

# Global Malaria Programme operational strategy 2024–2030

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# Foreword

In the first 15 years of the 21st century, countries and partners made tremendous strides in reducing the global burden of malaria. This momentum led to the adoption of the *Global technical strategy for malaria 2016–2030* with ambitious targets for controlling and eliminating the disease. The 2030 targets aimed to further reduce global malaria case incidence and mortality rates by at least 90%; eliminate malaria in at least 35 countries; and prevent the re-establishment of malaria in all countries that were malaria-free.

Since the adoption of the strategy in 2015, good progress has been made in eliminating malaria and preventing its re-establishment. However, progress in reducing malaria mortality and morbidity has levelled off, particularly in countries that carry a high burden of the disease. In 2022, there were an estimated 249 million new cases of malaria worldwide, compared to 231 million in 2015. The global tally of malaria deaths reached 608 000 in 2022 compared to 586 000 in 2015. The WHO African Region bears the heaviest burden of the disease, and young children and pregnant women living in poverty are particularly vulnerable.

Changing the trajectory of current malaria trends will require urgent and concerted effort across the malaria ecosystem, especially in view of the emergence of other potential disruptors. Population growth in several endemic countries is outpacing coverage of key malaria control tools. Antimalarial drug resistance in Africa threatens to limit the efficacy of the most commonly used treatments. Climate change is affecting the geographical range, intensity and seasonality of malaria transmission.

These are just a few of the multiple biological, environmental and epidemiological transformations taking place across the globe. Their impact on malaria epidemiology needs to be better quantified, and the world must collectively navigate this uncertainty.

As the World Health Organization’s technical department for malaria, the Global Malaria Programme has an important role to play in leading the global response. Through its direct actions and network, it has the potential to shape the malaria ecosystem and achieve impact at country level.

With this in mind, the Global Malaria Programme has developed an operational strategy outlining its priorities for the period 2024–2030 and the four strategic levers to control and eliminate malaria that are decisively within the Programme’s mandate: norms and standards, new tools and innovation, strategic information for impact, and leadership.



**Dr Daniel Ngamije M.**  
Director,  
Global Malaria Programme

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“We should act with resolve and keep a laser focus on our shared goal: creating a world in which no one dies of malaria. I am confident that if we respond with urgency and determination, we can beat this disease once and for all.”

**Dr Tedros Adhanom Ghebreyesus**  
Director-General, World Health Organization

The strategy describes how the Global Malaria Programme will also transform by collaborating more effectively with other programmes, regional and country offices and partners, guided by lessons learned from WHO's Thirteenth General Programme of Work (GPW13) and the GPW14 priorities.

With adequate investments, the right mix of strategies and robust commitment from stakeholders, we can build a healthier future for all. As the WHO Director-General noted in the foreword of the global strategy: "We should act with resolve and keep a laser focus on our shared goal: creating a world in which no one dies of malaria. I am confident that if we respond with urgency and determination, we can beat this disease once and for all."

A handwritten signature in blue ink, consisting of a large, stylized initial 'D' followed by a long horizontal line extending to the right.



# Acknowledgements

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The strategy was prepared under the overall coordination and technical guidance of Daniel Ngamije, Director of the WHO Global Malaria Programme. The lead writer was Alastair Robb, Senior Technical Advisor, WHO Global Malaria Programme, with support from Saira Stewart, Technical Officer, WHO Global Malaria Programme.

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WHO would also like to thank the many individuals that accepted to be interviewed to support the preparation of this strategy, including staff members from multiple departments across all three levels of the Organization, as well as representatives from United Nations institutions, procurers, implementers, donors, advocacy organizations and innovators.

The strategy was developed with support from Boston Consulting Group (BCG).

# Abbreviations

<b>ACT</b>	artemisinin-based combination therapy
<b>COVID-19</b>	coronavirus disease
<b>G6PD</b>	glucose-6-phosphate dehydrogenase
<b>GMEP</b>	Global Malaria Eradication Programme
<b>GPW</b>	General Programme of Work
<b>GTS</b>	<i>Global technical strategy for malaria 2016–2030</i>
<b>HBHI</b>	High burden to high impact
<b>HRP</b>	histidine-rich protein
<b>IPO</b>	international programme officer
<b>NSP</b>	national strategic plan
<b><i>pfhrp2/3</i></b>	<i>Plasmodium falciparum</i> histidine-rich protein 2/3
<b>PHC</b>	primary health care
<b>PMI</b>	United States President’s Malaria Initiative
<b>PPC</b>	preferred product characteristics
<b>R&amp;D</b>	research and development
<b>RDT</b>	rapid diagnostic test
<b>SDG</b>	Sustainable Development Goal
<b>TES</b>	therapeutic efficacy study
<b>TPP</b>	target product profile
<b>UHC</b>	universal health coverage
<b>WHO</b>	World Health Organization

# Executive summary

The *Global Malaria Programme operational strategy 2024–2030* outlines the priorities and key activities that the Global Malaria Programme will implement up to 2030. This strategy is not designed to replace the *Global technical strategy for malaria 2016–2030* (GTS) (1); rather, it outlines the Global Malaria Programme’s contribution to support countries and partners to achieve the targets defined by the GTS.

The development of the strategy was based on thorough research into the root causes of the stalled malaria response and extensive consultation, including more than 50 interviews with the World Health Organization’s (WHO) global, regional and country representatives, and external partners in the malaria ecosystem. To capture different perspectives, interviews were held with partners in academia, advocacy and resource mobilization organizations, innovators (including industry partners), funding agencies, implementers, civil society and community engagement organizations, as well as national malaria control programmes.

## Context

Malaria remains a severe global health issue, disproportionately affecting the most marginalized populations. Globally in 2022, there were an estimated 249 million cases of malaria and 608 000 deaths. The vast majority of these cases and deaths were in the WHO African Region, and young African children bore the brunt of the disease (2).

Historic successes in the control of malaria were realized between 2000 and 2015, underpinned by robust investments in research and development (R&D) for new tools, deployment of commodities and capacity building. The GTS, first published in 2015 and updated in 2021, sets ambitious targets for the response by 2030. WHO’s Global Malaria Programme is responsible for coordinating global efforts to control and eliminate malaria and supporting Member States in implementing the GTS.

Good progress has been made in eliminating malaria and preventing the re-establishment of malaria in 43 countries and one territory that are malaria-free. The 2020 GTS target for eliminating malaria in at least 10 countries was achieved. However, progress toward the 2030 GTS targets for reducing global malaria mortality and morbidity is substantially off track (See Table 1 on page 8). Based on current trends, the interim milestones and 2030 targets for malaria mortality and morbidity are out of reach.

## Case for change

The world is off track to meet the GTS 2030 targets, and the context for the malaria response has changed dramatically. A “business as usual”, vertical approach to malaria is no longer sufficient. Concerted effort across the ecosystem is needed to put the response back on track. Success will require alignment with the broader



universal health coverage (UHC)/primary health care (PHC) agenda and other growing priorities, including the interplay between climate and health.

Based on learnings from interviews, partners acknowledge the Global Malaria Programme's recent accomplishments, but recommend that the Programme strengthen its capacity to deliver and sharpen its strategic focus. Failing to do so may compromise its leadership role, especially in setting normative and strategic guidance.

## Root causes

A high-level review of the root causes of stalled progress was undertaken. This review showed that the ecosystem faces challenges along the continuum of care in maximizing the impact of interventions (e.g. availability, accessibility, acceptability – based on an adapted Tanahashi framework) for the millions of people in need. These challenges are compounded by risks in the compromised effectiveness of interventions (due to quality concerns and biological threats such as drug and insecticide resistance) and by the heavily resource-constrained environment. Against this backdrop, there is a need for more effective alignment of partners behind nationally defined priorities.

## Shift in response needed

A shift in the global malaria response is urgently needed to prevent avoidable deaths and achieve the GTS targets. This shift should seek to answer the root causes identified and be centred around efficiency, sustainability, equity, accessibility and integration. The Global Malaria Programme must drive this turnaround in the rapidly changing global health context of the post-pandemic era. The entire ecosystem of partners may also need to adapt their respective approaches.

## Global Malaria Programme operational strategy 2024–2030

The principles underpinning the strategic framework are: country ownership and leadership, with a whole-of-government and whole-of-society approach; resilient health systems to enable the success of national malaria responses; equity in access to quality health services; and the integration of data and science into decisions, recommendations and action plans. At the heart of the framework are four strategic functional objectives: norms and standards; new tools and innovation; strategic information for impact; and leadership. A fifth cross-cutting pillar, context-based country support, completes the objectives. The full cost of these objectives will be estimated.

Across all strategic objectives, the Global Malaria Programme will strengthen core activities to meet the needs of countries and the broader malaria ecosystem. These activities include up-to-date consolidated guidance that is disseminated quickly and clearly; end-to-end support for introduction of new products, underpinned by unified and streamlined processes; tracking of trends and threats to facilitate



data-driven decision-making; alignment of stakeholders around a common technical agenda; and stratification of support to countries based on need.

Three transformative initiatives have been identified to amplify the Global Malaria Programme's impact on the response.

- First, the Global Malaria Programme will introduce International Programme Officers (IPOs) in “High burden to high impact” (HBHI) countries to multiply the impact of partners' investments at country level through better coordination from a position of neutrality. Within 12 months of the launch of the operational strategy, the Programme plans to pilot the IPO approach in two African countries.
- Second, the Global Malaria Programme will expedite elimination efforts through technical assistance where the Programme is the sole actor providing guidance and support to countries with the potential to eliminate malaria by the year 2025. Within 12 months of the launch of the strategy, the Programme plans to support three countries (Georgia, Egypt and Timor-Leste) in their effort to obtain a malaria-free certification from WHO.
- Third, the Global Malaria Programme will bolster the response to antimalarial drug resistance by proactively addressing new and emerging threats, using the reach and knowledge accumulated by the Programme. Within 12 months of the launch of the strategy, the Programme plans to launch and convene therapeutic efficacy study (TES) networks in East Africa, the Horn of Africa, Central Africa and southern Africa.

Implementing the proof points and all activities included in the operational strategy is fully conditional on the level of funding that the Global Malaria Programme is able to raise.

Central to the Global Malaria Programme operational strategy is maintaining and further strengthening the Programme's role as the technical leader in the global malaria response. No other organization has the authority to publish norms and standards that guide countries and partners to execute activities. Driven by an increased emphasis on accountability, transparency, predictability and early engagement with the ecosystem, a detailed list of technical deliverables has been included in the strategy.<sup>1</sup>

## Enablers

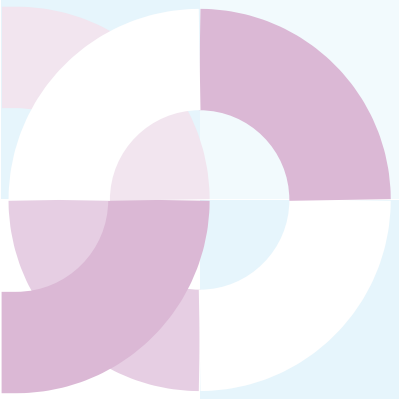
The cross-cutting enablers include: i) complementarity between the three levels of WHO; ii) cross-division and departmental coordination and iii) partner engagement. Other enablers include: iv) an internal transformation of the Global Malaria Programme to strengthen its performance management and value proposition for talent; and v) a new focus on resource mobilization for sustainable funding.

<sup>1</sup> All timelines and products are highly preliminary and subject to change based on the availability of data. These timelines are an indication for the technical review of data and do not imply that recommendations will be issued. The Global Malaria Programme will continuously maintain, develop and share the timelines as the pipeline of products changes.



## Results framework

Detailed operational plans outlining specific activities will be prepared and maintained. Progress on these activities will be monitored against the theory of change, tracked using robust monitoring and evaluation tools, and communicated to donors and partners.



# 1

## Context | What happened in the past in the fight against malaria

### Key messages of this chapter

Malaria remains a severe global health issue that disproportionately impacts people who are vulnerable and at risk. Historic successes to control and eliminate the disease were achieved in the first 15 years of the 21st century, underpinned by robust investment in the R&D of new malaria control tools and their wide deployment. Since 2017, progress against malaria has stalled. High-level guidance and vision for the malaria response are provided in the GTS (1), which was adopted by the World Health Assembly in 2015 and updated in 2021. The GTS sets ambitious targets for the response for

2030, as well as interim milestones to track progress. The WHO technical programme on the disease, the Global Malaria Programme, is responsible for coordinating the Organization's global efforts to control and eliminate malaria and supporting Member States in implementing the GTS. This operational strategy outlines how the Programme will reinforce these existing efforts and work closely with the three levels of WHO, malaria-endemic countries and partners to implement and reach the targets set out in the GTS.

## 1.1 Malaria at a glance

Malaria is a preventable and treatable disease, yet it continues to take a heavy toll on the health and livelihoods of millions of people around the world every year. According to the *World malaria report 2023* (2), there were an estimated 249 million new cases of malaria in 2022. In the same year, the disease claimed the lives of approximately 608 000 people.

Malaria disproportionately affects vulnerable and at-risk populations, including pregnant women, children, and people experiencing socioeconomic disadvantage and/or discrimination, such as persons with disabilities, rural populations, migrants, refugees, prisoners and indigenous people. Malaria is intimately connected to poverty; the disease is most intractable for the poorest countries and communities who face a vicious cycle of poverty, limited access to health services, and ill health. People in situations of poverty are more likely to be infected, less likely to receive quality care, and suffer the most from the consequences of the disease.

The WHO African Region shouldered approximately 94% of malaria cases and 95% of malaria deaths worldwide in 2022 (2). Children aged under 5 years in the WHO African Region are particularly vulnerable, accounting for nearly 80% of malaria deaths in the Region in 2022.

The expansion of malaria interventions during the Millennium Development Goal (MDG) era contributed to a 30% reduction in the global incidence of malaria.

## 1.2 Recent history of the malaria response

In 1955, WHO launched the Global Malaria Eradication Programme (GMEP), an ambitious plan to eradicate malaria worldwide. Over the course of the GMEP era, 15 countries and one territory eliminated malaria, and a number of others succeeded in greatly reducing their malaria burden. However, the GMEP achieved little success in sub-Saharan Africa and, in many settings, a failure to sustain the programme resulted in resurgences of malaria. The GMEP was discontinued in 1969, but the longer term objective remained unchanged: WHO reaffirmed the “ultimate goal of eradication” at the Twenty-second World Health Assembly through resolution WHA22.39.

The subsequent two decades saw a marked increase in malaria incidence worldwide – the result of abandoning the GMEP and reduced investment in malaria control. Although reliable data from this period are scarce, the situation was considered particularly alarming in sub-Saharan Africa where the disease was seen as the biggest killer of children and a major obstacle to socioeconomic development.

A Ministerial Conference in Amsterdam, convened by WHO in 1992, marked a turning point in global efforts to contain malaria. In view of the increasing gravity of the malaria situation, senior health leaders from 65 countries called for a renewed attack on the disease. A new WHO Global Malaria Control Strategy, endorsed by leaders at the Conference, was adopted the following year by the World Health Assembly.

In June 1997, at its Assembly of Heads of State and Government, the Organization of African Unity released the Harare Declaration on Malaria Prevention and Control – the first formal political commitment in Africa to place malaria within the context of African economic recovery and development. In 1998, the WHO Director-General





Dr Gro Harlem Brundtland launched the Roll Back Malaria initiative, created through a partnership between WHO, the World Bank, the United Nations Development Programme and the United Nations Children's Fund. Renewed political commitment and the establishment of Roll Back Malaria were instrumental in the signing of the Abuja Declaration at a summit of African Heads of State and Government in Nigeria. Its overarching aim was to “halve malaria mortality for Africa’s people by 2010, through implementing the strategies and actions for Roll Back Malaria”.

The late 1990s also saw renewed investment in the R&D of new malaria control tools. The Multilateral Initiative on Malaria in 1997 brought together prominent scientists and key funding organizations in Dakar to identify priority research areas for malaria. Increased investment in research led, over the next decade, to the development of effective malaria control tools, notably long-lasting insecticidal nets, rapid diagnostic tests (RDTs) and artemisinin-based combination therapies (ACTs). It also led to additional interest and financing to develop a vaccine for malaria. The creation of the Bill & Melinda Gates Foundation (2000), the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund; 2002), the United States President’s Malaria Initiative (PMI; 2005) and other financing mechanisms allowed for the wide-scale deployment of these new tools. Funds from these mechanisms were also used to great effect to support capacity building of local actors, and strengthen health systems and cross-cutting services, including UHC and PHC.

Following the expansion of malaria interventions, there was an estimated 30% reduction in global malaria case incidence and a 47% decline in malaria mortality rates between 2001 and 2015; an estimated 4.3 million deaths were averted in this period (1).

However, the global malaria response has stalled since 2017, particularly in sub-Saharan Africa, and coronavirus disease (COVID-19) has exacerbated the challenges. The fragility of the gains illustrates the close interdependence between malaria control efforts and overall health systems performance. Countries and the global health community need to do more to swing the pendulum back towards a malaria-free world. WHO’s UHC objective, based on PHC, holds the promise of more equitable, financially acceptable and sustainable access to malaria control, together with other strategies to reduce the burden of diseases linked to poverty.

## 1.3 Global malaria strategies (2000–2023)

Against this background, the first 15 years of the 21st century (see Annex 2) represented a “golden” era in the fight against malaria (3). Between 2005 and 2014, global investment for malaria control increased from US\$ 960 million to US\$ 2.5 billion annually. In 2008, Roll Back Malaria – which had become a partnership entity hosted within WHO – released the Global Malaria Action Plan, the first comprehensive blueprint for global malaria control and elimination. The plan set the targets of reducing malaria morbidity and mortality by 50% and eliminating malaria in 8–10 countries by 2010, compared to a baseline of 2000. It also aimed to achieve near zero preventable deaths by 2015. This era coincided with other trends and changes that had a positive impact on malaria, including a period of considerable economic growth and development, improvements in infrastructure and housing, rapid urbanization, and general improvements in health systems and population health (4,5).



The successes of the early 2000s and mid-2010s led to the bold ambition to draft the GTS and Target 3.3 of the Sustainable Development Goals (SDGs), which called for ending epidemics of malaria and other communicable diseases by 2030.

The GTS was adopted in 2015 by WHO Member States at the Sixty-eighth World Health Assembly through resolution WHA68.2. Building on previous strategies, it is the primary high-level framework for all countries and partners that are working to control and eliminate malaria. The strategy has set four ambitious global targets for 2030, along with interim milestones to track progress. These focus on the reduction of morbidity and mortality rates, as well as the elimination of malaria and prevention of re-establishment in countries where it had previously been eliminated.

