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TANZANIA (ZANZIBAR) MALARIA PROFILE

I. ABOUT

Launched in 2005, the [U.S. President's Malaria Initiative \(PMI\)](#) supports implementation of malaria prevention and treatment measures as well as cross-cutting interventions. PMI's 2021–2026 strategy, [End Malaria Faster](#), envisions a world free of malaria within our generation, with the goal of preventing malaria cases, reducing malaria deaths and illness, and eliminating malaria in PMI partner countries. PMI currently supports 27 countries in Sub-Saharan Africa and 3 programs across the Greater Mekong Subregion in Southeast Asia to control and eliminate malaria. Tanzania (Zanzibar) began implementation as a PMI partner country in FY 2006. See the [Tanzania \(Zanzibar\) Malaria Operational Plan](#) for more information on PMI's approach and investments.

II. CONTEXT

Table 1. General Demographics and Malaria Situation

Population	1,889,773 (National Bureau of Statistics, 2022)
Population at risk of malaria	100% (WHO, 2020)
Malaria prevalence	0.0% ¹ (Tanzania Demographic and Health Survey and Malaria Indicator Survey [TDHS-MIS], 2022)
Malaria incidence/1,000 population at risk	Rainy season is October to December and March to May
Peak malaria transmission	1,889,773 (National Bureau of Statistics, 2022)

¹ Data from 151 children were used.

STRATIFICATION

To achieve its malaria elimination target, Zanzibar has decided to implement an intervention approach based on risk strata. The Zanzibar Malaria Elimination Program (ZAMEP), with support from PMI partners, created a *shehia* (subdistrict) malaria stratification map for Zanzibar. Case-level malaria data were obtained from the malaria case notification system from January 2017 to December 2021. Data were aggregated and used to estimate the number of cases, incidence, fraction of imported cases, and probability of finding new cases

during follow-up investigations of primary index cases for all 388 shehias. For each selected malaria indicator, predetermined thresholds were assigned to determine the risk level of each shehia. Malaria indicator risk levels were analyzed using a multiple correspondence analysis to assign a score for each shehia. The quartiles of the scores were then used to divide 333 shehias in four strata (first to fourth stratum, from high to low burden, with approximately 80 shehia per stratum). Intervention packages for shehias in the second, third, and fourth strata will be based on community-level interventions, while the first stratum will adopt a shehia-level approach. Specific interventions will be implemented in each urban shehia.

