

A concept note outlines the reasons for Global Fund investment. Each concept note should describe a strategy, supported by technical data that shows why this approach will be effective. Guided by a national health strategy and a national disease strategic plan, it prioritizes a country's needs within a broader context. Further, it describes how implementation of the resulting grants can maximize the impact of the investment, by reaching the greatest number of people and by achieving the greatest possible effect on their health.

A concept note is divided into the following sections:

- Section 1:** A description of the country's epidemiological situation, including health systems and barriers to access, as well as the national response.
- Section 2:** Information on the national 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 NOTE:* Applicants should refer to the Standard Concept Note Instructions to complete this template.**

SUMMARY INFORMATION

Applicant Information

Country	Myanmar	Component	Choose an item.
Funding Request Start Date	1 Jan 2017	Funding Request End Date	31 Dec 2020
Principal Recipient(s)	'UNOPS' and 'Save the Children'		

Funding Request Summary Table



A funding request summary table will be automatically generated in the online grant management platform based on the information presented in the programmatic gap table and modular templates.

SECTION 1: COUNTRY CONTEXT

This section requests information on the country 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 Country Disease, Health and Community Systems Context

With reference to the latest available epidemiological information, in addition to the portfolio analysis provided by the Global Fund, highlight:

- The current and evolving epidemiology of the disease(s) and any significant geographic variations in disease risk or prevalence.
- 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.
- Key human rights barriers and gender inequalities that may impede access to health services.
- The health systems and community systems context in the country, including any constraints.

2-4 pages

a. Epidemiology of malaria and geographic variations in disease risk.

Epidemiology of malaria (for a more in-depth review please refer to the NSP, Annex 1)

Myanmar has made remarkable progress in reducing malaria related morbidity and mortality over the last decade (p12, Figure 2 NSP). Prior to 2012 trends in reported incidence are difficult to interpret due to significant changes in case management approaches and service coverage. Data from 2012 onwards is relatively robust (almost all cases are now parasitologically confirmed) and demonstrates a steady and impressive reduction in caseload year by year (p13 Figure 3, NSP). The annual incidence of reported malaria dropped by 49% since 2012 (from 8.09 to 4.16 cases per 1,000 in 2015) despite improved case detection resulting from the recent roll-out of RDTs. The number of severe malaria cases decreased from over 9,000 between 2005 and 2008 to 660 in 2015. The number of malaria deaths declined steadily year by year from 1,707 in 2005 to just 37 in

2015 (a 98% reduction over 10 years). The malaria case fatality rate fell from 2.87% to 0.02% during the same period.

Malaria transmission patterns in Myanmar vary geographically. In some forest-based communities malaria remains hyper-and holo-endemic (characterized by increasing immunity with age plus immunity amongst neonates as a result of maternal antibodies) in these communities young children and pregnant women are most vulnerable, while in other areas occupational malaria associated with forest goers is the norm (characterised by high incidence predominantly amongst non-immune adult males - p14 Figure 4, NSP).

Malaria burden by parasite

All four species of human plasmodia are present in the country and cases of *Plasmodium knowlesi*¹ have also been documented². The vast majority of malaria cases are caused by *Plasmodium falciparum* and *Plasmodium vivax*. The transmission of both is seasonal, peaking in July and dropping to a minimum in March and April. There has been a steady and similar decline in both falciparum and vivax malaria between 2012 and 2015 (p13 Figure 3 NSP) and since reliable data became available in 2012, falciparum malaria has accounted for around 63% of cases. This is unusual for the Region where usually the proportion of cases caused by *P. falciparum* drops rapidly as control efforts take effect. The anomaly is likely due to the unusually widespread use of primaquine in Myanmar for the treatment of vivax (and falciparum) malaria, resulting in radical cure and avoiding repeated relapses.

Epidemiology of drug resistant malaria (p14, NSP)

Artemisinin resistance probably emerged at the border between Myanmar and Thailand in 2001, but was not clearly recognized until 2008. Since 2009, data from Myanmar has consistently shown delayed parasite clearance times among a significant proportion of patients treated with each of three first-line ACTs (artemether-lumefantrine, artesunate-mefloquine and dihydro-artemisinin-piperaquine). All three nevertheless remain effective (adequate clinical and parasitological response >90%) giving high cure rates except in the case of artesunate-mefloquine in the Myanmar-Thailand border region³.

K13 mutants have been identified in Myanmar, including recently in the west of the country. Analysis suggests that these mutants arose independently rather than spread from Cambodia.

Vectors of malaria

The primary vectors of malaria in Myanmar are *Anopheles minimus* and *Anopheles dirus*. A further 7 secondary vectors has been listed (p75 Annex 5, NSP). Geographical distribution of these vectors is described on p10, NSP. The behaviour of malaria vectors in Myanmar varies depending on climatic and other environmental factors. Both indoor and outdoor biting takes place, but primary vectors are characterised, at least seasonally, by their early outdoor biting habit. Nevertheless, despite a portion of the vector biting occurring early and outdoors, LLINs continue to play a critical role in reducing malaria transmission.

There is no evidence of insecticide resistance among the primary malaria vectors in Myanmar at present (p75, Annex 5, NSP), however monitoring has been limited. Given the selection pressure being exerted by insecticide use in public health and in the agricultural sector, surveillance needs to be strengthened.

Geographical variation in disease risk (p20-21 NSP)

Myanmar is administratively divided into 15 States/Regions and 330 townships. Of these, 291 townships are at risk of malaria. Of the 52 million people residing in the country, 44 million (85%) reside in areas where there is a risk of transmission. Recently, an incidence-based micro-stratification has been conducted down to the lowest level public health facility (sub-Rural Health Centre - sRHC). Each sRHC has a catchment area of 4-5 villages (see table 1.1.a.). Village level micro-stratification has been started but the programme will continue using sRHC based micro-stratification until village level micro-stratification is available for all villages.

Table 1.1.a. Incidence-based micro-stratification at Sub-centre level.

Stratum	Transmission status	sRHCs	Population 2015	% of population
3a	High	1,026	3,542,647	7%

¹ *Plasmodium knowlesi*: a zoonosis associated with macaques but sometimes transmitted to humans in deep forest areas. to add the reference

² Jiang N, Chang Q, Sun X, Lu H, Yin J, Zhang Z, et al. Co-infections with *Plasmodium knowlesi* and other malaria parasites, Myanmar. Emerg Infect Dis [serial on the Internet]. 2010 Sep [date cited]. <http://dx.doi.org/10.3201/eid1609.100339>

³ Data from SMRU border clinics that treat patients from the Myanmar side of the border.

3b	Moderate	1,461	6,328,845	12%
3c	Low	2,062	12,664,333	24%
2	Potential	4,439	21,354,063	41%
1	Malaria free	1,531	8,116,373	16%
Total		10,519	52,006,261	

Malaria transmission is largely restricted to forested hilly and coastal areas and is becoming an increasingly focal disease. In 2015, a total of 120 townships had API<1 per 1,000 at risk population, compared to 45 townships in 2006. In 2015, 5 States/Regions (Rakhine, Sagaing, Ayeyarwady, Kayin, and Chin) out of 15 States/Regions together accounted for 72% of confirmed falciparum cases. Rakhine and Sagaing accounted for 25% and 19% respectively. Despite this progress in 'shrinking the malaria map', the disease remains a key health problem in forest and forest fringe communities, particularly in remote border areas of Kachin, Chin, Sagaing and Rakhine States/Regions. Although the likelihood of large-scale malaria epidemics has diminished very considerably since the 1990s, the potential for smaller-scale epidemics remains real, and a number of sporadic outbreaks have occurred in 2011.

Recent progress

The dramatic progress that has been made recently in Myanmar has been attributed to a number of factors including increased investment in malaria control operations (leading to improved coverage with LLINs and community-based case management through volunteer networks), the introduction of artemisinin-based combination therapy (ACT), expansion of RDT-based diagnosis the improving political situation (including the Nationwide Cease-fire Agreement - NCA) and advances in socio-economic development. Large-scale deforestation has also undoubtedly played a significant role in some areas. While these overall reductions in malaria burden have been impressive, advances should be expected to diminish in future unless significant funding is allocated to addressing hard to control 'residual malaria transmission' (RMT).

b. Key populations with disproportionately low access to prevention and treatment services and factors contributing to this inequality.

The wide variety of key risk populations with disproportionately low access to prevention and treatment services, which are also the population groups most at risk of malaria in endemic areas of Myanmar, is summarized in table 1.1.b and described in detail on p15-18, NSP. The level of malaria risk for each of these groups is dependent on a number of location-dependent factors including degree of endemicity and accessibility to and strength of health system services.

Table 1.1.b. Population groups at risk of malaria in endemic areas of Myanmar.

<i>Static populations</i>	<i>Mobile and migrant populations</i>
<ul style="list-style-type: none"> Established villages (ethnic minority groups [EMGs] and ethnic majority) New settlements Internally displaced persons (IDP) Camps associated with large-scale construction projects (dams, bridges, mines, etc.) Settlements associated with plantations (rubber, oil palm, food) Prisons and prison worksites 	<ul style="list-style-type: none"> Traditional slash-and-burn and paddy field farming communities visiting their forest farms (commonly EMGs) Seasonal agricultural labourers Military patrols, border guard forces, and armed groups Forest workers in the formal sector (police, border guards, forest/wildlife protection services) Forest workers in the informal sector (hunters, small-scale gem/gold miners, people gathering forest products [precious timber, construction timber, rattan/bamboo]) Transient or mobile camps associated with commercial projects (road/pipeline construction, large-scale logging, deep sea port projects) Formal and informal cross-border migrant workers (Legal and illegal workforces)

All of the key risk populations listed in table 1.1.b above, except those in permanent settlements close to a health centre, can be considered to have disproportionately low access to treatment services. Key factors contributing to this inequality include: language (often only a small proportion of people from ethnic minority groups speak the national language making communication of health messages etc. problematic); remoteness (malaria transmission tends to be most intense in remote areas, commonly along borders, where access to both public and private sector healthcare services is relatively limited); poverty (the populations living in or passing through these remote areas are

generally some of the poorest in the country); marginalization (ethnic minority groups and migrants may have limited access to services); and mobility (the high mobility of some individuals means that they may have moved to non-endemic areas, where health workers are less likely to be familiar with malaria, when symptoms first appear).

Providing malaria related services to high-risk static populations is relatively straightforward, at least theoretically: The location of settlements, plantations, construction sites and development projects can be mapped, populations can be quantified and plans for delivering interventions can be formulated. Furthermore, post-delivery checks can be made to validate coverage. However, in reality so far it has only generally been the administratively recognised villages that have been well served by routine prevention operations. Providing a comprehensive package of services to the remaining static population groups is one important focus of the strategy described below.

The challenges to service delivery among mobile populations are more complex. Conventional mapping approaches are often not appropriate due to the transient nature of many population movements, there may not be any actual houses or other structures in which to suspend an LLIN, the population size may vary from day to day making quantification of needs difficult, and in the case of illegal migrants and individuals involved in illegal activities, fear of punishment often prevents any contact with official groups or groups that are perceived to be official. Added to this, many people in these groups are driven only by the need to make money and so getting accurate information for health action from them is a sensitive and complex multi-sector task.

While forest goers in the formal sector, such as police, border guards and forest/wildlife protection services, may receive some level of protection in the form of ITNs and access to standby treatment, informal forest workers are commonly completely unprotected.

When ill, most of the seasonal workers described above self-medicate, seek care from informal private providers or from public sector health facilities close to the forest where they work, but many also seek treatment when they return to their homes in non-endemic areas, and in these non-endemic settings malaria may not immediately be suspected. In this way these individuals also effectively have disproportionately low access to treatment services. Malaria related mortality in this group can be relatively high as a result.

c. Key human rights barriers and gender inequalities that may impede access to health services.⁴

Human rights barriers (p20, NSP)

Four years of wide-ranging reforms have brought fundamental changes to Myanmar. During that time, thousands of political prisoners were released, numerous laws were adopted or reformed, and significant steps were taken towards allowing greater media freedom and government transparency. The general elections held in November 2015, which were assessed positively by both national and international observers (despite some irregularities and pre-election concerns), saw the National League for Democracy (NLD) win an absolute majority.

The new Government now faces formidable human rights challenges. The transition period following the elections has been smooth and peaceful, but also one of great uncertainty. The new Government plans to further recent reforms initiated by the outgoing Government and create an environment in which communities, civil society actors and human rights defenders may speak out and protest peacefully without fear of reprisal. The international community remains engaged and is supporting Myanmar in furthering reforms and in fulfilling its international human rights obligations.

Human rights issues in hard to reach, ethnic conflict affected areas and disproportionate access to services

Access to basic healthcare services is historically low in areas of the country where there has been a history of conflict and consequent population dislocation, sometimes resulting in the creation of temporary Internally Displaced Persons (IDPs) camps. In conflict situations, especially where these have been long-running, there has been a significant impact on the establishment and continued operation of health facilities and services. In Myanmar this has impacted most upon populations in parts of Kachin, Shan, Rakhine, Kayah, Kayin and Mon States. A 2013 survey⁵ of Ethnic Populations in 64 townships found that over 60% of respondents reported that they sought care from sources outside the government health sector. In remote ethnic minority areas covered by government-run health services, the services are sometimes inadequate due to geographic and

⁴ Response based on the 'Report of the Special Rapporteur on the situation of human rights in Myanmar' presented at the thirty-first session of the Human Rights Council.

⁵ Health Information Systems Working Group (2015) The Long Road to Recovery: Ethnic and Community-Based Health Organizations Leading the Way to Better Health in Eastern Burma.

economic constraints. In addition, language and cultural barriers are key factors preventing people from accessing public health care facilities, often combined with poor understanding of the benefits of health care⁶. The high cost of seeking appropriate medical treatment at distant facilities, and the dangers associated with transport (particularly by boat in bad weather) can be prohibitive, forcing patients to forego treatment or seek treatment from traditional healers or quacks. This commonly results in poor health outcomes.

Some IDP camp populations in Kachin and Rakhine however do have access to acceptable healthcare services (delivered by mobile teams coordinated either by National Disease Programs or I/NGO funded by the Global Fund and 3MDG as well Ethnic Health Organizations and local health authorities). Services include testing and treatment of TB and Malaria, MNCH, and water and sanitation supplies and commodities. To ensure that these populations are not excluded from community-based health initiatives, village health volunteers are recruited and trained from among the IDP populations to promote trust in the provider and increase utilization of services. The NMCP, through support from Global Fund-NFM, 3MDG and USAID/PMI, and in collaboration with partners and the wider network of village health volunteers, provide routine community-based case management services to at least some of these populations in various different locations. Preventive services (LLIN distribution) have also reached some of these populations, but replenishment has been limited.

Gender inequalities (p19, NSP)

In the 2014 gender inequality index, Myanmar ranked as 85th of 187 countries⁷. The National Strategic Plan for the Advancement of Women 2013-2022 is in place. The Gender Equality Network (GEN) to promote gender equality and women's rights throughout Myanmar is active. These platforms need to be used to reduce gender inequalities in delivering malaria services (p19, NSP).

A thorough understanding of the gender-related dynamics of treatment-seeking behaviour, as well as of decision-making, resource allocation and financial authority within households is important in order to maximize the effectiveness of malaria control and elimination efforts. There is limited data on gender and malaria. There is a general consensus that limited institutional capacity is hindering the development and implementation of gender sensitive policies and programmes in malaria. More research on the relationship between gender and malaria needs to be conducted in a broadly representative selection of epidemiological settings in Myanmar in order to fine-tune operations and maximise their effectiveness.

In 2015, the USAID-PMI funded 'CAP Malaria Project' conducted gender-related malaria assessments in 7 sites in Myanmar to investigate different patterns of exposure to malaria and the gender-related behaviours related to accessing preventive measures, treatment, and care for malaria as well as malaria education⁸. In the assessment sites selected, men were considered more likely than women to contract malaria. This risk perception was consistent among both men and women. Men had lower levels of knowledge on malaria and compared with women were less concerned about health issues including malaria. Bednet use was less among men than women as men were more engaged in forest activities where LLINs were considered less convenient. Pregnant women were not provided with any special pregnancy specific information on malaria, although they were prioritized during LLIN distributions. The assessment found that traditional communication channels such as mass media and Interpersonal communication (IPC) were not well suited to reach forest workers. Providing services to groups in high-risk worksites is a big challenge, as the worksites do not normally fall under any particular administrative area.

