



Global **Malaria** Programme



World Health
Organization

Assessments to guide malaria surveillance strengthening in any endemic countries

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SMERG, Bangkok

Agenda

- 1 **Background**
- 2 **Surveillance assessment Toolkit**
- 3 **Country implementations**
- 4 **Conclusion**

1. Background

Surveillance assessment

Malaria surveillance assessments is a systematic approach to measuring the performance of malaria surveillance systems, and identifying and evaluating the determinants of that performance.

They have been implemented in multiple countries, by different partners using a variety of different tools and approaches to assess systems and enable NMPs to improve surveillance system performance.



However, **past approaches and tools have not been standardized across assessments**, making it difficult to compare results between countries, between regions within a country, or over time in any select geographical region.

To address this issue, a standardized Malaria Surveillance Assessment Toolkit was developed to conduct comparable and replicable malaria surveillance assessments across multiple countries and within the same country over time.

2. Surveillance assessment Toolkit

Four objectives of the assessment, and a modular approach



Desired functions of surveillance

1: Performance



Determinants of surveillance

2: Context and infrastructure



3: Process and technology



4: Behavior

Objective 1: Measure the **performance of the surveillance system** (defined by surveillance system coverage, data quality and data use)

Objective 2: **Contextual and infrastructural** aspects of the surveillance (health sectors reporting, minimum data captured, information systems used, availability of and adherence to guidelines, human and financial resources and infrastructure)

Objective 3: **Processes and technical aspects** (processes, tools and personnel involved with the flow and use of data from recording to response)

Objective 4: **Behavioral aspects** (governance structures, information culture, proficiency, motivation and accountability of staff involved in malaria surveillance)

Total indicators= 79

Total priority indicators =53

Priority for burden reduction settings = 40

Priority for elimination settings =49

Content of the toolkit: eight tools with different functions and an Implementation step-by-step Reference Guide

Function	Tools	Description
Define scope	1. Assessment framework tool	A set of key objectives, sub-objectives, and indicators that can be used to quantify and/or qualify strengths and weaknesses in the surveillance system. This tool should be used as the starting point in an assessment to define the scope of the assessment and the approach.
	2. Concept note and protocol	A template for the outline of a short concept note for refining the scope, methods, expected outputs and outcomes of an assessment and a more detailed protocol outline required for comprehensive assessments.
	3. Assessment planning tool	A budgeting template to assist countries in developing a costed plan to undertake a comprehensive assessment.
Collect & analyse data	4. Desk review Tool	A set of questions, tables, graphics and diagrams used to collect information and summarize what is known about malaria surveillance through document and data review, and optional interviews with surveillance programme staff and other relevant supporting partners.
	5. Data Quality Assessment tools	Tools and guidance for collecting and analysing data to specifically assess data quality at national, regional, district and service delivery levels.
	6. Question Bank	A library of questions which can be used to develop survey questionnaires for data collection at service delivery levels.
	7. Analysis tools	A set of shell tables in excel used to summarise the results of analysis from the survey.
Develop & prioritize recommendations	8. Technical brief and Report outline	A report template for organizing, visualizing, and interpreting results from the assessment. A technical brief is used to highlight a subset of priority results, whereas the complete report includes all assessment results.