Figure 1. Malaria Stratification in Zanzibar

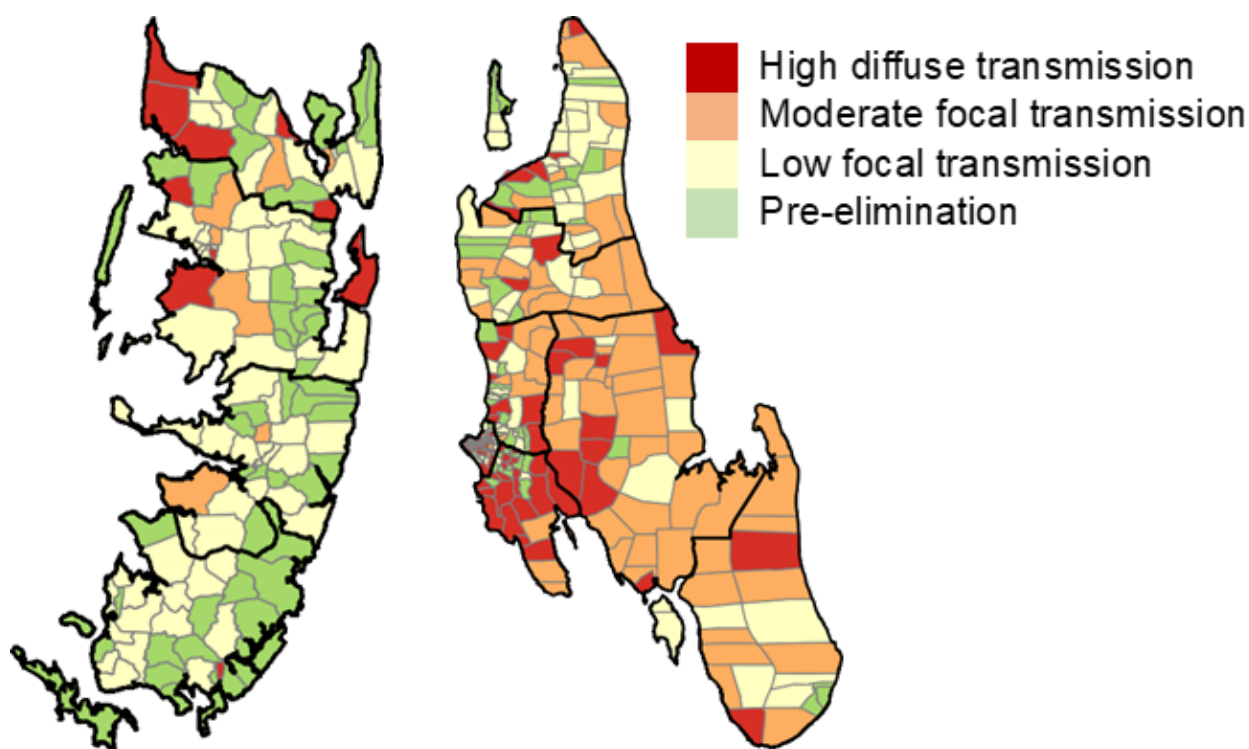


Figure 2. Malaria Incidence Map, 2022

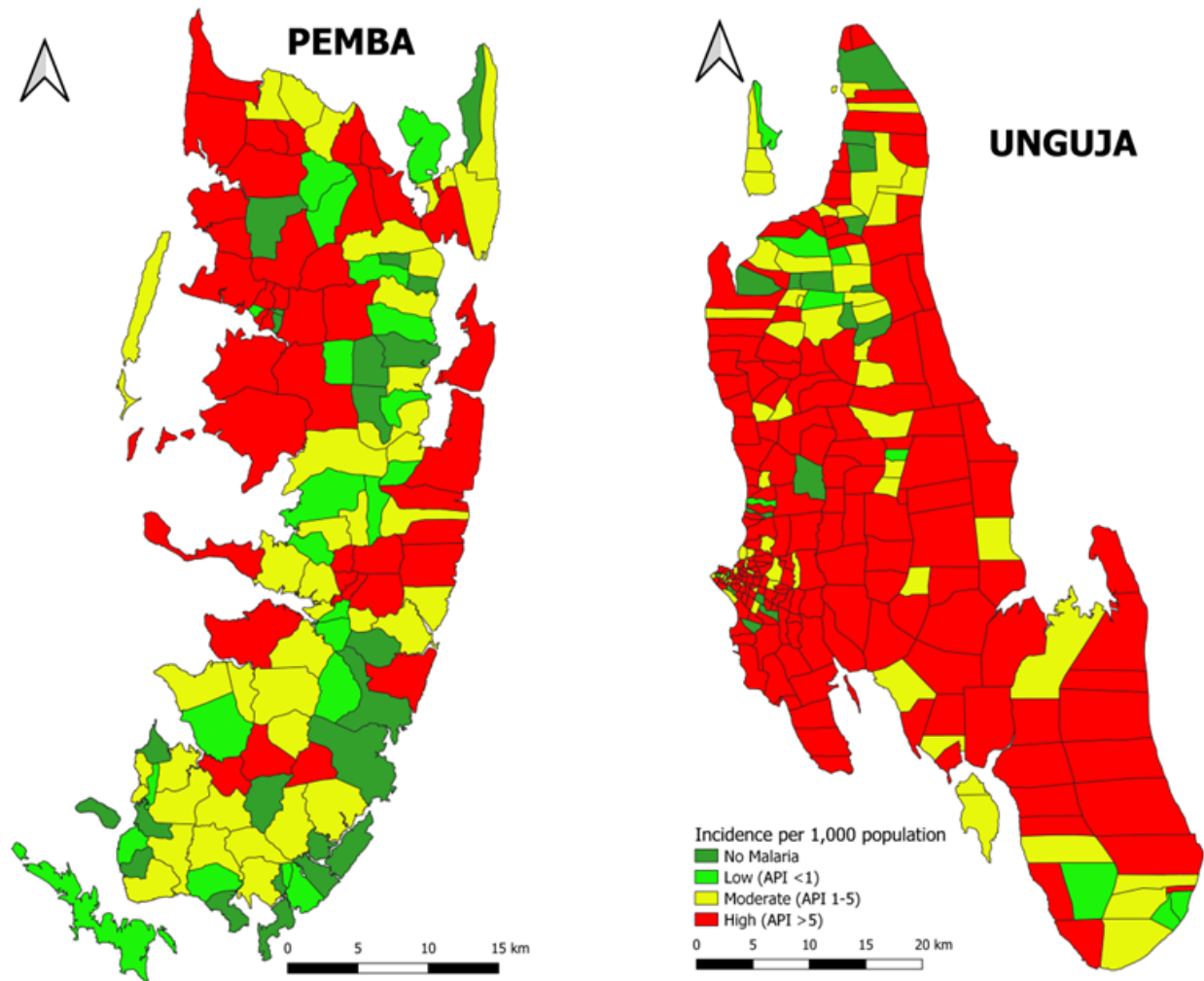


Figure 3. Insecticide-Treated Net Use-to-Access Ratio in Tanzania, 2017

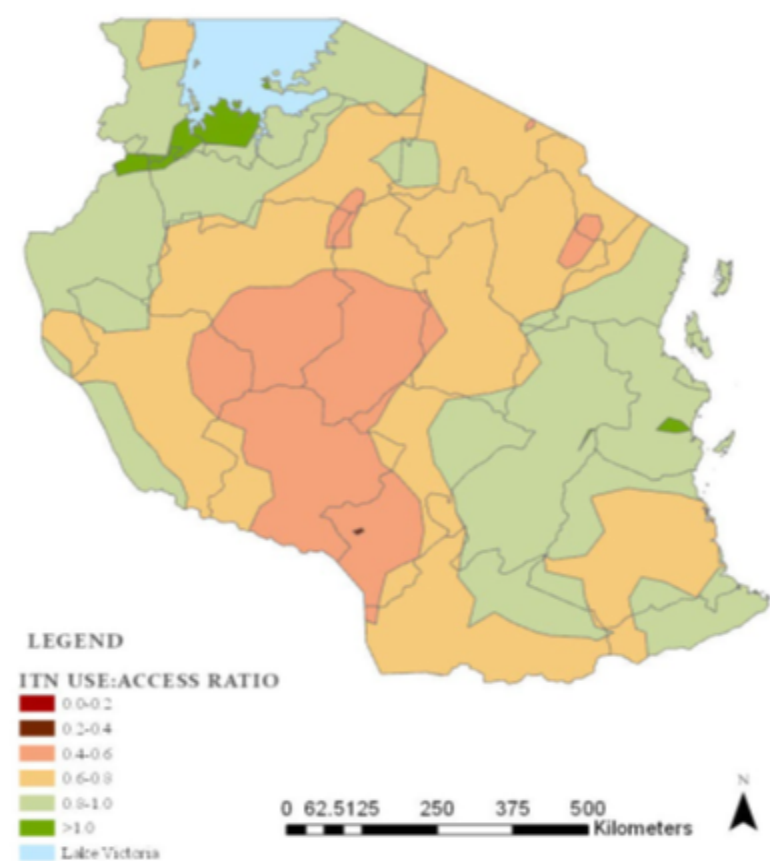


Table 2. Malaria Parasites and Vectors

Principal malaria parasites	<i>Plasmodium falciparum</i> (ZAMEP 2021)
Principal malaria vectors ¹	High coverage of ITNs and indoor residual spraying has resulted in a shift in the malaria vector population from <i>An. gambiae</i> s.s to predominantly <i>An. arabiensis</i> . The secondary vectors are <i>An. leesonii</i> and <i>An. rivulorum</i> from the <i>An. funestus</i> family complex, followed by <i>An. merus</i> and <i>An. gambiae</i> s.s. from the <i>An. gambiae</i> family complex (ZAMEP 2022).

¹ See the entomological monitoring section of the MOP for more details on vector bionomics and insecticide resistance and the indoor residual spraying section for details on residual efficacy.

COUNTRY HEALTH SYSTEM

Zanzibar consists of two major islands, Unguja and Pemba, as well as several small islands, covering a total area of 2,654 square kilometers; it is part of the United Republic of Tanzania. Administratively, Zanzibar is divided into five regions, 11 districts, 2 subdistricts, and 388 shehias. Zanzibar has a young, rapidly growing, and increasingly urbanized population. The population of Zanzibar is estimated to be about 1.9 million, of which approximately 46 percent reside in urban areas.

