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# Report of the first and second meetings of the Technical Advisory Group on Malaria Elimination and Certification

13–14 September 2022  
and 27 January 2023



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## Abbreviations

GTS	<i>Global technical strategy for malaria 2016–2030</i>
MECP	Malaria Elimination Certification Panel
MEOC	Malaria Elimination Oversight Committee
TAG-MEC	Technical Advisory Group on Malaria Elimination and Certification
WHO	World Health Organization

## Acknowledgements

The World Health Organization (WHO) would like to express its appreciation to all the members of the Technical Advisory Group on Malaria Elimination and Certification (TAG-MEC) who provided their time and expertise to review the background documents before the meetings and to contribute to the discussions during the meetings.

The TAG-MEC meeting report was drafted by Dr Xiaohong Li (Technical Officer) and reviewed by Dr Elkhon Gasimov (Unit Head), Elimination Unit of the Global Malaria Programme of WHO. The report was contributed by the members of the TAG-MEC.

Members of the TAG-MEC included Professor Pedro Alonso (University of Barcelona, Spain); Professor Fred Binka (University of Health and Allied Sciences, Ghana); Dr Keith H. Carter (Independent Consultant, United States of America); Professor Brian Greenwood (London School of Hygiene and Tropical Medicine, United Kingdom of Great Britain and Northern Ireland); Dr Anatoly Kondrashin (Sechenov First Moscow State Medical University, Russian Federation); Professor Reza Majdzadeh (University of Essex, United Kingdom of Great Britain and Northern Ireland); Dr Kamini Mendis (Independent Consultant in Malaria and Tropical Medicine, Sri Lanka); Professor Rossitza Ivanova Mintcheva (Independent Consultant, Bulgaria); Dr Martha L. Quiñones (Universidad Nacional de Colombia, Colombia); Dr Frank Richards (Carter Center, United States of America); Dr Allan Schapira (Independent Consultant, Philippines); Dr Leonardo Simão (Manhiça Foundation, Mozambique); Dr Larry Slutsker (Independent Consultant in Malaria and Global Health, United States of America); Professor Linhua Tang (Chinese Center for Disease Control and Prevention, China).

WHO would like to thank the Ministries of Health in Azerbaijan and Tajikistan for preparing the national elimination reports and supporting documents and for receiving the independent certification missions. Special thanks to the four members, Dr Keith Carter, Professor Reza Majdzadeh, Professor Pedro Alonso and Professor Fred Binka for giving their time generously to conduct certification missions to Azerbaijan and Tajikistan and prepare the evaluation reports as background documents for the second TAG-MEC meeting.



## **Executive summary**

The Technical Advisory Group on Malaria Elimination and Certification (TAG-MEC) was established to advise the World Health Organization (WHO) on malaria-free certification, malaria elimination and prevention of re-establishment. The TAG-MEC replaced two former advisory committees on malaria elimination: the Malaria Elimination Certification Panel (MECP) and the Malaria Elimination Oversight Committee (MEOC). The primary role of the TAG-MEC is to advise WHO whether malaria-free certification should be granted to a country and whether a country's malaria-free certification should be revoked. The Group is also tasked with advising WHO on resolving the bottlenecks hindering malaria elimination at the country, regional and global levels. In addition, the Group acts as an advisory body on policy recommendations in the field of malaria elimination and prevention of re-establishment of transmission.

WHO initiated the certification process in two countries, Azerbaijan and Tajikistan, after receiving the official request for certification of malaria elimination from their Governments in 2021. After reviewing the national elimination reports submitted by the Governments and considering the findings of the independent evaluation missions to the two countries, the TAG-MEC concluded that Azerbaijan and Tajikistan had met the current WHO criteria and recommended that they be certified as malaria-free.



# 1. Background

## 1.1 The vision of a world free of malaria and the *Global technical strategy for malaria 2016–2030*

A world free of malaria is the vision of the World Health Organization (WHO) and the global malaria community. This vision was first established by the Global Malaria Eradication Programme in the 1950s (1). After the discontinuation of the Global Malaria Eradication Programme in 1969, malaria eradication was reaffirmed as a goal for WHO and the global malaria community through multiple World Health Assembly resolutions. In 2015, the *Global technical strategy for malaria 2016–2030* (GTS) was adopted by the World Health Assembly to succeed the 1992 global malaria strategy (2, 3). The GTS, which was updated and endorsed by the World Health Assembly in May 2022, reiterates the vision of a world free of malaria. It includes two specific goals related to elimination: eliminating malaria in at least 35 countries by 2030 and preventing re-establishment of malaria in all countries that are malaria-free. To monitor progress, the GTS sets specific elimination milestones: malaria elimination should be achieved in at least 10 countries by 2020, 20 countries by 2025 and 35 countries by 2030.