Both males and females have been targeted to promote their involvement in the design phase, planning, and implementation of equitable malaria prevention and control. Partners and NMCP have trained thousands of malaria volunteers to provide effective malaria diagnosis and treatment at community level. Of these trained volunteers more than 50% are female. Further research is required to understand gender preferences in care seeking.

d. The health systems and community systems context in the country, including any constraints.

Recent decades of underinvestment left Myanmar's public health system under-resourced. Significant improvements have been made during the last 5 years. Government Total Health Expenditure (THE) is increasing year by year and rose steadily from 86 billion kyats (US\$70M) in

⁶ Proposed World Bank-Financed Project Myanmar Essential Health Services Access Social Assessment. Ministry of Health 2014.

⁷ Human Development Report 2015.

⁸ Gender Assessment Report. University Research Company. Myanmar. 2015.

2011-12 to 753 billion kyats (US\$610M) in 2015-2016 (fiscal years) – almost a nine-fold increase over four years. Government support allocated for the NMCP in 2016 exceeds US\$6.4 million. This support covers human resources, infrastructure and facilities.

Despite recent improvements most outpatient care is still obtained from private sector providers. Although Out of Pocket Expenditure (OPE) for healthcare fell from 80% in 2011 to 68% in 2013, it was still the seventh highest in the world resulting in high levels of catastrophic financial payments and subsequent impoverishment. Health outcomes are improving, but remain poor. In 2015 the under-5 mortality rate was 50 per 1,000 and life expectancy at birth was 66.

The public healthcare system in Myanmar is highly structured, following the ‘*state-district-township*’ government hierarchy and based on the principles of primary health care, with medical officers overseeing all health-related activities in their designated areas (p68-74, Annex 1 NSP).

World Bank has mobilized International Development Assistance (IDA) financing, global knowledge and learning and analytical work to support strengthening of Myanmar’s health system, namely in the area of health financing. With IDA of US\$ 100 million from 2015-2019, the Essential Health Services Access Project (EHSAP) aims to increase access to essential services of adequate quality, in particular to improve maternal, newborn and child health outcomes – providing funds to facilities at township level and below, including township and station hospitals, urban and rural health centres, maternal and child health clinics and school health programs. The EHSAP has already identified public financial management constraints that need to be tackled to improve service delivery. In spite of challenges however, the project also highlights that front line units of service delivery are able to spend money efficiently and transparently. Myanmar health sector today faces a challenge of having several parallel financing and implementation arrangements with different modalities of procurement, financial management, human resources, and reporting that are often significantly different from those of the MoHS.

GAVI also supports health system strengthening in Myanmar to address bottlenecks and achieve better immunisation outcomes (health workforce, supply, distribution, maintenance) and organization and management (US\$ 29 million). An additional HSS support for 3 years (2017-2019), scheduled to start in January 2017 will cover 199 (out of 330) townships contributing US\$ 52 million focusing on strengthening demand for immunization services; implementing cold chain expansion and improvement plan; strengthening leadership management capacity and coordination; improve equitable access to service delivery; strengthen EPI data management, M&E system; and program management. MoHS is responsible for implementation, human resource, social mobilisation and UNICEF for procurement and strengthening supply chain, cold chain, etc. WHO provides technical support, trainings, strategic information, surveillance, and data management activities.

The National Malaria Control Programme (NMCP)

NMCP is under the VBDC Programme headed by two Deputy Directors; one for Malaria and one for DHF, filariasis and other vector borne diseases (p71, Figure 3, NSP). Since 1978, the VBDC programme has been responsible for the control of malaria, dengue, lymphatic filariasis, chikungunya and Japanese encephalitis. Most of the staff and resources of VBDC at all levels, except in the bigger cities, are focused on malaria. The NMCP works particularly closely with the Department of Medical Services, the National Health Laboratory and the Food and Drug Administration Department in order to implement key activities.

The State/Region VBDC office is headed by the State/Region team leader who, with the team, manages the malaria programme at the State/Region level.

Primary Health Care System

The Township Public Health Department (TPHD) is headed by the Township Public Health Officer (TPHO), who functions at the Assistant Director level. Under the TPHO there are two Medical Officers (one for Disease Control/ Public Health and one for medical care) and one Administrative Officer. Generally each TPHO is responsible for four to five Rural Health Centers (RHCs) and a station hospital (each managed by a Health Assistant with a Lady Health Visitor and at least one Midwife) and four to five Sub-RHCs (each managed by a Midwife with a Public Health Supervisor - level II). Microscopy services are available at Township Hospitals and some NGO run clinics. Microscopists are multi-skilled rather than malaria specific.

Township Hospitals (25 to 50 beds) are the basic unit for medical and surgical care for rural and urban communities. All Township Hospitals in the country are managed by a Township Medical Officer. Under each Township Hospital, there are 1 or 2 Station Hospitals (16 beds) managed by Medical Officer. All basic health staff, Medical Officers and Township Medical Officers have received relevant training on malaria case management, recording and reporting, and supply chain management during the past 5 years.

Community health system

'Village Health Volunteers' (VHVs) are key service providers in Myanmar and now form the foundation of malaria control activities at village/community level. Substantial investments have been made in community based health services by Global Fund, 3MDG, USAID-PMI and JICA and as of 2015 there were 15,000 VHVs involved in malaria case management nationwide. VHVs working under the programme and I/NGOs are provided with five-day modular training on malaria diagnosis and treatment. They provide malaria diagnosis and treatment at community level using RDTs and ACT. Some are also engaged in prevention activities such as LLIN distribution, health education and community awareness raising activities depending on the organization that supports and supervises them. Just over 50% of the malaria cases diagnosed in 2015, were diagnosed and treated by VHVs. There is limited supervision and completeness of VHVs malaria registers is sub-optimal.

With funding under Global Fund-RAI, 3MDG and PMI over the past 3 years, various INGOs have been working directly with non-state actors (NSA)/ethnic health organizations to provide malaria diagnosis and treatment to the population residing in conflict affected and non-government controlled areas. Health staff and VHVs under a number of NSAs have also been actively involved in the provision of malaria services for the past 3-5 years. Coverage is however still sub-optimal.

There is also an active national network of auxiliary midwives and community health workers, operating in collaboration with village health committees, providing prevention and outpatient care. Although some areas are supported by I/NGOs healthcare services at the local level generally have limited resources. Strategies are therefore in place to make inadequate resources stretch as far as possible. There is an immediate need to review the extent to which various risk populations, especially ethnic minorities and the hardest to reach, have access to the health care services (this will be covered in year 1 of NFM2 by TA under WHO). Resulting information can be used to influence policy resulting in further improvements in health outcomes.

Recent aid-based interventions have primarily been vertical programmes running independently of the public health system rather than being integrated into the case management system at field level. There is no specific national strategy addressing integrated health care management for Basic Health staff (BHS) and community volunteers, although there is a wish list of integration of service provision at the programmatic level. Similarly there is no clear instruction, standardized cross programme recording and reporting among MNCH, Tuberculosis and malaria programmes. However, funding for aid interventions has increased very significantly in the last few years, a number of new funding partners have engaged with the country and key implementing partners are taking an increasingly holistic approach to healthcare support.

Human resources (HR) for health

There has been a steady growth in the number of basic health facilities and HR for health in recent years. Hospitals in Regions/States, and Districts are reasonably well staffed. The number of midwives has almost doubled over a 20-year period and midwives are the key providers of basic health services in rural areas. There is however an urgent need within the public sector for a comprehensive HR development and capacity building plan. The majority of field staff within MoHS/NMCP are not fully familiar with reporting obligations to the funding partners, or with methods for the effective management of field operations, or with the new strategies associated with the NMCP's move towards malaria elimination.

Of the 31,542 registered doctors in 2013-2014, 18,443 (58%) worked as private practitioners and the rest in the public sector. The private practitioners provide general care for illnesses including malaria and their services complement those of the programme. Population Services International (PSI) and Myanmar Medical Association (MMA) are working together with private practitioners to deliver quality malaria case management services. In addition, they also engage with other informal private providers like drug retailers, traditional healers, quacks, and train them to provide correct diagnosis and treatment to malaria patients. Wherever possible, NMCP and partners pool resources and take advantage of joint training opportunities in order to maximize cost efficiency.

1.2 National Disease Strategic Plans

With clear references to the current **national disease strategic plan(s)** and supporting documentation (include the name of the document and specific page reference), briefly summarize:

- a. The key goals, objectives and priority program areas.
- b. Implementation to date, including the main outcomes and impact achieved.

- 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. The main areas of linkage to the national health strategy, including how implementation of this strategy impacts relevant disease outcomes.
- e. For standard HIV or TB funding requests⁹, describe existing TB/HIV collaborative activities, 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.
- f. Country processes for reviewing and revising the national disease strategic plan(s) and results of these assessments. Explain the process and timeline for the development of a new plan (if current one is valid for 18 months or less from funding request start date), including how key populations will be meaningfully engaged.

4-5 PAGES SUGGESTED

a). The key goals, objectives and priority areas.

The 'National Strategic Plan (NSP) for Intensifying Malaria Control and Accelerating Progress towards Malaria Elimination 2016-2020' (Annex 2) was launched in June 2016. Its goals, objectives and priority areas are as follows:

Goals (p26, NSP)

This is a five-year strategy to reduce malaria morbidity and mortality by 85% and 75% respectively by 2020 relative to 2015 baseline figures. In states/regions where malaria transmission has been interrupted, the goal is to maintain malaria-free status and prevent re-establishment of local transmission.

Achieving these targets will put Myanmar on the path to eliminate *Plasmodium falciparum* malaria by 2025 (in-line with the urgent action required against multidrug resistance) and all malaria from Myanmar by 2030.

Objectives (p28, NSP)

1. To reduce reported incidence of malaria to less than 1 case per 1,000 population in all states/regions by 2020.
2. To interrupt transmission of falciparum malaria in at least 5 states/regions by 2020 (2016 Target States/Regions: Bago, Magway, Yangon, Mon, Mandalay).
3. To prevent the re-establishment of malaria in areas where transmission has been interrupted.
4. To prevent the emergence of multi-ACT resistant *P. falciparum* in Myanmar.

Priorities (p29, NSP)

- Reduce malaria burden in the highest endemic areas.
- Eliminate falciparum malaria in areas of multidrug resistance, including ACT resistance
- Strengthen the existing surveillance system including the capacity of health care providers and programme staff at all levels for elimination and prevention of re-introduction of malaria.

Key Interventions

1: Case detection and effective management (p32, NSP).

Ensuring universal diagnostic testing will reduce the over-use of ACTs and reduce drug resistance selection pressure on parasites. The detection of malaria infections will be based primarily on blood examination by RDTs or microscopy. Polymerase chain reaction (PCR) machines will be used in national malaria Reference Laboratory to resolve discordant results from microscopy quality assurance (QA) and for distinguishing recrudescence versus reinfection during TES but not for routine case management. The annual blood examination rate (ABER) for the population at risk will be increased from 6% (2015) to 8% (2020) overall depending on the availability of funding and the absorption capacity of implementers.

Treatment for falciparum and non-falciparum malaria will be based on national treatment policies, which are in-line with WHO guidelines. Currently, all medicines recommended for the treatment of uncomplicated falciparum malaria are ACTs. Treatment will include primaquine to eliminate

⁹ Countries with high co-infection rates of HIV and TB must submit a TB and HIV concept note. Countries with high burden of TB/HIV are considered to have a high estimated TB/HIV incidence (in numbers) as well as high HIV positivity rate among people infected with TB.

gametocytes, which are responsible for infecting mosquitoes with malaria and thus continuing transmission. Supervised treatment will be used to support patient adherence to radical treatment for vivax malaria, which requires 14 days/ once weekly for 8 weeks. This will entail follow-up by a health worker or volunteer on days 7 and 14. Directly observed treatment (DOT) for ACT, which has a 3 day regimen, may be applied, but only in the final stages of elimination when the number of cases falls to a point at which DOT becomes manageable. Until then, efforts will be made to maximize patients' adherence to their full treatment regimen through advocacy delivered by healthcare providers (inter-personal communication). The importance of this 'adherence advocacy' will be emphasized in all clinical training sessions in future.

Achieving universal coverage with case management requires three channels of service delivery: public, community based and private. While malaria incidence remains high, the programme will maximize coverage through all three channels while making efforts to improve quality. In order to ensure optimal case management, surveillance and reporting during the elimination phase, selected private sector providers will be allowed to test and treat patients according to the National Malaria Treatment Guidelines, but will be required to notify all positive cases to the local health authorities within 24 hours of diagnosis. Treatment by unverified private sector providers will be strictly prohibited in elimination phase Townships.

2: Malaria prevention (p40, NSP).

The selection of vector control interventions has been guided by an eco-epidemiological assessment informed by malaria case and entomological surveillance data. Implementation will be within the framework of integrated vector management to ensure optimal use of resources. Use of insecticidal interventions will follow technical recommendations provided in WHO's Global plan for insecticide resistance management in malaria vectors.

3: Malaria case and entomological surveillance (p43, NSP).

For States and Regions in the transmission reduction phase, the basic system of surveillance, which involves monthly reporting supplemented by outbreak monitoring, will be maintained and strengthened where necessary. For States and Regions in the elimination phase, standard surveillance will be replaced with 'case-based' surveillance whereby effectively every case is treated as an outbreak.

In-line with guidance from the ASEAN Communicable Disease Working Group, VBDC will collaborate with Myanmar's 'Emergency Operating Center' to integrate malaria related surveillance and response mechanisms into the broader health sector approach. Malaria response efforts will be progressively merged into the existing emergency mechanisms implemented by the multi-task detection and response teams associated with other epidemic prone diseases.

Supporting elements

1: Expanding research for innovation and improved delivery of services (p48, NSP).

A comprehensive package of needs-based operational research will be supported as far as funding permits. NMCP will work in collaboration with WHO and national and international experts and institutes to develop research capacity and improve the quality and relevance of research outputs.

Research will aim to address bottlenecks in operations and find innovative ways to address residual malaria transmission (RMT) and effectively deliver services to hard-to-reach populations. All research should be declared to NMCP and carried out in collaboration with NMCP counterparts following the approval of the Myanmar Ethics Review Committee.

- Develop novel tools and approaches to respond to existing and new challenges, such as drug resistance, insecticide resistance, outdoor biting and varying patterns of population mobility.
- Conduct operational research to optimize impact and cost-effectiveness of existing and new tools, interventions and strategies.
- Take action to facilitate rapid uptake of new tools, interventions and strategies

2: Strengthening the enabling environment (p49, NSP).

The adoption of the elimination strategy increases the need for leadership and management in the malaria programme. Operations will need to be managed with rigor and flexibility, supported by robust monitoring and quality control. The programme will need to be responsive to the evolving needs of the elimination effort in order to accelerate programmatic impact. Partners will provide support covering a broad range of programme areas and will work with the National program and WHO to strengthen the leadership and management capacity of the NMCP. The Programme will provide effective management and coordination to enable rapid and high-quality implementation of the elimination strategy.

- Maintain strong political commitment and ensure adequate financial support for elimination.

- Support capacity development appropriate to the implementing strategy
- Strengthen health systems to facilitate elimination.

b). Implementation to date, including the main outcomes and impact achieved.

Implementation of the NSP 2016-2020 only started in January and so results are not yet available. The previous NSP 2010 to 2015 was extended for one more year with similar objectives as follows:

1. Providing information, education and communication regarding malaria prevention and control up to the grass-root level of the community
2. Promoting personal protective measures and/or introducing environmental measures as principle methods and application of chemical and biological methods in selected areas depending on local epidemiological condition and available resources
3. Prevention, early detection and containment of epidemics
4. Provision of early diagnosis and appropriate treatment
5. Promote capacity building and programme management of malaria control programme (human, financial and technical)
6. Strengthen the partnership by means of intra- and inter-sectoral cooperation and collaboration with public sector, private sector, local & international NGOs, UN agencies and neighbouring countries
7. Intensify community participation, involvement and empowerment
8. Promote basic and applied field research

Implementation of the previous NSP was hampered to some extent by reduced funding particularly during the first two years. Table 1.2.a below presents the most recent data relating to programmatic impact and outcomes as measured by key national indicators.

Table 1.2.a. Programmatic progress against national targets in NSP 2010-15.

