



Financing for Malaria Elimination

December 2013



UCSF GLOBAL HEALTH SCIENCES

THE GLOBAL HEALTH GROUP

From evidence to action

CONTENTS

Acknowledgments | 4

Acronyms | 5

Executive summary | 6

1. Introduction | 8

- 1.1. Scope and objectives | 8
- 1.2. Methodology | 9
- 1.3. Structure of the report | 9

2. Global financing landscape for malaria elimination | 10

- 2.1. Government versus donor financing | 10
- 2.2. Key trends in bilateral and multilateral donor financing | 11

3. New or innovative financing mechanisms | 15

- 3.1. Focus and classification of mechanisms | 15
- 3.2. New approaches to fundraising | 15
- 3.3. New sources of funds | 18
- 3.4. Applicability to malaria elimination | 20

4. Recommendations | 23

- 4.1. Key considerations | 23
- 4.2. Recommendations on new financing mechanisms | 25
- 4.3. Recommendations for strengthening existing financing mechanisms | 32

5. Suggested way forward | 33

Annex 1. Bibliography | 34

Annex 2. List of consultations | 36

Annex 3. Government and donor funding for malaria-eliminating and control countries | 37

Annex 4. Donor funding for malaria-eliminating countries | 39

Annex 5. Details on financing for malaria elimination by select donors | 44

Annex 6. Regional initiatives for malaria and other sectors | 47

ACKNOWLEDGMENTS

The report has been developed by Cambridge Economic Policy Associates (CEPA). The authors of the report are Kaveri Kumar, Anna Pigazzini and Bo Stenson.¹

The report has benefited from review and comments by Richard Feachem, Elizabeth Brashers, Allison Phillips and Jenny Liu of the Global Health Group, University of California, San Francisco.

The study has been commissioned by the UCSF Global Health Group. However, the views expressed are those of CEPA alone. CEPA accepts no liability for use of this report or any information contained therein by any third party.

CEPA Ltd. ©All rights reserved

¹ Support has been provided by Pritha Venkatachalam, Daniel Hulls, Rajat Bansal and Ayushi Gupta.

ACRONYMS

ACT	Artemisinin Combination Therapy
ADB	Asian Development Bank
APLMA	Asia Pacific Leaders Malaria Alliance
APMEN	Asia Pacific Malaria Elimination Network
AusAID	Australian Agency for International Development
CEPA	Cambridge Economic Policy Associates
CRS	Creditor Reporting System
DAC	Development Assistance Committee
DFID	UK Department for International Development
E8	Elimination Eight Regional Initiative
EMMIE	Elimination of Malaria in Mesoamerica and the island of Hispaniola
EU	European Union
GCC	Gulf Cooperation Council
GMAP	Global Malaria Action Plan
IDA	International Development Association
IDB	Inter-American Development Bank
IFFIm	International Financing Facility for Immunisation
LIC	Low Income Country
LMIC	Lower Middle Income Country
ODA	Overseas Development Assistance
OECD	Organisation for Economic Cooperation and Development
PAHO	Pan-American Health Organisation
PEPFAR	President's Emergency Plan for AIDS Relief
PMI	President's Malaria Initiative
PPP	Public Private Partnership
UCSF	University of California, San Francisco
UMIC	Upper Middle Income Country
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

In recent years, a number of countries have made considerable progress in reducing the burden of malaria and at present, 34 countries are in the malaria elimination phase. These countries are mostly high or middle income countries and therefore have not been the focus of traditional bilateral and multilateral donors. Nevertheless, they require a certain level of financial support to achieve elimination, prevent resurgence, and support larger goals of regional elimination and global eradication. In this context, our report makes recommendations on appropriate new financing mechanisms as well as opportunities to strengthen existing financing mechanisms for malaria elimination.

As part of our analysis, we have reviewed the current global donor financing landscape for malaria-eliminating countries. Our main finding is that a few key donors have provided limited funding to these countries:

- The Global Fund is the largest source of funding for malaria-eliminating countries. However, its focus is on the low income-high burden malaria-control countries, although it is also considering regional funding arrangements that include some malaria-eliminating countries.
- The Australian and Japanese governments are the main source of bilateral funding for malaria-eliminating countries and have provided funding for neighbouring countries in the Asia Pacific region. Other major bilateral donors for health, such as the US and the UK, have provided limited or no bilateral funding for malaria elimination.

We have also reviewed a range of new or innovative financing mechanisms that are either ‘non-traditional’ models or have not previously been applied to malaria elimination but exhibit potential. These include:

- New instruments or approaches to fundraising, such as market financing/debt raising mechanisms, debt conversion mechanisms, endowment funds, international earmarked taxes and regional funds.
- New sources of funding, such as the private sector, major foundations and other philanthropists, emerging government donors and voluntary contributions.

We have assessed the applicability of these mechanisms for malaria elimination against desirable financing characteristics such as scale, predictability, sustainability, additionality and transaction costs. Each of the financing mechanisms scores positively against some of these criteria. Ultimately, it is our judgement that regional mechanisms that leverage financing from a range of sources (including relatively modest levels of global donor funding in addition to government and other new sources of funding) are the most promising approach. This is mainly because of the regional “public good” nature of malaria elimination, which implies that there is an argument for collective action at the regional level to fund elimination. It is also supported by the fact that in the face of limited global donor financing, regional funds may present an attractive opportunity for contributions from national governments of malaria-eliminating countries as well as emerging government donors (e.g. Malaysia, South Africa, South Korea) with specific interest in providing regional funding.

Our initial views on the potential structure of a regional mechanism are as follows:²

- **What would a regional mechanism do?** There is a case for combining both programmatic and financing aspects in the regional mechanism as a means to help deal with the collective action problem. The programmatic component may include activities that are best organised, delivered and funded at the regional level, such as surveillance and mapping of potential/confirmed sources (“hotspots”) of transmission and pooled procurement of diagnostics and drugs. The financing component would aim to “internalise the externalities” by providing “top-up” payments to countries for their national programmes. These could be structured as results-based funding wherein countries receive a reward once pre-agreed upon results have been achieved. Such an approach would provide countries with greater incentives to invest in malaria elimination.
- **How would a regional mechanism be funded?** Traditional bilateral and/or multilateral donor resources would also be needed to ‘kick-start’ the mechanism

² These are CEPA’s early views and have not been discussed with relevant stakeholders or “market tested.”

or provide ongoing funding for the programmatic and financing components. However, the regional mechanism need not be funded by traditional donors alone, and several other sources should be leveraged. These could include governments of participating countries, emerging government donors (many of which represent malaria-eliminating countries), the private sector, and foundations and philanthropists.

- **How would a regional mechanism be managed?**

The fund could be managed by one of the existing multilateral organisations (including a regional development bank), which would provide financial credibility for donors. Management could also be contracted out to a private sector organisation with the requisite technical expertise.

There is high potential for establishing such a regional fund in the Asia Pacific region given the existence of a number of fast-growing economies, a strong history of regional cooperation and the presence of the Asia Pacific Malaria Elimination Network (APMEN). The Asian Development Bank, with AusAID and other donors, is currently assessing the feasibility of establishing a regional funding

mechanism (an “Asia Pacific Fund”) for the long-term control and prevention of malaria and other communicable diseases.

We also recommend the strengthening of existing financing mechanisms in the following ways: (i) advocating for the financing of malaria-eliminating countries by the Global Fund; (ii) strengthening the work of existing bilateral donors (such as the governments of Australia and Japan) to maintain and expand their commitment to malaria elimination; and (iii) engaging with emerging government donors to encourage funding for malaria elimination.

To make the case for new or additional funding for malaria elimination, it is critical to develop a robust investment case for national and regional malaria elimination. This would entail identifying key funding gaps, quantifying the costs and time horizons involved, proposing practical financing mechanisms and linking investments with anticipated targets, results and benefits. Such an investment case would also support decision-making and be an important advocacy tool for malaria elimination and eventual eradication.

1. INTRODUCTION

Cambridge Economic Policy Associates (CEPA) has been appointed by the Malaria Elimination Initiative of the Global Health Group, University of California, San Francisco (UCSF) to consider suitable global financing mechanisms for malaria elimination.³ This report presents our analysis and recommendations.

1.1. Scope and objectives

The assignment aims to review the current global financing landscape for malaria elimination and consider appropriate new or existing financing mechanisms to provide increased resources. The context for the work is the limited funding for malaria-eliminating countries and the need to sustain a certain level of financial resources, to prevent malaria resurgence, support elimination and the eventual eradication of the disease.⁴

The focus is on malaria-eliminating countries defined as “(a country that has) formally declared a national, evidence-based elimination goal, has assessed its feasibility,

and has embarked on a malaria elimination strategy (or) is strongly considering an evidence based national elimination goal, and that has already made substantial progress in spatially progressive elimination...and in greatly reducing malaria nationwide.”⁵ The Global Health Group currently categorises 34 countries as malaria-eliminating, the majority of which are high- or middle income countries. These are listed in [Figure 1.1](#) and form the basis for our work.

The specific objectives of the assignment are as follows:

- Review the current global financing landscape for malaria elimination and assess opportunities for, and threats to, continued financing.
- Assess new or innovative financing mechanisms in public health and international aid, as may be applicable for malaria elimination.
- Identify one or more financing mechanisms for malaria elimination, considering both new and existing financing mechanisms.

Figure 1.1: List of malaria-eliminating countries (as of August 2012)

High income Countries	Upper middle income Countries	Lower middle income Countries	Low income Countries
Saudi Arabia South Korea	Algeria Argentina Azerbaijan Botswana China Costa Rica Dominican Republic Iran Malaysia Mexico Namibia Panama South Africa Thailand Turkey	Belize Bhutan Cape Verde El Salvador Nicaragua Paraguay Philippines Sao Tome and Principe Solomon Islands Sri Lanka Swaziland Uzbekistan Vanuatu Vietnam	Kyrgyzstan North Korea Tajikistan

³ Malaria elimination is described in Feachem et al. (2010) as “a state where interventions have interrupted endemic transmission and limited onward transmission from imported infections below a threshold at which risk of re-establishment is minimised.”

⁴ Increased financing will also aim to maintain the fragile gains that have been achieved from the resources and efforts expended over the past few years.

⁵ Feachem et al. (2010).

- To the extent feasible, examine implications of any new financing mechanism and its applicability to the malaria-eliminating countries in the Asia Pacific.
- Develop high-level strategies for engaging with potential funding agencies based on their priorities and focus areas.

The assignment covers global rather than domestic financing, although the latter is also very important for malaria-eliminating countries. The focus is exclusively on financing for malaria elimination; we do not consider aspects such as linkages with other communicable diseases.

1.2. Methodology

The assignment is based on a review of relevant literature and data analysis ([Annex 1](#) provides a list of references) as well as consultations with key stakeholders ([Annex 2](#) provides a list of consultations).

The report has benefitted from reviews and comments from the Global Health Group, the Economics and Finance Working Group of the Malaria Elimination Group and a selection of project consultees.

1.3. Structure of the report

The report is structured as follows:

- [Section 2](#) presents a review of the global donor financing landscape for malaria elimination;
- [Section 3](#) discusses new or innovative financing mechanisms and their applicability to malaria elimination;
- [Section 4](#) sets out our recommendations; and
- [Section 5](#) concludes and provides a suggested way forward.

The report is supported by the following annexes:

[Annex 1](#) is a bibliography; [Annex 2](#) lists the stakeholders and experts consulted for the assignment; [Annex 3](#) presents an analysis of the composition of donor and government funding for malaria in malaria-endemic countries; [Annex 4](#) presents the trends in financing for malaria-eliminating countries using data on Official Development Assistance (ODA) from the Organisation for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) Creditor Reporting System (CRS); [Annex 5](#) provides additional details on financing for malaria-eliminating countries by select multilaterals and bilateral initiatives; and [Annex 6](#) describes regional initiatives for malaria and other sectors.

2. GLOBAL FINANCING LANDSCAPE FOR MALARIA ELIMINATION

This section describes the global financing landscape for malaria elimination, comprised of bilateral and multilateral donor financing. Section 2.1 presents the context in terms of the share of government and donor financing for malaria-eliminating countries. Section 2.2 describes the key trends in donor financing, including a comparison of financing for malaria elimination with overall financing for health and malaria control.

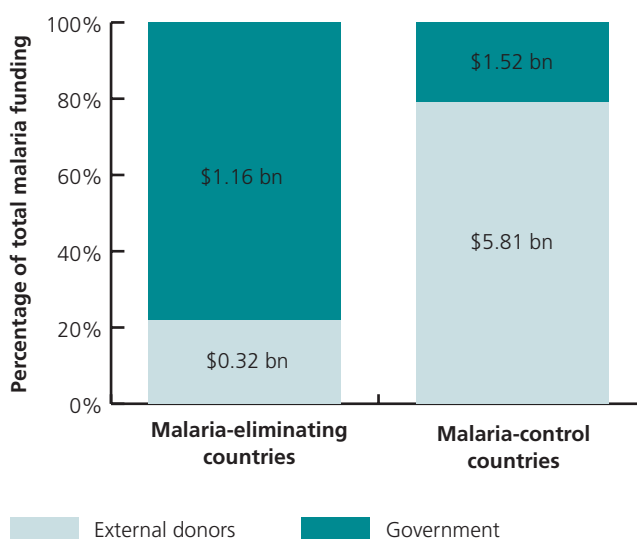
2.1. Government versus donor financing

Figure 2.1 presents the funding structure for malaria programmes in the malaria-eliminating and control countries over the period 2006–10.⁶ As can be seen from the figure:

- Total funding for malaria-eliminating countries was US\$1.49bn, of which 78% was from national governments and 22% was from donors.
- This contrasts with the funding for malaria-control countries, where the total volume of funding is much higher at US\$7.33bn and the majority of funding has been from external donors.

This trend is not unexpected given the relatively lower financing needs and higher economic status of the malaria-eliminating countries (31 of the current 34 malaria-eliminating countries are high- or middle income).

Figure 2.1: Comparison of government and donor financing for malaria-eliminating and malaria-control countries



Source: CEPA analysis using data from Pigott et al. (2012)

A key issue for financing in malaria-eliminating countries is that governments have the tendency to reallocate resources once the burden of malaria declines. A recent systematic review highlighted that of the 75 malaria resurgence events identified between the 1930s and 2000s, 91% were attributed at least in part to reduced malaria control activities, with more than half of the resurgence events due to resource constraints.⁷ A case in point is in Sri Lanka where, following a successful elimination strategy in the mid-1960s, the government disbanded the malaria programme, contributing to a massive resurgence of the disease in 1967–68.⁸

⁶ The analysis is based on data from Pigott et al. (2012). The data covers 97 countries based on regions at risk from *Plasmodium falciparum* and/or *P. vivax* transmission from the global risk map for 2010. We have used the Global Health Group's August 2012 list of countries to select malaria-eliminating countries (data is available for all countries except Algeria), and assume the remainder are malaria-control countries. More details are provided in Annex 3.

⁷ Cohen et al. (2012), Malaria resurgence: a systematic review and assessment of its causes. *Malaria Journal*, 11(22).

⁸ UCSF Global Health Group "Eliminating Malaria in Sri Lanka" (2013).

2.2. Key trends in bilateral and multilateral donor financing⁹

2.2.1. Approach and methodology

Trends in bilateral and multilateral donor financing for malaria-eliminating countries have been analysed using data on ODA commitments (at 2011 constant USD) from the OECD DAC CRS database. The database provides ODA for the health sector, disaggregated into three sub-categories: (i) 'general health'; (ii) 'basic health'; and (iii) 'population policies/programmes and reproductive health'.¹⁰ Basic health ODA includes a sub-sector on 'malaria control' (which comprises total donor financing for malaria programmes). We have calculated financing for malaria elimination by considering the 'malaria control' funding for the Global Health Group's 34 malaria-eliminating countries.¹¹

The data for health ODA is for the period 2000–11, while that for malaria ODA is for 2006–11 (and for some countries for 2007–11) based on the quality of data available. Note that sub-sectors of both basic and general health include health infrastructure and systems strengthening components which are also important for malaria control. Hence the trends presented below are at best an underestimate of actual malaria funding in these countries.

The data analysis is supplemented by consultation feedback from key donors and other stakeholders.

