APLMA Malaria Elimination Roadmap: Methodology and Background for Financing
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ACRONYMS AND ABBREVIATIONS

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<tr>
<td>ACT</td>
<td>artemisinin combination therapy</td>
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<td>ADB</td>
<td>Asian Development Bank</td>
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<td>AIM</td>
<td>Action and Investment to Defeat Malaria</td>
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<td>AP</td>
<td>Asia Pacific</td>
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<td>APLMA</td>
<td>Asia Pacific Leaders Malaria Alliance</td>
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<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<td>EAS</td>
<td>East Asia Summit</td>
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<td>GFATM</td>
<td>Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria</td>
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<td>GHIT</td>
<td>Global Health Innovative Technology Fund</td>
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<td>GTS</td>
<td>WHO Global Technical Strategy for Malaria 2016–2030</td>
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<td>LLIN</td>
<td>long-lasting insecticidal nets</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
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<td>ODA</td>
<td>Official Development Assistance</td>
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<td>PPP</td>
<td>public–private partnership</td>
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<td>RFMTF</td>
<td>Regional Finance for Malaria Task Force</td>
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<td>TMDA</td>
<td>targeted mass drug administration</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WHO GMP</td>
<td>Global Malaria Programme</td>
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EXECUTIVE SUMMARY

Significant progress made since 2000 has reduced the burden of malaria in the Asia Pacific (AP) region to sufficiently low levels that region-wide elimination is considered technically possible. Leaders acknowledged this at the 9th East Asia Summit in November 2014 when they committed to a goal of an Asia Pacific region that is free from malaria by 2030.

Building on the earlier work undertaken by the Asia Pacific Leaders Malaria Alliance (APLMA) Regional Finance for Malaria Task Force (RFMTF) in 2014, the APLMA Secretariat has reviewed options to sustainably finance the elimination goal. From this and broader work carried out by the secretariat on elimination, key priority actions were identified for Leaders in order to sustain financing over the next 15 years and beyond.

The APLMA Malaria Elimination Roadmap proposes six priorities for Leaders in order to accelerate elimination by 2030. Priority actions were guided and informed by critical global and/or regional strategies. Of the six priorities below, the first three relates to access to quality medicines to promote elimination (see separate synthesis document). The last three relate to financing, and this document will expand further on methodology, priorities and support to finance elimination:

1. **Unite national efforts and regional action**
2. **Map, prevent, test and treat the disease, everywhere**
3. **Ensure high quality malaria tests, medicines, nets and insecticides**
4. **Improve targeting and efficiency to maximize impact**
5. **Mobilize domestic financing and leverage external support**
6. **Innovate for elimination**

Each of the above priority actions has been identified as a particular need for the Asia Pacific region and is deemed critical for achieving elimination. The circumstances of individual countries will determine the relative emphasis on each specific area.

Investing in malaria elimination is provisionally forecasted to require an investment of US$24.5 billion that would generate close to US$300 billion in cost savings and social benefits. Studies show that costs may be as low as US$5 and up to US$8 per case averted. The elimination investment has the potential to avert 216 million cases of malaria and 1.32 million deaths across the region, when compared to maintaining current malaria control programmes.

The remainder of this synthesis document outlines the methodology used to identify the three financing priority areas that will support the elimination goal and the assumptions that underpin the financial modelling. The companion synthesis document on access to quality medicines and the brief on leadership and governance should also be read in conjunction with this document.

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1 Roll Back Malaria (2015) Action and Investment to Defeat Malaria (Geneva)
CONTEXT

Background

With 22 malaria endemic countries in the region, the Asia Pacific is home to over 2.2 billion people at risk of malaria and accounts for 32 million cases and close to 50,000 associated deaths every year. As a result of sustained, high levels of investment in malaria interventions since 2000, malaria deaths and disease burden have reduced substantially.

