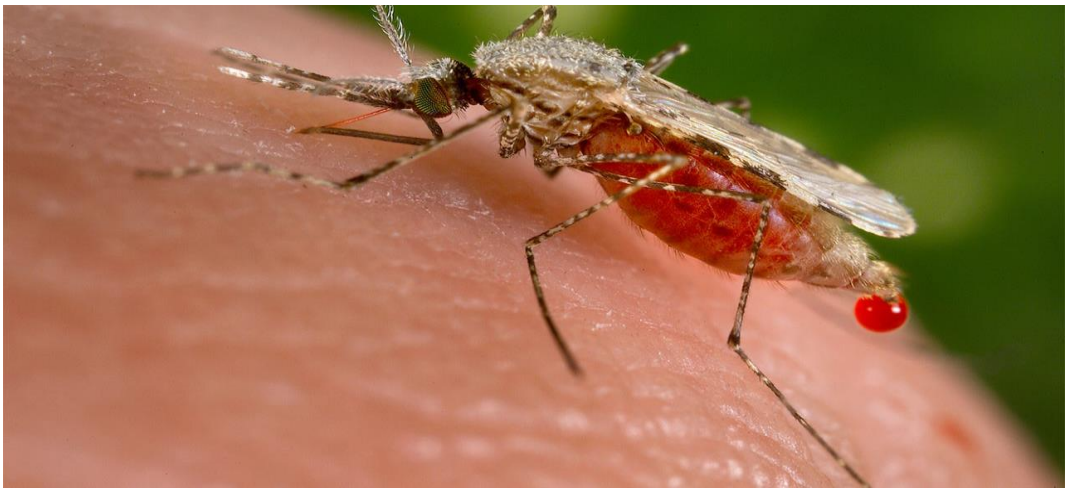
**Technical Support for**

**the 5th Malaria Joint Monitoring Mission (JMM-5)**



**Interim Progress Report on**

Joint Monitoring Mission-5, National Malaria Elimination Programme (NMEP), Bangladesh

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**Submitted by:**


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# Contents

# Report on 5th Malaria Joint Monitoring Mission (JMM-5) National Malaria Elimination Program (NMEP)

## Introduction

Combating towards eliminating malaria is one of the commitments of Bangladesh for achieving Sustainable Development Goal (SDG)-3. The country appears to be on track towards reducing disease burden gradually moving towards achievement of the vision of malaria elimination and its success is anchored on sound strategy and progressive improvements in implementation of effective preventive and curative interventions, surveillance and M&E.

The immediate previous JMM (Joint Monitoring Mission-4) organized in 2019, had reviewed the progress and made important recommendations for re-orienting the system towards elimination strategies as different from the earlier control measures. Unfortunately, the next two years were the pandemic years. The COVID-19 pandemic had definitely been a tremendous challenge to the program, but the NMEP had been sustained to the best of the department's ability through this period. Bangladesh has since set out a new National Strategic Plan for Malaria Elimination in Bangladesh 2021- 2025- which has reiterated the goals of elimination and worked out strategies in the post- covid situation, for achieving the same.

The present JMM (Joint Monitoring Mission -5) is mooted to assess the progress made with respect to JMM-4 and to learn from the experience of the intervening years, and to suggest effective interventions to accelerate the programs progress towards its goals.

## Purpose and Principal Objectives of the JMM-5

The objective of this assignment is to review the progress of implementation of the National Strategic Plan 2021–2025 in coordination with external program reviewers, and ultimately, to further strengthen the foundation for malaria elimination in Bangladesh by 2030.

## Responsibilities of this Institute as per the Agreement

This institute is expected to provide unbiased recommendations for the National Malaria Elimination efforts in the country. These recommendations will be based on their expert knowledge in key areas and based on the local context. Responsibility includes:

i. Analysis of existing program data, and relevant documents pertaining to health systems, private sector, other public sector organizations to provide relevant recommendations, based on their expertise local knowledge.
ii. Provide expertise technical inputs based on relevant local context to develop the checklists, and other technical documents during the preparatory phase of the JMM.
iii. Participate in field visits Dhaka/Gazipur, Bandarban, Cox's Bazar, Rajshahi / Chapai Nabab Ganj, Sylhet etc. stakeholder meetings, dissemination meetings to support the national program and international experts in their technical and advocacy efforts.
iv. Participate in the drafting of the final JMM-5 report and include relevant implementable recommendations, based on their knowledge of the country context.