## 1.2 The official register and certification of malaria elimination

During the Global Malaria Eradication Programme, some countries and regions managed to interrupt malaria transmission within their territories. However, malaria-free countries continued to have malaria cases imported from areas with ongoing malaria transmission. It was, therefore, necessary to take measures to prevent re-establishment. Due to the different levels of malaria endemicity, there was significant variation in the danger of acquiring malaria infections in a country and the likelihood of a country exporting parasites to others. Therefore, it was deemed useful to all concerned to have a central register that could provide information on where malaria was no longer transmitted. In this context, Member States requested WHO to “establish an official register listing countries where elimination has been achieved, after inspection and certification by a WHO evaluation team” (4). In addition, WHO created a supplementary list to the official register, listing “countries where malaria never existed or disappeared without specific measures” (5). From the 1950s to 2022, 40 countries and territories were certified as malaria-free by WHO and entered into the official register.

WHO established the criteria and process for certification to ensure that a country's malaria-free status would be rigorously verified and that countries would be likely to sustain their malaria-free status. The criteria and process for certification, first established in the 1960s, are reviewed continuously and updated as needed, with the latest revision published in *Framework for malaria elimination* (6) and *Preparing for certification of malaria elimination* (7). In 2021 and 2022, the following countries submitted an official request for certification: Azerbaijan, Tajikistan, Iran (Islamic Republic of), Cabo Verde and Belize.

## 1.3 Global progress on malaria elimination

Globally, there has been notable progress towards malaria elimination. The number of malaria-endemic countries with fewer than 10 000 indigenous malaria cases increased from 27 in 2000 to 46 in 2021 (8). Over the same period, the number of countries reporting fewer than 100 indigenous cases increased from six to 26. In 2017,

WHO identified 21 countries with the potential to achieve elimination by 2020 and launched the Elimination-2020 (E-2020) initiative to support countries in achieving their national malaria elimination goals. The E-2020 initiative was transitioned to the E-2025 initiative in 2021, covering 25 countries and one territory. At the regional level, many regions and subregions have established regional elimination initiatives to accelerate the progress towards elimination. For example, the subregional elimination initiative in the Greater Mekong subregion made significant progress between 2000 and 2020, reducing the number of indigenous *Plasmodium falciparum* malaria cases by 93%. The Regional Malaria Elimination Initiative supports seven Central American countries (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama) and the Dominican Republic to accelerate and achieve elimination.

## **1.4 Technical Advisory Group – Malaria Elimination and Certification (TAG-MEC)**

In 2017–2018, WHO established two advisory committees on malaria elimination. In December 2017, WHO established the Malaria Elimination Certification Panel (MECP), which was tasked with verifying countries' malaria-free status. In February 2018, WHO established the Malaria Elimination Oversight Committee (MEOC) to guide countries that were very close to elimination to achieve zero transmission and maintain their malaria-free status.

Preparation for certification should begin when countries embark on malaria elimination. Countries should document an effective elimination programme and improve surveillance so that by the time they become eligible for certification, the proof of evidence for certification is already in place. Therefore, achieving malaria elimination and prevention of re-establishment is an integral part of preparation for certification. With the MECP and the MEOC ending their initial terms in 2022, WHO decided that the functions of these two advisory committees could be merged into a single committee, taking into account the experience and lessons learned over the past few years and following a consultative process. The TAG-MEC was established to replace the former MECP and MEOC. WHO convened the first and second meetings of the TAG-MEC to review the Group's terms of reference and to discuss certification of Azerbaijan and Tajikistan, where the preparation for certification was in an advanced stage (see Annex 1 and 2 for the full agendas and lists of participants).

## **2. Declaration of interests**

All TAG-MEC members participating in the meetings submitted a Declaration of Interests form, which was assessed by the WHO Secretariat. Based on the assessment, Dr Rossitza Mintcheva was recused from the sessions on certification of Azerbaijan and Tajikistan.