Among public health facilities, there is one tertiary hospital (Mnazi Mmoja Hospital) with maternal and mental health services located in Zanzibar City, one hospital in Pemba, four district hospitals (Kivunge located in Unguja and Micheweni, Wete, and Chake Chake located in Pemba), two primary health care centers (also called cottage hospitals, one each in Unguja and Pemba), 32 primary health care units plus (13 in Pemba and 19 in Unguja), and 132 primary health care units (76 in Unguja and 56 in Pemba). There are 162 registered private health facilities in Zanzibar (19 in Pemba and 143 in Unguja), of which six are faith-based, one charitable, and 155 private for-profit, as well as many private laboratories and other diagnostic services and pharmacies. On average, more than 90 percent of the population in Zanzibar is within a 5-km radius to the nearest health facility, and there is a facility for every 5,000 people.

Health sector management and service delivery are divided between the Ministry of Health (MOH) and the President's Office Regional Administration and Local Government and Specialized Departments (PO-RALG-SD). The MOH is responsible for the strategic direction of the health sector, including setting policy and guidelines for Mnazi Mmoja and district hospitals. PO-RALG-SD is administratively responsible for councils, including staffing, budgeting, and accounting. Councils are responsible for service delivery at facilities below the hospital level.

OTHER CONTEXTUAL INFORMATION

There is evidence that a significant proportion (~60 percent) of malaria cases reported in Zanzibar may be imported, largely through informal ports of entry from mainland Tanzania.

III. ZAMEP STRATEGIC PLAN

The ZAMEP Strategic Plan 2018–2023 identifies three major strategies to achieve its goal of elimination:

1. **Malaria diagnosis and treatment:** Ensure quality assured diagnosis and appropriate case management in all health facilities and at the community level to 100 percent by 2023.
2. **Integrated malaria vector control:** Increase appropriate vector control measures to the population at risk of malaria to 100 percent by 2023.
3. **Surveillance, monitoring, and evaluation:**
 - Actively investigate and classify 100 percent of all confirmed cases of malaria and initiate entomological surveillance in malaria foci from 0 percent in 2017 to 100 percent by 2023.
 - Conduct entomological surveillance in 100 percent of malaria foci areas by 2023.

IV. KEY MALARIA DATA

EVOLUTION OF KEY SURVEY-BASED MALARIA INDICATORS

Table 3. Key Survey Indicators

Indicator	2004–05 DHS	2010 DHS	2015–2016 DHS-MIS	2017 MIS	2022 TDHS-MIS
% of households with at least one ITN	28	76	74	79	78
% of households with at least one ITN for every two people	10	39	40	42	49
% of population with access to an ITN	18	58	57	62	67
% of population that slept under an ITN the previous night	16	45	47	59	57
% of children under five years of age who slept under an ITN the previous night	22	55	56	67	65
% of pregnant women who slept under an ITN the previous night	20	50	52	63	66
% of children under five years of age with a fever in the last two weeks for whom advice or treatment was sought	80	73	79	82	81
% of children under five years of age with a fever in the last two weeks who had a finger or heel stick	N/A*	N/A*	34	31	31

Indicator	2004–05 DHS	2010 DHS	2015–2016 DHS-MIS	2017 MIS	2022 TDHS-MIS
% of children receiving an ACT among children under five years of age with a fever in the last two weeks who received any antimalarial drug	N/A*	NA*	N/A*	N/A*	N/A*
% of women who attended 4 ANC visits during their last pregnancy	N/A*	N/A*	N/A*	N/A*	79
% of women who received three or more doses of IPTp during their last pregnancy in the last two years	N/A*	N/A*	N/A*	N/A*	0.3
<5 mortality rate per 1,000 live births	101	73	56	N/A*	N/A*
% of children under five years of age with parasitemia by microscopy	N/A*	N/A*	0.7	N/A*	N/A*
% of children children under five years of age with Parasitemia by rapid diagnostic test	N/A*	N/A*	0.0	0.2	0.0

DHS: Demographic and Health Survey; MIS: Malaria Indicator Survey; N/A*: Indicator not measured.

Community-level data is generated from reactive case detection conducted by council malaria surveillance officers (CMSOs) and integrated into the broader health management information system (HMIS).

Table 4. Evolution of Key Malaria Indicators Reported through Routine Surveillance Systems

Indicator	2018	2019	2020	2021	2022
# of all-cause patient consultations	1,679,207	1,935,406	2,112,722	2,403,303	1,871,820
# of suspect malaria cases ¹	N/A	N/A	N/A	N/A	N/A
# of patients receiving diagnostic test for malaria ²	418,169	424,566	567,895	636,183	402,800
Total # of malaria cases ³	5,146	6,970	14,289	6,172	4,557
# of confirmed cases ⁴	5,146	6,970	14,289	6,172	4,557
# of presumed cases ⁵	0	0	0	0	0
% of malaria cases confirmed ⁶	100%	100%	100%	100%	100%
Test positivity rate ⁷	1.2%	1.6%	2.5%	1.0%	1.0%
Total # of malaria cases in children under five years of age ⁸	706	727	1,203	773	558
% of cases in children under five years of age ⁹	13.7%	10.4%	8.4%	12.5%	12.2%

