The Global Fund
To Fight AIDS, Tuberculosis and Malaria

STANDARD CONCEPT NOTE

Investing for impact against HIV, tuberculosis or malaria

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	**GHANA**	**Component**	**Malaria**
Funding Request Start Date	**JANUARY 2015**	**Funding Request End Date**	**DECEMBER 2017**
Principal Recipient(s)	**MOH/GHS AND AGA MALARIA CONTROL LTD.**		

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:

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

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

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

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

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

In Ghana, malaria still contributes substantially to the disease burden accounting for 38% of OPD attendance, 35% of total hospital admissions and 19% of all causes of deaths recorded [GHS Annual report 2012, p.34].

Plasmodium falciparum is the predominant malaria parasite (80-90%) in Ghana. Other parasites found are the Plasmodium malariae (10-20%) and Plasmodium ovale (about 1%). P. vivax has not been reported yet. An. gambiae s.l. and An. funestus have been identified as the major vectors of malaria in all the ecological zones of the Northern Sahel, Middle transitional and Southern zone. However, Anopheles arabiensis has been found in the Northern Sahel zone but in fewer numbers. [MPR 2013, p. 34].

The country has been considered generally hyperendemic for malaria over the years but recent evidence gives indication that the endemicity levels could be changing. The 2011 Multiple Indicator Cluster Survey (MICS) in children under five years has shown hypoendemicity in the Greater Accra Region (GAR), hyperendemicity in the Upper West Region (UWR) and mesoendemicity in the rest of the country (Figure 1A&B). Expressed by ecological zones, malaria endemicity is 14% in southern coastal areas, 28% in forest, and 44% in northern and central Savannah. [MICS 2011, p.126-128]

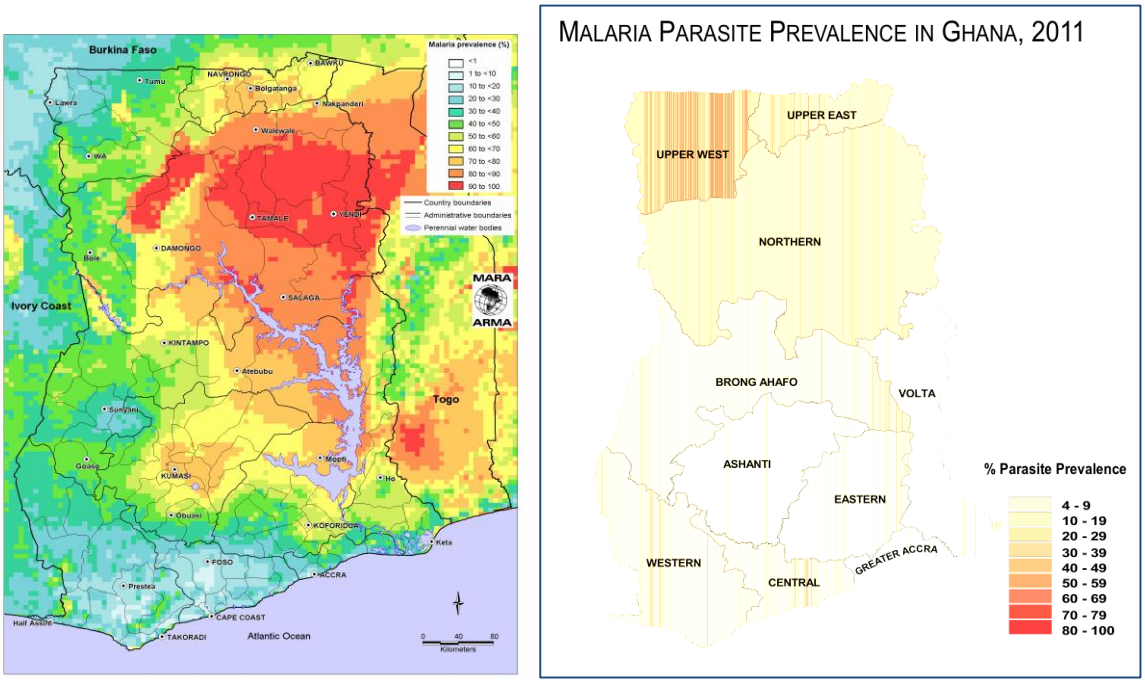


Fig 1. Malaria Prevalence in Children 6-59 Months, by Regions:
[Map A: MARA/ARMA Modeling, 2002. (www.mara.org.za) Map B: MICS, 2011]

However, lack of prior population-based national surveys that measured parasite prevalence makes interpretation of epidemiological trends difficult. There is also insufficient data to clearly define the current malaria epidemiological profile to the district level in Ghana.

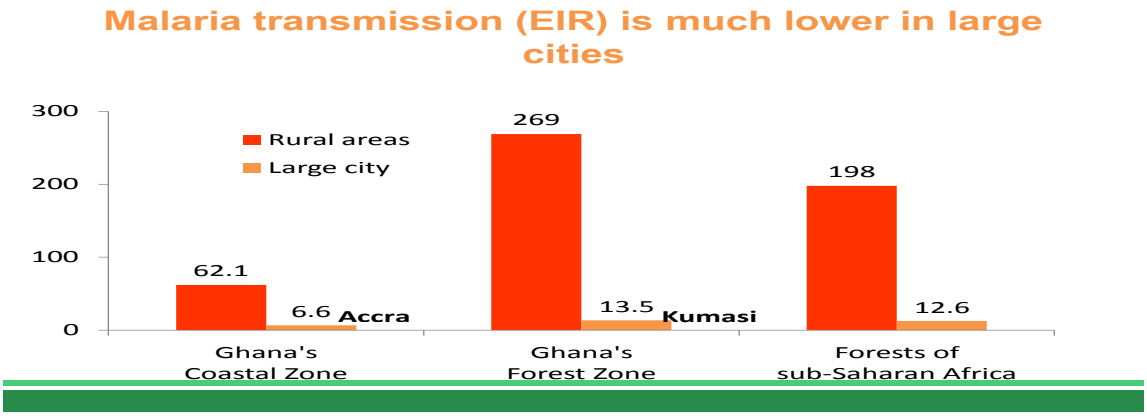


Fig 2: Risk of malaria in urban versus rural settings, Ghana
[Source: The Ghana Urban Malaria Study 2012]

The risk of malaria infection is higher in rural areas than urban areas; in the forest zone for example, EIR is 269 in rural area as compared with 13.5 in the urban area (See Figure 2). The malaria prevalence is also

higher in the poorest (52%) than the richest (3%) households and higher in non-literate mothers (43%) than those with secondary education or higher (5%) [MICS 2011 p. 126].