## **3. General objectives**

The members of the TAG-MEC met virtually on 13–14 September 2022, and in person on 27 January 2023 with the following objectives:

- to review the terms of reference of the TAG-MEC and agree on the operating procedures;

- to discuss the national elimination reports from Azerbaijan and Tajikistan;
- to reach consensus on whether Azerbaijan and Tajikistan should be certified as malaria-free countries or whether certification should be postponed; and
- to review data from recently certified countries.

## 4. Process

### 4.1 Background documents

The background documents for the virtual TAG-MEC meeting on 13–14 September 2022 were *Preparing for certification of malaria elimination (7)* and the national elimination reports submitted by the Governments of Azerbaijan and Tajikistan. The background documents for the TAG-MEC meeting on 27 January 2023 were the reports of the independent evaluation missions to Azerbaijan and Tajikistan, prepared by the members who conducted the missions.

## 5. Setting the scene

### 5.1 Opening of the first meeting of the TAG-MEC

The opening session of the first TAG-MEC meeting was moderated by Dr Elkhan Gasimov, Head of the Elimination Unit, Global Malaria Programme. Dr Ren Minghui, Assistant Director-General, made the opening remarks on behalf of WHO. Dr Ren acknowledged the contributions and support of the former MECP and MEOC in advancing malaria elimination at the country, regional and global levels. Six countries – Algeria, Argentina, China, El Salvador, Paraguay and Uzbekistan – were certified as malaria-free; focused reviews of malaria programmes were conducted in 14 countries to examine the programmes' performance and achievements and to identify gaps and areas in need of improvement. He thanked all the members of the TAG-MEC for their commitment to supporting WHO and the international malaria community in achieving the malaria elimination targets set in the GTS.

After reviewing the assessment of all members' declared interests, Dr Xiaohong Li, Technical Officer, Elimination Unit, Global Malaria Programme, presented the background to the meeting and its objectives. In her presentation, Dr Li said that preparing for certification, certifying a country as malaria-free, and following up with countries after certification is a continuous process. Strategically, combining the functions of the former MECP and MEOC into one committee will enable members to get to know countries as they move closer to the ultimate goal of elimination. This might help to ease the burden of certification, which involves a significant review of the country's documentation. Furthermore, by gaining experience in the process of certifying a country as malaria-free, TAG-MEC members will be in a better position to advise WHO on how to support and prepare the country for certification. Dr Li then went over the proposed agenda with TAG-MEC members. It was agreed that the meeting should follow the proposed agenda.

## 5.2 Global update on malaria elimination

Dr Gasimov presented a global update on malaria elimination. He said that global progress towards malaria elimination is accelerating, with more countries moving closer to achieving that goal. The total number of malaria-endemic countries reporting fewer than 10 000 malaria cases increased from 26 in 2000 to 47 in 2020. Over the same period, the number of countries reporting fewer than 100 endemic cases increased from six to 26. After a brief review of the results of the E-2020 initiative, the E-2025 initiative and its objectives were presented. Dr Gasimov provided an update on the progress of the STOP-malaria programme, launched by the Global Malaria Programme to strengthen subnational capacity in malaria-endemic countries, and the plan to evaluate its impact and cost-effectiveness. Dr Gasimov also provided an update on countries that had recently submitted an official request for certification. Finally, he informed the TAG-MEC that the fourth Global Forum of malaria-eliminating countries and the technical consultation on prevention of re-establishment of transmission were both scheduled for the first quarter of 2023.

## 5.3 Review of terms of reference and operating procedures

Dr Li presented the terms of reference and operating procedures of the TAG-MEC. She explained that the TAG-MEC has several functions. The main functions are to certify countries as malaria-free and to de-certify countries. The main activities of the TAG-MEC during the certification process include: (i) reviewing the national elimination report and supporting documentation; (ii) conducting a country visit by a subset of the TAG-MEC to verify the findings of the report; and (iii) reaching consensus in a plenary meeting on whether a country can be certified based on the WHO criteria or whether certification should be postponed. Another important function of the TAG-MEC is to assist WHO in resolving bottlenecks hindering malaria elimination at the country, regional and global levels. Members of the TAG-MEC may be invited to participate in malaria elimination events at the country, regional and global levels. Not all members will be invited to participate, but those who do will present their findings at a plenary meeting of the TAG-MEC, which will make recommendations to WHO. In addition, one of the TAG-MEC's roles is to advise WHO on policy and guidance for malaria elimination and prevention of re-establishment. Dr Li explained the assessment of conflicts of interest and the options available following the assessment.

