Second focused review meeting by the Malaria Elimination Oversight Committee (MEOC)

Report of a virtual meeting, 28 June–1 July 2021
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1. **SUMMARY**

The second focused review meeting of the Malaria Elimination Oversight Committee (MEOC) was held on a virtual platform from 28 June through 1 July 2021. Eight countries (the Dominican Republic, Ecuador, Eswatini, Mexico, Sao Tome and Principe, Thailand, Timor-Leste and Vanuatu) were invited to present results of their malaria elimination self-audits for a focused review with MEOC members. All 10 members of the MEOC attended the meeting, along with national malaria programme (NMP) representatives from the focus countries; World Health Organization (WHO) country, regional, inter-country support team and headquarters staff; and Fund Portfolio Managers (FPMs) and Monitoring and Evaluation officers from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund).

Prior to the focused review, each country conducted a self-audit using the draft WHO Malaria Elimination Audit Tool (MEAT)\(^1\) to identify the programmatic areas in need of further strengthening. MEOC members and NMP representatives discussed the findings of the MEAT in specific country sessions. In a closed session, the MEOC developed both general and country-specific recommendations, which were presented to the NMPs on the final day of the meeting. The MEOC requested a report back from WHO before the end of 2021 on the status of the recommendations and whether they have been implemented.

In the process of conducting the self-audit using the MEAT, malaria programmes identified strengths and weaknesses that could help or hinder the achievement of their elimination goal. The results revealed that, of the 10 domains in the tool, countries were implementing diagnosis and case management activities better than activities in other domains. Important gaps were frequently identified across countries in the domains of “National strategy, coordination, policies and advocacy”, “Vector control and entomological surveillance”, and “Prevention of re-establishment of transmission”. Across different domains, the self-audits frequently identified weaknesses related to human resources, such as lack of human resources at both the national and subnational levels, lack of qualified staff in entomology and diagnosis, and the sustainability of human resources for the prevention of re-establishment. The MEOC found the MEAT to be a useful tool and recommended that it be refined, continuously tested, and used in a harmonized manner for programme reviews and other purposes.

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\(^1\) The draft tool is currently being refined and will be updated in due course. The current version can be obtained by emailing: malaria-elimination@who.int
The World Health Organization’s (WHO) Global technical strategy for malaria 2016–2030 (GTS) (1) was adopted by the World Health Assembly in May 2015. One of the three pillars of the GTS calls for all malaria-endemic countries to accelerate efforts towards elimination and attainment of malaria-free status. The GTS set a goal for 35 countries that had malaria in 2015 to eliminate malaria by 2030, with milestones of 10 countries by 2020, another 10 by 2025 and 15 by 2030. WHO managed the Elimination 2020 (E-2020) initiative from 2017 to 2020 and launched the E-2025 initiative in 2021 to accelerate national elimination efforts to fulfil national elimination goals and achieve the GTS milestones. The 25 countries nominated for the E-2025 initiative were: Belize, Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, Panama, Suriname (WHO Region of the Americas); the Islamic Republic of Iran, Saudi Arabia (WHO Eastern Mediterranean Region); Botswana, Cabo Verde, Comoros, Eswatini, Sao Tome and Principe, South Africa (WHO African Region); Bhutan, Democratic People’s Republic of Korea, Nepal, Thailand, Timor-Leste (WHO South-East Asia Region); Malaysia, Republic of Korea and Vanuatu (WHO Western Pacific Region).

The E-2025 countries are spread across five WHO regions. While the countries share some common challenges in eliminating malaria, each programme faces a unique set of problems and opportunities and operates at varying levels of programme implementation. As the E-2025 countries are at different points along the continuum of transmission, the approach to malaria elimination will differ from country to country, depending on the epidemiology of malaria in the country, strength of surveillance systems, levels of domestic and external funding, and political commitment.

In March 2017, the Malaria Elimination Oversight Committee (MEOC) was created to support achievement of national elimination goals by monitoring and guiding malaria elimination activities. The MEOC met several times between 2018 and 2019 and conducted a previous focused review of seven malaria-eliminating countries in 2019. At the 2019 focused review, the MEOC recommended that WHO establish a systematic approach to malaria elimination audits. In response, the WHO Global Malaria Programme created the Malaria Elimination Audit Tool (MEAT) based on WHO’s A framework for malaria elimination (2), Guidelines for malaria (3) and other WHO malaria guidance documents. The MEAT has 10 domains covering the key components of a malaria elimination strategy and programme to prevent re-establishment (Fig. 1). Each domain of the MEAT is further subdivided into essential elements, reflecting the major activities recommended within that domain (Fig. 1).

2 Terms of reference for the MEOC are available at: https://cdn.who.int/media/docs/default-source/malaria/elimination/meoc-tor.pdf
### Figure 1: Domains and elements of the Malaria Elimination Audit Tool

<table>
<thead>
<tr>
<th>DOMAIN</th>
<th>ELEMENTS</th>
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<tbody>
<tr>
<td>1. National strategy, coordination, policies and advocacy</td>
<td>1.1 National strategic elimination plan</td>
<td>6. Focus investigations, microplans and epidemic response</td>
<td>6.1 Definition</td>
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<td>1.2 Committee formation</td>
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<td>6.2 Classification</td>
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<td>1.3 Communications and advocacy</td>
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<td>6.3 Focus investigations</td>
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<td>1.4 National programme structure</td>
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<td>6.4 Foci response plans</td>
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<td>1.5 Community engagement</td>
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<td>6.5 Epidemics and outbreaks</td>
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<td>2. Stratification</td>
<td>2.1 National stratification maps</td>
<td>7. Vector control and entomological surveillance</td>
<td>7.1 Entomological surveillance</td>
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<td>2.2 Intervention targeting</td>
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<td>7.2 Vector species and behavior</td>
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<td>3. Diagnostics</td>
<td>3.1 Diagnostic network</td>
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<td>7.3 Insecticide susceptibility</td>
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<td>3.2 Microscopy quality assurance</td>
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<td>3.3 Microscopy quality control</td>
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<td>3.4 Rapid diagnostic test</td>
<td>8. Accelerating strategies</td>
<td>8.1 Population-wide parasite clearance</td>
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<td>4.5 Treatment for severe malaria</td>
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<td>9.5 Surveillance and response system</td>
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<td>9.6 Vector control and entomological surveillance</td>
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<td>4.7 Monitoring drug efficacy</td>
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<td>9.7 Multi sectoral collaboration</td>
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<td>4.8 Drug supply</td>
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<td>9.8 Inter-country information-sharing and functional border collaboration</td>
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<td>4.9 Private sector</td>
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<td>9.9 Raising awareness and provision of prevention strategies</td>
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<td>5. Surveillance</td>
<td>5.1 Guidelines and standard operating procedures</td>
<td>10. Documentation and records for certification of malaria elimination</td>
<td>Plans, reports and legislation</td>
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<td>5.2 Training</td>
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<td>Surveillance</td>
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<td>5.3 Passive case detection</td>
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<td>5.4 Private clinics</td>
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<td>Vector control</td>
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<td>5.6 Reactive case detection</td>
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<td>Prevention</td>
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<td>5.7 Surveillance coverage</td>
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<td>5.8 Case investigations</td>
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<td>5.9 Data analyses</td>
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<td>5.10 Bulletins</td>
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<td>5.11 Monitoring and evaluation</td>
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All E-2025 countries were asked to conduct an elimination audit using the MEAT in the second quarter of 2021 to identify programmatic strengths and weaknesses, with the aim of guiding the development of a milestone roadmap to elimination, certification and prevention of re-establishment. Eight countries from among the E-2025 were selected to participate in the 2021 MEOC focused review and present the results of their self-audit. The countries selected (Dominican Republic, Ecuador, Eswatini, Mexico, Sao Tome and Principe, Thailand, Timor-Leste and Vanuatu) were intended to be generally representative of the E-2025 countries with respect to the following factors: a) participation in the E-2020 or newly nominated for the E-2025; b) number of malaria cases; and c) regional diversity.

