Regional Applications

CONCEPT NOTE

Investing for impact against HIV, tuberculosis or malaria

A concept note outlines the reasons for Global Fund investment. It should be based on robust national and regional strategies, and supported by data and information that shows why the proposed approach will be effective. It should clearly prioritize the needs identified at the regional level and the gaps within the broader regional context. It should also describe how implementation of the resulting grant(s) can maximize the impact of the investment, by achieving the greatest possible effect on the health of the people in the region.

The concept note is divided into the following sections:

**Section 1:** A description of the regional epidemiological situation, health system and other barriers to access, and the various national and regional responses.

**Section 2:** Information on the regional funding landscape and sustainability.

**Section 3:** A funding request to the Global Fund, including a programmatic gap analysis, rationale and description, and modular template.

**Section 4:** Implementation arrangements and risk assessment.

**IMPORTANT:** Regional applicants, who have been invited to submit a concept note to the Global Fund, should use this template. Applicants should refer to the Regional Concept Note Instructions in the platform or on the website to complete this template.
### SUMMARY INFORMATION

**Applicant Information**

<table>
<thead>
<tr>
<th>Applicant Name</th>
<th>Elimination 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applicant type</strong></td>
<td>Regional Organization</td>
</tr>
<tr>
<td><strong>Funding Request Start Date</strong></td>
<td>July 1, 2015 (est)</td>
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<tr>
<td><strong>Principal Recipient(s)</strong></td>
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### Eligibility Information: Countries** included in the regional application

<table>
<thead>
<tr>
<th>Country</th>
<th>Income Category*</th>
<th>Disease Burden*</th>
<th>Eligibility*</th>
<th>Focus of application*</th>
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<td>100% of intervention on special groups and/or interventions</td>
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<td>Yes</td>
<td>Minimum 50% of intervention on special groups and/or interventions</td>
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<td>Zimbabwe</td>
<td>Lower income (LI)</td>
<td>High</td>
<td>Yes</td>
<td>No requirements</td>
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* According to the Global Fund 2014 Eligibility List.

** Mention the tentative list of countries if final list is not available yet.
A funding request summary table will be automatically generated in the online grant management platform based on the information presented in the programmatic gap tables and modular template.

**IMPORTANT:** A regional application shall only be eligible for funding where the majority (at least 51 percent) of countries included in the concept note are eligible to submit their own request for funding for that same component through a single-country application.
SECTION 1: REGIONAL CONTEXT

This section requests information on the regional context, including the disease epidemiology, the health systems and community systems setting, and the human rights situation. This description is critical for justifying the choice of appropriate interventions.

1.1 Regional Disease, Health and Community Systems Context

With reference to the latest available epidemiological information, highlight:

a. The current and evolving epidemiology of the disease(s) and any significant geographic variations in disease risk or prevalence.

b. Key populations that may have disproportionately low access to prevention and treatment services (and for HIV and TB, the availability of care and support services), and the contributing factors to this inequality.

c. Key human rights barriers and gender inequalities that may impede access to health services in the region.

d. The health systems and community systems context in the region (and the countries of this regional application), including any constraints.

e. Important regional issues (i.e. epidemiological, health system, community system, human rights or gender issues) that impact on service delivery or health outcomes related to the three diseases.

2-4 PAGES SUGGESTED

a. The current and evolving epidemiology of the disease(s) and any significant geographic variations in disease risk or prevalence.

Eight of the 15 Southern African Development Community (SADC) member states are presently collaborating on an initiative to eliminate malaria from within their borders. Four of these countries – Botswana, Namibia, South Africa, and Swaziland – have reduced malaria transmission to the point where elimination in the short term is feasible\(^1\) – conditional on a simultaneous regional control effort to reduce malaria transmission across the sub-region.

Malaria transmission dynamics among these eight countries are highly connected, being linked through population movement and malaria ecologies. As a result of this interconnectedness, these “frontline” countries have continually battled high importation of the disease from their four northern neighbours – Angola, Mozambique, Zambia and Zimbabwe. These northern countries – the “second line” countries - experience notably higher malaria transmission, which serves as a continued reservoir of infection that is subsequently imported into the four eliminating countries, preventing them from achieving elimination. These eight countries have therefore banded together to form a sub-regional initiative – the Elimination 8 (E8). The E8 is founded on addressing the barriers to elimination that extend beyond the limits of what any individual state can control or mitigate; it addresses these barriers and facilitates multilateral collaboration on a set of regional activities that synergistically reinforce and accelerate progress, making malaria elimination possible in each of the countries. Eliminating malaria in the “frontline four” – will pave the way for a

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\(^1\) Using the World Health Organization’s criteria for elimination, these four countries have passed the threshold between pre-elimination and elimination, and are recommended to reorient their malaria programs.
subsequent elimination drive among the four “second line” countries to the north.

E8 countries have registered commendable declines in malaria transmission, and the region’s epidemiological profile of malaria today differs substantially from what it was ten years ago. The eight countries reported a total of 12,971,624 cases in 2013 (Table 1), a reduction of more than 50% since 2004. The “frontline four” countries in particular have each registered a greater than 75% decline in malaria between 2000 and 2012. (Figure 1 further highlights the extent of the decline in malaria incidence among the frontline four in particular.) While malaria transmission has declined across all E8 countries, there remains great heterogeneity in malaria transmission within the E8 sub-region (Figure 2). Four countries report incidence below 2 cases per 1,000, while the highest transmission rates are found in Angola, Mozambique, and Zambia, which report 146, 152, and 382 cases per 1,000, respectively. Of the 12,971,624 cases reported in 2013, only 0.1% of them were from Botswana, Namibia, Swaziland, and South Africa combined (3.4% if Zimbabwe is included). Although disease burden varies greatly within this regional grouping, the majority of the countries have significantly reduced the burden of disease to the point where malaria is no longer considered a major public health threat.

These gains, however, are fragile. Reintroduction from other countries in the region and subsequent resurgence where malaria had been suppressed remains a significant risk, threatening to erode the investments made to date. Malaria resurgence has already been experienced in Zimbabwe, Zambia, and Swaziland, largely due to importation from more highly endemic neighbours. For Swaziland in particular, there is now evidence confirming that without importation from neighbouring countries, the country would be able to rapidly accelerate to zero transmission. In order to protect and sustain the gains that countries are making, a joint regional collaboration to systematically reduce, eliminate, and prevent reintroduction is required.

Table 1: Epidemiological profile of the E8 region

<table>
<thead>
<tr>
<th></th>
<th>BO</th>
<th>NA</th>
<th>SA</th>
<th>SW</th>
<th>AN</th>
<th>MO</th>
<th>ZA</th>
<th>ZW</th>
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<tr>
<td>Population</td>
<td>2,021,144</td>
<td>2,303,315</td>
<td>52,776,130</td>
<td>1,249,514</td>
<td>21,471,618</td>
<td>25,833,752</td>
<td>14,314,515</td>
<td>13,327,925</td>
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<tr>
<td>Total No. of cases (2013)</td>
<td>506</td>
<td>4,911</td>
<td>8,851</td>
<td>669</td>
<td>3,144,100</td>
<td>3,924,832</td>
<td>5,465,122</td>
<td>422,633</td>
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<tr>
<td>Incidence (per 1,000)</td>
<td>0.25</td>
<td>2.13</td>
<td>0.17</td>
<td>0.54</td>
<td>146</td>
<td>152</td>
<td>382</td>
<td>32</td>
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Prevalence (%)

<table>
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<tr>
<th></th>
<th>3.4</th>
<th>9.9</th>
<th>1</th>
<th>0</th>
<th>13.5 (2011)</th>
<th>43.7</th>
<th>14.9 (2012)</th>
<th>0.39 (2012)</th>
</tr>
</thead>
</table>

% change in cases: 2008 - 2013

|        | -98% (2000-2011) | -96% | +14% | -87% | +46% | -24% | +77% | -58% |

Elimination target date


Figure 1: Change in number of malaria cases reported among the frontline four countries of the E8

The success of malaria programs in the region has been made possible by significant investments into the scale up of proven malaria control interventions over the last ten years; these include introduction of more effective artemisinin-based combination therapies (ACTs), greater access to quality diagnostics such as rapid diagnostic tests (RDTs), improved surveillance and mapping, indoor residual spraying (IRS), and long-lasting insecticidal nets (LLINs). Today, Angola, Mozambique, and Zambia continue to massively scale up coverage of these interventions, while Zimbabwe is scaling up only in parts of the country, having successfully reduced transmission in southern Zimbabwe. Botswana, Namibia, South Africa, Swaziland, and southern Zimbabwe are now consolidating the declines of the last few years, and using new tools, while actively reorienting their programs to focus on case investigation, robust surveillance, and mapping of transmission risk and human mobility to understand malaria patterns and risk factors. This increased granularity of data has helped to inform more targeted elimination campaigns.

There is now unprecedented momentum towards the ambitious goal of malaria elimination in southern Africa, as five of the eight countries have begun a concerted paradigm shift away from a “control” mentality to that of elimination. Continuing and expanding country level interventions alone is not sufficient to achieve elimination; national control efforts cannot effect change against cross-border movement, spreading insecticide resistance, or insufficient intervention coverage in another country. Poor coordination and lack of regional

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surveillance also undermine efficiency and outcomes, as countries invest significant resources that are sometimes out of concert with their neighbours and are implemented with limited understanding of the regional dynamics and drivers of transmission.

Figure 2: Map of Pf prevalence (among 2 – 10 year olds) among the countries of the E8.\textsuperscript{9}

Figure 2 illustrates the heterogeneity in transmission patterns across the E8 countries. A common pattern is the relatively high endemicity in the northern regions of the second line countries, compared to their southern regions. The second line countries therefore prioritize resources and intervention coverage in the more endemic north, while the southern regions - which border the frontline countries - receive relatively less priority. Importation from these southern regions in second-line countries into frontline countries poses significant barriers to elimination in the frontline countries.

b. Key populations that may have disproportionately low access to prevention and treatment services (and for HIV and TB, the availability of care and support services), and the contributing factors to this inequality.

As the frontline countries and border regions of second line countries tend towards lower levels of transmission, certain high risk groups maintain generally higher transmission as compared to the general population within these areas. They are the poor and marginalized, and migrants.\textsuperscript{10} Efforts to address high transmission in this group need to be adapted to enable targeting of services and interventions towards these groups.


\textsuperscript{10} Interestingly, these tend to be the same risk groups which are seen for HIV.
Within the context of the regional malaria control and elimination goals, residents of poor, remote, and underserved border districts as well as cross-border mobile and migrant populations (MMPs) are among the most marginalized groups. As one of the fundamental goals of regional coordination is to mitigate cross-border malaria transmission, targeting interventions and expanding access to malaria services for these populations (both residents of underserved border areas and MMPs) is a key focus of this proposal.

Residents of underserved border districts: In the border districts of the E8 countries, vast territories are often unserviced by public services; there are limited roads (in some cases because the terrain makes them very difficult to access), and few or no health facilities. The populations residing within these communities have to travel long distances to access health care facilities, and in many instances, a health facility will be more easily accessible on the other side of the border. Figure 3 below illustrates the relatively low coverage of health facilities in border districts, weighted for population density.

Mobile and migrant populations: Population mobility in southern Africa is made complex by various cultural and historical dynamics. Mobility is generally heterogeneous in nature, made up of different categories of migrants; these include labor migrants, family settlements separated by political borders, international students, asylum seekers, refugees, and other displaced persons. These migrant populations can be disaggregated into formal and informal

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11 "Map developed by Clinton Health Access Initiative in 2015 using 2013 data. For Namibia and South Africa, population size per district data comes from Worldpop.org.uk. All other supporting facility and population data comes from the national malaria control programs of E8 member states. Definitions of what qualifies as a health facility vary slightly by country."
migrants. While data exists on the volume of formal migration, few reliable estimates exist on the volume of traffic of informal migrants. While migrants with proper documentation can transit through formal border posts, many migrants use informal crossing routes, circumventing border posts where health services may be more readily available. The Southern African region recorded over four million migrants, excluding informal migrants; 44 percent of these were female and 20 percent were under 19 years of age.\(^2\) By far the largest number of formal migrants is found in South Africa (2.4 million, including some 1.5 million from Zimbabwe).\(^3,4\)

Figure 4 below illustrates the extent of population flow across the E8 countries, highlighting the major centers experiencing the greatest volume of migration flows.

![Figure 4: Mapping volume of human migration movement between locations among the E8 countries (population flow per month)].(15,16)

The governments of the countries receiving migrants, as well as the countries serving as transit routes to other countries, often take measures to deport undocumented migrants. Social dynamics in border areas also encourage discrimination against MMPs. Insecurity, lack of economic livelihood, drought, and crop failure motivate migrants to undertake risky migratory routes and impacts their health seeking behaviour. These population groups travel back and forth between more highly endemic countries and less endemic countries, facilitating the importation of malaria. While several agreements and policies are in place to protect migrants’ right to health, there is not uniform adherence to these policies, resulting in discrimination against migrants seeking healthcare. In instances where migrants seek health in foreign

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\(^3\) South Africa has the largest population of the E8 countries, and also experiences the largest migration flows. This is a key challenge to its ability to provide universal coverage with malaria interventions.  
\(^6\) The map does not show direction, only the magnitude of migration flow that is centered around different cities.
countries with better health services, they often do not provide correct information on nationality and residence for fear of being identified as foreign, and thus being charged user fees or reported. This, in turn, causes challenges in conducting the necessary follow-up for surveillance and active case detection efforts.

c. Key human rights barriers and gender inequalities that may impede access to health services in the region.

The health needs of migrants can only be met once migrants’ rights are respected, protected, and fulfilled. The principles of non-discrimination, equality, and participation are particularly important in the case of MMPs, for whom societal discrimination serves as a key obstacle to realizing their right to health. Despite the adoption of non-discrimination in international human rights law, nationality or legal status is often used (or perceived to be used) as a criterion for who may or may not access health facilities, goods, and services.

Population mobility is increasingly being recognized as a determinant of health, affecting health outcomes of both migrants and migration-affected communities in various ways. Because mobility tends to delay or prevent health-seeking behaviour, it can be associated with the acquisition and transmission of communicable diseases, including malaria, which often go undiagnosed or are diagnosed very late. Within SADC, a wide range of factors influence the health and well-being of migrants, including poor policies and legal frameworks that govern the health of migrants, limited cross-border collaboration and coordination, and limited financing for migrant health interventions. In addition, socio-cultural issues affect the rights of the migrants with regards to access to health; these include differing epidemiological profiles between communities of origin and destination, lack of access to health services, lack of targeted and appropriate health information, language and cultural differences, stigma, and discrimination. There is a need for a human rights-based approach to providing health services for populations, and MMPs in particular, living in or transiting through border areas. Agreement on expansion of services for MMPs, referral policies across borders, and use of user fees for MMPs can only be done through a joint effort to harmonize and enforce policies that ensure optimal access, while reinforcing the elimination goal.

d. The health systems and community systems context in the region (and the countries of this regional application), including any constraints.