## 5.4 Experiences and lessons learned from certification of malaria elimination in five countries

Dr Allan Schapira presented his experience of malaria elimination certification, drawing on the experience of the independent evaluation missions to Morocco, Turkmenistan, Paraguay, Algeria and China. In addition to the national elimination report and supporting documentation provided by the Governments, Dr Schapira explained that each certification team gathered information from a variety of sources, including field observations, to assess whether the two certification criteria had been met. The team weighed the strengths and weaknesses of the system in place after the mission before making a recommendation for certification. Dr Schapira considered the strengths of a malaria programme to be a well-structured malaria programme with clear roles for each participating institution; effective coordination and collaboration between participating institutions; sufficient resources available for malaria activities; motivated and competent staff for epidemiology and malaria prevention; strong and vigilant general health services; a robust surveillance and response system; free malaria diagnosis, treatment and prevention for all populations, including migrants and foreigners; and a good command structure for policy implementation and well defined monitoring systems. By contrast, the weaknesses identified in these countries included inadequate health services in remote areas and for underserved populations;

weak general health services; low vigilance in the general health services; unclear articulation of the functions of specialized institutions that are part of the malaria programme; unclear allocation of roles and responsibilities among the specialized institutions involved, and between the specialized institutions and curative general health services; decentralization of vector control policy leading to suboptimal implementation of vector control interventions, particularly where there is a lack of national-level monitoring and supervision; and lack of chemoprophylaxis services for travellers. Finally, Dr Schapira stressed the importance of WHO pre-certification missions, and that the final independent mission should complement the pre-certification missions.

## **5.5 Supporting the E-2020 and E-2025 initiatives – experiences and lessons learned from the MEOC**

Dr Frank Richards presented the experiences and lessons learned from the MEOC in supporting E-2020 and E-2025 countries. Dr Richards said that the establishment of the MEOC was modelled on similar committees for polio, onchocerciasis and dracunculiasis, with a focus on countries close to malaria elimination. In recent years, the MEOC has contributed to global malaria elimination forums, focused review meetings on targeted malaria elimination countries, and a high-level country visit to advocate for malaria elimination. Experiences and lessons learned from E-2020 and E-2025 countries show that the last mile of malaria elimination can be challenging and that countries face common challenges in crossing the finish line. These challenges include cross-border issues, resurgence and outbreaks, and difficulties ensuring access to malaria diagnosis, treatment and prevention for vulnerable populations, community engagement, and engagement of the private sector in diagnosis, treatment and surveillance, among others. Regular programme audits are needed to end “business as usual” so that specific gaps can be identified and tailored strategies and solutions developed.

## **5.6 Introduction to WHO certification of malaria elimination**

Dr Li presented an overview of WHO certification for malaria elimination, as well as current WHO guidance and tools. Certification of malaria elimination is a WHO mandate that was given to the Organization by its Member States through a World Health Assembly resolution in 1960. The certification process serves as a mechanism for adding a country to the official register of countries and territories that have achieved malaria elimination. WHO certification of malaria elimination requires fulfilment of two criteria and follows a standardized procedure. To assess whether a country has interrupted transmission, the coverage and quality of surveillance, the results and impact of the implementation of strategies and interventions, and other factors that might contribute to malaria elimination are considered. To assess the second criterion, countries are expected to demonstrate that there is a functioning system throughout the country to rapidly detect and respond to imported cases. Dr Li introduced the concept of subnational verification, which was introduced by WHO with the launch of the *Framework for malaria elimination (6)* in 2017, and the current global trends. She introduced the recently published guidance and tools to help countries prepare for certification. Dr Li said that an increasing number of countries in the tropics are achieving malaria elimination, but maintaining malaria-free status may be challenging due to high malaria receptivity and relatively weak health systems, which may pose a challenge for certification. Dr Li concluded that significant progress had been made in the guidance on certification. The certification process must be rigorous so that only countries that meet the criteria are certified. Looking forward, areas in which clarifications and improvement are needed include the development of more specific surveillance requirements, expanded guidance on the prevention of reestablishment, and the role of subnational verification in national certification.