Indicator	Baseline		Target		2015 result	Comment
	Value	Year	Value	Year		
Malaria morbidity rate	9/1,000	2007	4.5/1,000	2015	3.36/1,000	Over-achieved
Malaria mortality rate	2.18/100,000	2007	1.09	2015	0.08/100,000	Over-achieved
Slide positivity rate	42.4%	2009	30%	2015	7.69%	Over-achieved
Percentage of households with at least one ITN/LLIN	5.6 %	2008	53%	2015	54%	Over-achieved
Percentage of confirmed malaria cases treated in accordance with the national malaria treatment guidelines within 24 hours of onset of symptoms (fever)	25%	2008	60%	2015	86%	Over-achieved

National targets have either been exceeded or are expected to be met for 7 out of the 7 indicators presented above.

For the most recent Global Fund reporting period (1 January to 30 June 2015), the program performed well scoring an A1 rating, with an average performance of 103% (calculated on 7 coverage indicators for the above mentioned reporting period). All indicators were achieved or over-achieved. Indeed, since 2014 Myanmar's Global Fund performance ratings for malaria have consistently achieved scores of A2 or above. Although there was good performance in terms of % achievement of the targets, but there were less cases tested/found than the initially forecasted which could be due to higher decrease of burden than expected.

Impact: As described in detail in section 1.1.above, the burden of malaria in Myanmar has decreased markedly in the last decade: incidence has dropped by 61% (despite improved case detection resulting from the recent roll-out of RDTs) and related mortality has dropped by 93%. Furthermore the 'malaria map' has been shrinking steadily. While this progress cannot be attributed solely to programmatic impact relating to increased investment in malaria control operations, this increased investment has certainly been a key factor.

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.

Malaria control and elimination efforts in Myanmar face a daunting array of challenges relating to both technical and programmatic issues and to economic constraints. Furthermore, multidrug-resistant *P. falciparum* and the presence of inappropriate, substandard and fake drugs add considerably to the frontline difficulties associated with efforts to effectively eliminate the disease.

The NMCP has adopted comprehensive strategy, which aims to fully address each of the problems identified. It will utilize a range of tools and a variety of delivery approaches tailored to the specific needs of each of the risk groups described in 1.1 above:

Microscopy. Microscopy based surveillance will form a key tool in the move towards elimination. Rigorous quality assurance, including regular review of test slides by peripheral microscopists, is essential to maintain the sensitivity and specificity of microscopy-based diagnosis. This is especially true as malaria incidence falls, and microscopists see fewer and fewer positive slides in their routine work. Quality assurance is very limited in the public sector at present and it is largely absent in the private sector. As a result the quality of microscopy is sub-standard in many facilities. This will be addressed under the new NSP and under this application.

Community-based diagnosis and treatment for malaria. Myanmar has a well-established free community-based case management service for malaria delivered by village health volunteers (VHVs), work site volunteers and backpacked volunteers targeting mobile populations. Coverage however is still sub-optimal. During 2016-17 the Programme will therefore expand community-based malaria case management for hard-to-reach areas to cover all endemic settlements more than 2 km from a functioning health facility with no midwife coverage. There have been some recent efforts to address the coverage gaps affecting the key risk populations described in section 1.1b (for example through 3MDG funded programs implemented by ethnic health organizations, NMCP and partners) but coverage remains sub-optimal and needs to be expanded. Limitations (described in section 1.1) include poverty, language barriers, marginalization and the remoteness of some key risk populations. Lessons learned from recent implementation efforts include: Referral costs for poor patients who severely ill need to be covered by the programme; IEC materials need to be translated into local ethnic languages for use by ethnic minority populations and these materials need to be highly visual in nature to cater for the less literate; SRs must be required to provide equitable coverage of services regardless of a patient's ethnicity, and where services are not adequately provided by local service providers, volunteers from local populations must be established as VHVs (Partnership with Ethnic Health Organizations has been key to increasing coverage of marginalized populations in the South East of the country); and, Emphasis must be placed on ensuring volunteer coverage and support in remote areas.

Private sector involvement. Myanmar has recently started to work with I/NGO partners to strengthen the malaria case management services provided by the private sector. There has been engagement with private medical practitioners for delivery of malaria curative services and 'social franchising' operations have been established in some areas. Coverage however is still low and largely restricted to urban and peri-urban areas. There have been some limited efforts to engage with private sector employers to place malaria volunteers in high-risk worksite locations, however coverage needs to expand significantly.

Vector control. To date, population coverage with LLINs has focussed primarily on the settled population in stratum 3a and has been sub-optimal. In 2016 however coverage of the settled population in stratum 3a, 3b and 3c sRHCs is expected to reach 100% thanks to support from Global Fund (under the RAI and NFM grants), 3MDG and PMI. Coverage of mobile groups and migrants will however remain very limited.

Surveillance. Currently there are multiple malaria surveillance approaches in use in Myanmar. An expert review will be undertaken in association with MoH in 2017 to assess these various approaches and prepare a roadmap for the development of an elimination-specific case-based reporting system. The review report will define the new system's relationship to the MoH's DHIS2 system, identify data aggregation levels and clearly articulate how data will be used for decision-

making.

Human rights: With funding under Global Fund-RAI, 3MDG and PMI over the past 3 years, INGOs like Community Partners International (CPI), Medical Action Myanmar (MAM), University Research Co. (URC), and the American Refugee Committee (ARC) have been working directly with non-state actors (NSA)/ethnic health organizations to provide malaria diagnosis and treatment to the population residing in conflict affected and non-government controlled areas. The VHVs under NSA, such as Burma Medical Association (BMA), Karen Department of Health and Welfare (KDHW), Karenni Mobile Health Committee (KnMHC), and Mon National Health Committee (MNHC), Wa special region health authority, Shan special region 4 health authority, Kachin special region health authority and some faith based organizations such as Myanmar Council of Churches, Kachin Baptist Convention (KaBC), and Karen Baptist Convention (KBC) have been actively involved in the provision of malaria services for the past 3-5 years. Coverage is however still sub-optimal.

Gender: The programme has not placed enough emphasis on ensuring that pregnant women living in the most highly endemic areas are adequately protected against malaria. There has been no provision of additional LLINs through ANC services, no screening for malaria during pregnancy and no pregnancy associated IEC/BCC. According to a URC study conducted in 7 sites 2015 (see section 1.1c), men had lower levels of knowledge on malaria than women, were less concerned about health issues including malaria, and were less likely to use a bednet than women. There is a clear need for IEC/BCC specifically targeting behaviour change in males.

d). The main areas of linkage to the national health strategy, including how implementation of this strategy impacts malaria outcomes.

Controlling communicable disease is one of the many strategies of the National Health Plan 2011-2016 (Anne 2) and the objective under this strategy is to reduce the morbidity and mortality from communicable diseases so as to eliminate them from arising as public health problems (p13-14 NHP). The NHP clearly outlines malaria (along with TB and HIV/AIDS) as a disease of national concern and it has thus been prioritized (p13-14, NHP). The goals and objectives (three core interventions and two supporting elements) and strategic interventions of the 'National Strategic Plan (NSP) for Intensifying Malaria Control and Accelerating Progress towards Malaria Elimination 2016-2020' (see section 1.2.a above) are in-line with the current NHP (p32-37 NHP) and will be linked with the NHP, which is under development.

The implementation of the NSP will drastically reduce malaria related morbidity and mortality and lay the foundations for achieving malaria elimination in the country by 2030. This will help to achieve one of the social objectives of the State "Uplifting health, fitness and education standard of the entire nation".

f). Country processes for reviewing and revising the national malaria strategic plan(s) and results of these assessments.

The 'Myanmar Health Sector Coordinating Committee' (M-HSCC) (an expansion of the Global Fund specific 'Myanmar-Country Coordinating Mechanism') was established in 2013 and takes a leading role in coordination of both governmental and non-governmental sectors. The M-HSCC has a Technical Strategy Group (TSG) for malaria, which is led by the Department of Disease Control, with WHO serving as technical secretariat. The mandate of the TSG-Malaria is to provide technical guidance in the development of national strategies, to provide coordination among partners, and to provide clarity on major technical and policy issues. The TSG meets periodically to discuss, review and endorse certain proposals, reports and other documents and carry out the assignments given to them. It also provides broad oversight of the implementation of grants and projects as required. The TSG-Malaria appoints a working group (the Core Group for TSG-Malaria) to deal with specific tasks as necessary.

In addition NMCP holds an annual national review meeting where progress is assessed and strategies are reviewed by the broader malaria control community.

Malaria Program Reviews (MPRs) are carried out periodically in partnership with WHO. The most recent MPR was in March 2016. The findings of this review (see Annex 3) were largely favourable:

Myanmar has surpassed the Millennium Development Goal #6 by cutting malaria morbidity and mortality rates by respectively more than 50% and 90% in 2015 as compared to 2012

(and more than 60% and 95% respectively as compared to clinical data and attributed deaths in 2007¹⁰). Those results can be reasonably attributed¹¹ from 2010 onwards to the following critical interventions: (a) the large scale-up and use of free-of-charge rapid diagnostic tests (RDTs¹²) in communities and peripheral health care facilities (substantially increasing the detection rate), (b) the countrywide availability of free-of-charge and highly efficacious first line ACTs and, (c) the large distribution of LLINs¹³ on top of the existing important use of traditional nets. Above control interventions have been implemented by numerous dedicated and trained peripheral health care staff and malaria volunteers posted in strategic locations providing people at risk with malaria information and advice pertaining to behavior changes (IEC/BCC). Those interventions have been so efficient that confirmed malaria cases are no longer detected (or at very low rate) in an increasing number of villages/townships especially in Eastern and Northern States including in border townships where recorded Pf infections are drastically falling down.

The next MPR is expected to take place in 2019.

Based on the outputs of these various review processes, and taking into consideration regional strategy guidance where appropriate, the NSP Workplan is revised as necessary with external technical assistance and support from WHO where required. The revision process itself is fully transparent, incorporating stakeholder reviews whenever appropriate and prior to development of the final version. The NSP itself, which provides high-level guidance to the Program, is a formal document, signed-off on by the Minister for Health. It is revised every 5 years.

In-country work on the development of the current NSP started with a meeting of the TSG-Malaria on 20 May 2015. This was followed by a 'National Consultation Workshop on 24-25 September 2015, which was attended by 120 participants including MoHS representatives, WHO's Regional Advisor (Malaria) and a number of international consultants. Drafts of various sections of the NSP were circulated amongst stakeholders in October 2015, and in November/December the first draft of the overall NSP document was prepared by NMCP in partnership with WHO and in consultation with the Director (Disease Control). On 22 December 2015 this draft was disseminated to partners. A final draft incorporating feedback from all relevant stakeholders was prepared with WHO assistance in April 2016. The strategic planning process has thus been broad based and inclusive of all relevant partners.

SECTION 2: FUNDING LANDSCAPE, ADDITIONALITY AND SUSTAINABILITY

To achieve lasting impact against the three diseases, financial commitments from domestic sources must play a key role in a national strategy. Global Fund allocates resources, which are far from sufficient to address the full cost of a technically sound program. It is therefore critical to assess how the funding requested fits within the overall funding landscape and how the national government plans to commit increased resources to the national 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 national program and how this funding request fits within this, briefly describe:

- a. The availability of funds for each program area and the source of such funding (government and/or donor). 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 other donor resources.
- c. For program areas that have significant funding gaps, planned actions to address these gaps.

¹⁰Of note is that most malaria data before 2007 were not confirmed by any lab methods. 2012 is considered as a more valuable year for baseline reference with large use of combo RDTs.

¹¹The country is also experiencing rapid and high deforestation rate impacting on An. dirus and An. minimus survival

¹² Pf mono RDT from 2010 and combo tests from 2012 onwards

¹³ The GFATM (through R9NFM and RAI) is the major donor providing more than 90% of the budget requested by the program. PMI is also a large contributor.

Funding landscape

The Global Fund is the largest contributor of malaria funding in Myanmar at present. Other major funding partners are 3MDG, PMI, JICA and ADB. There are currently two active Global Fund grants: the New Funding Model (NFM) grant (2013 to 2016) and the Regional Artemisinin Resistance Initiative (RAI) grant. The NFM targets 284 endemic townships and the total allocation is US\$147 million from 2013 to 2016. RAI is a five country regional grant currently being implemented in Cambodia, Lao PDR, Myanmar, Thailand and Viet Nam with a total allocation of US\$50 million (including intra-country component) from 2014 to 2017. RAI focuses on the key challenges associated with artemisinin resistance in 72 townships providing support for LLINs, malaria case detection, case investigation and follow-up, and regional/national advocacy and awareness campaigns. 3MDG, a multi-donor trust fund, has supported community case management, LLINs, and surveillance in 52 priority townships. PMI is supporting LLINs, entomological surveillance, community case management. 3MDG and PMI jointly funded the nation-wide malaria indicator survey (MIS) in 2015. JICA is supporting malaria diagnosis and entomology surveillance in health care facilities in Bago Region. ADB is investing in microscopy QA, surveillance, and establishing guidelines for private sector employers engaging mobile and migrant populations. Other funders, such as the Bill and Melinda Gates Foundation and UKAID, contribute resources for malaria programming directly through implementing partners, e.g., the AMTR Project implemented by PSI.

Other partners are providing technical assistance, complementing the financial contributions committed by the government and the funding partners. WHO provides technical assistance through its country office and through the Emergency Response to Artemisinin Resistance (ERAR) program for coordination and strategy development, surveillance and response systems, information on migrant and mobile populations as well as operations research. Several INGOs are providing technical assistance to NMCP in the areas of planning, financing, malaria elimination, case-based data reporting system, and surveillance, among others.

Table 2.1 presents an overview of the NSP budget for 2017-20 broken down by funding source. The NFM2+ (above allocation resources requested from Global Fund) and NFM2++ (above allocation resources likely to be provided by other development partners) together make up the 'above allocation' request. The full cost of the NSP for 2017-20 is US\$350 million.

Table 2.1. NSP budget 2017-20 by funding source/implementing partner.

Funding source	2017	2018	2019	2020	Total
GF-NFM	4,793,505	-	-	-	4,793,505
NFM2	26,760,781	27,647,104	28,558,017	24,299,195	107,265,097
NFM2+	35,940,048	26,720,217	31,225,762	10,534,992	104,421,019
NFM2++	290,184	19,407,282	20,473,645	19,220,467	59,391,577
GF-RAI	17,142,434	-	-	-	17,142,434
RAI2	-	-	-	-	-
PMI	10,123,459	-	-	-	10,123,459
CHAI	200,000	-	-	-	200,000
JICA	811,000	1,070,000	800,000	1,070,000	3,751,000
GoM	7,724,916	9,269,900	11,123,879	13,348,655	41,467,350
ADB	1,300,000	-	-	-	1,300,000
UMB	5,936,400	-	-	-	5,936,400
3MDG	11,576,634	-	-	-	11,576,634
unfunded	-	-	-	-	-
Total	122,599,361	84,114,502	92,181,303	68,473,309	367,368,474

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

This analysis focuses on 2017 given the high degree of uncertainty regarding the level and scope of support from non-Global Fund sources post-2017: 50% (US\$14.7 million) of the case management

module will be funded from non-NFM2 sources in 2017. 32% (US\$15.4 million) of the Vector control module will be funded from non-NFM2 sources [US\$4.8 million of this is actually from NFM 2016 budget for LLINs to be distributed in 2017]. 43% (US\$7.4 million) of the 'HSS - Health information systems and M&E' module will be funded from non-NFM2 sources. 71% (US\$17.0 million) will be funded from non-NFM2 sources (71% of the total for this module). GOM has gradually increased health sector funding over the past several years. GOM will contribute US\$7.7 million (14%) of the 2017 non-NFM2 sources.

There are no programme areas that are fully supported by other donors. All areas will require Global Fund investment to maintain a minimum level of service provision and operations. For more detailed information please refer to the Modular Template and to worksheet 'Other contributions summary' in "Myanmar Malaria CN Budget 160612.xlsx".

There are no programme areas that are fully addressed without support from Global Fund under NFM2.

For more detailed information please refer to the Modular Template and to worksheet 'Other contributions summary' in "Myanmar Malaria CN Budget 160612.xlsx".

b. How the proposed Global Fund investment has leveraged other donor resources.