**General objective**

The purpose of the meeting was to convene the MEOC and ministry of health (MoH) staff from selected countries in the E-2025 to review the results of their self-audits, identify programmatic areas in need of strengthening, and enable the MEOC to identify any potential overarching themes that present opportunities for or threats to elimination.

The specific objectives of the meeting were to:

- review the progress towards malaria elimination in eight selected E-2025 countries;
- analyse the results of self-audits by national elimination programmes to identify weaknesses and strengths;
- jointly develop solutions to major challenges or barriers to elimination;
- share lessons learned and experiences among eliminating countries;
- summarize experiences and lessons learned from the self-audits, and improve the rigour and objectivity of the tool and process.
3. METHOD OF WORK

Before the meeting, NMPs were asked to complete the MEAT and develop recommendations to strengthen their programme based on the results. When using the tool, not every country needs to assess all 10 domains; for example, if a country is not implementing an accelerator strategy such as mass drug administration (MDA), section 8 will not be needed. Furthermore, countries still working towards elimination of malaria may not find section 9 on prevention of re-establishment to be relevant. For each element, one or more milestones indicate progress towards full implementation of that element. In the process of conducting the self-audit, NMPs reflect on the element and its milestones, and then record the current status of their programme under the box requesting “description of the current status of milestone”. The “recommendations” box provides an opportunity to recommend areas for improvement to help the country achieve the milestone. The implementation status of each element is indicated by a score, which reflects the programme’s level of advancement and capacity to institutionalize technical strategies in a sustainable manner. Scoring is applicable to most, but not all, elements; those elements that do not lend themselves to a score are indicated by a 5, “Not applicable” (Fig. 2).

Figure 2: Status codes for milestones in the Malaria Elimination Audit Tool

<table>
<thead>
<tr>
<th>STATUS CODES</th>
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<tbody>
<tr>
<td>1 – Not yet implemented</td>
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<td>2 – Limited implementation</td>
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<td>3 – Expanded implementation</td>
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<tr>
<td>4 – Fully implemented</td>
</tr>
<tr>
<td>5 – Not applicable</td>
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</table>

The results of the eight participating countries’ self-audits were sent to MEOC members in advance of the meeting. Each MEOC member was asked to review a specific domain in the MEAT for all eight countries and make specific comments for each country. In addition, each member was asked to review the full results for two countries. Comments were received by the Secretariat before the first day of the meeting and combined into a database that could be filtered by domain or country.

On the first day of the meeting, MEOC members briefly discussed their findings from each domain and then clarified the agenda for the subsequent days. For time zone reasons, MEOC members and countries were divided into two groups: eastern and western. On day 2, separate sessions were held for the four eastern and four western countries. In each session, after welcoming the MEOC members, NMPs, WHO staff and observers, and performing self-introductions, a recording of a background presentation was played for each country. Breakout rooms were used to conduct two simultaneous reviews – a process that was then repeated for the next two countries. Simultaneous interpretation in English, Spanish and Portuguese was provided for the western session.

On the third day, MEOC members and the WHO Secretariat met to finalize general and country-specific recommendations, which were presented to countries on the fourth day in separate sessions for the eastern and western groups. Both sessions on the fourth day were closed by the Director of the Global Malaria Programme, Dr Pedro Alonso.
### 4. OVERVIEW OF RESULTS OF THE MALARIA ELIMINATION AUDITS

All eight countries rated elements in domains 1–7. Only one country used an accelerating strategy for elimination and five countries assessed the domain for prevention of re-establishment. The average scores for each element from the eight countries are summarized in Fig. 3.

**Figure 3: Average scores of elements in the Malaria Elimination Audit Tool**

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<thead>
<tr>
<th>DOMAIN</th>
<th>ELEMENTS</th>
<th>AVERAGE</th>
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<tr>
<td>1. National strategy, coordination, policies and advocacy</td>
<td>11 National strategic elimination plan</td>
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<td>1.2 Committee formation</td>
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<td>1.3 Communications and advocacy</td>
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<td>1.4 National programme structure</td>
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<td></td>
<td>1.5 Community engagement</td>
<td>2.8</td>
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<td>2. Stratification</td>
<td>21 National stratification</td>
<td>2.9</td>
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<td></td>
<td>2.2 Intervention targeting</td>
<td>3.6</td>
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<td>3. Diagnostics</td>
<td>31 Diagnostic network</td>
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<td>3.2 Microscopy quality assurance</td>
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<td>3.3 Microscopy quality control</td>
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<td>3.4 Rapid diagnostic test</td>
<td>3.4</td>
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<td>4. Case Management</td>
<td>41 Guidelines</td>
<td>3.9</td>
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<td>4.2 Training</td>
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<td>4.3 Referral system</td>
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<td>4.4 Treatment for uncomplicated malaria infections</td>
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<td>4.8 Drug supply</td>
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<td>4.9 Private sector</td>
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<tr>
<td>5. Surveillance</td>
<td>51 Guidelines and standard operating procedures</td>
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<td>5.2 Training</td>
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<td>5.5 Proactive case detection</td>
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<td>5.6 Reactive case detection</td>
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<td>5. Surveillance (continued)</td>
<td>5.7 Surveillance coverage</td>
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<td>5.8 Case investigations</td>
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<td>5.11 Monitoring and evaluation</td>
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<td>6. Focus investigations, microplans and epidemic response</td>
<td>6.1 Definition</td>
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<td>6.5 Epidemics and outbreaks</td>
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<td>7. Vector control and entomological surveillance</td>
<td>7.1 Entomological surveillance</td>
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<td>9.2 National programme structure</td>
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<td>9.5 Surveillance and response system</td>
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<td>9.8 Inter-country information-sharing and functional border collaboration</td>
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<td>9.9 Raising awareness and provision of prevention strategies</td>
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The MEOC raised concerns that some countries lacked human resources at both the national and subnational levels, or lacked qualified personnel in key areas such as entomological surveillance and diagnostics. The Committee noted that the elimination strategic plan had yet to be updated or officially endorsed in a few countries and that more attention and action were needed for community engagement, advocacy and communication. Most countries appeared to have established appropriate case management plans and were delivering training in case management. However, several countries were experiencing major challenges in establishing full patient follow-up to ensure complete cure; monitoring drug efficacy; monitoring drug supply; and engaging with the private sector to ensure adherence to established guidelines. The Committee also noted that few countries were using glucose-6-phosphate dehydrogenase (G6PD) status to guide primaquine treatment according to WHO guidelines. A few eliminating countries reported limitations in their diagnostic capacity due to lack of equipment or qualified staff in laboratories. Engagement with the private sector to report cases to the surveillance system, and the country’s capacity for data analysis, monitoring and evaluation were identified as areas for improvement in several countries. Countries varied significantly in their level of implementation of focus investigations, microplans and epidemic response. Nearly all programmes identified gaps in the implementation of vector control. It appeared that a shortage of trained entomologists and limited capacity to implement entomological surveillance was common, thus contributing to the lack of entomological data in countries, such as updated data on anopheline behaviour. Few countries were systematically monitoring insecticide resistance, and the quality of vector control was often not evaluated or monitored. Five countries assessed their programme to prevent re-establishment, identifying outstanding issues that included the sustainability of human resources, the integration of services versus maintaining adequate malaria expertise in challenging areas, and the challenges of cross-border collaboration and inter-country information sharing.