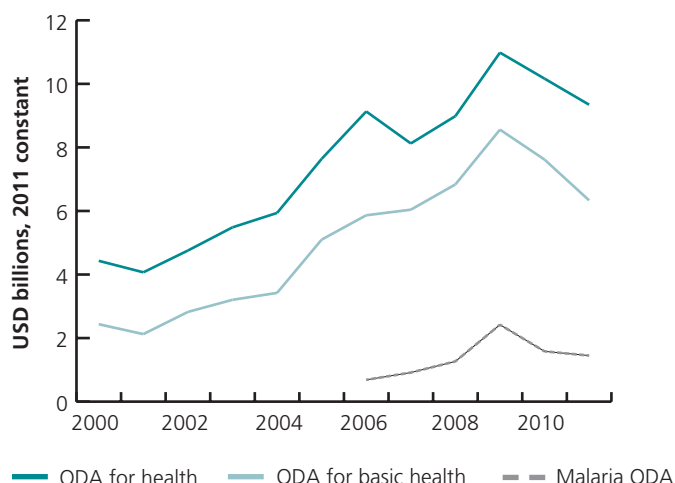
2.2.2. Key findings

Funding for malaria has increased over the period 2006–09 and declined somewhat thereafter, but the overall rate of growth over time has been higher than that for the health sector as a whole.

Total funding for the health sector and basic health increased over the period 2000–11, although there has been a decline since 2009. This decline is mainly on account of the global financial crisis and the corresponding tightening of donor aid budgets.¹²

A similar decline is also observed for malaria funding, following an increase over the period 2006–09 across all developing countries. While total health and basic health funding grew faster than total ODA, funding for malaria grew even faster, with an increase of 16% over the period 2006–11.

Figure 2.2: ODA for health, basic health and malaria



Source: CEPA analysis using CRS data.

Financing for the malaria-eliminating countries has accounted for a relatively small proportion of total funding for malaria.

Funding for malaria-eliminating countries over the period 2006–11 totalled US\$464m, accounting for around 6% of the total funding for malaria across all developing countries.¹³ The funding was relatively flat over 2006–09, followed by a peak in 2010 when the Global Fund approved large grants for China (US\$73m) and the Philippines (US\$28m).

The proportion of total funding for malaria that has been allocated to the malaria-eliminating countries has declined over time.

⁹ More details on the methodology and analysis is provided in [Annex 4](#).

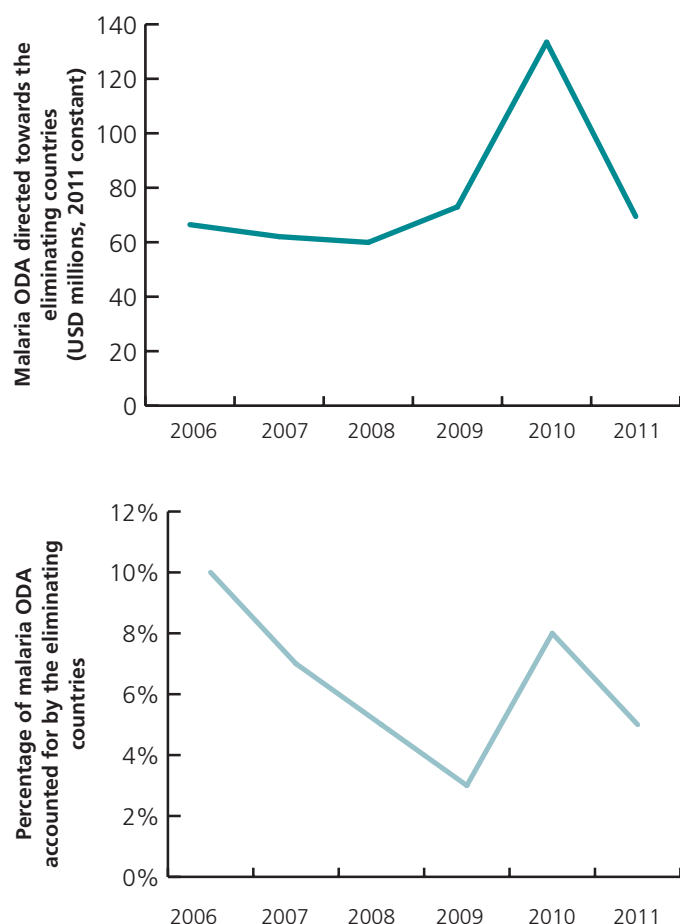
¹⁰ The sub-sectors for basic health include: basic health care, basic health infrastructure, basic nutrition, infectious disease control, health education, malaria control, tuberculosis control and health personnel development. The subsectors for general health include: health policy & administrative management, medical education/training, medical research and medical services. The subsectors for reproductive health component are: population policy & administrative management, reproductive health care, family planning, STD control including HIV/AIDS and personnel development for population & reproductive health.

¹¹ We have tried to improve the data by supplementing with information from the Global Fund website. However, this was not feasible given the different basis and time-period for which the data was available.

¹² <http://www.oecd.org/newsroom/aidtopoorcountryslipsfurtherasgovernmentstightenbudgets.htm>.

¹³ This data is not directly comparable with that presented in Section 2.1 due to use of commitments rather than disbursements data as well as different time periods and (country/donor) coverage.

Figure 2.3: Trends in financing for malaria elimination



Source: CEPA analysis using CRS data

The Global Fund has been the main source of donor funding for the malaria-eliminating countries. Funding from other multilaterals has been minimal.

Multilateral agencies account for the majority of donor funding (approximately 94%) for malaria-eliminating countries over the period 2007–11, driven largely by the Global Fund. However, financing for malaria-eliminating countries comprises a small proportion of the Global Fund's total funding for country malaria programmes.¹⁴

Under the Global Fund's new funding model (currently under discussion), the malaria-control countries with a higher burden of disease and lower income levels will continue to be the focus. Some stakeholders and experts consulted for the project have also suggested that there may be a possible decline in funding for malaria-eliminating countries. However, the Global Fund is currently considering regional funding arrangements that target regional elimination and include some malaria-eliminating countries. This includes:

- The proposed regional funding for Elimination of Malaria in Mesoamerica and the island of Hispaniola (EMMIE) (US\$10m for 10 countries, to be structured as a reward for achieving pre-agreed upon national targets).
- A regional grant for the Mekong subregion (US\$100m for five countries to support a coordinated response to the threat of artemisinin resistance).

More details on these initiatives are provided in Section 4.

Other multilaterals that have provided some funding to malaria-eliminating countries include the United Nations Children's Fund (UNICEF) and the World Bank International Development Association (IDA).^{15, 16} These contributions have been relatively small, totalling less than a million dollars by each organisation in most years over the period 2006–11.

Bilateral funding from the DAC donors to the malaria-eliminating countries has been limited. Key donors have been the governments of Australia and Japan.

Bilateral funding from DAC donors to malaria-eliminating countries comprised only 6% of the total donor funding. (The majority of donor funding for malaria-eliminating countries was from the multilaterals, as noted above.)

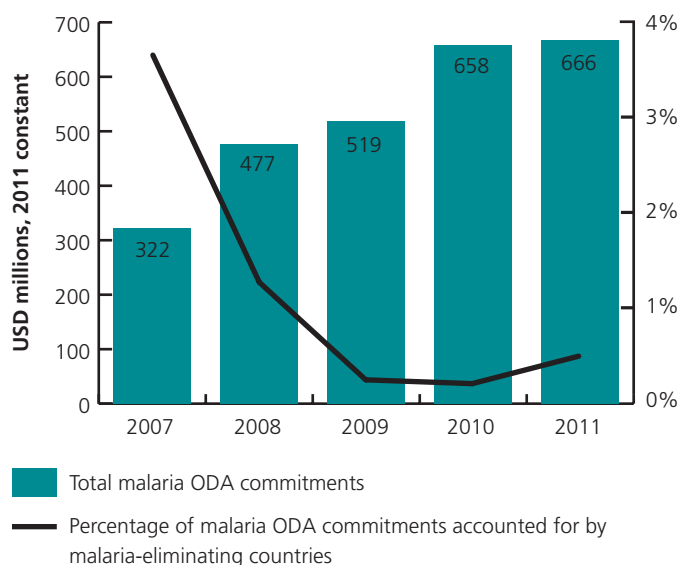
Although there was a steady increase in funding for malaria as a whole from DAC countries over the period 2007–11 (bar graph in Figure 2.4), a very small (and falling) share of this funding was directed towards the malaria-eliminating countries (line graph in Figure 2.4).

¹⁴ Data from the Global Fund website indicates that funding for malaria-eliminating countries was 7% (US\$0.65bn) of the total malaria-related approved grants (US\$8.65bn) through June 2013.

¹⁵ Annex 5 provides more details.

¹⁶ WHO, including the Roll Back Malaria Partnership, is an important contributor to R&D, guidelines development, policy and advocacy for malaria control and elimination, however does not provide specific country-level funding and hence is not covered in this analysis.

Figure 2.4: Trends in bilateral financing for malaria from DAC donor countries



Source: CEPA analysis using CRS data.

DAC donors that have provided bilateral funding to malaria-eliminating countries over the period 2007–11 include Australia, Japan, the US, Canada and Spain.¹⁷ Details on the volume and recipients of funding are as follows:

- **Australia:** Funding for malaria from the Australian government has almost exclusively been targeted at malaria-eliminating countries (specifically, the Philippines, Solomon Islands and Vanuatu). The total volume of funding for the malaria-eliminating countries over this period was US\$18m, although there has been a decline over time. More recently, AusAID has been looking to support a financing mechanism on malaria elimination for the Asia Pacific countries along with the Asian Development Bank (ADB). This is discussed further in Section 4.
- **Japan:** Total funding for malaria as well as specific funding for the malaria-eliminating countries (US\$4.01m) by the Japanese government has varied every year over this period (i.e. there is no clear trend). Its funding has focused on the Asia Pacific region, specifically the Solomon Islands, Thailand and Vietnam.

- **US:** The only malaria-eliminating country to receive funding from the US over the period 2007–11 was Sao Tomé and Príncipe, which received a commitment of US\$0.5m in 2008. Although the US is the largest bilateral donor for malaria, it has mainly funded malaria-control countries in sub-Saharan Africa through the U.S. President's Malaria Initiative (PMI). However, PMI expanded its scope in 2011 to include the Mekong subregion, which includes some malaria-eliminating countries (not reflected in the data presented here).
- **Canada and Spain:** These countries have provided very limited amounts of funding to malaria-eliminating countries. Canada's funding (US\$0.1m) was directed to South Africa in 2010 and the Dominican Republic in 2009, while Spain (US\$0.3m) funded Argentina in 2008.
- Other key donors for malaria (the UK, the Netherlands, France, Ireland, Belgium and Germany) have not targeted malaria-eliminating countries through their bilateral assistance (although all of these donors have provided contributions to the Global Fund).

China, the Philippines and Thailand have been the main malaria-eliminating countries to have received donor (bilateral and multilateral) funding over the period 2007–11.

Over half of total donor financing for malaria-eliminating countries over the period 2007–11 has been allocated to China, the Philippines and Thailand, mainly from the Global Fund. This trend might be expected as these countries have a relatively high burden of malaria as compared to other malaria-eliminating countries.

The majority of malaria-eliminating countries each received 5% or less of donor funding for malaria. Ten malaria-eliminating countries did not receive any donor funding over this period: Algeria, Belize, Costa Rica, El Salvador, Malaysia, Panama, Paraguay, Saudi Arabia, South Korea and Turkey.

¹⁷ In addition to direct ODA, some bilateral donors also provide in-kind contributions to support malaria-eliminating countries. For example, Japan through the Japanese Embassy (amongst others), provided Long Lasting Insecticide-treated Nets (LLINs) to Botswana (<http://www.afro.who.int/fr/botswana/press-materials/item/2538-botswana-launches-mass-distribution-of-long-lasting-mosquito-nets-in-an-effort-to-achieve-universal-coverage.html>). Although these non-financial contributions are not captured in the DAC flows, they are important in supporting malaria elimination efforts.

The Gates Foundation has been an important and catalytic financier for malaria elimination.¹⁸

The Gates Foundation, which has also provided financing for malaria elimination, is not included in the funding data and figures presented above. Data from the G-FINDER survey states that the Gates Foundation is the leading philanthropic funder of malaria research and development (R&D). Between 2007 and 2010, it provided US\$568m for a range of malaria R&D areas including basic research, diagnosis, drug development and vaccines.¹⁹

The Gates Foundation has provided support for Product Development Partnerships such as the Medicines for Malaria Venture, the Malaria Vaccine Initiative at PATH and the Innovative Vector Control Consortium at the Liverpool School of Tropical Medicine. Other key partners receiving funding from the Gates Foundation to build the evidence for malaria control and elimination include the PATH Malaria Control and Evaluation Partnership in Africa (MACEPA) and the Global Health Group Malaria Elimination Initiative.

The Gates Foundation is also a major funder of the Global Fund.

Summary of main findings

- The majority of the funding for malaria-eliminating countries comes from domestic government resources rather than external donor financing.
- Funding for malaria between 2006 and 2011 grew faster than that for the health sector as a whole. However, funding for malaria-eliminating countries represents a small and declining proportion of the total funding for malaria across all endemic countries.
- The Global Fund is the key source of donor financing for malaria-eliminating countries, although the majority of its funding has been allocated to the high burden-low income malaria-control countries. While this focus will continue under the new funding model, the Global Fund is also considering regional funding arrangements that target regional elimination and include some malaria-eliminating countries.
- Between 2007 and 2011, multilaterals such as UNICEF and the World Bank have provided negligible amounts of funding for malaria-eliminating countries.
- Bilateral funding for malaria-eliminating countries has primarily been from the Australian and Japanese governments, with small amounts of funding from the US, Canada and Spain. Other key DAC government donors such as the UK, the Netherlands and France have provided considerable amounts of funding to the malaria-control countries, but have not targeted the malaria-eliminating countries.

¹⁸ With the exception of the Gates Foundation, philanthropic and private sector contributions are mostly at the national level and have not been included with this landscape analysis.

¹⁹ This survey (http://g-finder.policycures.org/gfinder_report/) tracks global public, private and philanthropic investment for product research and development for neglected diseases.

3. NEW OR INNOVATIVE FINANCING MECHANISMS

This section considers new or innovative financing mechanisms that may be used for malaria elimination. Section 3.1 provides an introduction to the financing mechanisms considered; these are then described in Sections 3.2 and 3.3. Section 3.4 discusses their applicability to malaria elimination.

3.1. Focus and classification of mechanisms

We consider mechanisms that represent a departure from the traditional model of direct contributions from bilateral and multilateral donors; and can hence be regarded as “innovative.” We also consider some mechanisms that may not be innovative as such, but represent ‘new’ approaches that could be particularly instructive for malaria elimination.

We focus specifically on new or innovative financing mechanisms that aim to raise resources, rather than those that seek to address commodity market failures or increase access to essential commodities (which are also often referred to as “innovative financing mechanisms”).²⁰ Our emphasis is on global/multi-country financing mechanisms, although some of these mechanisms could also be applied at the national level.²¹

In particular, we consider financing mechanisms in terms of the:

- **instrument or approach to fundraising**—including (i) market financing/debt-raising mechanisms; (ii) debt conversion mechanisms; (iii) endowment funds; (iv) international earmarked taxes; and (v) regional funds.
- **source of funding**—including (i) the private sector; (ii) major foundations and other philanthropists; (iii) emerging government donors; and (iv) voluntary contributions.

The mechanisms are described in turn below.

3.2. New approaches to fundraising

3.2.1. Market financing/debt-raising mechanisms

These mechanisms entail fundraising through the issuance of bonds in the market. Some examples are:

- **The International Finance Facility for Immunisation (IFFIm).** IFFIm uses long-term pledges (10–20 years) from donor governments (the UK, France, Italy, Norway, Australia, Spain, the Netherlands, Sweden and South Africa) to issue bonds in the capital markets to fund the activities of the GAVI Alliance. It helps front-load future donor commitments. However, this front-loading means that only about 70% of the committed contributions are available for programmes (for example, because of the requirement to pay interest). To date, IFFIm has made US\$3.85bn (backed by pledges of US\$6.3bn) available to the GAVI Alliance.
- **Social impact bonds or ‘pay-for-performance’ bonds.** These have been designed as a mechanism whereby private investors provide capital for social/development programmes through the purchase of bonds, with the return on investment linked to the achievement of pre-determined results. Donors (usually governments, although they could also be philanthropists or private sector organisations) are responsible for making the repayment to investors on the achievement of results. Two examples would be:
 - » **Peterborough Social Impact Bond.** This was the first social impact bond. The objective was to reduce recidivism by supporting short-sentence prisoners that have been discharged from Peterborough Prison. Given the social nature of the intervention, investors

²⁰ For example, innovative financing mechanisms also include the Advance Market Commitment (AMC) which aims to incentivise pharmaceutical companies to invest in R&D and manufacturing to develop health products. Other examples are demand-side market mechanisms, such as the Global Fund Voluntary Pooled Procurement and Pan American Health Organisation (PAHO) Revolving Fund which aim to aggregate procurement for reduced prices and improved efficiencies; and supply-side models such as the Global Fund’s subsidy to manufacturers through the Affordable Medicines Facility – malaria (AMFm), which aim to improve affordability for countries.