Despite these results, progress is fragile and investments could be lost if malaria resurges. Within the Mekong region progress is particularly under threat given the critical issue of drug resistance. Malaria parasites are becoming resistant to the artemisinin combination therapy (ACT) medicines that we rely on as first line treatment. Resistance to the active compounds used in long lasting insecticide nets (LLIN) is also emerging, together with some evidence that vectors are changing biting habits to earlier in the evening and outdoors. To eliminate malaria, more funding is required to prevent, diagnose and treat it; yet, external funding has plateaued, and domestic financing is often insufficient.

Further, financing for malaria needs to be consolidated under a more strategic architecture if we are to achieve elimination. History teaches us that elimination requires a very different programme approach to those targeting control. Prevention, diagnosis and treatment all need to be significantly scaled up, and quality-assured commodities and services are urgently required. Countries must actively collaborate on cross-border issues and intervene based on real-time reporting and accurate data to respond rapidly to outbreaks and avoid resurgence.

APLMA and the Malaria Elimination Roadmap

Following acceptance of the report and recommendations of the APLMA Co-Chairs at the 9th East Asia Summit (EAS), Leaders requested the Co-Chairs to present a plan to achieve the goal of an Asia Pacific free from malaria by 2030 for consideration at the 10th EAS in Kuala Lumpur. The APLMA Secretariat has supported this process through wide-ranging consultations with governments, academia, the private sector, technical agencies and the donor community. It has further strengthened the evidence base through commissioning additional studies, and has analysed and prioritized options for inclusion in the Roadmap that is now presented to Ministers for consideration and guidance.
Developing the Task Force Recommendations

In developing the Roadmap, a comprehensive landscape analysis and needs assessment has been undertaken by the APLMA Secretariat. In early 2014 the RFMTF (comprising internationally and regionally acknowledged thought experts from government, technical institutions, development partners, donors and academia) was established to consider how to improve sustainable financing for malaria. During its deliberations between February and July 2014, the RFMTF considered existing literature; new studies and knowledge products commissioned by the APLMA Secretariat; and specialist knowledge brought to the table by individual members of the RFMTF. The RFMTF concluded that the region is at an important crossroads in history, given the high likelihood of malaria resurgence. Elimination efforts must be intensified, given ongoing multidrug resistance in the Mekong, which presents a regional health security threat. As a result, the RFMTF agreed that the region must accelerate towards elimination. However, challenges in securing broader financing remain. External official development assistance (ODA) is likely to continue declining as countries move to middle income status, thereby prompting governments to take a greater stance towards domestic financing.

The RFMTF considered a range of potential responses from government, senior officials, donors and technical partners, and eventually settled on five recommendations to convey to APLMA Co-Chairs towards the end of July 2014. The recommendations, which were presented and accepted by Leaders at the 9th EAS in November 2014, provide the initial framework for developing the Roadmap and elimination dashboard, as well as APLMA’s workplan for 2015 and beyond.

Scoping the priorities for the Roadmap

The APLMA Secretariat further distilled the five detailed RFMTF recommendations into key priorities for Leaders. Stakeholders and the APLMA Secretariat determined what level of detail should be contained in the Roadmap by developing a concept note that outlined the principles behind the Roadmap, and participation in a first reference group (composed of over 40 representatives from malaria affected countries in the Asia Pacific region, the Asian Development Bank (ADB), APLMA, WHO, the Association of Southeast Asian Nations (ASEAN) and the Global Fund) helped to build ownership around the process. Comments from key stakeholders were sought and feedback incorporated, and a comprehensive review of key malaria strategies under development was made. The APLMA Secretariat further identified areas that required more in-depth analysis, as follows:

- Mapping malaria incidence at sub-national level for 22 malaria endemic countries and a case study in five countries to estimate the potential under-reporting of disease burden, coupled with specific recommendations on how to improve the surveillance system in those countries.
- A landscape analysis and options appraisal to inform the business case for a regional financing mechanism to support health security in the region.
- A case study in Myanmar as one example of health financing opportunities at national level.
- Engaging with partners to review and assess various costing models and to then build on the WHO Global Malaria Programme (GMP) (2015) Modelling and costing for the Global
Technical Strategy for Malaria 2016–2030 modelling to provide an initial estimate of the cost of elimination for the 22 malaria endemic countries in the Asia Pacific region.