In general, countries that had joined the E-2025 without having been part of the E-2020 (except for Thailand) scored themselves lower on most of the elements compared to those countries that were transitioning from the E-2020 initiative. Across the eight countries, several critical elements were reported to be well implemented, with average scores above 3. These included the development of guidelines, such as for case management, treatment for severe malaria, guidelines and standard operating procedures (SOPs) for surveillance, and the definition of focus. Elements that had an average score below 2.5 and thus needed further improvement in most countries were: the formation of an independent malaria elimination advisory committee, communications and advocacy, monitoring of drug efficacy, development of a national plan for prevention of re-establishment, inter-country information sharing and functional border collaboration.
5. SUMMARY OF COUNTRY BACKGROUND PRESENTATIONS, MEAT RESULTS AND MEOC RECOMMENDATIONS TO COUNTRIES

Presentations from each country will be briefly summarized below in the order they were given to the Committee.

5.1 Vanuatu

Figure 4: Number of malaria cases in Vanuatu, 2000–2020

Vanuatu, a country newly nominated for the E-2025, is an archipelago in the south Pacific consisting of 83 islands. Since 2017, the country has reported fewer than 2000 indigenous cases (see Fig. 4). In 2020, the country reported 502 malaria cases, of which 345 were investigated and 14 (4%) were classified as imported. Out of the total population of 302,000, approximately 33% live in higher risk areas, 55% in lower risk areas and 12% in malaria-free areas. Most cases occur on three islands (Santo, Malekula and Epi), which are in three different provinces (Samna, Malampa and Shefa). The three remaining provinces have zero or very few indigenous cases.

Vanuatu hired a consultant to support the malaria elimination audit by assembling and reviewing various documents, including the National Strategic Plan for Malaria Elimination (2021–2026), 2020 Malaria Annual Report, 2018 Malaria Programme Review, and various elimination-related protocols. Each section of the MEAT was reviewed and discussed by the programme coordinator, WHO technical officers at national and regional levels, and the consultant, and then further reviewed by other programme staff during the annual review and planning meeting held in June 2021. The final draft was circulated to key partners for their comments.

The two domains in which Vanuatu scored itself the lowest were “stratification” and “focus investigation, microplans and epidemic response”. The national stratification map is not up-to-date, but is targeted for completion by the third quarter of 2021. The country is considering redefining its foci in an update to the elimination guidelines. Outside of these domains, Vanuatu rated itself as “not yet implementing” drug efficacy monitoring to ensure the effectiveness of its current first-line treatment. The NMP
recommended developing a protocol for operational research on integrated drug efficacy surveillance. In addition, the NMP identified two critical technical activities as follow-up actions after the audit: ensuring the availability of guidelines that are aligned with WHO recommendations and adapted to the local context; and completing the documentation of programme activities.

The fact that two provinces, Tafea and Penama, successfully achieved zero indigenous malaria cases in 2020 demonstrates the “know-how” of the malaria team in Vanuatu. Nevertheless, the MEOC was concerned about the current gap in human resources and recent declines in domestic funding for malaria elimination at both the national and provincial levels, partly due to the impact of COVID-19. The MEOC urged such gaps to be filled as soon as possible so that the NMP has the capacity and resources to carry out malaria activities in a rapid manner, especially at the subnational level. While a Malaria Elimination Advisory Group comprising MoH and development partners has been functioning since early 2020, the MEOC emphasized the importance of ensuring that an intersectoral Malaria Elimination Steering Committee is established. The terms of reference for the committee have been developed. Establishment of this committee will serve as a mechanism for directing coordination, planning, resource allocation and intervention implementation.

**Recommendations from the MEOC**

1. Include political leadership from the office of the Prime Minister on the Malaria Elimination Steering Committee so that important decisions, needs and measures carry the authority required to ensure intersectoral collaboration and involvement in malaria elimination; the health sector alone cannot achieve malaria elimination, and political leadership and engagement are critical.

2. The Government of Vanuatu and development partners should ensure the availability of adequate financial resources in order to fill critical human resources vacancies and provide surge support, and in order to fund operational activities so that adequate and timely case and focus investigations and response and health promotion activities can be conducted, especially in remote areas.

3. As Vanuatu is a nation of multiple islands with varying transmission intensities, inter-island movement puts receptive islands where malaria has been eliminated at risk of re-establishment of transmission. Surveillance should be strengthened to identify cases in people arriving to malaria-free locations from endemic islands and areas, including returning residents and those attending large gatherings such as religious or sporting events.

4. Operational research studies are highly recommended to better understand the behaviour of the malaria vectors to enable optimal targeting of insecticide spraying.

5. Prevention of re-establishment should be strengthened by documenting processes already being undertaken in some provinces (e.g. in Torba and Tafea) in order to support roll-out to other provinces.

6. Systematic documentation and record-keeping of the activities undertaken by the MoH should be maintained for future reference and action, and to support malaria-free certification.

7. Improve the stratification plan and strengthen the capacity of case and foci classification through support from the WHO team. Update current operational guidelines for malaria elimination to align with WHO guidance.

8. Implement the policy on the use of primaquine and G6PD testing, and monitor the implementation.
5.2 Thailand

Figure 5: Number of malaria cases by classification in Thailand, 2015–2020

Thailand, a newly nominated E-2025 country, has experienced steady reductions in indigenous cases since 2016, particularly with respect to *P. falciparum*, which currently represents only 3.4% of indigenous cases (see Fig. 5). The reduction in cases is also reflected in the lower number of districts with active foci, declining from 109 to 85 between 2018 and 2020. Most of the remaining affected districts are located along the borders with Cambodia, Malaysia and Myanmar.

The Thailand NMP used a variety of data sources to complete its audit, including the country’s main malaria surveillance platform, the mid-term programme review, routine monitoring and evaluation reports, subnational elimination verification reports and results of the 2019–2020 Thailand malaria survey. The results of the MEAT were reviewed and discussed at the national level with various units within the NMP, WHO-Thailand and experts from academia and institutes. The audit was further reviewed at the subnational level by provincial health offices and relevant agencies.

The two domains of the audit in which Thailand scored the lowest were “case management” and “prevention of re-establishment”. Within the “case management” domain, Thailand recognized the complexity of developing a system to prevent stockouts of antimalarial medicines and diagnostic supplies while some vertical programme aspects remain. Thailand scored the level of programmatic implementation as “fully implemented” for most elements across the domains.

The remaining transmission foci in Thailand are concentrated in 82 districts, mostly close to international borders. The 1–3–7 strategy is the main strategy for elimination, but there are challenges in case reporting and investigation in areas with persistent transmission. The programme recognized the need to increase financial support from the subdistrict organization initiative to further improve surveillance and response at the local level. The programme is trying new approaches such as MDA to accelerate malaria elimination. Thailand has been actively conducting operational research for malaria elimination and is encouraged to share its results with broader international communities to inform policy-making. As part of the Mekong Malaria Elimination initiative, Thailand has benefited from collaboration with other countries in the region, but the situation in border areas remains a challenge to achieving the elimination goal. The MEOC suggested that Thailand contextualize the border issues, continuously monitor the situation, and continue to seek collaboration and support.
from international parties and neighbouring countries to identify the opportunities and solutions to address the border issues.