Current status of the toolkit, and next steps - <https://malsurtoolkit.who.int/>

Malaria surveillance assessment toolkit
Implementation reference guide

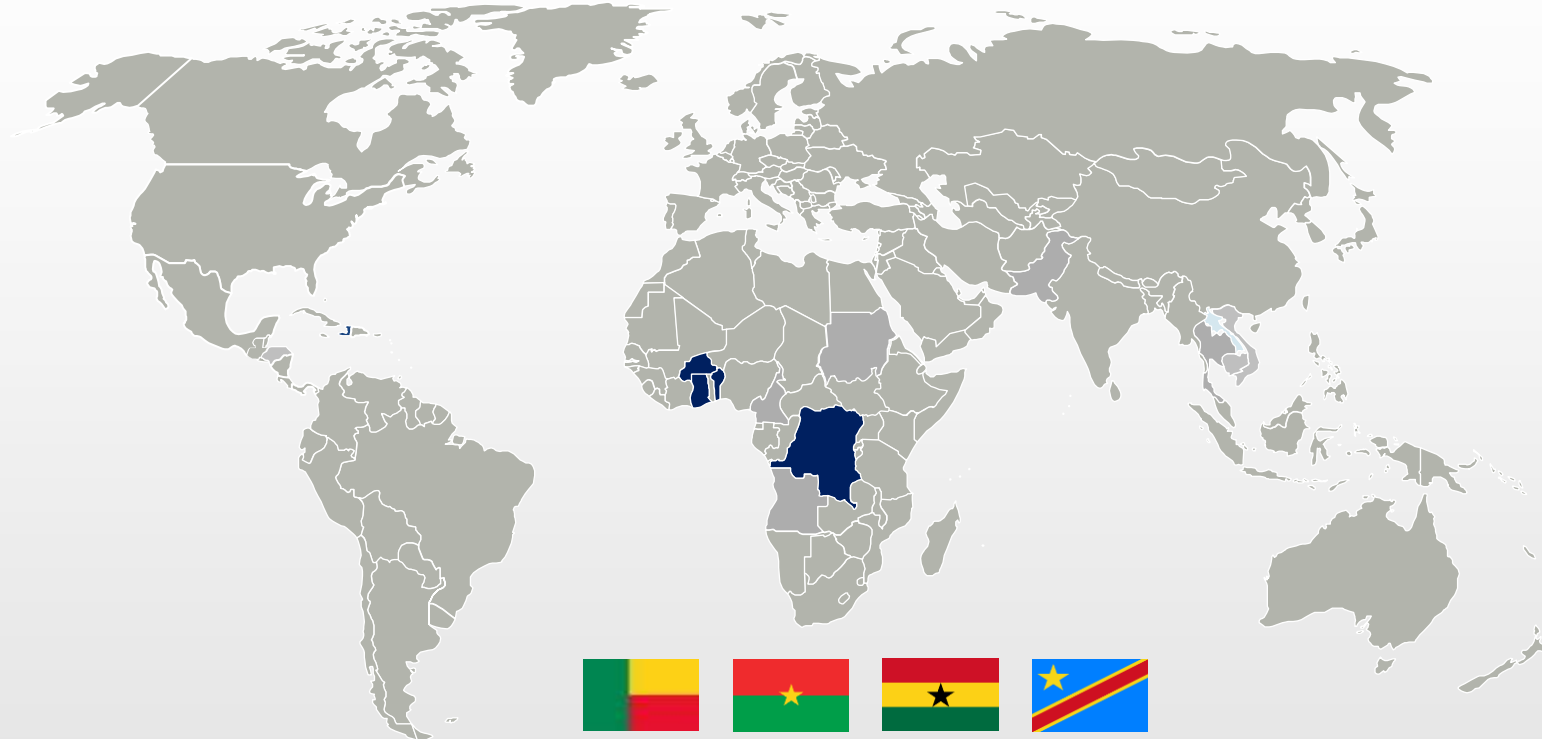
World Health Organization MALARIA SURVEILLANCE ASSESSMENT TOOLKIT

- Assessment framework**
A set of objectives, sub-objectives, and indicators that can be used to quantify and/or qualify strengths and weaknesses in the surveillance system. This tool should be used as the starting point in an assessment to define the scope of the assessment, selection of the transmission setting, malaria control interventions and strategies and indicators and the approach (rapid, tailored or comprehensive).
- Concept note and protocol**
A template for the outline of a short concept note for refining the scope, methods, expected outputs and outcomes of an assessment and a more detailed protocol outline required for comprehensive assessments.
- Desk Review**
A set of questions, tables, graphics and diagrams used to collect information and summarize what is known about malaria surveillance. Information is collected through document and data review at the national level, and through interviews or more informal discussions with surveillance programme staff and other relevant supporting partners.
- Data Quality Analysis**
Tools and guidance for collecting and analysing data to specifically assess data quality (completeness, timeliness, consistency and concordance) at national, regional, district and service delivery levels. At the desk level data are extracted from national databases and used to populate a template which automatically generates tables and graphics. At the service delivery level data extracted from the national database is compared with data collected at the health facility.
- Question Bank**
A library of questions which can be used to develop survey questionnaires for data collection at sub-national (regional/district), service delivery or community levels.
- Analysis tools**
A set of shell tables in excel used to summarise the results from the survey.
- Report template**
A report template for organizing, visualizing, and interpreting results from the assessment. A technical brief is used to highlight a subset of priority results, whereas the complete report includes all assessment results.