Seasonality of transmission: There is a highly seasonal malaria transmission in northern regions of Ghana (Figure 3). Between 50-59% of clinical malaria cases occur during four months in a year in the savannah regions of the country (Northern, Upper East, Upper West regions) [An Epidemiological Profile of Malaria and its Control in Ghana, 2013 p. 70].

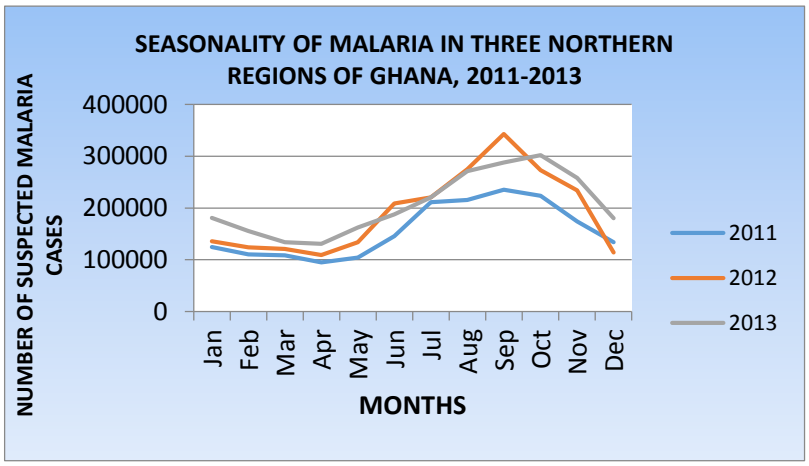


Figure 3: Seasonality of Malaria in three Northern Regions, 2011-2013 (DHIMS 2, 2014)

Insecticides Resistance: Data on insecticide susceptibility among the main malaria vector populations in Ghana from 2004 to 2012 showed that pyrethroid and DDT resistance is widespread nationally. Notable among the pyrethroids, which are ineffective, are permethrin, Alphacypermethrin, and Lambda-cyhalothrin. Vector susceptibility to other classes of insecticides such as carbamates and organophosphates remains relatively high across the country but indications are that the vectors may be developing resistance to them. [MPR 2013, p93-96; NSP 2014, p. 42-43]

b. ***Key populations that may have disproportionately low access to prevention and treatment services and the contributing factors to this inequality:***

The key populations most vulnerable to effects of malaria in Ghana are children under five years and pregnant women. According to MICS 2011, utilisation of ACTs was lower among children under 5 with fever in the rural areas (13.3%) compared with those in urban areas (27.6%) probably due to inadequate geographical spread of health facilities, poor road network, ignorance and poverty. Most children with poor access to ACT treatment come from poor households (9.5% vrs 33.9%), and resident in hard to reach/rural communities. About 60.1% of people living in rural areas own at least one ITNs compared with 39.1% in urban areas. Similarly, among women, 59.5% in rural areas have valid NHIS cards compared with 61.2% in urban areas while 50.2% of poorest in rural areas have access to valid NHIS card compared with 67.1% of rural richest. [MICS 2011, p.91, 107, 272]. Several communities in Afram plains and "overseas" areas of Upper East Region (UER) notably have limited access to health services due to very poor road network.

Refugees, internally displaced persons, and prisoners are other key population groups that may be disadvantaged with regards to access to health care as a result of their peculiar circumstances. The statistics on access of these categories of persons to malaria prevention and treatment is currently not well documented. Although people living with HIV/AIDS are known to be at an increased risk of malaria morbidity, it is unclear whether they are disadvantaged in accessing malaria preventive and treatment services. Finding adequate information (surveys and routine data) for clarification of these observations remain a challenge.

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

The constitution of Ghana provides for equal rights to all citizenry [Constitution of Republic of Ghana, 1992 Article 37(2) (a and b)]. There are no major human rights barriers that may impede access to malaria control services but for other health services such as HIV/AIDS, discrimination exists which may affect access to health care.

Gender inequalities especially as a result of sociocultural barriers exist in some areas. For example, in some communities in the North, women will have to seek permission from their husbands and mothers-in-law before seeking health care. GDHS 2008 shows that, only 25% of women currently married aged 15-49 years usually make decisions about their own health care in Ghana [GDHS 2008, p. 282].

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

Health Systems: The Ghana health system includes public and private sectors. The public sector is run by Ghana Health Service and Teaching Hospitals as agencies of Ministry of Health (MOH). The private sector is made up of faith-based and private-for-profit health institutions. The MOH is responsible for policy making and regulation of healthcare practice in the public and private sector. The GHS is responsible for service delivery including the management of human resources, infrastructure, systems and supplies for efficient health care service in a three-tier delivery system that includes primary (health centre), secondary (district hospital) and tertiary levels (specialist and teaching hospitals). Districts are divided into sub-districts which are further sub-divided into Community Health Planning & Services (CHPS) zones.

The National Malaria Control Programme (NMCP) is in the public health division of the GHS, and receives support from Government and development partners. The national malaria strategic plan is aligned with Health Sectors' Strategy and has linkage with the Medium-term national development policy framework (*see section 1.2 d for further details)*.

Some of the challenges of the GHS, which impact on the malaria control programme, include the inadequacy of health management information system and inequitable distribution of human resource [National Policy on Human Resource for Health, Revised 2014, p.7,8]. The distribution of clinical staff is skewed in favour of the urbanized areas to the detriment of the north and the rural areas; about 50% of health workers are located in 3 most urbanized regions (Greater Accra, Ashanti and Eastern) out of 10 regions in the country.

There is an integrated sector wide supply and procurement management system, but there are challenges, which result in delays in procurement and stock-out of essential commodities [MPR 2013, p.98]. There have been improvements in health management systems with the introduction of an integrated web-based health information capture and management system called District Health Information Management System 2 (DHIMS2) in 2012 but delayed reporting and suboptimal data quality remain a challenge.

A new National Health Promotion strategy has been developed but lacks funding to implement key components such as building capacity in advocacy and Behavioural Change Communication (BCC) especially at lower levels, as well as supporting national and regional Health Promotion advocacy champions.