**Recommendations from the MEOC**

1. Noting that there is a need to accelerate malaria elimination in Thailand, it is recommended that implementation of the elimination programme be reinforced.

2. Ensure that the operational plans of different agencies and implementing partners are better aligned with the National Strategic Plan.

3. Ensure that the Malaria Elimination Steering Committee conducts stringent monitoring of elimination activities at both the field and central levels of the programme, and evaluates the effectiveness of the programme’s activities, keeping clear sight on the timelines and national elimination targets.

4. Acknowledging the integration of malaria services into the general health system as government policy, it should be ensured that districts with persistent foci of transmission have dedicated malaria staff and conduct malaria-specific operations. Funding for essential staff categories such as malaria posts, which are currently supported by Global Fund grants, should be sustained through local government budgets until elimination is achieved and integration is implemented.

5. Ensure that classification of new cases is verified and validated by an independent committee of local experts.

6. Consider the recommendations made by the Evidence Review Group on border malaria, and continuously monitor the situation in border areas so that strategies and actions can be taken and adjusted accordingly. Mitigate the potential risk to malaria elimination posed by political unrest in Myanmar through support from international agencies, bilateral government approaches, partners and others.

7. Consider more intensive and innovative strategies to clear active foci based on the results of current pilots/studies in Thailand, lessons learned from neighbouring countries and upcoming recommendations from WHO.
5.3 Timor-Leste

Timor-Leste interrupted malaria transmission as an E-2020 country, but encountered a setback in 2020 during the COVID-19 pandemic with an outbreak that led to indigenous transmission (see Fig. 6). In Timor-Leste, both \textit{P. falciparum} and \textit{P. vivax} are transmitted, although the former has been more frequent in recent years. Prior to interruption of transmission in 2018, most of Timor-Leste’s active foci were along its borders with West Timor, Indonesia. The most recent outbreak in 2020 occurred in Oecusse along the border with Indonesia in an area that had not reported transmission in the previous two years.

Timor-Leste conducted its audit through virtual meetings among the NMP manager, senior staff members, international experts, and WHO regional and country staff. All available policy guidance, strategic plans, frameworks, reports, databases, guidelines, protocols and scientific articles were consulted. Because the country reported only two indigenous and four introduced cases in 2020, the NMP is following a National Strategic Plan to prevent re-establishment and is beginning to prepare the documentation required for certification.

As is to be expected from a programme close to elimination, Timor-Leste scored the level of implementation of its programme very high. Only the domains of “national strategy, coordination, policies and advocacy”, “diagnostics” and “prevention of re-establishment” had average scores less than full implementation. Under the first domain, Timor-Leste has yet to establish an independent national malaria advisory committee, although terms of reference have been prepared and submitted for approval. For “prevention of re-establishment”, Timor-Leste assessed that its efforts to strengthen multisectoral collaboration had not been fully implemented, as the MoH alone was unlikely to be able to motivate collaboration among other ministries or the corporate sector.

Timor-Leste is facing challenges in preventing the re-establishment of malaria transmission after reaching zero indigenous cases in 2018. The recent outbreak in the border area has highlighted the importance of maintaining a high-quality
surveillance and response system in high-risk areas so that cases can be detected and the necessary response, including vector control, can be deployed rapidly. While Timor-Leste continues its cross-border collaboration with West Timor, the programme also recognizes the need to strengthen intersectoral collaboration within the country to ensure that interventions are better targeted and rapidly implemented. The sustainability of necessary financial and human resources for the prevention of re-establishment remains a challenge. Assessment work is ongoing to inform the decision-making on the strategy to integrate malaria activities into other programmes. The recommendations made by the MEOC during the focused review meeting in 2019 remain valid. Timor-Leste is encouraged to continue improving the quality of its malaria services and keeping documentation to prepare for certification.

Recommendations from the MEOC

1. The malaria control officers currently funded externally should be funded by the government, so that expertise is not lost after elimination and prevention of re-establishment can be sustained. A financial and human resources plan is a critical priority and should include the integration of malaria activities with other vector-borne disease programmes. Update the national stratification, incorporating elements of receptivity and risk of importation and use it to inform the targeting of interventions.

2. Recent outbreaks in border regions provide important lessons as Timor-Leste is working towards malaria elimination. It is recommended that Timor-Leste strengthen rapid detection, investigation and response activities in remote areas; reinforce the collaboration with non-health sectors to target malaria interventions to high-risk populations such as undocumented migrants; and continue collaborating in border areas with West Timor on data and information sharing, with support from international organizations, the Global Fund and others.

3. Where access to health care is not optimal, ensure that the current community volunteer network is functional so that cases are detected and responded to rapidly. To ensure the maintenance of high-quality surveillance and response, frequent monitoring and evaluation, especially in high-risk border areas, is strongly recommended.

4. Continue to improve community engagement through innovative strategies and other approaches to ensure that malaria interventions such as vector control are implemented in vulnerable populations in receptive areas.

5. Continue to prepare the documentation and planning required for WHO certification.
5.4 Eswatini

Figure 7: Number of malaria cases by classification in Eswatini, 2016–2020

Eswatini participated in the E-2020 initiative and has reported fewer than 1000 indigenous cases since 2010 (see Fig. 7). Most cases are due to *P. falciparum*, and the eastern half of the country has more active foci than the western half. Since the beginning of 2021, the number of malaria cases has increased compared to previous years, particularly during the month of April.

Eswatini’s elimination audit was conducted from November 2020 through March 2021 with the assistance of a WHO consultant. The tool was reviewed by the NMP manager and senior staff, after which separate working sessions were conducted with various NMP officers for the different domains. The working groups reviewed strategic plans, national guidelines, reports and databases, and conducted field visits to observe the situation in district health facilities. Several feedback sessions were held to review the findings with the NMP and partners.

Eswatini’s lowest average audit scores were among elements in the domains of “stratification” and “focus investigations, microplans and epidemic response”. The last malaria stratification map was produced in 2009 and limited to the regional level. The NMP recognizes the need to update the map using smaller administrative units. The update should take place in July 2021, depending on the availability of funds; strategies will be targeted to strata depending on their malaria characteristics and other factors. The focus investigation manual needs to be updated in line with the latest WHO guidance. Individual elements outside of those two domains that were scored as “limited implementation” included patient follow-up and monitoring of drug efficacy. The programme is planning to develop a reminder system from mid-2021 to remind surveillance agents to follow up cases at the end of treatment. A new programme to institute integrated drug efficacy surveillance is set to begin in mid-2021.

Although Eswatini scored itself as having expanded or full implementation of its malaria elimination committee, the MEOC suggested that there needed to be high-level political representation to ensure that other sectors are convened and coordinated in a multisectoral response. The discussion with the MEOC also focused on the complex situation related to the farming of illegal crops. While these
communities are often affected by malaria, the illegal nature of their activities and their frequent stays in temporary housing near the fields complicate the delivery of interventions by the NMP.