- Convening a Finance Experts’ meeting at ADB to identify options for resource mobilization for malaria and health security. The outcomes from this meeting were presented at a Roadmap Senior Officials Meeting held in Manila on 9–10 July 2015.

In developing priority areas for Leaders’ action, the APIMA Secretariat undertook a review of strategic documents from key partners, and consulted with the relevant organizations. Five key strategic documents were reviewed;

- The WHO Greater Mekong Subregion malaria elimination strategy 2016–2030.
- The UN Special Envoy for Financing the MDGs Roadmap for malaria eradication – now entitled: From Aspiration To Action: What will it take to end malaria?
- The Global Fund Strategy for increasing domestic financing.
COSTING ELIMINATION

Methodology
In order to determine an investment forecast for malaria elimination, the APLMA Secretariat reviewed available costing models for Asia Pacific and identified key underpinning assumptions contributing to a large and varied regional cost estimate. A comparative analysis of available models highlighted that four key assumptions in elimination models drove the regional investment and cost interval. These included: (1) inclusion of economic versus financial costs; (2) the use of innovative tools and technologies such as targeted mass drug administration (TMDA); (3) populations-at-risk estimates; and (4) transmission assumptions. The APLMA Secretariat reviewed these models in-depth by running scenario analysis to determine the best model for Leaders to consider in the Roadmap. Firstly, it was noted that countries would follow the guidelines as per the WHO Global Technical Strategy; and secondly, in order to further refine existing cost intervals, countries urgently needed to carry out bottom-up costing based on targeted elimination plans. As such, the WHO GMP (2015) Modelling and costing for the Global Technical Strategy for Malaria 2016–2030 was adapted to obtain an initial cost estimate for achieving elimination. Adaptation included removing the treatment of non-malaria fever cases, primarily because the Roadmap is focused on the incremental marginal cost of elimination. The model is aligned with the WHO World Malaria Report data, the Imperial College Transmission Model and the Global Technical Strategy for Malaria 2016–2030 (GTS).

Limitations of the model
The WHO GMP model itself is not an elimination model and therefore only costs interventions on the basis of scale up to 90% coverage. However, the model is intended to be used as a baseline. Countries can further develop the cost estimates for elimination by targeting interventions, considering earlier introduction of innovative approaches and a more rapid acceleration of scale up in order to achieve the 2030 elimination target for all countries. Rapid acceleration of elimination interventions has the potential to reduce the total cost of elimination as the number of cases declines more rapidly. The mathematical malaria transmission model underpinning the GTS costs used to estimate the impact of different intervention strategies is focused on P. falciparum, although the costing does include P. vivax, which is an important consideration for the Asia Pacific region. Further, given the complexity of the task and diversity of the region, accurate costs of elimination will ultimately require each country to develop and cost its own strategy.
THE COST BENEFIT OF ELIMINATION

Cost
The WHO GMP (2015) model indicates that just over US$1 billion average per annum is required in the first five-year phase of the Roadmap, and just under US$2 billion average per year in the subsequent ten years. As Figure 1 below shows, the relative cost is skewed by sub-region, with approximately 80 percent of the estimated costs within South Asia – most notably India. Further analysis is required to adapt the model to individual country settings.

As an immediate priority, each nation will need to develop or update its own fully costed national malaria elimination plan in order to more accurately determine the investment required to achieve elimination. Such plans will need to be built from the ‘bottom-up’ and based on national specific data and information. Leaders and programmes should consider support by the APLMA Secretariat and other partners when developing strategy costings and the associated investment case for elimination.

Figure 1: Relative cost of elimination by region 2016–2030

Benefits
The APLMA Secretariat worked together with the AIM team to determine provisional estimates of cost savings and social benefits from elimination in the Asia Pacific region. Investing in malaria elimination is provisionally forecasted to generate close to US$300 billion in cost savings and social benefits from 2016–2030.5

Currently, a global cost-benefit analysis is being refined by the AIM team, based on the GTS and will be released in due course.