- The first iteration of the WHO web portal is live
- Access to standardized guidance and a common set of adaptable tools, and learnings from other countries
- Tools can be downloaded in English and in French

3. Country Implementations

Four countries were the focus of comprehensive assessments to pilot the WHO surveillance assessment toolkit



Four countries piloted the surveillance assessment tools between 2019 and 2022

- **Benin**
- **Burkina Faso**
- **Ghana**
- **DRC**

Additional countries (Angola, Cameroon, Laos, Pakistan, Sudan) are / have been using the WHO surveillance toolkit (or some modules) to conduct assessments

Implementation of a malaria surveillance assessment occurred in four phases (Assessment initiation ; Data collection and review; Data analysis and output development; Prioritization of recommendations and dissemination)

Qualitative and quantitative data collection were conducted at all levels of the information systems, including the service delivery, intermediate and central level

Select key findings for data quality and data use

TABLE 5.2.

Results from the assessment of indicators for data quality and use (>80%=met [green], 50–80%=partially met [orange] and <50=not met [red])

Indicator	Burkina Faso	Democratic Republic of the Congo	Ghana
Completeness of reporting	91%	91%	98%
Timeliness of reporting	85%	66%	94%
Consistency between core variables	85%	68%	60%
Completeness of core variables within registers	64%	74%	40%
Concordance of core variables between registers and aggregated reports	32%	38%	30%
Data used for strategic, policy and operational processes	83%	64%	72%
Users with access to data	58%	96%	73%

- Completeness at Health Facility is usually high
- Concordance between paper registers and electronic data is usually poor
- Data use high variable depending on health level (usually lacking at lower level)

Source: 2022 World malaria report

Key cross-cutting recommendations from the assessments



Improve demand for and access to malaria care to improve the surveillance **system representativeness**



Ensure **availability of commodities, infrastructure and guidelines** for surveillance and case management



Enhance or intensify the **integration** of malaria data from different information systems



Improve the **quality** of malaria data



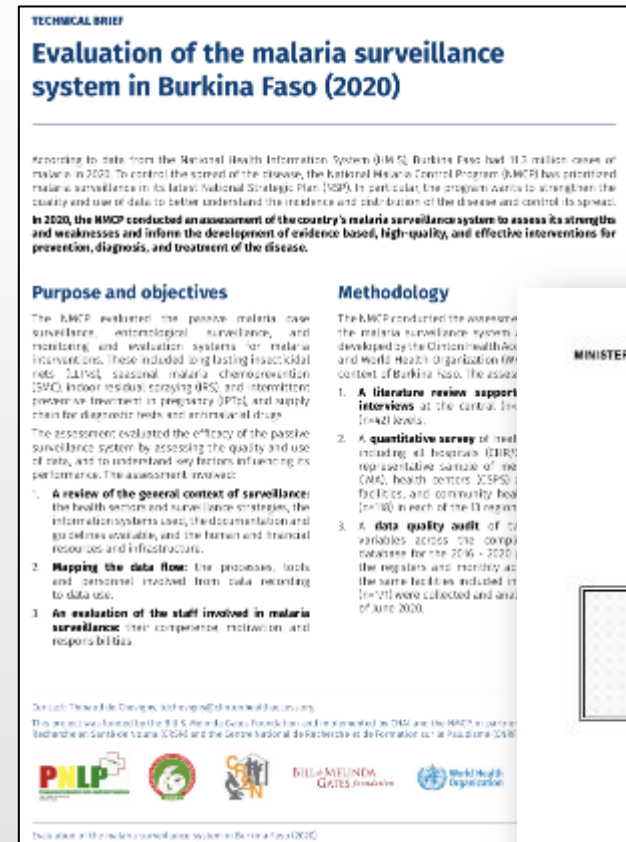
Improve **access, analysis, and use** of malaria data at all levels of the system



Ensure an environment that allows for effective **planning and implementation** of surveillance interventions

Outputs from the assessments were translated into reports and surveillance strengthening roadmaps, informing policies, strategies and funding

- Surveillance assessment outputs have been disseminated in the countries and internationally with key malaria actors through **final reports** as well as **technical briefs**
- Identified surveillance gaps were used to develop **recommendations and roadmaps** in collaboration with NMCP and key partners
- Donors, including PMI and GF are using the costed roadmaps to **inform key fundings** for surveillance activities



Three countries in the GMS are undertaking surveillance assessments to identify remaining gaps and to prioritize solutions