²¹ A review of domestic financing mechanisms is not within the scope of this assignment. More information on domestic financing is available at: <http://globalhealthsciences.ucsf.edu/global-health-group/malaria-elimination-initiative/research/case-studies> and <http://globalhealthsciences.ucsf.edu/sites/default/files/content/ghg/e2pi-maintaining-the-gains-country-briefs.pdf>.

are charitable trusts and foundations seeking ethical investment opportunities. The repayment (i.e. from the donors) is made by the government and a lottery fund.

- » **Proposed malaria bond.** The first malaria bond is currently being designed to support malaria control efforts in Mozambique. The sale of bonds will be used to fund the activities of a range of implementing organisations (both public and private sectors) working on malaria programmes in the country. This will also serve to coordinate malaria programmes in the country. While the donor pool is yet to be constituted, some initial 'seed funding' is being provided by Nandos, an international restaurant chain.²²

The key strengths (+) and weaknesses (-) of market financing/debt-raising mechanisms are summarised below.

- + These mechanisms help bring forward (or front-load) development financing.
- + They attract new sources of funding from investors in capital markets.
- They involve high transaction costs in establishment and implementation.
- Their success depends on the interest in the bond sale in the capital markets.

3.2.2. Debt conversion mechanisms

Debt-conversion mechanisms are schemes that convert a portion of a country's debt into grants. Some examples are:

- **Debt2Health.** This is a trilateral debt swap mechanism, whereby a portion of a country's debt is redirected to the Global Fund and the corresponding debt amount is written off by the creditor. The grant is later disbursed from the Global Fund to the original debtor country.
- **Performance-based credit buy-downs.** These schemes aim to convert a portion of a country's debt into a grant if the country achieves a set of pre-determined performance targets. It was initially proposed (although not implemented) under the World Bank Booster Programme for Malaria Control in Africa, wherein the World Bank would write off a portion of the country's debt if the country achieved a set of agreed-upon results through partner funding (such as other multilateral and foundation sources).²³

The key strengths (+) and weaknesses (-) of debt conversion mechanisms are summarised below.

- + These mechanisms help reallocate resources, which would have otherwise been used for debt servicing, towards development.
- + Fund flow is predictable as a pre-determined plan for target achievement and debt write-off is usually agreed upon in advance.
- There may be no additional funding in the case where the debtor country is not in a position to make the repayment.
- For the performance-based buy-downs, measuring and verifying results is challenging.

3.2.3. Endowment funds

Endowment funds are a type of investment fund whereby investors provide capital that is invested in the market, with the returns—but not the principal—being used to fund specific programmes. The initial investments, therefore, need to be large enough to generate revenues that can be used to finance programmes. For example, the Rockefeller Foundation was set up as an endowment fund with an initial contribution of US\$100m.

The key strengths (+) and weaknesses (-) of endowment funds are summarised below.

- + They serve as a suitable mechanism for investors who are more risk averse, given that the principal is not used.
- + They provide long-term sustainable funding, as the returns from the investments over time are used to fund programmes.
- They require initial large-scale funding in order to yield sufficient returns to support programmes.
- Given that endowments are typically invested in international capital markets, returns will fluctuate over time.
- Traditional bilateral donors have generally not been interested in providing funding for endowments.

3.2.4. International earmarked taxes

A new approach to fundraising for development has been through the institution of taxes earmarked for organisations and programmes. While earmarked taxes are more

²² Discussions with D. Capital (Dalberg Group), which is leading the design of the bond.

²³ The World Bank has however previously implemented debt buy-down instruments for countries experiencing debt distress.

relevant at the national level, they have also been employed to generate financing for global mechanisms.²⁴ A prominent example is the airline ticket levy used to fund UNITAID (see [Box 3.1](#) below for details). Individual countries have also applied special earmarked taxes and contributed the proceeds to global programmes. Norway, for example, has instituted a tax on carbon dioxide emissions from aviation fuel and contributes a portion of the proceeds directly to UNITAID.

Box 3.1: UNITAID funding through airline ticket levies

Established in 2006 to increase the availability of drugs for HIV, TB and malaria through market-based approaches, UNITAID is primarily funded through the solidarity tax on airline tickets. This is a compulsory tax applied on all airline tickets of nine participating countries. Up to the end of 2012, 65% of UNITAID total funds (US\$1.2bn) was derived from the airline ticket tax (with some contributions from Norway's carbon dioxide emissions tax).

The tax was designed to provide a stable and consistent flow of funding that would not be subject to the fluctuations of traditional ODA. Although this has largely been achieved, air travel as a luxury good has suffered from the global financial crisis, and this has resulted in a small drop in UNITAID's revenues.

UNITAID is now exploring the possibility of applying a tax on financial transactions in a similar manner as the airline tax.

Sources: UNITAID Annual Report (2012); and Centre for Global Development (2013).

There are a number of global earmarked taxes currently under discussion, including the tobacco solidarity tax (a "micro-tax" supplementing national tobacco taxes that would be channelled to support international health programmes) or the financial transaction tax that proposes to levy a small tax on financial currency and equity transactions.

The key strengths (+) and weaknesses (-) of international earmarked taxes are summarised below.

- + Earmarked taxes usually have a large revenue base (e.g. the general public for population-wide taxes).
- + Given the large revenue base and the long-term nature of taxes, the funding from this source can be sustainable and relatively predictable.
- They are politically very difficult to implement, and at the national level they are generally resisted by ministries of finance.
- New taxes generally require new legislation at the national level, which can be time and resource intensive.
- There is not necessarily a good economic case for particular taxes (i.e. the rationale for the tax has often not been directly linked to the tax base).
- There will be many competing needs for resources raised through taxes.

3.2.5. Regional funds

Regional funds present an opportunity and incentive for pooling of resources where there is a regional-level issue. While regional funds are not a new financing mechanism per se, they can be viewed as innovative by virtue of encouraging additional contributions from existing donors or from new donors with specific interest in the region.

Regional financing mechanisms have been established to support cross-border efforts and support cooperation on issues such as climate change and sustainable land management (e.g. the Central Asian Countries Initiative for Land Management and the Inter-American Development Bank Regional Fund for Agricultural Technology).

Regional funds have also been established for malaria control. For example, the Malaria Control Fund was established by the Gulf Cooperation Council (GCC) in 2006. This Fund was created by the Ministries of Health in the Gulf countries to prevent re-introduction of the disease in the malaria-free countries and support the efforts of the eliminating and control countries in the region. It receives financial contributions from the Kingdom of Saudi Arabia (US\$4.6m), Oman (US\$3m), Qatar (US\$2.2m) and Kuwait

²⁴ National earmarked taxes, such as "sin taxes" on alcohol and tobacco or tourist taxes, can be pooled into a fund that is used to support specific programmes. For instance, Thailand applies a 2% surcharge on the duty for tobacco and alcohol, the proceedings of which are pooled at the national level for the Thai Health Promotion Fund that promotes well-being of the Thai population. Zanzibar is proposing to introduce a tourist tax with the objective of financing 10–20% of the national malaria programme. Another approach is "de-tax," wherein a proportion of the Value-Added Tax (VAT) on goods and service sold by the companies participating in the scheme, is waived and redirected for use in health programmes.

(agreed to assign US\$2.4m). It also receives technical assistance from the WHO Regional Office for the Eastern Mediterranean (EMRO).²⁵

More generally, a number of regional initiatives have been constituted for malaria elimination, such as the Asia Pacific Malaria Elimination Network (APMEN) and Elimination Eight (E8) regional initiatives. These focus on promoting better coordination, advocacy and knowledge sharing between member countries (Annex 6 provides more details). Although these initiatives are important in terms of advocacy for malaria financing, they have not specifically raised funds for malaria elimination to date.

The key strengths (+) and weaknesses (-) of regional funds are summarised below.

- + Regional funds have the potential to raise resources from donors that are interested in supporting regional interests.
- + The regional public good nature of several development issues makes for a compelling argument to pool resources towards achieving a common goal.
- There has been limited experience to date with regional funds (both in health and other sectors).
- There is a collective action problem with regional funds as some stakeholders in the region may “free ride” and not be adequately incentivised to contribute.

3.3. New sources of funds

3.3.1. Private sector resources

The private sector is increasingly an important source of ‘non-traditional’ finance for development. There are a number of ways in which the private sector can provide funding, including:

- **Corporate Social Responsibility (CSR)**, such as the ExxonMobil Malaria Initiative, which includes a specific workplace programme that provides employees with educational information, medicines and tools such as repellents and bed-nets to reduce the risk of contracting malaria, thereby promoting a healthier workforce.
- **Profit-sharing mechanisms**, such as the (Product) RED campaign, whereby private companies donate a pre-determined share of the sale proceeds from specific products to the Global Fund.

- **Public-Private Partnerships (PPPs)**. The role of the private sector here is different from that of the two mechanisms noted above in that it operates on a commercial basis. PPP structures have also been employed to develop global funding mechanisms such as the Emerging Africa Infrastructure Fund (EAIF) (see Box 3.2 below).

Box 3.2: Structure of the Emerging Africa Infrastructure Fund

The Emerging Africa Infrastructure Fund (EAIF) is a debt fund modelled as a public-private partnership. It provides foreign currency loans to private companies in sub-Saharan Africa for the purpose of infrastructure development. The equity in the fund (US\$202m) is wholly owned by the Private Infrastructure Development Group (PIDG), which is a donor-funded group working towards mobilising private investment for infrastructure development in developing countries. The debt component (approximately US\$550m) is financed by a consortium of lenders. FMO (the Netherlands), the Development Bank of South Africa and DEG (Germany) have provided subordinated debt. Private commercial banks (Barclays and the Standard Bank of South Africa) and multilateral agencies (the International Financial Corporation (IFC) and the African Development Bank) have provided senior debt.

Source: <http://www.emergingafricafund.com/about-us/fund-structure.aspx>.

The key strengths (+) and weaknesses (-) of private sector contributions are summarised below.

- + Contributions from the private sector represent additional resources.
- + The private sector may be incentivised to contribute in areas that support their business.
- + There is a growing trend for customers to purchase goods from private companies that consider social and ethical issues.
- Historically, the private sector has not played a significant role in funding development or health programmes.
- PPPs in particular are challenging to develop and require considerable capacity and resources.
- Funding from the private sector is likely to be unpredictable, depending on companies’ business cycles and profits.

²⁵ Source: <http://sgh.org.sa/en-us/technicalprograms/infectiousdiseases/initiativearabianpeninsulafreeofmalaria.aspx>.

3.3.2. Major foundations and other philanthropic funding

Philanthropic funding is increasingly an important source for development programmes. There are a number of major foundations, such as the Gates Foundation, the Rockefeller Foundation and the Ford Foundation, that have a special role because of their size and focus on health. In addition there are a number of smaller foundations as well as other philanthropic funding agencies that contribute to global health (e.g. the MacArthur Foundation and the Hewlett Foundation).

The key strengths (+) and weaknesses (-) of foundation/philanthropic contributions are summarised below.

- + Foundations and philanthropic funding represent a growing source of funding.
- + The funding priorities of foundations and philanthropists may be influenced through advocacy, as they are mostly driven by individuals (excluding large foundations such as the Gates Foundation, which has a defined strategy).
- Funds from smaller philanthropists may be unpredictable.

3.3.3. Emerging government donors²⁶

In recent years, a number of emerging government donors have started contributing to various development issues. These include rapidly growing economies such as the Brazil, India, China and Russia (the BRIC countries), South Africa, and East Asian countries including Brunei, Malaysia and South Korea. For example:

- ODA from the Korea International Cooperation Agency (KOICA) in 2008 amounted to US\$800m, equivalent to 0.09% of its Gross National Income.²⁷
- Russia and South Africa have contributed to the GAVI Alliance.²⁸
- India—historically one of the largest aid recipients—is increasing its role as a donor, having allocated approximately US\$547m to aid-related activities in 2008.²⁹

These donors typically target neighbouring countries (focusing on “south-south” cooperation) or strategic partners where they have geo-political interests.

The key strengths (+) and weaknesses (-) of emerging government donors are summarised below.

- + Emerging government donors represent an untapped source with considerable funding potential.
- Funding from emerging government donors is driven largely by their geo-political interests rather than need.
- Funding from emerging government donors may be small at first and/or unpredictable, given their limited experience with aid.

3.3.4. Voluntary contributions

New revenues for global health can also be generated by pooling voluntary contributions from the general public. Examples include:

- Lotteries—in the UK, the Big Lottery Fund gives out 40% of the money raised for development and social causes; and
- Mobile phones solidarity contributions, which allow individuals and businesses to make voluntary donations through their monthly phone bills.

The key strengths (+) and weaknesses (-) of voluntary contributions are summarised below.

- + Voluntary contributions can have a large revenue base if the product and/or social cause appeal to the public.
- + Raising funds through voluntary contributions also helps to increase awareness of development and health issues.
- There have been cases of previous voluntary contribution programmes that have been discontinued due to costs exceeding revenues (e.g. MassiveGood).
- The charitable nature of these contributions means that the revenue stream is unpredictable.
- High marketing costs are involved in raising awareness amongst the general public.

²⁶ It is important to note that although these countries are often characterised as “new” donors, they have actually had development cooperation programmes in place for a number of years. For example, the Malaysia Technical Cooperation Programme was founded in 1980.

²⁷ Source: <http://www.koica.go.kr/english/koica/oda/volume/index.html>.

²⁸ The Russian Federation having contributed US\$46.4m to the AMC and South Africa having contributed US\$3.1m to the IFFIm. Source: <http://www.gavi Alliance.org/funding/donor-profiles>.

²⁹ Chanana, D. (2009), “India as an Emerging Donor” in *Economic and Political Weekly*, vol. XLIV(12).

3.4. Applicability to malaria elimination

In this section we provide an initial review of the applicability of the above described new or innovative financing mechanisms for malaria elimination.

In the case of malaria-eliminating countries, one should consider financing mechanisms that deliver on scale and long-term stability. In particular, we consider suitability based on the following criteria:³⁰

- **Scale.** It is important to think about financing mechanisms that can help generate scale in fundraising, rather than a number of small fundraising efforts. The Global Malaria Action Plan (GMAP) estimates the total annual cost for elimination as US\$3.3bn from 2021 to 2030, US\$1.5bn annually from 2031 to 2040 and US\$550m annually from 2041 to 2050 (with the likelihood of elimination costs extending beyond this period as well).³¹ In our assessment, scale is of essence when thinking about developing a new financing mechanism (or strengthening existing mechanisms).
- **Predictability and reliability.** A suitable financing mechanism would need to be predictable and reliable so as to ensure a steady stream of resources over time. This stems from the specific needs of malaria elimination, which cannot rely on one-off or time-limited contributions but require continued support (e.g. for the development and maintenance of surveillance systems).
- **Sustainability/longevity.** Funding needs to be maintained even after malaria has been eliminated to avoid resurgence and/or re-introduction. Therefore, a

mechanism for financing malaria elimination would need to be structured in such a way that it is able to maintain commitments over the longer term. It should be noted that this is the opposite of front-loading.³²

- **Additionality.** While additionality is a difficult attribute to measure, it would be important to ensure that financing for malaria elimination does not divert resources away from the malaria-control countries, given their relatively higher burden and low income status.
- **Low transaction costs.** To the extent feasible, any proposed mechanism should be simple to implement and have low transaction costs.

Table 3.1 provides a summary review of the key financing mechanisms with regard to these characteristics and also comments on specific opportunities and challenges for the applicability to malaria elimination. Based on these features, we provide an overall “applicability score” (applicable, marginally applicable and not applicable), which is used to inform our judgment on the most suitable financing mechanisms for malaria elimination.

We provide a tick mark (“√”) or cross (“X”) where the mechanism meets or does not meet each criterion. This is not a definitive assessment as that would have to take into consideration the specific design of the financing mechanism. Some dimensions have been left blank, which reflects the fact that there is not enough information available to reach a judgement on the criterion.

³⁰ While these are not novel or particular to the current mandate (in that these are desirable financing characteristics in general), we have attempted to bring out the rationale for these characteristics for a financing mechanism for malaria elimination.

³¹ The Roll Back Malaria Partnership, (2012) *The global malaria action plan: For a malaria-free world*.

³² Experience from other control/eradication programmes also emphasises the importance of long-term funding. For example, one of the success factors of the Onchocerciasis Control Programme in West Africa was the long-term commitment from donors for 20 years (structured through six year cycle trust funds). The programme came to an end in 1995 and although river blindness has not been eliminated, it has been largely controlled (95% of the original seven countries are free from the disease).

Table 3.1: Review of applicability of financing mechanisms to malaria elimination

We provide a tick mark ("√") or cross ("X") where the mechanism meets or does not meet each criterion.

