Malaria Elimination Initiative
The mission of the ISGlobal Malaria Elimination Initiative is based on the concept of knowledge translation: that generation of scientific evidence will create opportunities for advancing both policy and implementation options in endemic countries. We work through the implementation of projects in the areas of Research, Training, and Policy and Global Development.

The Initiative generates novel possibilities for action and impact, and establishes collaborative agreements with academic institutions, international organisations and national governments to advance malaria elimination in different regions of the world.

ISGlobal Malaria Elimination activities are supported by competitive funds from a variety of organisations including the “la Caixa” Foundation, the Bill & Melinda Gates Foundation, US National Institutes of Health, the European and Developing Countries Clinical Trials Partnership, the European Commission and Spanish and Catalan research and cooperation agencies, among others. In 2017, in recognition of its contributions in this field, ISGlobal designation as a World Health Organisation (WHO) Collaborating Centre for Malaria Control, Elimination and Eradication was renewed.

Towards a malaria free world

Malaria, a longstanding source of death and suffering in most impoverished areas of the world, is a clear example of a global health story showing two very different sides. On the one hand, as a result of substantial increases in available funds and the scale up of preventive tools, diagnostic testing and adequate treatment, the last decade has witnessed extraordinary advances in the fight against the disease. Between 2000 and 2015, there was a 41% reduction in malaria case incidence and a 62% decline in mortality rates. In this same period, 17 countries have eliminated malaria, six of which received the WHO certification as ‘malaria free’.

This is certainly a reason for celebration and gratefulness for aligned commitment from endemic countries, international organizations and funders. However, there is much to be done. First, is the gap of the more than 400,000 deaths and about 20 million cases that are reported annually (2015 data). Second, while 21 countries are now identified as advancing towards elimination of transmission by 2021 (see map), new tools and strategies are needed to achieve this in highly endemic areas. This gap is a focus of the initiative, advancing the creation and evaluation of key concepts that could serve the global effort.

The concept of elimination is driven by the need for sustainable solutions to malaria, the predictable risk of emergence of resistance to our priority drugs and vector tools, and the risk of resurgence where malaria is controlled but not eliminated. The concept of equity, for a disease that is both preventable and treatable, has led to consensus that the global target is the systematic progression of national elimination of the disease, as reflected in the WHO Global Technical Strategy for Malaria (2016-2030), eliminating malaria requires however, innovative approaches and other concomitant elements including strong health and surveillance systems, further political commitment, sufficient economic resources and well trained implementers at the national level. ISGlobal’s goal is to advance the malaria elimination agenda.
Classification of countries by stage of malaria elimination

The only sustainable solution to malaria is elimination

Approximately half of the world population lives at risk of malaria

Ongoing malaria transmission

21 countries with the potential to eliminate malaria by 2020

Countries certified as malaria free since 2007

Source:
malERA Refresh.
PLOS Med (2017)
Building on ISGlobal’s long history on malaria, the Malaria Elimination Initiative advances the creation and evaluation of products and strategies to support the elimination of malaria. ISGlobal research teams, collaborating in different in different countries around the world, generate knowledge and evidence ranging from basic science to implementation.

Activities include:

- Development of strategies for malaria elimination, including better ways to interrupt and measure disease transmission and eliminate the parasite from asymptomatic carriers.
- Creation of modern disease surveillance systems to guide malaria elimination interventions.
- Studies on how people acquire or lose immunity against malaria according to their exposure to the parasite in the context of natural infection as well as following administration of candidate malaria vaccines.
- Evaluation of the impact of drug and insecticide resistance in elimination strategies, as well as ways to measure these systematically in entomological surveillance systems.
- Development of new tools for vector control, including the creation of the ISGlobal Ivermectin Platform to assess the use of this endectocidal drug as complementary vector control tool against residual transmission.
- Studies on the Plasmodium vivax parasite, most commonly found in non-African settings, from its most basic biology to its epidemiology and transmission patterns.