The citizens of the E8 countries access health services primarily through the public sector. The public health systems are organized around 3 to 4 tiers of health service delivery, ranging from the community level, to the provincial or regional level hospitals. The national malaria control programmes (NMCPs) generally fall under the departments for prevention or public health of the ministries of health; NMCPs provide strategic and policy overview of malaria programming, while district health teams are at the frontline of delivery of malaria control and treatment services. Although southern Africa’s network of public health facilities is among the strongest in the continent, proximity to health services remains a challenge in very rural areas, where the terrain and limited road network leave some populations without access to health services.

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18 Information is summarized from the individual concept notes of the countries.
This often results in populations crossing the borders to access better services. The countries mostly like to receive migrants seeking better health care also happen to be the eliminating countries – Namibia, Botswana, and South Africa – where services are better, and free (for nationals) compared to their neighbours.

Limited transport options (e.g. vehicles for IRS, delivering medical products, and other logistics), the poor road network, and poor connectivity further complicate the challenge of access. Outreach services are therefore a common practice in the region, as is the use of community health systems to supplement service provision. All eight countries employ community health systems, albeit to varying extents. Many of the countries are still in the process of better defining and structuring community or village health systems. Although community health workers are often shared with other programmes (e.g. HIV and TB), they are increasingly being used to support malaria control, particularly through integrated community case management, as well as through support of active surveillance in eliminating countries.

The quality of information systems is a common challenge across all countries. Most malaria programmes use weekly notification systems for malaria; however, timeliness and completeness remain key challenges. The integration of malaria into existing national health information systems also limits the number of malaria indicators which can be used, and is therefore a challenge where surveillance for elimination is concerned. The frontline countries, and some of the second line countries, have therefore introduced parallel systems of reporting to allow the level of data that is required.

Personnel is also a common health systems challenge; this is discussed in greater detail in (e) below.

e. Important regional issues (i.e. epidemiological, health system, community system, human rights or gender issues) that impact on service delivery or health outcomes related to the three diseases.

**Population movement:** Between 2012 and 2025, the population of southern Africa is projected to rise from 133 million to 168 million, with an increasing urban share that is located in informal settlements. A supportive policy environment, such as SADC’s Free Trade Area protocol and the expected implementation of SADC’s Protocol on the Facilitation of Movement of Persons, suggests that mobility will further increase in the region, which will in turn have consequences on the movement of parasites across the region. Mobility is now one of the greatest factors working against the attainment of malaria elimination. Swaziland, for example, has implemented a robust control program, with wide intervention coverage, proven elimination tools, and rigorous analysis to inform strategy. And yet ongoing transmission in Swaziland remains, now driven solely by importation of malaria infections by migrants. The Swaziland government alone is unable to control the effects of migration and mobility from other countries; a regional approach in which countries collaborate to limit parasite movement and contain transmission is needed to attain elimination – and to sustain it.

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Informal migrants are particularly hard-to-reach with any health information and health services because of challenges they may encounter accessing health services in the host country. Informal migrants often avoid using public health facilities in host countries out of fear of being intercepted and deported. In addition, the living conditions of informal migrants in host countries are characterized by poverty and overcrowding, making migrants more vulnerable to deteriorating health status including malaria. Migrants often delay seeking health services, contributing to poor treatment outcomes and potentially large numbers of malaria cases going undetected and untreated. Migrant-friendly services and a supportive policy and legal environment are therefore required to ensure that mobile populations have optimal access to health services, including early diagnosis and treatment of malaria, which will limit movement of parasites across borders.

**Limited access to health services in border areas:** See 1.1b

**HIV/AIDS and TB:** The relatively high prevalence of HIV/AIDS and TB in the sub-region (compared to other regions) is a key factor that has shaped the health service delivery landscape. While E8 countries have made significant progress towards HIV treatment coverage and reduction in new infections, the health systems of the countries have not escaped from the crippling effects of these epidemics over the last 20 years. These diseases have overburdened key health system components, including human resources for health, supply chain, health information, and financing. In light of HIV/AIDS and TB, financing and prioritization of health system resources has become a challenge as countries are forced to prioritize scarce resources for life-long antiretroviral treatment and long-term TB treatment; this is particularly the case in countries where malaria transmission has been declining and where HIV/AIDS and TB now represent a larger proportion of morbidity compared to malaria. Support from the Global Fund and the President’s Malaria Initiative (PMI) – which supports all the second line countries – has alleviated this challenge, adding much needed resources and building capacity to drive the malaria gains which are seen today.

**Surveillance and information systems:** Although much improvement has been made in reporting and surveillance systems, the completeness and quality of health information systems across the region is a key weakness. Timely health reporting is important, not only for tracking progress, but as a tool for targeting interventions (particularly in the case of malaria). Five of the eight countries have introduced (or are in the process of introducing) the electronic district health information system (DHIS-2). While this is expected to improve the timeliness and completeness of reporting, challenges remain in the standardization of indicator definitions, as well as the quality and reliability of source data. Limited platforms and models exist for cross-country or regional disease surveillance with a high temporal and spatial resolution. This undermines visibility into health and disease trends across the region, particularly those that should inform planning and national response at the country level. These challenges are further complicated by the weaknesses and lack of consistency among the country surveillance systems.

**Laboratory capacity:** As countries target malaria elimination, the ability to detect low parasite densities in often asymptomatic carriers becomes paramount. Current diagnostic tools with a high sensitivity for low-density infections include nucleic acid detecting technologies such as polymerase chain reaction (PCR) and loop-mediated isothermal amplification (LAMP). However, the necessary training and equipment for these and other sophisticated testing
methods are expensive and require significant up front investments. It is difficult for low-burden countries to justify these purchases when there are only a low number of cases and limited resources. This challenge is even more pronounced for issues such as drug resistance, where the threat is high but documented cases are low. Rapid diagnostic test kits and microscopy continue to play an important role in diagnosis; however, most countries’ national referral laboratories do not have the capacity to support rigorous quality assurance programs.

Due to the large upfront investments involved in establishing these capacities, economies of scale can be achieved by developing regional capacity to support external quality assurance programs, as well as to serve as a referral testing center for the more expensive testing and quality assurance requirements.

**Human Resources:** The base of human resources for health across the region has been eroded as health workers migrate towards more lucrative opportunities, often in other parts of the world. Namibia, Botswana, and South Africa have more than 2 nursing/midwifery staff per 1,000 population; the remaining countries have ratios of between 0.4 per 1,000 and 1.6 per 1,000. Mozambique, Zambia, and Zimbabwe fall below the critical threshold of 23 critical health care staff (doctors, nurses and midwives) per 10,000 population.23 Most malaria programs of E8 countries therefore rely on shifting certain tasks, including diagnosis and treatment, to community health workers (CHWs), who provide supplemental capacity to the core nursing staff. Specialist expertise are generally scarce, particularly entomologists, geographic information systems analysts, and laboratory technicians.

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1.2 National and Regional Disease Strategic Plans

With clear references to the current national and/or regional strategic plan(s) and supporting documentation, briefly summarize the following:

a. The key goals, objectives and priority regional program areas.

b. Implementation to date, including the main outcomes and impact achieved, at the regional level.

c. Limitations to implementation and any lessons learned that will inform future implementation. In particular, highlight how the inequalities and key constraints described in question 1.1 are being addressed.

d. If applicable, the main areas of linkage to the national / regional health strategy, including how implementation of this strategy impacts relevant disease outcomes.

e. For standard HIV or TB funding requests, describe existing TB/HIV collaborative activities at regional level, including linkages between the respective national TB and HIV programs in areas such as: diagnostics, service delivery, information systems and monitoring and evaluation, capacity building, policy development and coordination processes.

The applicant can also refer to the technical partners’ regional frameworks or guidance while answering this question. Further, the response to this question should be tailored by the applicant in context of the situation in the region and focus of the application.

2-4 PAGES SUGGESTED

a. The key goals, objectives, and priority regional program areas.

The overarching concept of the E8 regional strategy is the interconnectedness between countries, which inherently undermines any country’s prospects for independently attaining malaria elimination. Porous borders and human movement are the main constraints to individual success; no individual country will be able to successfully interrupt transmission as long as cross-border human movement facilitates the continued introduction of malaria to countries that are close to eliminating.24 Similarly, malaria ecologies are closely linked, and patterns of transmission and resistance in one country have a bearing on the rest of the sub-region. It is possible, for example, that both Namibia and Angola can achieve 100% vector control coverage on their respective sides of the border, yet fail to realize the intended impact on transmission because of misaligned timing of IRS on either sides of the border. The “country” is therefore an insufficient unit of intervention when planning and executing a malaria elimination strategy; the “the ideal unit of operation or analysis” should be the region. This allows the region to collectively develop a harmonized strategy where the respective interventions, investments, and policies of the sub-units are channeled synergistically towards a collective goal, reinforcing each other and optimizing for one purpose – elimination.

The E8 therefore aims to create an enabling regional environment that will allow the respective countries to achieve their elimination goals, thus accelerating progress towards a malaria-free southern Africa. The main reference document guiding this regional concept note is the Elimination Eight Strategic Plan – Annex 1. The E8 Strategic Plan was developed through a collaborative process by the eight countries and their technical and implementation partners, and was endorsed by the Ministers of Health in January 2016. It details the set of interventions that

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will allow this multilateral partnership to achieve the collective goal of malaria elimination, beginning with elimination in the four frontline countries by 2020. As the E8 is recognized as an initiative falling under SADC, the E8 Strategic Plan is governed and guided by an overarching SADC Protocol on Health. (The link between the SADC Protocol on Health and the E8 Strategic Plan is discussed further in Section 1.2.d below.) The objectives and strategies put forth by the E8 Strategic Plan are also in line with the overarching goals and principles of the SADC Malaria Strategic Framework (2007-2015) and the SADC Malaria Elimination Framework.\(^{25}\)

Annex 2 illustrates the level of importation in some of the districts of the frontline countries, where continued importation remains as one of the main contributors to ongoing transmission, preventing the success of elimination efforts. **Given this, the regional E8 strategy aims to facilitate mutual collaboration in order to accelerate and reinforce countries’ plans to eliminate. The strategy focuses on a set of supra-national activities that complement and leverage country efforts to eliminate, without duplicating or replacing country plans and obligations to execute malaria control and elimination programs. (See Annex 1, E8 Strategic Plan, pg 8 for details on the E8 approach.)**

Figure 5 below illustrates the combined impact of malaria transmission (the first map) and human mobility (the second map) to provide an estimation of the flow of parasite movement between various locations across the E8 (the third map). Understanding the interplay between these two factors is the focus of new analytical approaches, which will be further expanded to support E8 strategies for dealing with the parasite movement problem.

**Figure 5: Mapping of parasite rate, mobility, and weighted parasite movement.\(^{26}\)**

The key structural challenges that serve as barriers against national and regional elimination are summarized in Table 2 below. These challenges include malaria parasite movement (facilitated through population movement); poor access to health services in neglected, border areas; weak country and regional surveillance; quality assurance for diagnosis; misalignment between country priorities; and financing.

In order to address these challenges and achieve its goal of regional elimination, the E8 Strategic Plan (2015 – 2020) has identified the following goal and objectives. *(A detailed description of the E8’s strategies and activities can be found in Annex 1, pg.24)*

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\(^{25}\) Plans are underway to extend the duration of the SADC Malaria Strategic Framework, which currently runs from 2007 to 2015; following this extension, the E8 Strategic Plan will be aligned to the SADC Malaria Strategic Framework.

**Goal:** To accelerate zero local transmission in the four frontline countries by 2020 through the provision of a mechanism for collaboration and joint strategic programming.\(^{27}\)

**Objectives:**
1. To strengthen regional coordination in order to achieve elimination in each of the E8 member countries;
2. To elevate and maintain the regional elimination agenda at the highest political levels within the E8 countries;
3. To promote policy harmonization, quality control, and knowledge management to accelerate progress towards elimination;
4. To reduce cross-border malaria transmission through expanded access to early diagnosis and treatment in border districts; and
5. To secure resources to support the regional elimination plan, and to ensure long-term sustainable financing for the region’s elimination ambitions.

Table 2 outlines the main interventions envisioned by the E8 to address several regional barriers to elimination.

