has made significant contribution to the success of the Vanuatu Malaria program through the procurement and supply of essential Malaria products. The support includes supply of Long-Lasting Insecticidal Nets (LLINs), RDTs and G6PD test Kits, based on the allocated funds for the Malaria program.

In 2023, a substantial quantity of 79,491 LLINs, valued at USD 193,717, was provided to the Vanuatu Ministry of Health (MoH) for the distribution in the same year. The PR also procured an additional 38,276 LLINs, amounting to USD 86,290 for the distribution in the year 2024.

Furthermore, the PR contributed significantly to the malaria control efforts in Vanuatu by procuring 53,175 Bionline Malaria Ag Pf/Pv diagnostic test kits. Moreover, an additional 35,000 kits were acquired through reprogramming initiatives, totaling USD 70,543. These essential supplies not only supported diagnostic efforts but also facilitated timely and accurate identification of malaria cases, enabling prompt treatment interventions and contributing to the overall success of the malaria control program in Vanuatu.

These major procurements contributed significantly towards Malaria control in Vanuatu. Despite these achievements, the PSM unit faced some major challenges such as RDTs giving false-negative results, which was actioned by reporting to the HIST and the Global fund. The PR also focused on enhancing the accuracy of stock



## 2. Progress Review

distribution and capacity building in Vanuatu by introducing a simplified version of the stock reporting template and conducted training sessions to improve operational efficiency.

### Output progress

The Malaria programme achieved 76% of 2023 key performance indicator targets. The table below shows the details of a malaria free Vanuatu, contributing to the good health and well-being of the population program performance against 2023 key performance indicator targets.

Indicator Name	2023 Target			2023 Results			Achievement Rate
	Numerator	Denominator	Rate	Numerator	Denominator	Rate	
Number of active foci of malaria			8	17		17	120%
Annual parasite incidence: Confirmed malaria cases (microscopy or RDT): rate per 1000 persons per year (Elimination settings)			0.17	1995	279371	7.14	120%
Inpatient malaria deaths per year: rate per 100,000 persons per year			0	0	97803	0	
Reported malaria cases (presumed and confirmed)			140	1995		1995	120%
Annual blood examination rate: per 100 population per year (Elimination settings)	32,410	324,099	10	19800	97803	20	120%
Proportion of population that slept under an insecticide-treated net the previous night			80%	1602	2494	64%	80%
Proportion of population using an insecticide-treated net among those with access to an insecticide-treated net			80%	1602	1929	83%	104%
Number of long-lasting insecticidal nets distributed to at-risk populations through mass campaigns	59,090			52907			90%
Number of long-lasting insecticidal nets distributed to targeted risk groups through continuous distribution	11,895			8379			70%
Proportion of suspected malaria cases that receive a parasitological test at public sector health facilities	11,239	11,239	100%	19800	19800	100%	100%
Percentage of malaria foci fully investigated and classified	8	8	100%	15	17	88%	88%
Proportion of confirmed malaria cases that received first-line antimalarial treatment at public sector health facilities	56	56	100%	1400	1995	70%	70%
Percentage of confirmed cases fully investigated and classified	56	56	100%	844	1995	42%	42%
Completeness of facility reporting: Percentage of expected facility monthly reports (for the reporting period) that are actually received	3338	3708	90%	2382	3816	62%	69%

Using the Global Fund performance rating methodology to assess the performance of MCWP against the 2023 targets, the performance indicators rating is C.

\* Individual indicators should have a **maximum score of 120%**, when calculating the mean.

\* If an indicator is rated **less than 60%** then the final Quantitative Rating is downgraded by **one rating level** unless indicator rating is C,D or E.

## Coverage indicator analysis

### Impact indicators

Target	8	Result	17
Report Values for Jan-Dec 2023			
Malaria I-9 <sup>(M)</sup> : Number of active foci of malaria	<b>Numerator:</b> Number of foci with ongoing local transmission of malaria		17
	<b>Denominator:</b> Not applicable		

Vanuatu was significantly affected by two tropical cyclones, TC Kevin and Judy, which led to an increase in the number of cases. After the disaster, affected Provinces carried out post-disaster response by conducting case investigations and replacing damaged nets. The tropical cyclone also caused harm to certain health facilities, resulting in damage to some of the consumables. The replacement of the damaged consumables takes some time.

The rise in foci is primarily on Torba and Sanma. Sanma is the largest island with numerous rivers ideal for breeding sites, rugged terrains that provide challenges for teams to provide quick reactions, and nomads as carriers who are difficult to contact for immediate case investigation and intervention.

The unregulated migration of individuals from regions with high malaria prevalence to areas with lower or no malaria risk also leads to a rise in the number of foci. Moreover, patients' reluctance to seek additional treatment at dispensaries and health clinics also led to ongoing transmission. As such the receptive vectors continue to spread the parasite to other introduced areas.

Below table provides additional details:

INDICATORS	2023 TARGET	2023 SITUATION
Annual parasite incidence	≤0.2	6.0
Indigenous malaria cases	≤56	1987
Number of provinces with zero locally transmitted cases of malaria	6	1
Inpatient malaria deaths per year: rate per 100,000 persons per year	0	0
Malaria test positivity rate	≤1	0.6
Number of active foci of malaria (based on health zones)	8	17

Target	0.17	Result	7.14
Report Values for Jan-Dec 2023			
Malaria I-10 <sup>(M)</sup> : Annual parasite incidence: Confirmed malaria cases (microscopy or RDT): rate per 1000 persons per year (Elimination settings)	Source of Infection (should add up to total reported)	Imported	8
		Induced	
		Local - Indigenous	1987
		Local - Introduced	
	<b>Numerator:</b> Number of laboratory (microscopy or RDT) confirmed cases		1995
	<b>Denominator:</b> Population at risk (number of people living in areas targeted for malaria elimination)		279,371

The continuous rise in case was due to impact of COVID-19 pandemic in 2021, TC Lola in 2022, and twin TC Kevin and Judy in 2023. The damaged health facilities were progressively restored, with receptive vectors finding more breeding sites with increase in vector density. Uncontrolled population movements, ad hoc shortage of malaria consumables at some health facilities in the provinces, airline challenges for immediate restocking and team response, and limited resources in the provinces contributes to rise in cases. Other contributing factors such as continuous poor weather, coupled with terrible road conditions also limits the time to response immediately as per the surveillance guideline.