Support for community-based malaria case management services initiated under previous Global Fund grants, and to be continued under NFM2, is expected to leverage essential support from UNICEF for the drugs required for expansion of the approach into iCCM. UNICEF, by building on the existing Global Fund-supported platform, will be able to greatly increase both the impact and the cost-effectiveness of community based healthcare services with a minimal investment. Global Fund investments have also been leveraged to increase planned investments by PMI in the upcoming "Defeat Malaria" project. This five year, \$50 million will result in improvements in coverage in LLIN distribution, community case management and surveillance in the targeted districts of Rakhine, Kayin and Tanintharyi. Global Fund resources have also been highly complementary to 3MDG program investments, however 3MDG will phase out malaria programming in mid-2017 and will itself come to a close at the end of 2017. No official information is available at the present time regarding future plans for the multi-donor trust or how GF resources may be leveraged to obtain additional donor commitments through this channel.

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

The GoM will lobby established funding partners for support to fill the funding gaps identified in this concept note. Particularly after TRP comments have been satisfactorily addressed, the concept note itself will provide a valuable framework with which to approach other potential funding partners. In addition GOM will approach private sector stakeholders to encourage investments in corporate social responsibility. NMCP and partners may apply for project-based additional funding though this is not expected to yield large investments.

2.2 Counterpart Financing Requirements

Complete the Financial Gap Analysis and Counterpart Financing Table (Table 1). The counterpart financing requirements are set forth in the Global Fund Eligibility and Counterpart Financing Policy.

- a. Indicate below whether the counterpart financing requirements have been met. If not, provide a justification that includes actions planned during implementation to reach compliance.

Counterpart Financing Requirements	Compliant?	If not, provide a brief justification and planned actions
i. Availability of reliable data to assess compliance	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
ii. Minimum threshold government contribution to	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Direct GOM contribution is 8% of the total within allocation

disease program (lower-middle income-20%)		funding request. Other contributions not included in the calculation are infrastructure, reagents, and basic and hospital staff. Efforts are underway to advocate for additional funding during the upcoming budget negotiations.
iii. Increasing government contribution to disease program	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

- b. Compared to previous years, what additional government investments are committed to the national programs in the next implementation period that counts towards accessing the willingness-to-pay allocation from the Global Fund. Clearly specify the interventions or activities that are expected to be financed by the additional government resources and indicate how realization of these commitments will be tracked and reported.
- c. Provide an assessment of the completeness and reliability of financial data reported, including any assumptions and caveats associated with the figures.

2-3 PAGES SUGGESTED

b (i). Compared to previous years, what additional government investments are committed to the national programs in the next implementation period that counts towards accessing the willingness-to-pay allocation from the Global Fund.

Government total health expenditure is increasing year by year and rose steadily from US\$70 million in 2011/12 to US\$610 million) in 2015/2016: this represents a nearly nine-fold increase over four years. The share of general government health expenditure (GGHE) increased from US\$6.8 million in 2001/2 to US\$567 million in 2014/15. Government health spending as a share of the gross national product (GDP) increased fivefold from 0.20% in 2010/11 to 0.99% in 2014/15. Similarly, total government health expenditures as percentage of gross government expenditures (GGE) increased from 1.03% to 3.38% in the same period.

Table 2.1.1. Gross health expenditure as percentage of GDP and GGE.

Financial Year	% of GDP	% of GGE
2010-11	0.20	1.03
2011-12	0.21	1.05
2012-13	0.76	2.82
2013-14	0.89	3.15
2014-15	0.99	3.38

Source: Health in Myanmar 2014

With specific regard to malaria, the Government of Myanmar's budget provision for malaria (the NMCP budget) was US\$261 million in 2010-2015 and is currently estimated at US\$468 million in 2016-2020. Government funds are allocated on a year-to-year basis, and therefore exact budgets for future years cannot be predicted with certainty. As noted above, the Government of Myanmar (GoM) budget provision for malaria was US\$1 million in 2014 and is currently US\$6.4 million in

2016. The expected GoM malaria budget in 2020 is US\$13.3 million, double the current 2016 budget. The National Health Plan (NHP) 2016 - 2020 is currently being drafted. Malaria is among the diseases of national concern, along with TB and HIV, and will be prioritized. Moreover, the country has signed the Asia Pacific Leaders Malaria Alliance (APLMA) declaration to eliminate malaria by 2030. The malaria programme is in a strong position to secure significant additional government funding, particularly considering the national and regional vision of malaria elimination by 2030.

b (ii). Clearly specify the interventions or activities that are expected to be financed by the additional government resources and indicate how realization of these commitments will be tracked and reported.

During this four-year period the MoHS is expected to invest at least US\$41.5 million on malaria. Priority investments include malaria commodities and equipment (insecticide for indoor residual spraying; LLIN retreatment tablets), travel costs for staff, infrastructure (entomology insectary and laboratory reagents). NMCP contribution for staff salaries will cover central (deputy and assistant directors, medical technician, entomologist), regional (regional malaria officer) and township level staff (malaria supervisor and malaria inspector).

c. The completeness and reliability of financial data reported (including assumptions and caveats).

As noted in the WHO Country Cooperation Strategy for Myanmar (2014-2018), all external funding coming into the country is required to be recorded in the National Health Sector Budget, under the financial management of the MOHS. Within the MOHS, technical units at all levels are responsible for monitoring and evaluation of programmes, including data collection. Financial units at all levels are responsible for disbursement and financial management, including financial reports.

Assessments of all plans and projects are carried out every 2–3 years, in addition to the mid-term and annual reviews. Internal and independent external reviews are also carried out to study and monitor progress and assess performance and impact of the interventions. Auditing mechanisms, both internal and external, are also in place. Overall, the current system allows for financial data completeness, reliability, transparency, and accountability.

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 3) organizes the request to clearly link the selected modules of interventions to the goals and objectives of the program, and associates these with indicators, targets, and costs.

3.1 Programmatic Gap Analysis

A programmatic gap analysis needs to be conducted for the three to six priority modules within the applicant's funding request.

Complete a programmatic gap table (Table 2) detailing the quantifiable priority modules within the applicant's funding request. Ensure that the coverage levels for the priority modules selected are consistent with the coverage targets in section D of the modular template (Table 3).

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.

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

This application for funding covers activities grouped under 19 *interventions* spanning 4 **modules** as presented in section 3.2 below. Seven programmatic gap tables have been prepared, one for each of the quantifiable priority modules and interventions: RDTs delivered through health facilities, through VHVs at community level and through the private sector; ACTs delivered through health facilities, through VHVs at community level and through the private sector; and, LLINs delivered

through mass and continuous distribution channels.

In addition, the NSP Budget 2016-20 (Worksheet 'Budget',) functions as a gap analysis in its own right. Proposed sources of funding for each budget line are presented on a quarterly basis in columns AW-BL of worksheet 'Budget'. For a detailed list of activities please refer to the modular template and for more in depth information relating to strategies please refer to the NSP (Annex 1).

Case management

Facility-based treatment - See programmatic gap tables (RDTs & ACT).

Integrated community case management - See programmatic gap tables (RDTs & ACT).

Private sector case management- See programmatic gap tables (RDTs & ACT).

Financial gap for Case management 2017-20: US\$35,120,069 – 32.7% of Allocation, US\$48,702,858 – 29.7% of Above allocation.

Vector control

LLIN - Mass campaign and continuous distribution - See programmatic gap table.

Financial gap for Vector control 2017-20: US\$10,692,083 – 10.0% of Allocation, US\$66,610,503 – 40.7% of Above allocation.

HSS - Health information systems and M&E

Routine reporting

The national malaria information system (MIS) in transmission reduction Townships is in need of expansion and modernization in support of the move towards elimination. The system needs to be upgraded to allow weekly reporting and geographical presentation of results. In elimination phase Townships a real-time case-based surveillance and response system (GIS) is required. All malaria data needs to feed into the DHIS 2. In addition, an effective pharmacovigilance system is required at health facility level. Systems need to monitor both public and private sector health care providers (including community based volunteers).

An additional US\$4.0 million has been allocated for this 'routine reporting' in 2017. RAI will support: Communication devices for strengthening surveillance system; M&E specific HR costs; M&E Training for field staff; Refresher training of Data Assistant; Supportive supervision and routine monitoring by Central, S/R, and Township levels; and, Supervision visits by community mobilizers to village level. ADB, JICA, PMI and UMB will also provide general support for malaria surveillance and M&E in areas not covered by this request to Global Fund.

Analysis, review and transparency

Ongoing broad-based operational research needs to continue in order to address programmatic issues as they arise. Findings need to be reviewed annually and strategies, guidelines and SOPs revised as appropriate. A joint malaria programme review is required every 3 years to ensure that the programme remains on track.

An additional US\$3,121,575 has been allocated for this intervention in 2017. RAI will support: Quarterly coordination meetings for border crossing malaria volunteers and HF staff; Annual evaluation and planning at central level; M&E field visits; and, Project supervision and team capacity building. JICA and UMB will each support specific operational research projects. PMI will support ToT training on micro-stratification for BHS.

Surveys

A variety of surveys will be needed to monitor specific aspects of programmatic progress not covered by routine surveillance. These will need to target programme elements in both public and private sector settings.

An additional US\$596,387 has been allocated for this intervention in 2017. RAI will support micro-stratification teams at Township level as well as migrant mapping and associated follow-up activities. PMI will provide support for micro-stratification in its 3 project States.

The financial gap for HSS - Health information systems and M&E 2017-20: US\$37,646,397 – 35.1% of Allocation, US\$30,972,352 – 18.9% of Above allocation.

Program management

Policy, planning, coordination and management

Representatives from various sectors (governmental and non-governmental) must be involved in the planning and implementation of malaria control and elimination efforts. Strong cross-border collaboration at State/Regional and Township levels as well as technical exchange within the region and beyond must be maintained. Technical assistance will be required for various issues. Long-term technical support is required from WHO. A comprehensive programme of training and needs-based refresher training is needed to strengthen service provision in all programmatic areas. Specialized training is required for senior technical staff. Infrastructure strengthening and maintenance will be needed. Vehicles, equipment, commodities and consumables will be required. Extensive monitoring and supportive supervision will be required for both public and private sector health care providers, including VHV's.

An additional US\$13,250,684 have been allocated for this intervention in 2017. US\$4,554,775 from RAI for: Annual Review Workshop (Merlin and CHDN Staff); In country annual review meeting of RAI; Quarterly Planning and evaluation meeting with ROs and TLs for preparation of QWPs; Bi-annual health team meeting cost; TSG Task force meeting; Form and support quarterly malaria network for key stakeholders at each border crossing point; Quarterly coordination meetings for ARC health staff; Coordination and planning meeting with malaria partners and Township Medical Officers at State/Region level; Malaria TSG meeting and meeting with National program/DOH/MOHS in Nay Pyi Taw; Cross border meeting; Conference attendance and other travel; Office rental; Trainings: WHO TA costs; Salaries for selected staff; External professional Services; HR and office running costs for PR and SRs; NTG workshop; Vehicle maintenance and fuel; Communication costs. . US\$7,724,916 from GoM for HR costs. US\$150,000 from JICA for: TA and HR cost; Capacity building for programme management; and, Procurement and supply of IT equipment. US\$770,993 from PMI for: Coordination meetings among partners at central and S/R levels; HR costs; Development and production of training materials; Planning and training on program reorientation towards malaria elimination; Capacity building for programme management; US\$50,000 from UMB for procurement and supply of IT equipment. An additional US\$33,742,434 has been allocated for this intervention during 2018-20 from GoM for HR costs.

Supporting procurement and supply management

The NMCP's central warehouse is in need of refurbishment. Supply systems need to be strengthened through training.

No additional funding has been allocated for this intervention.

Grant management

The programme and its partners need to continue to provide sound financial management in-line with national guidelines (and in-line with internationally recognized best practice). Grant management costs for PRs will be required for Global Fund supported activities.

An additional US\$3,722,466 has been allocated for this intervention in 2017. US\$1,082,466 from RAI for: Project support costs @ 7%; and, Indirect Cost Recovery. US\$2,640,000 from 3MDG for the 3MDG management office.

Financial gap for Programme management 2017-20: [US\$23,840,547– 22.2% of Allocation, US\$17,526,884 – 10.7% of Above allocation]

3.2 Applicant Funding Request

Provide a strategic overview of the applicant's funding request to the Global Fund, including both the proposed investment of the allocation amount and the request above this amount. Describe how it addresses the gaps and constraints described in questions 1, 2 and 3.1. If the Global Fund is supporting existing programs, explain how they will be adapted to maximize impact.

Note: NFM2 refers to allocation amount covered by this application (2017-2020).

NFM2+ refers to above allocation (2017-2020)

NFM2++ refers to above allocation likely to be funded by other donors (2017-2020)

This application for funding covers activities grouped under 19 *interventions* spanning 4 **modules** as presented in table 3.2.1 below. A total of US\$107,265,097 is requested from the allocation amount and US\$163,812,596 from the above allocation amount. A further US\$17,142,434 is expected in 2017 under the existing RAI grant.

Table 3.2.1. Global Fund Request by Module and Intervention. [For table 3.2.1. please see worksheet 'Global Fund request summary' in workbook 'Myanmar Malaria CN Budget 160612.xlsx']

This request is based on the understanding that there will be US\$124,407,531 (including the existing 2017 RAI grant) available for the Global Fund allocation for 2017-20 (table 3.2.2).

Table 3.2.2. Overview of funds available by PR, funding stream and allocation status
(Source: Global Fund-FPM, 24 May 2016).

	2017	2018	2019	2020	Total
NFM2 - PR1	20,323,801	13,417,674	13,417,674	13,417,674	60,576,822
RAI - PR1	17,142,434 *	7,666,667	7,666,667	7,666,667	23,000,000
NFM2 - PR2	6,436,980	5,750,432	5,750,432	5,750,432	23,688,275
Total	26,760,781	26,834,772	26,834,772	26,834,772	107,265,097

* RAI funds in 2017 (US\$17,142,434) are already allocated.

Table 3.2.3. Overview of request by PR, funding stream and allocation status.

	2017	2018	2019	2020	Total
Within allocation					
PR1 - NFM2	20,324,013	22,070,680	22,769,493	18,412,637	83,576,822
PR2 - NFM2	6,436,768	5,576,424	5,788,525	5,886,558	23,688,275
<i>Sub-total</i>	<i>26,760,781</i>	<i>27,647,104</i>	<i>28,558,017</i>	<i>24,299,195</i>	<i>107,265,097</i>
Above allocation					
NFM2+ and NFM2++					
PR1	30,913,840	41,955,406	47,547,312	28,565,012	148,981,570
PR2	5,316,392	4,172,093	4,152,094	1,190,447	14,831,025
<i>Sub-total</i>	<i>36,230,232</i>	<i>46,127,498</i>	<i>51,699,406</i>	<i>29,755,459</i>	<i>163,812,596</i>
Grand total	62,991,013	73,774,602	80,257,424	54,054,654	271,077,693

'NFM2' funding will make a very significant contribution towards the goal of the NSP (1.2.a above). NFM2 activities have been selected based on a robust prioritization process, which is described in section 3.3. The NFM2 funding will support high impact activities that are currently unfunded. Some of these activities are a continuation of the high impact activities supported by Global Fund under NFM and RAI. Others are innovations developed to address the issues currently undermining progress towards programmatic goals (described above). An overview of each intervention is presented below. Further details are provided in the NSP (Annex 1):

Case management [US\$35,120,069 – 32.7% of Allocation, US\$48,702,858 – 29.7% of Above allocation]

Facility-based treatment [US\$8,500,711– 7.9% of Allocation, US\$12,528,048 – 7.6% of Above allocation]

Funds will be used to: strengthen and maintain existing microscopy-based diagnostic services and to provide RDT-based standby diagnostic services at health facilities. Treatment will be provided in-line with WHO guidelines including provision of primaquine to eliminate gametocytes. Supervised treatment will be used to support patient adherence to radical treatment for vivax malaria. Funds will be used to: support case management (including the management of severe malaria) in public sector health facilities (training and operational costs); provide special diagnostic and treatment services in remote areas and at selected border crossing points; implement intensified case detection in special situations and in areas currently underserved; train defense service staff on pre- and post-deployment malaria screening; introduce screening for pregnant women in stratum 3a communities. Quality assurance for diagnostic and treatment services will be strengthened. Coverage achieved with the help of existing Global Fund grants will be expanded to areas currently underserved and as a result of this and increased screening by health service providers, as well as

expanded community based and private sector services (below), the annual blood examination rate (ABER) for the population at risk will be increased from 6% (2015) to 8% in 2020, in-line with the increased case detection requirements associated with the move towards malaria elimination.