In the interim, and working with WHO headquarters, the APLMA Secretariat analysed the benefits of elimination, to understand the investment case for Leaders. First, benefits were identified by running a scenario within the GTS model that maintained the ‘status quo’ from 2013 levels of malaria control interventions. A second scenario was also run based on a progressive scale up of coverage to 90% of the at-risk population. Based on the differences between the two scenarios, the model indicated a total of 216 million cases of malaria would be averted during the period 2016–2030, and 1.32 million lives saved. Approximately 78% of the total number of cases averted will be in South Asia followed by South East Asia, which is in line with Figure 1 above showing a large burden of disease within these sub-regions.

In addition to lives saved, cases averted and cost savings, elimination also brings significant benefits to regional public goods. Specifically, the opportunity to create stronger cross-border pandemic and communicable disease coordination, reduce duplicative spending on health security issues, and consider the provision of a regional health fund to cater for elimination interventions, funding gaps and accelerated innovation deployment such as targeted mass drug administration.

5 Roll Back Malaria (2015) Action and Investment to Defeat Malaria (Geneva)
LEADERS’ KEY ROADMAP PRIORITIES

The earlier work of the RFMTF combined with the methodology and approach as outlined in this document culminated in the identification of three key finance interventions for the Roadmap. These are shown in the table below together with their key components.

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<th>Interventions</th>
<th>Key components</th>
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| 4. Improve targeting and efficiency to maximize impact | • Carefully tailoring the supply of products and services to local conditions. We should get the most effective products to those who need them most. We should identify and reduce wastage of tests, medicines and nets.  
• Wherever possible, use existing national systems. Partners should support countries by using national planning procurement and reporting systems.  
• Engaging other stakeholders, such as the private sector and community representatives, to join the fight. For example to take advantage of business logistics capacity for bed net distribution.  
• Improving the health of workers and their families by encouraging large enterprises to support elimination in their areas of operation, and to promote the wider social good. |
| 5. Mobilize domestic financing and leverage external support | • Encourage Health Ministries to re-prioritize existing resources to reflect the current drug-resistant malaria threat and the opportunity for elimination.  
• Substantially increase domestic budget allocations for malaria elimination for a time-limited period, as appropriate.  
• Make the case for increased external support through higher levels of domestic funding, enhanced efficiency, demonstrated impact and accountability.  
• Mobilize in-kind contributions and investigate opportunities for cross-regional financing and technical support particularly to exploit strengths of major regional powers. |
| 6. Innovate for elimination | • Consider introducing new or expanding existing hypothecated taxes such as alcohol and tobacco taxes (“sin taxes”), tourism and airline levies.  
• Explore options for leveraging national lotteries and earmarked financing for elimination.  
• Investigate ways to increase private sector involvement in malaria elimination.  
• Consider expanding and leveraging innovative debt financing mechanisms such as malaria bonds. |

Rigorously track and report progress through the APLMA Dashboard
POLICY DISCUSSION – ROADMAP PRIORITY

Improve targeting and efficiency to maximize impact

Key Message
Ensure that the national elimination plans are based on targeted and country-specific interventions. Interventions will need to also be timely and informed by real-time data from well-functioning surveillance systems, coupled with a well-managed, efficient, and accountable operation that is focused on impact. Partners must use existing national systems and coordinate with each other to achieve common goals.

Background
Over the past decade and a half, the Asia Pacific region has invested close to US$3 billion\(^6\) in malaria control activities, with a significant amount of this occurring during the affluent years when donors substantially scaled up funding. This relatively rapid growth has not always resulted in the most efficient delivery models being adopted. In-country, malaria elimination programmes have the opportunity to be run even more efficiently by targeting vector control strategies, commodity procurement, surveillance and supply chain systems. Additionally, given that governments are managing multiple domestic revenue streams and external ODA, there is significant room for improvement in coordinating and streamlining funding for elimination. Leaders can discuss parallel donor reporting with various stakeholders to remove high transaction costs and administrative burdens.