## 2. Progress Review

Target	0	Result	0
Report Values for Jan-Dec 2023			
Malaria I-3.1 <sup>(M)</sup> Inpatient malaria deaths per year: rate per 100,000 persons per year	Age: (should add up to total reported)	5+	0
		<5	0
	<b>Numerator:</b> Number of in-patient malaria deaths		0
	<b>Denominator:</b> Population at risk (number of people living in areas where malaria transmission occurs)		97,803

Since 2012 there have been zero in-patient malaria deaths despite an increase in the number of malaria incidences during reporting period. This is a positive indication for the Programme. This achievement can be attributed to the Vanuatu Malaria programme, WHO's and UNDP's continuous commitment towards implementation of Malaria Elimination strategies and key interventions such as availability of supplies, good health coverage including at community level, and timely diagnostic and treatment of malaria cases by qualified health workers.

Target	56	Result	1995
Report Values for Jan-Dec 2023			
Malaria I-1 <sup>(M)</sup> Reported malaria cases (presumed and confirmed)	Malaria case definition	Presumptive	
		Confirmed	1995
	Age: (should add up to total reported)	5+	1792
		< 5	203
	<b>Numerator:</b> Number of reported malaria cases (presumed and confirmed)		1995

There were 1,995 cases in 2023. Two primary events caused this significant impact. The natural disaster involved a double tropical cyclone named Kevin and Judy in 2023, along with the RDT Bioline testing kit. The yearly parasite incidence rose from 5.03 in 2022 to 7.14 per 1,000 people in 2023.

Despite several areas having recovered from Tropical Cyclone Lola in 2022, they were hit by another disaster in 2023. These cases are spreading in a few health zones due to inaccurate test results from the new Rapid Diagnostic Test (RDT). The majority of the test results were negative based on the RDT Bioline detection, although the patients persist in exhibiting symptoms of malaria. The delayed detection of malaria has facilitated the spread and transmission of the disease, leading to an increase in the number of cases. The malaria program effectively carried out necessary tasks but encountered obstacles in certain health zones where transmission persisted in provinces like Sanma and Torba.

The issue of RDTs was raised with UNDP in August 2023 which was escalated to HIST team (Sophie, GPU and Ruby). Vanuatu MoH had concerns regarding the correctness of the RDT results, as *"suspected patients had negative results within a few days after onset of symptoms, but then presenting positive results"*. Vanuatu MoH sent the RDT samples to the Research Institute for Tropical Medicine in Philippines, and received report which was interpreted as *"testing has shown that there is a high likelihood of obtaining false-negative results. Our observations align with those from the field, confirming that the RDTs are malfunctioning and inaccurate."*

Upon investigation by the HIST team, it was concluded that.

Possible **root causes** for the observations by RITM:

- Rate of false negative results is within performance claims (within specifications)
- Faint line due to interference of serological reaction (unknown factors can interfere with raw materials of test and target protein in specimen)
- Incomplete clearing/reddish background (common when whole blood is used, the erythrocyte must be lysed in first step to release parasite protein)
- Broken test line (unknown factors/substances as above can cause interference).

**Conclusion:**

No product deficiency was identified.

Moving forward in year 2024 UNDP continues to collaborate with WHO and Vanuatu MoH to ensure that the RDTs are well maintained for effective testing.

**Outcome indicators**

Target	10%	Result	20%
Report Values for Jan-Dec 2023			
Malaria O-9 <sup>(M)</sup> : Annual blood examination rate: per 100 population per year (Elimination settings)	Case Detection	Active	4,381
		Passive	15,419
	<b>Numerator:</b> Number of persons receiving a parasitological test for malaria (microscopy or RDT)		19,800
<b>Denominator:</b> Population at risk (number of people living in areas where malaria transmission occurs)		97,803	

As directed by the National Malaria Surveillance, a greater number of active blood tests were performed on each individual case, which contributed to the increase in the number of tests. As per the protocol, it is mandatory to conduct testing on each individual case within a 200-meter radius, and an additional 500 meters in the event that one or more positive results are identified. In adherence to the guideline, this procedure aims to identify potential transmissions that may occur within households and communities. As a consequence, the frequency of blood examinations escalated in 2023. Additionally, all suspected fever patients, irrespective of the presence of malaria or other maladies, must undergo testing.

To ensure the having good performance, the PR, Vanuatu Malaria programme and WHO will continue to commit towards implementation of Malaria Elimination strategies.

Target	80%	Result	64%
Report Values for Jan-Dec 2023			
Malaria O-1a Proportion of population that slept under an insecticide-treated net the previous night	Gender (should add up to total reported)	Female	1,329
		Male	1,165
	<b>Numerator:</b> Number of individuals who slept under an ITN the previous night		1,602
<b>Denominator:</b> Total number of individuals who spent the previous night in surveyed households		2,494	

Although the coverage rate has been attained, the LLIN usage rate remains predominantly low, as evidenced by the two RCA surveys conducted in 2020 and 2023. The underperformance of community mobilization has significantly contributed to the program's unmet indicators, of which bed net utilization is a component.