Key activities within the allocation include: Procurement of microscopy supplies for 300 microscopy points; Refresher training for all microscopists; Case management training including elimination concepts at all levels of the public sector for staff; Establishing 7 new malaria clinics in 2017 then 8 per year thereafter in currently underserved high risk areas and supporting these plus 98 of the existing 217 malaria clinics in 2017 (52 of the 217 clinics will be covered by existing RAI funds during 2017, RAI will also support the establishment of 1 new clinic in 2017); Intensified case detection (338 missions in 2017 rising to 440 missions per year thereafter); Training of trainers for Defence Service personnel on pre- and post-deployment screening (in 17 States/Regions); Annual microscopy QA training at Central level; QA for case management plus needs-based training for those found to be weak; and, Procurement of RDTs and antimalarials for public sector health facilities (see programmatic gap tables for details). Key activities in the above allocation amount include: Procurement, supply of 45 replacement microscopes plus 1 teaching microscope. Procurement, supply and maintenance and other laboratory equipment; Training of newly recruited microscopists for malaria microscopy (1 training session per year by each PR); Case management refresher training; Establishing an additional 2 new malaria clinics per year in currently underserved high risk areas and supporting these plus 90 of the 240 existing malaria clinics in 2017, and all of the existing 240 clinics thereafter (as mentioned above 52 of the 240 clinics will be covered by existing RAI funds during 2017); Operational costs for 70 border screening points for malaria; G6PD deficiency mapping in 110 tribal Townships per year from 2017-2019; Incentives for microscopy based follow-up of patients on day 28 or day 42 (numbers of patients are expected to fluctuate between 1,200 and 2,400 per year depending on the number of States//Regions in the elimination phase and on the number of years each has been in the elimination phase); Quality assurance of microscopy including the establishment of a microscopy quality database at central and State/Regional level and external malaria microscopy competency assessments; Establishing a slide bank.

The Global Fund is already supporting most of the various facility-based treatment activities described above. Efforts have been made to maximize impact by minimizing wastage of antimalarials and RDTs by improved modeling of requirements, which factors-in product shelf-life while ensuring that every health facility has a basic level of provision (see worksheets 'RDT' and 'Pharmaceuticals' in 'Myanmar Malaria CN Budget 160612.xlsx') – thus catering for the issue of forest workers returning to their homes in non-endemic areas (see 1.1.b above). Revised training materials and SoPs will incorporate lessons learned from implementation to date. For example more emphasis will be placed on screening of all fever cases in order to maximize case detection as the programme moves towards elimination. Quality assurance for case management, including investigation of all reported malaria deaths, will ensure that any weaknesses in the management of severe malaria are addressed. Increased emphasis on quality of microscopy through external competency testing and the establishment of a reference laboratory will ensure microscopists provide the best possible value for money. Screening of Defense Services personnel pre- and post-deployment is a new intervention aimed at preventing the movement/export of drug resistant strains of malaria, a high priority in light of the drug resistance situation in the region.

Integrated community case management [US\$22,230,466 - 20.7% of Allocation, US\$22,358,810 - 13.6% of Above allocation]

Free community-based case management services for malaria will be continue to be delivered by village health volunteers (VHVs), work site volunteers and backpacked (mobile) health workers in endemic communities. During 2018 the Programme will expand to cover all targeted endemic settlements. Expansion will start from stratum 3a and continue until all eligible settlements in stratum 3c have been covered. There will be special emphasis on ensuring that all marginalized ethnic minority groups at risk are covered within the first year of operations.

Key activities within the allocation include: Quarterly VHV planning and coordination meetings in 215 key townships during year 1; Monthly supervision visits for ~70% of the 7,000 volunteers under PR1 and 75% of the 3,600 volunteers and 800 GPs under PR2 (those best performing will be visited less frequently); Training on the VHV manual (including iCCM) for new volunteers (50 training sessions per quarter for the first 2 years under PR1 plus 36 over the first 3 years for PR2); Training on the VHV manual (including iCCM) for existing volunteers (9,000 volunteers during the first 2 years under PR1 plus 800 volunteers during the full 4 years under PR2); Annual refresher training for all VHVs under PR2, covering both prevention and case management; VHV Kits; transport subsidies/incentives for volunteers; Support for transport for referral for severe malaria cases (the number of referral cases is expected to drop steadily from 428 in year 1 to 153 in year

4); and, procurement of RDTs and, antimalarials (see programmatic gap tables for details). Key activities in the above allocation amount include: Quarterly planning and coordination meetings in 30 Townships in year 1 and in all 291 participating Townships in subsequent years; Refresher training of VHV for both prevention and case management under PR1 (covering 291 Townships in both year 2 and year 4); Training on the VHV manual (including iCCM) for existing volunteers (3000 volunteers in year 3 and 100 in year 4 under PR1); Community empowerment meetings (4,435 in year 1 and 5,000 per year thereafter); and, procurement of additional RDTs and, antimalarials (expected to be covered by PMI and 3MDG) and other medicines for iCCM (expected to be covered by UNICEF).

Community-based malaria case management services have proven to be an extremely effective means of targeting the key populations, described in sections 1, 2 and 3.1 above, that otherwise have disproportionately low access to prevention and treatment services. The effectiveness of the original approach, which was based purely on village-based volunteers, has been further enhanced in this regard by the addition of work site volunteers and backpacked volunteers. The provision of referral support will address a key aspect of the access to secondary care issues described in section 1.1.c. The Global Fund has been supporting extensive community-based treatment services in Myanmar since several years and valuable lessons have been learned, which will be used to adjust the approach to maximize impact. In order to maximize the efficiency and cost effectiveness of the intervention, in future just one implementing partner will be allocated to manage services in each Township. The role of volunteers will expand to cover diarrhoea and acute respiratory tract infections for children under 5 (iCCM), as well as a fever management service for all age groups. The former will greatly enhance the cost effectiveness of community-based health services. The latter will ensure that communities continue to use volunteer services even when malaria incidence falls to very low levels, and this will protect the malaria elimination related surveillance role of the volunteers. The volunteers will also help to monitor population movements and support referral for severely ill patients. In areas in the elimination phase, volunteers will be required to support real time reporting wherever feasible and assist case investigation and focus response teams as necessary. In an effort to strengthen implementation still further, in future the volunteers will meet with supervisors on a monthly basis for resupply, data crosschecking and reporting.

The programme will leverage the services provided by I/NGOs and Ethnic Health Organizations in conflict affected areas and other similarly hard to reach areas, to provide more comprehensive access to malaria services. Services through these organizations will be scaled-up under NFM2 to cover the uncovered. Work site interventions will increase accessibility to the mobile and migrant population. Action points that will be supported by these agencies under NFM2 include: providing access to malaria services at all levels of health care facilities; establishing a referral fund for severe malaria cases; conducting small-scale peak season malaria prevalence surveys in areas for which data is scarce to rapidly assess burden and target interventions effectively; providing full VHV coverage in affected communities; and, lobbying Defense Services (especially Security Police) to improve the referral mechanism for severely ill patients in conflict affected areas who have been referred for hospital treatment.

ACD and investigation (elimination phase) [US\$915,507 – 0.9% of Allocation, US\$340,000 – 0.2% of Above allocation]

A transmission focus detection system will be established through training, supply and supportive supervision for staff at State/Region, District and BHS level. NMCP will work with MoHS to make malaria a notifiable disease in stratum 1, 2 and 3c Townships. Malaria cases will be reported within one day, full case investigations conducted within three days, and response actions taken within seven days. *Performance will be monitored against this 1-3-7 benchmark.*

Key activities within the allocation include: BHS training in elimination area for reporting (5 staff per township in 109 Townships from the first States/Regions to enter elimination in year 1 and a similar number for the next States/Regions to enter elimination in year 3); Capacity Building training of VBDC staff on Malaria Elimination (ToT & Multipliers) – 5 sessions in year 1 and 4 in year 3; Case follow-up (the number of cases requiring follow-up is expected to fluctuate annually from ~1,000 to 650 depending on staff capacity, number of States/Regions in the elimination phase and number of years each has been in the elimination phase); Foci Investigation and Management (the number of foci requiring follow-up is expected to fluctuate annually from around 570 to 250 depending on number of States/Regions in the elimination phase and number of years each has been in the elimination phase); Meetings and field visits for the National Malaria Elimination Committee (NMEC) will take place annually. Key activities in the above allocation amount include: Additional capacity building training of VBDC staff on Malaria Elimination (ToT & Multipliers) – 1 session a year under PR2.

These elimination specific activities are essentially new to the programme. They are fundamental to the new malaria elimination effort. The programme will adopt a 'learning by doing' approach, fine-tuning the strategy as required to maximize impact.

IEC/BCC [US\$894,218– 0.8% of Allocation, US\$2,689,000 – 1.6% of Above allocation]

A broad-based advocacy package targeting decision makers and community leaders at central, State/Regional and Township levels will be developed, along with a new IEC/BCC package, targeting key populations at risk. Target group specific and locally appropriate IEC/BCC materials and methodologies will be developed. Materials are likely to include IPC aids, audio and video sketches/presentations, billboard, posters brochures, articles and pamphlets.

Key activities within the allocation include: Development of advocacy fact sheet on malaria elimination; Production and dissemination of IEC materials; and, mobile phone-based BCC messaging.

Key activities in the above allocation amount include: Development of promotional materials for advocacy meetings on malaria elimination; Advocacy meetings at Township level; Promotion of corporate social responsibility for generating resources from private/corporate sectors; An assessment of BCC methodology and approaches; IEC/BCC package development workshops; Production and dissemination of additional IEC materials; Public service announcements; And, orientation meetings to increase community involvement in malaria elimination.

The approach and the materials will be tailored to the specific requirements of the key populations and gender-sensitive as described in sections 1, 2 and 3.1 above, and to the specific requirements of transmission reduction and elimination States/Regions. Products will be multilingual wherever appropriate, thereby addressing some of the communication issues described above. Where necessary work will be carried out in partnership with a commercial advertising agency to ensure that products are of the highest quality.

Ensuring drug quality [US\$1,041,273– 1.0% of Allocation, US\$1,758,000 – 1.1% of Above allocation]

A number of activities designed to minimize the use of inappropriate, counterfeit and sub-standard antimalarials will be supported. The ban on import, manufacture, export, registration, re-registration, distribution and sale of artemisinin monotherapy will be reinforced by the FDA through communication with importers, manufacturers, exporters, wholesalers/distributors, pharmacies and drug sellers. The programme will support the police to enforce the ban. A drug outlet survey will be conducted in order to develop a more in-depth understanding of the role of the private sector in Myanmar. 'On receipt batch testing' for RDTs and antimalarials procured by the programme will be carried out routinely.

Key activities within the allocation include: Facility visits by enforcement teams (rising from 10 per year in year 1 to 24 per year by year 4); FDA meeting on removal of monotherapy and inappropriate antimalarial medicines at Central, State/Region and Township levels (48 meetings per year); Procure and supply 4 replacement drug quality test kits (Minilabs) plus supplies as required; 100 FDA inspections per year; Field testing of collected samples; Confirmatory testing for collected samples (10% of passed plus all failed and suspect samples); Operational cost for incinerator for disposal of inappropriate, counterfeit and sub-standard antimalarials, including expired stock (cost sharing with HIV and TB); QA/QC of RDTs and antimalarials (batch testing of procured supplies). Key activities in the above allocation amount include: Inter-country collaboration meeting on pharmaceutical action (2 per year from year 2); Cross border collaboration on pharmaceutical interventions and others (likely to be funded through continuation grant from JICA); Strengthening FDA (equipment, training and operational costs - likely to be funded through continuation grant from PMI); a National Drug outlet survey in year 1; and, Annual training and retraining of FDA staff.

Most of these activities have been supported under existing and previous Global Fund grants. The introduction of support for police to enforce the ban is an innovation based on lessons learned over recent years and this is expected to significantly increase the impact of efforts to minimize the use of inappropriate, counterfeit and sub-standard antimalarials. The drug outlet survey is also new, and is considered an important step in increasing NMCP's understanding of the Private Sector's role in malaria case management in Myanmar.

Private sector case management [US\$793,895– 0.7% of Allocation, US\$3,804,000 – 2.3% of Above allocation]

Both 'social franchising' of private medical practitioners and public-private partnerships will be expanded and strengthened. to maximize coverage. Private sector partners will be provided with RDTs and antimalarials and this supply will be linked to timely and accurate reporting of data,

which will feed into the national HIS. During the elimination phase, selling of over-the-counter antimalarial drugs will be strictly controlled.

Key activities within the allocation include: Training of medical doctors on new treatment guidelines including management of severe malaria (133 Township level private sector and EHOs training sessions in year 2); and, Procurement of RDTs and antimalarials for the private sector (see programmatic gap tables for details). Key activities in the above allocation amount include: Operational costs (likely to be funded through continuation grants from PMI and JICA); Supervision and monitoring visits for medical doctors and other providers (4,400 in year 2 and 5,600 per year thereafter for the public sector, and 800 per year for the private sector).

This intervention involves an intensification of current efforts involving the private sector. Existing 'social franchising' engagement will be extended to cover pharmacies, private companies and selected vendors. Training, supportive supervision and monitoring and evaluation will be strengthened in order to improve and sustain the quality of services. A key message will be that the purpose of treatment is not only patient-centered but also for transmission reduction leading to elimination. The private sector often plays a key role in providing services to the populations described in sections 1, 2 and 3.1 above, that otherwise have disproportionately low access to prevention and treatment services. This expanded private sector engagement is therefore an essential component of the national malaria control and elimination efforts. The increased emphasis on timely reporting from the private sector, and the introduction of strict control of over-the-counter sales of antimalarials in States/Regions in the elimination phase, are both innovations aimed specifically at supporting the new elimination effort.

Epidemic preparedness and response [US\$744,000– 0.7% of Allocation, US\$4,505,000 – 2.8% of Above allocation]

Outbreak detection capability will be strengthened and maintained through training and supportive supervision for staff at State/Region, Township and RHC level. Malaria outbreaks will be reported within one day, full outbreak investigation will be conducted within three days, and response actions will be taken within seven days. Performance will be monitored against this 1-3-7 benchmark.

Key activities within the allocation are outbreak investigations and outbreak responses (a lump sum of US\$200,000 per year has been allocated – additional funds will be sought from emergency sources in the unlikely event that additional resources are required). Key activities in the above allocation amount are epidemic preparedness and response training

This intervention represents a continuation (with fine-tuning) of activities supported under existing grants. The existing outbreak detection system (currently based on the threshold system of 'mean monthly caseload for the last 3 years plus 2 standard deviations') will be revised to improve sensitivity in light of recent steady reductions in caseload. This innovation is expected to strengthen the impact of outbreak control efforts.

Therapeutic efficacy surveillance [US\$0– 0% of Allocation, US\$720,000 – 0.4% of Above allocation]

First-line treatment efficacy will be monitored through therapeutic efficacy studies (TES) annually. Monitoring drug resistance in *P. vivax* will be carried out in parallel where feasible. The programme will also carry out special clinical fieldwork in outbreak areas and in areas where treatment failure is suspected.

Key activities in the above allocation amount include: Therapeutic efficacy studies and other studies as required (likely to be funded through a continuation grant from PMI).

Once the number of patients falls to low levels, it will no longer be possible to perform TES; instead, the focus will shift to attempting to follow-up all patients (especially falciparum malaria patients) on the days specified in the WHO TES protocol for the ACT in question (see 'Facility-based treatment' above).

Vector control [US\$10,658,083 – 10.0% of Allocation, US\$66,610,503 – 40.7% of Above allocation]

Implementation of vector control interventions will be within the framework of integrated vector management to ensure optimal use of resources. Use of insecticidal interventions will follow technical recommendations provided in WHO's Global plan for insecticide resistance management in malaria vectors.

LLIN - Mass campaign [US\$3,514,545 - 3.3% of Allocation, US\$28,475,555 - 17.4% of Above allocation]

Free LLINs will be provided to cover the entire population residing in established settlements

(villages, IDP camps, prisons etc.) in target communities. Any urban areas in target sRHCs will be excluded from distribution. The target coverage rate for large sized LLINs will be 1.8 people per net (in-line with WHO standards). These LLINs will be delivered through regular rolling mass distributions. The periodicity of these mass distributions will depend on the expected lifespan of the LLINs procured (based on the most recent polyester LLINs distributed in Myanmar, mass distributions will take place every 3 years). The timing of mass distributions will depend on the date of the last mass distribution in the area in question.