An updated version of the GTS was adopted in 2021 by the World Health Assembly through resolution WHA74.9. The revised strategy is fully aligned with WHO's Thirteenth General Programme of Work (GPW 13) and Triple Billion targets, as well as with the SDGs and the global UHC agenda. The revised GTS reflects experiences and lessons learned in the global malaria response in the period 2015–2020, including lower funding levels, stagnating progress against the disease and the COVID-19 pandemic. While the milestones and targets in the updated strategy remain the same, approaches to tackling the disease in some areas have evolved to keep pace with the changing malaria landscape.

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The “High burden to high impact” approach was launched in 2018 to reignite the pace of progress in the global fight against malaria in the 11 highest burden countries.

## 1.4 WHO's Global Malaria Programme

WHO's vision is a world in which all people attain the highest possible level of health. The Organization's mission is to promote health, keep the world safe and serve the vulnerable, with measurable impact for people at country level. WHO's Fourteenth General Programme of Work (GPW 14) will build on the Triple Billion targets to:

1. promote better health by achieving transformative action on environmental and social determinants of health;
2. provide essential health services and address inequities in coverage; and
3. protect from health hazards, ensuring that every country is better prepared to prevent and respond to health risks (6).

This ambitious agenda will require that health be placed at the centre of national policy agendas to address every determinant and root cause of disease burden.

The Global Malaria Programme is responsible for coordinating WHO's efforts to control and eliminate the disease worldwide (7). It is committed to supporting Member States as they work to achieve the targets laid out in the GTS. As part of its core mandate, the Programme keeps independent score of global progress in the fight against malaria.

The work of the Programme is supported by the Malaria Policy Advisory Group, which provides independent, strategic advice to WHO on all policy areas relating to malaria control and elimination. The Global Malaria Programme also convenes multiple technical forums that provide scientific input for its activities. These include advisory groups such as the Vector Control Advisory Group, the Technical Advisory Group on Malaria Elimination and Certification and other technical networks such



as the Coordinated Scientific Advice, External Competence Assessment of Malaria Microscopists, and TES networks.

Since 2015, the Global Malaria Programme has achieved a number of successes, including introducing a consolidated set of guidelines through a user-friendly web-based platform and mobile app; coordinating the malaria-free certifications of 13 countries; developing strategies to respond to pressing biological threats, such as antimalarial drug resistance (8) and the spread of *Anopheles stephensi* in Africa (9);<sup>1</sup> and establishing a cross-partner mechanism to address the double challenge of malaria and COVID-19 and ensure a coordinated response. The Programme also played an important role, together with WHO Regional and Country Offices and a range of partners, in delivering the historic recommendation on the RTS,S/AS01 vaccine in October 2021. RTS,S/AS01 was the first vaccine recommended by WHO not only for malaria, but for any human parasitic disease. A second safe and effective vaccine against malaria, R21/Matrix-M, was recommended for use by WHO in October 2023.

In the highest burden countries, WHO and the RBM Partnership to End Malaria (formerly Roll Back Malaria) launched the HBHI approach (10) in 2018 to reignite the pace of progress in the global fight against malaria.<sup>2</sup> The HBHI approach is led by 12 countries that, together, account for approximately 70% of the global malaria burden. It is an intensified approach to reduce malaria mortality in the countries hardest hit by the disease. There is broad consensus that the HBHI pillars and their platform are appropriate;<sup>3</sup> however, adequate skills and capacity are needed to lead and implement the different elements of the approach to enable a step change, especially if supported by more overall resourcing.

In 2016, WHO identified 21 low-burden countries with the potential to achieve zero indigenous cases of malaria by 2020 under the E-2020 initiative. In 2017, the Global Malaria Programme published *A framework for malaria elimination* (11) to provide malaria-endemic countries with guidance on the tools, activities and dynamic strategies required to achieve interruption of transmission and to prevent re-establishment of malaria. Seven E-2020 countries succeeded in reaching this malaria-free milestone by 2020. In 2021, a new cohort of 26 countries and territories that could eliminate malaria within five years was identified, and the E-2025 initiative was launched (12).

Additional frameworks and guidelines have also been introduced periodically to respond to other emerging challenges (e.g. *Global framework for the response to malaria in urban settings* (13)), but the achievement of GTS targets remains at risk. In 2021, WHO Member States reiterated their commitment to the 2030 targets of the GTS and getting back on track.

<sup>1</sup> The driving force behind this policy guidance is the invasion of vectors that are adapted to breeding in urban environments such as *An. stephensi*. This species has been expanding its range over the past decade, with detections reported in Djibouti (2012), Ethiopia and Sudan (2016), Somalia (2019), Nigeria (2020), and Kenya, Ghana and Eritrea (2022). Where presence of *An. stephensi* has been reported in the WHO African Region, it has been found to be resistant to many of the insecticides used in public health, posing an added challenge to its control. This is expected to represent a growing threat in the fight against malaria in sub-Saharan Africa, where over 40% of the population already lives in urban environments and, according to projections, 7 in 10 people will live in cities by 2050. In 2022, WHO launched an initiative aimed at stopping the further spread of *An. stephensi* (9).

<sup>2</sup> “High burden to high impact” is founded upon four pillars (i.e. political will to reduce malaria deaths, strategic information to drive impact, better guidance policies and strategies, and a coordinated national malaria response) and two enabling platforms (strengthened health system and a multisectoral response).

<sup>3</sup> The approach will need to respond to ongoing reviews to ensure that it remains pertinent to the response.

Additional work by WHO, in partnership with other agencies, has helped to provide a greater focus on equity and the need to address harmful gender norms, roles and relationships.

This operational strategy outlines how the Global Malaria Programme will reinforce existing efforts and work closely with the three levels of WHO, malaria-endemic countries and partners to reach the targets set out in the GTS. The operational strategy is aligned with the timeline of the GTS 2030 targets and with key prioritized areas of GPW 14, as demonstrated in Fig. 1.

**Fig. 1. Overview of key documents guiding the work of the Global Malaria Programme**



GPW: General Programme of Work; GTS: Global technical strategy



## 2

# Case for change | Challenges the malaria ecosystem is facing today

### Key messages of this chapter

Progress toward the 2030 targets of the GTS has been mixed. Elimination and prevention of re-establishment are on track, but targets for decreases in morbidity and mortality are out of reach. In the wake of the COVID-19 pandemic, the context for the malaria response is dramatically different: The pace of technological and scientific change is faster than ever; the funding environment is tighter; the global health ecosystem is evolving; and WHO itself is undergoing a process of change, while people are placing greater value on health and well-being. At the same time, too many people are still missing out on the interventions they need to prevent, detect and treat malaria. These people are disproportionately located




in areas with weak health infrastructure, frequently combined with social crises and other vulnerabilities. Furthermore, there are emerging challenges, such as new biological threats, and ecological and demographic changes. A “business as usual” approach to malaria will take the global malaria response further off track. Without a change in the current trajectory, many people, particularly those who are vulnerable and at risk, will continue to die from a disease that is preventable and treatable. Concerted effort and engagement is needed from all stakeholders to ensure well targeted actions and the resources required to put the response back on track.

## 2.1 Stalling progress in the reduction of malaria mortality and morbidity

Progress towards the 2020 GTS milestones was mixed. On the one hand, the milestones for malaria elimination and prevention of re-establishment were both met. By the end of 2020, 10 countries that were malaria-endemic in 2015 had successfully interrupted malaria transmission, and no country that was malaria-free in 2015 reported re-establishment of transmission. The 2025 milestones for elimination and prevention of re-establishment are also within reach.

However, two critical GTS milestones for 2020 were missed (Table 1): reducing global malaria mortality and morbidity by at least 40% from 2015 levels.

**Table 1. Global technical strategy targets and milestones**

 <b>Goals</b>	 <b>Milestones</b>		 <b>Targets</b>
	2020	2025	2030
1. Reduce malaria mortality rates globally compared with 2015	At least 40% <b>18% reduction achieved</b> <b>22% off track</b>	At least 75%	At least 90%
2. Reduce malaria case incidence globally compared with 2015	At least 40% <b>3% reduction achieved</b> <b>37% off track</b>	At least 75%	At least 90%
3. Eliminate malaria from countries in which malaria was transmitted in 2015	At least 10 countries <b>On track</b>	At least 20 countries	At least 35 countries
4. Prevent re-establishment of malaria in all countries that are malaria-free	Re-establishment prevented <b>On track</b>	Re-establishment Prevented	Re-establishment prevented

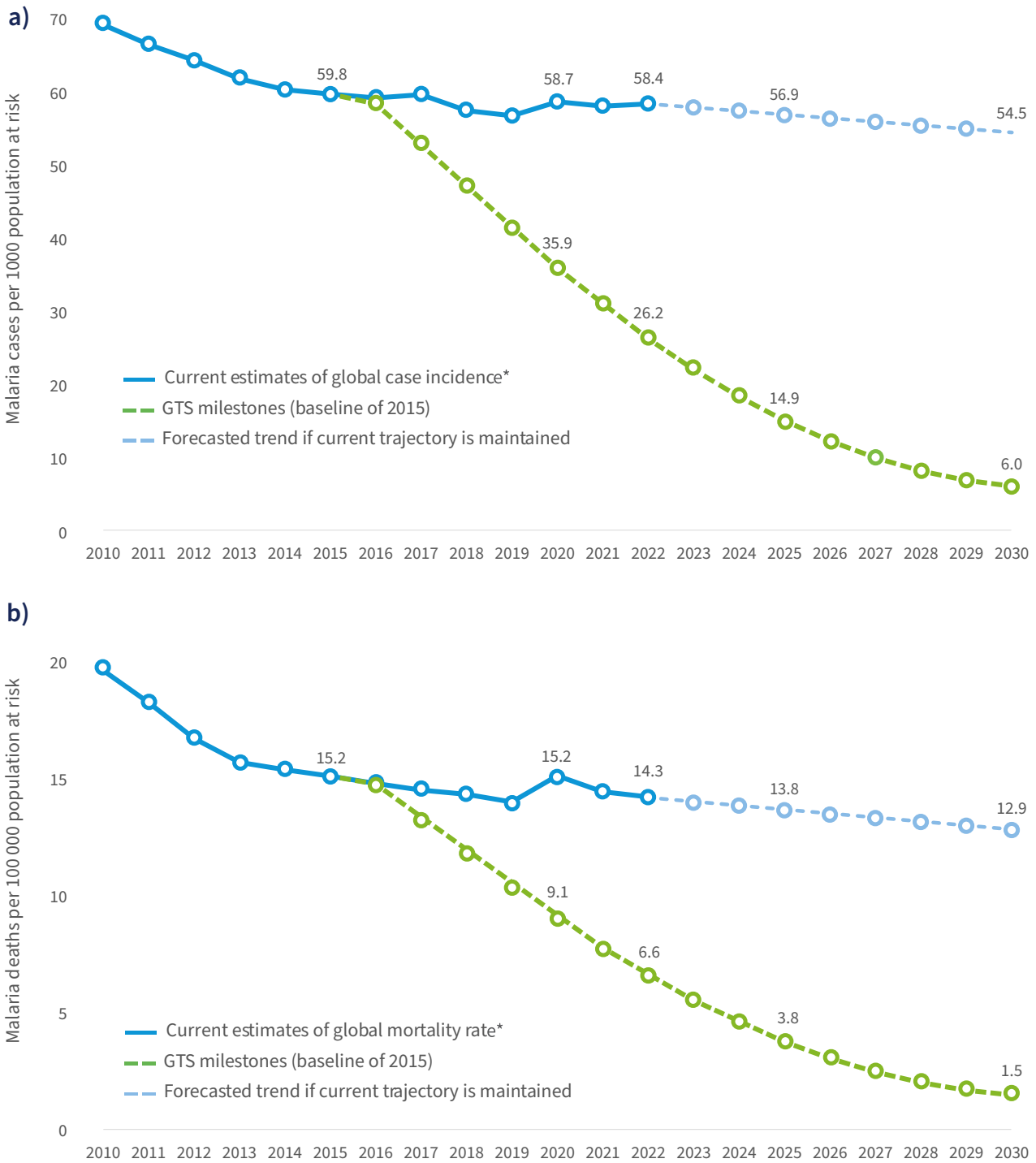
According to the *World malaria report 2023* (2), the global malaria case incidence rate (58.4 cases per 1000 people at risk, against a target of 26.2) and the global mortality rate (14.3 deaths per 100 000 people at risk, against a target of 6.6) were off track by 55% and 53%, respectively (Fig. 2). Based on current trends, the corresponding GTS 2025 milestones, which call for reductions in malaria mortality and morbidity of at least 75%, are out of reach.

Progress is variable and determined by people's socioeconomic status and their environment. Rural populations in situations of poverty with limited education are disproportionately affected by malaria. The poorest households are less likely to



promptly seek care for their febrile child. In many countries, persons with disabilities are more likely to live in poverty and face barriers in accessing health services (14). Those living in conflict can be more at risk of malaria and less able to access quality services.

**Fig. 2. Comparison of global progress in malaria case incidence and mortality rate, considering two scenarios: a) current trajectory maintained (blue) and b) GTS targets achieved (green)**



GTS: Global technical strategy for malaria 2016–2030

Source: World malaria report 2023

## 2.2 A dramatically different context for the response

In the last 20 years, the world has changed in fundamental ways. The pace of this change is faster than ever. Even since the update to the GTS in 2021, the learnings from COVID-19 have had profound implications for health and well-being, and health systems everywhere.

People are placing greater value on their health and well-being, and demand for health services continues to escalate, with new appeals for a more holistic, inclusive and equitable approach to health and increasing calls for health and well-being to drive development, humanitarian and economic agendas (6). Progress has been made on UHC, but too many people are still missing out on interventions that they need. Recent and ongoing advances in technology, digitalization, artificial intelligence, behavioural sciences, and basic and translational research are creating opportunities for, and sometimes threats to, health and well-being for all. The COVID-19 pandemic demonstrated to the world that infectious diseases can have catastrophic effects on people's health, well-being, livelihoods and the economy – something countries with malaria had been well aware of. It also showed the importance of trust, solidarity and international collaboration. The shock of the pandemic left health systems and the health workforce scarred.

The global health landscape is also evolving rapidly. While the COVID-19 pandemic was highly disruptive to the delivery of health services (including malaria-related services), it also spurred new commitments and determination to strengthen national health leadership and, in some countries, to increase domestic investment in building national health capacity.

New regional institutions, such as the Africa Centres for Disease Control and Prevention, African Medicines Agency, the European Union's Health Emergency Preparedness and Response Authority and the planned ASEAN Centre for Public Health Emergencies and Emerging Diseases, are strengthening the cooperation and capacity among countries, while also underlining the need for robust coordination across the global health landscape (15). In addition, the number and diversity of health actors are increasing everywhere – from civil society organizations to the private and philanthropic sectors.

WHO itself has embarked on a process of change, driven by GPW 13, WHO's transformation agenda and the need to respond to events such as the COVID-19 pandemic and other crises. Lessons from GPW 13 have informed how the Organization needs to change to be more relevant and responsive to the needs of Member States, and better equipped to play a central role in coordinating and enabling the wider ecosystem as part of GPW 14 (16).

At the same time, the recovery of the economy post-COVID-19 and greater attention to several other priorities (e.g. climate change, geopolitical tensions) have led to increased competition over tightened international funding envelopes, making it difficult to translate health-related political commitments into increased global and domestic resources. The impact of the challenging economic climate was highly visible during the Global Fund's Seventh Replenishment cycle. While the Global Fund

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The COVID-19 pandemic demonstrated that infectious diseases can have catastrophic effects on people's health, well-being, livelihoods and the economy. It also showed the importance of trust, solidarity and international collaboration.





raised an unprecedented US\$ 15.7 billion from countries and international partners, the largest replenishment in the history of the organization, it also exposed a worrying gap between ambition and reality. This fundraising fell short of the targeted US\$ 18 billion for the organization that is responsible for channelling more than 40% of the world's investment in malaria control and elimination efforts (17–19).

The scale-up of interventions has led to impressive advancements, but not everyone has benefited. Large populations, in particular those that are vulnerable and in situations of poverty, cannot take advantage of the interventions they would need to prevent them from getting the disease, or to get quality care once they have fallen ill. A concerted effort is needed to address the existing inequalities in the health status of people both within and among countries. Recognizing these disparities, the Declaration of Astana (2018) provides a political focus on PHC as a whole-of-society approach to maximize the level and distribution of health and well-being.

For malaria, the historic gains are also being eroded by the emergence of new biological threats, such as the expansion of parasite resistance to antimalarial drugs and mosquito resistance to widely used insecticides. New invading vector species and *P. falciparum* histidine-rich protein 2/3 (*pfhrp2/3*) gene deletions, which can lead to false-negative RDT results, are also a concern. There are, however, positive signs on the innovation horizon to counter the evolving nature of the disease. After a decade of limited innovation, several new products have recently been developed and more are expected to enter the pipeline in the near future. These include new vaccines, non-ACTs, new RDTs and new vector control tools.

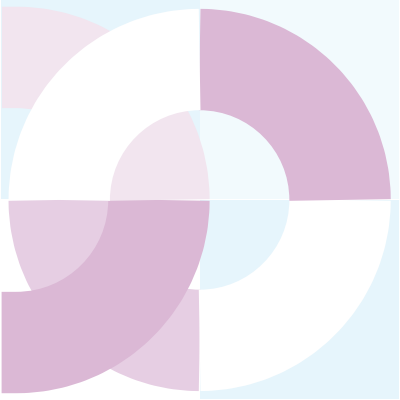
## 2.3 The time to act is now

As the world recovers from the impact of COVID-19, there is an urgent need to get the fight against malaria back on track. History, most recently from 2000–2015, has shown that progress is possible against this preventable and curable disease. But it will require decisive action to achieve the GTS targets for 2030 and avoid broader negative socioeconomic consequences (20,21).

The turnaround will require concerted effort across the entire ecosystem, with a focus on addressing key barriers that have prevented progress in recent years and emerging threats. It will require a political and scientific response from Member States, academia, civil society and partners, and will only be possible through parallel progress on the broader UHC/PHC and maternal, newborn and child health agendas. The renewed focus on PHC also includes a call for cross-sectoral action and Health in All Policies to tackle the social, economic and environmental determinants of health, and, in the case of malaria, to specifically address issues such as housing, urban planning, water and sanitation, agriculture, and education that contribute to the health inequities faced by marginalized groups.