A review of the program's partnership strategies with local governments is necessary to strengthen the notion of community ownership, in which all community/provincial residents are informed about and participate in the program's interventions.

The Malaria Programme of the Ministry of Health continued to emphasize the significance of LLIN access and utilization in 2023. Furthermore, the Malaria Programme guarantees the maintenance of a three-year replacement cycle, thereby ensuring continuity. Consistent with program policy, universal coverage should ensure that all individuals have access to LLINs. The program has encountered the following obstacles:

Initially, during net distribution, neighbors or family members were occasionally given the nets in the absence of the individual households, which may have hindered their ability to personally deliver the nets to the recorded households. Moreover, noteworthy factors include the possibility that, as a result of the high population mobility, returning families may transport individual nets from the provinces where they were recorded to their home province. Occasional obligations to agricultural or business affairs may cause communities to be excluded from mass distributions.

Furthermore, the sleeping space also determines the use of LLIN use in the communities. Cultural and traditional sleeping practices such as elderly couples not sleeping together, every member of the family sleeping in an

## 2. Progress Review

open studio, small hut with crowded people are some of the program limitations in appropriately using the bed nets. Additionally, weather situations such as increase in humidity due to climate change also impacts the people not to sleep under the bed net it obstructs ventilations during humid and hot weather. People with respiratory illness are not comfortable to use bed net due to the chemical and ventilation issues.

A way forward is for the Malaria Programme to continue to strengthen and improve in mass awareness on the importance on having access to, and to sleep under LLIN every night. Furthermore, additional focal area is to strengthen continuous distributions at the health facilities, and to include Community Aid Posts as retail point distributors which is the strategy for 2024-2026 grant cycle.

Target	70%	Result	83%
Report Values for Jan-Dec 2023			
Malaria O-3 Proportion of population using an insecticide-treated net among those with access to an insecticide-treated net	Gender (should add up to total reported)	Female	1,329
		Male	1,165
	<b>Numerator:</b> Number of individuals who slept under an ITN the previous night		1,602
	<b>Denominator:</b> Number of individuals with access to an insecticide-treated net		1,929

In the three selected provinces for the survey, Sanma had the highest proportion of LLIN usage amongst people with access to a bed net with 92,74% against only 7,26% in Malampa, due to the high number of focus and the multiple number of activities implemented in those focus.

### Coverage indicators

Target	59,090	Result	52,907
Report Values for Jan-Dec 2023			
VC-1: Number of long-lasting insecticidal nets distributed to at-risk populations through mass campaigns	Target/ Risk population group	Prisoners	No data
		Migrants/ refugees/ IDPs	No data
		Other Population group (specify):	52,907
	<b>Numerator:</b> Number of insecticide-treated nets distributed to- at-risk populations through mass campaigns		52,907

The proposed distribution for 2023 was to provide 59,090 bed nets. 52,907 LLINs were distributed throughout Vanuatu by the national malaria program.

The LLIN distribution follows a 3-year replacement cycle, which is backed by the LLIN Stratification Plan. Hence, achieving the fixed target indicators annually may not be essential due to variations in population and household sizes across different planned areas. Furthermore, some households have relocated to islands or locations beyond the distribution zones. The Ministry will collaborate with the Area Council to obtain updated population numbers and make necessary adjustments to the performance framework targets.

The Health Information System (HIS) is transitioning from Health Zones to Area Councils to prioritize accurate planning and reporting.

This program will devise a strategy to collect the missing information that is not included in the current LLIN registration forms.

Target	11,895	Result	8,379
Report Values for Jan-Dec 2023			
VC-3 <sup>(M)</sup> Number of long-lasting insecticidal nets distributed to targeted risk groups through continuous distribution	Target/ Risk population group	School Children	2,155
		Children 0-5	0
		Pregnant Women	0
		Other Population group (specify):	6,224
<b>Numerator:</b> Number of insecticide-treated nets distributed to targeted risk groups through continuous distribution			8,379

The targeted number of bed nets planned for distribution through continuous was 8,379 for 2023. The continuous distribution is captured in the D1 and D2 forms. This target has not been met as the Programme was not able to finalize its micro-plan for the continuous distributions on-time. Also, the LLIN distribution to ANC clinics were affected due to involvement of Nurses for cyclone response. Additionally, the staffs involved for this continuous distribution were also involved in cyclone response in the country.

Additionally, the current LLIN registration forms do not capture the number of bed nets distributed to the target populations of under 5 years and pregnant women, even though the population of this target groups by households has been enumerated.

As per the LLIN distribution strategies, bed nets are distributed according to sleeping spaces and not individuals, respectively to the ratio of 1.25, and according to the very limited spacing of an indigenous household setting.

This is also a big lesson learned for the Programme to continue distribution in 2024 as early as possible. The plans for the LLIN distribution are underway targeting ANC in 2024. Furthermore, the Programme will monitor the progress of continuous distributions on a quarterly basis, ensuring the target is met in 2024. The allocation of LLIN at ANC will be based on population growth and size.

Target	100%	Result	100%
Report Values for Jan-Dec 2023			
CM-1a <sup>(M)</sup> Proportion of suspected malaria cases that receive a parasitological test at public sector health facilities	Type of testing (should add up to total reported)	Rapid diagnostic test	18,370
		Microscopy	3
	Age (should add up to total reported)	5+	
		<5	
<b>Numerator:</b> Number of all suspected malaria cases that received a parasitological test at public sector health facilities			18,373
<b>Denominator:</b> Number of all suspected malaria cases that present at public sector health facilities			18,373

The Malaria Program continues to aim to achieve 100% testing of all suspected malaria cases by Rapid Diagnostic Tests (RDTs) at all levels of service delivery or microscopy at hospitals. All those with fever-like symptoms are advised to seek parasitological blood tests at their nearest health care facility to confirm whether they have malaria or not. This helps to reduce transmission by way of providing early detection and prompt treatment as per the National Malaria Diagnosis and Treatment Guideline. It also enables all confirmed cases to be investigated, classified and appropriate response provided.