**Table 2: Priority program areas for the E8 regional malaria strategy**

<table>
<thead>
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<th>Regional Barriers</th>
<th>E8 Strategy</th>
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<tbody>
<tr>
<td><strong>Population Mobility</strong></td>
<td><strong>Objective 4 and 5</strong></td>
</tr>
<tr>
<td>• High rates of mobility and migration across E8 countries</td>
<td>• Development and harmonization of policies on access to health services for MMPs</td>
</tr>
<tr>
<td>• Poor access, acceptability, and utilization of essential health services for mobile and migrant populations, as well as neglected communities in border areas where services do not reach</td>
<td>• Better monitoring and analysis of population movement, and intelligence on high risk populations</td>
</tr>
<tr>
<td>• Differing policy and legislative frameworks regarding MMPs</td>
<td>• Increased access to diagnosis, treatment, and IEC through malaria posts in areas that have high population movement and low health service coverage, with no discrimination based on nationality</td>
</tr>
<tr>
<td>• Malaria outbreaks triggered by imported cases</td>
<td>• Case reporting and surveillance in malaria posts, and disaggregated malaria case data on MMPs and neglected communities</td>
</tr>
<tr>
<td>• Different relative prioritization of malaria interventions between neighbouring countries</td>
<td>• Strategies to more actively engage and influence health seeking among MMPs. Joint, coordinated health, and malaria social, communication, and behaviour change campaigns across the countries for MMPs</td>
</tr>
<tr>
<td><strong>Surveillance</strong></td>
<td><strong>Objective 4</strong></td>
</tr>
<tr>
<td>• Independent surveillance systems across countries with different indicators and limited cross-border sharing</td>
<td>• Harmonized surveillance protocols and capabilities across the region</td>
</tr>
<tr>
<td>• Weak information systems across E8 countries, and lack of central repository to document,</td>
<td>• Integrated surveillance efforts across the region to share timely incidence patterns and outbreaks across borders</td>
</tr>
</tbody>
</table>

\(^{27}\) The interim goal of the current Strategic Plan is to achieve elimination in the frontline countries by 2020; however, the long term goal is to achieve elimination in all eight countries, although this will be beyond the duration of this Strategic Plan.
track, and map disease trends, as well as trigger alerts and response mechanisms across borders
- Lack of functional rapid response mechanisms to screen and treat for malaria in migrant and mobile populations
- Lack of regional entomological surveillance to monitor insecticide resistance, presence and feeding behaviour of mosquitoes, and granular mapping of vectors
- Active case investigation in border areas and where cases occur
- Regional surveillance platform capable of identifying transmission trends and outbreak risks
- Information sharing and feedback about locations that exhibit transmission potential
- Regional capacity and granular mapping of vectors for monitoring insecticide resistance, presence, and feeding behaviours of mosquitoes
- Dedicated regional technical assistance to feed information back into country and regional strategies for action and improved control, including more effective targeting of interventions based on regional understanding of transmission patterns
- Training and support for data use and decision-making

<table>
<thead>
<tr>
<th>Quality Assurance/Quality Control (QA/QC)</th>
<th>Objective 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited ability to determine accuracy of diagnostics</td>
<td></td>
</tr>
<tr>
<td>Insufficient microscopy skills</td>
<td></td>
</tr>
<tr>
<td>Lack of a regional slide bank for microscopy proficiency testing and training</td>
<td></td>
</tr>
<tr>
<td>High costs for specialized equipment and staff to conduct LAMP and PCR-based testing</td>
<td></td>
</tr>
<tr>
<td>Regional program for QA/QC to improve countries' accuracy of malaria diagnostic results and better detect asymptomatic infections</td>
<td></td>
</tr>
<tr>
<td>Regional laboratory to serve as a pooled resource for offering specialized tests</td>
<td></td>
</tr>
<tr>
<td>Access to expert skills in diagnosis and entomology to provide mentoring to countries and harmonization of regional approaches</td>
<td></td>
</tr>
<tr>
<td>Capacity for genotyping to distinguish origin of cases</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information and Knowledge Management</th>
<th>Objective 1 and 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited information on regional trends and risks, with respect to parasitology, entomology, and disease surveillance</td>
<td></td>
</tr>
<tr>
<td>Skeletal understanding of the true patterns and drivers of transmission among MMPs - which groups are most vulnerable, where and how do they become infected, and what are the variations in these patterns across different borders?</td>
<td></td>
</tr>
<tr>
<td>Lack of coordinated/harmonized approach to regional elimination</td>
<td></td>
</tr>
<tr>
<td>Misalignment between country and regional priorities (e.g. higher incidence in north of second line countries whereas frontline countries would want them to prioritize their southern borders)</td>
<td></td>
</tr>
<tr>
<td>Common knowledge management platform (such as website) to better share information</td>
<td></td>
</tr>
<tr>
<td>Annual symposiums for dissemination of best practice</td>
<td></td>
</tr>
<tr>
<td>Exchange visits to promote learning across countries</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing and Advocacy</th>
<th>Objective 1, 2 and 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limited donor-independent financing options</td>
<td></td>
</tr>
<tr>
<td>Limited domestic financing to support elimination</td>
<td></td>
</tr>
<tr>
<td>Limited resources at the global level to support elimination efforts</td>
<td></td>
</tr>
<tr>
<td>Domestic, malaria-dedicated financing mechanisms to improve long term sustainable financing for elimination</td>
<td></td>
</tr>
<tr>
<td>Private sector collaboration based on shared value for malaria outcomes and business outcomes</td>
<td></td>
</tr>
</tbody>
</table>
Successful implementation of the programme areas summarized above is expected to remove the majority of the exogenous barriers to country elimination efforts and to allow the frontline four to eliminate by 2020. As the current frontline countries eliminate, resources can therefore be increasingly targeted towards accelerating progress in the second line countries, continually pushing the boundary of malaria transmission upwards.

b. Implementation to date, including the main outcomes and impact achieved, at the regional level.

The first ministerial resolution on the concept of the E8 occurred in 2009. Since then, some progress towards the operationalization of the E8 has been made, facilitated by SADC as well as the Global Health Group of the University of California San Francisco (GHG-UCSF) and the Roll Back Malaria Southern Africa Regional Network (RBM-SARN). The lack of a dedicated secretariat and operational budget has limited progress towards the stated strategies and activities of the E8. However, the E8 Secretariat has become functional as of December 2014, and it is anticipated that there will be an accelerated level of progress in implementing the regional strategy.

Regional Coordination
A key contribution that the E8 will bring to the regional elimination agenda is the coordination of regional activities, steering the sub-region towards a common goal and towards harmonized and mutually reinforcing strategies. The E8 Secretariat therefore plays the central role of facilitating robust coordination and following through on the strategies and interventions that have been identified to contain malaria transmission in the region. Since the formation of the E8 in 2009, the Technical Committee has maintained the E8 partnership and joint commitment towards elimination, sharing lessons and working to mobilize resources for a secretariat that would coordinate the initiative, and for joint programming. A Secretariat has now been established and is based in Windhoek; an E8 Coordinator is in place; and two additional full-time staff will be added in 2015. An E8 Strategic Plan has been developed and costed.

Advocacy and Political Engagement
Ministerial-level engagement is a key feature of the E8 concept and its ability to effect change. Successful implementation of other interventions rests upon having direct access to influential policymakers to engage in political or diplomatic issues pertaining to malaria. The E8 has worked closely with the African Leaders Malaria Alliance (ALMA) and SADC to elevate the elimination agenda to the ministerial and heads of state levels. An elimination scorecard has been launched and discussed among ministers, holding countries accountable to their individual and joint pledges to support elimination (Annex 3).

Partner Engagement
The E8 has received support from GHG-UCSF and SARN, primarily for convening the E8 Technical Committee and Ministerial meetings, recruiting the E8 Coordinator, and establishing an E8 Secretariat. Financial and technical support from GHG-UCSF, SARN, the Clinton Health Access Initiative (CHAI), and the World Health Organization (WHO) has been used to develop the Strategic Plan and funding proposals, including this funding request. As the founding E8 Chair, the Ministry of Health and Social Services of Namibia gives support to the regional initiative by housing the
c. **Limitations to implementation and any lessons learned that will inform future implementation.**

   In particular, highlight how the inequalities and key constraints described in question 1.1 are being addressed.

Although the implementation of the E8 Strategic Plan is in its infancy, the following lessons learned have been identified. These lessons are based on the experience of existing bi/tri-lateral cross border collaborations in malaria, as well as the experience of other regional disease strategies, such as HIV/AIDS and TB.

### Health systems capacity

Because malaria elimination requires strong health systems to execute diagnosis, treatment, and surveillance interventions with high levels of rigour and precision, the generally weak state of health systems across the sub-region serves as a severe limitation. Key health system gaps exist with regards to optimal placement and access to health services, human resource shortages, and health financing. Varying levels of socio-economic development also exist within the region; as of 2013, South Africa has an income per capita of $7,190, while Mozambique has an income per capita of $590.28 Similarly, the governments of Botswana, Namibia, and South Africa finance more than 50% of their malaria budgets – 74, 66, and 100% respectively. Four countries within the E8 finance between 40 and 70%, while Mozambique and Zimbabwe finance 11% and 2% respectively.29

Cross-border strategies were largely designed to fill gaps in health system capacity by lending technical and operational expertise across the region (such as the Lubombo Spatial Development Initiative),30 and by leveraging port and road infrastructure to deliver commodities (as in the case of the Trans Kunene Malaria Initiative between Namibia and Angola). The E8 strategy will continue to identify opportunities to lessen the impact of national weaknesses in health systems capacity by facilitating the leveraging of health system capacity across countries, as well as building regional capacity for areas where there is an advantage in doing so (e.g. diagnostic and EQA capacity as well as entomology skills).

### Mobile and migrant populations’ right to health

As referenced in Section 1.1, parasite movement and importation, which is facilitated by human movement, poses a key challenge to malaria elimination. Migrants, refugees, and mobile populations often seek treatment from unregulated, private vendors (where these exist), or they neglect to seek services at all. This is a proven trend not only in southern Africa, but in Southeast Asia as well where the resultant use of sub-standard drugs becomes a contributor to drug resistance.31,32 Although migration in itself is not a definitive risk for malaria, several factors leave migrants vulnerable to illness. In particular, infrastructure and rural development, deforestation

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29 This information was self-reported from malaria program budgets.
30 LSDI involved the strengthening and extension of malaria control – IRS in particular – into southern Mozambique, through partnership with South Africa and Swaziland. LSDI reduced transmission in Mozambique, as well as in South Africa and Swaziland.
for logging and economic farming, political movements, and natural disasters are some of the major factors that Social and economic factors push and pull people in and out of malaria-endemic areas; therefore, understanding and considering population movements and their associated risks for malaria infection, is critical for malaria elimination.\textsuperscript{33} When MMPs do seek care outside of their country of primary residence, they often feel they cannot freely report their nationality, which challenges the disaggregation of malaria case data for the purpose of identifying areas that are sources of ongoing transmission across the region.

Interventions targeting malaria therefore need to consider the health-seeking behaviours of migrants and mobile populations. The E8 strategy plans to work across the countries towards harmonizing policies and approaches to MMPs and underserved border populations. Harmonization and accountability for enforcing policies are expected to eliminate inequalities in access to health, ensuring earlier malaria diagnosis and treatment for these populations, removing discrimination as a barrier to seeking care, and improving the quality of case data on country of origin and travel history. Approaches to improving malaria service provision among this group will employ a human rights-based approach, particularly in terms of accessibility, acceptability, availability, and affordability. \textit{(Refer to Annex 1A for further outline of the service delivery models that will be used in the malaria posts)}

District and community level ownership over implementation of these interventions is central to the success of regional elimination. As MMPs are often difficult to reach, there is a need to employ service delivery models with larger and more flexible reach than the current health facilities. The E8 strategy aims to increase the accessibility of health services by employing community health systems – for health information communication, delivery of services, as well as advocacy and program design.

\textbf{Regional collaboration and sharing of disease surveillance data, analysis and feedback}

Systematic tools for reporting and managing malaria data have been established and are in use, significantly improving disease reporting across the E8 countries. Five of the eight countries have introduced electronic disease reporting and management; six of the eight countries employ a parallel system of weekly or immediate reporting on malaria cases (beyond the integrated national health reporting mechanism). Harmonization of core indicators across the countries is an ongoing effort, and not all countries report cases from the private sector. However, given that malaria transmission across the E8 is highly connected, countries that conduct surveillance activities and consider transmission patterns in isolation will have limited efficacy compared to those that have a regional picture. Countries need to unite their surveillance information to develop a regional understanding of the transmission dynamics that play out across the region, thus allowing them to work in concert to mount appropriate responses for maximum impact. Having the regional picture will allow effective use and targeting by the countries and the region. The E8 plans to establish a regional surveillance system for aggregating regional data and for timely sharing of data, potential transmission, and importation risk. \textit{(See Annex 1B)} Within the national control and elimination strategies, accurate, timely disease surveillance data is a key strategic intervention that enables assessment of progress, allows identification of foci (including foci across borders with the potential to import), and informs subsequent response to, and targeting of, interventions.

Insecticide resistance
Resistance to insecticides has begun to emerge among E8 countries. Malaria vectors have shown various levels of susceptibility to all prevailing insecticide classes, with vector resistance to pyrethroids and carbamates appearing in multiple tested geographies. Insecticide resistance is of great concern nationally, regionally, and globally, as it has the potential to erode the efficacy of LLINs and IRS as vector control interventions. Yet to date, insecticide resistance monitoring has only been conducted sporadically and inconsistently across the E8 sub-region.

The potential for resistance to spread across the region is a risk to achieving elimination in the E8, and it represents a challenge for which mitigation requires a collaborative approach. There is a need for systematic insecticide resistance monitoring across the region, using district sentinel sites as the modes to collect field data. Data from resistance monitoring should be used to develop maps of confirmed and suspected resistance, which in turn should inform evidence-based insecticide resistance plans on a national and regional level. Such plans should set clear guidelines on the types of insecticides to use, waste disposal management, and on the operational practices – such as rotational, mosaic, or combination spraying – that can preserve the effectiveness of critical vector control interventions.

Evidence-based targeting of interventions
As malaria’s epidemiological profile evolves and the disease becomes more heterogeneously distributed, interventions should be targeted based on epidemiological and entomological evidence. However, weak surveillance systems and limited resources for operational research result in a lack of adequate rigor in strategic planning and intervention optimization. Discussion, validation, and root-cause analysis of data are not systematically carried out, so data is not optimized for its most valuable use. This analysis should be used to inform targeted interventions that slow down and interrupt transmission, particularly in border areas where the data should be used to control importation and risk of resurgence. Technical WHO and partner support for countries’ adaptation and implementation of disease surveillance for malaria - as outlined in the Malaria Elimination Operational Manual34,35 and Systems for the Early Detection of Malaria Epidemics36 - will be essential.

Sustainable financing
The share of domestic investment in malaria programs within the E8 ranges from 100% (South Africa) to 11% (Mozambique) and 5% (Zimbabwe); on average, the E8 countries cover 46% of their malaria budgets. The overwhelming reliance on external financing within the region poses a threat to both reaching and sustaining elimination. Global experience points to the lack of sustained financing for malaria as a major risk factor for resurgence.37 Within the region, resurgence in

malaria has been experienced in Swaziland, Zambia, and Zimbabwe following the delayed or reduced distribution of expected resources. In addition, the decline in the relative burden of malaria limits the level of donor financing that the region can attract to combat this disease, particularly in the frontline four countries. This makes sustainable financing a key responsibility, and one which benefits from a regional approach. Innovative mechanisms for complementing country resources are needed, as well as incentive-based models that reward regional collaboration.

The E8 strategy also recognizes the mutual public and private sector benefit that is derived from a sub-region that is free of malaria; by successfully suppressing malaria transmission, the E8 countries stand to benefit from improved levels of tourism, investment, and productivity growth. However, current levels of investment into eliminating malaria remain sub-optimal across most of the E8 countries. As investors consider a “regional investment climate,” there is a joint responsibility for E8 countries to improve investment prospects by promoting a region free of malaria. Through their advocacy, E8 member countries will promote domestic and regional investment in malaria elimination.

d. If applicable, the main areas of linkage to the national / regional health strategy, including how implementation of this strategy impacts relevant disease outcomes.