Examples of potential interventions
- Carefully tailoring the supply of products and services to local conditions. We should get the most effective products to those who need them most. We should identify and reduce wastage of tests, medicines and nets.
- Wherever possible, use existing national systems. Partners should support countries by using national planning, procurement, and reporting systems.
- Engaging other stakeholders, such as the private sector and community representatives, to join the fight. For example, to take advantage of business logistics capacity for bed net distribution.
- Improving the health of workers and their families by encouraging large enterprises to support elimination in their area of operation, and to promote the wider social good.

\(^6\) Based on combining WHO World Malaria Report 2011 Annex 2 and WHO World Malaria Report 2014 Annex 3 – Contributions as reported by countries
Malaria programmes often lack evidence to determine the optimal mix of interventions from a value impact perspective due to the current state of the science. The APLMA Secretariat could potentially support countries by commissioning the development of a toolkit (or similar) as a regional public good, that will enable programme managers to make an economic assessment on the best mix of interventions available under different scenarios. This tool would complement the WHO OneHealth toolkit introduced in 2013. For partners, Leaders may wish to signal to both financiers and implementers the need for improved operational efficiency within their respective malaria programmes. This includes integration with the broader health system, and strengthened sub-national and district level planning and targeting of resources.

Operational research is needed to inform intervention strategies. Being able to identify at an early stage for example where vector biting habits are changing is important for informing on the use of bed nets and can avoid un-necessary wastage due to using an inappropriate mix of interventions.

Leaders may wish to request through their Ministries of Finance to all donors/partners to agree on an approach that could, for example, result in all donors agreeing on a single monitoring and evaluation framework and adopting unified and standardized programmatic and financial reporting.

**Mobilize domestic financing and leverage external support**

**Key Message**

Achieving elimination and the associated returns on investment will require a significant boost in resources in the short to medium term. The reallocation of current funding and mobilizing additional financing will need to be mostly undertaken by countries themselves, but external support is also necessary and can take on many forms. Accordingly, strong investment cases will need to be made to support the elimination goal. The region will need to retain the support of external partners and build domestic financing.

**Background**

Even with much greater efficiency, achieving elimination will require a significant boost in resources in the short to medium term. For all but the most resource-constrained countries, the major share of the additional financing will need to be mobilized by countries themselves. Elimination requires that the region retains and increases external support while building up domestic financing.

Malaria investment in the region has grown steadily over the past decade, but has now plateaued at around US$3.50 million per year. While in total more than 50% of funding currently comes from domestic sources, this is not consistent across all countries. Most of the growth originated from multilateral funding provided by the Global Fund and bilateral partners. Future growth will need to come predominantly from within the region, which in turn will help mobilize complementary external financing.

Many countries are experiencing strong economic growth and have an opportunity to increase their investment in health. Social health insurance and other revenue-generating measures offer the potential to support malaria elimination and the business case is strong; i.e. domestic returns in a
healthy workforce reduced health care burden and improved health security. Other high-burden, low-income countries may require continued external support in the foreseeable future.

Mobilizing additional domestic resources in support of the malaria elimination goal will require a whole of government response that potentially may include exploring options to reallocate the existing budget, increasing the overall revenue envelope and expanding the mandate of social insurance schemes to include public health and disease prevention.

An early consideration in determining investment priorities in the first five years is the impact of multidrug-resistant malaria, which is a global threat to health security. Resistant malaria must not be allowed to spread outside of the Mekong, especially to sub-Saharan Africa where the impact could be catastrophic. Financing the elimination of multidrug-resistant malaria in the Mekong needs to be prioritized. The relatively modest level of investment required to eliminate malaria in the Mekong as an early priority is far outweighed by the positive long-term impact of such an investment.

**Example of potential interventions**

- Encourage Health Ministries to re-prioritize existing resources to reflect the current drug-resistant malaria threat and the opportunity for elimination.
- Substantially increase the domestic budget allocation for malaria elimination for a time-limited period, as appropriate.
- Make the case for increased external support through higher levels of domestic funding, enhanced efficiency, demonstrated impact and accountability.
- Mobilize in-kind contributions and investigate opportunities for cross-regional financing and technical support particularly to exploit strengths of major regional powers.