The triangulation of the data was based on the supply of consumables from Central Medical Store (CMS) to Provincial pharmacists, and from Provincial pharmacists to health facilities. The stock balance is recorded in Monthly Malaria Line Lists (MMLL) and during supervisory visits checklists. The number of consumptions is captured in DHIS-2 on monthly basis. The report results are verified through Monthly Malaria Line Lists (MMLL) on a monthly basis.

The performance is based on the availability of the Rapid Diagnostic Tests (RDTs) and microscopy that is readily available to ensure appropriate testing for all suspected cases. To ensure that 100% coverage of the target population, the stock reports are provided on-timely basis to ensure replenishment of stocks and commodities is available in all the six provinces.

## 2. Progress Review

Target	100%	Result	88%
Report Values for Jan-Dec 2023			
CM-6 <sup>(m)</sup> Percentage of malaria foci fully investigated and classified	<b>Numerator:</b> Number of malaria foci fully investigated during the reporting period and classified during the reporting period		15
	<b>Denominator:</b> Number of malaria foci identified during the reporting period		17

The good performance is based on availability and adequate resources in conducting the case investigation in the target active foci areas. Furthermore, the national programme continues to monitor the progress of malaria foci areas. The staff were continuously trained to monitor and evaluate epidemiological data. The number of active foci areas has been decreasing over time. This decline can be attributed to the Vanuatu Malaria programme, WHO's, UNDP continuous commitment towards implementation of Malaria Elimination strategies.

Target	100%	Result	70%
Report Values for Jan-Dec 2023			
CM-2a <sup>(m)</sup> Proportion of confirmed malaria cases that received first-line antimalarial treatment at public sector health facilities	Age (should add up to total reported)	5+	1792
		<5	203
	<b>Numerator:</b> Number of confirmed malaria cases treated who received first-line antimalarial treatment according to national policy at public sector health facilities		1400
	<b>Denominator:</b> Number of confirmed malaria cases at public health facilities (found by both passive and active surveillance)		1995

The number of prescriptions for Primaquine as a radical treatment for *P. vivax* infections and *P. falciparum* as recorded in the MMLLs and case investigation from all health facilities was 1,400 treated patients. This means that 70% achievement of the confirmed cases received primaquine treatment, as compared to only 21% receiving primaquine treatment in 2022. Shefa and Torba achieved over three quarter of the target, whilst two third is achieved in Penama and Sanma province.

Such cases are registered and treated with primaquine in hospitals, health centers, and dispensaries only as outlined in the Malaria Diagnosis and Treatment Guidelines. This shows that the number of cases is higher than number of patients prescribed primaquine because most of the cases were detected at lower facility level such as aid post. This indicates that the referral system may 'lose' some patients, and hence that correct issuance of Primaquine is not as high as expected. The program is trying its best to also trained some of the targeted nurses at Aid posts level to prescribe primaquine, with support from using G6PD testing devices, and under close supervision from the Zone Nurse. Furthermore, the number of G6PD testing devices are limited and access only in hospitals, health centers, and few dispensaries. Plans to procure further in 2024 to scale up testing rate and appropriate primaquine treatment to patients.

Target	100%	Result	42%
Report Values for Jan-Dec 2023			
CM-5 <sup>(m)</sup> Percentage of confirmed cases fully investigated and classified	<b>Numerator:</b> Number of confirmed cases fully investigated and classified during the reporting period		844
	<b>Denominator:</b> Total number of confirmed cases during the reporting period		1995

The total number of case investigations conducted for confirmed cases in 2023 was 844, achieving only 42%. Shefa managed to investigate 92% of all its confirmed cases, followed with Malampa reaching 68%. Torba seems to face challenges with reaching 33% due to limited Staffs, travelling challenges due to weather, and timely access to funds for immediate case investigations and response. Sanma has only achieved 43% of case investigations due to resource constrains, large geographical and isolated areas in the high lands, and hard to reach sporadic cases. Poor road and weather conditions, busy farming systems in the rural areas, limited access to communication networks are some of the limitations during case investigation interventions in the endemic areas in the provinces.

These case investigations were conducted in all six provinces of Vanuatu, the majority were in all transmission areas from higher to low in the provinces of Sanma, Torba, Malampa, Shefa and Penama. Penama had maintained zero (0) cases until some importation of cases from Sanma in 2023. Completion of case

investigations were supported by the stationing of Provincial surveillance staff in these provinces who primarily are responsible for case investigations. There are also Australian Volunteers Initiatives (AVI) who act as Malaria Support Elimination Officer in the provinces of Sanma, Penama, and Malampa.

Target	90%	Result	62%
Report Values for Jan-Dec 2023			
M&E-2a Completeness of facility reporting: Percentage of expected facility monthly reports (for the reporting period) that are actually received	Type of Report	Malaria Report	2,382
	<b>Numerator:</b> Number of monthly reports that were actually received for the reporting period		2,382
	<b>Denominator:</b> Number of monthly reports expected from health facilities for the reporting period		3,816

Reporting coverage is an important metric as it can further support assessments to determine if decreases in case numbers are true or may be due to under-reporting. Coverage has changed over time based on health systems disruptions, constraints, and opportunities. Between 2016 and 2020, reporting coverage ranged from 71 to 76%. In 2022, the overall reporting rate slightly decreased to 64%, and further to 62% in 2023. Three provinces of Malampa, Sanma, and Shefa has achieved over 70% of their reporting coverage. Penama and Tafea are just 43%, while Torba is just above 50% reporting coverage.