**Recommendations from the MEOC**

1. The health sector alone cannot achieve malaria elimination: political leadership and engagement are key. Inclusion of high-level political leadership on the malaria elimination advisory committee is recommended so that important decisions, needs and measures carry the authority required to ensure intersectoral collaboration and involvement in malaria elimination. Explore options for using the End Malaria Council as an independent advisory committee to provide external and objective oversight to elimination, given that the Permanent Secretary under the MoH is already part of that board.

2. Consider a multisectoral task force to explore options for preventing or treating malaria among populations engaged in illegal activities.

3. Further leverage the support of regional initiatives (e.g. Elimination Eight Initiative [E8], MOSASWA initiative) to accelerate malaria elimination in Eswatini.

4. Urgently update the stratification map and appropriately target interventions to the strata.

5. Complete the nomination of a national core group of highly competent microscopists to support a functional diagnostics quality assurance programme.

6. Improve the follow-up of patients to ensure complete cure and facilitate the monitoring of drug efficacy.

7. Conduct a systematic surveillance assessment to inform the update to the surveillance manual.

8. WHO should support Eswatini to develop SOPs for classifying challenging cases.

9. The programme should document all milestones and activities and keep records so that it can prove to the certification panel what has occurred.
5.5 Sao Tome and Principe

Sao Tome and Principe is a nation composed of two islands off the equatorial coast of Central Africa. The country was recently nominated to join the E-2025 given its progress towards malaria elimination, reporting fewer than 3000 indigenous cases since 2014 (see Fig. 8). All of its cases are due to *P. falciparum*. Since October 2019, cases have only occurred on Sao Tome, whereas Principe has reported zero indigenous cases since responding to an outbreak from January to September 2019.

Sao Tome and Principe gathered all guidance documents, including the National Strategic Plan, the monitoring and evaluation plan and case management guidelines, and consulted district officials during the audit process. An audit validation meeting was undertaken by the NMP with participation from the Ministry of Defence and Directorate of Land Transport.

The domains of the MEAT scored lowest by Sao Tome and Principe were “national strategy, coordination, policies and advocacy”, “stratification”, “case management” and “surveillance”. The country does not yet have an independent national elimination advisory committee with high-level political representation to help provide an objective and multisectoral view of malaria elimination. The last stratification map was completed more than a decade ago and urgently needs to be updated and linked to the interventions being implemented. The NMP scored multiple individual elements as “not yet implemented”, including microscopy quality assurance, a severe malaria referral system and insecticide susceptibility testing.

The MEOC appreciated the openness and honesty of the malaria programme in conducting the elimination self-audit. As a result of this exercise, many gaps and weakness were identified. One major challenge identified was the significant decrease in funds from both domestic and donor sources. The MEOC was concerned that with reduced funding, the programme will be unable to address important human resource insufficiencies at both the district and national level, and thus implement the recommendations made by the audit. The country should strengthen its leadership in advocating for the malaria programme and its activities at the highest political level and with donor agencies, while setting priorities for improvement. Sao Tome and Principe has gained successful experience in elimination from its own practice. The discussion suggested that the island of Principe had achieved elimination thanks to the stronger government leadership and better implementation of interventions.
The successful implementation of MDA had reduced transmission and accelerated elimination in targeted areas. The experiences and lessons learned from malaria elimination in Principe, including the use of MDA, need to be critically evaluated to inform future efforts to accelerate elimination in the country. Sao Tome and Principe should further demonstrate its political will to achieve elimination; improve the effectiveness of coordination with partners and donors; and improve the understanding of the role of the private sector in surveillance to achieve a common goal.

Recommendations from the MEOC

1. Prioritize the key findings and recommendations from the self-audit with a view to better understanding immediate and subsequent actions; develop a clear plan to implement the recommendations and integrate the recommendations into a budgeted and costed plan, while also ensuring that the updated priorities are funded and reflected in district strategic and operational plans.

2. The country should encourage donors and partners to buy into the National Strategic Plan, and the MoH should assist the NMP in coordinating its support and activities.

3. In light of the reported declining trend in both domestic and partner funding, and its implications for future programming and the need to ensure sustainability, additional measures and sources of funding need to be identified and mobilized. A fully costed overall updated plan should be developed and used as a planning and advocacy tool. The plan should incorporate the costs of implementing all the priority recommendations that the programme decides to adopt as a result of the MEAT.

4. Establish a National Reference Laboratory as part of an overall laboratory quality assurance system and develop a comprehensive, capacity-building plan, including external competency assessments for microscopists at all levels of the health system.

5. Important human resource capacity gaps were identified and need to be addressed, especially in the areas of microscopy, diagnostics quality assurance and entomological surveillance. NMP staff need to be sufficiently capacitated to ensure the effective running of a malaria elimination programme.

6. Update the national stratification map, incorporating elements of receptivity and risk of importation, and use it to inform the targeting of interventions.

7. Consider measures to strengthen surveillance and data quality, including case classification and foci mapping.

8. Revitalize the National Malaria Elimination Commission, chaired by the President and put in place by the Independent Malaria Elimination Advisory Committee (already created but not yet activated).

9. Explore further measures to clarify the role and scope of MDA as part of the country’s elimination strategy. Specifically, decide whether MDA should be restricted to use as a tool for outbreak control (in which case definitions of what triggers its use should be developed) or whether it should be employed as a general accelerator strategy once issues around community engagement and drug selection have been resolved.

10. In order to ensure that all malaria cases are being detected and reported in the surveillance system, the NMP should improve its understanding of the extent of the private sector in Sao Tome and Principe and the role it plays in malaria case management and surveillance. Once identified, private practitioners should be included in key trainings and the overall surveillance system.
5.6 Ecuador

Figure 9: Number of malaria cases in Ecuador, 2014–2020

Ecuador saw an increase in the number of indigenous cases over the period it participated in the E-2020 initiative – from 1155 in 2017 to 1920 in 2020 (see Fig. 9). Most indigenous cases (88%) are due to *P. vivax*, with the remainder caused by *P. falciparum* (12%). The population at risk is estimated to be approximately 7.3 million, with the Amazon region bordering Peru and the northern coastal region bordering Colombia at greatest risk. In 2018, Ecuador began stratifying its transmission foci and implementing the diagnosis-treatment-investigation and response strategy developed by the Pan American Health Organization (PAHO).

The National Directorate of Prevention and Control Strategy (DNEPC), the National Directorate of Epidemiologic Surveillance (DNVE) and the National Institute of Research in Public Health (INSPI) held virtual meetings with the country’s nine zonal health coordinating offices and their representatives in the malaria-affected districts to review and analyse each element of the MEAT with the assistance of PAHO. The documents reviewed included the 2021–2025 National Strategic Plan, the national guidelines for surveillance, laboratory and entomology, and the databases of both the Malaria Epidemiological Surveillance System (SIVEMAE) and the Integrated Epidemiological Surveillance System (SIVE-alert). After the information was consolidated, it was reviewed by the national directors of the DNEPC, DNVE and INSPI, and by the Malaria Elimination Technical Committee.

Ecuador scored itself lowest in the domains of “surveillance”, “focus investigations, microplans and epidemic response” and “vector control and entomological surveillance”. The NMP noted the need to complete the update of the surveillance guidelines and formalize the guidance around proactive and reactive case detection. Entomological surveillance needs to be carried out on a routine basis in areas with active and residual non-active malaria foci. Other elements outside of those domains that were judged to be of “limited implementation” were community participation (with health promoters diagnosing and treating cases), treatment of cases due to stockouts of drugs, and monitoring of drug efficacy due to the difficult access to some locations and high degree of patient mobility.