The SADC Protocol on Health (ratified by all Heads of State or Government in 1999) recognizes that close co-operation in health is essential for the effective control of communicable disease in the region. This includes collaboration in health systems research, health information systems, health promotion and education, communicable diseases, and malaria control. Member states have agreed to establish an efficient mechanism for the effective control of malaria in the region, harmonizing policies, guidelines, protocols, interventions, and treatment regimes. The SADC Malaria Strategic Framework and Malaria Elimination Framework ensure the effective alignment and harmonization of malaria interventions the region, as per the commitments on collaboration.

All objectives and strategies proposed by the E8 are in line with those in the above SADC protocols. Table 3 below summarizes the link between the SADC Protocol on Health (Annex 4) and the E8 Strategic Plan; it highlights the articles of the SADC protocol that support and reinforce the objectives of the E8 strategy, and the overall malaria elimination goal in southern Africa.

Table 3: Areas of alignment between the SADC Protocol on Health and E8 Strategy

<table>
<thead>
<tr>
<th>Reference</th>
<th>SADC Protocol</th>
<th>E8 Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective of the SADC Protocol on Health, pg. 3</td>
<td>• To coordinate regional efforts on epidemic preparedness, mapping, prevention, control and where possible the eradication of communicable and non-communicable diseases</td>
<td>• E8 Goal to serve as a platform for regional collaboration on malaria elimination • Objective 2, Ministerial engagement and collaboration on E8 within SADC framework</td>
</tr>
<tr>
<td>Health Information Systems</td>
<td>• Development of common definitions and a common data</td>
<td>• Objective 1, regional information sharing • Objective 4, regional surveillance</td>
</tr>
</tbody>
</table>

38 For example, the Global Fund’s new funding model – which is based on burden – places similar priority on level of burden
### Article 7, pg. 4
- Dictionary
- Establishment of mechanisms for information exchange
- Establishment of a SADC Regional Database of Health and Social Service Indicators
- Database and harmonized indicators

### Communicable Disease Control

#### Article 9, pg. 5
- States’ Parties shall share information related to outbreaks and epidemics of communicable diseases within the Region and work together in epidemic control and management
- Objective 4, regional feedback of surveillance data, outbreak containment collaboration

### Malaria Control

#### Article 11, pg. 5
- Sharing scarce technical resources and operational research
- Harmonising goals, policies, guidelines, protocols, interventions, and treatment regimens
- Objective 3, policy harmonization on malaria treatment, control, and approach to MMPs

### Referral Systems

#### Article 28, pg. 8
- The establishment of appropriate clinical and administrative guidelines for referral, within and between State Parties
- The sharing of information on centres of excellence in the region.
- Objective 3 and 4, harmonization of policies on MMPs and access to health, referral policies
- Objective 3, regional centers of excellence in entomology

### SECTION 2: FUNDING LANDSCAPE, ADDITIONALITY AND SUSTAINABILITY

To achieve lasting impact against the three diseases, financial commitments from national governments and other sources must play a key. Global Fund allocates resources which are far from sufficient to address the full cost of technically sound programs. It is therefore critical to assess how the requested funding fits within the overall funding landscape and how national governments or other donors plan to commit increased resources to the regional disease program and health sector each year.

#### 2.1 Overall Funding Landscape for Upcoming Implementation Period

In order to understand the overall funding landscape of the regional program and how this funding request fits within that, briefly describe:

a. The availability of funds for each program area and the source of such funding (national governments and/or donors). Highlight any program areas that are adequately resourced (and are therefore not included in the request to the Global Fund).

b. How the proposed Global Fund investment has leveraged (in case of any existing Global Fund grants) and will leverage resources from national governments and other donors.

c. For program areas that have significant funding gaps, planned actions to address
these gaps and raise additional funds.

Please keep your response specific to the aspect of the program for which funding is being requested through this concept note, instead of describing the overall funding landscape for the entire disease program in the region.

1-3 PAGES SUGGESTED

a. The availability of funds for each program area and the source of such funding (national governments and/or donors). Highlight any program areas that are adequately resourced (and are therefore not included in the request to the Global Fund).

Given that the E8 implements a set of activities that complement and reinforce country efforts towards elimination, it is important to recognize the significant investments into the core country programs that serve as the context in which the E8’s investments operate. The budget of the E8 therefore builds on the country investments, providing additionality in the form of regional collaboration and reduction of cross-border importation, as well as mitigation of the regional risks which countries face. The specific country investments are summarized in 2.1b below.

The E8 Strategic Plan is estimated to cost approximately $66 million over the next five years. Table 4 below summarizes the funding landscape for the E8, according to the strategic objectives of this funding request.40

Table 4: E8 Strategic Plan cost and unfunded gap

<table>
<thead>
<tr>
<th></th>
<th>Objective 1</th>
<th>Objective 2</th>
<th>Objective 3</th>
<th>Objective 4</th>
<th>Objective 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Need</td>
<td>$6,137,401</td>
<td>$814,776</td>
<td>$12,582,233</td>
<td>$46,486,202</td>
<td>$252,272</td>
<td>$66,272,884</td>
</tr>
<tr>
<td>Country contribution</td>
<td>$0</td>
<td>$0</td>
<td>$1,155,600</td>
<td>$14,897,301</td>
<td>$0</td>
<td>$16,052,901</td>
</tr>
<tr>
<td>GHG Contribution</td>
<td>$1,109,849</td>
<td>$127,040</td>
<td>$0</td>
<td>$105,184</td>
<td>$0</td>
<td>$1,342,073</td>
</tr>
<tr>
<td>Funding Gap</td>
<td>$5,027,552</td>
<td>$687,736</td>
<td>$11,426,633</td>
<td>$31,588,901</td>
<td>$252,272</td>
<td>$48,983,095</td>
</tr>
</tbody>
</table>

As an emerging regional initiative, the Elimination 8 is in the early stages of securing resources to support the E8 strategy. To date, only 26% of the resources required to execute the E8 strategy over the next five years have been secured. The national governments of the E8 have prioritized their malaria investments towards supporting their national control and elimination strategies. In addition to this, they have prioritized the provision of treatment and prevention commodities towards the regional E8 activities (24% of the total five-year cost of the E8 strategy). GHG’s support for the E8 (2% of the total five-year cost) has been dedicated towards the establishment and capacity building of the E8 Secretariat and the basic operations of a small Secretariat team. A key priority for the E8, which also has the largest funding gap, is the containment of cross-border transmission; this strategy is central to the E8’s theory of change and to the ability of the E8 to support country progress to elimination. It is also a major cost driver of the Strategic Plan (70% of the cost of the E8 Strategic Plan).

After taking into account the existing financial support, large funding gaps in all key strategic objectives of the E8 remain. This proposed investment by the Global Fund would therefore represent the first major investment into the initiative. The proposed funding award would effectively position the Global Fund to ensure the success of its current investments into six (soon

40 Note the E8 strategy’s program areas have been mapped against the modules/objectives of this funding request.
to be seven) of the eight countries. In particular, the Global Fund has committed to supporting elimination within the next 5 years in three of the frontline four; however, without the additional investment from the regional strategy, the individual countries will not be able to eliminate, and those investments will not achieve their intended impact. While the countries may achieve optimal intervention coverage and execute successfully on national strategies, they remain powerless to mitigate risks coming from the region, particularly through the importation of parasites through human movement, and the spread of insecticide resistance which would make their prevention tools ineffective. These risks have been discussed in greater detail in Section 1.1.

Additional approaches to mobilize grant funding (apart from this funding request), as well as long-term sustainable funding, are a key feature of the E8 Strategic Plan. (See Objective 5 of the E8 Strategic Plan, Annex 1.)

An E8 resource mapping exercise further details the current resources committed to malaria elimination and control activities in E8 countries. (See Table 5.) This exercise identified existing resources in the countries that the E8 would seek to leverage as it works to implement its regional programs. While these country resources have not been explicitly included in the E8 budget, they do represent a significant resource base, which, if not available, would require more considerable investments to attain the E8 objectives. In particular, the regional surveillance strategy outlined in the E8 Strategic Plan, and further detailed in Annex 1B, builds on large investments into establishing electronic rapid reporting systems for reporting malaria in five of the eight countries.

- How the proposed Global Fund investment has leveraged (in case of any existing Global Fund grants) and will leverage resources from national governments and other donors.

As mentioned in 2.1a above, this proposed funding request leverages significant investments that have been made by both governments and donors (including Global Fund) at the country level. Table 5 below summarizes country budgets of the E8 countries, by donor.

### Table 5: E8 country budgets for malaria control and elimination, by financing partner

<table>
<thead>
<tr>
<th>Country</th>
<th>Total available resources</th>
<th>Global Fund</th>
<th>PMI</th>
<th>Domestic</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>$20,287,777</td>
<td>$5,187,777</td>
<td>$0</td>
<td>$15,100,000</td>
<td>$0</td>
</tr>
<tr>
<td>Namibia</td>
<td>$19,126,162</td>
<td>$6,148,409</td>
<td>$0</td>
<td>$12,677,753</td>
<td>$300,000</td>
</tr>
<tr>
<td>South Africa</td>
<td>$38,120,607</td>
<td>$0</td>
<td>$0</td>
<td>$38,120,607</td>
<td>$0</td>
</tr>
<tr>
<td>Swaziland</td>
<td>$8,632,825</td>
<td>$4,023,220</td>
<td>$0</td>
<td>$3,448,857</td>
<td>$1,160,748</td>
</tr>
<tr>
<td>Angola</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Mozambique</td>
<td>$358,917,240</td>
<td>$171,760,097</td>
<td>$87,000,000</td>
<td>$37,902,612</td>
<td>$62,254,531</td>
</tr>
<tr>
<td>Zambia</td>
<td>$266,675,604</td>
<td>$98,637,570</td>
<td>$72,000,000</td>
<td>$85,500,000</td>
<td>$10,538,034</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>$115,326,046</td>
<td>$85,326,046</td>
<td>$28,000,000</td>
<td>$2,000,000</td>
<td>$0</td>
</tr>
<tr>
<td>E8 Regional</td>
<td>$31,001,200</td>
<td>$24,000,000</td>
<td>$0</td>
<td>$5,6591,27</td>
<td>$1,342,073</td>
</tr>
<tr>
<td>Strategy</td>
<td>(available)</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

41 Significant additional investments are also being channeled into southern Mozambique through the new MALTEM initiative. This is expected to significantly improve control in this area, providing additional valuable resources towards elimination among the E8.
Total “E8 System” Resources available

|                | $858,087,461 | $395,083,119 | $187,000,000 | $200,408,956 | $75,595,386 |

While there are no existing Global Fund grants to the E8 to support its regional malaria elimination strategy, the Global Fund is financing malaria control and elimination activities in six of the eight countries (Angola, Mozambique, Namibia, Swaziland, Zambia, Zimbabwe) and will soon begin funding Botswana. This application’s requested funding complements elimination-focused Global Fund resources and activities in the following E8 countries:

**Botswana (proposal stage)**
- Strengthening of active case detection and investigation systems and strategies
- Improvements to health information systems to increase routine reporting and data collection of parasitologically-confirmed malaria cases

**Namibia**
- Establishment of comprehensive QA/QC system for diagnosis, treatment, and vector control interventions
- Enhanced malaria surveillance data systems and expanded active case detection and investigation operations

**Swaziland**
- Intensified case detection through implementation of highly sensitive diagnostic testing using LAMP
- Targeted proactive case detection and vector control using GIS-based risk mapping
- Reduction of parasite reservoir though improved malaria treatment guidelines to include and roll-out single, low-dose primaquine for treatment of uncomplicated malaria cases

**Zimbabwe**
- Introduction of a real-time digital surveillance database system to increase capacity of surveillance program
- Reduction of parasite reservoir though improved malaria treatment guidelines to include and roll-out single, low-dose primaquine for treatment of uncomplicated malaria cases

In addition to the Global Fund resources committed to elimination activities in several E8 countries, the application’s funding request will be supported by additional capacity from the following E8 partners:

**E8 Governments**: The national malaria control programmes of the E8 countries have pledged to contribute domestic resources towards the procurement of control and treatment commodities for regional activities. These commodities, which will be used to stock the existing HIV and TB mobile clinics (in the regional programs) with malaria commodities, and providing nets during BCC campaigns. These commodities will be included in the national quantification and procurement of the host countries where the posts are located. The value of this contribution is estimated at $5.7 million 21% of the total E8 budget over the three years.

**CHAI**: CHAI (through a grant from the Bill and Melinda Gates Foundation [BMGF]) has supported country elimination efforts since 2008, and has recently committed to a new five-year program of engagement on malaria elimination with Botswana, Mozambique, South Africa, Swaziland, and Zimbabwe. CHAI will support these countries’ elimination efforts through providing strategic and process management support to efficiently scale up malaria elimination plans, generating and allocating financial resources, technical expertise for rigorous data analysis, risk mapping, and appropriate targeting of interventions based on data. As a key member of the E8 Technical Committee, CHAI will be able to effectively align its country support and technical assistance to reinforce the regional strategy as well as country goals.
GHG-UCSF: GHG, housed at UCSF, is a member of the E8 Technical Committee. Through a grant from the BMGF, GHG-UCSF will continue to support the E8 by funding the Office of the E8 Secretariat, helping to convene E8 Technical Committee and Ministerial Meetings, conducting various capacity building trainings, and providing technical input towards the development of key regional strategy documents. GHG-UCSF has access to vast resources for research and analysis, which will support the work of the Secretariat and of the Technical Committee. GHG-UCSF has also dedicated significant staff time to support research-based activities within the E8 Secretariat. GHG-UCSF will facilitate collaboration and sharing of experiences between the E8 and the Asia Pacific Malaria Elimination Network (APMEN) – a similar regional network that has been in operation since 2009 in Asia, and which has achieved strong results, similar to those targeted by the E8.

International Organization for Migration (IOM): IOM’s regional health team will contribute technical guidance towards the design of the E8’s proposed response towards the health-seeking behaviour, vulnerability, and transmission risk of mobile populations, which represent key challenges to the elimination goal. In particular, the design of malaria posts, which have been included in this funding request, is informed in large part by the experience of IOM in managing similar health posts among border communities. IOM’s regional team and network of country offices across all eight countries will continue to support country- and border-level interventions through the provision of technical expertise and analysis on migrant services, population movement, as well as including behaviour change strategies for MMPs.

