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# MEKONG MALARIA III MONOGRAPH

### TOWARDS MALARIA ELIMINATION IN THE GREATER MEKONG SUBREGION

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#### **Competing interests**

The authors declare that they have no competing interests.

#### Disclaimer

Findings and conclusions in the monograph are those of the authors and do not necessarily represent the official position of the above mentioned international institutions.

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## FOREWORD

Mekong Malaria III (MMII) provides an excellent overview and trend of recent malaria situation in the Greater Mekong Subregion (GMS) with data from 2002 to 2010, building upon MMI, which covers the period 1996-1998 and MM II from 1999 to 2001. This volume's data reveal rapid and dynamic changes in the GMS which impact upon the regional malaria situation, the regional problem of growing drug resistance, and extends to global efforts towards malaria control and elimination.

This most recent volume, *Mekong Malaria III: towards malaria elimination in the Greater Mekong Subregion*, was compiled with the invaluable contributions and support of the Ministries of Health of Cambodia, PR China, Lao PDR, Union of Myanmar, Viet Nam; the Ministry of Public Health, Thailand; SEAMEO TROPMED; WHO-WPRO, WHO-SEARO and WHO Mekong Malaria; the Malaria Consortium; the Mahidol-Oxford Research Unit (MORU); the Bill and Melinda Gates Foundation (BMGF) and the President's Malaria Initiative/US Agency for International Development (PMI/USAID).

The chapters cover the highly complex and diverse GMS context of malaria infection and management, epidemiology, malaria vectors, regional migration, drug resistance (*in vivo* protocols and progress towards molecular markers), the state of play in malaria research, the management of malaria, and progress towards malaria elimination. The current review of the regional situation reveals a set of contexts and circumstances that are specific to the GMS. We see an overall declining trend in the incidence of malaria in the Region, which is encouraging. However, critical challenges must be overcome for the achievement of the ultimate goal, the elimination of malaria – among them, remaining focal hotspots, especially in the more remote and inaccessible forested/forest-fringe areas of the Region, mainly along international borders; growing evidence of resistance to artemisinin-based combination therapies; the increased incidence of fake/substandard antimalarial drugs; and a complex of cultural, geographic, political, and legal impediments to healthcare access by minority, mobile, remote, and border populations. Strengthened networks of research institutions, NGOs, and national malaria programs, with overall coordination and support by a regional body, may be the best way to facilitate evidence-based decision-making and appropriate coordinated future action.

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## THE SOUTHEAST ASIAN JOURNAL OF TROPICAL MEDICINE AND PUBLIC HEALTH

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## **MEKONG MALARIA III**

### TOWARDS MALARIA ELIMINATION IN THE GREATER MEKONG SUBREGION

Abstract. The third Mekong Malaria monograph follows on from the second monograph published in 2003. This comprehensive document spanning a 10 year period (2000-2010) compiles data, project implementation reports, other official and unofficial grey literature and peer-reviewed publications essentially generated by experts, program managers and field workers who have been engaged in malaria control operations in the Greater Mekong Sub-region. The last decade has demonstrated progress far beyond expectations in malaria control in the region: as compared to 2002, malaria deaths have decreased in 2010 by more than 75% and confirmed malaria cases by 25% in all Mekong countries except Myanmar. Malaria case detection rate has increased over the years as a result of scale-up of microscopy services and progressive roll-out of falciparum specific and then PAN specific rapid diagnostic tests for malaria (now widely available at community level especially in remote locations). As a direct result of substantial extra funding in the region, largely through GFATM but also through other funding partners like BMGF and PMI, strategic options for controlling the disease have not only been consolidated and updated but also widely promoted throughout the region. This has hugely increased access to and use of relevant tools for malaria prevention and control by the most at risk. remote and mobile populations. As expected, the success has been outstanding in reducing P. falciparum incidence, to the extent that vivax malaria now predominates in many areas. Better control of P. vivax is one of the next major challenges faced by countries as they move towards malaria elimination goals. Digital maps of the region comparing API by district in 2002 and 2010 provide clear information on progress towards malaria elimination and clearly identify locations where the malaria burden remains a particular concern. The monograph also provides an overview of the dynamic socio-economic context of the Mekong region leading for example to public health and environmental challenges such as the increasing importance of secondary vectors which are adjusting to new conditions or new primary health care challenges associated with internal and international migrants reaching basic health and malaria related services. The region remains the hotspot of antimalarial drug resistance and containing or eliminating resistant strains presents a major challenge to National Malaria Control Programs. Also discussed is the importance of maintaining and implementing a strategic research agenda articulated to programmatic perspectives and technical issues, backed-up by national and international institutions. Fine tuning existing tools and identifying new control options remain the cornerstone of success. Based on the last 10 years of heightened control efforts, strategies and policies are discussed in view of their success but also in view of their technical and programmatic limitations. Last but not least, political support at the highest level, and supranational mechanisms to combat substandard medicines and properly measure progress made are both considered essential in the continuing effort to control and eliminate malaria in the region. This monograph is then a critical milestone against which to measure past and future effort in the Mekong region.