RBM Partnership To End Malaria

Difficult decisions: A framework for prioritizing surveillance to match available resources

Developed by the Surveillance, Monitoring & Evaluation (SME) Working Group

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INTRODUCTION

Strong surveillance is a cornerstone of successful malaria elimination, providing crucial information to guide national malaria programs (NMPs) in strategic planning, intervention targeting, allocation of resources, and measuring progress toward elimination goals. Its role as a core intervention was cemented in the Global Technical Strategy for Malaria 2016–2030, published by the World Health Organization (WHO, 2015, updated 2021). To operationalize this third strategic pillar, WHO released further tools, including *Malaria surveillance, monitoring & evaluation (SME): A reference manual* (2018, updated 2025) with corresponding core SME indicators, the *Malaria surveillance assessment toolkit* (2022, updated 2026), and *Guidance on establishing a national malaria data repository* (2025).

In the wake of dramatic reductions in funding support for malaria control and elimination, the malaria community must stretch available resources further than ever to mitigate increases in morbidity and mortality. Although NMPs have led prioritization exercises for each previous funding opportunity, currently available funding breaks historic trends and marks a new landscape to navigate. Thus, NMPs may need to make deeper structural choices to sustain malaria control and elimination capacity.

While it may be tempting to reduce surveillance and related measurement tools and processes in favor of acute “life-saving” interventions, surveillance data are essential to understanding how and where to deploy these front-line tools to maximize public health impact and deliver value for money. Surveillance systems identify outbreaks early, sharpen targeting of evidence-based interventions, and assess results (Letter from SME Working Group Co-Chairs, 2025), making them essential to any malaria program that saves lives. Without reliable surveillance data, NMPs will not know the state of malaria burden in their country and will not be able to make informed decisions in order to achieve control and elimination.

Still, prioritization discussions often focus on efficiently layering preventative interventions or calculating trade-offs between prevention and case management interventions. As the ultimate guidance tool for NMPs, surveillance systems are of increasing utility in a context of reduced resources; the role of surveillance is to encourage meaningful response and strategic decisions. Cross-country expert groups, such as the RBM SME Working Group and WHO Malaria Strategic Information Technical Advisory Group, and the Global Fund for AIDS, TB & Malaria (Global Fund) have developed best practices for strengthening malaria surveillance systems and processes. However, there has not been complementary guidance on how NMPs may adapt these ideals to preserve essential surveillance functions in a time of constrained resources.

PURPOSE AND TARGET AUDIENCE

The framework is intentionally released in line with the Global Fund's Grant Cycle 8 (GC8). It aims to **support NMPs as they work through the difficult process of adapting malaria control and elimination programs to fit available resources in 2026**. For many countries, this exercise builds on previous prioritization and reprogramming discussions (for example, from major funding disruptions, Global Fund planning and GC8 preparations, or subnational tailoring of malaria interventions and strategies [SNT] during National Strategic Plan [NSP] development).

Each NMP will need to consider its unique situation and adapt malaria surveillance accordingly; thus, this framework is not prescriptive nor normative guidance. Instead, the framework collates broad thinking into a structured approach on considerations for redesigning a compact surveillance system that maintains required intelligence within available resources. It also reminds us that reductions or cuts in surveillance programming may affect performance. There is **no universal "minimum essentials package"** of surveillance activities. Rather, a prioritized mix of surveillance interventions will look different in each country, based on its epidemiology, maturity of the surveillance system, mix of intervention uptake, information needs and gaps, and history of intervention success since sufficient coverage of surveillance activities is essential for success.

The framework includes a comprehensive taxonomy of surveillance components, a prioritization use case with illustrative results, and a checklist to consider where efficiencies or cost reductions may be possible. Programs may choose to apply individual elements of the framework modularly, depending on their needs and planning timelines. Documenting the decision-making process is highly advisable so that decisions can be easily revisited for midterm adjustments, the next funding cycle, or if additional funds become available.

UNDERSTANDING SURVEILLANCE FOR PRIORITIZATION

WHAT COUNTS AS SURVEILLANCE?

Malaria surveillance includes not only data reporting, but also the interconnected processes, people, tools, and systems required to collect, manage, analyse, interpret, and use data for two main purposes: measurement and guidance for decisions and response. These components enable NMPs to reliably capture and track malaria cases; understand where, when, and among whom transmission is occurring; detect changes or outbreaks; generate evidence to target and adapt interventions; and assess whether efforts are achieving the intended impact. A surveillance system's most precious asset is the human resources that power it; thus, decisions about surveillance activities will also affect people's skills, motivation, and confidence.