The Malaria Control and Elimination Partnership in Africa (MACEPA): MACEPA, whose main operations are based in Zambia, has established particular expertise in monitoring and evaluation and surveillance systems across southern Africa. MACEPA has worked closely with many of the eight countries to design and pilot new approaches that respond to the changing M&E needs of the malaria control programs as they reorient their programs; this work has included electronic reporting, indicator definition, CHW program design, and malaria indicator surveys. MACEPA’s experience will inform regional E8 activities through defining regional elimination indicators and designing a regional surveillance system.

The Mozambican Alliance towards the Elimination of Malaria (MALTEM): MALTEM is a new initiative operating in southern Mozambique, whose aim is to eliminate indigenous cases of malaria by 2020. The objectives and aims of MALTEM align closely with those of the E8; they include improved malaria surveillance to support decision-making, as well as increased coverage of geographically-targeted scale up packages, including in Gaza and Inhambane provinces. Additional resources to improve control in Mozambique could significantly reduce the importation into Swaziland and South Africa, accelerating their progress towards elimination. The E8 will aim to develop joint plans with MALTEM, ensuring that both E8 and MALTEM investments “pull together” in order to make elimination possible.

RBM-SARN: SARN is a member of the E8 Technical Committee. Prior to the establishment of the E8 Secretariat, SARN played a key role in convening and facilitating consultations related to E8 strategic planning as well as the development of the Expression of Interest to the Global Fund. SARN will continue to support the work outlined in this funding request through facilitating meetings and providing access to a network of regional and global partners and advocates across the east and southern Africa region. In addition, the E8 will rely on SARN’s access to a wide network of country and regional partners to support peer learning exchange visits, both within the SARN network and with other countries within the RBM network. The E8 has, and will continue to, benefit from input and guidance from the global RBM network, facilitated via SARN. In particular, RBM’s Malaria Advocacy Working Group (resource mobilization work stream) will be key advisors in the E8’s development and long-term planning.

World Health Organization (WHO): The WHO is a member of the Technical Committee and is currently serving as the Vice Chair of the E8 Technical Committee. Through its regional malaria focal persons (WHO-IST) and country malaria officers, WHO will provide technical assistance towards the robust planning and execution of all aspects of malaria elimination programming.
Critical guidance from the WHO, including malaria elimination field guidance, trainings, and elimination assessment tools, will inform the countries’ technical strategies.

b. For program areas that have significant funding gaps, planned actions to address these gaps and raise additional funds.

Sustainable financing remains as one of the key challenges to the long-term goal of eliminating and maintaining elimination gains. The E8 Strategic Plan aims to pre-empt the challenge of long-term sustainable financing for preventing reintroduction, even before elimination is attained. A number of activities are planned for the next three years to help address short-term funding gaps, while working towards long-term financial sustainability.

SADC Ministers of Health have committed to exploring the establishment of a regional trust fund, which would support funding for malaria, among other regional health priorities. While it is still in the early stages – a taskforce will be developed headed by UNAIDS Ambassador, Professor Sheila Tlou – this is a high priority of the Ministers, and it is strongly supported by private sector health partners.

Other sustainable sources: The E8 recognizes the importance of setting up additional funding mechanisms that would reduce the E8’s reliance on external sources. To this end, the E8 will be conducting an assessment of other financial mechanisms that would be feasible as alternatives to donor financing. Other external donors as well as private sector contributions will also be explored as a source of funding for the E8. The corporate sector has a stake in the elimination of malaria, as it benefits from a healthy workforce. The Lubombo Spatial Development Initiative (LSDI) has served as a model program initiated by the private sector and motivated by the “business case” for investing in malaria, which is ultimately more sustainable than appeals for corporate investment that are based on corporate social responsibility alone. Private sector participants also feature prominently in the E8’s Technical Committee and consultation processes.

SECTION 3: FUNDING REQUEST TO THE GLOBAL FUND

This section details the request for funding and how the investment is strategically targeted to achieve greater impact on the disease and health systems. It requests an analysis of the key programmatic gaps, which forms the basis upon which the request is prioritized. The modular template (Table 2) organizes the request to clearly link the selected modules of interventions to the goals and objectives of the program, and associates them with indicators, targets, and costs.

3.1 Programmatic Gap Analysis

A programmatic gap analysis needs to be conducted for three to six priority modules.

Complete a programmatic gap table (Table 1) detailing the quantifiable priority module(s) within the funding request. For any selected priority modules that are difficult to quantify (i.e. not service delivery modules), explain the gaps, the types of activities in place, the populations or groups involved, and the current funding sources and gaps.

If applicable, ensure that the coverage levels for the priority modules selected are consistent with the coverage targets in section D of the modular template (Table 2).

1-2 PAGES SUGGESTED – only for modules that are difficult to quantify

All three priority modules within the funding request are non-quantifiable. The table below
summarizes the planned activities and programmatic gaps for each of the three priority modules.

**Module 1: Program Management**

Planned activities (both funded and unfunded) under this module include:

- Elimination 8 Secretariat, including financial and grant management capacity (for E8 broadly, including but not limited to management of the proposed funds); this request includes personnel and operations costs (see E8 organogram, Annex 6, pg.11)
- Joint planning and collaboration forums, technical working groups
- Regional repository of specialist skills, including 1 Laboratories and Diagnosis Specialist, and 1 Entomologist
- Management and dissemination of new evidence, protocols, and best practices
- Advocacy for conducive policy, financing, strategy, and legal reform among Ministers, Heads of State, and financing partners
- Development of innovative, sustainable financing approaches, including PPP models
- E8 progress monitoring and accountability mechanisms, including scorecard, annual report and dissemination
- Coordination and synchronization of bi-lateral service provision through cross-border initiatives

*Current funding sources and gaps:* Current funding covers a Coordinator of the E8 Secretariat, as well as two full time staff – one for Finance and Administration and one to serve as a Data Analyst; eight positions on the E8 organogram are unfunded. Operations costs (rent, utilities, office equipment, some technical committee meetings, working group meetings, advocacy events, and travel) are provided by GHG-UCSF and the Namibia Ministry of Health. The remaining activities outlined above are unfunded.

**Module 2: Case Management**

Planned activities (both funded and unfunded) under this module include:

- Establish malaria posts (39, some static, some mobile) to expand access to neglected and underserved communities living in border regions, including MMPs. Specific inputs include stationary shipping containers (to be retrofitted and equipped to provide malaria testing and treatment services) as well as mobile caravans, vehicles, storage containers, container refurbishment, maintenance, staffing, and equipment). The malaria posts will also provide basic HIV and TB information, and other aspects of primary care (child illnesses).
- Border assessment survey to map locations of underserved communities to inform placement of malaria posts
- Operations support (supported by the E8 regional resources) to support outbreak containment in any one of the eight countries; includes outbreak control teams, vehicles, fuel, logistics support, and some commodities
- Dedicated teams located in border regions to support active surveillance and referrals for diagnosis and treatment, including environmental health technician (EHT) staff, surveillance officers, nurses, CHWs, and logistics and transport support. (The sustainability of these proposed positions is a risk, and mitigation strategies are further discussed in 4.4 below.)
- Building capacity of health and community workers in border regions on MMP-friendly services
- Regional, harmonized behavior change communication (BCC) campaigns for MMPs
- Equipping a laboratory within the region to provide regional capacity for malaria diagnosis QA, including a regional external quality assessment (EQA) program for RDTs and microscopy
- Establish regional capacity for specialized testing, including PCR, LAMP, and genotyping
through the regional laboratory

*Current funding sources and gaps:* Of the above activities, the governments are expected to support the placement of malaria tests and treatment into existing HIV and TB mobile clinics (such as the HIV corridor project and the regional TB in mining project). The commodities included in this funding request are those for the EDT strategy in the malaria posts (border districts), and for the regional response to outbreak containment. (Further justification for inclusion of these commodities in this funding request is provided in 3.2 below.)

**Module 3: Health information systems and M&E**

Planned activities (funded and unfunded) under this module include:

- Establishment of regional, harmonized indicators and tools for M&E
- Data collection and regional mapping of population mobility and malaria transmission risk
- Sentinel sites in border areas to track regional progress towards elimination and to inform response through redesign and redeployment of interventions
- Training and mentoring country surveillance and M&E staff to build capacity in using and conducting robust analysis of national and regional surveillance data, and applying this surveillance data towards national planning and prevention of importation
- Regional surveillance database and feedback mechanism to support integrated regional trend analysis and disseminating data to countries
- Joint monitoring of insecticide resistance, examining the presence and behaviour of different species of mosquitoes, and conducting vector mapping. Regional expert will conduct analysis and develop joint regional strategies to contain resistance (small operational budget for mentoring, regional studies)
- Regional coordination and harmonization of integrated vector management strategies, based on entomological surveillance and analysis mentioned above; regional coordination will ensure programs implemented on either side of one border are done in concert with one another, for mutual reinforcement of intended outcomes

*Current funding sources and gaps:* None of the above activities are funded; the full list of activities represents a funding gap.
3.2 Funding Request

In order to understand the applicant funding request:

a. Provide a strategic overview of the funding request to the Global Fund, up to the maximum allowable investment amount. Clearly outline the prioritization among different program areas while describing the funding request and any request above this amount.

b. Describe how it addresses the gaps and constraints described in sections 1, 2 and 3.1.

c. Describe the value-add of a regional approach in the context described in section 1 and how it complements, and not duplicates, the existing efforts of national governments and/or other major donors.

d. Describe how the new grant will continue scale up and/or refocus interventions, with reference to the past activities, their outcomes and lessons learned, as described in question 1.2.

e. If the Global Fund is supporting existing programs, explain how they will be adapted to maximize impact.

f. If support for direct services provision is included in the application, describe why such services cannot be covered by existing grants at country levels when available. Also describe how the proposed interventions will increase sustainability of other (single country) Global Fund investments, if applicable.

4-5 PAGES SUGGESTED

a. Provide a strategic overview of the funding request to the Global Fund, up to the maximum allowable investment amount. Clearly outline the prioritization among different program areas while describing the funding request and any request above this amount.

For this proposal to the Global Fund, the E8 has prioritized a set of activities that amount to $29.4 million over a three year period; these activities have been distributed between the allocation amount ($24 million) and the above allocation amount ($5.4 million).

After factoring in the total requested funding (within allocation) and other funding partners (expected government contributions and GHG), a funding gap of $24.9 million remains in the budget of the 5-year E8 Strategic Plan. (In this section, the “funding request” refers to the total allowable amount of $24 million.)

This funding request prioritizes a set of strategies and interventions that are designed to mitigate and minimize any external risks to elimination that countries face, thus creating an enabling environment and allowing the four frontline countries to eliminate. This is achieved by:

- Creating the necessary platforms and dialogues necessary to mount a regionally coordinated malaria response;
- Reducing the risk of importation from second line countries into frontline countries; and,
- Developing and managing systems for regional disease and entomological surveillance and monitoring; these systems will produce intelligence that enables the E8 countries to implement strategies and control measures that are in concert with one another and advance malaria elimination in the frontline four.

The stated objectives for each of the three modules are as follows:

A. To strengthen regional coordination in order to achieve elimination in each of the E8 member countries (module 1, E8 Strat Plan Obj. 1, 2, 5)

B. To expand access to early diagnosis and treatment for border communities as well as mobile and migrant populations (module 2, E8 Strat Plan Obj. 3, 4)
C. To strengthen regional epidemiological and entomological surveillance systems by the end of 2017 (module 3, E8 Strat Plan Obj. 4)

Figure 5 below summarizes the funding request according to each of the key modules.

Figure 5: E8 funding request, by module ($24m allocation and $5 above allocation)

A. To strengthen regional coordination in order to achieve elimination in each of the E8 member countries

The sub-regional ministerial declaration that established the Elimination 8 was first made in February 2009. Since then, limited progress has been made towards the goal of harmonizing and aligning regional processes and protocols, designing effective cross-border operations, and establishing regional platforms for surveillance and tracking of human movement. All these activities are critical to the success of the elimination goal, and yet they cannot be managed nor addressed by any country alone. To date, some progress has been made towards regional coordination; however, the recent surges in incidence in 2013 malaria data heighten the urgency for a more concerted and efficient regional collaboration effort to manage this regional trend. A regional coordination mechanism is therefore critical to facilitate interaction between countries, conduct joint planning processes, and provide platforms for information sharing. The funding request includes support for critical planning and monitoring events, which will involve participation of the E8 countries (including border district personnel) and expert advisors who will be engaged to provide input into the E8 strategies. Support for technical and programme management staff on the E8 Secretariat is also requested.

Sustaining the regional momentum towards elimination will require a joint approach to sustainable financing. In order to maintain the gains once elimination has been achieved, the region will require sustainable and predictable resource flows dedicated to preventing reintroduction. Long after malaria has been eliminated from the sub-region, the innate potential for transmission will remain, and the sustained transmission in the north of the region will mean that resurgence will persist as a very credible threat. While some of this investment for preventing reintroduction will be country-dependent, the region will require a regional funding base to support a surveillance system that continues to monitor trends across countries, as well as a stock of commodities to provide timely response to potential epidemics that may threaten resurgence. As the SADC region continues to pursue economic integration, there will also be a need for harmonization of approaches to the corresponding human movement. Financing for these activities must come from the region; thus there is an urgent need for the E8 – even as it begins its
operations – to pre-empt the financing challenge and to develop innovative, sustainable, and increasingly domestic sources of shared financing. The funding request includes minimal support for advocacy among Heads of State and Ministers of Finance to secure greater policy and finance support for malaria elimination, as well as expert services to design sustainable models of engagement and financing partnership with the private sector.

B. To expand access to early diagnosis and treatment for border communities as well as mobile and migrant populations

Cross-border collaboration is recognized as a necessary strategy for attaining elimination and containing the continued importation of cases across frontline and second line countries. The E8 is well positioned to build on the experiences and lessons learned from previous cross-border initiatives. For example, LSDI is a tri-lateral initiative between the governments of South Africa, Swaziland, and Mozambique, aimed at accelerating the agricultural and economic development of the Lubombo region. By extending malaria control support directly into Mozambique, LSDI supports this objectives while reducing malaria morbidity and mortality in the region. Of the many lessons learned from this project, LSDI showed that regional collaboration at an international level can be a highly effective tool in the fight against malaria in Africa.

Building on the success of LSDI and other models of collaboration (such as the APMEN Network), the E8 will distill key lessons learned to support effective collaborations through bilateral and multilateral cross-border projects. To address the disjointed approach to migrant populations and communities living within the region’s border areas, this funding request includes support for the development of harmonized policies and referral protocols for migrant populations that ensure optimal care across borders, as well as integrated behavior BCC campaigns.