The MEOC noted that Ecuador had managed to maintain certain levels of malaria interventions despite challenges, including the fragmentation of malaria interventions at district level caused by the transition from a vertical malaria programme to a horizontal one, reduced MoH personnel due to budget cuts during the period of
austerity and the impact of the COVID-19 pandemic. With the new government taking power in 2021, the MoH should be sensitized on the malaria situation and renew its commitment to elimination. Malaria elimination could become a flagship project in Ecuador through support from a high-level intersectoral commission. As Ecuador’s three malaria areas are distinct in terms of their vectors and socioeconomic environments, interventions should be tailored to the context. Ecuador still faces a lot of challenges to elimination, including the lack of professionals such as microscopists and vector control staff. At the same time, the country can build on its own successful experiences, such as its response to an outbreak in Santa Elena in 2019–2020 and the community volunteers in hotspots like Morona Santiago and Pastaza provinces, in order to continue its efforts towards achieving elimination.

**Recommendations from the MEOC**

1. Ecuador has been very close to elimination in the past. As the malaria problem is currently confined to specific territories, malaria elimination is a feasible goal in Ecuador and should be considered a priority in public health. The great potential of Ecuador to eliminate malaria should be communicated to high-level decision-makers so that the political leadership is engaged and committed to elimination.

2. Increased political will should be expressed through the allocation of sufficient financial and human resources for malaria control and elimination in the country. The country might consider mobilizing additional funding from strategic partners, private sector, financing institutions and donors. The MEOC stands ready to support the NMP in this endeavour through an advocacy visit to the country if necessary.

3. The NMP should obtain official endorsement and publication of the National Elimination Strategic Plan.

4. Review regulatory and operational functions assigned to different actors of the health system after the integration of the programme to ensure that they are appropriate and all malaria interventions are implemented properly.

5. Ensure continuous diagnosis and treatment at the local level by improving and sustaining procurement and distribution; measures should be taken to prevent the stockouts that occurred in 2020 from happening.

6. Support the health promoters’ strategy to ensure adequate diagnosis and treatment in foci with low coverage of health services. Special effort is needed to use health promoters for diagnosis with rapid diagnostic tests and for treatment in remote communities of the Amazonian areas.

7. Consolidate the quality assurance system through the implementation of the roadmap that has been elaborated and creatively solve the challenges that might appear, such as the disruption of the postal service.

8. Address the continuous diversion of laboratory and vector control staff to actions other than malaria in order to ensure there is sufficient capacitated malaria personnel.

9. Differentiate the interventions in the three malaria-endemic areas, and share and expand the good practice of community volunteers.

10. Develop coordinated action to address cross-border foci with Peru and Colombia.

11. Assure the execution of the micropans for malaria foci and produce progress reports.
5.7 Dominican Republic

**Figure 10: Number of malaria cases in the Dominican Republic, 2015–2020**

The Dominican Republic has been recently nominated for the E-2025. Occupying the eastern two-thirds of the island of Hispaniola, the Dominican Republic has recorded fewer than 2000 indigenous cases annually since 2011, almost all of them (>99%) due to *P. falciparum* (see Fig. 10). In the past few years, transmission has been interrupted in the cross-border focus in Dajabon (along the border with Haiti). Most cases (~80%) are being reported from the urban foci in Greater Santo Domingo.

The NMP of the Dominican Republic, located within the Ministry of Public Health, carried out the self-audit jointly with the clinical management team of the National Health Service and the epidemiological surveillance unit of the General Directorate of Epidemiology. Several workshops were held to analyze the current guidelines, the actions being undertaken by different institutions within the health system and the gaps impeding progress towards elimination. Once all information had been consolidated in the tool, it was finalized by malaria focal points.

The Dominican Republic scored itself lowest in the domains of “national strategy, coordination, policies and advocacy”, “surveillance”, “focus investigations, microplans and epidemic response” and “vector control and entomological surveillance”. The country has no current malaria elimination plan, but is developing a national malaria elimination strategy with the assistance of PAHO. Additionally, the country plans to form a national malaria advisory committee by early 2022. The country will work towards updating its malaria surveillance protocols, and strengthening case and focus investigations and data analysis. Within vector control, entomological surveillance will be supported by PAHO to establish a surveillance network in 2022. Outside of these domains, the Dominican Republic scored the following as “not yet implemented”: the targeting of interventions linked to its stratification map, patient follow-up, monitoring of drug efficacy and drug supply.

The decentralization of the health system in the Dominican Republic distributed the functions of the NMP among several governmental institutions at the national and provincial levels. However, the roles and responsibilities of the various departments and levels (particularly in terms of malaria) have not been clearly defined, with low involvement of the health care services in malaria. The development of the National Strategic Plan presents an opportunity to clarify the functions of the various units related to malaria elimination, including the General Directorate of Epidemiology.
The MEOC noted the increasing focalization of malaria cases to the area of Greater Santo Domingo. Currently, approximately 80% of cases occur in Greater Santo Domingo in two foci of Ciénaga and Los Tres Brazos. The concentration of malaria transmission in an urban area is unusual and will require additional attention and focus.

**Recommendations from the MEOC**

1. Clarify the management (roles and responsibilities) and budget of the malaria elimination programme, given that multiple institutions are involved with various responsibilities.

2. Complete the National Elimination Strategic Plan, addressing the gaps identified by the MEAT and the need to redefine roles and responsibilities in light of the recent decentralization of the health system.

3. Based on the stratification established by the country, develop differentiated elimination strategies that recognize the specific social, epidemiological and environmental challenges in the three main malaria-endemic areas. Realistic plans for programmatic activities with clear timelines should be included.

4. The response in the urban foci of Greater Santo Domingo should be financed urgently, possibly through special funding from partners (Global Fund, Regional Initiative to Eliminate Malaria [IREM], etc.) so that actions can be taken immediately. Ensuring health providers’ engagement and community participation in the malaria elimination programme is important to achieve impact.

5. Monitor, maintain and develop human resource capacity at all levels.
### 5.8 Mexico

**Figure 11: Number of malaria cases in Mexico, 2015–2020**

Mexico was one of the E-2020 countries. The country saw a steady decline in indigenous malaria cases from the late 1990s and reported 356 indigenous cases in 2020. All of the cases in 2020 were due to *P. vivax*. Currently, 24 of the 32 states in Mexico are free of indigenous malaria transmission; two areas of active transmission remain in the south-east (Chiapas, Campeche, Tabasco and Quintana Roo) and northern (Chihuahua, Nayarit, Sinaloa and Sonora) regions of the country.

The national institutions responsible for epidemiological surveillance, case management, health promotion and entomological surveillance conducted the audit with the assistance of PAHO. Mexico scored itself lowest in the domains of "diagnostics" and "national strategy, coordination, policies and advocacy". In other domains, Mexico has "not yet implemented" a referral system for severe malaria cases, and management of drug supply. The country does not yet count on an external advisory committee, but plans to create one in 2021. The use of rapid diagnostic tests is not yet operationalized within the country’s epidemiological and laboratory surveillance regulations, and funding for their purchase and use needs to be secured. The criteria for care and referral of patients with severe malaria are being reviewed. Outside these domains, the country noted “limited implementation” with respect to insecticide susceptibility monitoring, as it is working to develop its insectary and maintain colonies of susceptible strains of mosquito vectors.

