



Fact sheets on sustainable development goals: health targets

Malaria

Malaria is frequently considered around the world as a threat to the gains in health and development and the attainment of the 2030 Agenda for Sustainable Development because of the high number of people at risk of acquiring the infection (1).

The European Region was the first in the world to achieve interruption of indigenous malaria transmission, as announced by WHO on 20 April 2016, in line with the goal of the Tashkent Declaration to eliminate malaria from the Region by 2015 (2). However, climate change and other social, demographic and environmental factors have increased the risk of reintroduction of malaria (1). The reintroduction of malaria could compromise the achievement of the Sustainable Development Goals (SDGs), affecting health security, poverty, economic growth, progress in reducing inequalities and conservation of habitats and biodiversity. Action is necessary across sectors and settings to maintain this malaria-free status.

Overview

Malaria is a collective name for a life-threatening disease caused by five different *Plasmodium* parasites, transmitted to humans through the bite of an infected female *Anopheles* mosquito (3).



Malaria and SDGs: facts and figures



- Poverty and the conditions associated with it (malnutrition, weak health systems, poor housing and infrastructure and inequity) have all been associated with a higher risk of acquiring malaria and increased vulnerability to the consequences of the disease (4,5).



- Maintaining malaria-free status has economic benefits. In endemic areas outside of the Region, the reduction of malaria cases has been associated with higher economic growth (6).



- The interruption of malaria transmission in the European Region was made possible through a combination of strong political commitment, heightened detection and surveillance of malaria cases, integrated strategies for mosquito control with community involvement, cross-border collaboration and communication to people at risk (2).

- Of the five different parasites causing malaria, *Plasmodium vivax* was the most common malaria species responsible for local transmission in the European Region (7).

- Imported malaria remains a public health concern in many countries of the Region where the disease has been eliminated (8).

- Approximately 5000 malaria cases were imported to the European Region in 2014, demonstrating that the threat of reintroducing the disease remains (9).

- Travellers, foreign workers and migrants (including refugees) represent the main sources of imported malaria and can act as a reservoir for the resurgence of local transmission. Therefore, early detection and treatment are key elements to prevent the consequences of imported malaria (Box 1) (7).



- Malaria epidemics can occur when climate and other conditions suddenly favour transmission in an area where people have little or no immunity to malaria, as in the case of climate change (3).

- Climate change has altered pathogen transmission patterns, endangering the sustainability of the achievement in the European Region and producing the risk of reintroduction of malaria or its emergence in places where it had not been present previously and where there is no natural immunity (1).



- The impact of vector control on the environment and on biodiversity is an important consideration. Many vector-borne diseases are part of complex ecological systems and unintended impacts on non-target organisms should be avoided (10).

Commitment to act

After the first high-level meeting on prevention of malaria reintroduction in July 2016, 10 malaria endemic countries¹ signed the Ashgabat Statement committing themselves to efficiently manage malaria importation, to prevent the re-establishment of local transmission and to rapidly contain any resurgence of malaria (8).

To sustain the extraordinary results that have been achieved (Fig. 1), countries need to overcome the challenge of transitioning from malaria elimination efforts to the prevention of its reintroduction (7, 10).

¹ Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Russian Federation, Tajikistan, Turkey, Turkmenistan and Uzbekistan.

Box 1. Leaving no one behind...

Access to screening and treatment for high-risk populations: “the vulnerability of an area may be reduced by ensuring access to malaria diagnosis and treatment for the entire population, including immigrants and refugees. In some areas, especially those with a high influx of immigrants from malaria-endemic countries, screening high-risk populations for malaria infection may be recommended.” (7).