A significant proportion of this funding request (34%) involves the establishment of 29 malaria posts in border districts, employing (limited) nursing staff and (mostly) community-health workers to provide services to underserved and mobile communities.42 Districts in western Mozambique and southern Angola, for example, have weak health system infrastructure, a generally lower level of socio-economic development, and high malaria incidence compared to their neighboring districts. Large volumes of human traffic crossing borders therefore facilitate movement of parasites. The malaria posts and mobile clinics will be strategically placed to allow access to early diagnosis and treatment for the communities who live in these areas and for those who frequently travel across the border, thus reducing the level of transmission and importation. This intervention has been proven along the Thailand-Myanmar border, where the expansion of malaria posts to allow early diagnosis and treatment resulted in a significant decline in malaria among the population living in the border district.43 The experience from this border also suggests that an aggressive strategy based on early detection and treatment of cases, combined with vector control and information, is a promising intervention for overcoming the challenge of malaria and potential importation at border areas. The requested funding covers the establishment and running of the border posts (a proportion of the malaria testing and treatment commodities, fuel, staff, registers); these posts will provide additional basic health information and services, but these are not included in this funding request. During the development of this concept note, E8 consulted with the developers of the regional TB in mining proposal as well as Northstar Alliance

42 The allocation request includes 29 malaria posts, while an additional 10 are proposed through the above allocation amount.
who manage HIV mobile clinics in transport corridors in the region; no immediate overlap in proposed locations was found, although E8 will continue to work closely with these projects to ensure complimentarity. (See Annex 1A for a detailed concept design and placement of the malaria posts.)

The requested funding includes support for diagnosis and treatment commodities. However, this support is not duplicative of quantification and procurement of RDTs and ACTs through the country grants. The targeted population is one that (i) resides outside of the coverage area of existing national health systems (i.e. hard-to-reach, geographically inaccessible, and neglected populations) and (ii) mobile and migrant populations, for whom there is no incentive for governments to serve. For these reasons, these populations would not be catered for within the quantification and procurement that governments typically conduct. Within their individual country grants, governments continue to cover local residents, while this regional proposal complements localized investments with support for services to populations that either fall outside of the “catchment area” of any one government, as well as those that generally live in neglected border areas with no access to health services, and yet contribute significantly to ongoing transmission for their neighbours. However, there will remain some overlap in the national and regional quantification processes, and some effort will be made, in consultation with the countries and the Fund, to account for potential double-counting.

Diagnosis takes on greater importance in elimination settings, as countries need to be able to detect asymptomatic carriers with low parasite densities. Frontline countries are working towards strengthening laboratory-based diagnosis and introducing better tools, such as PCR and LAMP. The E8 will undertake a process to identify a qualified, accredited laboratory to host additional malaria testing capacity for the region. (One potential laboratory is the Tropical Diseases Research Center in Ndola, Zambia; this lab has previously received funding from the African Development Bank in order to help build its capacity as a reference laboratory for malaria testing in the region). The E8 aims to equip a regional laboratory that will house a programme of external quality assurance (EQA) and proficiency testing for diagnosis. Other testing capacity which will be established in the lab include genotyping to determine origin of cases, molecular testing in mass screening campaigns, serology testing to assess changes in transmission intensity, maintenance of a supranational malaria slide bank, as well as training for national laboratory technicians. A key aspect of the function of this laboratory will be the communication of testing results and trends to the countries and to the region as a whole. The funding request does not include infrastructure (as an existing laboratory will be selected), but rather procurement and maintenance of the necessary laboratory equipment, administration and other running costs; and personnel.

C. To strengthen regional epidemiological and entomological surveillance systems by the end of 2017

A coordinated and responsive surveillance system is an essential component of the regional collaborative effort. As they approach elimination, frontline countries need to have timely data regarding transmission patterns among their more endemic neighbours in order to plan appropriate responses to potential sources of importation. These same systems are needed by

44 As Swaziland is approaching zero local cases, it needs to conduct genotyping analysis in order to determine the origin of infections, distinguishing local cases from introduced or imported cases of malaria. However, the country is sending its samples to the US for testing, and would benefit from the capacity and the resources to do this locally.
second line countries as they engage in malaria control and prepare for elimination. However, there is variability across the region in the quality of surveillance information, the frequency and platforms for reporting, and the use of case definitions. Building on significant investments by the Global Fund towards designing and strengthening robust surveillance systems within the countries, this funding request includes support for a combined regional platform for collating surveillance data at high spatial and temporal resolution (i.e. ultimately aiming for facility- and community-level reporting on a weekly reporting). A core set of key harmonized indicators will be agreed upon, and countries (border districts in particular) will be required to regularly upload data onto an online portal. (Delays in availability of district data at the national levels are common; the E8 will work towards agreements and infrastructure to allow districts to upload data directly into the regional database. While this system bypasses existing national systems, this verticalized approach is warranted in a malaria elimination setting, at least as a temporary measure.) A focal person (based at the E8 Secretariat) will be responsible for the active management of the data to feed it back to the countries and border districts in question, allowing effective use of the data to contain transmission. The success of this system will rely on the rapid availability of data within the country systems. Global Fund and other country resources will be leveraged to enable rapid reporting in all frontline countries and border districts of second line countries. *(See Annex 1B) for design of surveillance system and components.*

The experience of Swaziland, northern Namibia, South Africa, and even eastern Zimbabwe provides ample evidence of the risk that poor outbreak containment poses to the success of countries that have reduced transmission. This funding request includes a small emergency fund for outbreak containment; the budgeted resources allow for activation of a rapid response where the affected country is unable to respond, either because of weak systems or inadequate financing. The E8 would provide funding to allow field teams from the affected country - supported by a regional team - to coordinate a response at the community level, with enhanced focus on high-risk populations in the affected communities. The regional team will be comprised of various regional partners with emergency response experience and with flexibility to travel into the countries in question; members of this team include WHO, SADC Military Health Services, and the E8 Secretariat staff. The role of the regional team is to rapidly mobilize regional stock for the affected sites and to capacitate local teams on the ground. This team will activate links to the Ministerial level to facilitate and expedite the necessary processes to ensure rapid response and containment of large outbreaks. (Further justification for the inclusion of this budget in a regional funding request, as opposed to the national proposals, is included in Section 3.2c below.) Strict controls and requirements will be put in place to decide what criteria will trigger the release of these regional funds; in years when these funds are not used, they will be reprogrammed in agreement with the Global Fund.

Sentinel sites will be established in the frontline and second line districts border districts. These will support close monitoring of progress in cross-border interventions, informing dynamic evolution of the E8 strategies. Various diagnostics will be used (including molecular methods). *Annex 5* lists a subset of the potential indicators which would be tracked through the sentinel sites.

Incidence data will be collected, along with other transmission risk variables and human movement data, to update regional risks of malaria transmission. These will be used to update country plans, and to better target sources of infection. While countries have begun to develop
national risk maps, the incorporation of data on human movement patterns across the region enhances the region’s and the countries’ understanding of malaria transmission pathways. This, in turn, informs intervention deployment and allows for optimal targeting of limited resources.

There is a shortage of trained entomologists in the region; four of the eight country malaria programs do not have entomologists on staff. **Regional expertise for entomology** will be cultivated through regular trainings. These experts will then coordinate and strengthen insecticide resistance and vector behaviour monitoring activities in the region. Given the concerns about changing vector behaviour, regional studies on biting behaviour will inform selection of the most effective interventions for a particular location. The existence of regional expert capacity will allow each country to leverage this resource. Other guidance on entomology includes management of emerging insecticide resistance and development of monitoring that studies these trends and patterns with a regional scope, assessing the extent to which the emerging threats in one country are moving to new countries. The funding request includes funding for expert technical assistance to support countries, as well as travel for mentoring of country personnel. The E8 will also support the entomological capacity in the region by serving as a center for training and capacity building in this field.

**ABOVE ALLOCATION REQUEST:**

The E8’s request that falls above the allocated amount would be used to expand the case management strategy, further reducing importation into the second line countries. This request includes an additional 10 malaria posts (these would likely be placed along the Mozambican border, which is the longest border, and which borders 2 eliminating countries – Swaziland and South Africa. It would also be used to conduct proactive case detection and treatment among high-risk populations, including the miners and other migrant populations coming into Swaziland and South Africa. Parasite screening, combined with case follow up (conducted by border elimination response teams) would ensure effective diagnosis and treatment of infections, and is expected to significantly accelerate progress in this region.

**b. Describe how it addresses the gaps and constraints described in sections 1, 2 and 3.1.**

Table 6 below summarizes the way in which this funding request specifically addresses challenges to elimination that have been identified in sections 1, 2, and 3.1.

**Table 6: Support to address key malaria elimination gaps and constraints through this funding request**

<table>
<thead>
<tr>
<th>Gap/Constraint</th>
<th>How this funding request addresses the gap</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCC and malaria prevention for migrant populations</td>
<td>The mapping of malaria transmission pathways in relation to human movement (part of the funding request under Objective C) will inform the design of targeted communications and prevention interventions among the migrant populations within the sub-region. Research by IOM and other partners will be referenced to inform the design of behavior change communication campaigns for migrant populations.</td>
</tr>
<tr>
<td>Limited access to care for underserved border communities and migrant populations</td>
<td>Malaria posts (with capacity for mobile outreach) will be established to expand access to early malaria diagnosis and treatment for vulnerable populations. They will be designed to encourage free attendance by undocumented communities, cross-border traders, and pastoral communities in transit, as well as residents of border districts who live in</td>
</tr>
</tbody>
</table>
neglected areas that far from access to traditional health facilities.

<table>
<thead>
<tr>
<th><strong>Health systems capacity and socio-economic development</strong></th>
<th>The malaria posts will provide free care (including for HIV, TB, and other childhood illnesses), filling a gap of access to health where traditional health services are not sufficient.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regional collaboration and sharing of disease surveillance data, analysis and feedback</strong></td>
<td>A regional surveillance database will be designed; countries will upload weekly disease data onto an online platform. Data will be aggregated and fed back to countries and border districts to inform appropriate response. Support will be provided to harmonize reporting of some minimum set of common indicators.</td>
</tr>
<tr>
<td><strong>Insecticide resistance</strong></td>
<td>Through the work of the E8 Technical Committee and the support of the expert entomologist, efforts will be made to ensure compliance to the SADC protocols on harmonization and adherence to regional waste management standards. (No specific funding is requested for this, but the existing technical working groups and personnel will be leveraged to manage the joint response to insecticide resistance.)</td>
</tr>
<tr>
<td><strong>Evidence-based targeting of interventions</strong></td>
<td>Mapping of transmission risk and analysis of the relative cost-efficiency associated with different interventions will be provided to countries, informing better, more effective targeting of appropriate interventions.</td>
</tr>
<tr>
<td><strong>Community participation</strong></td>
<td>In all the cross-border collaborations, community meetings with participation from both/all sides of the border will be held. Traditional chiefs, herdsmen, and other local government officials will be integral to the planning and management of the cross-border activities. In addition, CHWs (who are recruited from the communities) will be involved in mobilizing households and border communities to encourage use of the malaria posts, as well as to support BCC campaigns for MMPs. CHWs will also play a central role in generating demand for malaria EDT, and providing services in the malaria posts.</td>
</tr>
</tbody>
</table>

c. Describe the value-add of a regional approach in the context described in section 1 and how it complements, and not duplicates, the existing efforts of national governments and/or other major donors.

The fundamental concept of the E8 is that the whole is greater than the sum of its individual parts: the investments being made by the individual parts (or countries) will not realize their full return (elimination) without the contribution and mutual reinforcement of the larger whole. This funding request (as well as the broader E8 strategy) prioritizes those challenges that threaten the success of the respective countries, which any one country could not independently address.

The funding request includes a minimal budget for commodities. Instead, the E8 will leverage existing activities and resources at the country level. Apart from regional collaboration activities, the activities that will involve country-based implementation include the management of the malaria posts, as well as the epidemic response activities outlined in (a) above. The justification for including these activities in this funding request stems from the fact that they can be considered investments with “positive externalities.” That is, these activities, if financed by one country, will also benefit another country (the neighbouring country in this case, or the broader E8 sub-region); since the financing country would not stand to receive the full value of the investment within its borders, the investment case is not as compelling for one individual country. As a result, support for these activities with positive externalities is made through this shared source of funding.

Issues of migration, which involve communities moving back and forth across very porous borders,
warrant a regional approach; no individual government can deal comprehensively with the health concerns of mobile populations. The establishment of malaria posts therefore represents an investment that benefits communities on both sides of the border. Because it is not benefitting citizens of just one particular country, it requires a regional approach to coordination and financing as there is an economic disincentive for one government to finance these services. The malaria posts will also serve expand access to underserved communities living near the border, who are typically underserved as public services and the health system infrastructure of either country does not sufficiently reach these territories. Providing access to these residents of border districts (particularly on the second line side of the border) supports the regional approach because reducing the prevalence of malaria among these populations reduces the reservoir of infection, which in turn reduces the importation of parasites to the frontline.

Similarly, the emergency stock for outbreak containment represents an investment that will benefit the wider region. When a large outbreak occurs in any one of the E8 countries, it has the potential to cause onward transmission into an area that had otherwise successfully reduced transmission. By providing for shared resources to support emergency response to unpredictable outbreaks, the E8 reduces the risk of resurgence in other regions of the E8. While the country experiencing the outbreak is indeed expected to maintain financing responsibility for epidemic response, the reality is that these budgets are mobilized too slowly, or scarce budgets are prioritized for higher transmission regions away from border areas with frontline countries. However, the inability of one country to maintain outbreaks in border areas should not be allowed to become a barrier to success for the rest of the region.

d. Describe how the new grant will continue scale up and/or refocus interventions, with reference to the past activities, their outcomes and lessons learned, as described in question 1.2.

N/A. The implementation of the new grant would mark the beginning of key scale up and implementation of the E8 Strategic Plan.

e. If the Global Fund is supporting existing programs, explain how they will be adapted to maximize impact.

The relevant programs that the Global Fund is supporting are at the country level, where the Global Fund is one of the largest investors in malaria programs (both control and elimination) across the E8 sub-region.