The MEOC noted that Mexico has made good progress towards malaria elimination. The programme recognizes the importance of maintaining technical capacity and has invested in expanding its training programme. In addition to routine and refresher training, staff are provided training based on the needs and gaps detected. The country has worked to improve the effectiveness of coordination and communication within and outside the programme. The political commitment for malaria elimination is in place in Mexico, but this commitment should be demonstrated at both the national and local levels to achieve the final goal. While continuing to improve the quality and timeliness of the malaria services delivered to the population, including those living in hard-to-reach areas, Mexico is encouraged to consider other approaches that might help to accelerate malaria elimination.
Recommendations from the MEOC

1. Clearly declare national, federal and local political commitment and coordination to achieve elimination, ensuring that resources are available to sustain expertise at different levels of the system and that Mexico is on track to achieve its elimination goal.

2. Train all operational levels of the programme (vector control, malaria programme staff and frontline health providers) on the malaria guidelines. Consider new interventions or measures to accelerate elimination and prevent re-establishment at the subnational level, including the introduction of rapid diagnostic tests in the country.

3. Focus particularly on difficult areas with the highest burden, taking the following into consideration:
   a. Conduct social science studies to identify context-relevant solutions and strategies to address the local malaria problem.
   b. Identify specific accelerators for the areas with the highest burden.

4. Target measures to Chiapas, where 64% of cases occur, in order to strengthen the capacity of health professionals at the local level to provide rapid diagnosis and treatment to the population, particularly in hard-to-reach areas or areas with limited access to health services. In particular:
   a. Further strengthen the capacity of voluntary collaborators to use rapid diagnostic tests and provide treatment.
   b. Involve and train health services across the three levels of care.

5. Consider conducting implementation research to inform the plan for enlisting community engagement in malaria elimination, drawing lessons learned from the national elimination of trachoma and onchocerciasis, and the elimination of malaria from Oaxaca.

6. Continue the engagement with the private sector (including drugstores in active foci) to further strengthen its role in malaria surveillance through training and refresher training.

7. A national independent advisory committee must be set up as a matter of urgency with clear terms of reference to guide elimination efforts in Mexico.
6. MELOC OVERARCHING RECOMMENDATIONS

Across the reviews of the eight countries invited to participate in the focused review, the MELOC identified themes that were common to more than one country, or that reflected general opportunities or threats to malaria elimination on a global scale. These were presented to the countries, WHO and Global Fund observers during the last day of the meeting.

The MELOC recognized the impact of the COVID-19 pandemic on countries and health systems. Malaria programmes have suffered as a result of competing demands for financial and human resources. The MELOC hopes that the pandemic leads to greater consideration of the importance of resilient health systems and to prioritization of malaria within national health security agendas.

1. WHO should organize meetings between the MELOC and representatives of global (such as the Global Fund) and regional (such as the Elimination 8 and the RMEI in Mesoamerica) malaria initiatives to promote mutual understanding with respect to malaria elimination and potentially mobilize more financing for E-2025 countries.
   a. The MELOC should advocate for the continued inclusion of a focus on elimination in the new Global Fund strategy.
   b. The MELOC should advocate for support for coordinated, cross-border activities.
   c. WHO should invite representatives of global and regional initiatives to participate as observers in Global Forums and MELOC-focused reviews.
   d. The MELOC should advocate for special support for binational, cross-border coordinated activities with budgetary support for both countries. Global and regional initiatives should be approached to consider support for binational border programmes as “special intervention zones”.

2. The MELOC urges E-2025 countries to prioritize their focus on the most challenging and difficult areas with the highest malaria burdens. There needs to be new thinking and critical, prompt programmatic changes (i.e. not business as usual) in those foci with the most difficult problems.

3. After the successful virtual advocacy mission to Cabo Verde in 2020 and 2021, the MELOC recommends additional country advocacy missions focused on specific issues important to national elimination programmes, ideally when travel is permitted again, but notwithstanding virtual meetings. Such advocacy should also be targeted to economic and financial institutions and political leadership both at the federal level and in foci with persistent transmission. Well-known leaders and personalities should be recruited to improve the “voice” for malaria elimination. These champion-advocates are needed nationally and internationally.

4. The MELOC noted that WHO is in the process of developing new malaria elimination guidelines and looks forward to being engaged with the Global Malaria Programme in a useful way in the dissemination of new recommendations for malaria elimination accelerator strategies to E-2025 countries.
5. The MEOC congratulated the Global Malaria Programme on the development of the MEAT and urged its continued testing and refinement. The MEOC recommended that WHO harmonize malaria programme reviews with MEAT audits; develop quantitative indices and scoring systems for the different domains, elements and milestones; and align indicators with the World Malaria Report.

6. Many E-2025 countries have begun to publicly report malaria cases weekly or monthly. The MEOC recommended that the Global Malaria Programme monitor, compile and potentially display monthly case reports for those E-2025 countries that publicly report their data, and present these results at the next Global Forum.

7. The MEOC noted that stratification, optimal targeting of interventions, and effective and rapid responses to resurgence of transmission depend in part on entomological surveillance, which is often limited by a lack of trained entomologists and supporting infrastructure. There is a critical need to build capacity in vector surveillance and control. E-2025 countries and their partners should seek ways to improve this deficiency.

7. MEETING CONCLUSION

The meeting was concluded by Dr Pedro Alonso after a word of thanks to all participants by the Chair, Dr Frank Richards. It is hoped that the MEOC will be able to convene in a face-to-face meeting at the next Global Forum of malaria-eliminating countries in 2022.
8. REFERENCES


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Johnny Nausien
National Malaria Monitoring and Evaluation Surveillance Officer
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Len Tarivonda
Director of Public Health
Ministry of Health
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Emmanuel Farlack  
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Edmundo Morales  
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Selome Tadesse Worku  
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Monica Takyi-Appiah
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Africa and Middle East Department
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The Global Fund to Fight AIDS, Tuberculosis
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Switzerland
# ANNEX 2. AGENDA

## DAY 1, MONDAY, 28 JUNE 2021
**Closed session for MEOC members and WHO staff – Chair: Frank Richards**

<table>
<thead>
<tr>
<th>Geneva time</th>
<th>Activity</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00 – 13:05</td>
<td>Welcome Group photo</td>
<td>Pedro Alonso</td>
</tr>
<tr>
<td>13:05 – 13:15</td>
<td>- Meeting objectives and process</td>
<td>Kim Lindblade</td>
</tr>
<tr>
<td></td>
<td>- Introduction of the Malaria Elimination Audit Tool and the audit process</td>
<td></td>
</tr>
<tr>
<td>13:15 – 14:15</td>
<td>Comments on MEAT results by theme:</td>
<td>Chaired by Frank Richards</td>
</tr>
<tr>
<td></td>
<td>1. National strategy, coordination, policies and advocacy (5’, Mirta Roses)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Stratification (5’, Evelyn Ansah)</td>
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</tr>
<tr>
<td></td>
<td>3. Diagnosis (5’ Rose Leke)</td>
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</tr>
<tr>
<td></td>
<td>4. Case management (5’ Kevin Marsh)</td>
<td></td>
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<tr>
<td></td>
<td>5. Surveillance (5’ Leonardo Simao and 5’ Tang Linhua)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Focus investigations, microplans and epidemic response (5’ Frank Richards)</td>
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<tr>
<td></td>
<td>7. Vector control and entomological surveillance (5’ Tom Burkot)</td>
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<tr>
<td></td>
<td>9. Prevention re-establishment (5’ Kamini Mendis)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discussion (15’)</td>
<td></td>
</tr>
<tr>
<td>14:25 – 14:55</td>
<td>Discussion on management of sessions and development of recommendations</td>
<td>All MEOC members</td>
</tr>
<tr>
<td>14:55 – 15:00</td>
<td>Wrap-up</td>
<td>Frank Richards</td>
</tr>
</tbody>
</table>