Financing mechanism	Scale	Predictability	Sustainability	Additionality	Transaction costs	Applicability score and comments on opportunities/challenges, particularly for malaria elimination
New approaches to fundraising						
Market financing/debt-raising mechanisms	√				High	Applicable. Middle/high income malaria-eliminating countries present an opportunity with their relatively more developed financial markets. However, front-loading may not be suitable for malaria elimination, where more long-term and sustainable resources are needed.
Debt-conversion mechanisms		√		√		Not applicable. Given that limited debt exists for the malaria-eliminating countries, there is low potential to apply this mechanism.
Endowment funds	√		√		High	Applicable. Generally applicable, but the requirement of large upfront investments and related transaction costs is a significant challenge.
International earmarked taxes	√	√	√	√	High	Marginally applicable. Preferred option at national rather than global level, given the political economy of taxes.
Regional funds				√		Applicable. Given the regional public good nature of malaria elimination, regional funds provide an opportunity for donors and national governments to fund cross-border activities.
New sources of fundraising						
Private sector	X	X	X	√		Applicable. Potential in accessing resources from specific industries given their linkages with malaria, e.g. tourism, infrastructure, extractive/mining companies.
Major foundations and philanthropic funding				√		Applicable. Important emerging source of funding, with potential to raise resources from both the global and national-level foundations in the malaria-eliminating countries.
Emerging government donors				√		Applicable. Despite limited experience, emerging government donors are an untapped and potentially important source of funding, especially for regional financing.
Voluntary contributions		X		√	High	Marginally applicable. Limited experience in fundraising to date and considerable efforts required to set-up/establish.

Summary of main findings:

- There are a number of new approaches to fund-raising, with important strengths that could be applicable to malaria elimination. Key amongst these approaches are regional funds, market financing/debt-raising mechanisms and endowment funds. The latter two mechanisms can potentially deliver on scale but entail high transaction costs. Regional funds present an attractive opportunity given the nature of malaria elimination as a regional public good.
- The new and non-traditional sources of financing have significant potential and should be explored as one of the many sources of financing for malaria elimination—particularly the private sector, foundation and philanthropic funding and emerging government donors. With some exceptions, these sources cannot be expected to raise substantial resources on their own.
- The establishment of any financing mechanism should be preceded by an in-depth feasibility study to assess the rationale, potential and options for design. It is possible that, depending on the objectives and needs for which the funds will be used, a ‘blend’ of mechanisms might be more appropriate rather than one specific mechanism.

4. RECOMMENDATIONS

This section presents our recommendations on relevant financing mechanisms for malaria elimination. Section 4.1 sets out some key considerations that form the basis for our recommendations, which are further described in Sections 4.2 and 4.3.

4.1. Key considerations

We note the following key considerations, based on our review and on feedback received.

There is no appetite for a new global financing mechanism for malaria elimination.

Given the existence of the Global Fund, it is clear that there is no political will to establish another global financing mechanism that would focus on malaria-eliminating countries.

Following the Paris Declaration and the Accra Agenda for Action, there is strong resistance from the international aid organisations to create any new structures.³³ There is also a constant endeavour to avoid duplication by working with existing structures.

Traditional bilateral and multilateral donors, while very important, will not be able to cater to all the relevant needs of malaria-eliminating countries. Hence new sources of finance need to be encouraged.

Our assessment of the global donor financing landscape has emphasised the limited focus of most of the traditional bilateral and multilateral donors on the malaria-eliminating countries. Our expectation is that this trend will continue, given their priority of supporting low income countries with a high burden of malaria. However, some funding

has been provided by the Global Fund and bilateral donors such as the Australian and Japanese governments, and it would be important to continue to leverage these resources to the extent feasible.

At the same time, there are a number of potential new sources of finance for malaria elimination, including contributions from emerging government donors, the private sector, foundations and philanthropic organisations as well as voluntary contributions.

Table 4.1 presents a summary of key actors, opportunities and challenges.

Government financing from the malaria-eliminating countries has been the main source of finance. Opportunities to further leverage this source of funding should be explored.

Governments have been the main funding source for malaria-eliminating countries, notwithstanding the key issue of their reduced motivation to allocate resources when the disease burden declines. Their capacity to provide funding is much higher than the economically poorer malaria-control countries, with 91% of the current list of malaria-eliminating countries being high or middle income countries.

In our assessment, this is a key source of finance for malaria elimination and options to increase and sustain this funding source should be considered. Additionally, given the regional/global public good nature of the disease (and the high or middle income status of majority of the malaria-eliminating countries), it would be reasonable to expect that these governments can be motivated to provide additional financing for poorer neighbouring countries in the future. There is also an existing precedent in the GCC Malaria Control Fund set up by governments in the Arabian Peninsula.

³³ <http://www.oecd.org/dac/effectiveness/parisdeclarationandaccraagendaforaction.htm>.

Table 4.1: Review of key sources of finance for malaria elimination

Source	Key actors	Opportunities	Challenges
Multilateral organisations	Global Fund	Main external donor for malaria-eliminating countries. Support for regional initiatives in Latin America and Mekong subregion suggest continued support.	Focus is low income-high burden malaria-control countries Due to country eligibility criteria, possible decline in funding for malaria-eliminating countries under the new funding model.
Bilateral donors	Australia, Japan	Have provided funding for malaria-eliminating countries for a number of year Specific interest in neighbouring countries in the Asia Pacific region, which includes a number of eliminating countries.	Not large health sector donors (in comparison to the US and the UK). Other risks include global tightening of aid budgets and increasing emphasis on poverty reduction.
Private sector	Various	Many examples of CSR initiatives focusing on malaria. Potential to access resources from specific industries given their linkages with malaria, e.g. tourism, infrastructure, mining.	Need to be adequately incentivised to invest (including through more information on the business case for investment).
Foundations and philanthropic funding	Gates Foundation	Funding for R&D for malaria elimination. Likely to continue funding elimination as part of vision for malaria eradication.	Funds a limited number of country-specific programmes.
	Other foundations/philanthropists	No specific opportunities or challenges to note but recognised as a growing source of finance for public health at both the national and global levels.	
Emerging government donors	South Korea, Malaysia, South Africa, Brunei, BRIC countries	Many of these countries are malaria-eliminating, and given the regional public good nature of the disease and their high/middle income status, they may be incentivised to provide funding for neighbouring countries.	Limited experience with development aid and likely to have small aid programmes in the short to medium term.
Voluntary contributions	General public	No specific opportunities or challenges to note.	

The regional public good nature of malaria elimination confers important ‘externalities’ that present an opportunity for regional coordination and cooperation.

A malaria-eliminating country confers positive externalities on its neighbours by reducing the risk of spread of the disease and vice versa. Thus if a country invests in its national malaria programme, the incidence of the disease will decline, leading to a reduced risk of spread of the disease to its neighbours. Alternatively, inadequate focus on the national malaria programme will imply increased risk of spread of the disease across borders to neighbouring countries.

Therefore, the importance of regional coordination and cooperation in malaria control and elimination efforts cannot be overemphasised. In recognition of this, a number of regional initiatives have been established over the years—e.g. E8 and APMEN ([Annex 6](#) provides more details). These initiatives, while focused on advocacy and research, present an important base for regional collaboration that may be leveraged for financing as well. The regional initiatives proposed by the Global Fund in Latin America and the Mekong subregion as well as the GCC Malaria Control Fund in the Arabian Peninsula also point towards a growing recognition of the importance of tackling the issue of malaria elimination at the regional level.

Important lessons can be learned from other regional initiatives for disease elimination as outlined in [Box 4.1](#).

Box 4.1: Elimination of measles in the Americas

A number of lessons can be learned from the successful experience of measles elimination in the Americas. The region was able to achieve measles elimination in 2002, eight years after committing to this goal, with national commitment and regional cooperation being at the core of the strategy. The following factors contributed to this achievement:

- **High-level political commitment from all countries in the region:** All countries signed up for the regional measles elimination goal established by the Pan American Sanitary Conference in 1994. The programme was advocated by the heads of states as well as regional champions.
- **Country ownership and commitment to elimination:** National awareness of the public health burden of measles was critical to achieving elimination, ensuring significant financial contributions from national governments.
- **Detailed regional elimination strategy:** The strategy developed by the WHO Pan American Health Organisation (PAHO) and adopted by all relevant national governments provided a blueprint for regional cooperation.
- **Technical support from PAHO:** PAHO assisted governments in the drafting and implementation of national action plans.
- **Availability of vaccine:** The existence of a safe and affordable combined measles vaccine contributed to the success of the elimination efforts.
- **Focus on surveillance:** Strong national measles surveillance, with all countries conducting case-based surveillance supported by laboratory confirmation as well as sharing data on a weekly basis was an important supporting factor.

Source: Castillo-Solorzano, C. et al. (2011).

It is useful to avoid complexity and be cognizant of the challenges in implementing certain financing mechanisms.

In our assessment, a number of the new or innovative financing mechanisms are good ideas, but it is important to be pragmatic on what is involved in terms of their establishment and implementation. Innovative financing mechanisms, such as IFFIm and social impact bonds, involve considerable transaction costs and also require 'champions' to help take them forward (e.g. IFFIm took several years to develop, and progressed only through strong champions in the UK government). Other mechanisms such as international earmarked taxes are politically difficult to implement.

While we do not suggest that these mechanisms are impossible, we would like to draw attention to the fact that they are extremely difficult to implement in the public health and development context and entail high transaction costs.

4.2. Recommendations on new financing mechanisms

Based on our analysis for this project, our main recommendation is as follows:

Further work should be carried out to explore the possibility of establishing regional mechanisms that could leverage relatively modest levels of global donor funding with government and other new sources of finance, to increase regional and national-level activity, commitment and funding for malaria elimination.

The *core principles* for such a regional mechanism for malaria elimination would be as follows:

- The majority of the funding for national malaria programmes will continue to be provided by the respective governments. The role of the regional mechanism would be to support regional activities and encourage regional cooperation and commitment towards elimination.³⁴

³⁴ This follows from the subsidiarity principle in public policy and economics, which suggests that a central authority (in this case a pan-national/ regional mechanism) should only carry out those functions that cannot more effectively be carried out at the national (or indeed sub-national) level. For example, the principle of subsidiarity is key to the functioning of the European Union, wherein legislation states that the Union does not take action (except in the areas that fall within its exclusive competence), unless it is more effective than action taken at national or local levels. (http://europa.eu/legislation_summaries/institutional_affairs/treaties/lisbon_treaty/ai0017_en.htm)

- The main contributor to the regional mechanism would be participating national governments, and approaches to encourage collective action would need to be explored. While bilateral or multilateral donor resources may be leveraged for such a mechanism, new sources of finance (emerging government donors, the private sector, etc.) should also be encouraged.

We provide some thoughts below on the structure of a regional mechanism in terms of what it would do and how it would be funded and managed. We also consider its applicability to the Asia Pacific region. We consider a range of options, including some ‘ideal’ characteristics, and recognise that some of these might not be straightforward to implement. Hence the regional mechanism may ‘start small’ and then expand as interest in participation increases.

It should be noted that these are early views only, and are based on CEPA’s judgement of what might work. These views have not been “market tested.” In addition they do not take account of relevant issues, such as linkages with other disease that might also be funded at the regional level.

Prior to the establishment of a regional mechanism, a detailed feasibility and design study should be undertaken. This should be based on in-depth consultations with relevant stakeholders (e.g. potential funders, recipients).

4.2.1. What would a regional mechanism do?

It is important that any regional mechanism for malaria elimination develops a clearly articulated strategy, with goals and objectives and proposed means to achieve them.

Subject to further review, we believe that a regional mechanism should be structured to comprise both “programmatic” and “financing” elements, as the appetite for national governments to contribute to a financing

mechanism alone may be limited (given greater incentives to invest nationally). Our views on the two elements are as follows:

PROGRAMMATIC—FOR JOINT REGIONAL ACTIVITIES

The regional mechanism could be structured to support aspects of malaria elimination that are best organised, delivered and funded on a regional basis. These could include surveillance and mapping of potential/confirmed sources (“hotspots”) of transmission; multi-national responses to potential/confirmed outbreaks; contextual research and evidence generation; sharing of best practices and lessons learned; pooled procurement of diagnostics and drugs, and support for regional political commitment and advocacy for elimination.³⁵

FINANCING—FOR NATIONAL ACTIVITIES

The regional mechanism could be employed to help “internalise the externalities” (or at least a part of them) to provide countries with greater incentives to invest in malaria elimination.

One approach worth further consideration is the creation of a results-based funding mechanism that provides “top-up” payments to countries that deliver improved results on malaria elimination relative to an agreed-upon performance baseline. We refer specifically to top-up payments, as the majority of the funding for national malaria programmes would be provided by the respective country governments. The objective of the top-up payment would therefore be to encourage greater efforts from governments to fund and implement their national malaria programmes efficiently, in order to access rewards once results are achieved.³⁶ Such approaches require a clearly defined indicator(s) to measure results as well as high-quality data collection methods for monitoring.³⁷ Examples of programmes designed as results-based models are presented in [Box 4.2](#).

³⁵ While we understand that commodities are not the focus for the national malaria programmes in the eliminating countries (given the low burden and more localised demand), regional-level pooled procurement models may be explored to ensure that what commodities are being purchased are acquired at reasonable prices. We have not undertaken a detailed review of the current prices available to these countries in relation to what is secured, for example, through the Global Fund AMFm, to consider the relative merits and feasibility of this approach.

³⁶ Key to the structuring of such a mechanism would be ascertaining the level of incentive (i.e. reward) that would be needed to encourage changes in prioritisation behaviour at the national level.

³⁷ It can be expected that these would be country specific and focus on particular impacts being achieved i.e. malaria free status for the year/a specific number of years.

Box 4.2: Examples of results-based models

Results-based financing has become a popular approach for development aid as it allows donors to focus on pre-determined outputs rather than on inputs. Some examples include:

- **The Governor's Immunisation Leadership Challenge in Nigeria.** This is a Gates Foundation-funded programme that supported improvements in polio and routine immunisations by awarding grants of US\$0.5m to states that were able to achieve a pre-defined level of immunisation coverage. The award could be used to support other state health priorities.
- **The Clinton Health Access Initiative (CHAI)** is currently exploring the development of "cash-on-delivery" models in sub-Saharan Africa, wherein countries would receive grant financing based on their ability to either reduce malaria cases to zero or maintain malaria cases below a certain incidence threshold.³⁸

Source: Gates Foundation Press Release; Centre for Global Development.

Other approaches that might generate similar incentives (i.e. encourage greater funding of national malaria programmes by country governments) could include:

- 'matching contributions' (i.e. a commitment to provide additional funding to a country if the government allocates a certain amount of resources to the malaria programme); or
- some form of guarantee (e.g. a guarantee to provide additional funding if a certain level of national funding commitment is made).

These options would need to be assessed further in order to design a suitable regional-level financing mechanism.

4.2.2. How would the regional mechanism be funded?

Our initial thoughts on how the regional mechanism could be funded are as follows:

- There is a need for some **bilateral and/or multilateral donor funding** to help kick-start or provide ongoing funding for the mechanism. *However, the regional mechanism need not be funded by donors alone.* Several other sources could be leveraged, as detailed below.
- **Government funding from the participating countries** could be encouraged to support various aspects of this regional mechanism.³⁹
 - » For the programmatic component, participating countries could be encouraged to provide contributions as the activities would be relevant for all countries in the region (hence there is 'common interest').⁴⁰ For the financing component, governments of participating countries could be encouraged to contribute *as long as there is a proven economic case* that demonstrates a possibility of return on their investment through a reduction in imported cases in the long term.
 - » Some of the malaria-eliminating countries are becoming emerging donors in the global landscape (e.g. South Korea, Malaysia, South Africa, Brunei) and may be incentivised to contribute to a regional mechanism. Our prior experience in reviewing the incentives guiding these emerging government donors is that they often prefer to earmark their funding to global institutions in order to ensure that the funding is allocated to their region or specific countries where they have 'strategic' interests.
 - » It can be expected that it would be quite challenging to secure contributions from the relatively poorer countries in the region. Therefore countries could be encouraged to contribute based on their ability to pay (e.g. based on Gross National Income). Alternatively, relatively better-off countries could exclusively provide contributions.

³⁸ Centre for Global Development: Cash on Delivery Aid (2010).

³⁹ Given the importance of domestic financing for malaria-eliminating countries, better national accounting—both budgeting and expenditure—should be encouraged.

⁴⁰ Countries would be encouraged to contribute funding based on the region-wide goal of progressively "shrinking" the regional malaria map. Such a goal would provide a major incentive to both eliminating and control countries, given that they would both be striving to achieve the same goal.