A priority area within this grant, is the establishment of a regional surveillance system. In order to maximize the value that the Global Fund and the E8 will get on this investment into a regional surveillance platform, the countries’ surveillance systems need to be strengthened and adapted to generate quality surveillance data that will contribute to a regional surveillance picture, while also meeting the countries’ needs. In order to be effective, the regional surveillance system will require input of data on at least a weekly basis, at a relatively high spatial resolution (i.e. facility- and ideally community-level reporting). Among the countries that are currently supported by the Global Fund to implement elimination strategies (Namibia, Swaziland, southern Zimbabwe), malaria reporting is already occurring at a high temporal resolution (at least weekly, in some cases daily). However, in the second line countries, surveillance systems will be adapted to allow weekly reporting at the facility or community level, among the border districts at a minimum. In addition, investments into CHWs will be leveraged to provide support towards migrant populations and border communities. In particular, CHWs who are already deployed towards malaria activities in their respective countries (Swaziland, Zambia, Zimbabwe, Namibia) will be trained to become sensitive to the specific strategies for malaria migrant populations.

Additional areas in which the E8 will seek to coordinate with country programs to adapt the Global Fund’s existing investments include diagnosis (e.g. enrolling existing diagnosis programs into EQA), as well as bilateral cross-border collaboration (e.g. between Zimbabwe and Zambia).
3.3 Modular Template

Complete the modular template (Table 2) based on the funding request outlined in section 3.2. To accompany the modular template, briefly:

a. Explain the rationale for the selection and prioritization of modules and interventions.

b. Clearly describe the expected and measurable goals and outcomes that address gaps and encourage accelerated impact, referring to evidence of effectiveness of the interventions being proposed.

3-4 PAGES SUGGESTED

a. Explain the rationale for the selection and prioritization of modules and interventions.

This funding request prioritizes a sub-set of interventions within the E8 Strategic Plan that:

(i) mitigate the external risks that countries face as they pursue elimination,

(ii) cannot be conducted by countries working independently,

(iii) support the strengthening of control strategies in both the frontline and second line countries, thus maintaining the gains, and

(iv) leverage the significant resources being made by the Global Fund and other investors in the countries, ensuring maximum value for money.

The proposed modules are based on a series of extensive consultations with a range of stakeholders, including members of the malaria control programs of E8 countries, partner organizations, and civil society.

Program Management Module

Policy, Planning, Coordination, and Management Intervention: This proposal has prioritized a number of interventions that advance the first objective in the E8 Strategic Plan: “to strengthen regional coordination in order to achieve elimination in each of the E8 member countries.” Because E8 member states have jointly recognized that achieving regional malaria elimination will require a coordinated political, financing, and implementation strategy, the E8 has prioritized the development of a platform for collaboration, among ministers of health, heads of state, and financing partners. Many of the barriers to partnership across frontline and second line barriers are not necessarily about a lack of resources, but about failure to negotiate terms of partnership and engagement that are acceptable to both governments. In order to effectively identify and implement this strategy, the E8 will conduct joint planning sessions, diplomatic negotiation forums, and technical working groups with key stakeholders from across the E8 region.

Grant Management: The proposal includes a 12% budget for grant management. For the purposes of risk management, fund management will be outsourced to an external fund management agency (FMA) to hold and manage the grant funds for the first two years. To reduce administrative costs both within this grant and for future grants, the E8 Secretariat will work to build internal capacity to perform this function by the third year of the grant.

Other – Financing: The absence of sustainable and predictable financing – both in the medium term (to achieve elimination) and in the long term (to sustain elimination) – remains one of the largest risks to the elimination endeavour in southern Africa. The E8 recognizes the vulnerability of malaria elimination prospects in the region if there is no sustainable financing. This intervention
focuses on designing mechanisms that effectively pool resources from other external sources, the private sector, government contributions, as well as new, innovative mechanisms.

Other – Cross-border Community Harmonization: MMPs are the main target population of E8 programming. Improving health outcomes for this population requires greater cross-border collaboration among the community leaders, public service providers, immigration officials, and other organizations that interact with this population. This is necessary to develop joint, harmonized strategies on how to ensure optimal health outcomes, and how to provide MMP-friendly services that also protect their rights. Areas in particular need of coordinated planning include vector control, civil society and community partnerships across borders, and development of strategies for containing cross-border malaria transmission through EDT.

Case Management

Epidemic Preparedness and Response: A central threat to elimination in the region is the containment of malaria outbreaks in border regions, which then result in resurgence in neighbouring countries. 2013 incidence data shows an increase in cases in many of the E8 countries; outbreaks in Mozambique, for example, have been documented as the cause of increases in cases in Swaziland, South Africa, and eastern Zimbabwe. To prevent the weak EPR systems in one country from causing spillover of outbreaks into neighbouring countries, it is necessary (i) to activate regional surveillance systems to provide intelligence on the outbreaks, (ii) to use regional negotiation and accountability platforms to ensure that the country in question intervenes in a way that optimizes the response for the whole region, and (iii) to avail capacity, if necessary, to support the country in planning and executing a rapid response. The E8 has prioritized the updating of cross-border EPR plans and training of healthcare workers in cross-border EPR, as well as the availability of operations and commodity support.

IEC/BCC: The E8 has prioritized a regionally harmonized BCC plan in order to support the adoption of appropriate prevention interventions and early treatment seeking. Because MMPs travel across the region, there is a need for consistent policies and messaging about accessing services as well as seeking treatment. These BCC campaigns cannot therefore be managed by one country, as the objective is to have a branded BCC campaign across all countries, particularly in border districts, in areas where MMPs cross or seek other services.

Facility-Based Treatment: Parasite movement is facilitated by human mobility, and by MMPs in particular. While improving access to EDTs for MMPs is recognized as a necessary intervention, there are economic disincentives for countries to provide services for MMPs from countries other than their own. The formulation of policies and procedures for dealing with MMPs requires collaboration across all countries around a particular border. A core intervention in this proposal is therefore setting up – and adapting existing HIV/TB-dedicated – mobile and static malaria posts in border areas with poor access to health services. The rationale behind this prioritization comes from the recognition that low-access border areas are often the sites of ongoing cross-border transmission and subsequent importation and resurgence. Frontline countries are not able to detect and treat all cases coming through these porous borders, and the most effective way to reduce this transmission is to “drain the source” of these infections on the higher transmission side. However, given the practical situation facing second-line countries, national malaria resources are often dedicated away from these border areas into higher burden areas further north. To address this principal-agent challenge, the E8 will set up these clinics to provide critical malaria testing, treatment, and surveillance activities in underserved border areas. This strategy
simultaneously supports ongoing control efforts in the southern districts of second line countries, supporting their subsequent, gradual transition to elimination.

_Other – Laboratory:_ Acquiring the necessary equipment and expertise in more advanced molecular testing methods in every country would limit the cost efficiency of the region’s investments into malaria diagnosis. While the current frontline countries currently require more sophisticated diagnostic techniques to support their elimination strategies, second line countries, and even other SADC countries, will eventually require this testing capacity as they embark on elimination strategies. Establishing a regional malaria diagnosis laboratory is therefore a cost-effective way of ensuring access to the required EQA and testing capacities, and also developing local capacity (as opposed to outsourcing some of these tests to other parts of the world). This intervention was prioritized because of countries’ stated need for greater laboratory capacity, and because of recognition of the efficiencies that can be gained by having a central lab for expensive testing requirements. Rather than building a whole new center, the E8 will capacitate an existing laboratory so that it will be able to perform regional functions.

**Health Systems Strengthening – Health Information Systems and M&E**

_Routine Reporting:_ As discussed in Section 2, the unit of analysis when it comes to tracking and analyzing malaria transmission trends has to be larger than the single country unit. The design of appropriate responses in one country can often be better informed by information about transmission patterns, potential insecticide resistance, and migration patterns from other countries. This module therefore prioritizes the development of a regional database for information- and data-sharing and the establishment of regional harmonized indicators; the E8 will work to standardize the reporting tools necessary for countries to engage in coordinated, effective regional surveillance and tracking efforts. A special emphasis will be placed on collecting data on mobile populations and cross-border malaria transmission in order to inform interventions in border areas.

_Analysis, Review, and Transparency:_ To ensure that malaria data is put into use for planning and intervention design at both the country and the regional level, the E8 will support a regional surveillance feedback mechanism that facilitates integrated regional trend analysis. Training on M&E frameworks and tools will improve accountability to regional targets. The E8 will also sponsor an annual regional symposium for countries to share and review best practices, further disseminating useful findings and best practices.

_Prevalence Surveys:_ There is currently a dearth of standardized prevalence data in the region, particularly in the border districts. Through conducting prevalence surveys in Year 1, the E8 will work to establish a baseline upon which future progress can be measured. This survey will focus on the following borders: Namibia and Angola; Botswana, Namibia, and Zambia; South Africa and Zimbabwe; and South Africa, Swaziland, and Mozambique.

_Other – Entomological Capacity and Surveillance:_ Expertise in some of the analytical and operational research elements of entomology are scarce in the region; this skill set will also be housed within the above-mentioned lab, and made available to the region. In conjunction with sentinel sites in districts, the entomology expert will monitor and advise on response to insecticide resistance in the region, in accordance with SADC standards.

_b. Clearly describe the expected and measurable goals and outcomes that address gaps and encourage accelerated impact, referring to evidence of effectiveness of the interventions being
**Accelerated attainment of zero local transmission**

With the additional support of the Global Fund, the E8 expects to have reduced the importation of malaria into Swaziland, and that Swaziland will have achieved zero local transmission **by 2017**. The E8 will achieve this by facilitating the necessary diplomatic and political collaboration between the involved governments; by strategically coordinating partners from the governments, technical advisors, and funding partners to steer towards the elimination goal in this part of the region; and by establishing malaria posts strategically in Mozambique and Swaziland to ensure early access to EDT for migrant populations. The attainment of zero transmission in Swaziland will provide proof of concept that elimination in a mainland country in Africa is possible. Evidence from these efforts will be documented and disseminated to further accelerate progress elsewhere in the region.

In addition, the requested funding will enable reductions in importation into Namibia, South Africa, and Botswana, accelerating their progress towards their respective elimination goals of 2018 (Botswana and South Africa) and 2020 (Namibia). By 2017, the E8 expects that incidence will have been reduced among the frontline countries to 0.25 per 1,000, leaving these three countries well on the way towards elimination.

The establishment of EDT capacity in the border regions of the second line countries will strengthen their own control efforts, expanding access to underserved populations. This will help to complement their investments (which tend to be more focused on their northern regions) by improving control in the south and beginning the creation of a buffer of lower malaria transmission along the southern borders of the second line countries, positioning them to pursue elimination in subsequent years. In Zimbabwe in particular, where southern Zimbabwe is already implementing an elimination programme, the establishment of EDT capacity, surveillance, and diagnosis strengthening from the E8 will allow seven districts of southern Zimbabwe to achieve zero local transmission by 2017, while 13 additional districts in Zimbabwe will also progress towards elimination. The capacity to rapidly mobilize operations and logistics management support as well as service delivery capacity, and to leverage this capacity across countries, will prevent resurgence from occurring in eliminating countries, further enhancing their chances of elimination. Data from several provinces of the E8 countries displayed increases in incidence. The E8 will enable rigorous collection and analysis of data at a regional level, providing better insights into transmission patterns, and informing programmes on more strategic responses in relation to regional trends.

**Expanded access to early diagnosis and testing at borders:** The E8 estimates that its malaria clinics, strategically placed, will allow access to services for a population of 2.3 million across all the proposed border sites. Underserved populations and migrants will be able to access treatment earlier than they would have, and before they travel to low transmission regions. The E8 expects to test all prospective patients walking into the malaria clinics; and to provide treatment to all confirmed cases. This will in turn result in reduced importation and averted onward transmission in the frontline countries. Other access points (such as existing public and private facilities, and HIV and TB mobile clinics) will also be able to provide better services, including diagnosis of malaria and referral care where necessary. (A methodology will be developed to estimate the number and proportion of cases averted through the EDT strategy, as well as to determine the changing prevalence of malaria in the border regions.)

**Quality assured diagnosis of infections:** Through the establishment of the regional laboratory,
All E8 countries will be enrolled into an EQA programme with an accredited laboratory, ensuring access to quality assured diagnosis of infections. All eight countries will have access to PCR testing to support surveys as well as routine quality assurance of diagnosis, while countries that have achieved zero transmission will have access to genotyping to distinguish local and introduced cases as they apply for certification. Performance metrics will be developed for the EQA program, enabling better tracking of program impact on improving diagnosis, particularly of asymptomatic or low-density infections.

**Rigorous analysis and feedback of regional surveillance data:** For the first time, the E8 countries will collectively track one common set of indicators, with standardized protocols and definitions. By 2017, 152 districts (all frontline districts and the border districts of the second line) will be reporting to the regional surveillance database on a weekly basis. Quarterly surveillance reports of data from across the E8 will be mapped spatially and analysed, and reported back to the countries. Countries will develop their annual implementation plans with support from E8 and other technical advisors, based on the regional surveillance patterns, selecting the most appropriate interventions and more effectively targeting their interventions.

**Regional harmonized strategy for integrated vector control and management of insecticide resistance:** Standardized reporting and studies on entomology will be conducted, and the E8 countries will develop one harmonized evidence-based strategy on integrated vector management and management of insecticide resistance, laying out the various roles and responsibilities of countries in managing insecticide resistance.

**Malaria elimination supported at highest political levels:** Heads of State, Ministers of Health, and Ministers of Finance will make policy and financial commitments towards malaria elimination, enhancing the prospects for the long-term sustainability of elimination, and also signaling the commitment of the region to other external partners. Through the E8 Ministerial Committee, the ministers will keep each other accountable for commitments made, and will frequently evaluate their progress through the malaria elimination scorecard.

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45 Most will be enrolled in the E8 regional lab, while some will use existing capacity in country where present.
3.4 Focus on Key Populations and/or Highest-impact Interventions

This question is not applicable if all countries included in this concept note are low-income countries.

Describe how the requested funding focuses on undeserved and key populations and/or highest-impact interventions, as per the Global Fund’s Eligibility and Counterpart Financing Policy requirement.

a. For the lower-middle-income countries included in the request, describe how the funding requested for those countries focuses at least 50 percent of the budget on underserved and key populations and/or highest-impact interventions.

b. For the upper-middle-income countries and any non-eligible countries included in the request, describe how the funding request focuses 100 percent of the budget on underserved and key populations and/or highest-impact interventions.

½ PAGE SUGGESTED

100 percent of service delivery through this funding request is targeted at mobile and migrant populations as well as underserved populations in border regions, which represent a key underserved population (See Section 1.1).