## DAY 2, TUESDAY, 29 JUNE 2021
**Open to all meeting participants**

<table>
<thead>
<tr>
<th>Geneva time</th>
<th>Activity</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:00 – 08:15</td>
<td>Welcome, meeting objectives and agenda</td>
<td>Li Xiao Hong</td>
</tr>
<tr>
<td>08:15 – 09:15</td>
<td>Background presentations</td>
<td>Vanuatu, Timor-Leste, Thailand, Eswatini</td>
</tr>
</tbody>
</table>

## GROUP 1, BREAKOUT SESSIONS

<table>
<thead>
<tr>
<th>G1 - Vanuatu</th>
<th>G2 - Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9:15 – 10:45</strong></td>
<td><strong>11:15 – 12:45</strong></td>
</tr>
<tr>
<td>Welcome and introductions (5’)</td>
<td>Welcome and introductions (5’)</td>
</tr>
<tr>
<td>Presentation of malaria elimination audit results (30’)</td>
<td>Presentation of malaria elimination audit results (30’)</td>
</tr>
<tr>
<td>Discussion of key points</td>
<td>Discussion of key points</td>
</tr>
<tr>
<td>Agreement on areas for further development</td>
<td>Agreement on areas for further development</td>
</tr>
</tbody>
</table>

**Presenters**
- Yangyuth Yuthavong (Chair), Tom Burkot, Leonardo Simao
  - Presenters
    - Wesley Donald, Johnny Nausien (TBC), Len Tarivonda
    - Kamini Mendis (Chair), Tang Linhua
    - Presenters
      - Darin Areechokchai, Chantana Padungtong, Prayuth Sudathip, Suwich Thanmapala

<table>
<thead>
<tr>
<th>G3 - Timor-Leste</th>
<th>G4 - Eswatini</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9:15 – 10:45</strong></td>
<td><strong>11:15 – 12:45</strong></td>
</tr>
<tr>
<td>Welcome and introductions (5’)</td>
<td>Welcome and introductions (5’)</td>
</tr>
<tr>
<td>Presentation of malaria elimination audit results (30’)</td>
<td>Presentation of malaria elimination audit results (30’)</td>
</tr>
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<td>Discussion of key points</td>
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</tr>
<tr>
<td>Agreement on areas for further development</td>
<td>Agreement on areas for further development</td>
</tr>
</tbody>
</table>

**Presenters**
- Tom Burkot (Chair), Kamini Mendis, Tang Linhua
  - Presenters
    - Maria Do Rosario De Fatima Mata, Marta Santos, Juliana Da Rosario
    - Leonardo Simao (Chair), Yangyuth Yuthavong
    - Presenters
      - Quinton Dlamini, Vusi Lokotfwako, Zulusile Zulu
**DAY 2, TUESDAY, 29 JUNE 2021 (CONT.)**

<table>
<thead>
<tr>
<th>Geneva time</th>
<th>Activity</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Western Group, plenary session</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Focus on Sao Tome and Principe, Dominican Republic, Ecuador and Mexico</strong></td>
<td></td>
</tr>
<tr>
<td>16:00 – 16:15</td>
<td>Welcome, meeting objectives and agenda</td>
<td>Kim Lindblade</td>
</tr>
<tr>
<td>16:15 – 17:15</td>
<td>Background presentations</td>
<td>Sao Tome and Principe, Dominican Republic, Ecuador, Mexico</td>
</tr>
</tbody>
</table>

**GROUP 2, BREAKOUT SESSIONS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>MEOC members</th>
<th>Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:15 – 18:45</td>
<td><strong>G1 - Sao Tome and Principe</strong></td>
<td>Evelyn Ansah (Chair), Kevin Marsh, Rose Leke</td>
<td>Carlos Alberto Bandeira D’Almeida, Herodes Sousa Pontes do Sacramento Rampaao, Jessica Viegas dos Santos de Sousa Soares</td>
</tr>
<tr>
<td>19:15 – 20:45</td>
<td><strong>G2 - Dominican Republic</strong></td>
<td>Frank Richards (Chair), Mirta Roses, Rose Leke</td>
<td>Danielba Valdez, Edelmira Espaillat</td>
</tr>
<tr>
<td>13:00 – 13:05</td>
<td><strong>G3 - Ecuador</strong></td>
<td>Mirta Roses (Chair), Frank Richards</td>
<td>Julio Rafael Rivera Bonilla, Raquel Violeta Lovato Silva</td>
</tr>
<tr>
<td>13:05 – 13:20</td>
<td><strong>G4 - Mexico</strong></td>
<td>Kevin Marsh (Chair), Evelyn Ansah</td>
<td>Santa Ceballos, Fabian Correa</td>
</tr>
</tbody>
</table>

**DAY 3, WEDNESDAY, 30 JUNE 2021**

**Closed session for MEOC members and WHO staff - Chair: Frank Richards**

<table>
<thead>
<tr>
<th>Geneva time</th>
<th>Activity</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00 – 13:05</td>
<td>Welcome and assessment of the DOI forms</td>
<td>Kim Lindblade</td>
</tr>
<tr>
<td>13:05 – 13:20</td>
<td>General discussion</td>
<td>All MEOC members</td>
</tr>
<tr>
<td>13:20 – 14:20</td>
<td>Breakout sessions to finalize country specific recommendations. Members will break into Eastern and Western groups</td>
<td>Eastern group, Western group</td>
</tr>
<tr>
<td>14:20 – 15:00</td>
<td>Present country-specific recommendations to full MEOC</td>
<td>All MEOC members</td>
</tr>
</tbody>
</table>
## DAY 4, THURSDAY, 1 JULY 2021
Open to all meeting participants

<table>
<thead>
<tr>
<th>Geneva time</th>
<th>Activity</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eastern Group, plenary session</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00 – 8:05</td>
<td>Welcome and group photo</td>
<td>Li Xiao Hong</td>
</tr>
<tr>
<td>8:05 – 8:30</td>
<td>Recommendations to Eswatini, Thailand, Timor-Leste and Vanuatu</td>
<td>MEOC members Eastern Group</td>
</tr>
<tr>
<td>8:30 – 8:55</td>
<td>Comments from national malaria programmes</td>
<td></td>
</tr>
<tr>
<td>8:55 – 9:00</td>
<td>Closing</td>
<td>Pedro Alonso</td>
</tr>
<tr>
<td><strong>Western Group, plenary session</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16:00 – 16:05</td>
<td>Welcome and group photo</td>
<td>Kim Lindblade</td>
</tr>
<tr>
<td>16:05 – 16:30</td>
<td>Recommendations to Dominican Republic, Ecuador, Mexico and Sao Tome and Principe</td>
<td>MEOC members Western Group</td>
</tr>
<tr>
<td>16:30 – 16:55</td>
<td>Comments from national malaria programmes</td>
<td></td>
</tr>
<tr>
<td>16:55 – 17:00</td>
<td>Closure</td>
<td>Pedro Alonso</td>
</tr>
</tbody>
</table>
For further information please contact:

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