## Deliverables/Outcomes:

The consultants of this institute are the country leading professionals who are mostly the professors in different universities and government medical college with: (i) expertise in medicine with MBBS, FCPS, (ii) expertise in Medical Entomology with MSc and Ph.D, and (iii) expertise in epidemiology and disease surveillance with MBBS, Masters/MPhil or and Ph.D in Epidemiology and other disciplines. They were actively involved in the 5th malaria JMM and ensured following 4 deliverables.

## Deliverable 1: Report on Analysis of Program Data and Relevant Documents

The expert team did desk review of the program and perform epidemiological analysis. They also reviewed MEAT audit report. Following areas were focused during this analysis:

- Malaria situational analysis by years to determine its trends including malaria death
- Malaria case distribution covering the JMM-5 review period for understanding of malaria endemicity by place and time
- Malaria situational analysis of Bandarban districts

**Table-1: Malaria incidence in Bangladesh by year and malaria species, Year 2010-2021**

| Year | Population at risk | *P. vivax* | *P. falciparum* | Total cases | Malaria deaths | API (Number of cases per 1000 risk population) |
|---|---|---|---|---|---|---|
| 2010 | 15,922,319 | 3,824 | 52,049 | 55,873 | 37 | 3.51 |
| 2011 | 16,172,623 | 2,580 | 49,215 | 51,795 | 36 | 3.20 |
| 2012 | 16,428,991 | 1,699 | 27,819 | 29,518 | 11 | 1.80 |
| 2013 | 16,691,607 | 983 | 25,908 | 26,891 | 15 | 1.61 |
| 2014 | 16,960,664 | 3,348 | 54,132 | 57,480 | 45 | 3.39 |
| 2015 | 17,236,360 | 4,011 | 35,708 | 39,719 | 9 | 2.30 |
| 2016 | 17,518,901 | 3,306 | 24,431 | 27,737 | 17 | 1.58 |
| 2017 | 17,801,442 | 4,444 | 24,803 | 29,247 | 13 | 1.64 |
| 2018 | 18,090,830 | 1,675 | 8,848 | 10,523 | 7 | 0.58 |
| 2019 | 18,744,803 | 2,126 | 15,099 | 17,225 | 9 | 0.92 |
| 2020 | 19,053,728 | 1,245 | 4,885 | 6,130 | 9 | 0.32 |
| 2021 | 19,370,244 | 1,954 | 5,340 | 7,294 | 9 | 0.38 |

The above table shows a sharp decline of malaria cases from 2010 to 2018; and then it platued until 2021; indicating that the program is in the last mile. So, the country should have a plan to mitigate the potential issues of the last mile.