Defining costed surveillance components is complex.[1] In Global Fund budgets, while many measurement costs are categorized under Resilient and Sustainable Systems for Health (RSSH), some surveillance components are assigned to other technical categories, rendering a fragmented total surveillance budget. For example, insecticide resistance monitoring may be included as a vector control line item even though it is also a surveillance activity. Surveillance costs are sometimes shared with health information systems (e.g. DHIS2 server maintenance) or funded independently through technical assistance partners that may shift over time.

As a result, the true level of investment in surveillance may be difficult to see in standard budgets. NMPs may thus need to map surveillance-related activities across multiple budget lines to obtain a full picture of surveillance investments, identify potential gaps or overlaps, and advocate for prioritization. This framework and the RBM SME gaps table may help to identify surveillance-related activities and funding shortfalls.

[1] Clinton Health Access Initiative (CHAI), *Multi-country costing analysis of malaria surveillance activities and related inputs*, unpublished (2026).

ROUTINE DATA FOR MEASUREMENT AND DECISIONS

As noted in the WHO Malaria SME Manual 2025, all major components of a malaria surveillance system should be integrated into broader health information systems (HIS). As large-scale surveys become more difficult to finance, the role of routine HIS as a primary data source is increasingly important. HIS strengthening represents an investment in long-term, country-owned, and sustainable malaria solutions.

HIS and nationally representative household surveys have long been complementary data sources. HIS primarily focus on public health facilities (though in some settings may also include community health workers and private sector), alongside health facility surveys and NMP program data. Household surveys, sampled from full populations, can offer insight into patients who do not seek care from public health facilities. Other methods such as lot quality assurance sampling (LQAS), school-based surveys, or ANC surveys can utilize specialized sampling to provide rapid, targeted data on coverage, prevalence, or service uptake differential to results from HIS or large household surveys.

Outcome and impact indicators generally do not need to be collected frequently (although appropriate frequency depends on the indicator and context). Funding partners that have organized requirements around these metrics may need to develop more flexible options for impact reporting. Many survey indicators can be substituted with proxies or other metrics from routine data to reduce costs, if the data are sufficiently complete, representative, and consistent to support the decision being made.[2]

SURVEILLANCE COMPONENTS

This exercise drew on existing HIS and malaria surveillance frameworks[3] to help define surveillance components as a starting point for prioritization. The frameworks were aggregated and reviewed to identify the major building blocks of surveillance systems and processes and to ensure alignment with existing global guidance.

A main framework developed by CHAI[1] defined costed surveillance components as those related to the collation, cleaning, upload, and maintenance of data; tasks to improve that data; and the use of data related to understanding what is happening with malaria and malaria control in the country. This operational framework was expanded with ideas from the other known frameworks to create Table 3.

Table 3: Framework of surveillance strategies, components, and sub-components

Strategy	Component	Sub-component
Case Surveillance	Passive Case Surveillance	Facility-based reporting (case notification)
		Community-based case surveillance
		Supervision

[2] Nizet A, Edwards H, Richardson S, Poyer S, Mayor A, Stresman G, Burrough L, Ademu C, Robertson M, Roca-Feltrer A. *Beyond national household surveys: routine and alternative approaches to sustain robust evidence-based decision making.* Unpublished manuscript, April 2026.

[3] WHO, Surveillance Assessment Toolkit (2025); MEASURE Evaluation, Performance of Routine Information System Management (PRISM) framework (2011); CHAI, Malaria Disease Surveillance Framework (2025); MEASURE Evaluation, Health Information System Strengthening Model (HISSM) (2020); MEASURE Evaluation, HIS Stages of Continuous Improvement (SOCI) Toolkit (2020); WHO, Malaria Surveillance Strengthening Roadmap (2025); RBM SME WG, Minimum essential surveillance components and gaps table (2025).

		Private sector collaboration
	Active Case Surveillance	Proactive Case Detection (PACD)
		Community-based proactive case detection
		Points of entry / border surveillance
		Supervision
	Surveillance for Elimination	Case investigation and classification
		Reactive Active Case Detection and Foci Investigation
		Supervision
	Outbreak Monitoring	Outbreak/epidemic investigations and assessments
		Outbreak alert verification & AARs
		Epidemic Preparedness
		Epidemic Response
Entomological Surveillance	Vector Bionomics	Adult Mosquito Collection
		Larval Collections
		An. stephensi monitoring
	Insecticide Resistance	Resistance Testing
	Bio-efficacy	Bio-efficacy (cone tests on LLIN)
		Bio-efficacy (cone tests on IRS)
		Supervision
	Molecular Surveillance	Laboratory Testing
		Supervision
	Insectary	Insectary Infrastructure (building, commodities)
		Insectary maintenance and mosquito rearing
	General Field Work	Field testing/collections
		General supervision
	Entomology Communication (for non-ento workers)	Report Dissemination
		Trainings for HWs/nonEnto
Data Systems & Quality Management	System Maintenance	Malaria Data Repository (MDR) maintenance (central)
		Health information system (HIS) maintenance for malaria (central)
		Malaria-related modules (not integrated - VC, entomology)
		Geographical Hierarchy update/maintenance
		Logistics management information system (LMIS) maintenance
		Laboratory information system (LIS) maintenance