There is a narrow window of opportunity: The leadership of key global actors, including the RBM Partnership, PMI and the Global Malaria Programme, has recently changed and, by teaming up with the existing leadership at Unitaaid, the Bill & Melinda Gates Foundation and the Global Fund, will create new momentum for the malaria (and broader global health) ecosystem. Similarly, new products are generating a sense of hope around the disease, and more broadly, the aforementioned evolution of WHO (i.e. accelerated transformation agenda, codification of the lessons from GPW 13 for a strong GPW 14, predictable and more streamlined evaluation processes for new products (22)) also creates a strong platform for renewed focus on achieving impact at the country level. The operational strategy is designed to seize this opportunity and move the response forward, particularly at a time when the malaria ecosystem is looking for renewed guidance and direction.



# 3

## Root causes | Drivers of stalled progress

### Key messages of this chapter

A high-level review of root causes behind the stalled progress of the malaria response was undertaken to inform the operational strategy. By applying an adapted Tanahashi framework (23), the review showed that the ecosystem faces significant challenges in delivering interventions in a way that maximizes their coverage (e.g. availability, accessibility, acceptability) for the millions of people in need. Existing interventions and tools also face the risk of compromised effectiveness due to quality concerns and biological threats such as drug and insecticide resistance. These issues are

compounded by a heavily resource-constrained environment. The highly fragmented ecosystem, consisting of different actors fulfilling different roles with often limited coordination across the three-level structure, presents an additional layer of complexity. Changing course will require holistic strategies that address the determinants of the disease, address factors that make people susceptible to the disease, and improve the delivery of quality services and interventions in the context of the broader malaria ecosystem.

It is critical to understand the root causes behind stalling progress in the fight against malaria to be able to devise effective strategies for eliminating this debilitating disease. This section of the document aims to provide this understanding through a high-level review of the current challenges: as such, it intentionally forgoes a strict academic review of all the root causes.

## 3.1 Broader determinants of the malaria response

The global malaria response is affected by a broad range of biological, technical, financial, socioeconomic, political and environmental factors, many of which evolve over time, such as poverty, land use, conflict, climate change, population growth, gender, habitation and movement.

The receptivity of an ecosystem to the transmission of malaria is influenced by these evolving factors that impact the interaction between humans, parasites and vectors. For instance, the heaviest burden of malaria is already borne by Africa, which has a rapidly growing population. The effect of increased population growth may be offset by urbanization as transmission intensity is generally lower in cities. However, the emergence of *An. stephensi*, a mosquito species adapted to urban areas, will represent an increasing challenge. This growing human population is also changing the way land is used in the region, which impacts the natural habitat of the mosquito vectors.

The environment is already in flux, impacted by the biggest threat to global health: climate change. Climate change is resulting in gradual long-term changes in temperature and humidity, seasonal variation, and more frequent and extreme weather events, all of which have the potential to impact malaria. The intensity and geography of transmission will be altered by the climatic effects on the vector and parasite. While the magnitude and direction of effect on malaria transmission over the longer term will be variable and uncertain, recent cyclones demonstrate the acute toll on malaria and the challenges of mounting a response during such devastating disruptions. Clearly, climate change will have a huge impact on people's livelihoods, nutrition, security, and access to and use of services, exacerbating existing inequalities and indirectly increasing their vulnerability to malaria infection and severe disease.

At an individual level, some are more likely to become very sick and die, including people with little or no immunity to malaria, such as young children, pregnant women and those suffering from malnutrition; people with little or no exposure to malaria; and those with certain underlying conditions. In addition, people's socioeconomic status will determine their vulnerability to malaria infection and its consequences, including the catastrophic and impoverishing impacts of out-of-pocket spending. Other factors, such as monetary resources, education, gender, age, disability and culture will also have an impact on an individual's risk of disease and on his or her ability to access quality interventions and services.

An additional contextual factor for the malaria response is the existence of a non-human reservoir of infection, which has always been considered a major barrier to eradication of any disease. Transmission of simian malaria to humans has been reported in several parts of the world, with the highest numbers of cases recently observed in Malaysia. Controlling zoonotic malaria is critical and may require new tools to be effective.

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Clearly climate change will have a huge impact on people's livelihoods, nutrition, security, and access to and use of services, exacerbating existing inequalities and indirectly increasing people's vulnerability to malaria infection and severe disease.

## 3.2 The diminishing effectiveness of malaria interventions

With existing tools, malaria is a preventable and curable disease. However, the effectiveness of the different tools could be further compromised by multiple factors, including the quality of the product (substandard or falsified medicines, integrity of insecticide-treated nets), the emergence of biological threats, such as insecticide and drug resistance, changes in vector biology, and inadequate accessibility and use of the interventions. All of these challenges are subject to intervention and improvement.

Yet, even with improvements, there is no silver bullet for malaria; maximizing the impact of the response will require a mix of tools that are tailored to the local context and that tackle different steps along the disease pathway.

The world needs to ensure that there are sufficient incentives for investment in R&D to avoid stagnation of the technological advancements that are vital for malaria control and elimination, given the evolution of the disease and its vectors. This remains critical if new tools are to be made available that can contend with the biological threats undermining the effectiveness of vector control, chemoprevention, and the diagnosis and treatment of malaria.

There is no established playbook to rapidly introduce, scale up and support the introduction of new products. Successful product uptake is not a singular event, but a complex process that spans all activities from manufacturing to end user adoption. It requires the collective strength and coordinated efforts of all stakeholders involved; this is currently often missing. The COVID-19 response, while far from perfect, has set the precedent in this regard. The successful roll-out of dual active ingredient nets has shown that a coordinated response can facilitate the effective deployment of new interventions, but the struggle to diversify the options for first-line malaria treatment reveals that there still work to be done.

Countries will need to continuously review their intervention mixes and be prepared to introduce new tools and intervention mixes, depending on the context and resource envelope.

Limited success with scaling up interventions has significant implications for biological threats. If only one type of product is available, it can become overused and less efficacious. Better scaling would make the full suite of products available and help to avoid adverse outcomes. New products, however, are often expensive, which limits the demand for them. This creates a vicious cycle of not being able to reach the level of demand that would be sufficient to drive down the price.

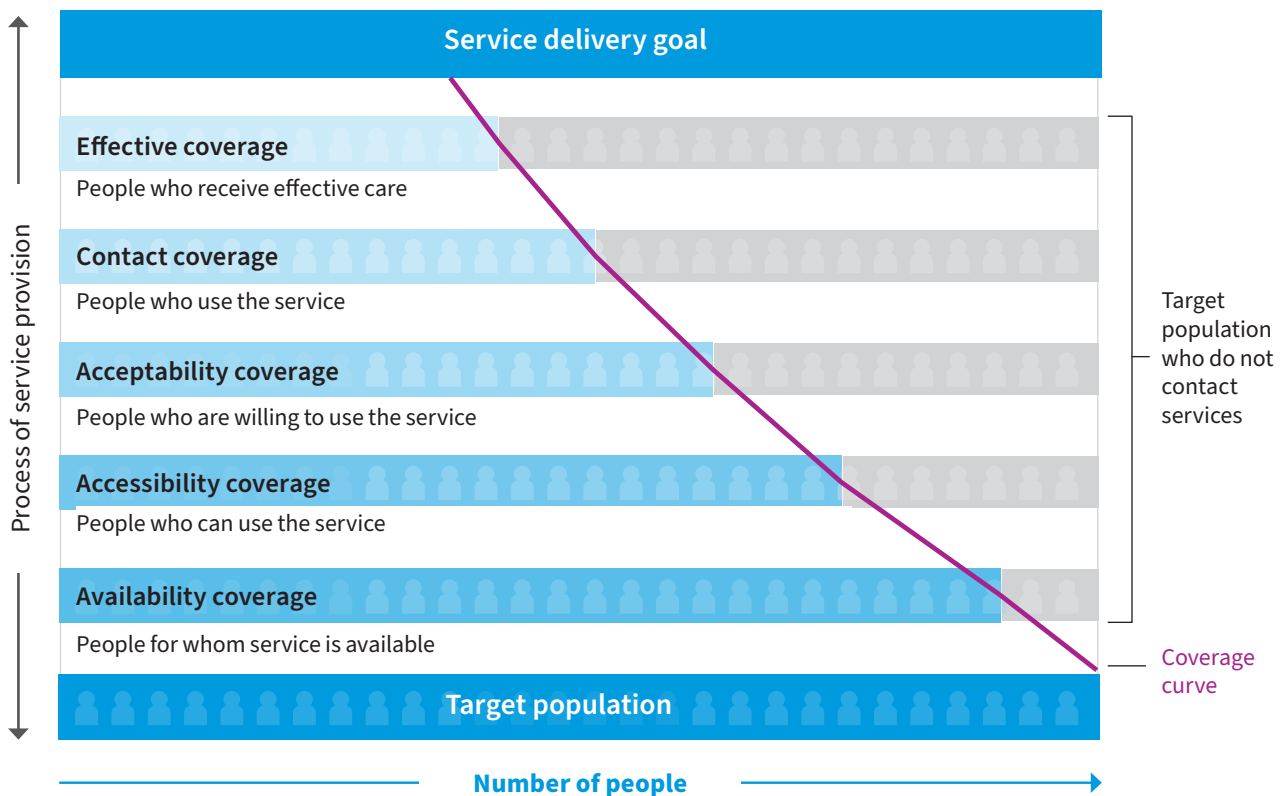
Whether it is a new tool or an existing one, the adoption of sound policies coupled with presence of an effective supply chain and a fully functioning health workforce remain critical for people to access the products. This includes the means of addressing substandard and falsified malaria medicines and products that come on the market.

### 3.3 Challenges around coverage based on the Tanahashi framework

The Tanahashi framework (23) has been used to identify the limitations of health systems in providing quality health services and malaria interventions to all those in need. These limitations include lack of available services and commodities, geographical inaccessibility, low demand for services, delayed provision of care, low adherence to clinical protocols, and the out-of-pocket costs to individuals and households. These shortfalls limit the ability to close the gaps in the coverage, quality and affordability of malaria interventions, and undermine the potential to achieve UHC.

The Tanahashi framework (see Fig. 3) can be used to highlight the current deficiencies that have resulted in excess cases and deaths from malaria. In many countries with malaria, there are insufficient numbers of health facilities, outreach and community-based services. This is further compounded by the lack of skilled and motivated health workers and tools, medicines and diagnostics for malaria prevention and treatment at the service delivery points. Demand-side factors, which include poverty and the need to prioritize daily livelihood activities, lower education levels, and harmful gender norms, roles and relationships, may pose further barriers to accessing services for malaria.

Fig. 3. Tanahashi framework for effective coverage



**Availability:** The availability of health services is compromised by the following:

- lack of equipped and functional health facilities and community-delivery points;
- inadequate numbers of skilled health workers; and
- insufficient quantities of appropriate health products.

Over the past few years, the availability of services has evolved to better serve excluded and vulnerable populations. This includes identifying the potential of community-based health workers to reduce inequities in access to essential health services.

Life-saving products for malaria have become more available at reduced prices as a result of market-shaping initiatives and the injection of global funding. Yet, more work needs to be done in this space to improve the availability of current tools, both within and among countries, and to facilitate the introduction of promising innovations in the pipeline.

**Accessibility:** Even when services and products are available, they may be inaccessible for those in need. Distance, transport constraints and time limitations can create challenges with geographical access. Services might not be open at suitable times for the clients. These factors may affect some people more than others. For example, all these health system barriers contribute to the health inequities faced by persons with disabilities (14). Cultural and systemic barriers to gender equality may impact access to health services and interventions for both women and men. In addition, accessibility is affected by affordability. For malaria, like with other diseases and conditions, inadequate financial protection mechanisms leads to financial hardship due to out-of-pocket health spending and barriers to accessing health care, which may deter people from using health services for malaria.

**Acceptability:** Services and interventions need to be designed so that they are socially and culturally acceptable to those who are using them, acknowledging gender and other social norms that might inhibit their use. They need to be of good quality and provided to all in need, without discrimination. The use of insecticide-treated nets, for example, may be influenced by gender norms and sleeping practices. In addition, the intervention needs to be suited for use in the local context.

The availability, accessibility and acceptability of services requires governments to commit to UHC and to invest in people-centred, integrated, gender-responsive, disability-inclusive and rights-based health care. They need to be held accountable for using all the resources at hand in the most effective and equitable manner that leads to the provision of quality health care and services for all in need.

**Quality:** While these factors will lead to an increase in the number of people using services, there is also a need to invest in the quality of products and services to ensure that people receive effective care.

The challenge of coverage is even greater in settings that are fragile, conflicted and vulnerable, where deaths among mothers and children are higher than elsewhere. Such settings present complex emergencies that often result in large-scale migration and displacement which, in turn, exacerbate malaria risks from two angles. First,

refugees and displaced populations might lack immunity to local strains of malaria and are often in compromised health states, making them particularly susceptible to malaria and progression of the disease. In addition, the harsh conditions and limited resources in refugee camps make it difficult to distribute preventive measures, such as insecticide-treated nets and antimalarial medicines, and to deliver quality care. Second, the movement of populations can inadvertently result in the cross-border transmission of malaria parasites and vectors, further complicating efforts to control and eliminate the disease. The magnitude of the challenge is evident from the statistics: In 2019, approximately 148 million people in 37 malaria-endemic countries required assistance due to health and humanitarian emergencies unrelated to the COVID-19 pandemic. This number surged to 301 million in 2020, partially fuelled by the pandemic, and remained alarmingly high at 258 million in 2022 (24).

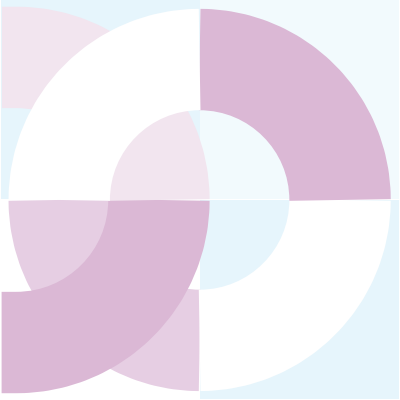
## 3.4 Challenges related to funding and the nature of the ecosystem

Countries and their global partners are responding to malaria in heavily resource-constrained environments. The disease disproportionately impacts those facing vulnerability and people in situations of poverty – in other words, those who might not have the resources required to fight it. The malaria response needs sufficient funding and sustained commitment from countries and international donors that will translate into action to address malaria as a health priority. This commitment is also needed in elimination settings, where the disease has lost its prominence. Funding the malaria response is estimated to require more than US\$ 7 billion per year (24); currently, only about half of that is available. Over the past several years, funding from both domestic and international sources has plateaued, while the overall funding need has continued to grow. An over-reliance on international funding, coupled with domestic political and economic challenges, are expected to further constrain sustainable financing.

The fragmentation of the ecosystem causes inefficiencies at all levels. Countries have to work together with a multitude of international partners while also coordinating their local players. On an international level, some functions are well covered (e.g. R&D), even with potential duplication. Other areas, such as facilitating the build-out of local/regional manufacturing, are supported by few international actors. At the same time, the entire ecosystem competes intensely for funding from the same plateauing envelope. More coordination is needed so that all actors can work together to create the most accessible delivery paths.

From this analysis, it is evident that accelerating the pace of progress will require strategies to disrupt transmission, address the determinants of disease, find solutions for the factors that make people susceptible to the disease, and improve the delivery of quality services and interventions in a way that maximizes their availability, accessibility and acceptability to the millions of people in need. There is a need to accelerate access to and use of game-changing innovations and products, alongside existing tools. There is also a need to know who is missing out and the barriers they face, and to tackle health inequities and gender inequalities by being more inclusive of those most impacted by malaria.





# 4

## Shift in the response needed | A renewed call to action

### Key messages of this chapter

The global malaria response has been at a crossroads since 2017. Sticking to the status quo will take countries and their development partners further off track and have significant negative socioeconomic consequences beyond malaria. A shift is urgently needed to prevent avoidable deaths. The shift should seek to answer the root causes identified in the previous chapter and be centred around five key

attributes – accessibility, efficiency, sustainability, equity and integration – all of which apply to the delivery of essential packages of health services. The Global Malaria Programme must shift its focus to support this turnaround in the rapidly changing global health context of the post-pandemic era. To remain effective, the entire ecosystem of partners may also need to adapt their respective approaches.



WHO's *World malaria report 2017 (25)* signalled for the first time that the ecosystem could not continue with a “business as usual” approach. This message has since been repeated every year. Sticking to the status quo will take the malaria response further off track and have significant negative socioeconomic consequences beyond malaria.<sup>1</sup>

A shift in both the global response to malaria and the strategic focus of the Global Malaria Programme is needed to address the root causes of current trends in the epidemic. Addressing the funding gap will require an efficient use of existing resources, and the gains made must galvanize new funders to engage in the malaria response. Robust political support is needed in countries with a significant malaria burden to leverage the domestic funding that will drive change and create sustainable and equitable impact. Political commitment is also needed in countries facing elimination, where the disease is less prominent, as the dividends from elimination would be great.

To remain effective and support the turnaround in the fight against malaria in the rapidly changing global health context, the Global Malaria Programme must refine its focus and adapt its current ways of working across all three levels (i.e. global, regional and country).