## 6. Certification of malaria elimination in Azerbaijan

### 6.1 A brief history of malaria in Azerbaijan and review of the national elimination report

Malaria has a long history in Azerbaijan. The systematic organization of malaria research and control began after Azerbaijan became part of the former Soviet Union in 1920. At that time, the incidence of malaria reached 1006 per 100 000 population. Three types of malaria were transmitted: *P. vivax*, *P. falciparum* and *P. malariae*. The new Government quickly established a network of malaria control institutions, including the establishment of the Azerbaijan Institute of Tropical Medicine in 1931. Following the successful implementation of the malaria eradication programme in the 1950s, local transmission of *P. falciparum* and *P. malariae* was interrupted by 1960, while there were only about 100 cases of *P. vivax* (9). Several major outbreaks occurred in the subsequent years. An outbreak in the 1990s affected large parts of the country and resulted in more than 13 000 cases (9). The successful implementation of the National Malaria Elimination Strategy (2008–2013) led to the interruption of transmission throughout the country in 2012, when the last local cases were recorded.

Dr Keith Carter facilitated the review and discussion of the national elimination report submitted by the Ministry of Health of Azerbaijan. WHO staff and TAG-MEC members who had visited Azerbaijan shared their experiences of malaria control, elimination and prevention of reestablishment in Azerbaijan. The TAG-MEC found the report to be well written, with complete data and information according to WHO guidance. The review and discussion identified areas to be investigated or clarified during the independent evaluation mission.

### 6.2 Independent evaluation mission

The independent evaluation mission to Azerbaijan took place from 3 to 14 October 2022. The mission team included two members of the TAG-MEC, Dr Carter (Team Lead) and Dr Reza Majdzadeh. The team was supported by Dr Elthuran Ismayilov from the WHO Country Office in Azerbaijan and Dr Gasimov from the WHO Global Malaria Programme in Geneva, Switzerland.

During the two-week mission, the team visited the Ministry of Health, training institutions and health partners. Three districts were selected for field visits: Lankaran, on the southern coast of the Caspian Sea; Bilasuvar, on the border with the Islamic Republic of Iran; and Sabirabad, where there were many cases among displaced persons in the 1990s and early 2000s. In each of these districts, the team visited at least one primary health care unit, the district central hospital and the District Center for Hygiene and Epidemiology, which is responsible for the surveillance and control of infectious diseases. During the visits, the team reviewed data, records and documentation at various levels of the system. The team interviewed health professionals to assess their knowledge and skills with respect to malaria. At the end of the mission, the members of the independent evaluation team discussed their findings with the Ministry of Health. The report of the independent evaluation mission to Azerbaijan was prepared by the mission team and shared with all members of the TAG-MEC.



### **6.3 Summary of discussions at the TAG-MEC meeting**

The meeting discussion was chaired by Professor Brian Greenwood. On behalf of the team, Dr Carter presented the findings from the mission. The mission team considered that Azerbaijan had met the two criteria for WHO certification and highlighted the following aspects that may have contributed to Azerbaijan's success in malaria elimination: high-level political commitment, evidenced by a sustained programme and sustained financing for malaria through the years; a fully functional surveillance system that covered the entire country; accessible health care to all populations, including immigrants and travellers; good collaboration with other sectors, including agriculture and water resource management; rapid availability of a system that could rapidly transport blood samples for laboratory examinations and results; impressive data management systems; collaboration between the Administration of the Regional Medical Divisions under the State Agency on Mandatory Health Insurance (TABIB) and the Centers for Hygiene and Epidemiology; and dedicated and competent staff. The mission team considered the risk of importation at the time of the field visit to be low, given that the neighbouring territories were free of malaria.

The following issues were raised and discussed: human resources and investments to maintain activities to prevent re-establishment, particularly at the national level; engagement of the private sector in malaria surveillance; the national quality assurance system for malaria diagnosis; the sustainability of vector control capacity; drug supply; and a rapid response team. The Group considered that there was room for improvement in these areas, and recommendations were made accordingly.

### **6.4 Recommendation**

The TAG-MEC unanimously recommended that Azerbaijan be certified as malaria-free.

