Global malaria situation

Massive improvements have been noted since the launch of the Roll Back Malaria initiative in 1998. In recent years, four countries have been certified by the WHO Director-General as having eliminated malaria: United Arab Emirates (2007), Morocco (2010), Turkmenistan (2010), and Armenia (2011). Fifty-two countries are on track to reduce their malaria case incidence rates by 75%, in line with World Health Assembly and Roll Back Malaria targets for 2015. Fifty-nine countries are on track to meet the Millennium Development Goal target of reversing the incidence of malaria.

Malaria is still a major public health problem – even though it is a preventable and treatable mosquito-borne disease. In 2013, 97 countries had ongoing malaria transmission. An estimated 3.4 billion people are at risk of malaria, of which 1.2 billion are at high risk.

There were an estimated 207 million cases of malaria in 2012 (uncertainty range: 135–287 million) and an estimated 627,000 deaths (uncertainty range: 473,000–789,000). Ninety per cent of all malaria deaths occur in sub-Saharan Africa, and 77% occur in children aged under 5 years. In 2012, malaria killed an estimated 483,000 children under 5 years of age. That is 1300 children every day, or one child almost every minute.

Between 2000 and 2012, the scale-up of interventions helped to reduce malaria incidence rates by 29% and malaria mortality rates by 45%, globally. During that period, an estimated 3.3 million lives were saved as a result of the scale-up of interventions –90% of which were in the under-5 age group, in sub-Saharan Africa.

Malaria parasite resistance to artemisinin – the core compound of artemisinin-based combination treatment – and mosquito resistance to insecticides are major threats to malaria control and elimination. Resistance to artemisinin has been detected in four countries: Cambodia, Myanmar, Thailand and Viet Nam. Mosquito resistance to at least one insecticide used for malaria control has been identified in 64 countries. Management of these threats is described in the Global plan for artemisinin resistance containment and the Global plan for insecticide resistance management in malaria vectors, released by WHO in 2011 and 2012, respectively.

Malaria in the South-East Asia Region

The malaria situation in the Region is complex due to several factors, including: the presence of many vectors; population movement; various environmental factors that affect malaria transmission; and, the presence of all human malaria parasites. Most cases in the Region are due to *Plasmodium falciparum*, although in Nepal and Sri Lanka most cases are due to *P. vivax*, and exclusively so in the Democratic People’s Republic of Korea. Deaths due to malaria are mainly attributed to *P. falciparum*. In recent years, increasing numbers of malaria deaths due to *P. vivax* have been noted.

About 1.6 billion people are at some risk of malaria in the 10 malaria-endemic countries of the Region, and 1 billion people are at high risk. High-risk groups include: workers in development projects such as agroforestry and mining; subsistence farmers in hilly and forested areas; settlers in forests and forest fringes; ethnic communities; and, those residing along international borders where ecological conditions favour malaria transmission. Although transmission is predominantly in rural settings, malaria is also a problem in several urban areas in India.

Between 2000 and 2012, the number of confirmed malaria cases in the Region decreased from 2.9 to 2 million while the
The number of reported malaria deaths decreased from 5500 to 1200. Three countries – India, Indonesia and Myanmar – accounted for over 90% of reported cases and deaths. Of the 10 countries with ongoing transmission, five have reduced malaria case incidence by >75%, two are on track to achieve a decrease >75%, and one a decrease of 50–75% by 2015. In the remaining two countries, progress is obscured by changes in diagnostic or reporting practices. Sri Lanka is in the elimination phase, and Bhutan and the Democratic People's Republic of Korea are in the pre-elimination phase.

### Addressing the key challenges

National malaria control programmes face several challenges. Key actions to address the challenges are:

- Consider malaria as a development issue and not just as a health problem
- Maintain high political and financial support
- Maintain core capacities to address the needs for malaria control and elimination
- Scale-up key interventions through multisectoral approaches targeting highly vulnerable populations
- Prioritize delivery of integrated health services, including malaria control interventions, to malaria-endemic areas where access to health services is difficult
- Address bottlenecks in malaria control programme management
- Ensure rational use of malaria medicines and get rid of substandard, counterfeit and fake anti-malarial drugs
- Intensify monitoring of parasite resistance to malaria drugs and vector resistance to insecticides, and use the information for decision-making
- Strengthen intercountry and cross-border collaboration for malaria control and elimination
- Invest in research to develop new tools as well as formulate innovative delivery mechanisms to reach the unreached populations and to control outdoor transmission

### Guiding principles

- Malaria is a focal disease and its determinants vary from one area to another. Sound knowledge of the local epidemiology should underpin control and elimination programmes.
- Micro-stratification should be done regularly (at least once in 1–3 years) to guide operational planning and improve targeting of interventions.

### Strategic objectives 2014–2020

- Generate evidence and strategic information for policy and strategy development, operational planning and decision-making
- Scale-up key interventions in countries and areas with a high burden of malaria, particularly in foothills, forested and border areas, at development project sites and among indigenous communities
- Reorient national malaria control programmes towards pre-elimination/elimination in countries with very low burden of malaria
- Prevent the emergence of artemisinin resistance, and eliminate it in areas where it has already emerged
- Strengthen managerial and technical capacities for malaria control and elimination
- Strengthen partnerships, multisectoral participation and international collaboration in malaria control and elimination

### Research

Effective implementation of existing tools has markedly brought down the burden of malaria. However, much more needs to be done to address the remaining burden and residual transmission. To reach the endgame of malaria elimination will require new tools as well as innovative mechanisms to deliver services to hard-to-reach populations in malaria-endemic areas. Moreover, research is needed to inform policies and strategies for prevention of resurgence of transmission. Research agenda to be considered are:

- Operational research including the use of modern information technologies for surveillance and response; mechanisms to effectively deliver interventions to high-risk groups such as ethnic communities, migrant workers and those living in hard-to-reach endemic areas; engaging communities at risk, private health-care providers and the private corporate sector; and sustainable financing mechanisms
- Testing of new tools to control outdoor transmission and to detect very low levels of parasitemia, including in those without symptoms
- Development and deployment of vaccines and new drugs