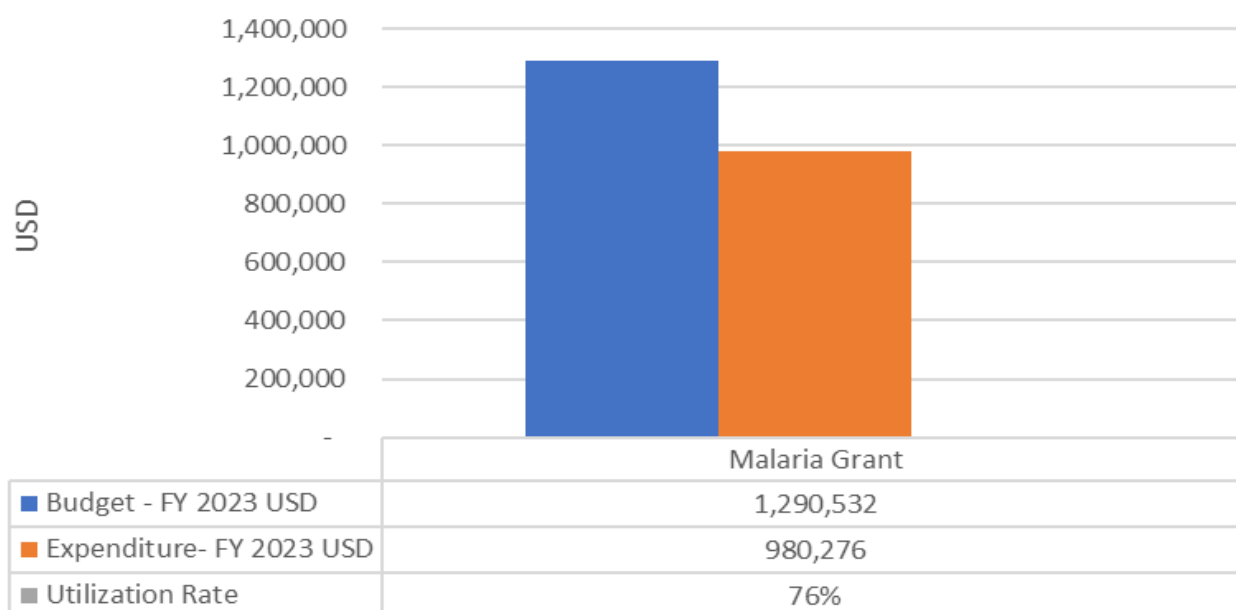
The reporting coverage in 2023 is below the expected target due to similar challenges previously mentioned. Other contributing factors were due to open-closed facilities such as community Aid posts, vacant positions in some of the health facilities, unavailability of the health workers during reporting period, damaged health facilities due to tropical cyclones, and logistic support including missing reports during deliveries at Provincial health office.

Such challenges were discussed in 2023 annual meeting and forward resolutions on how to improve in reporting coverages were respectively identified by each Provinces. It is planned that the Program will continue to address the issues on reporting coverage through continuous supervisory visits, health zone meetings, and surveillance training in 2024, with inclusion of all facilities in some initiatives and additional targeted initiatives to selected health facilities. Provincial support through partnerships and networking with NGOs is also an opportunity in collecting timely and monthly reports from the health facilities. Monitoring tools and specific resources are to be provided to help strengthen and improve information recording and management at all levels of health facilities.

### Financial Delivery for FY2023

Below graph presents overall budget for the Malaria grant with the expenses and utilization rate for the year.

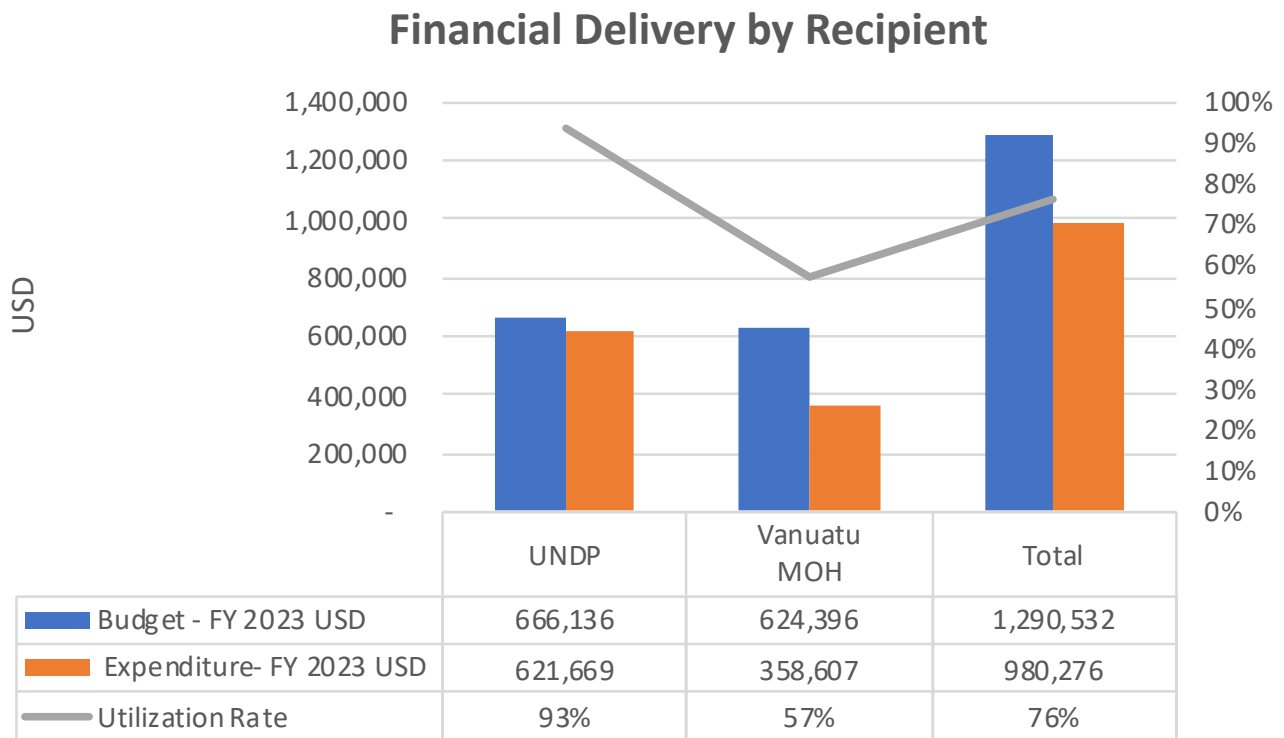
#### FY 2023 Budget and Expenses with Utilization Rate