In 2015, 91 countries had on-going malaria transmission

- Clinical trials for the evaluation of treatments for malaria, including high-risk groups such as infants, children with severe malaria, and pregnant women.
- Search for new antimalarial compounds and drug delivery systems.
- Health economy and studies of the economic impact of malaria elimination.
- Studies on the basic biology of malaria parasites and malaria pathophysiology.
ISGlobal leads the **Malaria Eradication Scientific Alliance (MESA)**, which aims to advance the emerging evidence supporting malaria elimination and eradication and promote knowledge management as a platform to advance the science of malaria elimination by the community. MESA provides a dedicated platform to drive an evidence-based approach to malaria eradication; creates tools to accelerate and expand the impact of the relevant evidence base; and accelerates research, especially in areas of relevance for policy makers and programmes. It has also led the update of the Malaria Eradication Research Agenda (malERA refresh). MESA is funded by the Bill & Melinda Gates Foundation.
ISGlobal Malaria Elimination Initiative supports the development of effective policies related to malaria elimination and advocates for enhancing leadership and financing for malaria in low incidence disease scenarios.

- Analysis of opportunities and challenges for malaria elimination, including the active involvement in the WHO Strategic Advisory Committee for Malaria Eradication (SAGme).
- Collaboration in the review of scientific evidence to incorporate the latest knowledge generated from research on malaria elimination.
- Organization of briefings and public events to raise awareness on the importance of investing in malaria elimination programmes and encourage the availability of additional financial resources.

Malaria elimination is defined as the reduction of the incidence of Plasmodia infections to zero in a defined geographical area.
A skilled human resource capacity to create knowledge and to effectively manage and deliver the most effective programmes in endemic countries is essential for achieving malaria elimination. ISGlobal trains public health professionals and researchers who work on issues related to malaria elimination and generates opportunities for knowledge sharing between scientists, implementers and representatives from international organisations. Examples of these actions include:

- The annual “Science of eradication: malaria” course, organised as a collaboration between Harvard University, the Swiss Tropical and Public Health Institute and ISGlobal.

- Other regional courses on malaria elimination such as the Keystone symposia and participation in conferences such as the Pan-African Malaria Conference.

- Short courses on entomology and surveillance to personnel working for the Mozambican National Malaria Programme.

- Doctoral Programme in Medicine: International Health Research Track, in collaboration with the University of Barcelona.

- Masters Programme in Global Health and in Clinical Research (International Health Research Track and Clinical Microbiology Track).

Malaria killed more than 400,000 people in 2015, causing nearly 200 million cases.
The WHO Global Technical Strategy for Malaria 2016-2030 aims at eliminating the disease in at least 35 new countries.
The Malaria Elimination Initiative strengthens, through strategic partnerships, regional initiatives to implement elimination activities and engages in collaborative agreements in which it can contribute to reach malaria elimination and eradication goals.

Malaria Elimination in Southern Mozambique

In partnership with the Manhiça Health Research Centre (CISM), ISGlobal supports the National Malaria Control Programme in Mozambique in its efforts to eliminate malaria in the south of the country through knowledge generation, development of surveillance systems, training, advocacy and coordination mechanisms. These actions fall under the umbrella of the Mozambican Alliance for Malaria Elimination led by the Mozambican Ministry of Health, and are funded by a partnership established between the Bill & Melinda Gates Foundation and “la Caixa” Foundation.

WHO Collaborating Centre for Malaria Control, Elimination and Eradication

Following years of fruitful collaboration, ISGlobal was designated WHO Collaborating Centre in 2013, and this designation was renewed in 2017. The agreement envisages advancing the science of malaria elimination in order to inform relevant WHO policies and guidelines, supporting the writing up of guidelines, handbooks and reports, participating in the Strategic Advisory Committee on Malaria Eradication, and supporting workstreams on issues relevant to malaria eradication and elimination.
ISGlobal’s mission is to promote health equity through excellence in research and the translation and application of knowledge. Our vision is a world in which all people can enjoy good health.

ISGlobal Initiatives

• Antibiotic Resistance
• Chagas
• Malaria Elimination
• Maternal, Child and Reproductive Health
• Urban Planning, Environment and Health