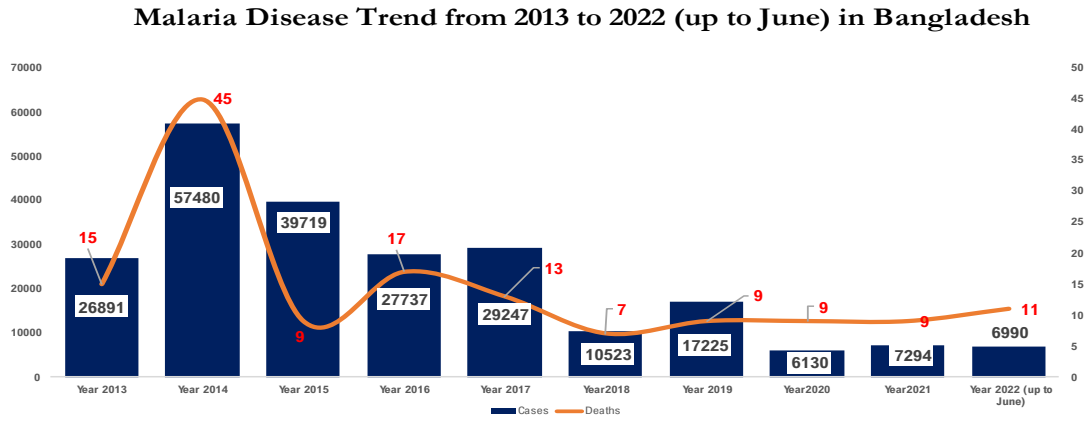


Figure-1: Malaria cases and deaths 2010-2021 up to June, 2022

The graphical presentation shows that the malaria fatality rate has not been significantly coincided with the sharp decline of case incidence rate since 2015; and it is, to some extent platued from 2015 to 2021. It indicates some issues including inadequacy of surveillance for early case detection and management, and raises some research questions, eg. if there is any treatment failure, or hrp2 gene deletion as country's 80% of malaria case diagnosis are done by RDT.

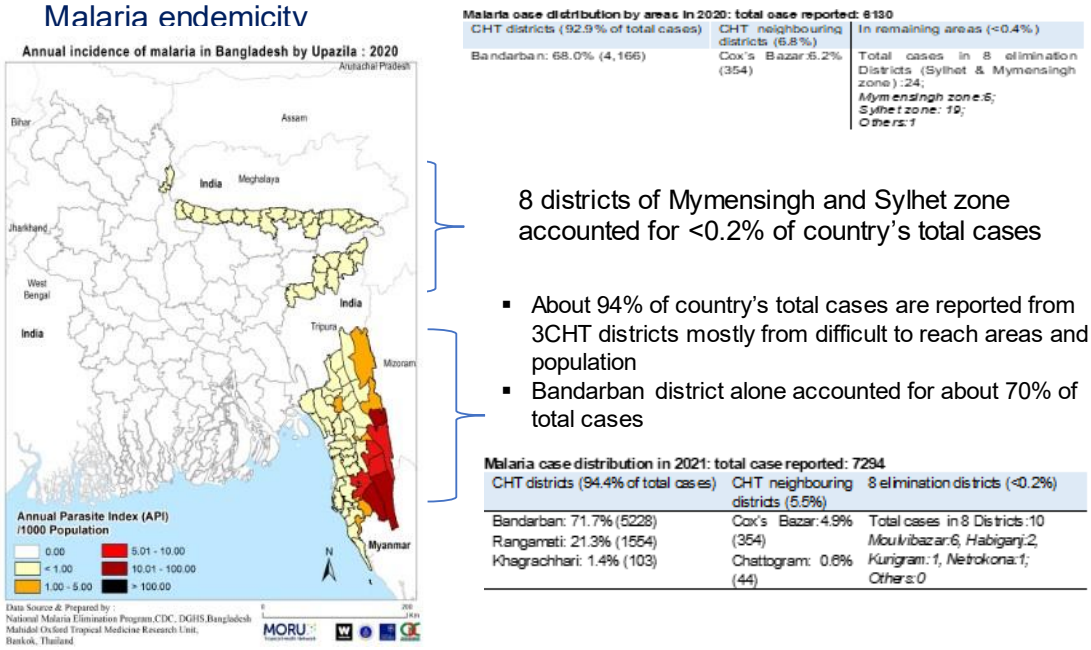


Figure-2: Malaria endemicity and distribution of cases of last 2 years covering JMM-5 review period