		General User support & operations
		Data security and ethics
	New Information System Module Builds	Build/Test/Train
		Supervision
	Integration and Data Sharing	Information System Integration
		Regular Data Sharing (Export/Import)
		Data dictionary and metadata
		Data validation rules
	Data Monitoring and Supervision	Monitoring dashboard review
		Data Quality Audit (DQA)
		Regular data review meetings (district/province/national)
		General supervision
		Surveillance bulletins
Surveys, Assessments & Studies	Surveys	National Household Surveys (MIS, MICS, DHS)
		Alternative surveys
	Operational research & Special Studies	Operational research
		Special Studies
		Stratification
	Assessments and Evaluations	Facility Assessments
		National Program Evaluation (Malaria Midterm Review, NSP review)
		Elimination Certification
	Drug Resistance Monitoring	Therapeutic Efficacy Surveillance (TES)
Leadership and Governance	Policy, Guidelines, SOPs	TWGs/steering committees
		Drafting and disseminating strategic guidance
		Surveillance protocols
		Policy compliance and enforcement
	Surveillance-specific contract management	Procurement and contract management
	Collaboration and partnerships	Cross-border coordination
		Cross-Ministerial collaboration
		Participation in global scientific and partnership fora
	Financing and sustainability	Financing plan and gaps analysis
		Resource mobilization

		Transition and sustainability plan
Intervention Data Management	IRS Campaign	Supervision
		Data Collection
		Data Monitoring
		Data Analysis and Evaluation
	ITN Mass Campaigns	Supervision
		Data Collection
		Data Monitoring
		Data Analysis and Evaluation
	ITN Continuous Distribution	Supervision
		Data Collection
		Data Monitoring
		Data Analysis and Evaluation
	Chemoprevention methods (MDA, SMC, PMC, IPTp)	Supervision
		Data Collection
		Data Monitoring
		Data Analysis and Evaluation
	Larval Source Management	Supervision
		Data Collection
		Data Monitoring
		Data Analysis and Evaluation
Workforce and Management	Surveillance personnel management	SME staff salaries
		HR policy and enforcement
	Professional development	General MEL training
		Further trainings
	Data use for decisionmaking	Data triangulation
		Visualizations and analyses
		Data-driven response and program management

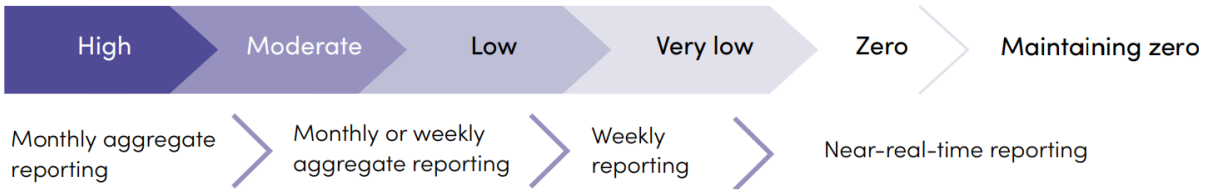
PRIORITY NEEDS BY TRANSMISSION INTENSITY

Prioritization decisions must reflect the realities of a country's malaria transmission, as surveillance needs evolve along the transmission continuum.[4] Table 2 summarizes priority and supporting surveillance activities across the continuum as defined by WHO. NMPs may need to separately consider

[4] World Health Organization. *Malaria surveillance, monitoring & evaluation (SME): A reference manual* (2025).

surveillance needs among control and elimination areas of the country, in line with SNT guidance, to determine how to balance both needs.

Table 2: Prioritized surveillance components by transmission setting



High Transmission	Moderate Transmission	Low Transmission	Very Low/Zero Transmission
Goal			
Track trends and guide large-scale interventions.	Identify persistent hotspots for intervention targeting.	Interrupt transmission by identifying foci and investigating every case.	Quickly detect and stop transmission and prevent re-establishment.
Priority surveillance activities			
• Aggregate case reporting • Data quality audits • Sentinel entomological surveillance[5] • District-level data analysis	• Aggregate case reporting with high completeness • Periodic data review meetings • Sentinel entomological surveillance • Subnational hotspot analysis	• Case investigation and classification • Targeted reactive case detection • Enhanced data analytics for decisions	• Real-time case notification systems • Rapid case investigation • Reactive case detection • Cross-border data sharing
Supporting surveillance activities			
	• Case investigations in low-incidence districts • Targeted reactive case detection	• Entomological surveillance in hotspots • Cross-border surveillance	• Molecular markers • Rapid response teams

Although the transmission setting may suggest technical priorities for surveillance, budget constraints may dictate a need for an additional cost prioritization process.