Community Systems: Ghana operates an integrated decentralized health service especially from the district level. Community-based services are provided through a Community Health Planning & Services (CHPS) system where Community Health Officers (CHOs) work with community volunteers, traditional

community leaders and other community-based structures to increase access to integrated package of health services, including those for malaria. A typical district with a population of 100,000 has one hospital, 5 health centres and 10-15 CHPS zones [MPR 2013, p.58-59]. The implementation of an Integrated Community Case Management (iCCM) in Ghana has leveraged extensively from the CHPS system, and offers an enormous opportunity for scaling up of iCCM and other malaria control interventions at community level. Village Development Committee (VDC) is a key community-based institution which provides oversight and accountability for development activities including health and social services. The CHOs in various CHPS zones are linked closely with VDCs and other community-based organizations (CBOs) such as women and youth groups for the promotion of health activities, including those for malaria. These CBOs engage in various health-related activities like social mobilization, awareness raising and sensitization on environmental sanitation. Capacity of these community-based organizations to carry out their core functions is often poorly developed. There are also issues with accountability and monitoring of community-based initiatives.

2-4 PAGES SUGGESTED

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 requests[1], 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.

[1] 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.

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

The goal of national malaria strategic plan is to reduce the malaria morbidity and mortality burden by 75% (using 2012 as baseline) by the year 2020.

The Specific Objectives are:

- To protect at least 80% of the population with effective malaria prevention interventions by 2020
- To provide parasitological diagnosis to all suspected malaria cases and provide prompt and effective treatment to 100% of confirmed malaria cases by 2020
- To strengthen and maintain the capacity for programme management, partnership and coordination to achieve malaria programmatic objectives at all levels of the health care system by 2020
- To strengthen the systems for surveillance and M&E in order to ensure timely availability of quality, consistent and relevant malaria data at all levels by 2020.
- To increase awareness and knowledge of the entire population on malaria prevention and control so as to improve uptake and correct use of all interventions by 2020 [NSP 2014-2020,p. 49]

Priority programme areas are Case Management including iCCM, Long Lasting Insecticidal Nets (LLINs), Indoor Residual Spraying (IRS), Intermittent Preventive Treatment in Pregnancy (IPTp) and Seasonal Malaria Chemoprevention (SMC). Details are as follows:

Case Management

In the year 2010, the Test, Treat and Track strategy was adopted to replace presumptive treatment. Quality assured microscopy or Rapid Diagnostic Tests (RDTs) are used to diagnosis before treatment with the recommended antimalarials [Artesunate-Amodiaquine (ASAQ), Artermether-Lumefantrine (AL) and Dihydroartemisin Piperaquine (DHAP) for uncomplicated malaria]. For severe malaria treatment, the drug of choice is injection Artesunate with parenteral quinine as alternative. Quality assurance of medicines and health products is undertaken by the Food and Drugs Authority (FDA) [NSP 2014, p. 55-57].

Ghana has adopted Integrated Community Case Management (iCCM) linking its implementation to the Community Health Planning Service (CHPS) strategy. It is an approach to provide basic management of malaria, diarrhoea and acute respiratory infection at the community level. The NMCP collaborates with Reproductive and Child Health Programme (RCHP), district health teams and other stakeholders to implement iCCM.

Preventive Interventions

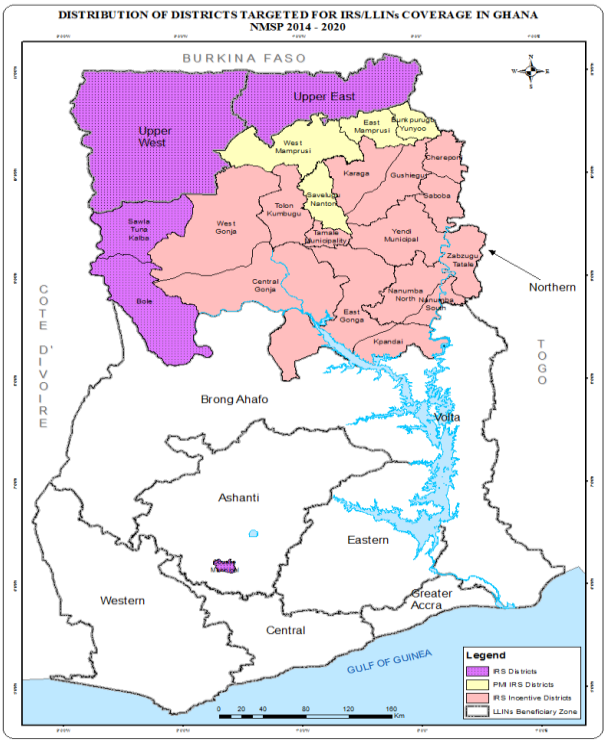
Integrated Vector Control

The key intervention is universal coverage with LLINs, supported by IRS limited to areas of high disease burden (under 5 parasite prevalence > 40 %) and targeted areas of economic importance. The total number of the districts targeted for IRS is 52 (refers to 32 old district demarcation) as per Figure 4. Entomological monitoring and insecticide resistance management is part of our vector control strategy.

LLINs will be distributed in non-IRS districts through mass campaigns (one LLIN per two people) and continuous distribution strategies (using multiple channels such as Antenatal Clinics (ANCs), Child Welfare Clinics (CWC) and school based approach). Larviciding will be conducted in areas where breeding sites are few, fixed and findable**[**NSP 2014, p. 52] .

Intermittent Preventive Treatment in Pregnancy (IPTp)

This will be done in collaboration with the RCHP, private maternity homes and other partners. Every pregnant woman is expected to take a minimum of three doses starting from the second trimester and given at one month interval as directly observed treatment. Existing community structures and NGOs will be used for defaulter tracing to increase IPTp coverage. Monitoring of adverse events will be strengthened in collaboration with FDA.



Legend details for Figure 4

- **Purple Area:** All districts in Upper West Region (UWR), Upper East Region (UER), 2 districts in Northern Region (NR) Obuasi and Wassa West districts. The Global Fund and AGA currently support IRS in all these districts.
- **Yellow Areas:** 4 districts in Northern region. PMI/USAID currently supports IRS in these districts
- **Pink Area:** Additional districts with high parastemia that NSP will cover within its NSP implementation period.
- **White Areas:** LLINs targeted areas. All IRS areas will not receive LLINs

Fig. 4 : Distribution of Districts Targeted for IRS/LLINs Coverage in Ghana

Seasonal Malaria Chemoprevention (SMC)

Intermittent administration of full course of Amodiaquine and Sulphadoxine-Pyrimethamine (AQ-SP) during peak malaria transmission season will be adopted in specified areas where transmission is seasonal targeting children between 3 and 59 months [NSP 2014, p.54]. This will be done at monthly intervals for a maximum of four doses. Eligible regions are UWR, UER and NR.