Leaders may wish to review processes to identify options for prioritizing and increasing the domestic budget contribution in support of malaria elimination. By reallocating and increasing domestic resources, this will send a clear signal to potential and existing external support to do the same. Resource mobilization could also be cross-regional, and not limited to funding, such that other support such as technical assistance and in-kind contributions are considered. Leaders may also consider tasking their Ministries of Finance and Health to jointly explore options to move towards financing models that are more directly attributable to results, for example, using results-based financing modalities that can retroactively pay countries a pre-negotiated price for achieving one or more measurable impact targets.

To support countries in evidence-based policy formulation, the APLMA Secretariat could be tasked with providing support to countries to develop the methodology and framework to estimate the costs and financing gap for achieving malaria elimination. This would prepare the foundation for investment case studies that will establish the feasibility, rationale and economic benefits accrued from increasing malaria financing investment in support of the elimination goal.
Innovate for elimination

**Key Message**
In order to supplement the elimination financing gap, countries must consider sources of innovative finance in addition to domestic budget reallocations and donor funds. Innovative financing provides countries with the opportunity to increase, diversify and complement existing sources of funding for malaria elimination. Leveraging non-traditional sources of financing can provide targeted and sustainable funding for elimination, until the very last case of malaria is cleared.

**Background**
Leaders, Ministries of Health and Finance officials cannot achieve malaria elimination without committing domestic resources and maintaining funding until the very last case is cleared. Innovative finance can provide long-term financing, alongside committed domestic budgets. In many countries, such mechanisms already exist and can be leveraged to finance elimination programmes and provide a ‘quick win’ for governments. Governments can leverage existing finance mechanisms, and consider new ones. By doing so, leaders will also be seen to actively contribute towards health security and systems strengthening and open doors to discuss counterpart financing. Additional health lending should be discussed with development partners such as the Asian Development Bank, given the ADB 2020 strategy focusing on health alongside other priorities.

There are three critical reasons why malaria elimination should receive specific focus when considering innovative finance. Firstly, malaria is a major ongoing cost driver burdening national health systems. By investing in elimination, national health systems will realize public health benefits and savings sooner. Secondly, sustained financing is critical. There is a strong correlation between the decline in malaria burden and sustained financing. Finally as health development assistance declines globally, governments must now step up efforts to close funding gaps through innovative finance.

**Examples of potential interventions**
Examples of innovative finance options are illustrated in Figure 2. There are multitudes of options for innovative financing available, and governments are advised to assess which are appropriate:

- Consider hypothecated taxes such as existing alcohol and tobacco taxes, tourism and airline levies.
- Explore options for leveraging national lotteries and earmarked financing for elimination.
- Investigate ways to increase private sector involvement in malaria elimination.
- Consider expanding and leveraging innovative debt financing mechanisms such as malaria bonds.
Many of these revenue-generating structures already exist within countries. For example, the hypothecated taxes ("sin taxes") in Indonesia, Viet Nam and the Philippines, which raised approximately US$7 billion over a ten-year period. Similarly, governments could also consider leveraging national lotteries and earmarking financing for elimination. In Costa Rica, earmarked funds are dedicated to purchasing vaccines, while in South Africa lotteries generated US$1.42 billion for social causes.