USE CASE

This use case focuses on prioritizing surveillance as a component of the total program, in addition to prioritizing activities within surveillance to enable measurement and evidence-based decision making. Each NMP has an NSP comprising prevention, vector control, case management, community engagement, and surveillance activities. In the common scenario where the full costed plan cannot be

[5] Further guidance on right-sizing entomological surveillance is forthcoming from the Entomology for Impact Initiative.

met with available funds, the NMP must prioritize interventions and optimize costs.[6] However, surveillance often represents a small share of total malaria program costs, so NMPs may be unlikely to achieve significant cost savings from curbing surveillance activities.

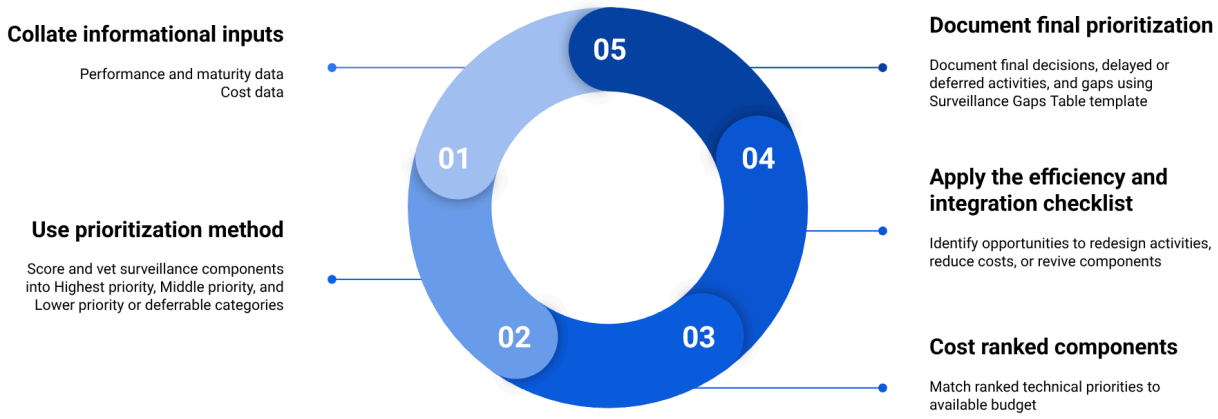
The NMP and its technical partners will convene to conduct the prioritization exercise. Ideally, the exercise should include representatives responsible for surveillance, monitoring and evaluation, case management, vector control, and health information systems to ensure that different program perspectives are considered.

Before deciding how to allocate funding, it is important to remember what the surveillance system is meant to do. Surveillance should support key program decisions, such as where to target interventions, how to monitor implementation, and how to track progress. Being clear on these decision and measurement needs helps identify where limited resources should be focused.

DECISION QUESTION

How should the NMP allocate available surveillance funding to maintain its ability to measure progress and impact, guide interventions planning and implementation, and respond to changes?

STEPS AND GUIDING PRINCIPLES



In applying the use case, NMPs should keep in mind the following guiding principles:

- Priority surveillance functions are those for measurement, decision-making, and response
- Surveillance components are interconnected, both within malaria and with other health programs, so any decision may have ripple effects
- A surveillance system's most precious component is its workforce; thus, decisions about surveillance activities will also affect people's skills, motivation, and confidence
- Targeting facilities, districts, or populations where the potential impact is greatest is crucial to overall country success
- Reductions may disproportionately affect populations that are less visible in routine data

INFORMATIONAL INPUTS

[6] World Health Organization. *Subnational tailoring of malaria strategies and interventions* (2025).

The ranking exercise uses the following information on surveillance components to inform discussions:

Performance and maturity data

- Digital coverage
- Activity coverage
- Data platforms, with relevant adoption and renewal dates
- Surveillance assessment findings
- Supervision and data quality review results

Cost data

- Budgeted and allocated costs
- Shared costs with other programs
- Incurred costs

PRIORITIZATION METHOD

The exercise is conducted by scoring discrete surveillance components, and then prioritizing the resulting ranked list for available funds. The structured approach uses **five prioritization criteria**:

1. **Decision Utility:** How essential is this surveillance component to timely NMP decision-making?
2. **Measurement Utility:** How essential is this surveillance component to measurement or reporting needs?
3. **Value for Money:** Is the result or insight generated proportional to the cost?
4. **Operational Feasibility:** Can the activity be implemented at high quality and coverage?
5. **Irreplaceability:** Are there alternatives to the surveillance data (or proxies) or surveillance components?