## 2. Progress Review

For 2023, 52 % of the budget allocated to PR while 48% was for Vanuatu MOH. Below graph illustrates delivery by recipient, UNDP, and SR delivery.



In 2023, the highest budget allocation was for case management followed by vector control, and program management. Below table presents budget breakdown by output/ Global Fund modules for the Malaria grant with the expenses and utilization rate for the year.

Output/ Global Fund Module	Budget - FY 2023 USD	Expenditure- FY 2023 USD	Utilization Rate
Vector control	380,408	327,754	86%
Case management	532,154	322,122	61%
RSSH: Integrated service delivery and quality improvement	72,504	86,070	119%
Program management	272,519	208,228	76%
RSSH: Human resources for health, including community health workers	32,946	36,102	110%
<b>Total</b>	<b>1,290,532</b>	<b>980,276</b>	<b>76%</b>

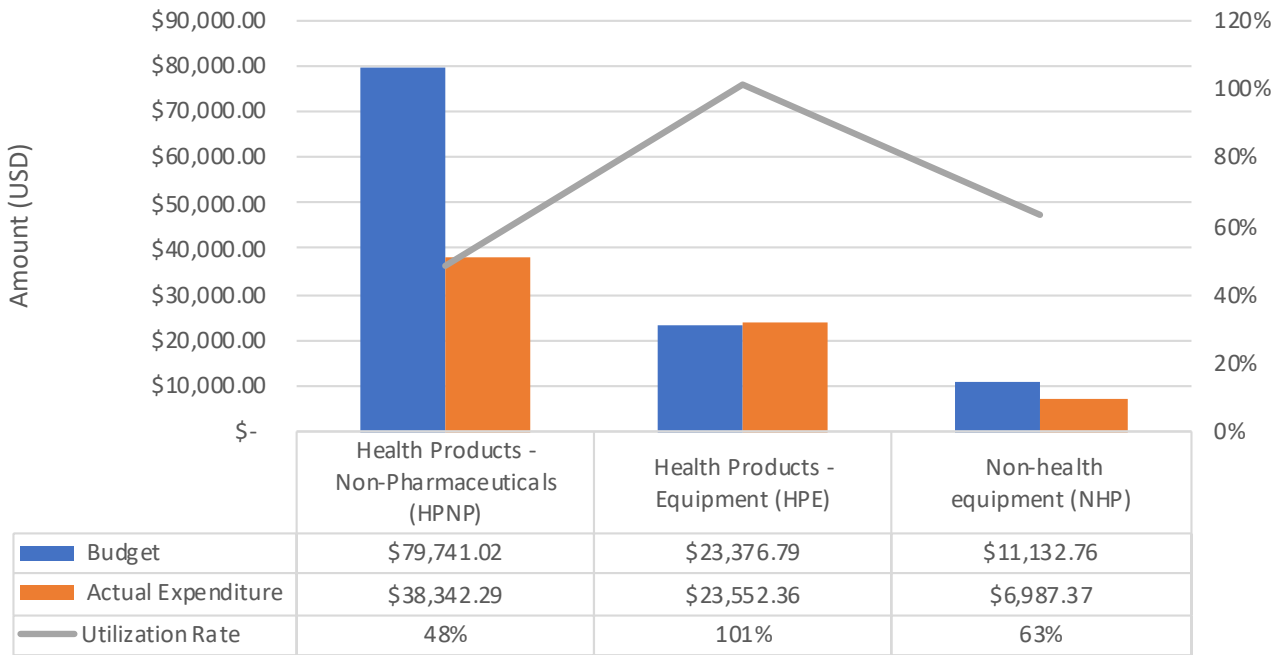
### Procurement Delivery for FY2023

The below graph presents overall PSM budget for the Malaria grant with the expenses and utilization rate for the year.

#### Expenditure for by Cost Dimension

In 2023, the Malaria grant allocation for Health Products - Equipment (HPE) demonstrated expenditure, slightly exceeding the budget at 101%, indicating efficient resource management. However, Health Products - Non-Pharmaceuticals (HPNP) and Non-health equipment (NHP) fell short, with utilization rates of 48% and 63% respectively. The total expenditure reached 60% of the allocated budget, highlighting the need for strategic optimization.