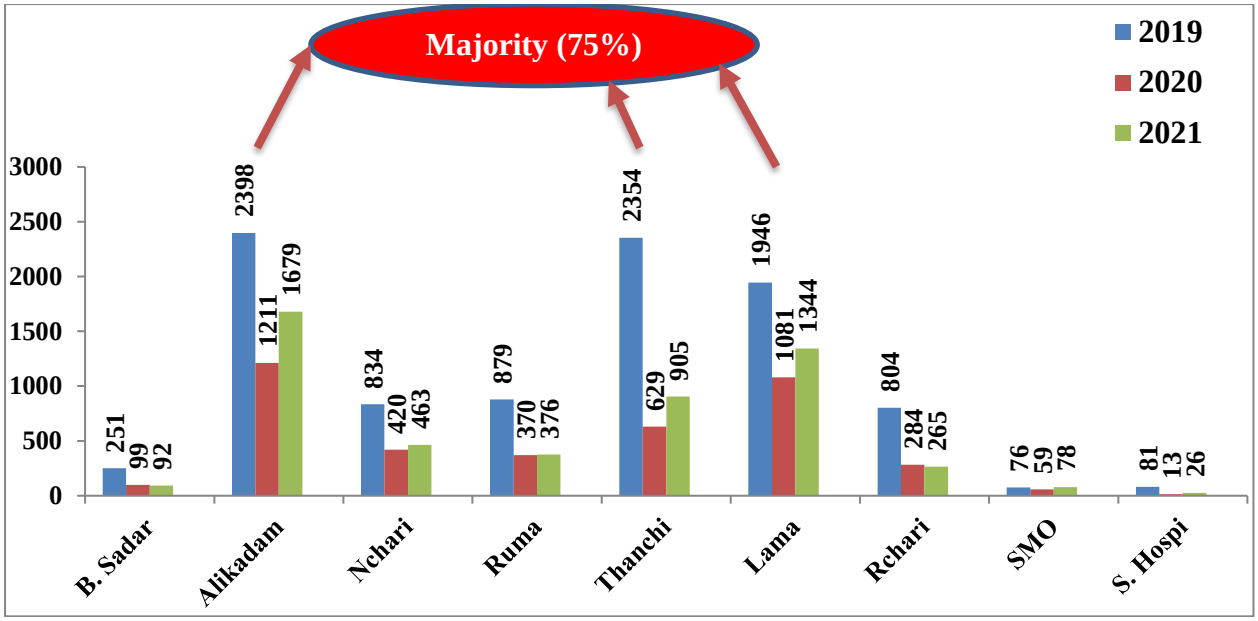

Figure-3: Bandarban Upazila-wise Case Distribution: 2019 – 2021

The graphs shows that the 3 Upazila of Bandarban: Alikadam, Thanchi and Lama accounted for majority of malaria cases in Bangladesh. Digging deep to extract detail information is critical to know why these areas continues reporting high. It demands business not usual approach.

## Deliverable 2. Develop Checklists Locally Implementable Addressing All Thematic Areas

As the hired professionals of this institutes for the malaria 5th Joint Monitoring Mission (JMM-5) are experts in different areas, they prepared checklist for the field review covering following thematic areas.

| | | |
|---|---|---|
| Thematic area | 1 | Overall status of program performance and implementation of JMM4 recommendations, issues and challenges of the program identified through MEAT audit done in July 2022 |
| Thematic area | 2 | Malaria epidemiology, determinants of malaria, epidemic preparedness, and response |
| Thematic area | 3 | Malaria case management (diagnosis, treatment, referral), drug resistance, in public and private sectors |
| Thematic area | 4 | Malaria entomology and vector control, insecticide resistance |
| Thematic area | 5 | Malaria Surveillance, M&E |
| Thematic area | 6 | Relevant health systems issues: Management, organization of service delivery, logistics/supply chain management, workforce/HR issues, private sector engagement, partnerships, at different levels of health system, ACSM |

**The focused issues were:**

- Malaria case management in line with national treatment protocol with inclusion of concern about treatment failure
- Malaria epidemiology connecting with determinants in control and elimination areas of Bangladesh
- Malaria disease surveillance considering existing health system in Bangladesh and issues of malaria last mile including malaria cross-border surveillance and role of the health staffs, Bangladesh Army/Border Guards especially in the bordering areas of Hill Tracts districts, Chattogram, Cox's Bazar
- Entomology and malaria vector control focusing vectors in CHT districts, other endemic districts and non-endemic areas like Dhaka and other urban areas

The expert consultants with the request of the program voluntarily started working with the JMM team from 27th July to develop the checklist. They did it in line with the local context.