Prioritization matrix

Score	Decision Utility	Measurement Utility	Value for Money	Operational feasibility	Irreplaceability
3	Informs essential strategic decisions or program adjustments	Significant for measuring malaria or interventions	High output or insight for high or low cost	Implementation will confidently be high quality and coverage	No options exist for integration or alternative data collection
2	May offer some insight on strategy or program adjustments	Some significance for measuring malaria or interventions	Some output or insight for high cost; low output or insight for low cost	Historical implementation has had challenges in quality or coverage	Integration or alternative data collection can be considered
1	Little to relevance on strategy on program adjustments	Little to no significance in measuring malaria or interventions	Limited output or insight for high cost	Historical implementation has been seriously challenged	Integration or alternative data could confidently suffice

For each surveillance component, NMPs would provide scores on a Likert scale across these five ranking criteria. The five scores are summed to produce a total score for each surveillance component. These scores classify components into Highest priority, Middle priority, and Lower priority or deferrable categories.

Prioritization categories

Highest priority: Essential surveillance components that provide immediate decision or measurement utility to the NMP.
Middle priority: Important surveillance components that support the NMP's goals, including for targeted geographies or initiatives, but could be redesigned.
Lower priority or deferrable: Valuable surveillance components to be deferred or scaled back, with documentation to understand effects on surveillance functionality. In many cases, these activities may be redesigned, reduced in scope, or implemented less frequently rather than completely discontinued.

The scoring process is intended to support structured discussion rather than replace programmatic judgment. Scores should be interpreted in light of the country context, such as transmission setting (as outlined in the section "Priority Needs by Transmission Intensity").

BUDGET ALLOCATION

Prioritizing the building blocks of surveillance will require long-term investments with slow progress over time. The most strategic components have the potential to deliver excellent value for money even if they are not the fastest or lowest cost components. The Global Fund reminds NMPs that budget allocation should comprise both national and subnational costs in support of the National Strategic Plan.

Surveillance needs expand as countries progress towards elimination, and gradually surveillance becomes the primary malaria intervention. Malaria surveillance costs thus increase as NMPs target elimination and implement more complex strategies based on individual cases and foci.

Following initial prioritization, NMPs may use the efficiency and integration checklist (Annex 1) to identify opportunities to redesign activities, reduce costs, or revive components proposed for deferral before the costed surveillance plan is finalized.

DOCUMENTING DEFERRED OR CUT ACTIVITIES

For delayed or low priority or deferrable activities, NMPs should consider what would happen over a pause of one or two years. Some activities may lead to immediate loss of visibility on malaria trends or delays in outbreak detection, while others may have more gradual impacts or sequential effects on downstream malaria processes. NMPs should outline how long is an acceptable pause, what would be an early warning that the pause is causing damage, and what is the threshold for resuming the activity.

There may also be an opportunity cost of removing or reducing activities, including the loss of momentum, loss of skills or capacity, and changes in motivation among health personnel. Reductions in supervision, data quality processes, or analytical capacity may also gradually reduce confidence in surveillance data or the system itself.

Reducing surveillance components is likely to result in gaps, so documenting prioritization decisions will help understand how surveillance goals may be compromised. On the road to elimination, when surveillance becomes the primary malaria intervention, the impact of surveillance cuts may grow. In contexts where malaria surveillance is interconnected or sets a standard for other health programs, cuts may reach beyond malaria.

SAMPLE PRIORITIZATION RESULTS

With a 30% reduction in overall malaria budget, what might be next steps? In both scenarios below, the goal is to preserve the ability of the NMP to detect cases, understand trends, and guide interventions, even if the budget and thus structure of surveillance activities changes. The examples show how different countries may arrive at different prioritization solutions after considering their epidemiology, health system structure, and existing surveillance capacity.

Country A has utilized SNT approaches to stratify its 45 districts into 40 burden reduction and 5 elimination districts. To protect essential functionality in both burden reduction and elimination areas, the frequency of some activities will be reduced, alternate trainings and review meetings will occur in virtual formats, and proxies will be used for survey indicators in the short term.