Advocacy, Communication and Social Mobilization (ACSM)

Strategies for ACSM cut across all intervention areas [NSP 2014, p.63] and aligned to the National Health Promotion Strategy (2014-2018) [p. 1-33]. Principal activities will focus on achieving increased awareness and effective utilization of preventive interventions, and malaria case management at all levels. Sustained advocacy to political leaders, policy makers, opinion leaders, National Champions and corporate bodies will be embarked upon to support malaria control interventions.

Monitoring and Evaluation (M&E)

An integrated web-based health information management system (DHIMS) for all diseases exists at all levels and forms the basis for monitoring malaria control. Mid-term and end-term evaluation of the programme relevant operations research will be supported will be implemented. Systems for monitoring parasite prevalence and drug efficacy will be institutionalized [NSP 2014, p.60-62; 65-71].

Programme Management

This focuses on governance, human resource capacity for planning and coordination as well as malaria commodity security. It also focuses on ensuring partnerships and collaborations are strengthened at the international and local levels as well as with the public and private sectors. The programme will continue

to facilitate the effective functioning of the multi-sectorial Malaria Inter-Agency Coordinating Committee (MICC) to enhance governance, coordination, provision of guidance and updates on partners' activities. All the malaria technical working groups will be strengthened to meet on a regular basis [NSP 2014, p.72-78].

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

Case Management

Implementation of diagnostic policy is countrywide but the current use and capacity especially at lower levels need improvement. As at 2013, a diagnostic test rate of 53%, mainly in the public health facilities, had been achieved. [NSP 2014, p. 39]. Population based data shows an increase in access to ACTs for children under 5 years of age from 4.4% in 2006 to 18.2% in 2011. Access to ACTs is also much higher in urban areas (12% in 2006 to 26% in 2011) compared with rural areas (0.9% in 2006 to 13.3% in 2011); though access to ACTs in rural areas has increased over the years[MICS 2006 p.48, MICS 2011 p.107] [MPR 2013, p. 144]. Facility based data shows >85% of malaria cases are treated with ACTs [MPR 2013, p113].The improvement is partly attributable to the introduction of the Affordable Medicines Facility malaria initiative since 2010. [MPR 2013, p.166; NSP 2014, p.40]. According to the independent evaluation of AMFm, there was a decrease in prices in ACTs from $3.42 to $1.13 and increase in availability of ACTs in private outlets from 31% (2009) to 83% (2011). [Multi country independent evaluation report, 2012 p. xliv].

In 2008, Ghana won the grant to implement the malaria component of the Home Based Care (HBC) (now iCCM). Although volunteers in 80 districts were trained to manage the three diseases, resources were available only for malaria treatment. [MPR 2013, p. 135]. However, the proportion of children under five with fever receiving treatment by CBAs with appropriate antimalarials (ACT) remains low at 2% and 3.1% in 2006 and 2011 respectively [MICS 2011.p.108].

IPTp

Coalition of NGOs in malaria partners with NMCP to carry out house-to-house education on IPTp and also do follow-up to improve dropout rate. IPTp started in 20 districts in 2003 and was scaled up nationwide from 2005 to date. The IPTp2 coverage has increased from as low 0.8% in 2003 [GDHS 2003, p.201] 64.6% in 2011 [MICS 2011, p 104; NSP p.41].

LLINs

From a purely social marketing approach using Public Private Partnership arrangement in 1998, the country adopted the Universal Coverage (UC) strategy (1 net for 2 persons in a household) and used door-to-door distribution and hanging of nets in recipients' sleeping places in 2010-2012 where 12.5m LLINs were hanged. In terms of overall performance, percentage of households owning at least one treated net increased from 3.2% in 2003 to 48.9% in 2011 [MPR 2013, p 92; NSP, p.42]

IRS

IRS is being implemented in Ghana mainly by AngloGold Ashanti Malaria Control Limited (AGAMal) and PMI. AGA instituted an integrated malaria control program in Obuasi in 2006, which included IRS, screening of residences, larviciding, and improved case management. As a result malaria cases recorded monthly in the Mine Hospital declined from 6800 in 2006 to 400 in 2013, significantly advancing the municipality towards pre-elimination. In 2009, AGA established a separate entity AngloGold Ashanti Malaria Control Ltd. (AGAMal) which became the IRS implementing partner of the Round 8 Global Fund grant, and started spray operations in 2011. At present AGAMal covers 35 new (25 old) districts including Obuasi and Wassa West. AGAMal used Organophosphates (Pirimiphos methyl) and rotated them with Carbamates (propoxur) in the districts in which IRS was implemented as part of the program's insecticide resistance management plan since 2011. Actellic 50EC was introduced into the AGAMal programme in November 2013 and orders have been placed for Actellic 300CS for use from October 2014.

PMI supports IRS implementation in 4 districts in Northern Region. Over the last 5 years, the IRS program in Northern Ghana has used a single spray round per year starting just before the rains using pyrethroids (alpha-cypermethrin then deltamethrin).

About 92.7% to 94% of all structures in targeted districts were covered by IRS in 2012. [MPR 2013, p.116, 122]. A comparison of the pre and post-IRS EIRs in Northern Region also revealed a significant reduction, from 0.35 infective bites/man/night (ib/m/n) in 2011 to 0.021 ib/m/n in 2012. In 2013, there was slight decrease in EIR to 0.018 ib/m/n after spraying with pirimiphos-methyl that year (Dadzie et al, 2014 unpublished).

SMC

This is being implemented currently in the Upper West region with plans to extend to Northern and Upper East regions, if evaluation shows positive impact. SMC was launched in April 2014 with media briefing to coincide with the World Malaria Day in UWR. Planning and training has been completed and dosing will start soon.

ACSM

Under this, the programme will utilize all the media channels (TV, radio and print). Knowledge about symptoms and prevention of malaria is quite high (96.4%) in Ghana [MICS 2011, p. 112-115] but this does not translate proportionately to the needed behaviour change for malaria control. What will be done differently during the NSP period is more emphasis on advocacy and use of National Champions and other community advocates (e.g media advocates) for social mobilization, establishment of Community listener groups to promote behaviour change. Such strategies have been used very effectively in Ghana's Guinea Worm eradication effort as well as Polio eradication.