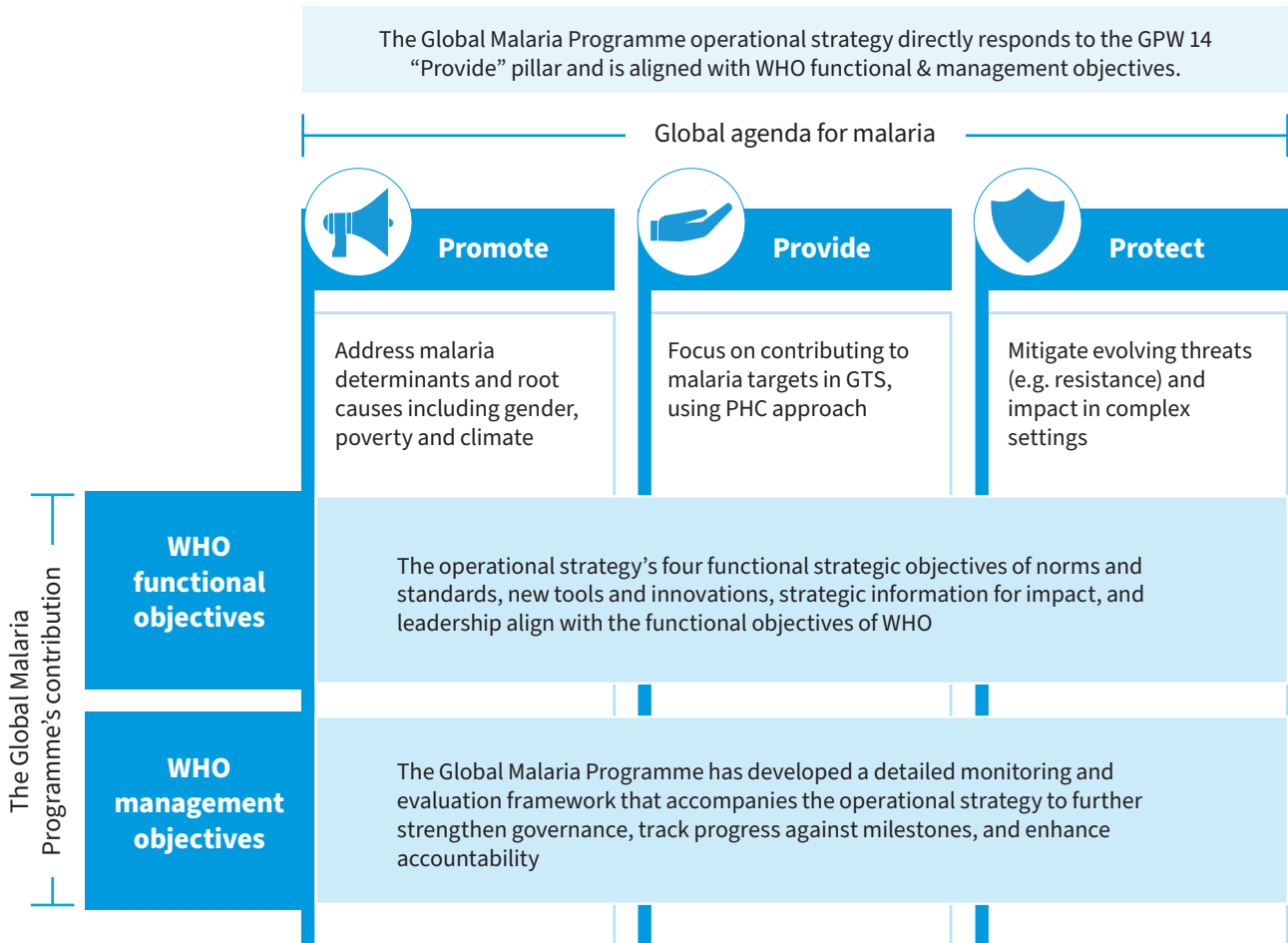
In line with the GPW 14 objectives, the Global Malaria Programme will streamline its internal processes and strengthen linkages with other WHO departments and partners to be faster, more efficient, more relevant and more responsive to the needs of the broader global health ecosystem and ensure delivery of its core mandate. The Programme will work closely with WHO Regional and Country Offices to align actors around a common mission and provide contextual, stratified support to countries. In addition, the Programme will focus on the HBHI approach to ensure that the most affected countries receive adequate support. Across all levels, the Global Malaria Programme will ensure consistent communication as “one voice” guiding the global response against malaria.

The linkages between this operational strategy and the WHO priorities outlined in GPW 14 are summarized in Fig. 4.

Timely recommendations for new tools will empower the ecosystem and countries to roll out new interventions that have been reviewed and recommended by WHO as soon as possible, which can ultimately support overall reductions in mortality and morbidity. Failure to effectively implement such changes within the Global Malaria Programme will lead to worsening outcomes at the country level. For example, delayed recommendations in turn delay the procurement of new products by partners who rely on such recommendations. This means that countries that rely on partner support are unable to introduce new interventions, stalling overall progress. This also creates inequity: countries that can proceed without the Global Malaria Programme's recommendations will do so, leaving those most in need of support further behind.

<sup>1</sup> While the pace of progress has stalled globally, the 2025 GTS milestones for elimination and prevention of re-establishment are within reach. These milestones should continue to receive attention.

**Figure 4. Linkages between the Global Malaria Programme operational strategy and GPW 14**



Early signs of these trends are already visible: Brazil has become the first endemic country to roll out tafenoquine and an accompanying quantitative glucose-6-phosphate dehydrogenase (G6PD) point-of-care test, based on other stringent regulatory authority reviews in the absence of a WHO recommendation on the use of such G6PD tests.

Further detail on the refinement of the Global Malaria Programme's focus is provided in Chapter 5.

Partners in the malaria ecosystem may also need to adapt their approaches. Outlining what each partner should do is beyond the scope of this document. However, greater harmonization of technical and financial partners and greater alignment with country planning, budgeting and prioritization will be essential to secure the full impact of international partners' efforts.



# 5

## Global Malaria Programme operational strategy 2024–2030 | Vision and interventions to support shift

### Key messages of this chapter

This operational strategy is supported by a strategic framework that works towards the mission of the GTS: a world free of malaria. Key principles underpinning the framework are: country ownership and leadership, with a whole-of-government and whole-of-society approach; resilient health systems to underpin the success of the malaria response; and equity in access

to quality health services. Like WHO, all of the Global Malaria Programme's work is shaped by data and science. At the centre of the framework are four strategic objectives: norms and standards; new tools and innovation; strategic information for impact; and leadership. A fifth transversal pillar, context-based country support, completes the objectives.



The vision of WHO and the global malaria community is a world free of malaria, as defined in the GTS. The Global Malaria Programme's mission is to support countries in implementing the GTS and promote effective partnerships with malaria stakeholders.

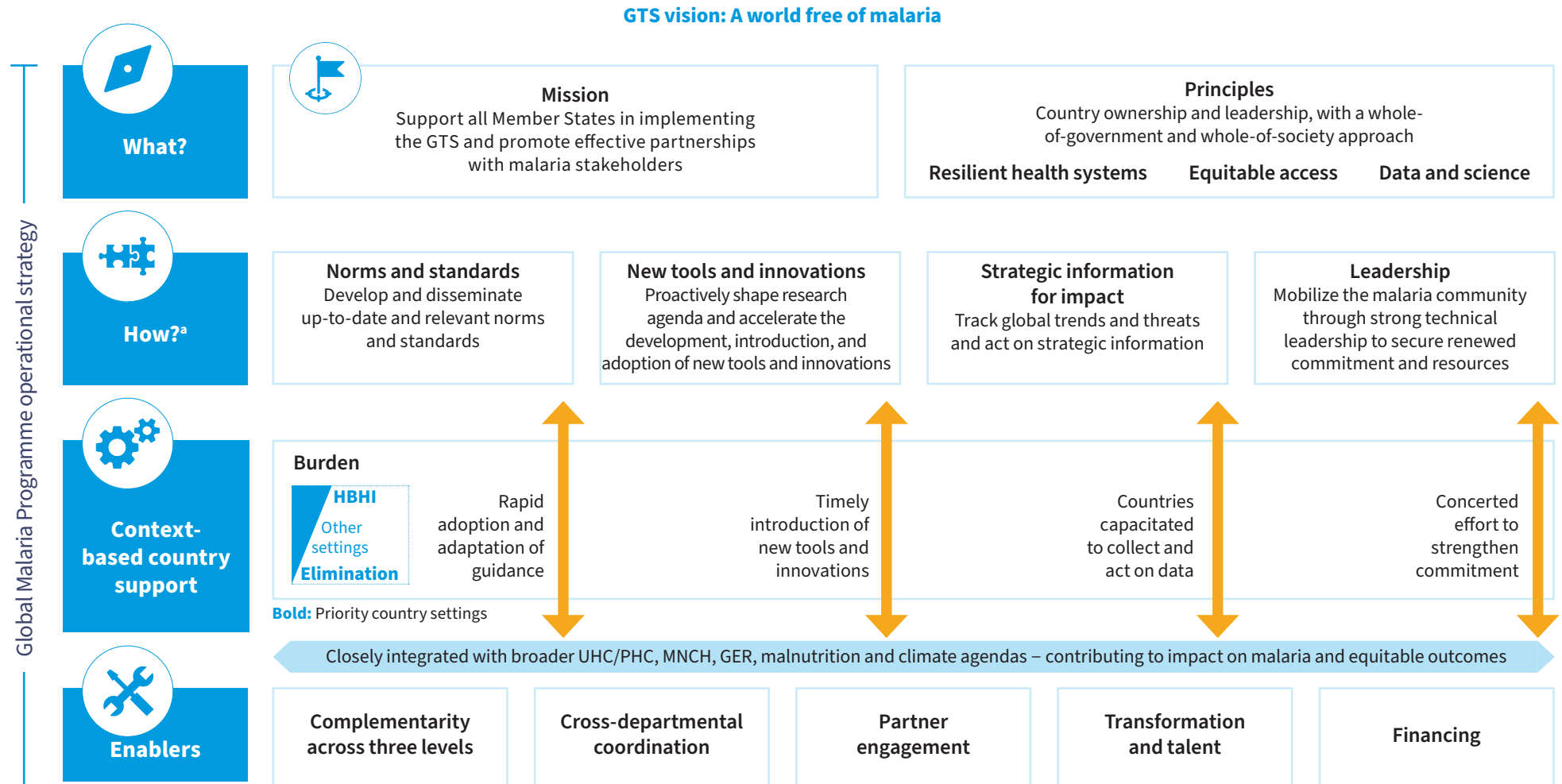
Across all activities, the Global Malaria Programme's work to support countries will be guided by three equity-focused principles coupled with a focus on data and science:

- **Country ownership and leadership, with a whole-of-government and whole-of-society approach:** Efforts to fight malaria must be fully owned and led by countries, driven by strong political will, adequate investment of domestic resources and a multisectoral response. A country-led response further promotes inclusive governance, accountability, inclusion of key stakeholders and the development of context-specific interventions.
- **Resilient health systems to underpin the success of the malaria response:** Ensuring the provision of malaria services relies on a strong PHC system that can respond to emerging needs and provide quality care for all patients, including those infected with the disease. Embedding the malaria response into the broader health system ensures it is considered within the broader planning, budgeting, and prioritization of the sector and promotes stronger linkages between health programs at the service-delivery level, thereby promoting the PHC agenda.
- **Equity in access to quality health services:** All efforts to fight malaria will be rooted in the principles of equity, gender equity and human rights to ensure that all those facing and experiencing vulnerability are protected and have access to quality health services, malaria interventions and information. This will achieve greater malaria impact and contribute to more sustainable and equitable futures.
- **Driven by data and science:** All recommendations, guidelines, priorities and activities will be informed by emerging data and scientific evidence. Addressing emerging threats and supporting countries and partners to prioritize activities in the context of a resource-constrained environment will rely on the rapid collection, synthesis and analysis of scientific evidence at the global, national and subnational levels.

Key enabling mechanisms will be needed at all levels to ensure the feasible, effective and sustainable implementation of planned activities. These mechanisms are further detailed in Chapter 6.

The full strategic framework for the Global Malaria Programme operational strategy is laid out in Fig. 5.

Fig. 5. Strategic framework of the Global Malaria Programme operational strategy



GER: gender, equity, rights; GTS: *Global technical strategy for malaria 2016–2030*; HBHI: High burden to high impact; MNCH: maternal, neonatal and child health; PHC: primary health care; UHC: universal health coverage

<sup>a</sup> Across the following interventions: vector control, immunoprevention, chemoprevention, diagnosis, chemotherapy, surveillance



This operational strategy specifies the Global Malaria Programme's role in working together with partners and countries to support the realization of targets defined in the GTS. The Programme's role has been articulated across four strategic objectives based on core WHO functions, with an additional transversal objective to provide tailored support to endemic countries based on their unique context:

1. Develop and disseminate norms and standards.
2. Stimulate the development and timely introduction of new tools and innovation.
3. Promote the use of strategic information for impact.
4. Provide technical leadership of the global malaria response.

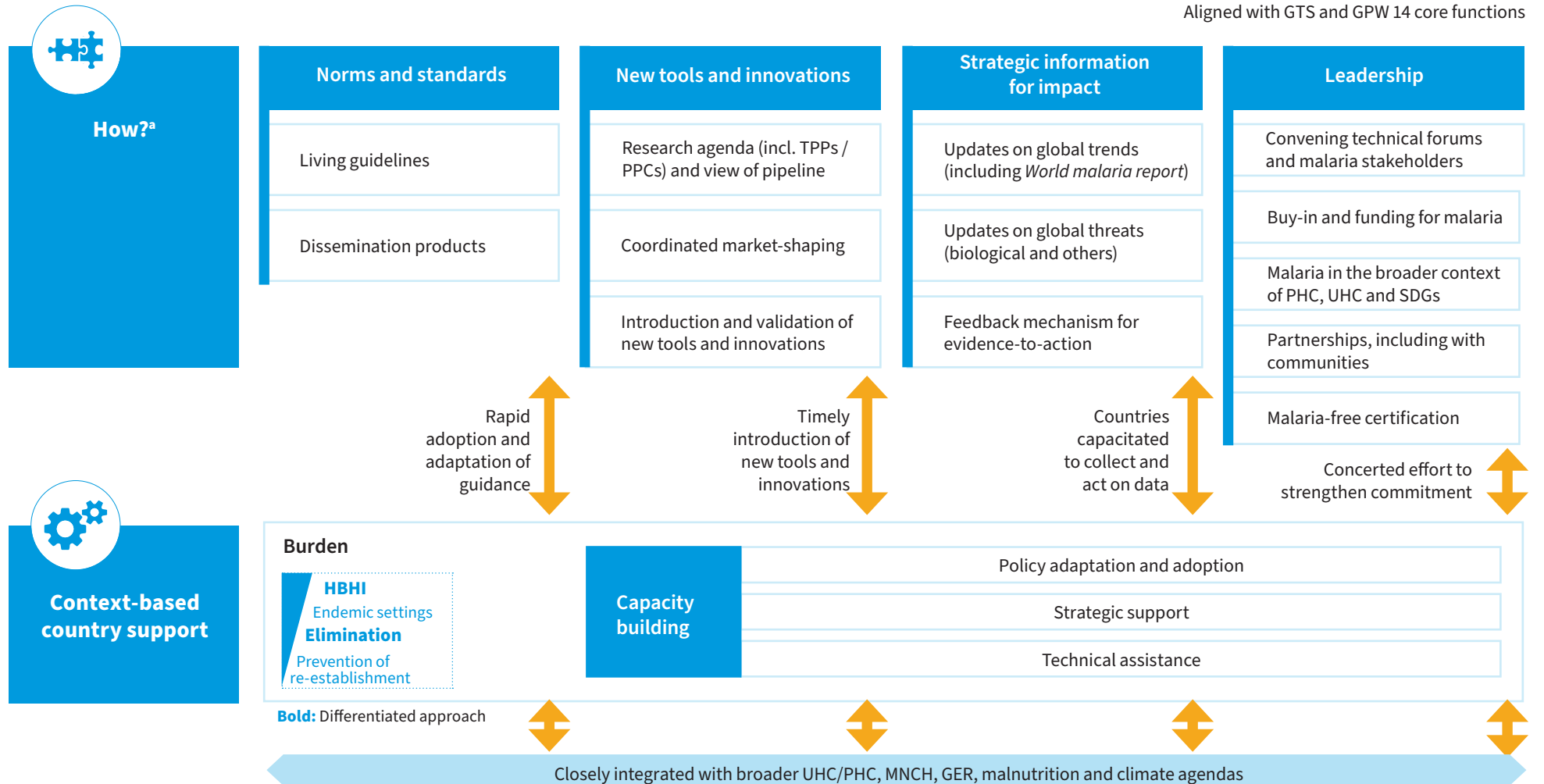
Within each strategic objective, numerous subdimensions have been defined to further outline the Programme's primary activities. Delivering context-based country support is a transversal function across all vertical functions, as all elements of the operational strategy will translate into country-level support. The strategic objectives are further detailed in Fig. 6.

Through the collective implementation of these strategic objectives, the Global Malaria Programme will contribute to achieving the targets laid out in the GTS, including reductions of malaria mortality and morbidity and progression towards malaria elimination and prevention of re-establishment of transmission. The adapted strategic objectives also empower the Programme to help advance broader health priorities, including working with regional and country partners to integrate malaria programmes into the UHC and PHC agendas, strengthening the response to other vector-borne diseases, promoting gender equality and addressing health risks related to climate change.

The following sections provide more information on each strategic objective, including details of the Global Malaria Programme's expected role in each area based on its unique value add relative to other ecosystem actors.



Fig. 6. Overview of strategic objectives



GER: gender, equity, rights; GPW 14: General Programme of Work 14; GTS: *Global technical strategy for malaria 2016–2030*; HBHI: High burden to high impact; MNCH: maternal, neonatal and child health; PHC: primary health care; PPCs: preferred product characteristics; SDG: Sustainable Development Goal; TPPs: target product profiles; UHC: universal health coverage

<sup>a</sup> Across the following interventions: vector control, immunoprevention, chemoprevention, diagnosis, chemotherapy, surveillance





## 5.1 Develop and disseminate norms and standards

Evidence-based technical recommendations are a cornerstone of the fight against malaria. Normative guidance supports the translation of evidence into action by aligning countries and partners under one common technical vision and strategic direction. This is critical for the coordination of downstream activities and implementation of malaria programmes.

In the area of norms and standards, virtually all countries rely on WHO's International Classification of Diseases for standardization and interoperability of health statistics and key terminology, while many countries, as well as partners, depend on WHO recommendations and prequalification for the procurement and roll-out of interventions.

The Global Malaria Programme, as the technical programme for malaria within WHO, has a core responsibility to shape the research agenda and analyse evidence that can inform global policy. The Programme will continue to drive the development of living guidelines and the accompanying suite of guidance products to facilitate the dissemination of guidelines, ensuring a mechanism to incorporate feedback from countries and other end users into guidance during the development stages. The development of living guidelines and dissemination products helps to facilitate the rapid adoption and adaptation of guidance at country level. Core to the Global Malaria Programme's approach will be creating a more predictable, faster process with targeted interventions along each step – from conducting operational research to supporting and monitoring countries in adopting and adapting guidance to suit their local context.

### 5.1.1 Living guidelines

**Overall objective:** Develop and, where appropriate, routinely update evidence-based normative guidelines.

Living guidelines refer to global guidance documents, technical policies and recommendations that are published by the Global Malaria Programme and updated regularly based on emerging evidence. These guidelines serve as the basis for technical and policy decisions that are undertaken by other partners globally and at country level. To ensure that policymakers have access to the most up-to-date information and guidance, it is critical that global guidance reflect the best available evidence.

The Global Malaria Programme, as a technical authority in the malaria community, routinely publishes global guidance on multiple topics and will continue to lead the development and continued maintenance of living guidelines.

The Programme will conduct prioritization exercises to decide on planned updates to published guidance based on emerging new evidence and country needs. Country needs will be collected through engagement channels, such as through regular communication with WHO Regional Offices and Country/Regional Support Partner Committee channels with the RBM Partnership.



This communication with partners will help countries prepare for activities that will support the introduction of new tools and strategies. This involves maintaining and revising the consolidated malaria guidelines to include updates on malaria diagnostics, medicines, vaccines and novel vector control approaches, in line with emerging evidence.