## **7. Certification of malaria elimination in Tajikistan**

### **7.1 A brief history of malaria in Tajikistan and review of the national elimination report**

Tajikistan is a young country, having become independent in 1991, but the fight against malaria has lasted for decades. Organized implementation of malaria interventions began in 1929, when the country was a Soviet socialist republic. The country came very close to elimination in the 1950s and 1960s, with only a few residual transmission foci recorded. However, the subsequent decades saw several malaria epidemics, which were attributed to major disruptions to health services and malaria control activities in both Tajikistan and neighbouring Afghanistan, troop movements and influxes of refugees. Civil unrest and political instability led to massive epidemics of both *P. vivax* and *P. falciparum* in the 1990s, with an estimated 30 000 cases in 1997 (9). The Government of Tajikistan mounted a strong and sustained political and public health response, which has continued for the past 25 years. Through the implementation of a series of malaria programmes (the 2006–2010 control programme, the 2011–2015 malaria transmission interruption programme and the 2015–2017 elimination programme), transmission interruption was achieved, with the last indigenous case detected in 2015.

Professor Pedro Alonso facilitated the review and discussion of the national elimination report from Tajikistan. WHO staff and TAG-MEC members who had assisted Tajikistan in malaria control, elimination and prevention of reintroduction provided additional information, as requested by Professor Alonso. The review and discussions identified districts sharing an international border with Afghanistan as priority areas for field visits by the independent evaluation mission.

## **7.2 Independent evaluation mission**

The independent evaluation mission took place from 17 to 26 October 2022. The mission was conducted by Professor Alonso (Team Lead) and Professor Fred Binka. The team was assisted by Dr Khadichamo Boymatova from the WHO Country Office in Tajikistan and Dr Li from the Elimination Unit of the WHO Global Malaria Programme in Geneva, Switzerland.

The team visited facilities in both Dushanbe and the countryside. In Dushanbe, the team visited the Republican Center for Tropical Diseases, the State Sanitary and epidemiological service, a hospital for infectious diseases, and key institutions involved in malaria elimination and prevention of re-establishment. Five districts (Darvoz, Kulob City, Shuro-obod, Vahdat and Vose') were selected for field visits based on the varying risk of re-establishment of transmission. The team reviewed and assessed the epidemiological and entomological services provided by tropical disease centres and the sanitary and epidemiological service at all levels. The team visited a number of public and private hospitals, the rural health centres and rural health posts to review curative services, and access to and quality of malaria diagnosis and treatment. The team visited the last case of indigenous malaria to gain an in-depth understanding of the health system, including its surveillance and response capacity. Several days of the mission were dedicated to the area at the Tajikistan–Afghanistan border, which was identified as a key challenge area in terms of risk of transmission and importation, and prevention of re-establishment.

## **7.3 Summary of discussions at the TAG-MEC meeting**

The session was chaired by Professor Greenwood. On behalf of the team, Professor Alonso presented the findings of the mission. The mission team considered that Tajikistan had met the two criteria for WHO certification and highlighted the following aspects that may have contributed to the country's success in malaria elimination: strong political and financial support from all levels of the Government, as evidenced by the launch and implementation of a series of malaria programmes across the continuum of malaria control, elimination and prevention of reestablishment; ability of the health system in place to provide universal health coverage to all populations; effective coordination between tropical disease centres and sanitary and epidemiological service at all levels; malaria diagnosis and treatment available and free of charge to all populations; a well defined and functioning system for the training and re-training of health personnel in malaria; a functioning surveillance system; competent and knowledgeable personnel; established and functioning intersectoral cooperation (agriculture, water and other sectors) in malaria prevention and response; and mechanisms to coordinate response in the event of an influx of malaria cases from Afghanistan. The mission team considered the risk of importation to be low, as the border with Afghanistan was closed at the time of the visit.

The group discussed and reached consensus on recommendations that could help Tajikistan to maintain its malaria-free status. These include sustaining political and financial commitment; maintaining vigilance; strengthening entomological surveillance

capacity; ensuring drug supply; and continuing the quality-assured diagnosis programme. The Group considered that another important strategy for addressing the challenges of preventing re-establishment is to collaborate with universities and other research centres.

#### **7.4 Recommendation**

The TAG-MEC unanimously recommended that Tajikistan be certified as malaria-free.