Total # of severe cases ¹⁰	N/A	N/A	N/A	N/A	N/A
Total # of malaria deaths ¹¹	5	7	20	8	4
# of facilities reporting ¹²	229	249	258	285	313
% of data completeness ¹³	98.1%	98.3%	98.7%	99%	94%

1 Number of patients presenting with signs or symptoms possibly due to malaria (e.g., fever); 2 Rapid diagnostic test or microscopy, all ages, outpatient and inpatient; 3 Total reported malaria cases; all ages, outpatient and inpatient, confirmed and unconfirmed cases; 4 Diagnostically confirmed; all ages, outpatient and inpatient; 5 Clinical/presumed/unconfirmed; all ages, outpatient and inpatient; 6 # of confirmed cases divided by total # of cases; 7 Confirmed cases divided by # of patients receiving a diagnostic test for malaria (rapid diagnostic test or microscopy); 8 Outpatient and inpatient, confirmed and unconfirmed; 9 Total # of cases in children under the age of five divided by total # of cases; 10 Severe cases are defined in a patient with *P. falciparum* asexual parasitemia and no other obvious cause of symptoms, the presence of one or more of the following clinical features: behavioral changes, prostration/extreme weakness, coma, respiratory distress, convulsions, vomiting everything, inability to drink or breastfeed, circulatory collapse/ shock, pulmonary edema, bleeding tendency/ disseminated intravascular coagulation, jaundice, acute renal failure, and hemoglobinuria; 11 All ages, outpatient, inpatient, confirmed, and unconfirmed; 12 Total # of health facilities reporting data into the HMIS/District Health Information System-2 (DHIS-2) system that year; 13 # of monthly reports from health facilities divided by # of health facility reports expected (average for the calendar year).

Community-level data is generated from reactive case detection conducted by CMSOs.

Table 5. Disaggregated Community-Level Data

Indicator	2020	2021	2022
# of patients receiving diagnostic test for malaria from a CMSO	30,528	19,772	14,426
Total # of malaria cases reported by CMSOs ¹	598	416	415
% of CMSO-reported cases (among total malaria cases) ²	4.2%	6.7%	9.1%

1 Includes all ages, confirmed and unconfirmed.

2 Total number of malaria cases reported by CMSOs divided by total number of malaria cases in the previous table.

Table 6. Key Elimination Indicators

Malaria Policy and Implementation	Response		
1. Is malaria elimination part of the current malaria strategy?	Yes		
2. Are individual malaria cases investigated? <i>If yes, please note whether this occurs nationally or subnationally.</i>	Yes		
3. Are foci investigated? <i>If yes, please note whether this occurs nationally or subnationally.</i>	Yes, subnationally.		
Elimination scope	2020	2021	2022
4. Total # of districts in the country (admin 2)	5 – Regions 11 – Districts 389 – Shehias	5 – Regions 11 – Districts 389 – Shehias	5 – Regions 11 – Districts 389 – Shehias
5. # of districts that have been verified as having eliminated malaria? ¹	0	0	0
6. Among districts not verified as having eliminated malaria, how many districts are targeted for elimination efforts?	11	11	11
6A. Among districts targeted for elimination efforts, how many have active elimination activities ? ²	11	11	11

¹ Malaria elimination—interruption of local transmission, i.e. no local malaria cases for three years. This refers to NMP-led subnational verification only. It is not referring to ‘elimination certification,’ which can only be granted by WHO for an entire country. ² Elimination activities include, but are not limited to reactive ITN and/or IRS, reactive case detection, reactive or focal drug administration, procurement and/or strategies for single dose primaquine for *P. falciparum* or radical cure primaquine for *P. vivax*, SBC for hard to reach or migrant populations, case investigation, foci classification, etc.

V. OTHER IMPLEMENTATION INFORMATION

Summary of Completed Therapeutic Efficacy Studies (TES)

PMI doesn’t support TES in Zanzibar. PMI supports drug efficacy monitoring following the standard WHO protocol at four sentinel sites annually in mainland Tanzania, including molecular testing of antimalarial resistance markers for artesunate-amodiaquine (ASAQ), Zanzibar’s first-line artemisinin-based combination therapy (ACT). For details about Tanzania’s TES, see the TES section in the mainland Tanzania FY 2024 MOP.