For guidelines that have been prioritized, the Global Malaria Programme will commission updates on a rolling basis that will include systematic reviews of evidence, definition of PICO (Population, Intervention, Comparator, Outcome) questions, and drafting of proposed recommendations for review by the Guidelines Review Committee, in line with the processes defined by WHO's Quality Assurance for Norms and Standards department. Underpinning this process will be the collection of end user input from key partners, including the WHO Regional and Country Offices, national malaria control programmes, implementing partners and civil society organizations, to ensure that recommendations are clear and feasible to implement.

The Global Malaria Programme will ensure that guidelines are developed with those that stand to benefit, including end users and communities. During the guidelines development process, the Programme will systematically consult a selection of key stakeholders, including countries and/or partners (where appropriate), to review the draft guidelines and ensure they are easily understandable and clear to implement.

The Global Malaria Programme will work to update current treatment guidelines and address additional new normative guidance (for example, guidance on single low-dose primaquine to reduce *P. falciparum* transmission in areas of artemisinin resistance) and more generally will continue to evolve its normative guidance to adapt to emerging threats – biological and other.

The Programme's guidelines will reflect any relevant considerations for climate to ensure that end users take this into account when planning interventions. Guidelines will also include analysis and recommendations that address health equity, gender equality and human rights. The Global Malaria Programme will continue to identify and prioritize selected normative guidance for more systematic disability inclusion, in line with the United Nations Disability Inclusion Strategy and WHO Policy on Disability.

The Global Malaria Programme will continue to provide partners with more regular, predictable updates and develop interim guidance and information notes, based on current evidence with clear caveats (e.g. additional evidence must be generated during implementation). The guidance will be updated as new data emerge.

The Global Malaria Programme will continue to make its latest consolidated malaria guidelines available online through three digital platforms: the WHO website, MAGICapp and a mobile app. The Programme will also investigate potential barriers preventing countries from using the digital platforms to access published guidance. It will ensure that guidance is available in English, French, Arabic and Spanish, and aligned with global accessibility standards (26).

The Global Malaria Programme will continue to track (and publish in the *World malaria report*) the level of country adoption of guidance, and engage with Regional

Offices to support countries in addressing any challenges to adopting and adapting guidance. This is a critical step to ensure that any barriers to implementing guidance are identified and addressed in a timely manner at country level.



## Key takeaways

### Continued activities:

- Lead the update and development of normative guidance.
- Provide visibility on planned guidance updates.
- Implement the living guidelines model.
- Identify and prioritize selected normative guidance for more systematic disability inclusion.
- Track implementation of guidelines at country level, published in the *World malaria report*.

### Activities to start / extend:

- Leverage existing channels to systematically collect feedback on the guidelines to prioritize for update.
- Incorporate climate considerations into guideline development.
- Ensure that health equity, gender equality and human rights are adequately reflected in guideline development.
- Investigate potential barriers to the use of digital platforms that may inhibit access to published guidance.
- Track and publish the level of adoption of guidelines across countries.

### Proof points to prioritize within 12 months:

- Publish recommendations for tafenoquine and G6PD point-of-care testing.
- Publish guidance on the use of single low-dose primaquine for *P. falciparum* case management.
- Convene a technical consultation on multiple first-line therapies.
- Extend IRS recommendation to include broflanilide.
- Conduct data reviews on spatial repellents and attractive targeted sugar baits (ATSBs).

### Activities to terminate:

- N/A



## 5.1.2 Dissemination products

**Overall objective:** Develop operational guidance and tools to support country implementation of normative guidelines.

To support timely implementation and guide operationalization of normative guidance, dissemination products, such as how-to manuals, field guides and other related materials, are required.

As the primary developer of global norms and standards for malaria, the Programme will play an important role in developing dissemination products that enable the implementation of published guidance. This process will rely on the collection and incorporation of end user feedback.

Based on end user feedback and relevant operational research, the Global Malaria Programme will develop and refine implementation guidance, including how-to manuals, field guides, operational guidelines and technical checklists to guide ministries of health, health practitioners, community health workers, civil society organizations and other partners in implementing malaria guidelines. The Programme will develop implementation field guides on a range of interventions and deploy user-friendly approaches to disseminate the guidance. To support countries' adoption of guidelines, the Programme will provide technical support to countries to evaluate policy options that are suited to their specific contexts, with a focus on equitable outcomes.

In response to ever increasing financial constraints, the Global Malaria Programme has developed, in consultation with Member States and partners, guiding principles for prioritizing interventions in resource-constrained country contexts in order to help achieve maximum impact.

To further support capacity building to implement normative guidance, the Global Malaria Programme will continue to develop and disseminate other derivative products, including training modules, educational and informational materials, advocacy materials and videos. The Programme will further incorporate malaria training into the curriculum of the WHO Academy and OpenWHO. For broader and more efficient dissemination, WHO will ensure that dissemination products are available in English, French, Arabic and Spanish, and aligned with global accessibility standards (26).



## Key takeaways

### Continued activities:

- Develop easily digestible dissemination products (including operational guidance, field guides, checklists, case studies, etc.).

### Activities to start / extend:

- Expand training to the online curriculum of the WHO Academy.

### Proof points to prioritize within 12 months:

- Prepare advanced draft of the practical manual on larval source management.
- Publish case studies on the management of *An. stephensi*.

### Activities to terminate:

- N/A

## 5.2 Stimulate the development and timely introduction of new tools and interventions

While more progress in malaria control and prevention can be made with currently available tools, new interventions will be essential to counter emerging threats (including drug and insecticide resistance in Africa), accelerate progress towards global targets, and achieve elimination. New interventions need to be suited to the contexts in which they will be deployed, acknowledging variation in delivery and use. There are many new interventions under development or evaluation, and some of them are expected to be ready for WHO review and potential recommendation in the next few years. These include innovations in medicines, diagnostics, vector control tools and vaccines, as well as digital solutions and innovations that will support more effective delivery to those in need.

WHO plays a key role in facilitating the evaluation and introduction of new interventions and works closely with multiple partners to provide an evidence base to inform effective scale-up.

The Global Malaria Programme will contribute by identifying public health needs via preferred product characteristics (PPCs) or target product profiles (TPPs), in turn informing intervention development and the associated research agenda. The Programme will work closely with other WHO departments to ensure that new interventions are of good quality, safe and efficacious and that their prequalification is linked to specific WHO recommendations, and vice versa. This will support the timely introduction of new interventions at country level. The Programme will position itself as a partner for innovation through closer and appropriate engagement with actors across the value chain, from R&D and manufacturing to implementing partners and countries.



## 5.2.1 Research agenda and view of pipeline

**Overall objective:** Set priorities for future R&D and monitor progress of new tools through the development pipeline.

Global R&D priorities need to be set and shaped by emerging trends and threats. This will help to ensure that there is a coordinated focus on key topics and that new interventions are fit-for-purpose to address identified challenges.

The Global Malaria Programme, as a collector and synthesizer of global data on emerging trends, threats and country needs, is in a unique position to oversee current and potential future areas of concern and opportunity. The Programme will coordinate the development of a joint research agenda for priority topics (consistent with the Sex and Gender Equity in Research (SAGER) guidelines (27)), with input from other partners active in the innovation space, and steer donor funding towards the world's most pressing questions while avoiding duplication of effort. These pressing questions include those related to implementation research, which is important for improving the equitable delivery of quality health services and, thus, improving malaria outcomes. This should include a greater focus on equity analysis and programme evaluation to ensure a more effective and equitable response to malaria.

The Global Malaria Programme will identify unaddressed public health needs and outline associated gaps in existing interventions across different commodities to address these needs. Public health needs will be identified through engaging with WHO Member States, their affected communities and their implementing partners to understand current needs and challenges related to existing tools and/or other public health gaps. In particular, research and innovation will be focused so that it benefits those people experiencing neglect and vulnerability. The Programme will also promote research into more environmentally friendly tools.

To address identified gaps, the Global Malaria Programme will continue to develop and publish PPCs that outline the key characteristics of new tools to be developed (minimum and preferred requirements). PPCs will consider end users' input to better address their unmet needs and to ensure that future tools are adapted to end users. By collecting input from partners, the Programme will ensure that PPCs clearly identify an unmet public health need and encourage innovation to address it.

PPCs are published with the intention to inform the development of TPPa by industry to guide their own R&D activities. New interventions that meet PPC requirements, and hence demonstrate public health value, are likely to be recommended by WHO, thus further accelerating development timelines. Priority areas for PPCs not already published by the Programme include genetically modified mosquitoes and products such as non-invasive diagnostic tests, multi-pathogen tests at point of care, second-generation vaccines and monoclonal antibodies. The Global Malaria Programme will ensure that PPCs and any other important guidance or requirements associated with the development and evaluation of new interventions are communicated early to innovation partners/developers. Current PPCs will also be reviewed and updated regularly as required.

The Global Malaria Programme, in coordination with partners, will articulate strategic use cases for novel products as part of advocacy efforts to promote their adoption to combat malaria. By setting clear evidence requirements for a product to be recommended early in the development phase, the Programme will ensure that all partners/developers have a common understanding and are aligned on data requirements, which may streamline the development and trial process.

In addition to responding to the need for new interventions, the Global Malaria Programme will engage key stakeholders in the setting of the research agenda for malaria by continuously collating a set of research questions that need to be addressed to move the field forward and maximize the impact of interventions. The Programme will socialize these with donors/academic institutions and partners for implementation. Including the key outstanding research questions in the agenda for existing forums will contribute to greater transparency and avoid duplication and gaps in the research undertaken.

Working closely with WHO Prequalification, the Global Observatory on Health R&D and partners, the Global Malaria Programme will support the development of a consolidated list of products in the development pipeline across different commodities. The pipeline will be monitored regularly to ensure that it maintains an accurate view of candidate products under development.

By consistently monitoring the horizon of products under development, the Global Malaria Programme will gain awareness of these products to begin preparing for the development of guidance as soon as possible and to ensure that the R&D investments are consistent with public health priorities.



## Key takeaways

### Continued activities:

- Strengthen linkages with WHO Prequalification, other relevant departments and partners to further align evaluation and guidelines processes, thereby reducing time to market access.
- Develop and update PPCs based on public health needs.
- Articulate use cases for novel products.
- Provide input for the development of the product pipeline.
- Monitor the pipeline of products under development and prepare for the publication of recommendations.

### Activities to start / extend:

- Prepare a consolidated list of prioritized research questions.

### Proof points to prioritize within 12 months:

- N/A

### Activities to terminate:

- N/A



## 5.2.2 Coordinated market shaping

**Overall objective:** Provide technical input that shapes the vision to support partners' efforts to ensure the availability and affordability of quality tools.

All malaria products are subject to market failures. Global health organizations, through market shaping, play an active, deliberate and strategic role in maximizing access to health products and improving health outcomes. Market shaping is a complex process that requires close coordination across multiple partners along the value chain. To successfully ensure the availability and affordability of quality tools, partner efforts must be synchronized and guided by a common strategic vision and technical strategy. Market shaping spans a wide range of activities that are not limited to procurement activities. These activities encompass topics of adaptability (largely related to product development and prequalification), affordability (including price agreements, pooled procurement and other financing mechanisms), availability (supply chain and inventory management, including diversification of suppliers) and adoptability (including global and national policies and guidelines).

In addition to commissioning or coordinating select market shaping activities such as operational research or demonstration studies, the Global Malaria Programme may support overall coordination across partners by convening key stakeholders to discuss market shaping topics in instances where there is a public health need or emergency that requires a coordinated response (e.g. partial artemisinin resistance) or where no forum currently exists. These forums will seek to give partners the opportunity to highlight ongoing activities, align on challenges that need to be collectively addressed to improve access to quality and affordable commodities, and determine priority corrective actions that the malaria community should undertake.

The Global Malaria Programme will continue to provide technical input to inform discussions, for instance on emerging trends, and work with major procurers to ensure that new tools and innovations are procured in line with WHO recommendations. The Programme will also provide guidance on how to manage suboptimal products, for instance by phasing out old products such as monotherapies and addressing quality challenges in available products such as insecticide-treated nets.

By providing evidence-based input to partners, the Global Malaria Programme will empower partners to make conscious trade-offs between key dimensions of market shaping, such as greening the market, ensuring sustainable affordability without compromising the quality of products, or supporting regional manufacturing to diversify supply chains and increase local ownership.

While the Global Malaria Programme will provide technical input for market-shaping strategies, it will not directly conduct market shaping through direct procurement and negotiations with suppliers.





## Key takeaways

### Continued activities:

- Provide technical input to guide market shaping decisions on next-generation insecticide-treated nets, malaria vaccine supply, and diversification of first-line antimalarial drugs.

### Activities to start / extend:

- In instances of public health need or emergency, convene partners on market shaping.

### Proof points to prioritize within 12 months:

- N/A

### Activities to terminate:

- N/A

## 5.2.3 Introduction and validation of new tools and innovations

**Overall objective:** Ensure that new tools are quality-assured through established technical and regulatory review processes.

WHO Prequalification conducts regulatory assessments of new tools and innovations to ensure that they meet the appropriate level of quality, safety and efficacy. Following a WHO recommendation for the use of a tool, major procurers are able to add that new tool to their portfolio and begin supplying it to countries for use. Ensuring that a well facilitated, streamlined process is in place can improve access to new tools.

The Global Malaria Programme will work with WHO Prequalification and other relevant departments to expedite technical and regulatory review timelines for novel and innovative products and ensure that the integrated review process between WHO Prequalification and the Programme is maintained. This process was put in place in 2018–2019 and validated by the WHO Deputy Director-General to allow for joint Prequalification listing and policy recommendation processes. The Global Malaria Programme, in partnership with WHO Prequalification, will strive towards earlier engagement with industry partners for early-stage testing and data collection.

The Global Malaria Programme will ensure that Prequalification-listed products that are available are recommended for use by the Programme and that, conversely, prequalified products exist for all WHO recommendations. The Programme will work closely with Prequalification to give visibility to future guideline updates and data needs, and ensure seamless data sharing to support accelerated and aligned reviews. These processes will be clearly laid out in a revised norms and standards procedure document, which will include data requirements, overviews of the joint processes, and other key information.

The Global Malaria Programme, by working with the WHO Regulation and Prequalification Department, will also ensure that additional reviews of product quality are conducted and recommendations provided on what to do with substandard products for which quality concerns have been noted. These activities will be supported by establishing feedback mechanisms with end users for continuous improvement of new tools based on real-world experience.

To support the timely introduction of new tools and innovations, the Global Malaria Programme will coordinate partners and commission select activities, such as operational research and cost-effectiveness and comparative efficacy studies, where there are gaps in the studies conducted by partners. The evidence generated will inform country prioritization and decision-making in alignment with the guiding principles for prioritization. To ensure that this information is easily accessible, the Global Malaria Programme will develop a dedicated webpage for publishing comparative efficacy data.



## Key takeaways

### Continued activities:

- Coordinate with WHO Prequalification and other relevant departments by maintaining implementation of the integrated processes.

### Activities to start / extend:

- Provide technical input to policy decisions based on evidence.
- Engage with industry partners for early-stage testing and data collection.
- Establish feedback mechanisms with end users for continuous improvement of new tools.
- Where there are research gaps, commission comparative efficacy and cost-effectiveness studies.

### Proof points to prioritize within 12 months:

- Revise the norms and standards procedure document.
- Update protocol for comparative efficacy studies + non-inferiority analyses.

### Activities to terminate:

- N/A

## 5.3 Promote the use of strategic information for impact

Partner organizations and countries are faced with increasingly complex decisions and must have access to relevant information to make the best possible decisions given their local context.

The global malaria landscape has become increasingly dynamic. In recent years, many threats, including biological and other threats, have emerged, posing significant risks to the fight against malaria. There has been concerted effort in recent years to improve data collection and monitoring systems, which has contributed to the overall strengthening of global information on malaria and other health priorities.

The work of WHO in monitoring, evaluating and reporting on health trends drives priorities and decision-making at all levels – from in-country actors to international donors and other partners. This work extends beyond measuring trends in disease and emerging threats. It also includes global and national equity monitoring and support to local barrier assessments to better understand who is missing out on malaria interventions and being left behind.

The Global Malaria Programme will work closely with a range of partners, including countries, academia, civil society and other implementing partners, to play a key coordinating role in generating, synthesizing and monitoring global trends and threats. The Programme will consolidate the information collected and publish it for use and reference by relevant ecosystem actors at the global, regional and country levels. Support at country level will focus on building capacity to collect and act on data at the national and subnational levels (e.g. through the establishment of data repositories).

### 5.3.1 Updates on global trends, including publication of the *World malaria report*

**Overall objective:** Monitor, track, generate evidence and publish insights on the global malaria burden and trends.

The consolidation of global trends into a cohesive narrative is an important advocacy tool to build awareness of challenges and progress, shape current and future priorities, and ensure that all partners have a common understanding of the malaria ecosystem.

The Global Malaria Programme will continue to leverage the strength of its partnership network to consolidate and synthesize evidence to monitor global malaria trends. This includes alignment and coordination for data submission by countries and partners. The Programme will work with other WHO data platforms to help countries develop integrated databases and support analytical capacity. This will include strengthening systems for more systematic collection and analysis of data disaggregated by sex, age and disability (at a minimum), among many other factors that affect equity in malaria responses and outcomes.



Underpinning this effort is the ability for countries to collect timely and granular health data, including epidemiological and programmatic indicators, and reflect collected data in the national health information system. The Global Malaria Programme will continue to maintain digital tools and systems, working with the WHO Academy and data teams to harmonize tools and collect data. Through this harmonization process, which is already under way, the Programme will validate that the indicators collected serve national decision-makers and are aligned with donor requirements in order to effectively reduce the reporting burden on countries.

Opportunities should be sought to extend the digital tools developed by the Global Malaria Programme to other disease areas, including non-communicable diseases (such as cancer) and neglected tropical diseases (such as dengue and other vector-borne diseases), to promote mutual adoption of developed tools.

The publication of the annual *World malaria report* is a crucial activity in this area. The report serves as a single consolidated update on global trends in malaria, including epidemiological trends, programmatic progress made, current biological and other threats, and dynamics in the financing landscape each year.

The Global Malaria Programme will continue to drive the development, publication, dissemination and post-launch review of the report. Importantly, the *World malaria report* puts forward a different theme every year to raise awareness on a specific issue or attract the community's attention to the factors that are currently impacting progress. The *World malaria report* is a powerful vehicle to set the narrative and call to action. The Programme will capitalize on this platform by including an update on relevant previous themes, such as climate change, in future editions to convey the latest WHO perspective and guide partners.

To supplement the information provided annually in the *World malaria report*, the Global Malaria Programme will collaborate with regional and country partners to publish more frequent informational notes on emerging trends and threats. This will require definition of which topics need more frequent updates, and establishment of a structure to support subsequent data collection and analysis for interim reports.