M&E

In collaboration with the Policy, Planning, Monitoring and Evaluation Department of the GHS, NMCP has supported the roll out of the DHIMS 2, which has greatly improved visibility of national data and reporting rate. Monthly OPD morbidity reporting rate (through DHIMS) has increased from 58.2% in 2010 to 95% as at 2013, but there are still some challenges with completeness and accuracy of reporting.

Main Outcomes and Impact of Malaria Interventions

All-cause under-five mortality decreased from 111 per 1000 live births in 2003 to 80 per 1000 in 2008 while infant mortality rate as at 2008 stood at 50 per 1000 live births compared with 64 per 1000 live births in 2003. [GDHS 2008, p. 139; GDHS 2003, p.127]. Under-five malaria case fatality rate has been dropping consistently: a 94.4% reduction from 14.4% in 2000 to 0.8% in 2012 [MPR 2013, p.45]. Proportion of total deaths attributable to malaria for children under-5 (institutional data) has declined from 1.2 per 10,000 deaths in 2005 to 0.5 per 10,000 deaths in 2012 [MPR 2013, p. 46]. Figure 5 gives a summary of achievements of some key indicators.

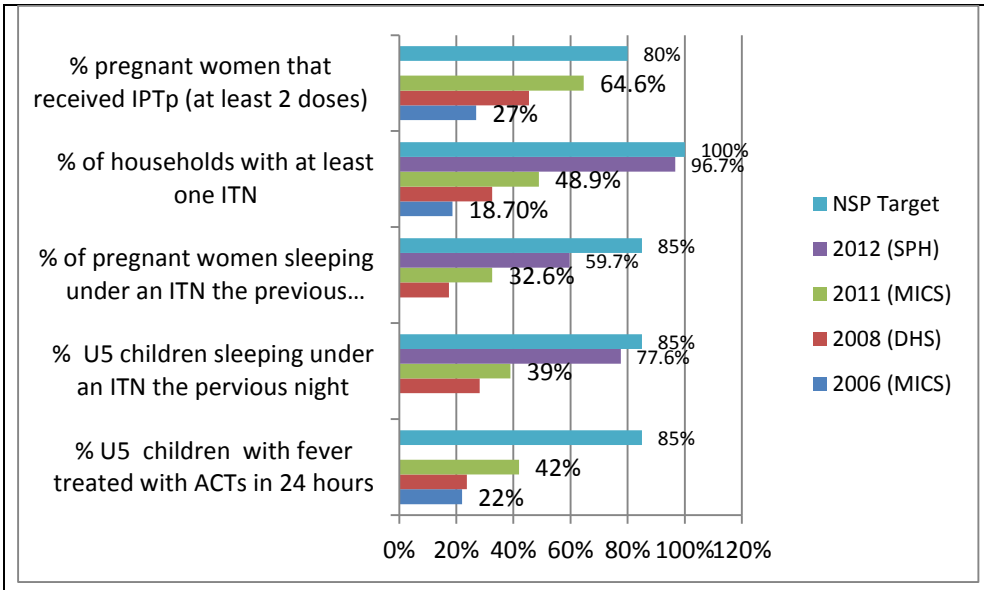


Figure 5: Achievement of key coverage and outcome indicators for malaria control

c . Limitations to implementation and lessons learned.

Limitations to implementation cut across all intervention areas (though a few are intervention specific) and are related to the following, among others:

- Delays in procurement of essential commodities leading to frequent stock-outs of essential commodities like LLINs, ACTs and RDTs. Inadequate human resource capacity for PSM is a major contributory factor.
- Over-consumption of ACTs due to presumptive diagnosis of malaria. Most fever cases are diagnosed as malaria without confirmation and treated with expensive ACTs. It has been difficult to show much reduction in reported malaria cases despite many years of intervention activities mainly due to this anomaly. [MPR 2013, p. 42]
- Inadequate capacity and numbers of staff, especially Health Promoters, from district to CHPS zones.
- Delayed data reporting, inadequate human resource at district level and incomplete data reporting especially from district level..
- Inappropriate socio-cultural attitudes and practices affecting uptake of available services.

The MPR documents lessons learned in malaria control over the past years and this informed the development of the new strategic plan and prioritization of the modules and interventions in the concept note.

Ensuring sustained availability of efficacious and affordable antimalarial is key to malaria case fatality rate reduction. Presumptive diagnosis of malaria leads to overconsumption of ACTs necessitating the procurement of adequate RDTs, improving supportive supervision and health worker education.

Public-Private partnership between GHS and AGAMal (IRS) and Private First Line Buyers (ACTs) has been successful in achieving set objectives therefore will be sustained. Partnership with research institutions (notably Noguchi Memorial Institute for Medical Research) has been successful in operations research, drug efficacy, parasite prevalence and will be further strengthened.

Strong partnership within the Health sector and among its agencies, CSOs, community leaders and development partners has been found to be critical for successful implementation.

The data from the MICS 2011 on parasite prevalence has informed the stratification of preventive interventions such as prioritization the three northern regions for SMC and IRS.

d . The main areas of linkage to the national health strategy

Malaria control is linked to both the national development goals, policy objectives and strategies in the Ghana Shared Growth and Development Agenda (GSGDA) [GSGDA 2010, p.1,5] as well as with the priority issues and the policy objectives of Medium Term Health Strategy [Draft MTHS 2014, p. 23-24,]. The GSGDA policy framework, defines five policy objectives one of which is "to intensify prevention and control of non-communicable and communicable diseases (malaria, HIV/AIDS/STI and TB)". Among the listed strategies are institutionalizing rapid diagnostic test and microscopy in all health facilities, scaling up indoor residual spraying, improving malaria data management, scaling up home management of malaria and improving household ownership and use of insecticide treated bed nets. [GSGDA 2010, p.103].

f. Country processes for reviewing and revising the national disease strategic plan(s)

The country processes for reviewing and revising the previous national malaria strategic plan were very involving and all-embracing. It started with a WHO guided Malaria Programme Review (MPR). The findings and recommendations made were used as major inputs for re-designing the programme and developing the new strategic plan. [MPR 2013, p. 14-24 for executive summary] The NSP was developed through a participatory approach with various stakeholders. Technical support was provided by consultants from WHO, RBM and other partners working on various thematic areas. A stakeholders meeting was held to ensure involvement of all Key organisations, institutions, groups and agencies and partners. The document was then subjected to a joint assessment and review by various external and internal resource persons. A stakeholders' meeting was then conducted for the dissemination on findings, after which inputs from Stakeholders were incorporated and finalized.