The European Regional framework for prevention of malaria reintroduction and certification of malaria elimination 2014–2020 provides a strategy for the prevention of resurgence and/or reintroduction of malaria in the Region and outlines the process for certification of malaria-free status (7). The Regional framework shares the vision of the Global technical strategy for malaria 2016–2030 (7, 12), which includes the prevention of re-establishment of malaria in all malaria-free countries as one of the goals, and it suggests the following main approaches and activities:

- prioritization of the programme at the high level of government and ensure adequate funding allocation;
- a strong and effective surveillance and health system for prompt detection and notifications of all cases;
- early and full treatment of all reported cases by the health care system;
- training and retraining of epidemiologists, parasitologists, entomologists, general physicians, nurses, and laboratory personnel on malaria-related issues;
- cross-border and intersectoral collaboration to coordinate efforts to prevent re-establishment of local transmission (Box 2);
- educational programmes to maintain malaria awareness in the general population; and
- enhanced monitoring and evaluation of interventions.

Box 2. Intersectoral action

Intersectoral network to eliminate malaria: elimination of malaria in Turkey was achieved through the following initiatives.

- Primary health care services were given an integral role in all malaria interventions.
- A specialized intersectoral malaria network was set up, with substantial expertise in control and elimination. This appears to have been a critical factor in achievement of the goals and provided a strong and reliable system for the surveillance and control of malaria.
- Strong laboratory support, intersectoral and international collaboration, as well as improved health education and community mobilization, facilitated malaria elimination and prevention (13).

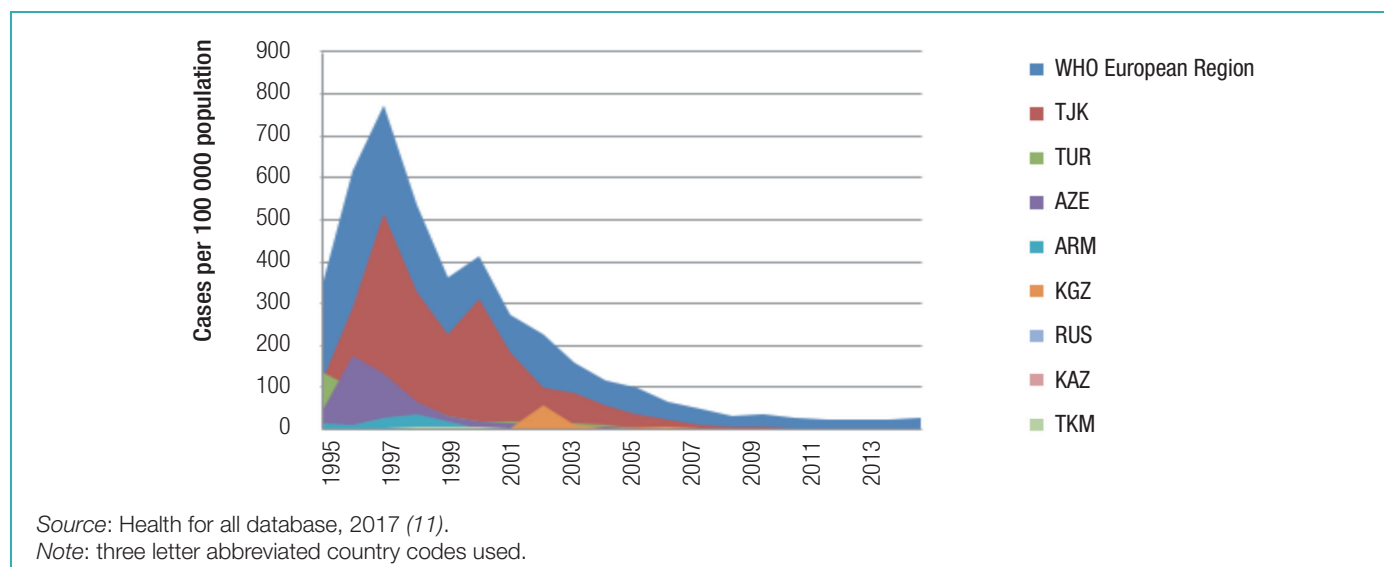
Member States of the WHO European Region are encouraged to apply for certification of malaria elimination, which is the official recognition by WHO of a country’s malaria-free status. It is voluntary and countries may apply to initiate the process after three consecutive years without malaria transmission (10, 14). Globally, 35 countries are certified by WHO as malaria free, including 19 countries in the European Region (14). In recent years, Turkmenistan (2010), Armenia (2011) and Kyrgyzstan (2016) have been certified malaria free. In 2016, Uzbekistan officially requested support from the WHO Regional Office for Europe to prepare for certification (2).