## Key takeaways

### Continued activities:

- Develop, publish and disseminate the annual World malaria report.
- Maintain and develop digital tools.
- Harmonize digital tools to support alignment of reported indicators between country needs and donor requirements.
- Promote mutual adoption of standardized data tools across other non-communicable disease and neglected tropical disease programmes (including other vector-borne diseases).

### Activities to start / extend:

- Publish more frequent informational notes on high-priority emerging trends and threats.
- Leverage the existing data repository on climate and health to conduct further analyses.
- Publish guidance on using climate data to predict potential impact on malaria control.

### Proof points to prioritize within 12 months:

- N/A

### Activities to terminate:

- N/A

## 5.3.2 Updates on global threats including biological and other threats

**Overall objective:** Monitor, track, generate evidence and publish insights on global malaria threats, including biological and other threats.

The extent of emerging threats (for example, drug resistance in Africa) is not yet fully understood. To address these threats, it is critical to develop and maintain a central bank of information on currently known and potential future threats (including biological and other threats). This will ensure that the global malaria community can easily access the research and information required to design solutions and make programmatic decisions.

The Global Malaria Programme will continue to play a key role in this area by establishing the protocol and supporting countries and partners in collecting the evidence needed to guide policies in countries.

To monitor the emergence and subsequent spread of drug resistance, the Programme will continue to develop and update guidance on the collection and analysis of information on drug efficacy and resistance. Where needed, the Programme will provide technical support to countries (by working with WHO Regional and Country Offices) to develop protocols for collecting data on drug efficacy and resistance.



Where there are gaps in support by other partners, it will provide support to countries for the implementation of studies to ensure that data are of high quality and comparable. The Programme will also collate and communicate information, supporting countries to act on the data collected.

The Global Malaria Programme will support countries to conduct TES by coordinating TES network meetings, supporting the development of TES protocols, and collating information on planned, ongoing and finalized TES and molecular marker studies. The Programme will continue to provide technical support to existing regional TES networks (e.g. the Greater Mekong subregion TES network) and support the establishment of new TES networks in Africa, initially in East Africa, with a potential expansion planned to southern Africa and beyond in the future. The Programme will also support the design and implementation of surveys, for instance to study the prevalence of molecular markers of resistance and *pfhrp2/3* gene deletions. Through these efforts, the Programme will ensure the collection and synthesis of better data on efficacy and resistance.

Where there are gaps in partner support for in-country TES, the Global Malaria Programme may provide funding and technical support to conduct studies. These gaps will be identified by conducting a landscape analysis of partner activities.

A core activity for the Global Malaria Programme is to continue facilitating information sharing on global threats through published normative guidance, status reports, the Malaria Threats Map, and other relevant communication and partner engagement forums. Such information will feed into global forums, including the Malaria Policy Advisory Group, regional forums such as TES networks (e.g. in the Horn of Africa), and country programmes.

These are select examples of the strategic use of data that the Global Malaria Programme will undertake in response to the threat of antimalarial drug resistance. A more comprehensive description of the broader WHO response to this urgent priority is detailed in the *Strategy to respond to antimalarial drug resistance in Africa (8)*. The Global Malaria Programme will also track other biological threats, including vector resistance to insecticides, invasive vector species and gene deletions in malaria parasites that result in false-negative diagnostic results.

In addition, the Global Malaria Programme will track other threats, such as climate change, helping to better understand the complex relationship between climate and malaria transmission and equip countries with a more resilient response to malaria-related risks. The Programme will leverage the climate module, which is already included in the national malaria repository available to countries, to develop further analysis on climate and health. This will include triangulation of data, visualization of insights and other analyses that can help to generate insights. To further guide countries, the Programme will develop guidance on how countries can use climate data to predict potential impact on malaria control – for example, how expected flooding may impact malaria outbreaks in affected areas.



## Key takeaways

### Continued activities:

- Develop and update the Malaria Threats Map.
- Convene and provide technical support for TES network meetings.
- Support the design and implementation of studies on malaria parasite and vector resistance and *pfhrp2/3* gene deletions.

### Activities to start / extend:

- Support the alignment of reported indicators between donor requirements and country needs.
- Establish TES networks in Africa.
- Conduct a landscape analysis to identify gaps in country-level support for TES.

### Proof points to prioritize within 12 months:

- Convene TES networks in Central, southern and West Africa.

### Activities to terminate:

- In-country TES support (based on landscaping analysis).

### 5.3.3 Feedback mechanism for evidence-to-action

**Overall objective:** Ensure that information generated on global trends and threats feeds into decision-making processes and channels at the global, national and subnational levels.

To maximize the utility of data collected on global trends and threats, there must be a strong feedback mechanism enabling policymakers and other leaders to leverage available data to guide malaria programmes.

The Global Malaria Programme plays a key role in collecting and synthesizing data and evaluating the efficacy of interventions. This feeds into updated WHO guidelines that ultimately inform partner strategies and national malaria control programme policies.

By analysing emerging information and trends, the Global Malaria Programme will develop guiding principles and timely recommendations and policy options to support countries' prioritization based on their epidemiological context and available resources. This ties in to context-based country support (Section 5.4) and will help countries to allocate scarce resources for different types of interventions, geographies and population risk groups.

The Global Malaria Programme will work closely with WHO Regional and Country Offices and partners to build country capacity to facilitate domestic data-driven decision-making and stratification. This will be supported by channelling investments into country-level surveillance (especially surveillance of drug resistance and vector

control resistance) and preparing a guidance “playbook” on how better surveillance can drive stratification. The Programme will continue to provide guidance on prioritization and the subnational tailoring of planned interventions. Data will be used to identify the appropriate mix of interventions suited to the local context and support planners in orchestrating the provision of quality services that are accessible to all in need. The Global Malaria Programme will also encourage and guide the use of local knowledge and data to identify who is missing out on key malaria interventions, the barriers they face and how to overcome these barriers.

This commitment to data-driven decision-making is consistent with the WHO approach of developing a systematic and sustained focus on health results, and providing countries with analytical and implementation skills, capacity and tools. These enhanced data systems will facilitate the collection, analysis and use of more timely and granular data to achieve greater malaria impact. The Global Malaria Programme will continue to provide guidance and conduct surveillance assessments to strengthen national data systems, complemented by ongoing work to support countries in the use of data for planning, budgeting and prioritization.



## Key takeaways

### Continued activities:

- Strengthen the feedback loop from evidence-generation to decision-making.
- Build countries’ capacity to facilitate domestic data-driven decision-making and stratification.
- Provide evidence to support the subnational tailoring of interventions.
- Conduct surveillance assessments.

### Activities to start / extend:

- Enhance information sharing across countries and partners (including in-country partners).
- Prepare guidance on how better surveillance can drive stratification.

### Proof points to prioritize within 12 months:

- Publish subnational tailoring implementation manual.
- Publish a surveillance, monitoring and evaluation manual.
- Develop national data repositories and help countries implement the subnational tailoring of interventions.

### Activities to terminate:

- N/A



## 5.4 Provide technical leadership of the global malaria response

To coordinate partners under a common strategic and technical direction, strong leadership will be required to set global priorities, define strategic objectives, and use evidence to make the case for renewed commitment to reaching the GTS targets. This will require the navigation of complex socioeconomic, demographic, financial and political factors and challenges, which will include the relationship with climate change.

At both the country and global levels, WHO leads and coordinates the United Nations' health agenda. WHO has a core responsibility to convene key stakeholders, define and advocate for priority activities, and empower communities and individuals to access quality health services.

The Global Malaria Programme is responsible for embodying this core WHO function in the malaria ecosystem. The Programme will play a global leadership role in malaria and effectively support countries and partners to achieve the milestones and targets of the GTS. To this end, it will convene key stakeholders and strengthen partnerships, generate political and financial support for malaria, and put communities at the centre of planned interventions. This concerted effort to strengthen commitment will translate across global, regional and country-level forums.

### 5.4.1 Convening technical forums and malaria stakeholders

**Overall objective:** Ensure strong collaboration between stakeholders, including malaria programmes and other key stakeholders.

Bringing key stakeholders into forums to discuss and implement malaria programmes is critical to ensure continued cooperation and facilitate a cross-sectoral response to combat malaria.

In close collaboration with WHO Regional and Country Offices, tapping into the worldwide WHO footprint globally and in countries, the Global Malaria Programme will engage with ministries of health and partners to discuss emerging issues. Through this convening role, the Global Malaria Programme will also foster collaboration among national malaria programmes, other vector-borne disease programmes and broader health programmes. This includes conducting a high-level dialogue with leadership in high-burden countries, in partnership with the WHO Regional Office for Africa, the African Leaders Malaria Alliance and the RBM Partnership, and working with governments and partners to continue efforts to control and eliminate malaria.

Globally, on technical matters, the Global Malaria Programme will continue to convene the WHO Regional and Country Offices and partners across multiple technical and strategic forums. These include meetings of the Malaria Policy Advisory Group, WHO Technical Advisory Group on Malaria Elimination and Certification and WHO Vector Control Advisory Group, as well as other technical forums such as the Global Vector Control Response, External Competence Assessment of Malaria Microscopists and regional TES networks.

The Global Malaria Programme will continue to facilitate activities and ongoing work implemented through WHO Collaborating Centres. The WHO Collaborating Centres include the WHO Collaborating Centre for Prevention and Control of Malaria, WHO Collaborating Centre for Malaria Control, Elimination and Eradication, and WHO Collaborating Centre for Modelling, Monitoring and Training for Malaria Control and Elimination.

The Global Malaria Programme will convene a virtual Technical Expert Group on climate change and malaria, which will review the available evidence and recommend an official position for WHO on the impact of climate change on malaria and on approaches for mitigation. The Programme will also increase its influence at key climate forums, including the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change, to provide guidance on climate and health-related topics. In all future work, the Global Malaria Programme will lead by example, identifying the means to reduce its own carbon footprint by coordinating with key partners to minimize unnecessary travel, while maintaining an adequate presence in the field and at key forums and meetings.

The Global Malaria Programme will not replace any existing coordination mechanisms where appropriate forums already exist with established governance mechanisms.



## Key takeaways

### Continued activities:

- Convene key stakeholders and technical forums on priority topics.
- Engage with WHO Collaborating Centres.

### Activities to start / extend:

- Mobilize and strengthen WHO Regional and Country Offices to convene stakeholders at the regional and country levels.
- Convene a Technical Expert Group on climate change and malaria.

### Proof points to prioritize within 12 months:

- N/A

### Activities to terminate:

- N/A

## 5.4.2 Political buy-in and funding for malaria programmes

**Overall objective:** Support the generation of political buy-in for the financing and technical implementation of malaria programmes.

At a time when the global health community is facing multiple competing priorities, it is important to generate and sustain political buy-in and support for malaria programmes. Even more crucially, this support must be translated into sustained financing and technical implementation.



The Global Malaria Programme, through WHO and partner networks, will raise awareness on key issues facing the malaria ecosystem, including resistance to tools, short- and long-term implications of climate change, stagnation in global financing for malaria, and strategic use cases of novel tools, as well as on other issues that may arise in the future. This will be driven by the synthesis and analysis of emerging data. By defining the yearly theme for the *World malaria report*, the Global Malaria Programme supports the shaping of the global malaria narrative and agenda setting. The Programme will develop each year's *World malaria report* narrative in consultation with the WHO Regional Offices and partners in a process overseen by the central editorial committee. The Programme will also identify opportunities to incorporate malaria into World Health Assembly and Regional Committee resolutions and commitments.

World Malaria Day, which is marked annually on 25 April, is another important channel for advocacy. The Global Malaria Programme works each year with advocacy networks and civil society organizations to define, develop and amplify key messages around World Malaria Day.

The estimated global funding shortfall for malaria control and prevention was US\$ 3.7 billion in 2022 (2). Global funding commitments for malaria control and prevention have plateaued in recent years and, especially in the context of current and emerging threats, there is a critical need to bridge the widening funding gap. The Global Malaria Programme will advocate for increased financial resources to effectively combat emerging threats and ensure progress towards achieving the targets outlined in the GTS.

To gradually transition out of and reduce the reliance on international funding, endemic countries should commit to increased domestic spending on malaria control and prevention.

In March 2024, the Global Malaria Programme, in collaboration with the WHO Regional Office for Africa and the Government of Cameroon, convened African Ministers of Health and other senior government officials from HBHI countries in Yaoundé, Cameroon.

The Ministers signed a declaration expressing a commitment to accelerated malaria mortality reductions in their respective countries. Among other measures, they pledged to:

- provide stronger leadership and increased domestic funding for malaria control programmes;
  - strengthen health systems, with a focus on primary health care;
  - ensure more effective use of data;
  - apply the latest technical guidance in malaria control and elimination;
  - enhance coordination and multi-sectoral collaboration; and
  - build partnerships for funding, research and innovation.
- Six of the 11 HBHI countries signed the Yaoundé Declaration at the conference. WHO is working together with ministries of health to secure signatures for the remaining five HBHI countries in Africa.

The signing of the Yaoundé Declaration is an important step forward in Africa's malaria response. Now, the commitments need to be translated into concrete actions and financial resources, which will require follow up and action in all HBHI countries. The Global Malaria Programme, in collaboration with WHO regional and country offices, is well placed to provide the appropriate support to countries.

Progress towards the commitments will be monitored through a accountability mechanism, currently under development. Civil society and parliamentarians from African countries will play a key role in holding those in office to account.

The Global Malaria Programme will work with the WHO health governance and financing team to support countries in using the OneHealth Tool in order to better integrate malaria programming within a broader framework for costing, health impact analysis, budgeting and financing for all major diseases and health system components.

The Programme will work with WHO Regional and Country Offices to provide national malaria programmes with the technical guidance to facilitate the planning, budgeting and prioritization of their malaria responses. WHO will support countries with strategic plans that are aligned with technical guidance and suited to the local context and, through the WHO Regional and Country Offices, monitor the implementation of such plans. The support from the Programme will include guidance on how to prioritize malaria interventions within a resource-constrained budget. Countries will use this global guidance by applying the principles within their own unique malaria context. The Programme will work with partners to facilitate a greater alignment between external funding and nationally agreed priorities, within a costed operational plan.



## Key takeaways

### Continued activities:

- Advocate for malaria to be tackled at all levels and for malaria programmes to be integrated into broader health priorities.
- Advocate for more financial resources to fight malaria (both international and domestic funding).
- Partner with other advocacy networks to publish and amplify key messages around World Malaria Day each year.

### Activities to start / extend:

- Leverage WHO's leadership role to identify and bring awareness to new challenges hindering malaria progress.
- Identify opportunities to incorporate malaria into World Health Assembly and Regional Committee resolutions and commitments.

### Proof points to prioritize within 12 months:

- Hold a side event with francophone countries at the Summit of La Francophonie.

### Activities to terminate:

- N/A

### 5.4.3 Malaria in the broader context of PHC, UHC and the SDGs

**Overall objective:** Embed malaria into broader PHC and UHC initiatives, promoting overall progress towards achieving the SDGs.

Malaria is a disease that disproportionately affects the socioeconomically disadvantaged, with more than 90% of all malaria-related morbidity occurring in the world's poorest regions, and with infants and young children suffering the greatest mortality. Socioeconomic inequalities in the malaria burden call for a response that addresses the disparities related to poverty and other forms of social disadvantage, with a particular focus on equitable access to health and health services for vulnerable populations.

PHC initiatives purposefully address health inequities by prioritizing vulnerable and marginalized populations, and enhancing health equity, efficiency and resilience. PHC has been shown to narrow the gap in health outcomes between socially advantaged and disadvantaged populations.

The Declaration of Astana (2018) includes three inseparable and mutually influential components, all of which are critically important for getting the malaria response back on track: multisectoral policy and action, empowered people and communities, and integrated health services with primary care and essential public health functions. In areas with high disease burden, integration of malaria interventions within maternal, newborn and child health programmes should provide the greatest impact on mortality prevention.

The Global Malaria Programme will use its leadership role to advocate for health systems that are oriented towards PHC, so that people with malaria receive good-quality, affordable care close to where they live and work; communities are fully engaged in the malaria response; there is appropriate focus and action on upstream determinants of malaria, such as education, environment, poverty and gender; and all malaria control interventions are included in UHC packages that benefit from financial protection through health insurance or other health financing schemes.

PHC is also very relevant in the complex settings where malaria thrives. The benefits of community resourcefulness, coupled with public health functions and primary care, contribute to a more resilient system.

The Global Malaria Programme will also support the generation of data and evidence on the broader socioeconomic determinants of malaria. This will include supporting countries in identifying who is at greater risk of disease and who is missing out on interventions as a result of their circumstances, and analysing the barriers they face. As part of the Programme's work with maternal, newborn, child and adolescent health and WHO Country Offices, an approach to an integrated assessment and microplanning for PHC at the subnational level will be piloted.



## Key takeaways

### Continued activities:

- Advocate for health systems that are oriented towards PHC.
- Support the generation of data and evidence on the broader socioeconomic determinants of malaria.

### Activities to start / extend:

- Pilot a field test approach to microplanning for PHC at the subnational level.

### Proof points to prioritize within 12 months:

- N/A

### Activities to terminate:

- N/A

### 5.4.4 Partnerships, including with communities

**Overall objective:** Empower individuals, families and communities through partnerships with ecosystem actors, including partnerships with the private sector.

Effectively controlling, preventing and eliminating malaria will draw on the collective strength of the full ecosystem and will require diligent efforts from all partners at the global and national levels. Partners must continue to place individuals at the centre of planned initiatives and ensure that interventions are well suited to community contexts. The Global Malaria Programme, through the broader WHO network and partnerships, plays a key role in ensuring that service delivery challenges are acknowledged and considered as an input during normative guideline development and the introduction of new products.

The Global Malaria Programme will continue to engage partners (including private sector actors, community-based organizations, and implementing partners) to capture service delivery bottlenecks and incorporate learnings into new normative guidance and research. The Programme will work more closely with health systems departments, partners and countries to address the broader service delivery challenges and bottlenecks in supply chains for malaria commodities.

The engagement of communities in the response at the subnational level is a critical element of the PHC response. Their involvement should be extended to global work, as they have the right to be advocates for their health and participate in formulating malaria guidelines and guidance by sharing their experiential knowledge.

To ensure systematic engagement with communities, the Global Malaria Programme will formalize its partnership with Civil Society for Malaria Elimination (CS4ME) by establishing and convening a Civil Society Task Force. This will take the form of periodical meetings, complemented by ad hoc engagement as opportunities arise.