4-5 PAGES SUGGESTED

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.

1-2 PAGES SUGGESTED

a. ***Funds available for the Programme areas and sources of funding***:

The total funding need for malaria control in Ghana for 2014–2020 is $2,225,749,444. Out of this $900,849,291 has been budgeted for the period 2015 to 2017 [NSP 2014, p.82]. The available funds from GoG and other sources for 2015-2017 is $ **517,185,637.15**, leaving a funding gap of $**383,663,653.92** for the period as summarized in Table 1.

Table 1: Total Funding needs and Available resources and financial gap for NSP 2015-2017

Year	Amount required	Government of Ghana	Ghana's Private Sector	Other Sources (PMI,UNICEF /DFID/ WHO	Total Amount Available	Funding gap
2015	267,604,462.08	99,966,127.40	840,000.00	60,878,887.00	161,685,014.40	105,919,447.68
2016	293,127,027.90	123,754,204.90	840,000.00	42,974,185.00	167,568,389.90	125,558,638.00
2017	340,117,801.09	143,214,463.70	840,000.00	43,877,769.15	187,932,232.85	152,185,568.24
Total	**900,849,291.07**	**366,934,796.00**	**2,520,000.00**	**147,730,841.15**	**517,185,637.15**	**383,663,653.92**

Budget for Prioritized Interventions

Table 2 shows the budget for the prioritized interventions. The total funding need is $742,768,873; the available resource is $421,649,320 leaving a gap of $321,119,553 The GoG provides $368,859,585 (50% of total need) comprising essential operational and personnel costs of the NMCP as well as malaria-specific health system costs in health facilities throughout the country. Funds available from non-GF sources for 2015-2017 provided mainly by PMI/USAID, DFID, UNICEF, WHO, RBM and AngloGold Ashanti ($52.7 million) will meet 7% of the priority programme needs (**Table 2**).

Funding gaps exist in all the priority programme areas with IRS, ITNs and private sector co-funding mechanism for ACTs having the highest gaps of approximately $96m, $82m and $72 million respectively. The bulk of the operational cost for delivery of IPTp is imbedded in the cost of running ANC services, and is borne by the Government of Ghana. The GoG also procures SP for IPTp leaving a gap of $1.2 million.

Table 2: Prioritized Costs showing available resources, sources and funding gaps

Interventions	Prioritized NSP Budget 2015-2017	Domestic (Govt.) resources	External Resources (Non GF)	Total available resources (US$)	Funding Gap (U$) 2015-2017	Sources of funds
Diagnostics	18,366,697	-	7,831,535	7,831,535	10,535,162	PMI, GF, DFID
Facility-based Treatment	29,699,866	-	11,330,000	11,330,000	18,369,866	PMI, GF, DFID
Severe malaria	7,151,861	-	4,455,000	4,455,000	2,696,861	GoG, PMI
Malaria in pregnancy/IPTp	2,842,265	866,265	760,000	1,626,265	1,216,000	GoG, PMI
Private sector co-payment (ACTs)	72,142,108	-		-	72,142,108	
SMC	10,142,833	-	1,003,193	1,003,193	9,139,640	DFID, UNICEF
iCCM	9,091,630	-	600,000	600,000	8,491,630	UNICEF, GoG
ITNS/LLINs	93,637,289	5,946,000	5,689,000	11,635,000	82,002,289	PMI, GF, DFID
IRS	113,086,927	-	16,722,000	16,722,000	96,364,927	PMI, AGA
Entomological monitoring	546,150	-	-	-	546,150	PMI, GoG
M&E	11,220,116	230,000	1,755,000	1,985,000	9,235,116	PMI, GoG
Programme Management	367,055,702	361,326,620	184,007	361,510,627	5,545,075	GoG, WHO, RBM, WAHO
ACSM/ BCC	7,785,430	490,700	2,460,000	2,950,700	4,834,730	PMI, GoG
Grand Total (US$)	**742,768,873**	**368,859,585**	**52,789,735**	**421,649,320**	**321,119,553**	
% of Total Need/Budget		**50%**	**7%**	**57%**	**43%**	

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

Under the auspices of the Country Coordinating Mechanism (CCM), all donor partners take active part in the development of the NSP. Each partner provides information on their programme of work and budget estimates for the 3 year period to the CCM and NMCP for inclusion in the NSP. Key malaria partners and health development partners are encouraged to provide additional resources to cover essential gaps. Furthermore, through the MOH/Health Partners engagement, additional resources are leveraged not only for malaria but also for other health needs. The iCCM task team led by UNICEF is currently leveraging additional funds from other partners to support iCCM scale up in Ghana. PMI has expressed the willingness to seek for or re-programme available funds to ensure that critical programme gaps are met especially with respect to procurement of pediatric ACTs, RDTs, SP, pre-referral medicines and severe malaria medication should the need arise. DFID has also indicated in providing additional support for SMC implementation.

c. Actions planned to address program areas with significant funding gaps:

Priority will be given to fully cover diagnostics and treatment, and LLINs (mass campaign and routine) gaps in 2015 and 2016 from the allocative Global fund resources. The requests from allocative GF resources will also be made to fully meet the gaps in other vital areas such as iCCM and crosscutting areas (viz Program Management, SM&E and ACSM) for 2015 and 2016. Since allocative funds will be unable to meet all the needs for SMC, IRS and private sector co-payment in 2015 and 2016, above allocation request will also be made for these activities (See section 3.2 for details). For iCCM in particular, Ghana will continue to explore options for additional funding through an ongoing partnership with the International iCCM task team. Continuous advocacy will be undertaken to seek for additional resources from GoG and development partners like PMI/USAID with DFID. Some of these measures include;

- Advocacy with MOH and MOF for increased funding
- Advocacy with NHIA to take part of cost for inclusion of community level cost of managing malaria into NHIA
- Advocacy with development partners for increased funding such as exploring "Debt for Health" initiative to fill in gap for private sector co-payment.
- Advocacy with private sector for increased corporate social responsibility on malaria.

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	☒Yes ☐ No	
ii. Minimum threshold government contribution to disease program (low income-5%, lower lower-middle income-20%, upper lower-middle income-40%, upper middle income-60%)	☒Yes ☐ No	
iii. Increasing government contribution to disease program	☒Yes ☐ 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.

b) Additional government investments in national health programs that counts towards accessing the willingness-to-pay allocation from the Global Fund.