## Deliverable 3: Field Visits and Meetings

The designated team actively and effectively participated in the field visits in several districts across Bangladesh including Dhaka North, Dhaka South & Gazipur, Bandarban, Cox's Bazar, Chapai N. Ganj, and Sylhet. During the field visits, they arranged a significant number of stakeholder meetings, dissemination meetings in order to support the national program and international experts in their technical and advocacy endeavors. The team conducted their field visits and meetings which was started on August 04, 2022.

**Table: Field Visits & Meetings**

| SN | Name of the District | Period of Field Visits |
|---|---|---|
| 1 | Chapai Nawabganj | 04/08/22- 07/08/22 |
| 2 | Cox's Bazar | 04/08/22- 07/08/22 |
| 3 | Dhaka North, Dhaka South & Gazipur | 05/08/22- 07/08/22 |
| 4 | Sylhet | 04/08/22- 07/08/22 |
| 5 | Bandarban | 04/08/22- 07/08/22 |

## Deliverable 4: Report on Field Visit with Inclusion of Locally Implementable Recommendations

The team actively with the international reviewers and contributed in preparing the JMM-5 final report. Epidemiological findings mentioned above under the deliverable 1. Other key findings given below.

**Malaria Diagnosis and Case Management:**

- National Treatment Guidelines (NTG) are being followed in public and BRAC and associated NGOs. NTGs are not being adequately followed in private sector, and in the NGOs working with FDMN population. Private sector not much aware of NTG.
- Good knowledge of malaria treatment protocol exists at different levels of public sector health care providers and partner NGOs but not in private sector.
- Nearly 80% of malaria cases are detected by BRAC. Most of the cases of malaria are tested and treated in the community by NGO community health workers and community laboratories.
- Testing of fever cases is relatively low at community level at public health facilities like CCs and by public sector community health worker like HA.
- Ratio of using malaria RDTs and microscopy is usually 80:20
- JMM team hardly found any WHO prequalified RDTs for malaria and antimalarials in non-endemic districts
- Patients are not often followed up for compliance of treatment. Enquiries are made on day 14 from vivax patients if primaquine full course was completed. No advice is given to patients prescribed with 14-day primaquine course or to report for any G6PD deficiency symptoms.
- Key posts of Medical Technologists frequently found vacant in many Upazillas.
- Issues have been found with reagents related to diagnostics, blood slides; and related logistics being out of stock in few of the areas visited by the Sylhet Team.
- EQA/EQC could not be carried out due to COVID19. Certification of LTs was extended for period of 2 years. Evidence of EQA/EQC in Bangla was not evident.
- Malaria lab surveillance is very inadequate in non-endemic districts. However, the program recntly provided training to the MT-Lab of bordering (with India) Upazilas on malaria microscopy.

**Malaria Surveillance, M&E:**

Routine malaria surveillance is in place. It is coordinated by the Medical Officer Civil Surgeon (MOCS) under the supervision of Civil surgeon. GFATM fund recruited Surveillance Medical Officer (SMO) for malaria is playing the key role in coordinating routine surveillance and assisting the district health

authority. It is one for each 3 CHT districts, 1 for 2 neighboring districts of CHTs (Chattogram and Cox's Bazar), 1 for Sylhet zone and 1 for Mymensingh zone.

Malaria report from the public sector health facilities/health workers and partner NGO from each upazila are submitted weekly, whilst the Upazila/Community Clinics (CCs) health workers from hard-to-reach areas submit such reports fortnightly/monthly. On the basis of the case load, initiatives are planned and implemented including instruction to the Upazila Health officers for action as well as field visits, organization of special medical camps in the hotspot areas for EDPT. The SMO visits all Upazilas once in a month on rotation basis to strengthen the surveillance system at upazila and union levels. Updated surveillance guidelines and M&E plan are available (English version) with key programme officers at district and Upazila headquarters.

SMO for elimination districts seems inadequate, and none in non-endemic districts. Surveillance in non-endemic districts found very inadequate.