Laos: Data Analysis & Outputs



Embedded into the Global Fund mid-term review (MTR) process, the surveillance assessment has been used to identify surveillance gaps that could be directly addressed while applying for RAI4E funding

Vietnam: Assessment initiation



Given that the country had less than 500 cases in 2022, the toolkit will be used to understand where remaining gaps are in endemic areas as well those implementing prevention of reestablishment and to prepare documentation for elimination certification

Cambodia: Assessment initiation



Toolkit will help to formalize surveillance gaps identified in the MTR and targeted in RAI4E, identify gaps that may have been missed, and collect documentation needed for elimination certification

So far, the assessment in Laos has identified key gaps in data concordance and the case investigation and classification system



Data concordance

Background	Comparison of key indicators on paper-based forms at the village, HF, and district (DAM) level and electronically-reported data in DHIS2
Findings	High levels of concordance with testing (~100%), but issues with cases, treatment, and RACD data <ul style="list-style-type: none">• Shift of data entry from DAM to HF
Actions	<ul style="list-style-type: none">• Data quality added as key indicator in weekly provincial data reviews• Targeted supervision and refresher trainings to worst performers• Removal of duplicate aggregate forms in favor of direct reporting at the HC

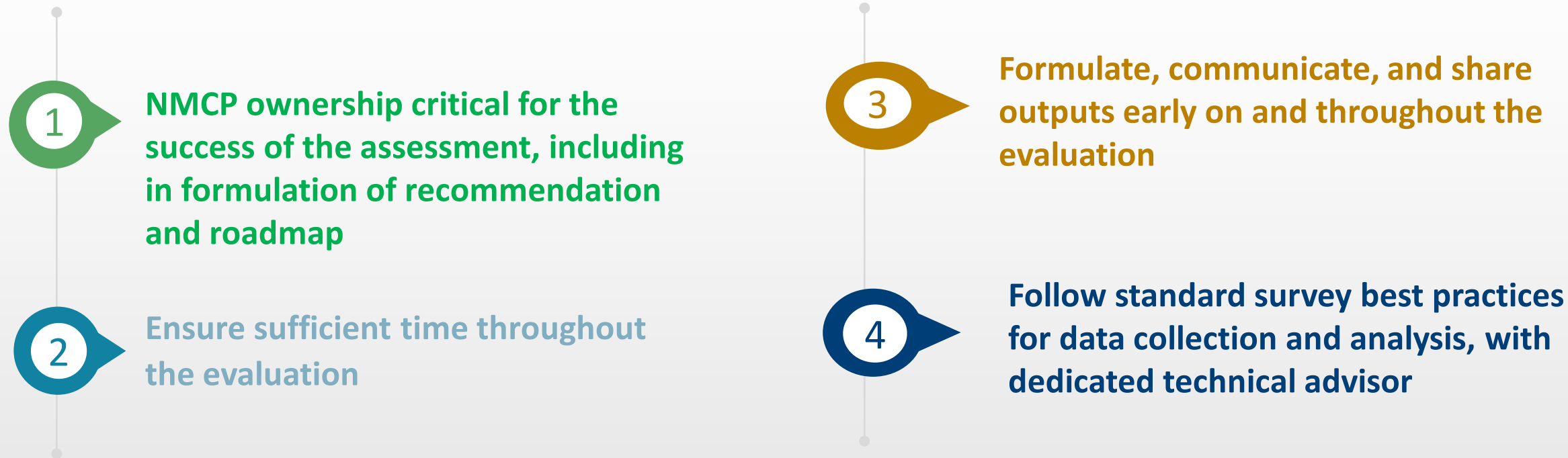
Case investigation and classification

Background	Case investigation and classification only done in elimination areas. CMPE previously piloted a simplified CI/CC system in burden reduction areas
Findings	Small proportion of cases being investigated and classified (~7%), simplified case investigation and classification pilot had high rates of acceptability and rates of CI/CC
Actions	Include a simplified case investigation and classification process in burden reduction areas



4. Conclusion

Toolkit Implementation lessons learnt, and key recommendations



Consider the use of **surveillance assessment to inform strategy as part of malaria planning and routine activities, train program on use of toolkit, and include it in relevant policies** by different partners

Surveillance strengthening recommendations are relevant to other programs beyond malaria (e.g. HMIS unit)

Thanks to the malaria programs and the multiple partners who contributed to the toolkit formulation and implementation