Government of Ghana has shown its commitment in funding health services in general, strengthening of health systems, as well as malaria-specific interventions even though challenges exist. For the previous NSP 2008-2015, out of an actual amount of $112,934,870.91 mobilised, by 2011, GoG contribution amounted to $40,361,582 representing 35.74% [NSP 2014-2020 p.39; MPR p.67-72]. Overall GoG

spending for health has increased over the years and it is expected to continue during the implementation period. See Fig 6 below

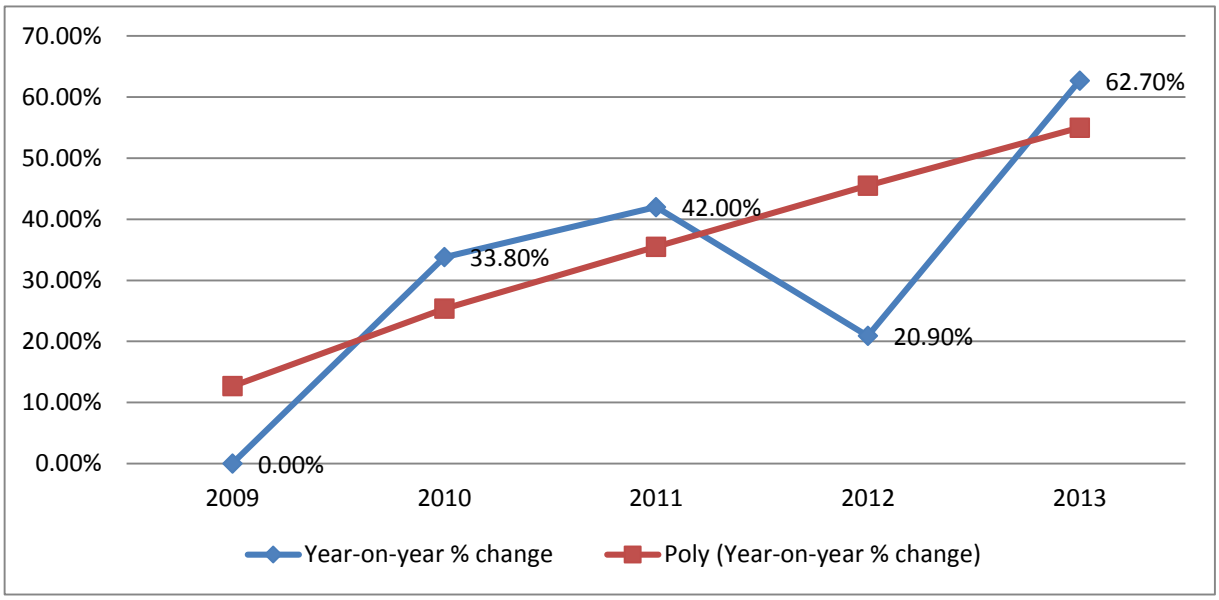


Figure 6:Year on year % change in the resource envelope for health from GoG [MOH 2013 Program of Work, p.19]

Since 2003 the government has introduced a National Health Insurance Scheme (NHIS) to address financial barriers to treatment arising from out-of-pocket payments at point of service. Government has made open declaration to continue to strengthen the NHIS to cover pregnant women, insured parents and their children under 18 years, as well as indigents. It is also embarking on strengthening the CHPS system through the "one million community health worker project", with GOG supporting capacity building of CHWs in CHPS zones. The goal of the project is to strengthen Ghana's community-based health delivery system by recruiting, training, equipping and deploying roughly 32,000 CHWs over a 10-year period (2014 – 2023). There is government commitment up to 2016 which is $59m out of a budget of $205m for the period 2014-2016. It is also embarking on a pilot larviciding project in selected areas as part of an integrated vector control programme. There is a special programme to strengthen laboratory diagnosis as part of health systems strengthening which will benefit malaria case management. It has also supported procurement of SP for IPTp in the past and is committed to continue funding this in the coming years. The Government of Ghana, through the district assemblies, provided storage for the LLINs in the sub-districts, communities as well as incentives for volunteers. In some hard-to reach areas, the district assemblies also provided transportation for carting nets to pre-positioning sites.

Tracking of government investments is usually done through a variety of ways. There is an annual MOH/Partners Health Summit which provides a forum to review programmes' implementation and funding commitments and actual releases by GoG and Partners. An aide memoire is usually signed by key stakeholders which outlines what has to be done (programmatic and financial) by all parties, and it provides a way of tracking government investments in health. Ghana has developed its National Health Accounts (NHA) for 2010 and 2012, and is currently working on the 2013 version, which will be ready by end of year 2014. The Global Fund supported 2012 NHA and is also supporting 2013. NHA estimates the total expenditure on health and it breaks it down into the sources of funding and its uses and this will facilitate tracking of funds.

The Ministry of Finance also provides annual budget statement and expenditure patterns to Parliament, and this provides another opportunity to track government's investments. The public accounts committee

of parliament also tracks all public financial expenditure by all government Ministries, Departments and Agencies.

A new on-line financial management system has been introduced by the Ministry of Finance and MOH termed "Ghana Integrated Financial Management Information System" (GIFMIS) and this will help improve tracking of actual expenditures. In addition, the "Great Plains" software has also been introduced by GHS to facilitate expenditure tracking to activity and programme level, and the system will be supported and strengthened.

b. **Assessment of the completeness and reliability of financial data reported, including any assumptions and caveats associated with the figures.**

As a basic principle, the Ministry of Health maintains its books and records using the Modified Accrual method of accounting, and presents its Financial Statements on a historical cost basis. Details of the system are described in attached document [Ghana Ministry of Health-Financial Notes, 2013, p. 1-3]

However, Financial data reporting is often incomplete. Various MDAs use different accounting methods for financial data capture and reporting leading to conflicting information depending on source. This is worsened by late reporting, as well as gaps in reporting by the reporting entities, including donor partners. For instance, non-compliance by some partners with MOH guidelines on the transfer of funds to Budget Management Centres (BMCs) beyond Headquarters limits the Ministry's overall ability to account for and manage the flow of those funds. Furthermore, many external assistance agencies incur expenditure directly on behalf of the Ministry in support of its operational activities and some of these expenditures are not reported on to be captured in the overall Financial Statement.

Commitments do not always match actual releases both by the government as well as partners but some sources of financial information treat them as if they are the same, resulting in conflicting figures for same years. Government of Ghana figures for the implementation period are based on projections and assumptions from previous years. Refer to comments in Financial Gap Analysis and Counterpart Financing Table (Table 1) for further details.