- Contributions from the **private sector, foundations and philanthropists** should also be encouraged.
 - » The Gates Foundation has an interest in supporting malaria elimination efforts (refer to Section 2.2). In addition there may be other regional or national foundations and philanthropic funding agencies that may be interested in contributing resources.
 - » There is considerable potential for involving the private sector as a funding source for malaria elimination. This is especially the case for private companies that have a direct linkage with malaria for their productivity, such as tourism, infrastructure and mining companies. Contributions may also be sourced

from private companies that provide services that are relevant to national malaria programmes, such as software and mobile phone companies that can provide supporting services for country surveillance systems.^{41, 42}

Fundraising would be through direct grant contributions from the multiple funding sources. While there is potential to structure the mechanism as an endowment fund or social impact bond, our preference is to “keep it simple.”

Box 4.3 provides some high-level strategies for engaging with the range of potential funders.

Box 4.3: Strategies for engaging with potential funders⁴³

Potential funders would need to be engaged using different strategies, depending on their priorities and motivations for funding. This box presents some key advocacy and communication messages that could be used for targeting the three main potential funders: (i) bilateral and multilateral donor agencies; (ii) national governments of the malaria-eliminating countries; and (iii) other contributors such as the private sector, philanthropists and voluntary contributors.

BILATERAL AND MULTILATERAL DONORS

In our assessment, there are two main aspects to any strategy in engaging bilateral and multilateral donors in malaria elimination efforts:

- Presenting the case for malaria elimination, which is contingent on support for both malaria-control and malaria-eliminating countries. A future eradication goal (or vision) would build global consensus on the overall goal of a malaria-free world and would thus encourage support for elimination as a means to moving forward and preventing resurgence. At the current stage, it is critical for donors to bear in mind the

inherent risks associated with a resurgence of malaria in the malaria-free or malaria-eliminating countries.

- Tailoring specific strategies to the focus/priorities of specific donors can help to capitalise on existing synergies. For example, AusAID is a major regional donor in the Asia Pacific region and is keen to support elimination amongst its neighbours. Another example is the potential role of China as a donor, supporting its neighbours in the greater Mekong subregion to work together to address the emergence of artemisinin resistance as a regional and global public health threat.

NATIONAL GOVERNMENTS

The primary strategy for encouraging national governments to continue to support malaria programmes despite a low burden in their countries is to present the counterfactual argument, i.e. the risk of resurgence of the disease and consequently much additional expenditure if constant lower levels of funding are not maintained over time. A strong case in support of this argument can be made by referencing the continuous efforts of countries to maintain their immunisation

⁴¹ On the former, beyond CSR initiatives, these private companies could be encouraged to structure some type of profit-sharing mechanism or matching contributions to government funding where the reduced incidence/control of malaria can be shown to directly impact their profits. For the latter i.e. software/mobile phone companies, could be encouraged to provide more cost-effective services through long term or regional contracts that provide sufficient economies of scale to these companies to offer lower prices.

⁴² It is important to recognise that the private sector is not just a source of funding, but also a critical partner for implementing activities. For example, given the business case of reduced absenteeism and the return on investment of keeping a healthy workforce, there is the need to articulate a dialogue with large private sector employers on how they can best be involved in supporting efforts of malaria-eliminating countries. Additionally, engaging business associations or creating business coalitions of private sector employers can also have the beneficial effect of raising awareness around malaria control and elimination.

⁴³ Malaria elimination efforts are not yet hinged on a vaccine (as was the case with smallpox), which makes fund raising difficult as donors cannot see a specific commodity to fund and potentially more certain and measureable outcomes.

cont'd **Box 4.3**

programmes even though a certain disease may no longer be present. Other important actions that would need to be undertaken as part of mobilising government support include generating political will (including creating 'champions'), development of a national elimination advocacy strategy and introduction of a budget line.

PRIVATE SECTOR, PHILANTHROPIC AND VOLUNTARY CONTRIBUTORS

The economic benefits of malaria elimination need to be emphasised, especially for the business community.

There are examples of the overall productivity of business operations going up due to a reduction in the incidence of malaria cases in the region. These can be used as success stories for the business community.

For philanthropists and voluntary contribution, advocacy about 'the problem' (e.g. through mortality statistics) and the 'benefits of contributions' (explained in simple terms such as the value of a one dollar contribution) will be critical.

4.2.3. How would the regional mechanism be managed?

Suitable arrangements would need to be made for the management of the regional mechanism. Some options include:

- management by an existing multilateral organisation (including a regional development bank); and
- contracting-out the management to a relevant private sector organisation with the requisite expertise.

It would be important to select a strong institution with a credible track record that is able to administer funds in a way that would ensure accountability and transparency. Collaborating with an existing and trusted multilateral organisation would provide financial credibility for donors, thereby encouraging them to pledge contributions.

Contracting options with the private sector have been explored by a number of development institutions (e.g. the Private Infrastructure Development Group, funded by the Department for International Development (DFID) and other donors). However this approach has often been very costly.

4.2.4. Applicability in the Asia Pacific region

In our assessment, there is high potential to establish a regional mechanism in the Asia Pacific region on account of the existence of:

- a number of fast growing economies, with governments that may be willing and able to contribute to such a fund (where the economic case is established),⁴⁴
- a number of regional cooperation initiatives (e.g. Association of South East Asian Nations (ASEAN)); and
- APMEN, as a regional cooperation mechanism for malaria elimination.

We note that ADB, in discussion with AusAID, DFID, developing member country governments and the private sector, is assessing the feasibility of establishing a regional funding mechanism (an "Asia Pacific Fund") for long-term control and prevention of malaria and other communicable diseases in the Asia Pacific region. [Box 4.4](#) provides more details.

⁴⁴ China might be an outlier in this context and may require a specific approach to fund raising.

Box 4.4: Proposed Asia Pacific Fund

ADB is in the process of establishing a fund to support regional cooperation and integration in the health sector. The fund would focus on malaria and communicable diseases and aim to tackle emerging regional threats (e.g. artemisinin resistance, influenza). An initial contribution has been made by AusAID to ADB with the aim of initiating regional cooperation and the development of a business case for the regional funding mechanism. The plan is for this fund to be hosted and managed by ADB.

A further step towards the establishment of this fund has been the creation of the Asia Pacific Leaders Malaria Alliance (APLMA), which comprises heads of state

of participating countries. APLMA is in its early days and is supported by:

- a working group on financing for malaria (with representation from the ministries of finance) to ensure adequate financing at regional and national levels;
- a working group on pharmaceuticals to improve access to life-saving commodities for malaria and engage in regional/trans-boundary issues around trade and regulation of pharmaceutical products; and
- a “champions group” which will support advocacy efforts for malaria at the regional level and mobilise resources by interacting with the Global Fund, private sectors and other non-traditional sources.

Source: ADB (2013) Project Data Sheet.

Box 4.5 provides some key lessons from the experience of other regional financing mechanisms, specifically the

existing GCC Malaria Control Fund as well as the planned Global Fund funding arrangement for EMMIE.

Box 4.5: Lessons from the experience of other regional initiatives

Key lessons learnt from the experience of the GCC Malaria Control Fund and EMMIE are as follows:

- **There is interest amongst countries to create a regional mechanism for malaria.** In the case of the GCC Malaria Control Fund, cooperation was born out of the Gulf countries' interest in coming together and pooling funds to support malaria control efforts in Yemen, thereby reducing the risk of re-introduction of the disease in the region. EMMIE represents an example of collective action towards eliminating malaria amongst countries at different economic and disease-burden levels in Central America, with the 10 countries included in the initiative comprising both malaria-eliminating and control countries. Interest in regional collaboration is also exhibited by the fact that Mexico is part of the regional initiative but will not have access to the rewards and is also providing technical assistance.⁴⁵
- **The process of developing a regional initiative is time-consuming.** The resolution for the creation of the GCC Malaria Control Fund was signed in 2006, though the first contributions were made in 2009. The lengthy timeframe between signing and start of operations was mainly due to the fact that a number of details had to be agreed upon, such as the scale of national contributions and implementation arrangements. The current discussions on EMMIE have also grown out of continuous engagement between the Global Fund and the country governments over a number of years.
- **It is important to select an independent fund manager.** The GCC Malaria Control Fund is managed by the Health Ministers' Council of the GCC, which may not be entirely independent given the membership from the participating Gulf countries. For EMMIE, discussions are ongoing regarding an appropriate implementer/manager for the fund, and we understand that Population Services International (PSI) is going to be proposed as the Principal Recipient. The selection of PSI is based on its independence and clear separation from the governments of the countries involved.
- **Monitoring and Evaluation (M&E) requires careful consideration and requisite funding.** For EMMIE, all countries are aiming to reach zero malaria incidence by 2020, with certified elimination status by 2025. Given different starting points for the participating countries, each would aim to pursue its own appropriate strategy towards elimination. Correspondingly, the M&E approach to assess performance and eligibility for rewards would need to be carefully designed in order to be fair and transparent. The current plan is to include only one impact indicator (number of malaria cases) in order to keep it simple. The grant proposal will include an allocation of funds for the M&E design. The GCC Malaria Control Fund was structured in two phases to promote results, with funding for the second phase being tied to results achieved at the end of Phase 1. The participating countries also proposed to set up an oversight committee that would track funding and validate results at regular intervals.
- **Need for provision of technical assistance.** One of the key considerations under the GCC Malaria Control Fund was the role of WHO as a provider of technical assistance. For EMMIE, the Global Fund has also been engaging with a number of key partners in the region, including Centres for Disease Control and Prevention (CDC) and PAHO.
- **Forward thinking and sustainability is important.** The Global Fund support to EMMIE is being designed for a period of three years, with rewards distributed in years one and two, and the third year to be utilised for consolidation and reporting. The Global Fund has been in discussion with other relevant donors (Gates Foundation, Carlos Slim Foundation) for future funding.

⁴⁵ The experience of regional funds in other sectors also demonstrates the potential for collective action for regional issues. Some of these funds/initiatives have included contributions from national governments as well as from development partners and multilateral agencies. Two examples are the Central Asian Countries Initiative for Land Management (CACILM) and the IDB Regional Fund of Agricultural Technology (FONTAGRO). More details are provided in [Annex 6](#).

4.3. Recommendations for strengthening existing financing mechanisms

In our assessment, the following should be prioritised:

- **Advocacy for financing of malaria-eliminating countries by the Global Fund.** As noted, the new funding model for the Global Fund may result in reduced support for the malaria-eliminating countries. Increased advocacy and policy dialogue is needed to ensure continued support for these countries by the Global Fund.⁴⁶ Advocacy is also needed to encourage the malaria-eliminating countries to include support for malaria programmes (apart from other communicable diseases) in their funding proposals to the Global Fund.
- **Strengthen the work of existing donors of malaria-eliminating countries and other health sector donors.** Key bilateral donors such as Australia and Japan should be encouraged to maintain and expand their support for the malaria-eliminating countries—both through bilateral and multilateral contributions (i.e. funding of the Global Fund). Other key health sector donors such as the UK, the U.S., the Netherlands and France should also be encouraged to provide support for the malaria-eliminating countries.
- **Engagement with emerging government donors to encourage funding for malaria elimination.** As discussed previously, regional financing mechanisms might help promote a new class of government donors (such as Malaysia, South Africa and South Korea) for malaria elimination. Efforts should be made to provide requisite information to these donors to encourage them to contribute resources.

In addition, consideration may also be given to alternative approaches, such as ‘matching contributions,’ whereby traditional donors match any contributions from the national governments of the malaria-eliminating countries or other funding sources such as the private sector and philanthropists. For example, the Gates Foundation and DFID have committed to provide matching funds for any private sector contributions to the GAVI Alliance as a way to encourage greater financing from the private sector for the activities of the Alliance.⁴⁷ One could envisage a similar mechanism wherein contributions from the malaria-eliminating countries could be matched by the traditional donors. We recognise, however, that this may not be perceived as very compelling to the traditional donors, given their current focus on low income–high burden malaria-control countries.

More generally, with the growing popularity of results-based financing initiatives amongst the traditional donors, there may be merit in accessing these pools of funding (such as the World Bank’s Health Results Innovation Trust Fund), given the positive results that might ensue for a country in the elimination phase (notwithstanding their focus on high burden and economically disadvantaged countries). Linkages with other disease-focused (e.g. dengue) funding or general health systems and infrastructure funding might also provide an opportunity for additional resources being allocated to malaria programmes in malaria-eliminating countries.

⁴⁶ The Global Fund is considering options for financing for graduating countries including through “bridge funding” and supporting the development of market based financing mechanisms (i.e. bonds) and social security/ micro insurance schemes in these countries. The Global Fund is also looking to structure “binding commitments” from countries ensuring they will take over the financing post Global Fund support, with potential to ‘back stop’ these through some donor-based guarantee mechanisms.

⁴⁷ <http://www.gavialliance.org/funding/gavi-matching-fund/how-it-works>.

5. SUGGESTED WAY FORWARD

This report has highlighted the fact that global financing for malaria elimination has been limited and heavily concentrated amongst a few key donors. Alternative fundraising mechanisms therefore need to be developed to support malaria-eliminating countries.

Our key recommendation is to examine the feasibility of a suitably designed regional mechanism, with financing from a mix of sources including existing bilateral and multilateral donors, national governments of the malaria-eliminating countries, emerging government donors, the private sector, foundations and philanthropists. Given the ongoing discussions between ADB and AusAID to establish a regional financing mechanism in the Asia Pacific region, it would be critical to engage with these organisations. Further work is required to assess the feasibility of the financing mechanism as well as its detailed design. This should be supported by extensive consultations with governments and other key stakeholders in the region.

Advocacy—at the global, regional and national levels—needs to be strengthened to ensure that the traditional bilateral and multilateral donors maintain and expand their commitment to malaria elimination where possible. At the same time, advocacy efforts need to also be directed towards emerging government donors, especially to understand their key priorities and to encourage contributions.

To make the case for new or additional funding for malaria elimination, it is critical to develop a robust investment case for national and regional malaria elimination. This would entail identifying key funding gaps, quantifying the costs and time horizons involved, proposing practical financing mechanisms and linking investments with anticipated targets, results and benefits. Such an investment case would also support decision-making and be an important advocacy tool for malaria elimination and eventual eradication.

ANNEX 1: BIBLIOGRAPHY

Abeyasinghe, R. R., Galappaththy, G. N. L., Smith Gueye, C., Kahn, J. G., and Feachem, R. G. A. (2012). Malaria control and elimination in Sri Lanka: Documenting progress and success factors in a conflict setting. *PLoS ONE*, 7(8).

ALMA, E2Pi Global Health Group, and Clinton Health Access Initiative. (2011). Maintaining the gains in malaria control. Available at <http://globalhealthsciences.ucsf.edu/sites/default/files/content/ghg/e2pi-maintaining-the-gains-country-briefs.pdf> (accessed July 2013).

Asian Development Bank. (2013). Project data sheet: Regional strategic response to malaria and other communicable diseases in Asia and the Pacific. Project Number 47272-001. Available at <http://www.adb.org/projects/47272-001/main> (accessed September 2013).

Bill and Melinda Gates Foundation. (2013). Foundation fact sheet. Available at <http://www.gatesfoundation.org/Who-We-Are/General-Information/Foundation-Factsheet> (accessed September 2013).

Bill and Melinda Gates Foundation. (2011). To help Nigeria stop polio Bill Gates launches governor's immunization leadership challenges. Available at <http://www.gatesfoundation.org/Media-Center/Press-Releases/2011/10/To-Help-Nigeria-Stop-Polio-Bill-Gates-Launches-Governors-Immunization-Leadership-Challenge> (accessed September 2013).

Castillo-Solorzano, C., Marsigli, C., Danovaro-Holliday, M. C., Riuz-Matus, C., Tambini, G., and Andrus, J. K. (2011). Measles and rubella elimination initiatives in the Americas: Lesson learnt and best practices. *Journal of Infectious Diseases*, Suppl.1, S279–83.

Centre for Global Development. (2010). Cash on delivery aid. Available at <http://international.cgdev.org/initiative/cash-delivery-aid> (accessed August 2013).

Centre for Global Development. (2013). Working group on value for money: An agenda for global health funding agencies. Available at http://international.cgdev.org/doc/Silverman_UNITAID_Background.pdf (accessed June 2013).

Chanana, D. (2009). India as an emerging donor. *Economic and Political Weekly*, XLIV(12).

Cohen, J. M., Smith, D. L., Cotter, C., Ward, A., Yamey, G., Sabot, O. J., and Moonen, B. (2012). Malaria resurgence: A systematic review and assessment of its causes. *Malaria Journal*, 11(122).

Cotter, C., Sturrock, H. J. W., Hsiang, M. S., Liu, J., Phillips, A. A., Hwang, J., Smith Gueye, C., Fullman, N., Gosling, R. D., and Feachem, R. G. A. (2013). The changing epidemiology of malaria elimination: New strategies for new challenges. *The Lancet*, 382(9895), 900–11.