Key activities within the allocation are procurement and distribution of LLINs and micro-planning for LLIN distribution. Key activities in the above allocation amount are procurement and distribution of additional LLINs and micro-planning for distribution of additional LLINs (see programmatic gap tables and worksheets 'LLIN' and 'Budget' in workbook 'Myanmar Malaria CN Budget 160612.xlsx' for details); **post-campaign LLIN coverage assessments (representative random sample); and, Insecticide treated materials.**

This intervention is a continuation of activities supported under previous grants. The micro-planning is an innovation based on lessons-learned: Township officials will conduct micro-planning prior to bednet distribution as part of their routine duties. Micro-planning will take into consideration which members of a household share a sleeping space in order to ensure 100% coverage without wastage. Distribution of LLINs will be coupled with locally and linguistically appropriate and gender sensitive IEC/BCC to ensure community mobilization and high and correct LLIN usage by all beneficiaries. Under NFM2 the LLIN programme plans not only to maintain coverage in static communities in stratum 3 sRHCs, but also use multiple continuous delivery strategies to maximize LLIN/ ITN coverage in the key risk populations that are currently under-served.

LLIN - Continuous distribution [US\$6,296,775 – 5.9% of Allocation, US\$32,921,545 – 20.1% of Above allocation]

LLINs will be provided for use in forest/forest farms (targeting traditional farming communities and informal sector forest workers e.g. small-scale gem/gold miners, people gathering forest products). These nets will be delivered in LLIN target communities during routine mass distribution. Additional LLINs will be given to pregnant women in communities targeted for mass LLIN distribution. These nets will be delivered through ante-natal care (ANC) services. LLINs will be provided to employers in endemic areas of stratum 3a and 3b Townships for them to provide to their workers. This intervention will target: construction project settlements (e.g. dams, bridges and mines); plantations (e.g. rubber, oil palm, food); forest workers in the formal sector (e.g. forest/wildlife protection services); and, camps associated with commercial projects (e.g. road/railway construction, large-scale logging). LLINs will be provided to managers of farms in endemic areas of stratum 3a and 3b Townships to give to their seasonal agricultural workers when they arrive. LLINs will be provided to people in new settlements in target sRHCs e.g. IDPs, roadside economic migrants, settlements adjacent to construction projects. LLINs will be supplied through malaria clinics and volunteers at forest entry points. This intervention will target forest workers in the informal sector e.g. small-scale gem/gold miners and people gathering forest products. Continuous distribution of LLINs will be provided through the VHV network in order to address any LLIN attrition in-between mass distributions. In the event of disasters, outbreaks and confirmed transmission foci in target areas, LLINs will be provided to anyone who has not already been covered.

Key activities within the allocation include: Procurement and distribution of LLINs. Key activities in the above allocation amount include: Procurement and distribution of additional LLINs (see programmatic gap tables and worksheet 'LLIN' in workbook 'Myanmar Malaria CN Budget 160612.xlsx' for details).

This intervention is comprised of a range of innovative LLIN delivery approaches designed to target the key populations, described in sections 1, 2 and 3.1 above, that otherwise have disproportionately low access to prevention services. In addition to the usual 3 yearly mass distribution to people living in established communities, from 2017 the programme will provide additional LLINs through a range of new delivery channels (see 3.1) designed to specifically target each of the key populations that have disproportionately low access to prevention (identified in section 1.1.b above) and maintain 100% coverage. The various delivery channels are based on experience gained from pilot projects and operational research conducted both in Myanmar and elsewhere in the region. A detailed implementation plan is currently under development and will be completed prior to grant signing. Quantification of LLIN requirements (see worksheet 'LLIN' in Myanmar Malaria CN Budget 160612.xlsx) is based on a clear set of assumptions. Some of these assumptions are conservative estimates based on expert opinion. The quantification will be updated annually as more information, particularly relating to mobile populations and migrants, becomes available. The revised quantification will take into account any updates to the micro-stratification of malaria risk. As these delivery approaches are largely new to Myanmar, the

programme will adopt a 'learning by doing' approach, fine-tuning the strategy as required to maximize impact.

Entomological monitoring [US\$818,145 – 0.8% of Allocation, US\$1,617,680 – 1.0% of Above allocation]

The programme will monitor the coverage and quality of interventions, including the 'within village' and 'within house' coverage of IRS, the physical condition of LLINs, and the residual efficacy of insecticides on LLINs and on walls and ceilings with time. LLIN utilization and perceived usefulness will also be assessed. Entomological surveillance will include assessments of species distribution, densities, aquatic habitats, feeding and resting behaviours. NMCP will collaborate with other Ministries to control the import and use of insecticide for agricultural purposes.

Key activities within the allocation include: Procurement of entomological equipment and reagents; Training on malaria entomology at Central level in years 2 and 4; Field work for entomological monitoring by State/Region VBDC teams; Monitoring of Insecticide resistance of vectors in sentinel sites in 7 States/Regions; Longitudinal Vector Prevalence and Vector Bionomics Surveys from year 2; and, Monitoring the effectiveness of IRS on sprayed walls (carried-out annually in 6 townships).

Key activities in the above allocation amount include: Procurement of a multi-viewer microscope for training; Maintenance cost for an insectary; Training on basic malaria entomology in 15 States/Regions in years 2 and 4; and, additional entomological surveillance and monitoring (likely to be funded through a continuation grant from UMB); Identification of larval breeding sources and larvae and study on durability and efficacy of LLINs.

The programme will establish a core group of highly trained entomologists to manage entomological surveillance and make evidence based recommendations about any necessary changes in interventions or delivery strategies, and to address any elimination-specific challenges. Entomological intelligence will be used to evaluate risk of reintroduction where malaria-free status has been achieved recently.

Indoor residual spraying [US\$28,618 - 0.0% of Allocation, US\$2,494,919 - 1.5% of Above allocation]

Focal responsive IRS will be conducted in the event of outbreaks/confirmed transmission foci. IRS will however only be applied in areas which have not been targeted for LLINs during the previous three years. Areas that have received LLINs in the last three years will instead receive top-up LLINs as required. Community mobilization, and behaviour change communication will be key to ensuring access to homes in order to achieve the high level of coverage (>80%) required to maximize impact. Emphasis will be placed on strengthening logistics in order to ensure timely and adequate supplies of consumables, equipment and transport. Attention will also be given to strengthening coverage assessments and documentation.

Funds from within the allocation will be used to procure personal protective equipment for IRS (572 sets in year 1 for IRS already supported under RAI); Key activities in the above allocation amount include: Procurement and supply of 572 spray cans in Year 1; Procurement and supply of 733 sets personal protective equipment for IRS annually from 2018; Procurement and supply of Insecticide (see worksheet 'IRS' in workbook 'Myanmar Malaria CN Budget 160612.xlsx' for details); Training of VBDC staff and IRS teams in elimination States/Regions on geographical reconnaissance and IRS methodology (3 States/Regions in year 1 and 3 in year 3); Operational costs for IRS (some of this is likely to be funded through a continuation grant from JICA); Conducting post-IRS coverage assessments; Piloting larval source management in specific settings; and, Insecticide batch sample testing at a WHO collaborating centre.

This represents an expansion of the support provided under previous Global Fund grants, which focussed on outbreak response in more endemic areas. This revised intervention will place heavy emphasis on response to confirmed transmission foci in elimination areas and is a key component of the elimination effort.

Other vector control measures [US\$0 – 0% of Allocation, US\$1,100,803 – 0.7% of Above allocation]

Both of the activities under this intervention are in the above allocation request. They are: Procurement of mosquito repellents to prevent outdoor transmission (pilot project). Piloting the use of VHV to conduct routine collections of mosquitoes/larvae.

HSS - Health information systems and M&E [US\$37,646,397 – 35.1% of Allocation, US\$30,972,352 – 18.9% of Above allocation]

Routine reporting [US\$2,666,762 - 2.5% of Allocation, US\$15,895,181 - 9.7% of Above allocation]

The national malaria information system (MIS) in transmission reduction Townships will be expanded and upgraded. In elimination phase Townships the real-time case-based surveillance

and response system (GIS), which is to be established under NFM funding in 2016, will be further rolled-out and supported with training and equipment as required. All malaria data will feed into the DHIS2. The programme will monitor progress and provide supportive supervision for public and private sector health care providers including VHV's. Regular meetings of the M&E Technical Working Group will be supported. WHO data assistants who are at present responsible for surveillance at Township level will be gradually phased out and replaced with VBDC staff. Health staff and malaria volunteers in elimination areas will be trained on malaria case and focus investigation and transmission focus response. A Malaria Indicator Survey will be conducted every 3 years until caseload falls below the level at which these surveys are appropriate. An external/joint malaria programme review (MPR) will be conducted every 3 years. NMCP will work closely with the DFDA to establish effective pharmacovigilance at least at health facility level.

Key activities within the allocation include: Strengthening the reporting system through incorporating malaria reporting into eHealth (DHIS 2); Logistic support for expanding e-health reporting system; Installation and maintenance of a server; Procurement of GIS software and training on GIS; Technical support for the e-health database; Training on the e-health database and data entry and analysis at Central and State/Regional levels; SMS reporting costs; Printing updated carbonless case register form (15,000 case registers per year for BHS, VHV, LLIN record, SME record); Pharmacovigilance by FDA; Procurement of 80 computers; Review and update SME system; Supportive supervision, mentoring and routine monitoring by central level SR team (2 visits per quarter); Supportive supervision, mentoring and routine monitoring by state/region VBDC team (14 visits per quarter); Supportive supervision, mentoring and routine monitoring by township VBDC (505 visits per quarter - 18% of these covered by RAI in year 1). Key activities in the above allocation amount include: Malaria surveillance, monitoring and evaluation (likely to be funded through a continuation grant from UMB); Logistic support for expanding e-health reporting system; Procurement of GIS software and Training on GIS; Technical support for the e-health database; Training on e-health database and data entry and analysis at Central level; Procurement of mobile phones for electronic based malaria reporting (500 in year 1 and 500 in year 3); Recruitment of temporary staff for the National Program at Central level (3 Surveillance Officers, an M&E Officer, an IT Assistant, 2 Data Assistants); Recruitment of 17 State/Regional Surveillance Officers; Recruitment of Surveillance Assistants at Township level (increasing from 25 in year 1 to 100 in year 4); Procurement of 40 computers; Review and update of the SME system.

For States and Regions in the transmission reduction phase, the basic system of surveillance, which involves monthly reporting supplemented by outbreak monitoring, will be maintained and strengthened where necessary. For States and Regions in the elimination phase, standard surveillance will be replaced with 'case-based' surveillance whereby effectively every case is treated as an outbreak. This represents a significant increase in support for routine reporting in-line with the requirements associated with the move towards elimination. The system will be modernized and upgraded to allow weekly reporting and geographical presentation of results from States/Regions engaged in transmission reduction and same-day reporting and geographical presentation of results from States/Regions engaged in elimination. Support for the pharmacovigilance system is essential and overdue especially in-light of the extensive use of primaquine in Myanmar. The gradual replacement of WHO's Township level data assistants with new VBDC staff will strengthen the capacity of the NMCP and increase the sustainability of the approach.

Analysis, review and transparency [US\$34,979,635 - 32.6% of Allocation, US\$13,545,382 - 8.3% of Above allocation]

A comprehensive package of needs-based operational research will be supported (as far as funding permits). The Research Technical Working Group will conduct annual technical reviews of research findings. There will be an annual review of programmatic progress. Strategies, guidelines and SOPs will be reviewed periodically and developed and revised as appropriate. A joint malaria programme review (MPR) will be conducted every 3 years.

Key activities within the allocation include: A special study 'Gender and malaria in Myanmar'; Annual review meetings at Central and State/Regional level; Six monthly planning and review meetings with township malaria focal persons and implementing partners (IPs) at township level; Printing of guidelines, SOPs and other revised documentation for VBDC staff and VHV's; WHO TA and WHO meetings, workshops and trainings; WHO travel costs and office running costs; WHO technical support to the National Programme; Human resources (HR) costs, office running costs and travel costs for implementing partners (IPs); Operational costs associated with the 'field funds flow mechanism'; Supportive supervision; Coordination and capacity building; International and domestic travel; External professional services for PRs (HQ and consultancy); A joint malaria programme review. Key activities in the above allocation amount include: Operational research

(some of this is likely to be funded through continuation grants from UMB and JICA); Research review workshop; Procurement of qPCR machine; training on PCR; Six-monthly review meetings at township levels from year 2; Six-monthly review meetings at State/Regional level; Six-monthly planning and review meeting with township malaria focal persons and all IPs at township level; Bottom-up planning (township level activity planning); Training on Micro-stratification (ToT) to BHS at the township level (likely to be funded through a continuation grant from PMI); and, Migrant mapping; hiring epidemiologists at the state level.

In general this represents a continuation of activities funded under existing grants. However, a special study will be conducted in order to gain a thorough understanding of the gender-related dynamics of treatment-seeking behaviour, availability and utilisation of malaria services as well as of decision-making, resource allocation and financial authority within households (specialist TA will be recruited to assist through WHO). Results will be used to fine-tune operations and thereby maximize the effectiveness of malaria control and elimination efforts and address any gender specific issues beyond those already addressed through gender sensitive IEC/BCC, additional LLINs and malaria screening for pregnant women.

Surveys [US\$0 – 0% of Allocation, US\$1,531,789 – 0.9% of Above allocation]

NMCP will use the latest molecular techniques to quantify and monitor the prevalence of artemisinin resistance markers. It will carry out routine genotyping of *P. falciparum* parasites from sentinel sites around the country. The programme will use special surveys as necessary to monitor programmatic progress.

All of the activities under this intervention are in the above allocation request. They include: Detection of molecular markers for resistance (molecular epidemiology – Testing of 100 samples per quarter); Annual community based surveys by NMCP and SRs; LLIN utilisation surveys in different risk populations in years 2 and 4; Annual facility based surveys by NMCP and SRs; and, a Malaria Indicator Survey (likely to be funded through continuation grants from 3MDG, PMI and JICA).

This represents a continuation of activities funded under existing grants.

Program management [US\$23,840,547– 22.2% of Allocation, US\$17,526,884 – 10.7% of Above allocation]

Policy, planning, coordination and management [US\$15,635,661 - 14.6% of Allocation, US\$6,560,172 - 4.0% of Above allocation]

Representatives from various sectors (governmental and non-governmental) will be involved in the planning and implementation of malaria control and elimination efforts. Efforts will be made to ensure strong cross-border collaboration at State/Regional and Township levels as well as technical exchange within the region and beyond. Technical assistance will be provided for various issues as required. Long-term technical support will continue to be provided through WHO. A comprehensive programme of training and needs-based refresher training will be implemented to strengthen service provision in all programmatic areas. Specialized training will be supported for senior technical staff. Infrastructure strengthening and maintenance will be supported. Vehicles, equipment, commodities and consumables will be procured as required. The programme will monitor progress and provide supportive supervision for public and private sector health care providers including VHVs.

Key activities within the allocation include: HR costs for program management by PRs and SRs/SSRs; Maintenance of programme vehicles and equipment; Fuel for programme vehicles and generators; Communications; stationery; Insurance; Procurement of Vehicles (1 car and 40 motorcycles); Office furniture and fixtures; 120 computers; 343 printers; Supportive supervision, mentoring and routine monitoring by Central level VBDC team (six monthly). Key activities in the above allocation amount include: work with Ministry of Agriculture to develop and implement guidelines on the management and correct use of public health insecticides; Annual meeting with MoA; Six-monthly coordination meetings among partners at Central and State/Regional levels; Hosting of annual cross-border meetings at Central level; Six-monthly cross-border meetings at border Townships; Technical exchange visits (international) from year 2; JICA TA costs (to be funded through a continuation grant from JICA); Preparation of an annual HR development plan; Hiring 17 epidemiologists at state level; Additional international and domestic travel for IPs; Additional external professional services for PRs (HQ and consultancy); Capacity building and training on leadership and management at Central and State/Regional levels (likely to be funded through a continuation grant from PMI); Annual Operational System Strengthening Training/Workshop (PSM/M&E/Finance/Program); Specialized international training for senior technical staff (entomologists, epidemiologists, sociologists, BCC specialists etc.); Malariology training at Central level for newly appointed Medical Officers; In-country MMFO course on malaria

control and elimination; Additional communications; Additional insurance; Additional 23 cars and 980 motorcycles; Additional office furniture and fixtures; Additional 7 printers; Six-monthly supportive supervision, mentoring and routine monitoring by Central level VBDC team by State/Region VBDC team and by Officials from State/Region Health Director's Office.