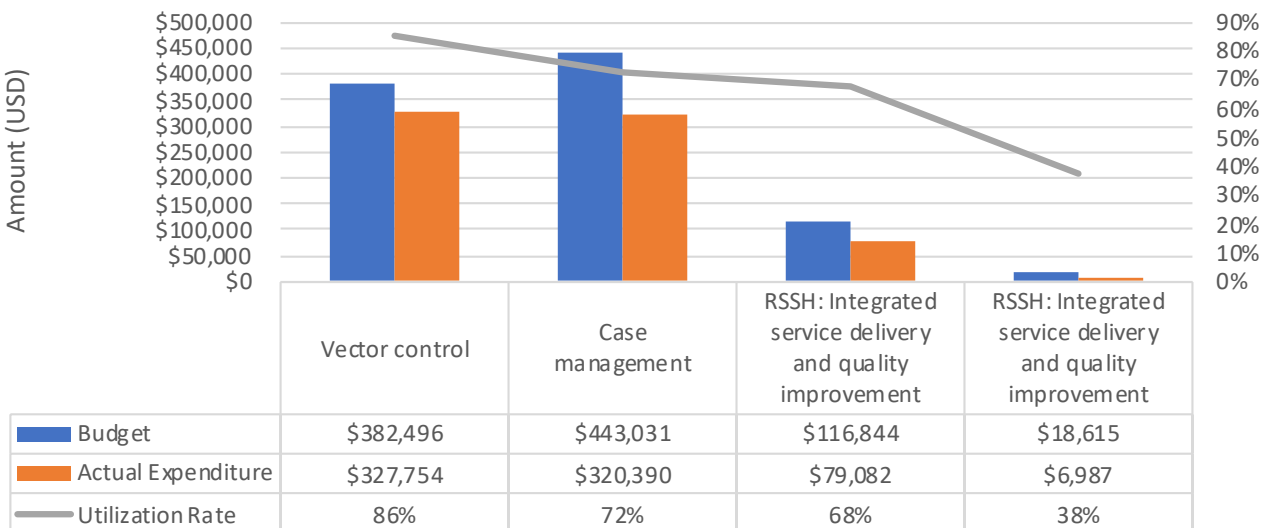
### PSM Delivery by Cost Input, Year 2023



### Expenditure by Module

In 2023, the management of the Malaria grant showcased a diverse utilization pattern across different modules. Vector control has an efficient utilization rate of 86%, with actual expenditure closely aligning with the budget. However, case management fell short, with a utilization rate of 72%, suggesting potential inefficiencies in resource allocation or implementation. Similarly, the Integrated Service Delivery and Quality Improvement module displayed varied utilization rates, with one component achieving 68% utilization while the other lagged at 38%. Overall, the total expenditure reached 76% of the allocated budget.

### PSM Delivery by Module, Year 2023



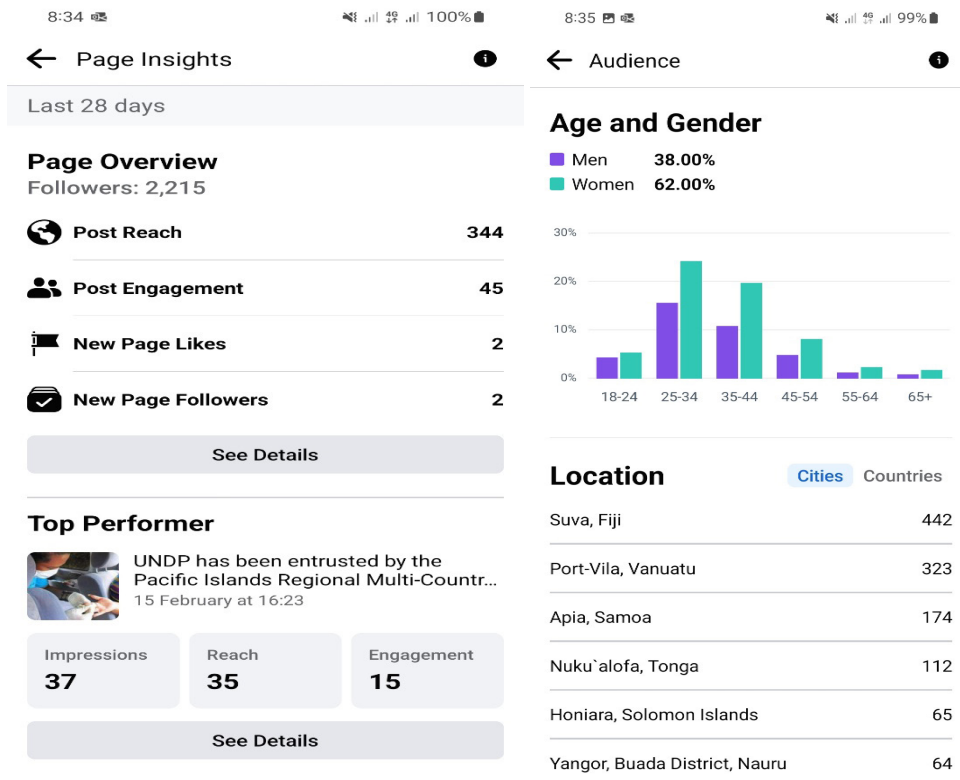
### 3. Communications, visibility, and partnerships

## 3. Communications, visibility, and partnerships

A Vanuatu Malaria Advocacy, Communication and Social Mobilization Strategy (ACSMS) was developed in 2023 which is a critical tool that aligns with the Vanuatu National Strategic Plan for Malaria Elimination, 2021 - 2026 (NSPME) to drive advocacy, communication, and social mobilization processes towards achieving zero indigenous cases of malaria in all provinces of Vanuatu by the end of 2026; and receive World Health Organization (WHO) certification of malaria-free status by 2029.

Facebook: Multi Country Western Pacific Programme. UNDP FIJI.

The project has a Facebook account in which the project stories/ posts are regularly updated. The page has 2,215 followers.



## 4. Project risks and mitigation measures

Lack of knowledge and awareness about malaria are major risk factors in malaria control and prevention in general and among women in particular. Evidence suggests, for example, that barriers to information access result in women sometimes being less able to correctly identify the malaria parasite as a causative agent for malaria. Similarly, numerous barriers to access can make facility-based service delivery less accessible and less available to women. High levels of gender discrimination in Vanuatu would suggest these barriers require special attention.