Highest priority

- Surveillance personnel
- Routine malaria reporting from facilities and communities (tests, cases, severe cases, deaths, commodities, intervention coverage)
- Essential, non-malaria, supporting data (population data, master health facility lists, community health registry, care-seeking behavior, shape files)
- Stratification to guide targeting of interventions
- Digitalization and HIS maintenance
- Sentinel entomological surveillance on mosquito species, biting times, insecticide resistance
- Outbreak preparedness, detection, and response
- Purpose-driven data analysis and use

Middle priority

Country B has 60 provinces, all of which qualify as pre-elimination or elimination status. Real-time surveillance data are available with relatively high quality and coverage. Documented increases in parasite clearance time suggest that drug resistance may be imminent. Country B chooses to maintain high surveillance intensity while simplifying coordination and national management activities, as its program can reliably be decentralized

Highest priority

- Surveillance personnel
- Routine malaria reporting from facilities and communities (tests, cases, severe cases, deaths, commodities, intervention coverage)
- Essential, non-malaria, supporting data (population data, master health facility lists, community health registry, care-seeking behavior, shape files)
- Stratification to guide targeting of interventions
- Digitalization and HIS maintenance
- Sentinel entomological surveillance on mosquito species, biting times, insecticide resistance
- Purpose-driven data analysis and use
- Genomic and molecular marker surveillance
- Therapeutic efficacy surveillance
- Case- and foci-based elimination surveillance

Middle priority

• Data quality assessments • Therapeutic efficacy surveillance • Case- and foci-based elimination surveillance • Data integration • National data repositories • Surveillance TWGs • Malaria-specific surveillance trainings • Cyclical data analysis and use (e.g. bulletins, data review meetings, and dashboards)	• Private sector reporting systems • Data integration • Outbreak preparedness, detection, and response
Lower priority or deferrable • Targeted supervisory visits • Nationally representative household surveys • Private sector reporting systems • Genomic and molecular marker surveillance • AI and predictive modeling • Comprehensive malaria surveillance assessments	**Lower priority or deferrable** • Targeted supervisory visits • Nationally representative household surveys • AI and predictive modeling • Comprehensive malaria surveillance assessments • Data quality assessments • National data repositories • Surveillance TWGs • Malaria-specific surveillance trainings • Cyclical data analysis and use (e.g. bulletins, data review meetings, and dashboards)

RESULTS DOCUMENTATION

At the country level, surveillance components that will not be immediately funded in full should be organized into a Surveillance Gaps Table (Table 5), similar to those generated for other malaria interventions. The Global Fund specifies that even when surveillance activities are domestically financed, it is still important to document the full need of the malaria program.

Table 5: Country-level surveillance gaps table template

Year: 2026					
Surveillance component	**Priority level**	**Target coverage**	**Total cost**	**Already funded**	**Funding gap**

The table clearly organizes what remains unfunded or underfunded. Should a funding adjustment be available at a later time, this Table can be used to easily justify and cost supplemental surveillance activities. It may also be used to advocate for complementary resources from new funding partners, both domestic and external. Maintaining clear documentation also supports transparency with partners and facilitates future reassessment as epidemiology, resources, or program priorities evolve. NMPs may wish to review and update the Surveillance Gaps Table periodically.

NMPs should also monitor key surveillance performance indicators after prioritization decisions. Signals such as declining reporting completeness or timeliness, reduced analytical outputs, or delays in outbreak detection may indicate that surveillance capacity has been reduced too far and should trigger reassessment.

ANNEXES

ANNEX 1: CHECKLIST TO IDENTIFY INTEGRATION OPPORTUNITIES AND EFFICIENCIES

The Global Fund has stated that integration with other programs is essential for surveillance systems, both financially and programmatically. This checklist may be used during the prioritization exercise to identify opportunities for integration of other efficiencies that may reduce costs without compromising surveillance functionality. NMPs may review each question and discuss what adjustments may be feasible within their context.

☑ Where are surveillance activities currently **duplicated** across programs or systems? Examples include:

- The same staff entering data into multiple parallel systems (e.g. separate DHIS2 instances for malaria, HIV, TB)
- Parallel reporting tools or databases collecting similar indicators across programs
- Separate supervision, training, or data review processes conducted by different disease programs
- Multiple household listings or data collection exercises conducted by different campaigns

☑ Which malaria surveillance components and activities can be **integrated** with other disease areas? Examples include:

- Incorporate malaria supervision, data verification, and data discussions into general health initiatives.
- Use district health staff in recording, reporting, and analysis of malaria data, relocating costs to non-malaria budgets[1]
- Identify other disease areas conducting case-based reporting where data infrastructure or working groups may facilitate the transition for malaria programs
- Ensure malaria representation in HIV, Tuberculosis & Malaria (HTM), maternal and child health (MCH) and other disease integration initiatives

☑ How can the **format, frequency, or structure** of surveillance activities be optimized? Examples include:

- Shift some surveillance meetings (e.g. data reviews, supervision visits) to virtual formats.
- Deliver some surveillance trainings through online modules or pre-recorded sessions.
- Conduct data quality assessments less frequently.
- Collapse campaign visits to just one for both household demographics and net distribution.