### **8. Review of data from recently certified countries and workplan**

Dr Li presented data on malaria cases reported by countries recently certified as malaria-free. Data sources included peer-reviewed journal articles and case data submitted by countries to WHO regional offices. Dr Li noted that the data submitted by malaria-free countries to the World malaria report remain incomplete and limited. However, the Secretariat is working to address this issue. Dr Li also briefly reviewed the workplan of the TAG-MEC. After reviewing the number of imported cases reported by malaria-free countries, the Group recommended that WHO conduct a follow-up mission to Algeria to assist in preventing re-establishment, given the high level of importation. It was tentatively decided that the Group would meet again in person later this year.

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## Annex 1. Agendas

### Agenda of the first meeting of the WHO Technical Advisory Group on Malaria Elimination and Certification (TAG-MEC)

13 September 2022		
13:00–13:05	Welcome and opening of the meeting	Ren Minghui
13:05–13:15	Self-introduction	
13:15–13:30	Declaration of interests Meeting background and objectives	Xiaohong Li
13:30–14:00	<ul style="list-style-type: none"> <li>• Global update on malaria elimination</li> <li>• Q&amp;A</li> </ul>	Elkhan Gasimov
14:00–14:30	<ul style="list-style-type: none"> <li>• Review the terms of reference of TAG-MEC</li> <li>• Discuss and agree on operating procedures</li> </ul>	Xiaohong Li
14:45–15:15	Experiences and lessons from the recent certifications (Paraguay, Algeria, China)	Allan Schapira
15:15–15:45	Supporting the E-2020 and E-2025 initiatives – experiences and lessons from MEOC	Frank Richards
15:45–16:00	Closure	
14 September 2022		
13:00–13:30	Introduction of WHO certification of malaria elimination, current WHO guidance and tools	Xiaohong Li
Closed session		
13:30–14:30	Discuss the national elimination report from Azerbaijan <b>Closed discussion TAG-MEC members and Elimination unit</b>	All members, facilitated by Keith Carter
14:30–15:30	Discuss the national elimination report from Tajikistan <b>Closed discussion TAG-MEC members and Elimination unit</b>	All members, facilitated by Pedro Alonso
15:30–15:45	Workplan of TAG-MEC 2022–2023	Xiaohong Li
15:45–16:00	Closure	Elkhan Gasimov

## Agenda of the second meeting of the WHO Technical Advisory Group on Malaria Elimination and Certification (TAG-MEC)

27 January 2023		
8:30–8:40	Opening of the meeting	Elkhan Gasimov
8:40–8:50	Declaration of interests and meeting objectives	Xiaohong Li
8:50–9:30	<ul style="list-style-type: none"> <li>• Presentation: Findings, conclusion and recommendations from the independent certification mission to Azerbaijan</li> <li>• Clarifications</li> </ul>	Keith Carter Reza Majdzadeh
9:30–10:10	<ul style="list-style-type: none"> <li>• Presentation: Findings, conclusion and recommendations from the independent certification mission to Tajikistan</li> <li>• Clarifications</li> </ul>	Pedro Alonso Fred Binka
10:30–11:40	<ul style="list-style-type: none"> <li>• Reach consensus on potential certification of Azerbaijan and Tajikistan</li> <li>• Recommendations to Azerbaijan</li> <li>• Recommendations to Tajikistan</li> </ul>	All members
11:40–12:00	<ul style="list-style-type: none"> <li>• Review data from certified countries</li> <li>• Updates on workplan</li> </ul>	Xiaohong Li
12:00–12:05	Closure	Elkhan Gasimov

## Annex 2. Lists of participants

### List of participants of the first meeting of the WHO Technical Advisory Group on Malaria Elimination and Certification (TAG-MEC) 13–14 September 2022, virtual meeting

#### Members

**Professor Pedro Alonso**

Faculty of Medicine & Hospital Clinic  
University of Barcelona  
Spain

**Professor Fred Binka**

School of Public Health  
University of Health and Allied Sciences  
Ghana

**Dr Keith H. Carter**

Senior Adviser, Malaria  
United States of America

**Professor Brian Greenwood**

Clinical Tropical Medicine  
London School of Hygiene and Tropical Medicine  
United Kingdom of Great Britain and Northern  
Ireland