VI. KEY POLICIES

Table 7. Policies in Zanzibar

Available policy, operational, and guidance documents can be viewed and downloaded from the MOH Zanzibar [website](#).

Zanzibar Malaria Elimination Strategic Plan (2018–2023)	
Zanzibar Digital Health Strategy (2020–2025)	
Zanzibar Digital Health Investment Roadmap (2020–2025)	
Zanzibar Malaria Elimination Social & Behavior Change Communication Strategy (2018–2023)	
Zanzibar Supply Chain Strategic Plan (2021–2026)	
Vector Control Guidelines for Malaria Elimination in Zanzibar (2017)	
Guidelines for Malaria Diagnosis and Treatment (2018)	
What is/are the first-line treatment(s) for uncomplicated <i>P. falciparum</i> malaria*?	Artesunate-amodiaquine (ASAQ)
What is/are the second-line treatment(s) for uncomplicated <i>P. falciparum</i> malaria*?	Artemether lumefantrine
What is/are the first-line treatment(s) for uncomplicated <i>P. vivax</i> malaria?	Primaquine
What is the first-line treatment for severe malaria?	Artesunate injection
In pregnancy, what is the first-line treatment for uncomplicated <i>P. falciparum</i> malaria in the <i>first trimester</i> ?	Quinine with clindamycin
In pregnancy, what is/are the first-line treatment(s) for uncomplicated <i>P. falciparum</i> malaria in the <i>second and third trimesters</i> ?	ASAQ
What is/are the first-line treatment(s) for <i>P. vivax</i> malaria during pregnancy?	ASAQ
In pregnancy, what is the current first-line treatment for severe malaria?	Intravenous artesunate
Given the WHO policy change to recommend AL as treatment for uncomplicated malaria in the first trimester, does the MOH plan to update the policy on treatment of MIP in the first trimester? And if so, what is the status of this policy change and implementation of the new policy?	MOH is planning to update the policy on treatment of MIP in the first trimester.
Is prereferral treatment of severe disease recommended at peripheral health facilities? If so, with what drug(s)?	Yes, artesunate injection.
Is prereferral treatment of severe disease with rectal artesunate recommended for community health workers?	No
What is the # of CHWs currently providing iCCM?	N/A

What is the country's target for the number of CHWs providing iCCM?	N/A
What percent of the country's target is met?	N/A
Does the country have a policy that enables the routine, regular payment of salaries/stipends for CHWs?	N/A
Do CHWs have the authority to test and treat all ages for malaria?	No
At what gestational age is the first dose of Intermittent preventive treatment for pregnant women (IPTp)- sulfadoxine-pyrimethamine (SP) to be given to pregnant women according to the national guidelines for malaria and maternal and child health?	Zanzibar is no longer implementing IPTp.
Do the national ANC guidelines reflect the WHO 2016 recommendation of eight ANC scheduled contacts (plus one additional contact for early initiation of IPTp at 13–16 weeks)? If not, how many ANC contacts are recommended?	Zanzibar is no longer implementing IPTp.
What is the status of training ANC providers on the WHO recommended eight or more contacts?	USAID supported MOH to review, update, and disseminate the updated ANC guidelines based on the WHO 2016 recommendations, including the eight ANC contacts.
Have HMIS/DHIS2 and ANC registers been updated to include eight or more contacts?	No
Are IPTp data collected as single months where the January 2022 data represent the number of doses administered in January 2022, or cohort data, representing the cumulative data from pregnancies which began six months prior?	Zanzibar is no longer implementing IPTp.
Is antenatal care/IPTp provided by facility staff conducting antenatal care outreach to communities?	Zanzibar is no longer implementing IPTp.
Can community health workers deliver IPTp and, if so, which specific cadres and beginning with which dose?	Zanzibar is no longer implementing IPTp.

VII. PARTNER LANDSCAPE

Table 8. Partner Landscape

Partner	Key Technical interventions	Geographic Coverage	Funding Amount or In-Kind Contribution	Time Frame
Global Fund	• Support for nationwide ITN mass campaign • Training and Malaria Service and Data Quality Improvement supportive supervision in health facilities	• National	\$4,524,000	CY 2021–2023
Swiss Development Corporation—Swiss Tropical Public Health Institute	• Technical guidance on surveillance, monitoring, and evaluation and case management	• National	Technical guidance from partner staff	CY 2021–2025