☑ Can **digitalization or automation** reduce manual processes and long-term operational costs? Examples include:

- Embed automated data quality checks and response protocols within digital reporting systems.
- Expand digital reporting to reduce time for manual data collation.

☑ Which surveillance activities have **limited programmatic value** and could thus be paused or scaled back? Examples include:

- Remove death audits that have limited influence on NMP needs and programs[1]
- Some new technologies and analyses, such as AI-assisted analysis or decision-making software, climate prediction models, and advanced entomological surveillance should not replace funding for main surveillance building blocks.

☑ Where can routine data sources **replace primary data collection** activities? Examples include:

- Use community health workers to develop pre-campaign household listings from community surveillance.
- Partner with research organizations to develop adjusted calculations for malaria prevalence
- Invest in nimble survey options such as lot quality assurance sampling [LQAS], school-based surveys, or ANC surveys.

☑ How can **geographic targeting** streamline surveillance activities? Examples include:

- Sentinel surveillance for entomology or therapeutic efficacy

☑ Do any surveillance components dovetail with **domestic strategic initiatives** that enable access to additional national funds? Examples include:

- Digitalization, including DHIS2 upgrades and server maintenance
- Prioritizing indigenous or hard-to-reach populations
- Tourism campaigns that would benefit from low malaria risk

ANNEX 2: TOGO CASE STUDY

In 2025, Togo's NMP evaluated its national malaria surveillance system with technical support from the Health Management Support Team (HMST) and funding from Expertise France. The assessment aimed to understand how malaria data were collected, reported, and used across the health system, from community health workers and health facilities to district, regional, and national levels.

The evaluation used the WHO Malaria Surveillance Assessment Toolkit and included document review, key informant interviews, facility surveys, and data quality analysis. While the evaluation detailed Togo's strengths and weaknesses in malaria surveillance, the NMP recognized a need for clear prioritization of 44 proposed surveillance strengthening activities to fit limited financial, human, and technical resources.

Table 1: Malaria context of Togo

Strategic vision	Strengthen malaria surveillance as a core intervention to guide malaria control and reduce malaria morbidity and mortality (surveillance captures ~39% of suspected cases)
Transmission	2,182,671 cases (2024); Incidence ~257 per 1,000 population (2023); ~993 deaths (2023)
Health facility context	Private sector represents ~70% of care in Lomé but only some accredited private facilities report
Surveillance system	Routine data through DHIS2 (~50% facilities), complemented by community and sentinel surveillance (17 epidemiological sentinel sites, 12 entomological, 6 genomic)
National surveillance evaluation	Conducted in 2025 comprising DHIS2 data review (2022–2024), facility and community surveys, qualitative interviews
Costing estimate	The prioritization process led to an operational action plan totaling 3 million FCFA for 44 activities. The 5 costliest activities account for 95.2% of the total budget.

A participatory prioritization process

To translate the evaluation findings into concrete actions, the NMP convened a two-day national workshop in Lomé in October 2025. Prior to the workshop, facilitators prepared draft recommendations and a structured action-planning template based on the surveillance assessment findings to streamline the workshop. The 30 participants represented NMP technical staff, Ministry of Health departments responsible for surveillance and health information systems, regional and district health teams, research institutions, and technical partners including WHO.

The first day focused on reviewing the surveillance assessment results. On the second day, the workshop shifted from diagnosis to action planning. Participants were divided into three working groups to review recommended actions emerging from the evaluation. A prioritization framework guided participants to assess each activity on four criteria: expected impact on surveillance performance, implementation timeline, availability of resources, and budget requirements. Using a pre-prepared action plan template, working groups discussed each recommendation, refined its description, and assigned a priority score. High priority activities combined high expected impact and strong feasibility, while those requiring more time or resources were ranked as medium or lower priority.

Prioritization criteria

For each proposed improvement to the surveillance system, a total score was calculated by adding the points obtained for each of the four criteria. High priority activities scored 10-12 points, medium priority activities 7-9, and low priority activities 4-6.