Emerging Africa Infrastructure Fund. (2013). Emerging Africa Infrastructure Fund Structure. Available at <http://www.emergingafrica-fund.com/about-us/fund-structure.aspx> (accessed July 2013).

Executive Board of the Health Ministers' Council for the Gulf Cooperation Council. (2013). Technical programs: Malaria control. Available at <http://sgh.org.sa/en-us/technicalprograms/infectiousdiseases/initiativearabianpeninsulafreeofmalaria.aspx> (accessed July 2013).

Feachem, R. G. A., Phillips, A. A., Geoffrey, A. T., and Snow, R. W. (2010). Call to action: priorities for malaria elimination. *The Lancet*, 376(9752), 1517–21.

Feachem, R.G.A., Phillips, A.A., Hwang, J., Cotter, C., Wielgosz, B., Greenwood, B. M., Sabot, O., Rodriguez, M. H., Abeyasinghe, R. R., Ghebreyesus, T. A., and Snow, R. W. (2010). Shrinking the malaria map: Progress and prospects. *The Lancet*, 376(9752), 1566–78.

Gallup, J. L., and Sachs, J. D. (2001). The economic burden of malaria. *The American Society of Tropical Medicine and Hygiene*, 64(1,2), 85–96.

Global Funding of Innovation for Neglected Diseases. (2013). G-FINDER database. Available at http://g-finder.policycures.org/gfinder_report/index.jsp (accessed July 2013).

The Lancet. (2010). Series on malaria elimination. Available at <http://www.thelancet.com/malaria-elimination>.

Liu, J., Modrek, S., Gosling, R. D., and Feachem, R. G. A. (2013). Malaria eradication: Is it possible? Is it worth it? Should we do it? *The Lancet*, 1(1), e2–e3.

Malaria Atlas Project. (2013). Malaria atlas resources. Available at <http://www.map.ox.ac.uk/> (accessed July 2013).

OECD. (2013). Aid to poor countries slips further as governments tighten budgets. Available at <http://www.oecd.org/newsroom/aidtopoorcountriesslipsfurtherasgovernmentstightenbudgets.htm> (accessed September 2013).

OECD. (2013). International development statistics (IDS) online databases. Available at <http://www.oecd.org/dac/stats/idsonline.htm> (accessed July 2013).

OECD. (2010). DAC statistical reporting directives. Available at <http://www.oecd.org/dac/stats/dacstatisticalreportingdirectives.htm> (accessed June 2013).

Pigott, D. M., Atun, R., Moyes, C. L., Hay, S. I. and Gething, P. W. (2012). Funding for malaria control 2006–2010: A comprehensive global assessment. *Malaria Journal*, 11(246).

- Roll Back Malaria Partnership. (2008). The global malaria action plan: For a malaria-free world. Geneva: World Health Organization.
- Sandor, E., Scott, S., and Benn, J. (2009). Innovative financing to fund development: Progress and prospects. Available at <http://www.oecd.org/dac/effectiveness/44087344.pdf> (accessed June 2013).
- Snow, R. W., Guerra, C. A., Mutheu, J. J., and Hay, S. I. (2008) International funding for malaria control in relation to populations at risk of stable *Plasmodium falciparum* transmission. *PLoS Med*, 5(7).
- The GAVI Alliance. (2013). Donor profiles. Available at <http://www.gavialliance.org/funding/donor-profiles/> (accessed September 2013).
- The Global Fund. (2013). Grant portfolio. Available at <http://portfolio.theglobalfund.org/en/Downloads/Index> (accessed July 2013).
- The Global Health Group. (2012). List of 34 malaria-eliminating countries. Available at <http://www.malariaeliminationgroup.org/resources/elimination-countries> (accessed June 2013).
- The Global Health Group, Malaria Atlas Project, and APMEN. (2013). Eliminating malaria in Sri Lanka. Available at http://globalhealthsciences.ucsf.edu/sites/default/files/content/ghg/country-briefings/asia-pacific/Sri-Lanka_2013.pdf (accessed July 2013).
- The Global Health Group, and World Health Organization. (2013). County case studies on malaria elimination. Available at <http://globalhealthsciences.ucsf.edu/global-health-group/malaria-elimination-initiative/research/case-studies> (accessed June 2013).
- Turkisch, E. (2011). Sovereign wealth funds as investors in Africa: Opportunities and barriers. Available at <http://www.oecd.org/dev/48748381.pdf>.
- White, M. T., Conteh, L., Cibulskis, R., and Ghani, A. C. (2011). Costs and cost-effectiveness of malaria control interventions—a systematic review. *Malaria Journal*, 10(337).
- Wilson, P., Aizenman, Y. (2012). Value for money in malaria programming: Issues and opportunities. Available at http://international.cgdev.org/sites/default/files/1426120_file_Wilson_Aizenman_Value-forMoney_FINAL_0.pdf (accessed July 2013).
- UNITAID. (2012). Annual report. Available at <http://www.unitaid.eu/en/resources/publications/annual-reports> (accessed July 2013).
- The U.S. President's Malaria Initiative. (2013). PMI's seventh annual report. Available at <http://www.fightingmalaria.gov/resources/reports/index.html> (accessed July 2013).
- World Health Organization. (2011). World Malaria Report 2011. Geneva: World Health Organization.
- World Health Organization. (2012). World Malaria Report 2012. Geneva: World Health Organization.

ANNEX 2: LIST OF CONSULTATIONS

Table A2.1: Consultations for the assignment⁴⁸

Organisation	Consultee
Asia Pacific Malaria Elimination Network	Maxine Whittaker, University of Queensland
Asian Development Bank	Patricia Moser, Lead Health Specialist
AusAID	Ben David, Principal Health Adviser
Bill and Melinda Gates Foundation	Diana Measham, Senior Programme Officer Alexandra Farnum, Programme Officer Susie Nazzaro, Programme Officer
Clinton Health Access Initiative	Robert Brickman Charlotte Dolenz
D. Capital (Dalberg Group)	Lisbet Peeters, Partner Lily Han, Associate
Global Fund	Scott Filler, Senior Technical Advisor, Malaria Stefan Emblad, Director, Resource Mobilisation Silvio Martinelli, Regional Manager for Latin America and the Caribbean
Global Health Group	Richard Feachem, Director, UCSF Global Health Group Allison Phillips, Deputy Lead, Malaria Elimination Initiative Jenny Liu, Economist, Malaria Elimination Initiative
Roll Back Malaria Partnership	Thomas Teuscher
UNITAID	Alexandra Cameron, Market Dynamics Officer for Malaria
University of Washington	Dean Jamison, Macroeconomist
U.S. President's Malaria Initiative	Bernard Nahlen, Deputy Coordinator
WHO	Richard Cibulskis, Coordinator, Malaria Strategy Economics and Elimination Hoda Atta, Regional Malaria Advisor, WHO EMRO
World Bank	John Paul Clark, Senior Technical Specialist (Health)

⁴⁸ The designation of the consultee has been included where available.

ANNEX 3: GOVERNMENT AND DONOR FUNDING FOR MALARIA-ELIMINATING AND CONTROL COUNTRIES

This annex presents total funding for malaria endemic countries from country governments and international donors for the period 2006–10. We also compare the funding composition for malaria-eliminating and control countries.

The analysis is based on data provided in Pigott et al. (2012).⁴⁹ This paper reviews funding for malaria endemic countries from international donors, NGOs and governments over the period 2006–10. The data covers 97 countries based on regions at risk from *Plasmodium falciparum* and/or *P. vivax* transmission from the global risk maps for 2010. As described in the paper, the data has been obtained as follows:

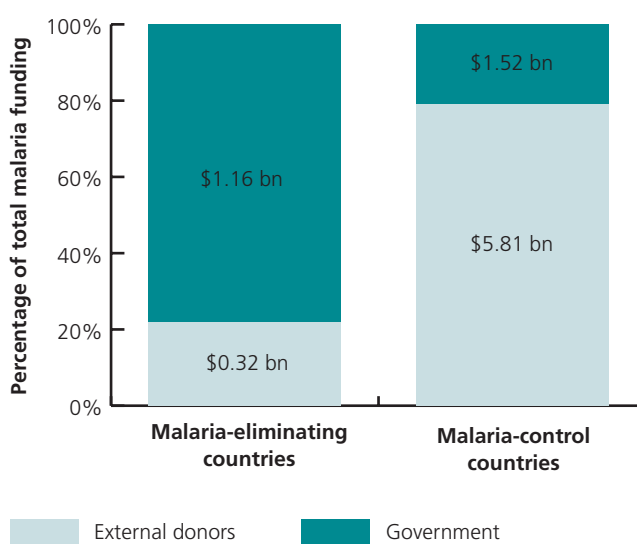
- Government funding for malaria has been determined by collating information in the grant proposals to the Global Fund, using the most up-to-date information from 83 countries. The World Malaria Report 2011 has been used for the 20 countries that have not requested Global Fund support.⁵⁰
- Donor funding for malaria has been obtained from the OECD DAC database, supplemented by data from the following funders: the U.S. President's Malaria Initiative, the Global Fund, UNICEF and the World Bank Booster Programme for Malaria Control in Africa.⁵¹ Data on disbursements of funding has been collected, where possible.

We have used this data to estimate the total funding available for malaria-eliminating countries as well as analyse the composition of funding for malaria-eliminating and control countries. We have used the Global Health Group's August 2012 list to identify the malaria-eliminating countries from the 97 countries included in the database.⁵²

Our key findings are as follows:

- Between 2006 and 2010, total funding across the malaria-endemic countries, aggregating domestic government and international donor funding, was US\$8.81bn. Total funding for malaria-eliminating countries over this period was US\$1.49bn, or 17% of the total across malaria-endemic countries.
- The main source of funding for malaria-eliminating countries is country governments. The reverse is the true for malaria-control countries, where 79% of the total funding is provided by donors. [Figure A3.1](#) presents this disparity in the funding composition for malaria-eliminating and control countries.

Figure A3.1: Comparison of government and donor financing for malaria-eliminating and malaria-control countries



Source: CEPA analysis based on Pigott et al. (2012).

⁴⁹ Pigott et al. (2012) Funding for malaria control 2006–2010: A comprehensive global assessment. *Malaria Journal*, 11:246.

⁵⁰ WHO: *World Malaria Report 2011*. Geneva: World Health Organization; 2011.

⁵¹ The data only includes grants that were malaria-focussed or with clearly defined malaria budgets within an overall larger grant, thus presenting a 'lower bound' estimate for external funding disbursements. Many donor grants have been excluded if they could not be directly apportioned to malaria control, such as those from the World Bank and the Gates Foundation. Also grants without a clear indication of the recipient countries were excluded.

⁵² The database includes all malaria-eliminating countries included in the Global Health Group's August 2012 list with the exception of Algeria.

The following malaria-eliminating countries did not receive any donor funding between 2006 and 2010: Belize, Costa Rica, South Korea, Malaysia, Panama, Paraguay, Saudi Arabia, and Turkey. Further, the following countries received less than US\$50,000 each in donor funding over this period: Argentina, Cape Verde, El Salvador and Mexico.

This trend is not surprising given the relatively lower financing needs and higher economic status of the malaria-eliminating countries (31 of the current 34 malaria-eliminating countries are high or middle income).

ANNEX 4: DONOR FUNDING FOR MALARIA-ELIMINATING COUNTRIES

This annex provides an analysis of the recent trends in donor funding for malaria-eliminating countries using data from the OECD Development Assistance Committee (DAC) Creditor Reporting System (CRS) on Official Development Assistance (ODA).

The annex is structured as follows: Section 1 presents the methodology and limitations; Section 2 presents the trends in total, health and malaria ODA; and Section 3 presents the trends in donor funding for malaria-eliminating countries (overall, from multilaterals and bilaterals, and for recipient countries).

1. Methodology and limitations

We have used data on ODA commitments (at 2011 constant USD) from the OECD DAC CRS database.

The database disaggregates health ODA into three sub-categories: (i) general health; (ii) basic health; and (iii) population policies/programmes and reproductive health.⁵³ Basic health ODA includes ODA for malaria control, which is defined as “the prevention and control of malaria.”⁵⁴ We have calculated donor funding for malaria elimination by considering ODA for malaria control for the 34 countries that are defined as malaria-eliminating by the Global Health Group as of August 2012.

We consider data for the period 2000–11 for total and health ODA. However, for malaria ODA in general and ODA for malaria-eliminating countries in particular, we are restricted to the time periods of 2006–11 and 2007–11 respectively as there is limited data for preceding years. Given the short time period for which data is available, we are unable to conclude on a clear trend in our review.

It can be expected that the overall levels of financing for malaria elimination presented below are an underestimation, given the issues with the database in terms of

incomplete reporting by multilaterals and lack of coverage of non-DAC donors. Also, as malaria elimination encompasses a number of activities that are shared with other parts of the health system, it can be expected that some relevant funding is also included within the sub-categories for general and basic health ODA.

2. Overall trends in total, health and malaria ODA

This section presents an overview of the trends in total, health, basic health and malaria ODA (Figure A4.1). Key points to note are as follows:

- Total ODA commitments across all developing countries exhibited an upward trend between 2000 and 2011, growing at a compound growth rate of 5.4% p.a. More recently, there has been a decline since 2009 mainly due to the impact of the financial crisis on donor aid budgets.
- ODA for health had a broadly similar trend to that of total ODA; however, it grew much faster than total ODA at the rate of 7% p.a. over the period.
- Basic health ODA, which includes malaria ODA, grew at an even faster rate of 9.1% p.a. Basic health ODA accounted for 68% of health ODA over the period; however, its annual share in total health ODA has been declining over time due to a rise in funding for population policies/programmes and reproductive health.
- Total malaria ODA across all developing countries increased between 2006 and 2009 and declined thereafter. In particular:
 - » Funding for malaria increased steadily from 2006, reaching a peak level of US\$2.4bn in 2009. As noted in the 2008 Global Malaria Action Plan, donors increased their financial support by three times between 2004 and 2007. For example, the U.S.

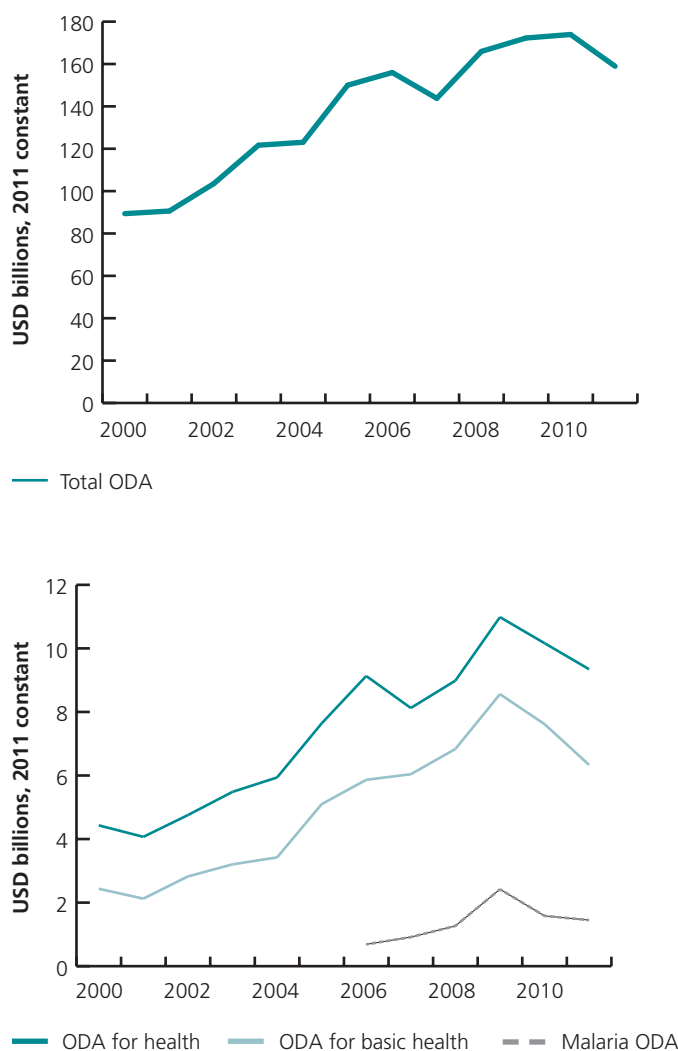
⁵³ General health includes “health policy, medical training, education and research, laboratories, hospitals and specialised clinics, ambulances, dental services, mental health, rehabilitation, non-infectious disease control, drug and substance abuse control (excluding narcotics traffic control).” Basic health is defined as “basic health care provision, training of basic health personnel and development of basic health infrastructure.” Population policies/programmes and reproductive health is defined as covering “all activities in the field of reproductive health, family planning and research into population problems, STD control including HIV/AIDS.” (OECD DAC Statistical Reporting Directives, 2010)

⁵⁴ Reporting Directives for the Creditor Reporting System, 2007.