**Malaria Case Detection in Public Sector:**
From public sector, active case detection (ACD) is done by Heath Assistants (HA), Assistant Health Inspector (AHI). Health Inspectors (HIs) supervise their activities and reporting to MOs at Upazila level under the supervision of Upazila Health & Family Planning Officer (UH&FPOs). Passive case detection (PCD) by the community health care providers (CHCPs) at CCs (each for 6000 population) provide malaria services at community/village/para level. A Statistician at Upazila level is responsible for collating/uploading surveillance data. Except 3 CHT districts, involvement of HA/AHI/HI and others is inadequate; and it requires some strong initiatives from DGHS to get them involved.

**Case Detection by Partner NGOs:**
The partner NGO Shasthyo Kormi (SK), Shasthyo Shebika (SS) are conducting ACD are at the community/village/para level. This network is available in 3 CHTs, Chattogram and Cox's Bazar only.

**Data Analysis and Use:**
The district & sub-district staff in public sector health facilities and with partner NGO are aware of the malaria data. The data are analyzed and used to identify the hot spot unions, villages/paras in the District/Upazila as well as the NMEP level for intervention and more proactive actions.

**ABER Protocols:** As regards ABER, at least 10% of the total at risk population is screened in a year. In Bandarban, almost 30% of the total population has been tested in 2021.

**Malaria Surveillance in Districts Under Malaria Elimination:**
It is adequate and done using 1-3-7 approach. It includes case-based surveillance, case investigation and classification, focus investigation and classification and response.

These activities are not in 3 CHT districts as these districts are high burden and in control setting. Micro-stratification is done periodically on the basis of API and caseload for identifying hot spot areas. Vector incrimination and susceptibility test for the vector are carried out in the hot spot areas for identifying the gaps by entomology team from central level.

**Formats for Reporting**: Different forms viz., national MIS format (monthly data aggregation format), line listing form of malaria cases, foci update form and supervisory checklist for senior officials from central, district and Upazila levels (GoB), central PMU, SMOs (GoB) are included. Whilst the M&E plan is yet to be widely distributed to district/Upazila, partner NGO, key elements of M&E plan is disseminated at these levels including key indicators (confirmed malaria cases/1000 pop., reported death/1000 pop., annual blood examination rate (ABER), slide positivity rate etc.). Analysis is carried out by the SMO. However, achievements. Against district/Upazila level targets/projections are not clear. Similar analysis is yet to be carried out at all Upazila level, where emphasis is more on data aggregation and reporting. Feedback mechanism exists following sharing of results with the NMEP and also with the Upazila level.

**Gaps in Reporting**: Presently, most data are from public sector and partner NGO (BRAC consortium). Data sharing between public health sector and partner NGO at all levels of the health system is good. The M&E reporting protocol is followed for reporting. The reports are submitted in the standardized format from field as well as from all facilities (HW & CHCP/SK & SS) to Upazila level and finally to the district level both from GoB and NGO partners. The current reporting formats incorporate the age-gender disaggregation. However, details of population at risk as such forest goers, jhum cultivators etc. are yet to be captured from all Upazilas for estimations. However, there is no systematic mechanism with formats, timelines to get malaria data from all NGOs/agencies in FDMN camps as well as other INGOs, Armed/other security forces, private sector. Reporting is episodic. Such data is included in the malaria MIS when received.

**Private Sector Engagement:**
The country is still in the process of developing private sector engagement strategy for malaria elimination noticed during field visit.

**Cross-border Surveillance for Malaria:**
The program conducted cross border situational analysis for malaria and did 2 G2G meetings with India.

There is no cross-border surveillance yet and information is not available on malaria incidence on the cross-border districts/blocks/villages, although overall malaria data was shared during cross-border meetings in 2021, 2022 between Bangladesh and India (but none with Myanmar). However, case investigation forms have provision to capture information on travel history including any travel across border. Such malaria cases are classified as imported malaria (non-local).

**Participate in Drafting the JMM Report:**
The team was actively involved with the international consultants and other members in preparing the JMM reports. The expert consultant did it based on the field findings combining with their expertise, experiences aligning with the local context.