Monitoring progress

The WHO Regional Office for Europe is developing a joint monitoring framework for the SDG, Health 2020 and noncommunicable diseases indicators² to facilitate reporting in Member States and to provide a consistent and timely way to measure progress. The reintroduction of malaria will compromise all Health 2020 targets (15). The Regional Office collects malaria data annually from all countries of the Region. The following, as proposed in the global indicators’ framework of the United Nations Economic and Social Council (ECOSOC), will support monitoring of malaria (16).

² EUR/RC67/Inf.Doc./1: joint monitoring framework: proposal for reducing the reporting burden on Member States.

Fig. 1. Malaria incidence (indigenous and imported) in the WHO European Region and countries at risk of reintroduction 1995–2014



WHO support to its Member States

WHO's main role is to set, communicate and disseminate normative guidance, policy advise and implementation guidance to support country action in the area of vector control and malaria (1).

The WHO Regional Office for Europe works closely with Member States by continuing to provide technical support in developing, reviewing and updating national malaria strategies, data collection and analysis, and in monitoring and evaluation processes. Finally, WHO supports countries in the process of certification of malaria elimination (14).

Partners

WHO collaborates closely with partners whose work is fundamental to successful implementation and monitoring of the Global technical strategy for malaria 2016–2030 to maintain malaria-free status (12). Recent WHO reforms will improve support to countries for response to outbreaks and emergence of vector-borne diseases (1).

Resources

- Global technical strategy for malaria 2016–2030
http://apps.who.int/iris/bitstream/10665/176712/1/9789241564991_eng.pdf?ua=1.
- Regional framework for the prevention of malaria reintroduction and certification of malaria elimination 2014–2020
http://www.euro.who.int/__data/assets/pdf_file/0008/254978/Regional-framework-for-prevention-of-malaria-reintroduction-and-certification-of-malaria-elimination-20142020.pdf.
- Malaria elimination. A field manual for low and moderate endemic countries
http://apps.who.int/iris/bitstream/10665/43796/1/9789241596084_eng.pdf.
- From malaria control to malaria elimination. A manual for elimination scenario planning
http://apps.who.int/iris/bitstream/10665/112485/1/9789241507028_eng.pdf?ua=1.
- Eliminating malaria (2016)
http://apps.who.int/iris/bitstream/10665/205565/1/WHO_HTM_GMP_2016.3_eng.pdf?ua=1.

Key definitions

- **Malaria elimination.** The interruption of local transmission (reduction to zero incidence of indigenous cases) of a specified malaria parasite species in a defined geographical area as a result of deliberate activities. Continued measures are required to prevent re-establishment of transmission (17).
- **Malaria eradication.** The permanent reduction to zero of the worldwide incidence of malaria infection caused by all human malaria parasites as a result of deliberate activities. Interventions are no longer required once eradication has been achieved (17).

- **Malaria imported case.** Malaria case or infection in which the infection was acquired outside the area in which it is diagnosed (17).
- **Malaria indigenous case.** A case contracted locally with no evidence of importation and no direct link to transmission from an imported case (17).