**Dr Anatoly Kondrashin**

Martinovski Institute of Medical Parasitology and  
Tropical Medicine  
Sechenov First Moscow State Medical University  
Russian Federation

**Professor Reza Majdzadeh**

School of Health and Social Care  
University of Essex  
United Kingdom of Great Britain and Northern  
Ireland

**Dr Kamini Mendis**

Independent Consultant in Malaria and  
Tropical Medicine  
Sri Lanka

**Professor Rossitza Ivanova Mintcheva**

Independent Consultant  
Bulgaria

**Dr Martha L. Quiñones**

Department of Public Health  
Medicine Faculty  
Universidad Nacional de Colombia  
Colombia

**Dr Frank Richards**

Senior Advisor  
River Blindness, Lymphatic Filariasis,  
Schistosomiasis and Malaria  
Carter Center  
United States of America

**Dr Allan Schapira**

Independent Consultant  
Philippines

**Dr Leonardo Simão**

Chairman of the Board of Patrons  
Manhiça Foundation  
Mozambique

**Dr Larry Slutsker**

Independent Consultant in Malaria and  
Global Health  
United States of America

**Professor Linhua Tang**

Former Director and Professor  
National Institute of Parasitic Diseases  
Chinese Center for Disease Control and Prevention  
China

#### WHO regional staff and malaria elimination focal points

**Dr Ebenezer Sheshi Baba**

Malaria Elimination Focal Point, WHO Regional  
Office for Africa  
Democratic Republic of the Congo

**Dr Blanca Escribano**

Malaria Elimination Focal Point, WHO Regional  
Office for the Americas  
United States of America

**Dr James Kelley**

Malaria Elimination Focal Point, WHO Regional  
Office for the Western Pacific  
Philippines

**Dr Rishantha Premaratne**

Malaria Elimination Focal Point, WHO Regional  
Office for South-East Asia  
India

**Dr Ghasem Zamani**  
Regional Advisor  
Cairo, Egypt

**Dr Xiaohong Li**  
Technical Officer  
Global Malaria Programme Elimination Unit

#### WHO Headquarters

**Mr Laurent Bergeron**  
Project Officer  
Global Malaria Programme Elimination Unit

**Mr Anderson Chinorumba**  
Technical Officer/Consultant  
Global Malaria Programme Elimination Unit

**Dr Elkhan Gasimov**  
Unit Head  
Global Malaria Programme Elimination Unit

**Dr Ren Minghui**  
Assistant Director-General  
Universal Health Coverage/Communicable and  
Noncommunicable Diseases

**Dr Pascal Ringwald**  
Director, a.i.  
Global Malaria Programme

**Ms Selome Tadesse Worku**  
Team Assistant  
Global Malaria Programme Elimination Unit

## List of participants to the second meeting of the WHO Technical Advisory Group on Malaria Elimination and Certification (TAG-MEC) 27 January 2023, Cape Town, South Africa

#### Members

**Professor Pedro Alonso**  
Faculty of Medicine & Hospital Clinic  
University of Barcelona  
Spain

**Professor Fred Binka**  
School of Public Health  
University of Health and Allied Sciences  
Ghana

**Dr Keith H. Carter**  
Senior Adviser, Malaria  
United States of America

**Professor Brian Greenwood**  
Clinical Tropical Medicine  
London School of Hygiene and Tropical  
Medicine  
United Kingdom of Great Britain and Northern  
Ireland

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Martinovski Institute of Medical Parasitology and  
Tropical Medicine  
Sechenov First Moscow State Medical University  
Russian Federation

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School of Health and Social Care  
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Chinese Center for Disease Control and  
Prevention  
China

**WHO Headquarters****Mr Laurent Bergeron**

Project Officer  
Global Malaria Programme Elimination  
Unit

**Dr Elkhan Gasimov**

Unit Head  
Global Malaria Programme Elimination  
Unit

**Dr Xiaohong Li**

Technical Officer  
Global Malaria Programme Elimination  
Unit

**Ms Selome Tadesse Worku**

Team Assistant  
Global Malaria Programme Elimination  
Unit

For further information please contact:

**Global Malaria Programme**  
**World Health Organization**

20 avenue Appia

1211 Geneva 27

Switzerland

Email: [GMPinfo@who.int](mailto:GMPinfo@who.int)