Data show women bear a significant burden of violence and discrimination in communities. Three in five women have experienced sexual and/or physical violence, and the practice of bride-price further undermines their status. Whilst the impact is a pervasive and cross-cutting constraint to equitable national development, the impact on access to malaria services is less clear. Certainly, with travel times to health facilities often 4 hours (and sometimes 12 hours), it's reasonable to assume significant barriers to accessing facility-based care, particularly for pregnant women. The 2013 Demographic and Health Survey (DHS) revealed that despite high LLIN coverage, utilization of LLINs in Vanuatu was unacceptably low (41% amongst pregnant women).

With the proposed malaria elimination model, the shift in service delivery from being facility-based to the community will make significant contributions to reducing barriers to service access by women particularly pregnant mothers. Training for Provincial Health Teams for Malaria Elimination (PHT-ME) will have a heavy focus on barriers and enablers to equitable access and utilisation. Similarly, IEC/BCC training will incorporate gender dimensions, as will community mobilisation activities. This will include localising awareness and prevention campaigns. Here decision making on the bed-net distribution, implementation, program review and evaluation will be done consultatively with the enhanced participation of women, and with the explicit objective of improving LLIN access for women and pregnant women. It is also important to note that the recently designed DFAT bilateral health programme has a significant gender equity component. It is anticipated that the DFAT investment will assist the government to incorporate gender-equity initiatives into provincial health operations.

Building on past and recent successes and achievements, the Malaria Program remains committed to the vision of a malaria-free Vanuatu contributing to the health and well-being of the population. This is clearly articulated and set out in the revised National Strategic Plan for National Malaria Elimination (2023–2026).

Despite the shift on the elimination road map the Ministry of Health will continue to provide high-quality support to enable health services at all levels of the health system. Cooperation and coordination with development partners will be further strengthened for the betterment of the services endorsed by Government of Vanuatu. It is anticipated that concerted work will continue to reap the benefits of decreased malaria burden in Vanuatu, towards national malaria elimination and WHO certification of malaria-free status in the near future.

The finance team's commitment to capacity building and support was evident through various initiatives, including continuous mentorship, regular Zoom meetings, and the organization of a regional finance workshop held in Fiji. Additionally, in-country missions were conducted, leveraging the opening of country borders in 2023 to provide on-the-ground support and guidance. These efforts collectively contributed to enhancing the quality of financial reporting within the program. The PR ensured 100% supporting financial document verification. While significant progress was made, the team acknowledges the need for improvement in the timeliness of financial reporting. Recognizing this, efforts will continue to streamline processes and enhance efficiency to meet reporting deadlines effectively.

# 5. Lessons Learned

The following were identified as key lessons learned for 2023 implementation and for the Malaria programme to improve their performance during 2024 implementation:

- Increase availability of malaria commodities at health facilities, especially Primaquine, RDTs and Artemisinin-based combination therapies (ACTs)
- Improve surveillance to ensure timely reporting of cases and a clear picture of disease burden across the country.
- Strengthen case management, including training of health facility staff to rapidly recognize, test and treat malaria, and to ensure microscopy capacity for validation of RDT accuracy.
- Continue case investigations that include screening by RDT around confirmed cases.
- Continue distribution of long-lasting insecticidal net distribution campaigns, and supplement with top-ups in active foci
- Conduct targeted indoor residual spraying in active foci, prioritizing those with high numbers of cases.
- Enhance community education and mobilization to ensure awareness of malaria.
- Improve advocacy and stakeholder engagement to ensure participation of communities in anti-malaria activities.
- Establish community Malaria Elimination Committee and Elimination officers in active foci areas.
- Strategically focus in high active foci areas with more intensified control measures
- Engage Provincial Government, Provincial Technical Advisory Group (TAG), NGOs, Provincial Health Emergency operation Centers (PHEOC), and National Emergency Operation Centers during outbreaks.
- Engage community leaders with trainings on the management of active foci areas.
- Work with Ministry of finance on decentralization of funds for immediate access for routine activities and response.

A set of recommendations were raised during the Annual Malaria Meeting in December 2023, and the PR will continue to collaborate and coordinate with the SR during 2024 implementation.

## 6. Way Forward

UNDP will continue its effort to work closely with VMOH and prioritize to address the challenges that the Programme faced in 2023. Some of the priorities for the Programme for 2024 will be:

1. Full time Programme Specialist position based in Vanuatu to support the programme implementation.
2. Increase availability of malaria commodities at health facilities (national and provincial level)
3. Improve surveillance to ensure timely reporting of cases and a clear picture of disease burden across the country
4. Strengthen case management, including training of health facility staff to rapidly recognize, test and treat malaria, and to ensure microscopy capacity for validation of RDT accuracy
5. Continue case investigations that include screening by RDT around confirmed cases
6. Continue distribution of long-lasting insecticidal net distribution campaigns, and supplement with top-ups in active foci
7. Conduct targeted indoor residual spraying in active foci, prioritizing those with high numbers of cases
8. Enhance community education and mobilization to ensure awareness of malaria. This will be coordinated by selection of a new CSO to support Vanuatu Malaria Programme.
9. Improve advocacy and stakeholder engagement to ensure participation of communities in anti-malaria activities
10. Increase close coordination and collaboration with other stakeholders for the Malaria Programme including AVI, RAM, Vanuatu Red Cross, DFAT post.

UNDP in its role as a PR will also strengthen close collaboration with WHO and effective implementation of WHO TA Plan. More importantly, UNDP will continue to provide support to building the Program management unit (PMU) structure (including ToRs and Job Descriptions), legal authority, reporting systems and governance arrangements (procedures, policies, signatories, oversight).





United Nations Development Programme  
Pacific Office in Fiji