Essentially this represents a continuation of activities funded under existing grants, however it includes some expansion to address the additional requirements associated with the move towards elimination.

Supporting procurement and supply management [US\$560,000 – 0.5% of Allocation, US\$250,000 – 0.2% of Above allocation]

Infrastructure strengthening and maintenance will be supported. Supply systems will be strengthened through training, supervision and system updates.

The key activity within the allocation is: Upgrading the Central warehouse. The key activity in the above allocation amount is: LMIS training/workshop.

Grant management [US\$7,644,887 - 7.1% of Allocation, US\$10,716,712 - 6.5% of Above allocation]

The programme and its partners will continue to provide sound financial management in-line with national guidelines (and in-line with internationally recognized best practice). Grant management costs for PRs are fixed at 7%.

The key activity within the allocation is: Annual Grant Audit for all IPs.

3.3 Modular Template

Complete the modular template (Table 3). To accompany the modular template, for both the allocation amount and the request above this amount, briefly:

- a. Explain the rationale for the selection and prioritization of modules and interventions.
- b. Describe the expected impact and outcomes, referring to evidence of effectiveness of the interventions being proposed. Highlight the additional gains expected from the funding requested above the allocation amount.

3-4 PAGES SUGGESTED

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

A detailed prioritization of activities has been carried-out as part of the NSP development process. Activities have been identified as 'absolute', 'high', 'medium' and 'low' priority based on an analysis of a combination of various factors including 'expected impact', 'cost' and 'malaria risk'. The prioritization process was carried out by a panel of experts from NMCP, WHO and implementing partners following stakeholder approval of the final draft of the NSP. The prioritization itself was then fine-tuned in consultation with various stakeholders including members of the Global Fund Country Team before the final version of the NSP budget was prepared and disseminated. The results of the prioritization process are presented in column E of worksheet 'Budget' in the workbook 'Myanmar Malaria NSP Budget 160612.xlsx'). The within allocation component of this request is restricted to support for absolute and high priority activities.

- b. Describe the expected impact and outcomes, referring to evidence of effectiveness of the interventions being proposed. Highlight the additional gains expected from the funding requested above the allocation amount.

At the impact level, the annual parasite incidence is expected to fall from the 2015 baseline of 4.16 per 1,000 to 0.62 per 1,000 in 2020, Inpatient malaria deaths per 1000 persons per year is expected to fall from the 2015 baseline of 0.00093 to 0.00020 in 2020 and the malaria positivity rate is expected to fall from the 2015 baseline of 6.9% to 0.8% in 2020.

At the outcome/coverage level: The percentage of confirmed malaria cases that received first-line antimalarial treatment according to national policy is expected to rise from an estimated 90% in 2017 to 100% by 2020 (based on facility/outlet surveys/supervision records); The proportion of the population that slept under an insecticide-treated net 'the previous night' is expected to rise from the 2014 baseline of 63% to 85% in 2020; The percentage of mobile/migrant population in targeted areas who slept under an insecticide-treated net the last time they slept in a transmission area is expected to rise from the 2014 baseline of 43% to 80% in 2020. Outcome targets relating to the move toward elimination are somewhat erratic in nature due to the phased enrolment of States/Regions in the elimination effort. These are therefore best described in tabular form, as presented in the modular template. Expected changes in programmatic coverage as well as planned programme outputs are presented in detail in the modular template for both the allocation and the above allocation amounts.

The increased programmatic impact presented above is expected due in part to the consolidation of recent gains (e.g. maintaining and where necessary strengthening routine case management services at health facilities and in communities, and maintaining periodic mass distribution of LLINs), and in part due to the innovative new strategies/delivery mechanisms described herein, which target high burden, hard to reach groups, especially mobile groups and migrants (e.g. scale-up of community based and private sector case management approaches and introduction of carefully targeted continuous LLIN distribution channels). In addition to these efforts, which aim primarily to reduce the burden in higher incidence areas/groups, the programme will re-orientate towards eliminating malaria in less endemic areas by focusing on elimination specific surveillance and associated case investigation and focus response operations.

Case management is a core element of malaria control and elimination. In Myanmar the national malaria control and elimination effort adopts a three-pronged approach to case management, covering public sector facility-based services, community based services and private sector services. Public sector health facilities provide essential primary care as well as management for severe and complicated cases. Service strengthening efforts described herein are expected to lead to increased utilization of the free diagnosis and treatment for malaria that they provide. The crucial role played by community-based case management services in Myanmar is well known. Although only rolled-out in 2011 they now account for 50% of all malaria cases detected. During 2017-20 an

estimated 8.2 million RDT tests will be performed by community based volunteers (6 million of these will be procured with funds from within the NFM2 allocation). The private sector is a major provider of malaria case management services in Myanmar (an outlet survey planned for 2017 will provide detailed information on its exact role). The roll-out of Together with case management interventions in the private sector and in the public sector these community-based efforts will contribute to the case management related outcomes and to the impact described above. Effective engagement with the private sector is particularly crucial given their role in malaria case management in Myanmar and given the drug resistance situation in the region.

Insecticide Treated Bednets (ITNs) have been shown to be highly effective in reducing malaria morbidity and mortality by as much as 50% and 17% respectively among children in areas of stable transmission in sub-Saharan Africa¹⁴. The evidence base supporting the use of ITNs in the GMS is not as robust as that supporting their use in the majority of African countries. Nevertheless, a number of randomized controlled trials in the region have found significant improvements in malaria outcomes as a result of ITNs. In a study on the Thailand-Myanmar border, children aged 4-15 (n=350) who were given ITNs had 41% fewer symptomatic episodes and a non-statistically significant 20% relative reduction in prevalence of *P. falciparum* compared to those with untreated bednets¹⁵. A study in eastern Thailand showed a 41% reduction in the incidence of mild clinical episodes of *P. falciparum* and *P. vivax* in migrant workers (n =261) provided with ITN compared to untreated bednets¹⁶. A larger scale cluster-randomised trial in 34 villages in northeast Cambodia (population 10,726) revealed a non-statistically significant reduction of 28% in *P. falciparum* incidence overall and a 35% reduction in *P. falciparum* incidence in children under 5-years old in communities provided with ITNs compared with communities not provided with any bednets¹⁷. Despite important differences in vector behaviour (early outdoor biting is a characteristic of vectors in the GMS), transmission intensity and malaria burden, these estimates of ITN effectiveness approach those seen in trials in Africa. The continuous distribution mechanisms described herein will focus on getting LLINs to high risk individuals and groups spending time in endemic areas, and on maintaining coverage between mass distributions in communities targeted for periodic mass delivery.

Scale-up of LLIN coverage to 100% in stratum 3a sRHCs (classified as absolute priority - 17% of the total target population in stratum 3) was achieved in 2015 with support from NFM, RAI, USAID-PMI and 3MDG, and will be maintained using existing funds until 2017. Coverage in 3a areas will be maintained in 2018-19 using within allocation funding, but based on the model, coverage in these areas will drop to 49% in 2020 unless US\$2.5 million can be found for an additional ~847,000 LLINs. However, the model does not take re-stratification into account. The shortfall will therefore be less than predicted in the model and will be addressed through reprogramming of unspent funds.

It is expected that 100% coverage will be achieved in other target areas (strata 3b and 3c sRHCs, which are classified as high and medium priority respectively) in 2017 using existing funds. Above allocation funds will be required to maintain coverage in these areas during 2018 and beyond (see modular template). Historically, other funding partners have invested heavily in LLINs and it is expected that these funding partners will cover at least some of the 'above allocation' request. [If referring to the budget, please note that procurement for LLINs to be distributed in 2018-2020 will take place in the final quarter of the year before].

The elimination specific surveillance and associated case investigation and focus response operations described in this application are largely new to Myanmar, but the methodology is in-line with that proposed by WHO, and has been proven in numerous countries that have already achieved, or are progressing towards elimination. Under 'the allocation', the real-time case-based surveillance and response system, which is to be established under NFM funding in 2016, will be further rolled-out in elimination phase Townships. The funding requested for this intervention under the 'above allocation' amount will cover additional training, procurement of additional surveillance related equipment and recruitment of additional staff to strengthen implementation still further. The

¹⁴ Lengeler C. Insecticide-treated bed nets and curtains for preventing malaria. Cochrane Database Syst Rev. 2004:CD000363.

¹⁵ Luxemburger C, Perea WA, Delmas G *et al.*, Permethrin-impregnated bed nets for the prevention of malaria in schoolchildren on the Thai-Burmese border. *Trans R Soc Trop Med Hyg* 1994, 88, 155-9.

¹⁶ Kamol-Ratanakul P & Prasittisuk C. The effectiveness of permethrin-impregnated bed nets against malaria for migrant workers in eastern Thailand. *Am J Trop Med Hyg* 1992, 47, 305-9.

¹⁷ Sochantha T, Hewitt S, Nguon C, Okell L, Alexander N, Yeung S, Vannara H, Rowland M, Socheat D. Insecticide-treated bednets for the prevention of Plasmodium falciparum malaria in Cambodia: a cluster-randomized trial. *Trop Med Int Health*. 2006, 11(8), 1166-77.

programme is currently seeking alternative sources of funding for these activities in order to accelerate progress towards elimination.

3.4 Focus on Key Populations and/or Highest-impact Interventions

This question is **not** applicable for low-income countries.

Describe whether the focus of the funding request meets the Global Fund's Eligibility and Counterpart Financing Policy requirements as listed below:

- a. If the applicant is a lower-middle-income country, describe how the funding request focuses at least 50 percent of the budget on underserved and key populations and/or highest-impact interventions.
- b. If the applicant is an upper-middle-income country, describe how the funding request focuses 100 percent of the budget on underserved and key populations and/or highest-impact interventions.

As described in section 1.1.c above, malaria in Myanmar is closely associated with poverty. Mobile and marginalized migrant populations and minority groups working or living in the forest and on the forest fringes often carry the greatest burden of both poverty and disease. These are the key populations of concern in the national malaria control and elimination effort. Well-targeted malaria control efforts by their nature therefore cater to the needs of some of the least privileged. This, together with the rigorous activity prioritization process employed in the development of the NSP budget and the subsequent careful selection of activities for inclusion in this request (described in section 3.3 above) mean that at least 90% of the proposed budget will go towards supporting what can be considered to be 'highest impact' interventions focused on underserved and key populations.

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. 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)).
- b. If more than one Principal Recipient is nominated, how coordination will occur between Principal Recipients.
- c. The type of sub-recipient management arrangements likely to be put into place and whether sub-recipients have been identified.
- d. How coordination will occur between each nominated Principal Recipient and its respective sub-recipients.
- e. 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

a. 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)).

Not applicable. The proposed implementation arrangement does involve a dual-track financing arrangement.

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

More than 1 PR is nominated (same as PRs in Round 9 and NFM: UNOPS and SC). Regular

meetings are conducted to share programmatic achievements and lessons learned. PRs and M-HSCC share PSM, M&E and programmatic challenges and best practices on a quarterly basis during M-HSCC meetings. Technical meetings are also run between PRs and with SRs as needed. UNOPS manages grants for local NGOs, WHO and the NMCP; SC manages the grants for international NGOs.

c. The type of sub-recipient management arrangements likely to be put into place and whether sub-recipients have been identified.

SRs for this proposed grant have not yet been identified. A transparent SR selection will be carried over during the grant making, under the supervision of the M-HSCC. The selection will take into account TRP comments as well as the final funding levels approved by the Global Fund for the Myanmar 2017-2020 NFM. More emphasis however will be placed on maximizing cost effectiveness by avoiding the administrative and logistical duplication and coordination related issues that arise from having multiple SRs implementing similar activities in the same States/Regions.

Sub-recipient management arrangements will remain as they are at present. These are well established and considered effective by Global Fund and the LFA.

d. How coordination will occur between each nominated Principal Recipient and its respective sub-recipients.

PRs regularly conduct meetings in addition to day-to-day communication, to review programmatic achievements, issues and lessons learned. Annual procurement plan meetings and fund flow management workshops are also carried out to brief SRs regarding latest issues. Workshops to review Standard Operating Procedures in various technical and management areas are also conducted together with the NMCP and SRs to seek inputs and validate policy guidance.

e. 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 request was made through a consultative and transparent process of TSG and M-HSCC meetings. In these forums, experts, SRs and other implementing partners who have exposure to field and communities are present. Civil society, community based organizations, faith-based organization, Ministry of Social Welfare who are present in the M-HSCC forum will review law and policies related to malaria interventions, barriers to access to treatment and prevention such as stigma and discrimination, etc. They ensure that women, migrant population and ethnic people are not neglected or left out from the services supported by the Global Fund.

4.2 Ensuring Implementation Efficiencies

Complete this question only if the Country Coordinating Mechanism (CCM) is overseeing other Global Fund grants.

Describe how the funding requested links to existing Global Fund grants or other funding requests being submitted by the CCM.

In particular, from a program management perspective, explain how this request complements (and does not duplicate) any human resources, training, monitoring and evaluation, and supervision activities.

The NFM grant will come to a close in December 2016 and the new NFM2 grant is expected to start in January 2017. There is therefore no chance of overlap or duplication of effort between these two grants. The first year of funding requested in this application will however overlap with the last year of the current RAI grant. Care has therefore been taken during the planning of this request to ensure that there will be no overlap or duplication of funding between this new grant and the existing RAI grant. This is clearly documented in the 'Myanmar Malaria CN Budget.xlsx', both for commodities (LLINs and RDTs) and for program management related costs associated with human resources, training, monitoring and evaluation, and supervision. From 2017 the budget identifies funding source by quarter for each activity (see columns AW-BL of worksheet 'Budget'.

In order to minimize the risk of overlap on the ground, as of January 2017 implementation of Global

Fund activities will be managed by a single SR in each Township. These SRs will be responsible for mapping all interventions annually from year 1, down to village level where appropriate.

4.3a 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.			
PR 1 Name	UNOPS	Sector	Malaria
Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?		Yes	
Minimum Standards		CCM assessment	
1. The Principal Recipient demonstrates effective management structures and planning	Meets minimum standards. PR fulfills Global Fund staffing requirements including professionals competitive at international level (e.g. Programme Director, Head of Programmes, Finance Officer, M&E Officer, Procurement specialist, Logistics Officer, Quality Assurance Officer). Regarding procurement, PR conducts the procurement for both pharmaceuticals and other health products as approved by Global Fund based on the PSM capacity assessment carried out in August 2012. A procurement and logistics-monitoring sheet is being shared with M-HSCC, all the stakeholders and partners every Monday. LMIS manual/system had been developed and 2,000 people were trained in the MOHS on logistics management.		
2. The Principal Recipient has the capacity and systems for effective management and oversight of sub-recipients (and relevant sub-sub-recipients)	Meets minimum standards. Financial and programmatic oversight plans for SRs had been approved. Semiannual reports of findings are submitted to Global Fund including measures to address identified issues. PR provides status updates of capacity building of SRs in the area of financial management and other LNGO capacity building workshops, summary reports on desk reviews and field visits to identify and address weaknesses. Regarding required SR M&E responsibilities, PR embarked on RDQAs, on-site data validation with submission of periodic reports, programme review meetings etc. that support indicator and target revision. PR monitors SR compliance with set agreements on eligibility of expenses.		
3. The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud	Meets minimum standards. The internal control system is considered effective to detect misuse and fraud. This system is implemented through such mechanisms as: A code of conduct to which all personnel subscribe; clear delegations of authority which limit an individual from processing incompatible transactions; regular reports and reconciliations to UNOPS Regional Office; financial declarations for identified personnel; robust recruitment systems which require a thorough background check; a financial management information system (oneUNOPS) with embedded strong and proven controls, and periodic reviews and audits by HQ for PR operations and PR compliance reviews for SRs operations.		
4. The financial management system of the Principal Recipient is effective and	Meets minimum requirements. The financial management system of the PR is considered effective and accurate. The system can handle large budgets and can easily produce accurate income and expenditure reports in the format desired		

accurate	by most donors.
<p>5. Central warehousing and regional warehouse have capacity, and are aligned with good storage practices to ensure adequate condition, integrity and security of health products</p>	<p>Meets minimum requirements.</p> <p>Renovation work of central NAP and VBDC warehouses was completed and highly appreciated during the inaugurated by HE the Minister and the General manager of the Global Fund on 17 August 2012. The renovation work of the 3 TB warehouses of NTP Central, Lower Myanmar and National TB Reference Lab was also completed in December 2012. Besides the above, Latha warehouse originally used as Central NAP has also been renovated for NAP. 41 warehouses, ART clinics and TB/HIV sites of all three National Programmes in the States/Regions were renovated in 2013. Six new warehouses were built with financial and administrative support of the Embassy of Japan. The renovated warehouses now have enough capacity, appropriate storing conditions and access control environment.</p> <p>Trainings on LMIS including TOTs were successfully conducted twice, once in 2012 and then in 2014, covering around 2000 Staff from all over the country. Third round of LMIS training is planned for 2016.</p>
<p>6. 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</p>	<p>Meets minimum requirements. In order to ensure adequate and quality supplies and avoid over/under estimation of supplies, the two PRs works close consultation with the DOP, technical partners to generate annual forecasts and quantification considering stock in hand, pipeline supplies and expected consumption until arrival of the next orders.</p> <p>There are plans to further strengthen the PSM including automating the systems and interface it with the HIS. This will allow the use of consumption data in the forecasting and quantification. Additional investment in the PSM system strengthening is needed. The National Programmes had started using M-supply for the stock management and this has improved the quality of the stock management and reporting.</p> <p>UNOPS LMIS and the related SOPs have been very effective in proper management of the supply chain. SOPs have been translated into local language and distributed all over the country.</p> <p>With the implementation of the LMIS, and introduction of M-supply the storage and distribution system and reporting has much improved.</p>
<p>7. Data-collection capacity and tools are in place to monitor program performance</p>	<p>Meets minimum standards. Updates on progress in using the Malaria M&E tool have been provided to Global Fund in January 2012.</p> <p>The PR uses the national system to avoid creating parallel and sustainably system. The routine Malaria reporting and recording system is functioning well. However, the PR documented several concerns: (1) risk related data security as there is weak back up system, (2) the data management system is continue to be paper-based at state/region and below, (3) minimal data management trainings for township level.</p> <p>Despite difficulties to collect and submit documentation of a high volume of activities with vast coverage, PR provides aggregated training reports from States and Regions along with PUDR as supporting documents.</p>