Regular meetings will enable the Programme to hear challenges and concerns at the community level and simultaneously share global updates to facilitate information sharing. Initially, the task force will focus on HBHI countries, with a view to gradually expanding the scope over time to include all endemic countries. By convening the task force, the Global Malaria Programme will effectively empower civil society organizations to further engage with national malaria control programmes and other political, administrative, religious and traditional leaders who can influence country-level decisions to ensure that malaria remains a priority.

The Global Malaria Programme will push to establish transformative partnerships at different levels, with a view to playing an advocacy and leadership role to facilitate technology transfer, which can contribute to ongoing efforts to build manufacturing capabilities in Africa.



### Key takeaways

#### Continued activities:

- Mobilize and engage partners and communities to understand service delivery bottlenecks.

#### Activities to start / extend:

- Strengthen engagement with civil society organizations and advocacy groups globally and through WHO Country Offices.
- Develop transformative partnerships to promote technology transfer and scale up manufacturing in Africa.
- Establish and convene the Global Malaria Programme Civil Society Task Force.

#### Proof points to prioritize within 12 months:

- Hold the inaugural meeting of the Global Malaria Programme Civil Society Task Force.

#### Activities to terminate:

- N/A

## 5.4.5 Malaria-free certification

**Overall objective:** Work with WHO Regional and Country Offices to support countries in the process of certifying their malaria-free status at the national and subnational levels.

Promoting and accelerating efforts towards malaria elimination and prevention of re-establishment is a central component of the global response to malaria. The GTS sets the ambition to eliminate malaria from at least 35 countries by 2030 (where there was active infection in 2015). Although good progress has been made, further efforts are required to meet the GTS elimination targets.

Through its strong in-country footprint and global coordination role, the Global Malaria Programme can support countries to achieve malaria elimination and lay the foundational groundwork to prevent re-establishment after certification. The Programme will update the guidance framework for elimination, continue to develop technical publications (e.g. WHO recommendations for elimination, guidance on prevention of re-establishment, and certification case studies) and disseminate knowledge across countries, for example by convening inter-country and inter-regional meetings, to support them in charting a path towards malaria elimination.



## Key takeaways

### Continued activities:

- Oversee and support countries through the certification process.

### Activities to start / extend:

- Develop a technical guidance framework for elimination and prevention of re-establishment of malaria.

### Proof points to prioritize within 12 months:

- Certify the malaria-free status of at least Georgia and Timor-Leste.
- Publish guidelines for prevention of re-establishment.

### Activities to terminate:

- N/A

## 5.5 Deliver context-based country support

Countries are at the core of the fight against malaria and must have access to sufficient guidance, technical support and operational assistance to bolster national malaria programmes and improve health outcomes. In many instances, in-country actors and global networks are disconnected, with few engagement forums to convey key information and support activities.

The technical support of WHO, from published guidelines to in-country experts and operations, plays a central role in the rapid and effective translation of policy into impact. WHO is uniquely positioned with on-the-ground presence in 150 Country Offices that are supported by six Regional Offices. This is an unparalleled footprint that acts as a powerful mechanism to reach and support countries.

To provide effective support to countries, the Global Malaria Programme must continue to decentralize selected key activities and work effectively with WHO Regional and Country Offices. This will enable the Programme to play a coordinating and guiding role at the global level, and empower the Regional and Country Offices to work closely with other in-country partners to implement key initiatives.





All elements of the Global Malaria Programme operational strategy (i.e. norms and standards, new tools and innovation, strategic information for impact, and leadership) will closely interface with country support. However, the extent and role of its activities may vary across endemic countries based on each country's needs, capabilities and unique context. Specifically, the Programme's operational strategy will adopt a differentiated approach to two country settings – high-burden and low-burden countries, i.e. elimination settings – but will continue to support national malaria programmes in all endemic countries. Countries that have already eliminated malaria will be supported to prevent the re-establishment of transmission.

More broadly, WHO will cooperate with countries through policy dialogue to develop future systems; strategic support to build high-performing systems; technical assistance to build national institutions; and service delivery to fill critical gaps in emergency situations. The type of support will depend on the country needs and contexts. The three levels of WHO will contribute, with Country Offices being bolstered by the regional and headquarters levels.

The breadth of engagement of WHO Country Offices provides opportunities to embed the malaria response in national development planning and engage sectors that are responsible for addressing the determinants of malaria. WHO Country Offices support the development and implementation of national health policies, strategies and plans, providing technical assistance for strategic planning, health systems governance, health financing strategies and effective development cooperation. Critically, the work of Country Offices contributes to the delivery of malaria interventions and quality services. The Global Malaria Programme will respond to requests from the WHO Country Office technical malaria lead and health policy advisers to support countries with their malaria responses within a broader UHC and health systems strengthening agenda. The Programme will facilitate the translation of its global work into country outcomes by playing its part in the three-level organizational support for countries in the following areas.

### 5.5.1 Development of comprehensive national malaria strategic plans

Specifically, the Global Malaria Programme will support the development of comprehensive national malaria strategic plans (NSPs) that embed malaria in national development plans and other relevant sector plans. To effectively implement normative guidelines, countries must develop NSPs and make provisions for adequate financial resources to execute planned activities. NSPs should be developed and updated by countries every five years, with regular programme reviews scheduled at least every second year.

Implementing normative guidelines requires the development of subnational strategic plans and policies, including a mechanism for countries to track progress on targets that have been defined, such as periodic malaria programme reviews, and, when required, course correct.

#### **In all endemic countries:**

The Global Malaria Programme, with support from WHO Regional and Country Offices, will help countries to develop NSPs that prioritize malaria and develop costed operational plans to help secure sufficient funding for implementation.



The Programme, through a network of in-country actors, will also support the integration of malaria into health sector planning, budgeting and prioritization.

The Global Malaria Programme will provide technical input into regular programmatic reviews to track progress against strategic objectives and support strategic redirection of programmes to address any identified bottlenecks.

The Programme will leverage its political clout through WHO channels and partners to strengthen cross-sectoral engagement by establishing a comprehensive dialogue between key stakeholders. This will be done within the health sector across different national programmes focused on malaria control, immunization, neglected tropical diseases and maternal and child health, as well as across different sectors including finance, agriculture and other relevant sectors.

The Global Malaria Programme will continue to support countries in their grant applications to secure funding from organizations such as the Global Fund, with a view to capacitate countries on grant application writing, project planning, budget management and financial resources. The Programme will support the review of grant applications to ensure that they are technically robust and account for aspects related to climate, gender, equity and rights.

#### **In HBHI countries:**

In HBHI countries, it is critical that WHO Regional and Country Offices have the leadership and capacity to support high-burden countries in adopting and implementing the HBHI approach. This relies on strong leadership from the WHO Representative and strong programme management capacity. The Global Malaria Programme will play a key role in enabling the WHO Representative and in raising funds for WHO Regional and Country Offices to be fully operational. In some HBHI countries, the Programme may support the introduction of IPOs for malaria in WHO Country Offices. The IPOs will be responsible for coordinating across WHO Country Office teams (including those that lead health systems strengthening and gender, equality and human rights programmes), other in-country partners, and civil society representatives, supporting the development and monitoring of NSPs and providing technical input to malaria programmes based on normative guidance. The specific roles of the IPOs will be adapted to country contexts. The terms of reference will be defined so that their roles do not conflict with those of the National Professional Officers and multi-country assignment teams, and the links between the three levels of WHO will be clarified. The introduction of the IPOs will further strengthen the capacity of WHO Country Offices to support countries in the design and implementation of national malaria programmes.

A monthly data collection, analysis and feedback process supported by the IPOs will enable the analysis of key indicators, so that stakeholders can identify gaps in implementation, areas for improvement or any discrepancies with respect to WHO's normative guidance.

The IPO approach will be piloted in two countries for a period of 12 months. During the pilot phase, the Global Malaria Programme will continuously assess the impact and refine the approach for rolling out subsequent IPOs.

The Global Malaria Programme will also continue to support emergency preparedness and response to malaria outbreaks in HBHI countries. The Programme will achieve



this by publishing guidance, providing technical support and developing online tools that can support countries to prepare and respond to health emergencies.

### In elimination settings:

The Global Malaria Programme will support countries to develop and implement national elimination strategies by contributing technical input to programme reviews. It will also conduct needs assessments to identify potential barriers to achieving elimination. Pre-certification and certification missions will support countries in navigating the certification of elimination. Support will also be offered to secure political and financial commitment to ensure that low-burden countries continue to cross the finish line.

### In prevention of re-establishment settings:

The Global Malaria Programme will support the development of plans for preventing re-establishment of malaria and continue to support countries in monitoring, tracking and synthesizing data on potential re-establishment of malaria.



## Key takeaways

### Continued activities:

- Provide concerted support for the development of NSPs, including costed operational plans.
- Provide technical input for funding requests submitted to partners (e.g. World Bank, PMI, United States Agency for International Development, Global Fund).
- Through WHO channels, strengthen cross-sectoral engagement.
- In elimination settings, support the development and programmatic reviews of national elimination strategies.
- In elimination settings, conduct needs assessments, and pre-certification and certification missions.
- In HBHI settings, support emergency preparedness and response to malaria outbreaks.

### Activities to start / extend:

- In HBHI settings, introduce IPOs to improve coordination capacity in WHO Country Offices based on country needs.
- In HBHI settings, continuously refine the IPO approach based on lessons learned.

### Proof points to prioritize within 12 months:

- Launch IPO pilots in two HBHI countries.
- Refine the HBHI approach based on evaluation.
- Publish a manual on malaria response in emergencies.

### Activities to terminate:

- N/A

## 5.5.2 Adoption of global guidance and adaptation to the local context

**Overall objective:** Support adaptation of global guidance to the local context to facilitate implementation at the national, subnational and local levels.

Endemic countries must develop national malaria guidelines that are rooted in normative guidance but adapted to local contexts and settings. Global norms and standards should guide implementation around defined technical priorities. This can be effectively achieved through the subnational tailoring of interventions to maximize impact.

### In all endemic countries:

Alongside the WHO Country Office and malaria national programme officer, the Global Malaria Programme will support the adaptation of global malaria guidelines to suit local contexts and work with partners to enable the adoption of guidelines at the national, subnational and local levels. Working closely with the WHO Regional and Country Offices, the Programme will also support the development of action plans for countries where guidelines have not been implemented.

### In HBHI countries:

The Global Malaria Programme will hold high-level ministerial meetings to create a platform for political buy-in and commitment. The primary objective of these high-level meetings is to promote ownership of malaria response, ensure full and sustained adoption of the HBHI approach, translate political will into domestic resources, facilitate action in all sectors by integrating national malaria control programmes with other health services.

To identify and assess bottlenecks in health systems and promote a multisectoral approach following the high-level meetings, the Global Malaria Programme will also convene annual HBHI taskforce meetings. These taskforce meetings will enable technical monitoring of progress towards the national malaria objectives defined in the high-level meetings.

The Global Malaria Programme will also continue to develop and update country profiles to provide a broader, year-end snapshot benchmark of each country's performance against WHO's normative guidance. This consolidated view, including key indicators, challenges and recommendations, will be a critical tool for both internal review and external advocacy.

The HBHI approach will be facilitated by deploying IPOs to support the coordination of partners and stakeholders in HBHI countries. Coordination forums should be evaluated to ensure that they remain effective. This should enable more peer-to-peer learning and allow time for development of concrete actions.

### In elimination settings:

The Global Malaria Programme will update the document *A framework for malaria elimination (11)*, with translations, to incorporate the most recent evidence-based strategies for surveillance and response. The framework will equip countries with the insights needed to effectively identify, manage and neutralize any emergent risks.

### In prevention of re-establishment settings:

The Global Malaria Programme will publish normative guidance on prevention of re-establishment of malaria transmission.



## Key takeaways

### Continued activities:

- Engage WHO Regional and Country Offices to support the adoption of global guidelines and their adaptation to local settings.
- In HBHI countries, convene HBHI taskforce meetings.
- In HBHI countries, develop and update country profiles.

### Activities to start / extend:

- In elimination settings, support the alignment of plans with an updated framework for elimination.
- In HBHI countries, improve the effectiveness of coordination meetings.

### Proof points to prioritize within 12 months:

- Ministers of health in high-burden countries commit to ending malaria deaths.

### Activities to terminate:

- N/A

## 5.5.3 Technical assistance to build national institutions and capacity

**Overall objective:** Support countries to build institutional and technical capacity.

Building technical and institutional capacity is critical for the implementation of national malaria programmes and sustainable impact. Many countries require technical, scientific and operational support and capacity building to strengthen their national malaria programmes. The Global Malaria Programme's support for building capacity is driven by a future vision of self-reliance for malaria programmes in Africa, alongside a network of African institutions that are well placed to support countries in generating evidence and making important decisions.

**In all endemic countries:**

The Global Malaria Programme, through WHO Regional and Country Offices, will provide technical, scientific and operational support (working closely with in-country implementing partners) to strengthen national malaria programmes, with the overarching objective of improving the quality of intervention delivery.

By developing and rolling out training modules and conducting in-country workshops and trainings (including the adoption of train-the-trainer approaches), the Global Malaria Programme will further strengthen the capacity of national malaria programmes. This includes programme management training to strengthen WHO Country Offices. The Programme will be responsive to countries' technical needs and will provide technical assistance on a range of topics, including TES or survey protocol development, subnational strategy development and data collection activities to support decision-making. The Programme will hold international courses in the WHO African Region to further strengthen capacity. Training will also be conducted on topics related to gender, equity and rights to strengthen the capacity of the WHO Regional and Country Offices and the programmes.

In partnership with the WHO Academy in Lyon, France, the Global Malaria Programme will also continue to develop and publish online training courses. Online training modules present a major opportunity to expand capacity building beyond traditional in-person training. The Programme will ensure that online training courses are relevant, digestible and continuously updated.

**In HBHI countries:**

The Global Malaria Programme will update and digitize training modules on malaria to ensure wider dissemination and easy accessibility, thereby expanding the reach of best practice sharing. The development of e-learning interactive modules will provide a versatile approach to capacity building.

The Programme will conduct annual capacity-building courses in Africa that will serve as a forum for hands-on skill development and peer-to-peer learning.

**In elimination settings:**

The Global Malaria Programme will provide targeted training workshops on elimination strategies, surveillance and interventions to accelerate elimination. The Programme will further support countries in strengthening surveillance and elimination interventions and provide guidance for the implementation of strategic plans for eliminating malaria.

**In prevention of re-establishment settings:**

The Global Malaria Programme will provide targeted training workshops on reorientation of malaria programmes to prevent re-establishment of malaria.



## Key takeaways

### Continued activities:

- Support capacity building, including programme management capacity, in countries to implement NSPs.
- In elimination settings, support countries in strengthening surveillance and elimination interventions.
- Develop online training modules in partnership with the WHO Academy.
- Provide targeted training based on country settings.

### Activities to start / extend:

- Hold international courses to build capacity at WHO Regional Offices.
- Conduct capacity building for WHO Regional and Country Office staff on gender, equity and rights.

### Proof points to prioritize within 12 months:

- N/A

### Activities to terminate:

- Operational support, unless requested by the WHO Country Office.

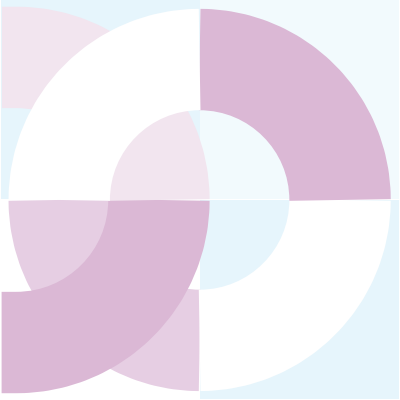
The Global Malaria Programme is providing technical support to seven countries with the potential to eliminate malaria by the year 2025 and an additional 15 countries aiming for elimination by 2030.

**Fig. 7. Transformative initiatives that will amplify the Global Malaria Programme's impact on the malaria response**

	<b>Introduce IPOs in HBHI countries</b>	<b>Expedite efforts for elimination</b>	<b>Bolster response for drug resistance</b>
<b>Vision</b>	Countries supported to optimize interventions and tools	Ten more countries certified as malaria-free	Up-to-date understanding and response to the emerging threat of drug resistance in Africa
<b>Outputs</b>	IPOs piloted in two HBHI countries and, if successful, expanded to other HBHI countries by 2030	The Programme providing technical support to five countries on the brink of elimination by 2026 and 10 countries by 2030	Three TES networks in Africa convened by 2026, five networks by 2030. Secretariat in the WHO African Region launched by 2026, ramped up by 2030
<b>Value add</b>	Multiply impact of partners' investments at country levels through better coordination from a position of neutrality	The Global Malaria Programme has a critical role in certifying countries malaria free, that cannot be done by any other actor, and will need to be appropriately resourced	Proactively address new and emerging threats using reach and knowledge accumulated by the Global Malaria Programme

Not exhaustive and conditional on funding





# 6

## Enablers | What delivery will take

### Key messages of this chapter

The operational strategy and its strategic objectives are supported by five transversal enablers: i) complementarity across the three levels of WHO; ii) cross-division and

departmental coordination; iii) partner engagement; iv) internal transformation and talent retention; and v) predictable financing.

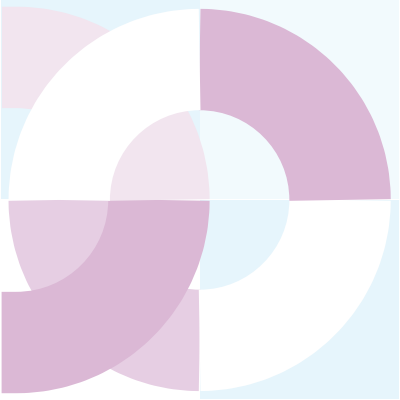
To facilitate successful delivery of the operational strategy, five transversal enablers are needed at all levels:

- **Complementarity across three levels:** Coordination across WHO's three-level structure will be driven by active engagement among the Global Malaria Programme, WHO Regional Offices and WHO Country Offices in endemic countries to ensure consistency and complementarity in implementing the strategy. By working closely with the WHO Regional and Country Offices, the Global Malaria Programme can more effectively translate global guidance, advocacy and leadership into impact in endemic countries. WHO Regional and Country Offices must be empowered to support in-country coordination and support for national malaria control programmes.
- **Cross-division and departmental coordination:** The Global Malaria Programme relies on strong linkages with other divisions and departments within WHO. By fostering cross-departmental coordination and cooperation, the Programme ensures internal alignment with WHO



priorities, integration of malaria into broader health programme planning, and streamlined internal processes – all of which are critical to translating strategic objectives into effective interventions.