President's Malaria Initiative expanded its scope from 10 countries in 2007 to 15 countries in 2008, increasing its budget from US\$135m to US\$300m over this period.

- » However, malaria ODA declined in subsequent years. The 2012 World Malaria Report attributed the recent levelling off to lower levels of disbursements from the Global Fund in 2011 and 2012.⁵⁵

Figure A4.1: Total ODA, ODA for health, ODA for basic health and malaria ODA



Source: CEPA analysis using CRS data.

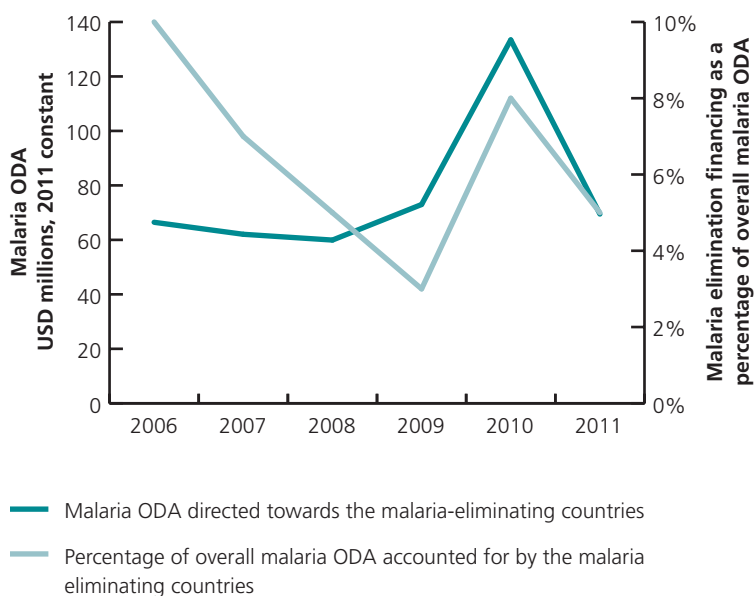
3. ODA funding for malaria elimination

Figure A4.2 presents the total volume of ODA for malaria elimination (blue line, to be read on the left axis) and the percentage of ODA for malaria accounted for by the malaria-eliminating countries (red line, to be read on the right axis).

Key points to note are as follows:

- Between 2006 and 2011, funding for malaria elimination totalled US\$464m, accounting for approximately 6% of overall malaria ODA across all recipient countries.
- The funding was relatively flat from 2006 and 2009, followed by a peak in 2010 when the Global Fund approved large grants for China (US\$73m) and the Philippines (US\$28m).

Figure A4.2: Key trends in overall donor financing for malaria elimination



Source: CEPA analysis using CRS data.

⁵⁵ The report notes that this decline was offset by increased funding from PMI and DFID. However, the data suggests that these initiatives would only have been partially offsetting, as malaria ODA declined in 2010 and 2011.

A comparison of certain metrics on total malaria ODA and that for malaria-eliminating countries in particular highlights the limited focus of donors on the eliminating countries:

- Donor funding for malaria-control countries grew at 17% p.a. over this period, in contrast to donor funding for malaria elimination, which grew at 1% p.a.
- Malaria ODA accounted for 21% of basic health ODA for the malaria-control countries. The corresponding figure for malaria-eliminating countries was 13%.

MULTILATERAL FINANCING FOR MALARIA ELIMINATION⁵⁶

Table A4.1 below summarises the financing for malaria-eliminating countries by key multilaterals over the period 2007–11.⁵⁷

Key points to note are as follows:

- Between 2007 and 2011, multilaterals provided 65% of the total funding for malaria (with the rest being provided directly by the DAC donors as bilateral assistance). The share of multilaterals in total financing for malaria-eliminating countries was, however, much higher at 94% (with bilateral donors contributing the remaining 6% as discussed in more detail below).
- The main multilateral organisation funding malaria-eliminating countries is the Global Fund (also the largest donor in general for malaria-eliminating countries).
- Other multilaterals such as the World Bank IDA and UNICEF have provided negligible amounts of funding to the malaria-eliminating countries in the period under review.
- The Global Fund has mainly directed funds to China, the Philippines and Thailand. In particular, China accounted for 31% of total the Global Fund's malaria elimination ODA over the period 2007–11, while this figure was 15% and 12%, respectively, for the Philippines and Thailand.⁵⁸

Table A4.1: Malaria elimination financing from multilaterals over the period 2007–11 (USD million, 2011 constant)

Multilateral	2007	2008	2009	2010	2011
Global Fund	50	54	72	132	66
World Bank IDA	-	-	-	0.11	-
UNICEF	0.27	0.01	-	0.01	0.03

Source: CEPA analysis using CRS data.

BILATERAL FINANCING FOR MALARIA ELIMINATION BY DAC DONOR COUNTRIES⁵⁹

Figure A4.3 below presents bilateral funding for malaria (bar graph, to be read on the left axis) and the percentage of bilateral malaria ODA accounted for by the malaria-eliminating countries (line graph, to be read on the right axis) for the period 2007–11.

Key points to note are as follows:

- Bilateral ODA for malaria increased annually throughout 2007–11, accounting for 35% of the total ODA for malaria. However, malaria-eliminating countries accounted for an extremely low percentage of bilateral funding from the DAC countries. In particular, their share of total malaria ODA declined significantly, from 3.6% in 2007 to 0.16% in 2010. Since then there appears to have been a slight increase in the share of malaria funding directed towards the eliminating countries.
- Bilateral funding from the DAC countries comprised 6% of the donor funding for malaria-eliminating countries over the period 2007–11 (with the majority of funding coming from multilaterals as noted above).

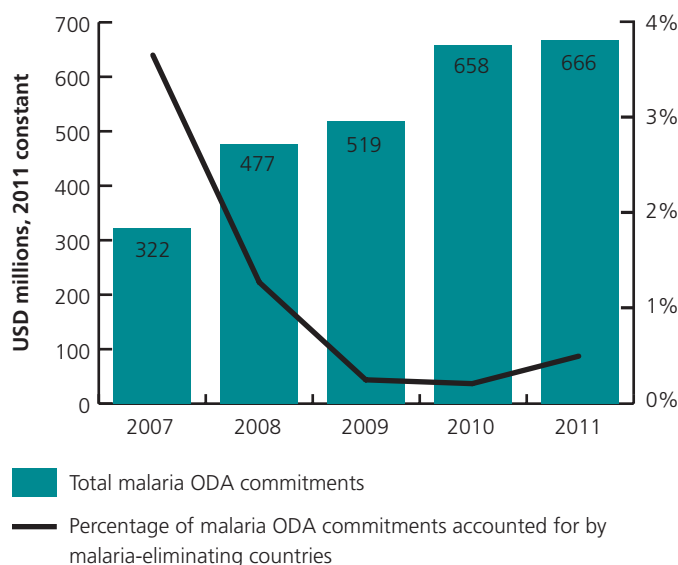
⁵⁶ The multilaterals for which we have data on malaria ODA are: the Global Fund, UNICEF, World Bank IDA and Islamic Development Bank.

⁵⁷ More details are also provided in [Annex 5](#).

⁵⁸ A number of malaria-eliminating countries are not eligible for financing from the Global Fund.

⁵⁹ The donor countries for which there is some data are: Australia, Austria, Belgium, Canada, Finland, France, Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, South Korea, UK and US.

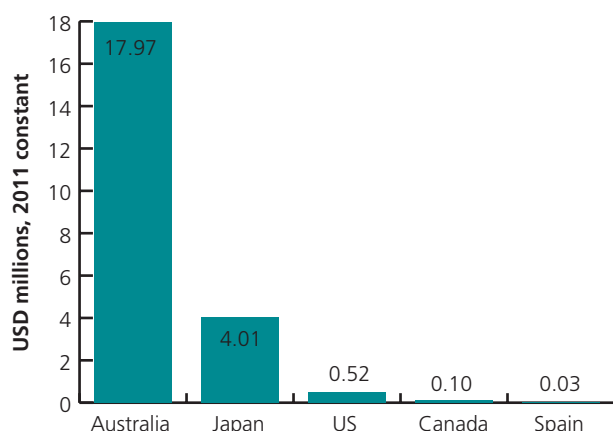
Figure A4.3: Key trends in bilateral financing for malaria and malaria elimination



Source: CEPA analysis using CRS data

The following DAC countries directed part of their malaria ODA to the malaria-eliminating countries: Australia, Japan, U.S., Canada, and Spain (refer to [Figure A4.4](#)).

Figure A4.4: Total malaria elimination financing by DAC nations over the period 2007–11



Source: CEPA analysis using CRS data.

More details on funding by DAC donor are as follows:

- Total malaria financing from Australia has varied between 1% and 7% of its total health ODA over the period 2007–11. Australia's funding for malaria has mainly been directed towards the malaria-eliminating countries, specifically to the Philippines, Solomon Islands and Vanuatu.^{60, 61}
- Total malaria funding from Japan has been somewhat volatile (ranging between 1% and 14% of total health ODA over the period 2007–11). Its funding has focused on the Asia Pacific region, specifically the Solomon Islands, Thailand and Vietnam.
- Malaria elimination funding from other DAC countries is relatively low. The only malaria-eliminating country to receive funding from the U.S. over the period 2007–11 was Sao Tomé and Príncipe, which received a commitment of US\$0.5m in 2008. Although the U.S. is the largest bilateral donor for malaria, it has mainly funded malaria-control countries in sub-Saharan Africa through the President's Malaria Initiative (PMI). However, PMI has expanded its scope in 2011 to include the Mekong sub-region, which includes some malaria-eliminating countries (not reflected in the data presented here). In addition, only 0.12% of the total US\$86.4m of Canada's malaria ODA commitments between 2007 and 2011 was directed towards malaria-eliminating countries.
- Other important donors such as the UK, the Netherlands, France, Ireland, Belgium and Germany have not targeted malaria-eliminating countries.⁶²

FINANCING FOR MALARIA ELIMINATION BY RECIPIENT COUNTRY

[Figure A4.5](#) below summarises the top 10 malaria-eliminating countries that have received funding between 2007 and 2011.⁶³ The graph also reflects the income status of these countries based on the World Bank categorisation for 2011.

Key points to note are as follows:

- China, the Philippines and Thailand together accounted for over half of total malaria ODA commitments to the malaria-eliminating countries. China accounted for 29% of total malaria elimination financing between 2007 and

⁶⁰ In 2007, the Solomon Islands and Vanuatu together accounted for Australia's total malaria funding commitment of US\$11.15m in that year. In 2008 the Philippines, Solomon Islands and Vanuatu accounted for 86% of Australia's total malaria ODA while in 2011, the Solomon Islands alone accounted for 84%.

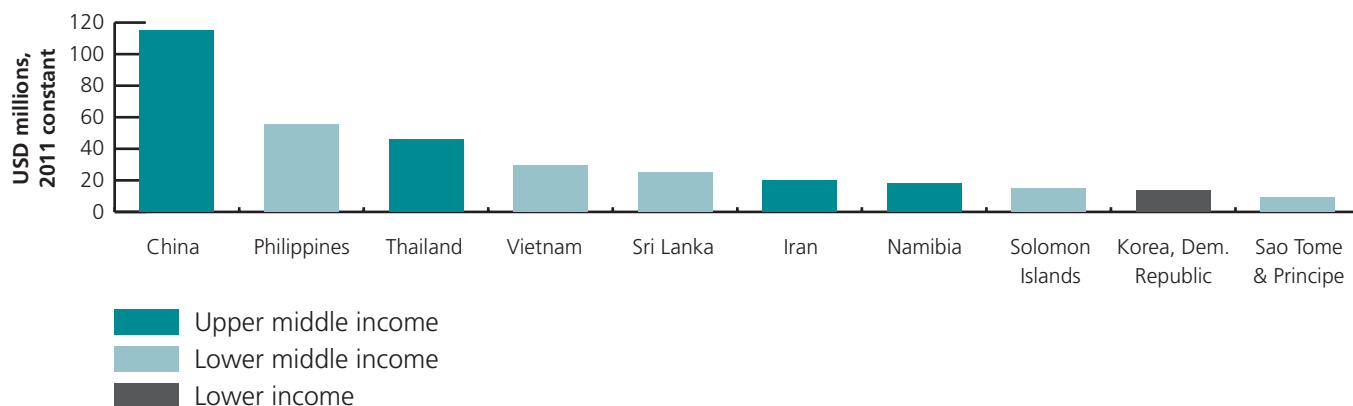
⁶¹ These commitments could be related to the Pacific Malaria Initiative, which is funded by the Australian government to help control and progressively eliminate malaria in the Solomon Islands and Vanuatu. The initiative supports implementation of national malaria programmes based on a single consolidated work plan, drawing upon the combined resources of the Ministries of Health, the Global Fund, WHO and AusAID.

⁶² These donors have committed more than US\$5m to malaria ODA between 2007 and 2011.

⁶³ Countries which have received over US\$10m in malaria-related ODA commitments.

- 2011, receiving US\$115m in funding. The Philippines and Thailand accounted for 14% and 12% of total financing for malaria elimination, respectively.
- The majority of malaria-eliminating countries individually accounted for 5% or less of total malaria funding.⁶⁴
 - Ten malaria-eliminating countries did not receive any external malaria funding: Algeria, Belize, Costa Rica, El Salvador, Malaysia, Panama, Paraguay, Saudi Arabia, South Korea and Turkey. (Saudi Arabia and South Korea are not eligible for funding from the Global Fund.)

Figure A4.5: Top 10 recipients of malaria funding over the period 2007–2011



Source: CEPA analysis using CRS data

⁶⁴ By size of funding these countries are: Iran, Namibia, Solomon Islands, Korea Dem. Rep., Sao Tomé and Príncipe, Nicaragua, Tajikistan, Vanuatu, Swaziland, Dominican Republic, Azerbaijan, Kyrgyzstan, Bhutan, Uzbekistan, Cape Verde, Botswana, South Africa, Mexico, Argentina.

ANNEX 5: DETAILS ON FINANCING FOR MALARIA ELIMINATION BY SELECT DONORS

This annex presents additional details on financing for malaria elimination by select multilateral and bilateral initiatives including the Global Fund, UNICEF, World Bank IDA, UNITAID and PMI.⁶⁵

1. The Global Fund

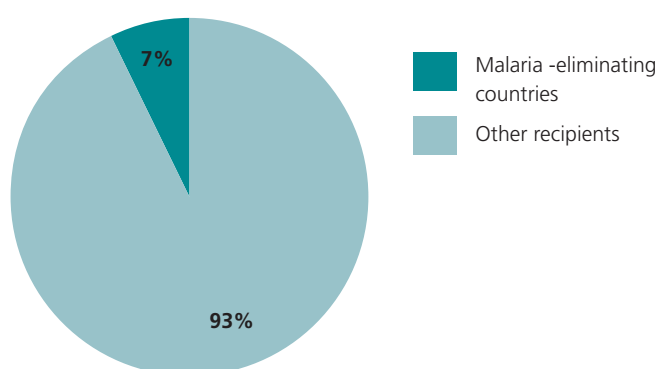
A total of US\$8.65bn in malaria-related grants have been approved by the Global Fund as of June 2013. However, as [Figure A5.1](#) below illustrates, malaria-eliminating countries account for only 7% of this total, or US\$0.65bn.

This trend can be explained by the Global Fund's country eligibility criteria, which excludes some malaria-eliminating countries.^{66, 67} In particular:

- 17 of the 34 malaria-eliminating countries are classified as low income or lower middle income and are thus eligible to apply for funding from the Global Fund regardless of their malaria burden.⁶⁸ Five of these 17 countries have not received national-level grants from the Global Fund: Belize, El Salvador, Paraguay, Solomon Islands and Vanuatu. However, the Solomon Islands and Vanuatu have received regional funding through the Global Fund's multi-country Western Pacific funding.

- Fifteen malaria-eliminating countries are classified as upper middle income and are thus only eligible to apply for funding if their reported malaria burden is measured as "High," "Severe" or "Extreme."⁶⁹ Only six of lower middle income malaria-eliminating countries have received grants: Azerbaijan, China, Dominican Republic, Iran, Namibia and Thailand.
- High income countries (Saudi Arabia and South Korea) are ineligible for Global Fund support.

Figure A5.1: Total malaria-related grants approved by the Global Fund, disaggregated by malaria-eliminating countries and other recipients



Source: CEPA analysis using Global Fund data sourced from their website.

⁶⁵ The data and information presented in this annex has been sourced as follows:

For the Global Fund, we downloaded data on its malaria portfolio from its website (<http://portfolio.theglobalfund.org/en/Downloads/Index>) in June 2013. (This database provided the cumulative funding to date and hence could not be used in our analysis in [Annex 4](#)).