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<th>Innovative finance</th>
<th>Examples to consider</th>
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| Consider introducing new or expanding existing hypothecated taxes such as alcohol and tobacco taxes (“sin taxes”), tourism and airline levies | ✓ Indonesia’s tobacco tax generated annual averages of US$5.4 billion revenues 2005–2011.  
✓ Viet Nam’s tobacco tax generated annual averages of US$478 million in revenues.  
✓ Philippines “sin tax” generated US$2.3 billion enabling subsidization of health insurance premiums.  
✓ Tourism Levy in Zanzibar for specific elimination financing that could cover 15–20% of funding needs by 2020.  
✓ UNITAID’s airline levies raised an average of US$208 million per year from 2007 to 2011. |
| Explore options for leveraging national lotteries and earmarked financing for elimination | ✓ Costa Rica has allocated earmarked funds towards health causes such as the National Immunization Fund for the purchase of vaccines, since 2006.  
| Investigate ways to increase private sector involvement in malaria elimination | ✓ Anglogold Ashanti (Ghana) implemented malaria interventions by committing to an investment of US$1.3 million per year, since 2005.  
✓ Oilsearch Health Foundation committed to improving Papua New Guinea’s access to health, in partnership with the Global Fund.  
✓ Pfizer’s “Mobilize Against Malaria” programme 2007–2011 successfully met objectives to “treat, teach, build, and serve communities affected by malaria”. |
| Consider expanding and leveraging innovative debt financing mechanisms such as malaria bonds | ✓ The Global Fund, along with the Government of Nigeria, World Bank, Bank of America, Islamic Development Bank and the Bill & Melinda Gates Foundation, are exploring a unique bond structure to facilitate financing for LLIN campaigns and health systems strengthening.  
✓ The Global Fund, along with the Government of South Africa, leveraged a Social Impact Bond for reducing HIV and TB among high risk populations.  
✓ World Bank Green Bonds have raised nearly US$7 billion for programmes, since 2008. |
Given the growth in tourism to Asia Pacific, airline levies could present an opportunity to capitalize upon aviation and tourism growth. Asia Pacific is expected to be the largest air travel market globally with 48% of total aviation traffic by 2033.\textsuperscript{7} Levies could be reviewed either nationally, or as a regional mechanism to fund elimination. There could be cooperation on such a levy and one that utilizes learning from international experiences. Leaders may wish to explore the opportunity of an airline levy that could be used to finance the regional components of malaria elimination such as cross-border surveillance, or eliminating artemisinin-resistant malaria in the Mekong region.

Using a global example, the UNITAID airline levy raised an average of US$208 million per year between 2007 and 2011, and demonstrates a successful innovative financing structure that provided ongoing revenue for health. Assuming a similar take-up rate in Asia, an airline ticket levy could raise more than US$300 million per year — enough to close the financing gap during the 2016–2020 phase of elimination for most countries in the region. These revenues are likely to increase, given the forecast of 6.7% annual growth in aviation in Asia Pacific for the next 20 years.\textsuperscript{8}

Another source of innovating finance is public–private partnerships. Examples include the successful private sector partnership for health between Oilsearch Health Foundation and the Government of Papua New Guinea to increase health access. Similarly, the Government of Lao PDR and external partners invested in the construction of a dam and power plant, with returns of US$1.9 billion being put into poverty reduction efforts (including health interventions) over 25 years.\textsuperscript{9} Regional public–private partnership (PPP) examples include the Japan Global Health Innovative Technology Fund (GHIT). Since its inception, the GHIT has invested US$15 million into 18 malaria drug and vaccine projects of regional interest.

Governments may also consider concessionary loans or debt conversion mechanisms to frontload the necessary investment in elimination, and to explore how this might then be used to unlock donor counterpart financing. Governments are urged to work with key agencies, such as the Global Fund, Asian Development Bank and others to assess mechanisms for innovative financing; and rapidly implement them in appropriate settings. ‘Debt for health’ mechanisms also include more sophisticated structures such as malaria or health development bonds. In South Africa, a social impact bond was implemented to reduce HIV/TB among high-risk populations. Another example is the World Bank’s Green Bonds that raises funds from fixed income investors to support lending for eligible projects that seek to mitigate climate change or help affected people adapt to it.

In order to assist Leaders, the APLMA Secretariat can support governments to review innovative financing both nationally and regionally. A strategic Finance Task Force on Resource Mobilization and Innovative Financing comprising experts and chaired by the APLMA Envoy will be established in 2016. The overarching objective for the Task Force will be to support the APLMA Secretariat in supporting policy processes, and providing technical inputs to facilitate innovative financing mechanisms and resource mobilization options in for malaria elimination.

\textsuperscript{9} Asian Development Bank Independent Evaluation Department, SAP: Lao 2010–42 Sector Assistance Program Evaluation October 2010 Energy Sector in the Lao Peoples Democratic Republic
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