	<p>In 2015, the NMCP with support from PMI, piloted an electronic recording of malaria cases in two townships. The plan is to expand this system to all programme implementation areas. Also, in 2015 and 2016 the Global Fund provided additional funding to strengthen the country data and M&E systems including rollout of the DHIS in nearly 200 townships. The automation of the data management systems with the strengthened supervision and monitoring at all level shall address the aforementioned gaps and concerns.</p> <p>The PR conducts routine monitoring activities including onsite verification of implementation, data and service quality assurances, period reviews and coordination meetings. Feedbacks are provided to DOP at highest level, to the MHSCC and to all implementing and technical partners.</p>
<p>8. A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately</p>	<p>Meets minimum standards.</p> <p>As mentioned above, there good and functional paper-based reporting system. In 2015, the NMCP with support from PMI and the Global Fund have started moving towards electronic data entry and transmission at the service township levels using the DHIS. The automation of the data management systems with the strengthened supervision and monitoring at all level shall address the aforementioned gaps and concerns. The rollout of these electronic data systems (eHealth) shall further improve the quality of the data including timely reporting.</p> <p>The PR, conducts RDQAs, on-site data validation, program reviews and monitoring visit for the SRs.. Each Quarter a review is held with all SRs to share lessons and review results and M&E related matters.</p> <p>Quarterly stock reports are received from NMCP. These reports are analyzed to check for the near to expiry products, over stocked products and necessary decisions are taken, if required, to relocate the stocks or expedite the orders.</p>
<p>9. Implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-country supply chain</p>	<p>Meets minimum standards. Appropriate systems/procedures are being put in place to ensure compliance with the requirement to conduct random sampling and quality control testing of health products throughout the supply chain (WHO pre-qualifications or ISO17025 standards for laboratories). An in country quality monitoring team chaired by the DG FDA was formed in November 2011 and TOR established, for in-country quality monitoring of pharmaceuticals.</p> <p>The team meets periodically and prepares sampling plan for a year. The sampling is carried out as per the established QC workplan by the FDA inspectors.</p> <p>Samples of different key and sensitive pharmaceuticals are withdrawn from from different locations in the supply chain and sent to TUV SUD Singapore a WHO prequalified laboratory for test/analysis</p>

4.3b 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.

PR 2 Name	SC	Sector	Malaria
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Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?	Yes
Minimum Standards	CCM assessment
10. The Principal Recipient demonstrates effective management structures and planning	Meets minimum standards. The PR demonstrated effective management structures and planning in regard to management letters sent by Global Fund. A team of 40 international and national staff are employed to work exclusively in the management of the Global Fund grants to ensure that activities are technically sound and are implemented following national and global quality standards. This includes providing support on financial and program management to SRs, procuring pharmaceutical and health products, and reporting on program performance to both the Global Fund and the Myanmar Health Sector Coordinating Committee. Annual planning processes, such as the submission of training plans and annual budgets and work plans are routinely implemented according to deadlines. The latest Global Fund ratings for the PR (as of November 2015) are A2 for the Tuberculosis, Malaria and HIV grants.
11. The Principal Recipient has the capacity and systems for effective management and oversight of sub-recipients (and relevant sub-sub-recipients)	Meets minimum standards. The PR has effectively managed both the Round 9 and the NFM (2013 – 2016) grants. Under the NFM (2013 – 2016), the PR supports 18 sub-recipients (SRs) across the three grants with a total budget of US\$132.1 million. The PR is organized in four units: program implementation; monitoring and evaluation; procurement and supply chain management; and grants and compliance. Each unit conducts routine monitoring visits to SR and sub-SR (SSR) to ensure that interventions are implemented according to agreed standards, reporting systems are robust and accurate, health and non-health products are stored and managed as per best practice, and that resources are used and managed according to agreed compliance standards. These units routinely meet to triangulate information, e.g., that expenditure trends match program implementation and stock consumption.
12. The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud	Meets minimum standards. The PR is operating under the set standard policies and procedures of Save the Children International. The internal control system is the main key performance indicator for the team, which will be maintained by the Country Office operations, monitored by the Regional and HQ level, and verified by the Global Assurance Unit (serves as internal audit function). In addition, the business workflow and control are highly effective to detect misuse and fraud. The fraud protection training is compulsory for all staff members and also applicable to the partner organizations receiving funds from Save the Children.
13. The financial management system of the Principal Recipient is effective and accurate	Meets minimum requirements. The financial management system of the PR is effective and accurate. Save the Children uses a grant accounting system to segregate accounting books for each donor funding. This system enables analysis of the portfolio throughout program implementation. Accurate donor reports are generated and available for further verification and audit by an independent agent or auditor. The financial system supports analysis of implementing partner expenditure as required by the donor.
14. Central warehousing and regional warehouse have	Meets minimum requirement. Warehouses have been strengthened since SRs began implementation in Round 9 and the NFM (2013 – 2016) grants. Annual turnover of

<p>capacity, and are aligned with good storage practices to ensure adequate condition, integrity and security of health products</p>	<p>goods is higher than USD 10 million through the current network and distribution system. The PR conducts regular monitoring visits to ensure that SRs maintain adequate storage conditions. In collaboration with Myanmar FDA, samples are collected each year at SCI's SR warehouse level, up to dispensing sites. All QC testing to date has resulted in a "PASS" rating, demonstrating that SR's warehousing network / distribution system can maintain quality of products along the supply chain.</p>
<p>15.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</p>	<p>Meets minimum requirements. Supply is well regulated and scheduled from one to three shipments / year according items shelf life and volume. This approach is taken in order to limit the risk of expiry, damage, and overstock in-country, as well as to ensure adequate flow of goods. SC-PR does not have a central warehouse. Items procured by SC-PR PSM team are directly transported either from port to SRs central warehouses, or, in the case of high volume items, to township level. This decreases the storage and transport costs of such products. Each SRs has a well-established distribution system based on programs and activities. Moreover, the PR has a monitoring system, which identifies items at risk of shortage/overstock and reallocates stock in urgent need or to limit risk of expiry. The current distribution system has been proven highly efficient: there has been no shortage of key items among SC-PR SR during the past five years of program implementation.</p>
<p>16.Data-collection capacity and tools are in place to monitor program performance</p>	<p>Meets minimum standards. Data collection mechanism has been in place since beginning of phase I and is functioning well. The latest OSDV have consistently indicated "Overall Good Data Quality" for malaria, TB and HIV grants. The PR has also conducted periodic training and capacity building activities so that all SRs observe the key aspects of data quality: completeness, validity, consistency, timeliness and accuracy. The M&E system ensures the ability to report according to both Global Fund and national M&E reporting requirements.</p>
<p>17.A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately</p>	<p>Meets minimum standards. Routine reporting (based on MOHS data collection forms) is in place to report performance in time and accurately as confirmed by management letters sent for the previous reporting periods. The latest OSDV have consistently indicated "Overall Good Data Quality" for malaria, TB and HIV grants. The PR routinely meets PU-DR reporting deadlines and tracks SR submissions in terms of timeliness and completeness of information. Results are verified through Routine Data Quality Assessments (RDQA) carried out by the PR's M&E team. By the end of 2016, the PR will have supported the roll out of DHIS2 at SR level to expand reporting coverage and streamline SR-level reporting systems.</p>
<p>18.Implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-country supply chain</p>	<p>Meets minimum standards. Save the Children coordinates QA/QC of key pharmaceuticals with the Food and Drug Administration (FDA) in order to avoid duplication of QA/QC systems. SC- PR PSM staff conduct regular monitoring visit to ensure that adequate storage conditions are maintained. Temperature monitoring devices recording T^o have been installed at each of the SRs' warehouse levels. This system has improved management of the supply chain and significantly decreased risks. Moreover, SC-PR is member of the in-country Quality Monitoring Team chaired by Myanmar FDA. In collaboration with Myanmar FDA, samples are collected regularly at SC-PR SRs' warehouse level, up to</p>

dispensing sites. All QC testing to date has resulted in a “PASS” rating, demonstrating that SRs’ warehousing network / distribution system can maintain quality of products along the supply chain.

4.4 Current or Anticipated Risks to Program Delivery and Principal Recipient(s) Performance

- a. With reference to the portfolio analysis, describe any major risks in the country 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.

1-2 PAGES SUGGESTED

- a. With reference to the portfolio analysis, describe any major risks in the country 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.

[Please note: The Global Fund Secretariat has not yet prepared a portfolio analysis for malaria grants in Myanmar].

There are 12 key anticipated risks to the implementation environment. These are detailed below, together with proposed mitigation measures.

- i. **Security issues.** Although very significant progress has been made in resolving security issues in recent years, the situation in some ethnic states where armed groups operate remains volatile. There is currently an ongoing conflict in the north of Shan State and in Kachin State, and there remains the possibility of violent clashes in other ethnic states. Programme development and programme implementation in areas such as these is often problematic, slow¹⁸ and somewhat haphazard. Total cessation of services may be necessary periodically. Proposed mitigation. The programme cannot significantly improve the security situation. Implementers will follow security related protocols and take precautions as advised by security officials.
- ii. **Natural disasters.** Cyclones, flash and floods and earthquakes occur frequently in Myanmar and these may jeopardize implementation of planned activities both in directly affected areas and in other parts of the country due to diversion of efforts and supplies to affected areas. Proposed mitigation. Buffer stocks have been incorporated into the procurement of all key programme commodities (RDTs, drugs, LLINs and insecticide). Realignment/Reprogramming of Global Fund-budgets and work plans to cover the immediate needs is another option to mitigate the losses and resume essential services
- iii. **Development and spread of multi-ACT resistant falciparum malaria in Myanmar.** Proposed mitigation. Close monitoring of drug resistance status will be maintained through TES in sentinel sites and through molecular studies analysing samples collected nationwide. Resulting data will be shared with WHO and technical partners and in the event of development of multi-drug resistance a suitable response will be developed following the recommendations of WHO’s Malaria Policy Advisory Committee (MPAC). Strong and active malaria surveillance strategies will be implemented to ensure efficient and effective early warning systems are in place. Myanmar will also be linked to central pool of ACTs, whereby it can access a new drug in emergency if the need arises.
- iv. **Development and spread of operationally significant pyrethroid resistance in Myanmar.** Proposed mitigation. Close monitoring of insecticide resistance will continue to be carried out at sentinel sites. Resulting data will be shared with WHO and technical partners. If insecticide resistance is found it’s operational significance will be assessed and a suitable response will be developed as required in consultation with WHO. IRS will only be applied in areas where there are no LLIN distribution in the past 2 years.

¹⁸ MOU agreements are required for each new geographical area to be covered by the programme and their preparation can be very time consuming.

- v. **Reduced support from other funding partners.** Untied indicators linked to Global Fund projects represent a risk for the performance framework. The 2 PRs and its SRs have no control over non-Global Fund donor commitments to SRs. If contributions decrease or are cancelled, Global Fund performance targets could be missed. Proposed mitigation. As far as possible, any significant financial gaps left by the withdrawal of funds by other funding partners will be addressed through periodic reprogramming of Global Fund funds. The government will be requested to increase its contributions to cover any such crucial gaps.
- vi. **Financial issues.** Fluctuations in exchange rates have negatively affected the purchasing power of the budget in the past. While the exchange rate appears now to be becoming more stable, inflation remains an issue and commodity prices are on the rise. Proposed mitigation. An inflation rate of 3% has been built into the NSP budget for selected items that historically have been prone to inflation. Where necessary shortfalls will be addressed during periodic reprogramming of Global Fund funds.
- vii. Timely clearance for import license and tax exemption of pharmaceutical and health products (under Save the Children) cannot be achieved without increased government commitment to support abstention of import permits. Proposed mitigation. High-level commitment and support is needed to resolve the issue. Proposed mitigation. Access. The extreme remoteness of some areas is often compounded by poor physical infrastructure making access limited, particularly during the rainy season. Proposed mitigation. The timing of visits to remote areas will be planned taking seasonal constraints into consideration. Additional funds for accessing hard to reach target communities have been incorporated into the budget.
- viii. **Access.** The extreme remoteness of some areas is often compounded by poor physical infrastructure making access limited, particularly during the rainy season. Proposed mitigation. The timing of visits to remote areas will be planned taking seasonal constraints into consideration. Additional funds for accessing hard to reach target communities have been incorporated into the budget. LLIN distribution is always planned either before or after the rainy seasons. Special travel rates are paid to the health staff and volunteers in these areas. Special price and brand is approved for vehicles and M/C to be used in these areas. Mobile activities are organised to reach such areas for their basic medical and malaria needs
- ix. **Health system weaknesses.** Inherent weaknesses in the health systems often limit the quality of services. Proposed mitigation. Malaria related health system strengthening activities have been incorporated into this application . Extensive use of volunteer networks to provide malaria related services in less accessible communities solves some of the issues associated with access and at the same time reduces the burden on overstretched health workers, particularly in the periphery. Global Fund is also supporting the implementation of e-Health system that will improve recording and reporting for all the three diseases. LMIS is also improving and supply chain is being strengthened progressively. National Programmes through Managed Cash Flow of UNOPS has been capacitated throughout the country in terms of bottom up budgeting, planning, implementation, controls and reporting. Financial Management and Procurement is still a challenge for the national structures.
- x. **Lack of sustained political commitment for malaria elimination and failure of the Myanmar Government to deploy increased domestic and foreign investment for malaria control and elimination.** Proposed mitigation. APLMA will play a role in advocating the government to increase domestic funds. Furthermore, a strong advocacy strategy will be in placed to obtain political commitment at all levels.
- xi. **Global Fund support fails to continue at existing levels.** Proposed mitigation. Strong justification for the continuation of RAI beyond 2017 will be developed in collaboration with WHO and other regional stakeholders.

These risks will be monitored in partnership with WHO during implementation and reported on by the PRs, regularly reviewed by the LFA, and assessed by Global Fund during periodic grant appraisal sessions.

Other risks were identified during the NSP workplan design process and handling approaches have been developed and incorporated into the final workplan (those relevant to Global Fund are described under section 1.2 c above).

Before submitting the concept note, ensure that all the core tables, CCM eligibility and endorsement of the concept note shown 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.

- Table 1: Financial Gap Analysis and Counterpart Financing Table
- Table 2: Programmatic Gap Table(s)
- Table 3: Modular Template
- Table 4: List of Abbreviations and Annexes
- CCM Eligibility Requirements
- CCM Endorsement of Concept Note