- **Partner engagement:** No single organization can end malaria in isolation. To effectively tackle malaria, concerted effort must be made along the entire value chain to ensure that new tools are developed in line with gaps in public health needs. These tools are validated and their use scaled in countries, and programmes are monitored and evaluated to track effectiveness. This will require end-to-end coordination across all partners at all levels. The Global Malaria Programme relies on regular engagement, including strong feedback mechanisms, to facilitate coordination and support for its leadership and convening role in the ecosystem. Central to achieving the Programme's objectives will be the development and strengthening of transformational partnerships. These partnerships are critical to enabling large-scale change in the ecosystem, including technology transfer to build local manufacturing capacity.
- **Transformation and talent retention:** To effectively carry out the planned activities and deliver on the Global Malaria Programme's mandate, efforts to recruit and retain talent must be maintained at all times. The Global Malaria Programme will rely on the skill of all internal staff to execute the strategic objectives as part of their day-to-day roles. To further deepen the Programme's expertise on different topics, it will target recruitment efforts towards candidates with high-demand skills and diverse experiences, including profiles with expertise in PHC and UHC, climate and health, health equity, country-level implementation, and programme management as examples. Recruited staff will also be empowered in their roles through effective performance management systems.
- **Predictable financing:** Implementing the planned activities will require sufficient and predictable funding for the Global Malaria Programme. This will rely on the Programme's ability to raise new funding and flexibly allocate existing funding commitments to priority activities. As part of the results framework (Chapter 7), activities will be costed and prioritized.



# 7

## Results framework | How the Global Malaria Programme's work will translate into impact

### Key messages of this chapter

The Global Malaria Programme's objectives are fully aligned with the GTS targets. These objectives have been translated into concrete outputs that support the desired outcomes of the fight against malaria. The objectives have also been translated into deliverables along the continuum of care. Detailed annual operational

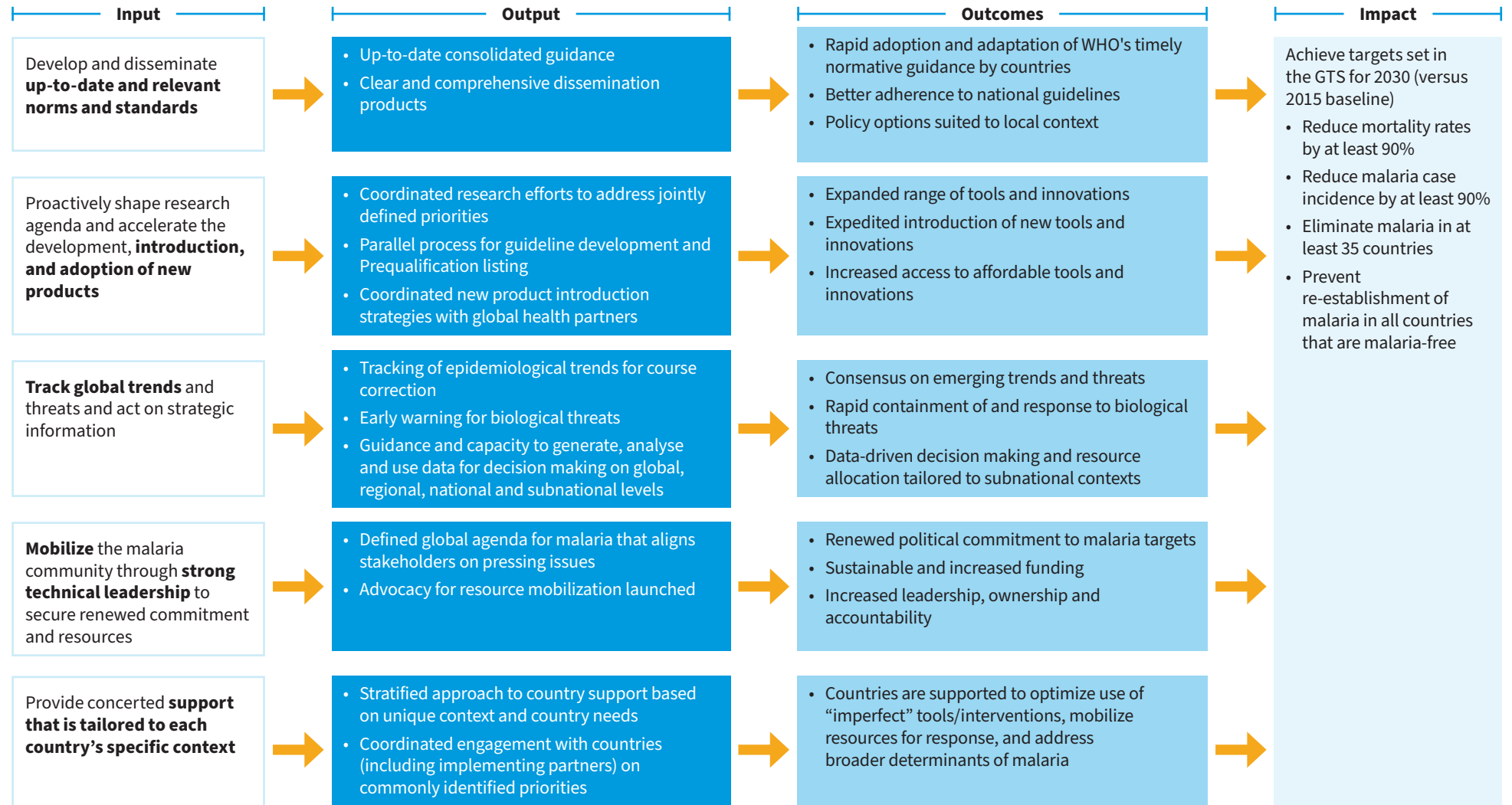
plans outlining specific activities will be prepared and maintained in alignment with this operational strategy. The Global Malaria Programme will monitor and track progress across these activities to ensure the consistent delivery of the operational strategy.

The Global Malaria Programme's strategic objectives must be fully aligned with the targets laid out in the GTS. Each strategic objective has been translated into concrete outputs, which, in turn, support the fulfilment of desired outcomes and facilitate the realization of target impacts. This linkage has been outlined in the theory of change below (Fig. 8).

The Global Malaria Programme will translate its strategic objectives into more concrete deliverables along the continuum of malaria care (Fig. 9).



Fig. 8. Theory of change driving impact

Source: *Global technical strategy for malaria 2016–2030*



**Fig. 9. Global Malaria Programme deliverables along the continuum of care**

Preliminary, not exhaustive and conditional on funding

	Vector control	Immunization prevention	Chemoprevention	Diagnosis	Chemotherapy	Surveillance	
<b>Norms and standards</b>	<ul style="list-style-type: none"> <li>Data review on spatial repellents and broflanilide indoor residual spraying (2024)</li> <li>Operational guide on larval source management (2024)</li> <li>Data review on ATSBs and eave tubes (2025)</li> </ul>	<ul style="list-style-type: none"> <li>Updated guidelines for malaria vaccines</li> </ul>	<ul style="list-style-type: none"> <li>Data review for expanded use of sulfadoxine-pyrimethamine + amodiaquine for children 6–10 years of age</li> <li>Data review for artesunate + piperaquine (for use in first trimester pregnancy)</li> </ul>	<ul style="list-style-type: none"> <li>Data review for G6PD test</li> <li>Data review for non-HRP2-only RDTs</li> </ul>	<ul style="list-style-type: none"> <li>Data review for artemisinin resistance<sup>a</sup></li> <li>Data review for lumefantrine resistance<sup>b</sup></li> <li>Data review for elimination scale-up<sup>c</sup></li> <li>Data review for ivermectin long-acting formulation</li> </ul>	<ul style="list-style-type: none"> <li>Subnational tailoring implementation manual</li> <li>Surveillance manual</li> </ul>	
<b>New tools and innovations</b>	<ul style="list-style-type: none"> <li>New PPC for genetically modified mosquitoes</li> <li>Updated PPC for outdoor biting, bed nets</li> <li>Revised norms and standards procedure document</li> </ul>			<ul style="list-style-type: none"> <li>PPC for digital malaria microscopy</li> <li>PPC for non-invasive malaria diagnostics</li> </ul>	<ul style="list-style-type: none"> <li>Regularly updated product pipeline</li> <li>Prioritized research agenda</li> </ul>		
<b>Strategic information for impact</b>	<ul style="list-style-type: none"> <li>Updates on vector control resistance in informational notes, and <i>World malaria report</i> and Malaria Threats Map</li> </ul>			<ul style="list-style-type: none"> <li>Updates on HRP2/3 deletion in informational notes, <i>World malaria report</i>, and Malaria Threats Map</li> </ul>	<ul style="list-style-type: none"> <li>Updates on resistance in informational notes, <i>World malaria report</i>, and global threats map</li> <li>African TES networks established</li> <li>Country TES supported</li> <li>Surveys commissioned</li> </ul>	<ul style="list-style-type: none"> <li><i>World malaria report</i> published annually</li> <li>Malaria Threats Maps regularly updated</li> </ul>	
<b>Leadership</b>	<ul style="list-style-type: none"> <li>Forum on health and climate topics</li> </ul>	<ul style="list-style-type: none"> <li>Equity framework for access to novel vaccines</li> <li>Advocacy for novel tools</li> </ul>	<ul style="list-style-type: none"> <li>Advocacy for novel tools</li> </ul>	<ul style="list-style-type: none"> <li>Advocacy for novel tools</li> </ul>	<ul style="list-style-type: none"> <li>Forum of technical experts on multiple first-line treatment convened</li> <li>Advocacy on drug resistance</li> </ul>	<ul style="list-style-type: none"> <li>Leverage existing data on climate and health to conduct deeper analyses</li> </ul>	
<ul style="list-style-type: none"> <li>Implemented principles for prioritization in resource-constrained settings</li> </ul>							
<b>Country support</b>	<ul style="list-style-type: none"> <li>Updated NSPs to include latest recommendations</li> <li>Adapted global guidance</li> </ul>		<ul style="list-style-type: none"> <li>Training and technical assistance</li> <li>HBHI taskforce meetings and elimination missions held</li> </ul>				<ul style="list-style-type: none"> <li>Surveillance strengthening and assessments</li> </ul>

ATSBs: attractive targeted sugar baits; TES: therapeutic efficacy study; HRP2/3: histidine-rich protein 2/3; PPC: preferred product characteristics; RDTs: rapid diagnostic tests; HBHI: High burden to high impact; G6PD: glucose-6-phosphate dehydrogenase; NSPs: national strategic plans

<sup>a</sup> Single low-dose primaquine with ACT for *P. falciparum* case management, multiple first-line treatments, Triple ACTs, cipargamin (severe malaria)

<sup>b</sup> M5717-pyronaridine, ZY 19489-ferroquine

<sup>c</sup> Tafenoquine + chloroquine for *P. vivax*, primaquine + ACT for *P. vivax*, Single low-dose primaquine + ACTs, tafenoquine + ACT for *P. vivax*

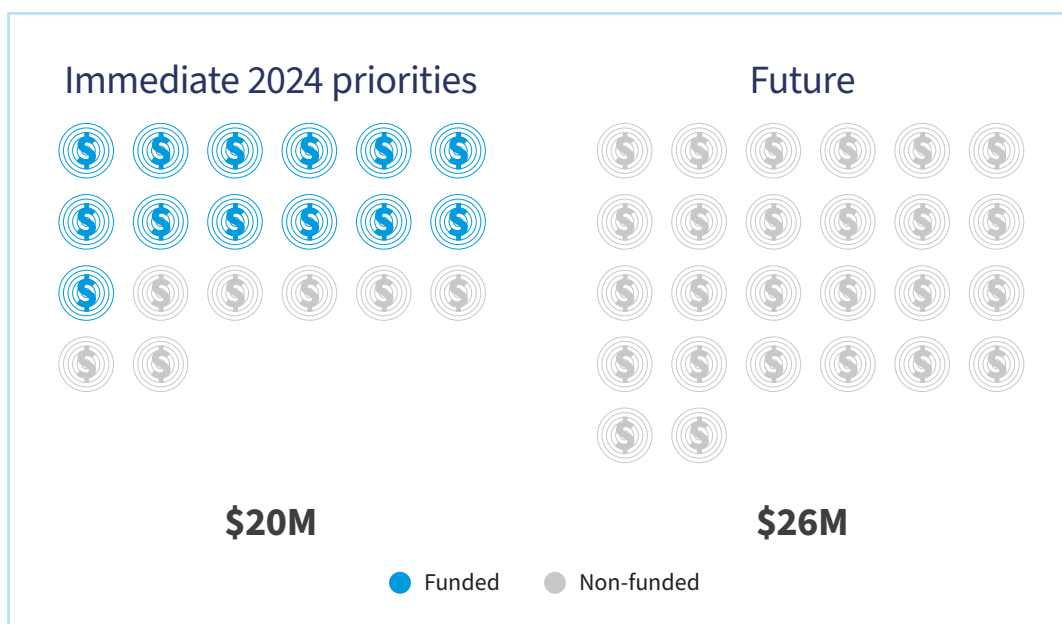
To accompany the operational strategy, the Global Malaria Programme will develop and maintain detailed operational plans that outline specific activities to be completed within defined time periods. The Programme will monitor and track progress across these activities to ensure the consistent delivery of the strategy. Progress reports will be summarized and circulated annually with donors and partners.

Successful implementation of the operational strategy will rely on adequate and sustainable sources of funding for the Global Malaria Programme. Implementing the operational strategy will cost an estimated US\$ 20 million in 2024, which is expected to increase to approximately US\$ 26 million per annum as activities gradually ramp up.

The majority of this funding is related to implementing (and enhancing) core activities that the Global Malaria Programme has a clear mandate to execute. This also includes ensuring that the Programme has recruited sufficient staff to fill vacant roles and implement the activities.

Additional funding will be required to implement transformative activities for which the Global Malaria Programme has identified opportunities to drive targeted impact. These include: recruiting and deploying IPOs in HBHI countries to support coordination and technical leadership at country level; accelerating elimination through introduction of game-changing interventions in countries that have been identified as potential candidates to eliminate malaria and certifying eligible countries as malaria-free; and bolstering the response to drug resistance by launching and convening TES networks in Africa and the Greater Mekong subregion. These funding estimates are highly preliminary and may evolve over time based on ecosystem needs and the Global Malaria Programme's level of ambition to address these needs. Therefore, sustained funding for key work packages may be required to amplify impact, for which additional funding, beyond what is included in the estimates below (Fig. 10), will likely be required.

Fig. 10. Total funding required (salary cost and activity cost combined, US\$ million)



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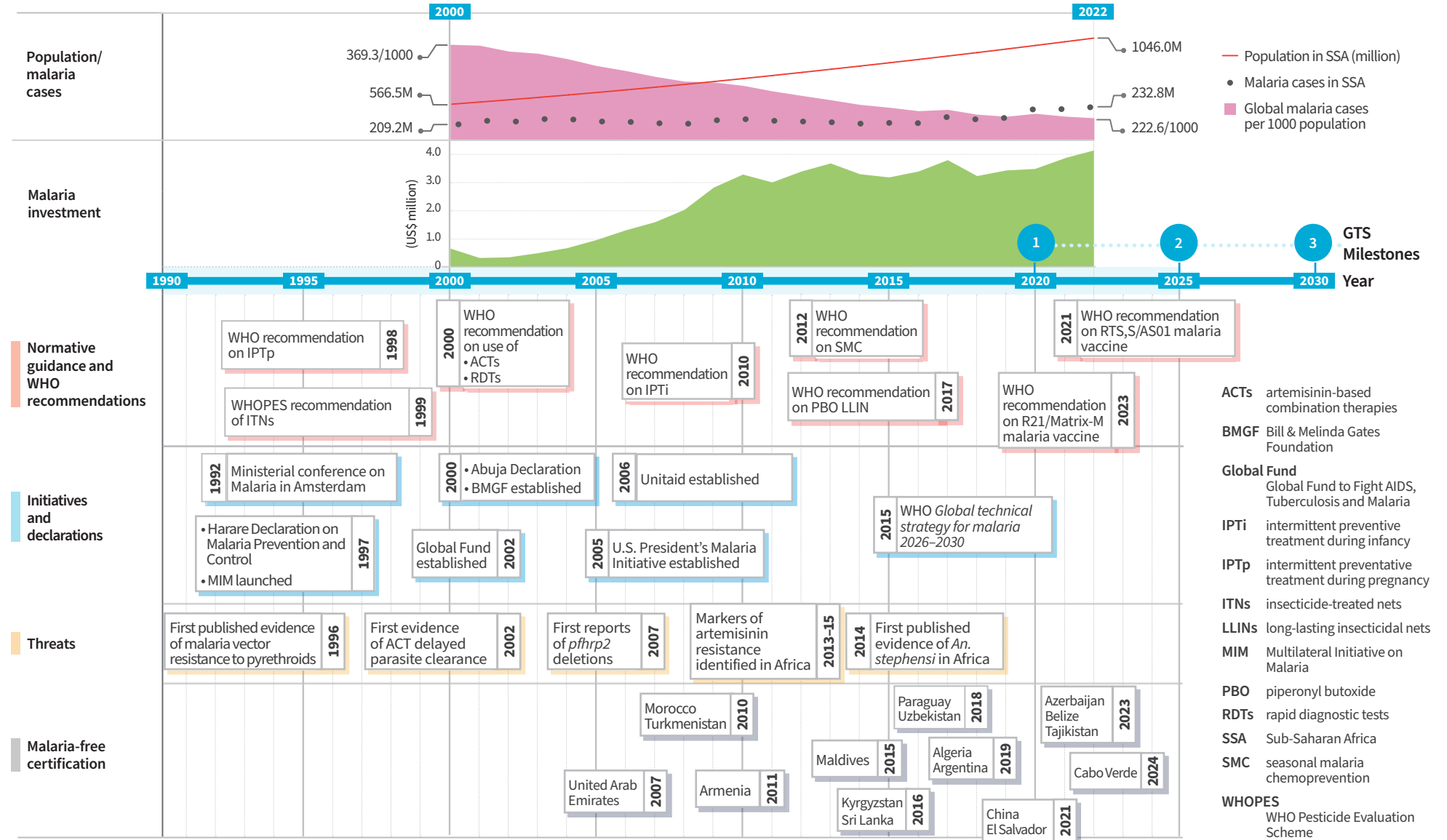


## Annex 1. Strategy development process

The Global Malaria Programme operational strategy was developed and refined by conducting nearly 50 interviews with different stakeholders. Interviews were 30-minutes long and focused on understanding each partner's perceptions of the Global Malaria Programme, including the role of the Programme in the ecosystem, areas in which the Programme should focus and/or expand its efforts, areas in which the Programme could limit its focus, and general priorities that should be reflected in the operational strategy. Specific questions were adapted to each stakeholder to ensure relevance.

# Annex 2. Recent history of the malaria response

Key milestones in the fight against malaria in the past two decades





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