References

1. Global vector control response 2017–2030. In: Malaria programme [website]. Geneva: World Health Organization; 2017 (<http://www.who.int/malaria/global-vector-control-response/en/>, accessed 6 August 2017).
2. History of malaria elimination in the European Region. Copenhagen: WHO Regional Office for Europe; 2016 (Fact sheet; http://www.euro.who.int/__data/assets/pdf_file/0003/307272/Facsheet-malaria-elimination.pdf, accessed 6 August 2017).
3. Malaria. Geneva: World Health Organization; 2017 (Fact sheet; <http://www.who.int/mediacentre/factsheets/fs094/en/>, accessed 6 August 2017).
4. Worrall E, Basu S, Hanson K. The relationship between socio-economic status and malaria: a review of the literature. In: Ensuring that malaria control interventions reach the poor, London, September 2002. Washington (DC): World Bank: 2003 (<http://siteresources.worldbank.org/INTMALARIA/Resources/SESMalariaBackgroundPaper.pdf>, accessed 6 August 2017).
5. Barat LM, Palmer N, Basu S, Worrall E, Hanson K, Mills A. Do malaria control interventions reach the poor? A view through the equity lens. *Am J Trop Med Hyg.* 2004;71(2):174–8.
6. Gallup JL, Sachs JD. The economic burden of malaria. *Am J Trop Med Hyg.* 2001;64(1–2 suppl):85–96.
7. Ejov M, Davidyants V, Zvantsov A. Regional framework for prevention of malaria reintroduction and certification of malaria elimination 2014–2020. Copenhagen: WHO Regional Office for Europe; 2014 (http://www.euro.who.int/__data/assets/pdf_file/0008/254978/Regional-framework-for-prevention-of-malaria-reintroduction-and-certification-of-malaria-elimination-20142020.pdf, accessed 6 August 2017).
8. From over 90 000 cases to zero in two decades: the European Region is malaria free. Copenhagen: WHO Regional Office for Europe; 2016 (Press release; <http://www.euro.who.int/en/media-centre/sections/press-releases/2016/04/from-over-90-000-cases-to-zero-in-two-decades-the-european-region-is-malaria-free>, accessed 6 August 2017).
9. Towards a malaria-free European Region by the end of 2015. In: Vector-borne and parasitic diseases news. Copenhagen: WHO Regional Office for Europe; 2015 (<http://www.euro.who.int/en/health-topics/communicable-diseases/vector-borne-and-parasitic-diseases/news/news/2015/04/towards-a-malaria-free-european-region-by-the-end-of-2015>, accessed 6 August 2017).
10. United Nations Development Programme, Roll back Malaria Partnership. Multisectoral action framework for malaria. New York: United Nations Development Programme; 2013 (<http://www.rollbackmalaria.org/files/files/about/MultisectoralApproach/Multisectoral-Action-Framework-for-Malaria.pdf>, accessed 6 August 2017).
11. European Health for All database [online database]. Copenhagen: WHO Regional Office for Europe; 2017 (<http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-family-of-databases-hfa-dbhttp://data.euro.who.int/hfadb/>, accessed 6 August 2017).
12. Global technical strategy for malaria 2016–2030. Geneva: World Health Organization; 2015 (http://apps.who.int/iris/bitstream/10665/176712/1/9789241564991_eng.pdf?ua=1, accessed 6 August 2017).
13. UCSF Global health sciences, Republic of Turkey Ministry of Health, WHO. Eliminating malaria: the long road to malaria elimination in Turkey. Geneva: World Health Organization; 2013 (Case study 5; http://apps.who.int/iris/bitstream/10665/94961/1/9789241506403_eng.pdf?ua=1, accessed 6 August 2017).
14. Certification process. In: Malaria programme [website]. Geneva: World Health Organization; 2016 (<http://www.who.int/malaria/areas/elimination/certification/en/>, accessed 6 August 2017).
15. Targets and indicator for Health 2020, version 3. Copenhagen: WHO Regional Office for Europe; 2016 (http://www.euro.who.int/__data/assets/pdf_file/0011/317936/Targets-indicators-Health-2020-version3.pdf, accessed 4 August 2017).
16. Statistical Commission report E/2017/24 on the 48th session. New York: United Nations; 2017 (<https://unstats.un.org/unsd/statcom/48th-session/documents/Report-on-the-48th-session-of-the-statistical-commission-E.pdf>, accessed 28 July 2017).
17. A framework for malaria elimination. Geneva: World Health Organization; 2017 (<http://apps.who.int/iris/bitstream/10665/254761/1/9789241511988-eng.pdf?ua=1>, accessed 28 August 2017).

URL: www.euro.who.int/sdgs

© World Health Organization 2017. All rights reserved.

The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

World Health Organization Regional Office for Europe
 UN City, Marmorvej 51, DK-2100 Copenhagen Ø, Denmark
 Tel.: +45 45 33 70 00 Fax: +45 45 33 70 01
 E-mail: eucontact@who.int