SECTION 4: IMPLEMENTATION ARRANGEMENTS AND RISK ASSESSMENT

4.1 Overview of Implementation Arrangements

Provide an overview of the proposed implementation arrangements for the funding request. In the response, describe:

a. How do the proposed implementation arrangements take into account the regional nature of the investment?

b. If applicable, the reason why the proposed implementation arrangement does not reflect a dual-track financing arrangement (i.e. both government and non-government sector Principal Recipient(s)).

c. If more than one Principal Recipient is nominated, how coordination will occur between Principal Recipients.

d. If applicable, the type of sub-recipient management arrangements likely to be put into place and whether sub-recipients have been identified.

e. If applicable, how coordination will occur between each nominated Principal Recipient and its respective sub-recipients.

f. How representatives of women’s organizations, people living with the three diseases, and other key populations will actively participate in the implementation of this funding request.

1-2 PAGES SUGGESTED

Significant consultation took place among the governing bodies of the E8 regarding the selection of a PR for this proposed funding. The PR selection process is discussed in further detail in Annex 7.

a. How do the proposed implementation arrangements take into account the regional nature of the investment?

The proposed principal recipient is the E8 Secretariat, which is a non-profit organization that has been established to serve as the implementing arm of the E8’s Ministerial and Technical
Committees. The E8 Secretariat is the main convener and facilitator of the eight countries, it facilitates collaboration across the eight country governments and malaria programs, and it advances the decisions and action points of the two committees and the member countries; it is therefore best positioned to allow for effective cross-regional coordination of activities outlined in this proposal.

The E8 Technical Committee held several consultations to consider respective PRs (See Annex 8, pg. 80). Other PRs that were considered were IOM and the SADC Secretariat; however, it was ultimately decided that the E8 Secretariat would be the most favorable for the long term sustainability of the initiative. This investment by the Global Fund would support the development of the required systems and capacity for effective organization and financial management, even beyond the management of Global Fund resources.

All the proposed activities under this funding request are of a regional nature; they do not represent NMCP-level activities, and therefore none of the proposed funds are country-specific. A variety of activities and interventions will occur within certain countries, although they are not specific to the country, but rather activities whose beneficiaries or audience extend to the other countries. Such activities will be implemented by appropriate technical and implementing partners (mostly NGOs or universities), partnering closely with the E8 Technical Committee and Secretariat.

b. If applicable, the reason why the proposed implementation arrangement does not reflect a dual-track financing arrangement (i.e. both government and non-government sector Principal Recipient(s)).

The main intervention requiring country-level activity is the malaria posts and the outbreak containment activities, both of which will involve activity on either or both sides of the various borders across the E8 sub-region. However, channeling these resources through the eight country programs would be highly cost-inefficient due to the multiple transaction costs which would be involved – i.e. developing recipient arrangements with eight different countries. The resources for managing this activity will thus be channeled through one sub-recipient with experience and implementation systems across all or most countries and border regions in particular (see implementation arrangements below). This will bring efficiency as it minimizes transactional, coordinating, and overhead costs, while simultaneously minimizing costs related to grant management. The respective governments will nevertheless play a key role in managing these activities, particularly for the sake of sustainability and eventual absorption of the facilities.

While the proposed implementation arrangements do not take a dual-track financing approach, the E8 Secretariat is essentially an arm that represents the member countries, and therefore this arrangement still upholds the principles of sustainability and ownership that are the goal of dual-track financing. The E8 Secretariat is governed by, and accountable to, the E8 Technical Committee and the Ministerial Committee. Both committees are made up of country representatives, and both were established to implement and manage the collaborative decisions and strategies of the eight countries.

c. If more than one Principal Recipient is nominated, how coordination will occur between Principal Recipients.

Not applicable.

d. If applicable, the type of sub-recipient management arrangements likely to be put into place and whether sub-recipients have been identified.
An FMA will be sub-contracted to handle the grant funds on behalf of the E8 Secretariat. The FMA will retain responsibility for all financial transactions. This allows E8 Secretariat sufficient time (approximately two years) to develop and strengthen the requisite organizational experience and systems to serve in this role. Although the specific sub-recipients (SRs) have not been identified, selection criteria will include proven experience, demonstrated through strong performance and impact; a regional footprint (i.e. offices across most or all of the E8 countries); and proven experience working in border regions with MMPs (in the case of the malaria posts).

e. If applicable, how coordination will occur between each nominated Principal Recipient and its respective sub-recipients.

As all activities within the E8 complement and reinforce each other, joint strategic planning and performance reviews will be critical to the coordination of SRs, as well as between the PR and SRs. The E8 anticipates that given the regional nature of implementation – SRs located across the region, the E8 will need to pro-actively plan and budget for joint meetings, which will allow all partners to plan and implement in concert with another, and towards the overall goal of the E8. Within the Secretariat’s management team, focal persons will be identified to work closely with each SR, serving as a liaison between the PR and the SRs. In order to ensure performance and alignment, the PR team will actively engage with the SRs to contribute to their strategies, and to conduct joint supervision and data quality assessment visits.

As part of the rapid capacity building plan, the E8 will develop guidelines for partner selection. These will provide greater detail on the coordination structures that will be put in place to manage implementing partners, as well as sub-recipients.

f. How representatives of women’s organizations, people living with the three diseases, and other key populations will actively participate in the implementation of this funding request.

The E8 will work closely with the civil society representatives on the country CCMs, as well as specific organizations representing migrants and border communities.
4.2 Ensuring Implementation Efficiencies

Complete this question only if the Regional Coordinating Mechanism (RCM) / Regional Organization (RO) is overseeing other Global Fund grants.

Describe how the requested funding links to existing or planned Global Fund grants.
In particular, from a program management perspective, explain how this request complements (and not duplicates) any human resources, training, monitoring and evaluation, and supervision activities.

1 PAGE SUGGESTED

N/A

4.3 Minimum Standards for Principal Recipients and Program Delivery

Complete this table for each nominated Principal Recipient. For more information on minimum standards, please refer to the concept note instructions.

<table>
<thead>
<tr>
<th>PR 1 Name</th>
<th>Elimination 8</th>
<th>Sector</th>
<th>NGO</th>
</tr>
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<tbody>
<tr>
<td>Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?</td>
<td>No</td>
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Minimum Standards

1. The Principal Recipient demonstrates effective management structures and planning

The Elimination 8 has established the office of the E8 Secretariat and is currently expanding its staffing capacity. It is also in the process of establishing effective structures for management of Grant Funds and planning. As part of efforts to rapidly strengthen its capacity to serve as PR, a capacity development plan (based on the Global Fund’s Capacity Assessment Tool) has been developed and is in the process of being implemented (Annex 6). Funding has been mobilized from GHG-UCSF to support its implementation over a six-month period, ensuring that the E8 will have established the relevant core capacities. The E8 will, during Years 1 and 2, outsource financial management to a fiscal agent as a risk mitigation measure, given the fact that more time is required to establish credible, strong financial controls.

2. The Principal Recipient has the capacity and systems for effective management and oversight of sub-recipients (and relevant sub-|

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| 3. | The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud  

Procurement and finance policies will be developed as part of the capacity building process, in line with international standards and practices. |
| 4. | The financial management system of the Principal Recipient is effective and accurate  

An FMA will be selected through a competitive process. The FMA will be chosen based on proven experience, as well as the ability to support capacity building for gradual transfer to E8. |
| 5. | If applicable, central warehousing and regional warehouse have capacity, and are aligned with good storage practices to ensure adequate condition, integrity and security of health products  

The E8 will subcontract existing warehousing services from one or more of the eight countries, allowing strategic placement of stocks for rapid delivery to the needed sites. Where country capacity is not sufficient, the E8 will identify a private sector agent. |
| 6. | If applicable, the distribution systems and transportation arrangements are efficient to ensure continued and secured supply of health products to end users to avoid treatment/program disruptions  

As above, E8 will leverage the systems which exist in the E8 countries. |
| 7. | Data-collection capacity and tools are in place to monitor program performance  

Development of harmonized indicators and protocols to guide collection is a key activity in the E8 strategy. Tools will be in place mid-way through Year 1, while capacity for data collection and analysis has been budgeted for within the Secretariat team. The E8 will also leverage country investments in strengthening monitoring, and will use these as much as possible to complement data sources. |
| 8. | A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately  

The E8 Secretariat aims to recruit three full-time staff dedicated to M&E functions (database management and analysis, field surveillance strengthening, design and management of M&E frameworks). The reporting system will be made up of the districts units from the eight countries. The E8 will co-invest with countries to strengthen reporting systems to improve timeliness and accuracy. The E8 M&E team will also aggregate country data, sentinel site data, and other outputs from assessments and surveys to develop program reports. |
| 9. | If applicable, implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-region supply chain  

Implementers have not been selected. However, selection will prioritize this experience as a key criterion of selection. |
### 4.4 Current or Anticipated Risks to Program Delivery and Principal Recipient(s) Performance

a. Describe any major risks in the region and implementation environment that might negatively affect the performance of the proposed interventions including external risks, Principal Recipient and key implementers’ capacity, and past and current performance issues.

b. Describe the proposed risk-mitigation measures (including technical assistance) included in the funding request.

<table>
<thead>
<tr>
<th>Risks</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failure to achieve diplomatic consensus among the eight countries, in particular regarding outside intervention in country affairs</td>
<td>The Ministerial Committee will be further developed as the central feature of the E8 governance structure. This is the main mechanism through which the countries will negotiate and hold each other accountable for decisions made. Hon. Min. Dr. Kamwi (Minister of Health of Namibia) will continue to play a role in facilitating high level interactions and negotiations among countries, as well as financing partners with various degrees of leverage and influence. The Secretariat, with support from Dr. Kamwi, will focus on strengthening this platform through frequent interaction and accountability measures, such as the scorecard. The elimination agenda will be further elevated to the heads of state level through partnership with African Leaders Malaria Alliance (ALMA).</td>
</tr>
<tr>
<td>Failure to receive timely supply and adequate commodities from governments may lead to treatment interruptions at cross border sites</td>
<td>The E8 will work with national programs to integrate the quantification and procurement of necessary commodities for the cross-border elimination interventions into country systems, without requiring additional procedures to make regional commodities available. The funding request is also structured so as to share costs between the Global Fund and governments, reducing the financing burden on countries. The procurement of commodities will also be a priority for private sector financing support.</td>
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<tr>
<td>Weakness in country surveillance systems may undermine the value of a regional surveillance system</td>
<td>Recognizing the centrality of this intervention to the work of the E8, a full-time team will be recruited to manage the regional system; they will also provide hands on support to strengthening systems in country. The team will have expert skills in health information systems (including DHIS), information technology, and familiarity with data systems in the region. While every effort will be made to strengthen and build on country systems, the E8 will work with countries to develop alternate systems (e.g. direct access to district data). This verticalization of systems is justified given the fact that malaria elimination is not “business as usual” and time-limited parallel systems can be necessary.</td>
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<tr>
<td>Lack of baseline data in order to determine impact of the proposed interventions</td>
<td>The first year of grant implementation prioritizes a set of assessment and baseline surveys. These will inform specific operational parameters for certain interventions (e.g. where precisely to place border posts, or what regional entomological questions should be prioritized). Other surveys will also inform baseline data for new interventions or measures that have not</td>
</tr>
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</table>
been tracked to date. The E8 will work together with M&E experts, including MACEPA and GHG-UCSF, to design appropriate evaluation metrics.

| Sustainability of staff being hired with support from this funding request | Field level and implementation staff are largely comprised of CHWs; the E8 will work to use this existing CHW capacity whenever available. Where nursing staff and additional CHWs are supported through this funding request, the E8 will develop exit strategies with governments to allow them to eventually absorb these CHWs into their systems. The absorption of CHW cadres is also expected to be less of a financing challenge, compared to higher cadres which are more costly to maintain. For the professional staff (e.g. expert skills and Secretariat staff), the E8 Ministerial Committee and Coordinator have prioritized the securing of additional funds to support the E8, aiming to gradually increase cost sharing between the Global Fund and other donors. |
| Absorptive capacity | Approximately 51% of the grant is expected to be implemented by three SRs. These are SRs for (i) EDT strategy and malaria posts, (ii) regional laboratory, and (iii) field surveillance and M&E. The E8 will ensure selection of SRs based on prior experience working across the region, and absorptive capacity to dedicate resources and implement the required strategies at a high level of performance. |
| Lack of E8 prior organizational experience risks poor principal recipient (PR) performance | As one key risk within the scope of PR responsibilities is financial management, the E8 will subcontract this aspect to an FMA. The E8 has developed and costed a capacity building plan (Annex 6) to allow the organization to rapidly develop the core systems required to be a high performing PR. The E8 has included in this funding request the recruitment of professionals with proven experience in managing and delivering high impact results in similar sectors. The Coordinator of the E8 Secretariat is also an experienced program manager, having overseen both program delivery and organizational management in previous roles. |

**CORE TABLES, ELIGIBILITY AND ENDORSEMENT OF THE CONCEPT NOTE**

Before submitting the concept note, ensure that all the core tables, eligibility requirements and endorsement of the concept note forms listed below have been filled in using the online grant management platform or, in exceptional cases, attached to the application using the offline templates provided. These documents can only be submitted by email if the applicant receives Secretariat permission to do so.

**Endorsement of the concept note**

The Global Fund requires evidence of endorsement of the final concept note by all RCM / RO members (or their designated alternates). The endorsement attachment must be downloaded from the online portal, and signed by all RCM / RO members. A
representative of each PR must sign off on the funding request at the bottom of the endorsement sheet confirming that they endorse the concept note and are ready to begin grant-making and implementation.

**Endorsement of the concept note by CCMs**

(a) For each country included in the concept note, attach a signed letter from the national CCM Chair or Vice-Chair, confirming endorsement of this regional funding request. List these documents in the supporting documents tab of the endorsement form.

(b) For each country included in the concept note, attach the signed and dated minutes of the CCM meetings, at which the CCM agreed to endorse the funding request submitted. List these documents in the supporting documents tab of the endorsement form.

(c) List any countries included in the concept note where there is a functioning CCM, but for which there is no CCM endorsement and explain the reasons for the lack of such endorsement. For these countries, describe how the RCM / RO will obtain support from in-country partners to implement the proposed interventions and address any operational and legal challenges to program implementation.

(d) If any of the countries included in the funding request have no functioning CCM, please attach a signed letter of endorsement from an existing national mechanism. If no endorsement has been provided, explain the reasons for the lack of such endorsement. For these countries, describe how the RCM / RO will obtain support from in-country partners to implement the proposed interventions and address any operational and legal challenges to program implementation.

**Core Tables / Documents**

- Table 1: Programmatic Gap Table(s)
- Table 2: Modular Template
- Table 3: List of Abbreviations and Annexes
- Eligibility requirements
- Endorsement of Concept Note Form, including endorsement letters from CCM of each country that forms a part of the regional application