Criteria	High Priority	Medium Priority	Low Priority
Impact	Significant improvement in surveillance performance	Moderate improvement in surveillance performance	Limited or no improvement expected
Implementation timeline	Short-term: Implementable within 3 months	Medium-term: 3-12 months	Long-term: more than 1 year
Resources required	Resources currently available	Resources not yet available but could be mobilized	Resources currently unavailable
Budget required	Low cost or budget already available	Moderate cost; funding may be mobilized	High cost; funding not currently available
Score	3 points	2 points	1 point

The discussions highlighted different perspectives across health system levels. National staff emphasized improving governance, data analysis, and system integration. District representatives highlighted operational feasibility, including staff capacity, supervision demands, and competing program priorities. When participants reconvened in plenary, each group presented its proposed prioritization. Facilitators guided a discussion to harmonize scoring across groups and identify the final set of prioritized activities. In several cases, activities were merged or reclassified to better reflect programmatic realities.

The workshop ultimately produced a costed operational action plan outlining priority surveillance strengthening activities, implementation timelines, and responsible institutions. By linking the evaluation findings directly to planning and budgeting discussions, PNLP transformed the surveillance assessment into a practical roadmap for strengthening malaria surveillance in the country. The roadmap also provided a structured basis for coordinating partner support and aligning surveillance strengthening activities with national planning processes and future funding opportunities.

Lessons learned

Togo demonstrated that participatory prioritization can help translate technical evaluations into actionable program strategies. Involving stakeholders from multiple levels of the health system ensured that priorities reflected both national objectives and operational realities. The use of clear prioritization criteria helped structure discussions and facilitate transparent comparisons. Drafting recommendations and an action-planning template ahead of the workshop allowed the meeting to focus on making final decisions. The experience also highlighted the value of translating surveillance gaps into prioritized, costed implementation plans that can guide program management, partner coordination, and resource mobilization.

Acknowledgements: Togo NMP and consultants

ANNEX 3: UGANDA CASE STUDY

In 2025, the Uganda National Malaria Elimination Division (NMED), in collaboration with CHAI, applied the WHO Surveillance Assessment Toolkit to systematically assess and quantify challenges within the malaria surveillance system. This process informed the development of a costed roadmap outlining targeted solutions to address identified gaps. The assessment included both national-level analysis and subnational validation, generating comprehensive findings. To ensure the roadmap was actionable and focused, a prioritization exercise was subsequently conducted. The roadmap and evidence-based results have been channelled into Malaria Program Review, National Strategic Plan, and GC8 planning.

Table 1: Malaria context of Uganda

Strategic vision	A malaria-free Uganda for socioeconomic growth and national development.
Transmission	95% of the population resides in areas with stable, year-round transmission.
Health facility context	42% of care-seeking is in public sector, remaining 60% is in private sector
Surveillance system	Districts started using DHIS2 for electronic data entry since 2012. Prior to this, paper reports were submitted to MoH for data entry into Epinfo.
Assessments	Conducted WHO Surveillance Assessment in 2025

A multistakeholder approach with technical representatives from NMED, CHAI, WHO, and other malaria partners conducted the prioritization exercise consolidating the extensive list of approximately 250 recommended activities identified through the surveillance assessment into a more focused and structured roadmap, organized around defined strategic areas.

Several prioritization frameworks were considered to guide the ranking of activities as high, medium, or low priority. Key criteria informing this process included potential impact and level of effort required such as the extent of resources, infrastructure, and planning needed for implementation. The team also deliberated on how to advance malaria elimination efforts while maintaining essential malaria control interventions, which remain both epidemiologically necessary and operationally feasible.

To balance these considerations, final prioritization labels were assigned based on whether an activity was critical to the functioning of the surveillance system (e.g., server capacity, data quality improvements) and/or represented a strategic investment for future system strengthening (e.g., rollout of electronic medical records).

Alternative matrix approaches were explored during the initial prioritization discussions, including categorizing activities as “urgent” versus “important.” However, this approach was not adopted in the final framework, as the selected matrix sufficiently captured both dimensions.

The prioritization process was conducted over approximately one week of working sessions and reflective discussions. Following agreement on the prioritization framework, NMED and partners systematically reviewed each activity and assigned a priority ranking.

Subsequently, the prioritized activities were synthesized into a structured roadmap over the course of several days, resulting in a summary framework comprising four overarching strategic areas and 21

sub-categories. Importantly, this roadmap was not treated as a static product; rather, it remained iterative and was refined as needed to support ongoing strategic review and planning.

The timing of the assessment was critical in ensuring that its findings were incorporated into the Malaria Programme Review and that proposed solutions were integrated into the strategic plan with the report serving as a key reference document.

The consultative, multi-stakeholder approach strengthened ownership and advocacy for surveillance improvements. These recommendations are now being actively tracked and used to inform ongoing funding and resource mobilization efforts, including the GC8 application.

Acknowledgements: Uganda NMED and partners