For UNICEF and World Bank IDA we have used data from the OECD DAC CRS database as per the approach outlined in [Annex 4](#).

For UNITAID and PMI, we used donor websites and published reports.

⁶⁶ We have used the following document from the Global Fund's website to determine their eligibility criteria; "Policy on eligibility criteria, counterpart financing requirements and prioritization of proposals for funding from the Global Fund" (2011).

⁶⁷ We recognise that some eligible malaria-eliminating countries may not have applied for Global Fund support.

⁶⁸ These countries are: Belize, Bhutan, Cape Verde, Democratic People's Republic of Korea, El Salvador, Kyrgyzstan, Nicaragua, Paraguay, Philippines, Sao Tomé and Príncipe, Solomon Islands, Sri Lanka, Swaziland, Tajikistan, Uzbekistan and Vanuatu, Vietnam.

⁶⁹ These countries are: Algeria, Argentina, Azerbaijan, Botswana, China, Costa Rica, Dominican Republic, Iran, Malaysia, Mexico, Namibia, Panama, South Africa, Thailand and Turkey.

Table A5.1 presents the Global Fund's support to malaria-eliminating countries as of June 2013.

Table A5.1: Global Fund allocations to malaria-eliminating countries

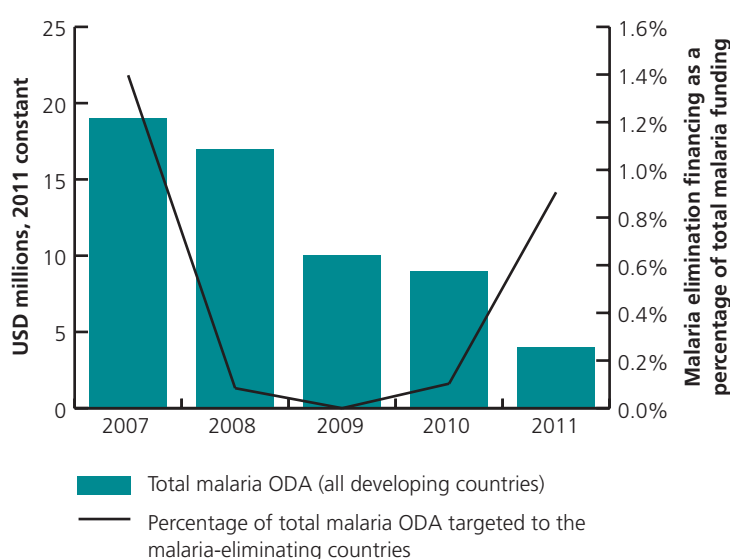
Country	Approved grants (US\$m)
Algeria	-
Argentina	-
Azerbaijan	5.9
Belize	-
Bhutan	4.3
Botswana	-
Cape Verde	1.9
China	229.0
Costa Rica	-
Democratic People's Republic of Korea	20.3
Dominican Republic	7.4
El Salvador	-
Iran	28.8
Kyrgyzstan	6.6
Malaysia	-
Mexico	-
Namibia	27.0
Nicaragua	16.9
Panama	-
Paraguay	-
Philippines	71.7
Sao Tomé and Príncipe	12.0
Saudi Arabia	-
Solomon Islands	-
South Africa	-
South Korea	-
Sri Lanka	39.1
Swaziland	9.5
Tajikistan	16.0
Thailand	99.5
Turkey	-
Uzbekistan	5.0
Vanuatu	-
Vietnam	46.0

2. UNICEF

Figure A5.2 below summarises total malaria ODA commitments from UNICEF as well as the share of malaria ODA allocated to the malaria-eliminating countries.

- The CRS data indicates that there has been a steady decline in UNICEF's total commitments for malaria control and prevention, from US\$19.5m in 2007 to US\$3.7m in 2011.
- The share of malaria financing accounted for by the malaria-eliminating countries decreased from 1.4% in 2007 to 0% in 2009. Since then, financing for malaria elimination has increased slightly to almost 1% in 2011.

Figure A5.2: Total malaria ODA commitments from UNICEF and the relative share of financing for malaria elimination



Source: CEPA analysis using CRS data.

3. World Bank IDA

The World Bank IDA supports malaria activities mainly based on GNI per capita (with exceptions for small countries). According to Feachem et al. (2010), as of November 2010, 11 malaria-eliminating countries were eligible for highly concessionary loans for malaria elimination.⁷⁰

Our review of OECD DAC CRS data finds that between 2007 and 2011, the World Bank's malaria-related commitments totalled US\$359.5m across all developing countries. However, the only country to receive funding in 2010 was Sao Tomé and Príncipe. The country received US\$0.11m, which represented 0.18% of the total US\$62.2m funding commitments for malaria control by the World Bank in that year.

⁷⁰ Feachem et al. (2010) Shrinking the malaria gap: progress and prospects. *The Lancet*, 376(9752), pp. 1566–78.

Total grant disbursements from the World Bank's Booster Program for Malaria Control in Africa were US\$446m over the period 2006–10. The programme aims to support malaria prevention efforts in countries hardest hit by malaria (i.e. not directed towards the malaria-eliminating countries).

4. UNITAID

Since its establishment in 2006, UNITAID has committed over US\$420m to malaria market interventions, such as expanding access to artemisinin-based combination therapies (ACTs) by increasing the supply of quality products and reducing prices and accelerating coverage of insecticide-treated bed nets by reducing delays and prices.⁷¹

UNITAID's website indicates that only two malaria-eliminating countries are currently being provided with funding: China and Namibia.⁷² However, an assessment of some of their previous projects suggests that other malaria-eliminating countries may have also benefited. For example,

the Assured Artemisinin Supply Service (A2S2) Project, which was implemented between 2007 and 2011 with a total commitment of US\$9.2m, incentivised extractors of *Artemisia annua* in China and Vietnam to sell artemisinin to manufacturers of ACTs.⁷³

5. President's Malaria Initiative (PMI)

Between 2006 and 2012, the PMI has contributed a total of US\$2.58bn in funding for malaria activities, excluding other U.S. government funding from USAID, Centers for Disease Control and Prevention (CDC) and other agencies. Although these funds have been directed mainly at the 15 PMI "focus" countries, in 2011 the PMI's budget increased to US\$578m from US\$500m in the previous year, as the PMI expanded its scope to include the DRC, Nigeria, Guinea, Zimbabwe and the Mekong sub-region. The latter includes three of the malaria-eliminating countries: Thailand, Vietnam and China.

⁷¹ www.unitaid.eu/images/Factsheets/English_UNITAID%20Malaria%20Factsheet_Septembre%202012.pdf.

⁷² www.unitaid.eu/en/malaria-projects.

⁷³ www.unitaid.eu/images/projects/malaria/110406_A2S2_Final_Report.pdf; <http://www.unitaid.eu/en/a2s2>.

ANNEX 6: REGIONAL INITIATIVES FOR MALARIA AND OTHER SECTORS

This annex provides an overview of key regional initiatives for malaria and examples of regional initiatives in other sectors.

1. Regional initiatives for malaria

ASIA PACIFIC MALARIA ELIMINATION NETWORK (APMEN)⁷⁴

Established in 2009, APMEN comprises 14 countries from the Asia Pacific region as well as leaders and experts from donor agencies and academic institutions.^{75,76} APMEN looks to address the challenges of malaria elimination in the target countries through leadership, advocacy, capacity building, knowledge exchange and building of an evidence base on malaria control and elimination. It is coordinated by a Secretariat, which is jointly formed by the University of Queensland, Australia and the Global Health Group, University of California, San Francisco. It receives funding AusAID (committed AU\$7m over the period 2009–13).⁷⁷

The core activities of APMEN are as follows:

- Undertaking research through programmes such as the APMEN Fellowship Programme and the Research Grant Programme.
- Developing and coordinating operational research to create an evidence base for the control and elimination of *P. vivax* in the APMEN countries and the greater Asia Pacific, through the Vivax Working Group.
- Advocating for the level of vector control capacity required at the regional and country levels to attain and maintain malaria elimination, including providing support for operational research through the Vector Control Working Group.
- Training on geographical information systems for country partners and partner institutions.
- Promoting community engagement for malaria elimination by holding workshops.

ELIMINATION EIGHT (E8) REGIONAL INITIATIVE

Launched in 2009, the E8 Regional Initiative focuses on eliminating malaria in the southern African region by 2015, specifically in the countries of Botswana, Namibia, South Africa and Swaziland. It aims to achieve this objective by promoting collaboration between eight member countries in the region. The other four countries are Angola, Mozambique, Zambia and Zimbabwe. These countries are expected to focus their malaria control efforts on surveillance on their southern borders in order to help the control and elimination activities in the four southern countries.

A progress report prepared in the run up to the 2010 Maputo meeting of the E8 Regional Initiative noted that, although significant progress had been made at the country level, efforts to mobilise resources for the E8 Regional Initiative have been lacking.⁷⁸

GULF COOPERATION COUNCIL (GCC) INITIATIVES

The Gulf Cooperation Council (GCC) is a political and economic union of Arab states in the Gulf region: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE. The GCC established the *Gulf Malaria Control Committee* in 1976, with the following objectives: strengthening capacities of, and coordination between, the member countries on malaria control and elimination activities; setting up a *Malaria Control Fund*; holding training workshops; and supporting the dissemination of new insecticides and technologies such as geographical information systems.⁷⁹

In 2010, the GCC started implementing the *Malaria-Free Arabian Peninsula Initiative*, with a commitment of US\$47.2m over a period of ten years.^{80,81} As part of this initiative, a Malaria Control Fund has been set up with an executive board to oversee its functioning and progress. The major contributors to the fund from the GCC

⁷⁴ <http://apmen.org>.

⁷⁵ Countries include Bhutan, Cambodia, China, Democratic People's Republic of Korea, Indonesia, Malaysia, Nepal, Philippines, Republic of Korea, the Solomon Islands, Sri Lanka, Thailand, Vanuatu and Vietnam.

⁷⁶ The main agencies represented are WHO, UNICEF, the Gates Foundation, USAID and the Roll Back Malaria Partnership.

⁷⁷ <http://ausaid.gov.au/MediaReleases/Pages/Display.aspx?QID=1136>.

⁷⁸ www.malariaeliminationgroup.org/sites/default/files/E8_MAPUTO_CONCEPT_NOTE_FINAL_SEND.pdf.

⁷⁹ sgh.org.sa/en-us/technicalprograms/infectiousdiseases/initiativearabianpeninsulafreeofmalaria.aspx.

⁸⁰ Approved funding for the year 2010–11 is US\$16.8m.

⁸¹ WHO, Regional Committee for Eastern Mediterranean (2011): "Progress Report on Control and Elimination of Malaria."

countries are Saudi Arabia (US\$4.6m), Oman (US\$3.0m), Qatar (US\$2.2m) and Kuwait (which has agreed to assign US\$2.4m).⁸²

Yemen is a country of focus within this region as it has a high incidence of malaria and has received assistance from the GCC governments.⁸³ Malaria control efforts targeted towards Yemen have resulted in joint Saudi-Yemenese programmes in the border areas, and bilateral support from other member countries such as Oman and the UAE. The total budget for Gulf support to Yemen is estimated at US\$1.6m.

LUBOMBO SPATIAL DEVELOPMENT INITIATIVE (LSDI)⁸⁴

LSDI was a regional initiative run jointly by the governments of Mozambique, South Africa and Swaziland. It was established with financial assistance initially by the private sector, and subsequently by the Global Fund. A number of malaria control strategies have been deployed under this initiative, including insecticide-treated nets, artemisinin-based combination therapies and indoor residual spraying.

The initiative does not exist anymore as it had issues with sustaining funding. However, the proposed malaria bond for Mozambique (refer to Section 3.2) will be structured around the legacy of this regional initiative, with support from the private sector players that were initially involved.

TASHKENT DECLARATION⁸⁵

In 2005, nine countries of the WHO Eastern Mediterranean region committed to action on malaria elimination by promoting coordination between member states and with WHO. The commitment reemphasised support to global initiatives such as Roll Back Malaria Partnership, development of technically sound strategies, and recognised the importance of progress monitoring mechanisms.

In terms of financing, the declaration urged the partners of Roll Back Malaria Partnership to increase the level of financial assistance to the region. The declaration also reiterated the countries' support "to make all possible efforts required to achieve a greater impact on malaria situations in Member States."

AMAZON MALARIA INITIATIVE/AMAZON NETWORK FOR THE SURVEILLANCE OF ANTIMALARIAL DRUG RESISTANCE (AMI/RAVREDA)⁸⁶

Funded by USAID, the AMI/RAVREDA initiative is a partnership of eleven countries.⁸⁷ It is aimed at establishing an effective surveillance network in the region to address anti-malarial drug resistance. This would be achieved through the establishment of reliable and standardised information collection tools and processes, development of evaluation tools, and enhancing partnerships to improve malaria control in the region.

2. Regional initiatives in other sectors

There is limited information available on regional-level initiatives in other sectors. However, we present a brief summary below to inform our thinking on the recommendation of developing a regional financing mechanism for malaria elimination.

CENTRAL ASIAN COUNTRIES INITIATIVE FOR LAND MANAGEMENT⁸⁸

The Central Asian Countries Initiative for Land Management is a multi-country initiative set up in 2007. Its objective is to increase cooperation between five Central Asian Countries to support issues of land management, desertification and its linkages to poverty. The initiative has raised more than US\$140m, including contributions from the governments of the affected countries (US\$25m) as well as from a multilateral partner (the Global Environmental Facility has provided US\$20m) and other development partners (US\$110m).

FONTAGRO (REGIONAL FUND FOR AGRICULTURAL TECHNOLOGY)⁸⁹

FONTAGRO is regional alliance of Latin American and Caribbean countries as well as Spain. Its objective is to support research and innovation in agriculture. Funds are raised through the member countries, R&D organisations and the Inter-American Development Bank (IADB). The IADB also hosts FONTAGRO.

⁸² sgh.org.sa/en-us/technicalprograms/infectiousdiseases/initiativearabianpeninsulafreeofmalaria.aspx.

⁸³ www.undp.org/ye/MDG_Progress6.php.

⁸⁴ <http://www.fightingmalaria.org/issues.aspx?issue=31>.

⁸⁵ <http://www.euro.who.int/en/what-we-do/health-topics/communicable-diseases/malaria/policy/tashkent-declaration-the-move-from-malaria-control-to-elimination>.

⁸⁶ http://www.cdc.gov/malaria/malaria_worldwide/cdc_activities/amazon.html.

⁸⁷ Countries include: Belize, Bolivia, Brazil, Colombia, Ecuador, Guatemala, Guyana, Honduras, Nicaragua, Peru, Panama, Suriname, and Venezuela.

⁸⁸ <http://global-mechanism.org/en/Platforms/Central-Asian-Countries-Initiative-for-Land-Management-CACILM>.

⁸⁹ <http://www.fontagro.org/en/que-es-fontagro>.

Funds are allocated on a competitive basis to projects in member states. One of the main achievements of FONTAGRO is that it has fostered cooperation in science and technology across the regional member states to support agricultural innovations and improvements.

SALUD MESOAMERICA 2015 (SM2015)

The SM2015 initiative is a public-private partnership between the Gates Foundation, the Carlos Slim Foundation, the government of Spain, IADB and eight country governments of the southern America and southern Mexico regions.⁹⁰ The initial objectives of the initiative were to finance projects in the areas of reproductive, maternal and neonatal health, maternal and child nutrition, immunisation, and prevention and control of dengue and malaria. However malaria is no longer a focus for the initiative.

The Gates Foundation, the Carlos Slim Foundation and the government of Spain have each committed US\$50m to the initiative. The IADB is responsible for the implementation and monitoring of projects.

The allocation of resources to each country is governed by its poverty and health inequity status. The government of the country responsible for the identification of the projects proposed to be financed.⁹¹

SENEGAL RIVER BASIN MULTI-PURPOSE WATER RESOURCES DEVELOPMENT PROJECT

Initiated in 2006, this project aims to develop the water resources in the region and is primarily funded by the World Bank. It is implemented by the Senegal River Basin Development Authority, which was established in 1972 with representation from the four countries sharing the basin: Senegal, Mali, Mauritania and Guinea.

The project also aims to reduce water-borne diseases. This health-related objective focuses on regional activities only (i.e. those with a clear regional public good rationale). National activities (i.e. country-specific private good activities) are explicitly noted as being the responsibility of country-specific programmes.

⁹⁰ The countries from the region are Mexico, Costa Rica, Guatemala, Honduras, Belize, El Salvador, Panama and Nicaragua.

⁹¹ <http://www.sm2015.org/en/salud-mesoamerica-2015/sm2015/bill-melinda-gates-foundation-carlos-slim-health-institute-spain-and-the-idb-collaborate-to-improve-health-of-the-poor-in-mesoamerica,3375.html>.