2-3 PAGES SUGGESTED

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.***

Detailed gap analyses for prioritized iCCM, SMC, Severe malaria, programme management, M&E and ACSM/BCC costs for 2015-2017 are part of the comprehensive gap analysis of the whole NSP programme areas using the tool recommended by RBM partnerships. The summary of the programme needs, available resources and funding gaps for each of these areas is presented in this section (see Table 3). While iCCM, SMC and severe malaria gaps have been expressed in populations covered, the gap analyisis for programme management, M&E and ACSM/BCC have used cost inputs since it is not feasible to relate these to populations.

Table 3: Summary programmatic Gap Analysis for SMC, iCCM and Severe Malaria for 2015-2017

Intervention Areas	**Target Population**	**2015**	**2016**	**2017**
SMC	country need	739,855	757,162	774,912
	country need covered	446,230	446,230	0
	programmatic gap	293,625	310,932	774,912
ICCM	country need	756,620	1,163,302	1,589,847
	country need covered	113,493	116,330	0
	programmatic gap	643,127	1,046,972	1,589,847
SEVERE MALARIA	country need	650,638	627,231	572,400
	country need covered	650,638	333,333	333,333
	programmatic gap	0	293,898	239,067

SMC

Table 3 shows a gap covering a population of 293,625 in 2015, 310,932 in 2016 and 774,912 in 2017 for SMC (See Table 3). The total need for SMC for commodities and implementation cost is $10,142,833; the available resource from partners (DFID) is $1,003,193 plus a GF commitment of $3,151,337.96 from 2014, leaving a gap of $ 5,988,301.78.

iCCM: Table 3 shows a gap covering a population of 643,127 in 2015, 1,046,972 in 2016 and 1,589,847 in 2017 for iCCM. A phased approach will be adopted starting from most deprived communities with the highest need in selected districts in the three northern regions; and progressively scaling up to other districts over time. The iCCM prioritized activities within the implementation period 2015-2017 include development, procurement and deployment of tools and enablers, training supervision, communication and transportation of community health workers among others. The total funding need for iCCM is $9,091,630. The available resources from GoG and UNICEF amount to $600,000 leaving a financial gap of $8,491,630.

Severe Malaria

Table 3 shows a gap covering a population of 293,898 in 2016 and 239,067 in 2017 for severe malaria. The main cost will cover procurement of injection artesunate for the management of severe malaria. The rest of the logistics for severe malaria management like intravenous infusions, rectal artesunate and management of complications will be covered by funds largely provided by GoG and other partners in health facilities. The total need for injection artesunate is $7,151,861 the available resources from GoG and other partners are $4,455,000 leaving a gap of $2,696,861 of which $1,342,185 for 2016. There is enough supply available for 2015 and no request is made.

Programme Management

The prioritized programme management total funding need for 2015-2017 is $367,055,702 (which includes $5,963,606.86 as direct cost inputs for NMCP and $361,326,619 for malaria-specific health system costs) [see Table 4]. Activities funded within the direct NMCP programme management costs include organizing bi-annual review meetings, supporting vehicle running costs /maintenance, supporting civil society/private sector participation in national and international conferences, training on financial management, as well as supporting coordination, personnel, utilities and logistic costs. The funds for the health system includes infrastructure and equipment maintenance as well as government expenditure for salaries, wages for health work force time spent on managing malaria in health facilities and communities. Additional support for NMCP direct program management costs will be from RBM, WAHO, WHO, DFID and PMI/USAID to a tune of $184,007 leaving a funding gap of $5,545,075.

Table 4: Prioritized costs of programme needs, available funds and gaps for programme management, ACSM/BCC and SM&E for 2015-2017

Intervention area	Funding need 2015-2017	Total available support	Funding Gap ($)	Non-GF Sources of support
SM&E	11,220,116	1,985,000	9,085,117	DFID, PMI, GoG
Programme Management	367,055,702	361,510,627	5,545,075	GoG, WHO/RBM, WAHO, DFID, PMI/USAID
ACSM/ BCCE	8,481,188	2,950,700	5,530,488	DFID, PMI, GoG

Surveillance, Monitoring and Evaluation (SM&E):

The activities planned for SM&E include routine reporting through the HMIS/DHIMS, data quality auditing, supportive supervision, operational research and Malaria Indicator Survey. The total funding need for this module $11,220,116. Government, PMI and DFID will provide $1,985,000 to support these activities leaving a funding gap of $9,085,117 (see Table 4).

Advocacy Communication Social Mobilization/Behaviour Change Communication (ACSM/BCC)

Principal activities for ACSM/BCC will focus on strengthening advocacy activities through use of National Champions, as well as strengthening community mobilisation to enhance utilization of available malaria services. This is aimed at achieving increased awareness and effective utilization of preventive interventions, and malaria case management at all levels. Sustained advocacy activities will target political leaders, policy makers, opinion leaders and corporate bodies. The total prioritized need for ACSM/BCC for 2015-2017 is $8,481,188with available resources amounting to $2,950,700 leaving a gap of $5,530,488. The sources of funding are GoG, DFID and PMI/USAID (see Table 4).

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.

4-5 PAGES SUGGESTED

Strategic overview of funding request to the Global Fund:

The five prioritized areas include (i) Case Management (facility-based treatment, iCCM, severe malaria and private sector co-payment); (ii) Vector control (LLINs and IRS); (iii) Specific Prevention Interventions (SMC and IPTp). (iv) Programme Management and (v) Health Information/ M&E (see Table 5).

The prioritized total funding need for 2015-2017 will amount to $742,768,873 from 2015-2017. The Government of Ghana and key partners are committed to making an investment of $421,649,320 for the period 2015-2017 (which includes Government of Ghana investment of $368,859,585 for malaria-specific health services costs) leaving a funding gap of $321,670,469.

Table 5: Summary of Allocative and above Allocation Requests

Interventions	Funding Gap for Prioritized Interventions (NSP: 2015-2017)	Allocation (US$)	Above allocation (US$)
Facility Based Treatment (Diagnosis and Treatment of uncomplicated malaria)	28,189,841.68	13,868,222.03	14,321,619.64
Severe malaria	3,412,047.33	1,342,185.29	2,069,862.04
IPTp	1,216,000.00	639,000.00	577,000.00
Private sector co-payment (ACTs)	72,142,107.63	8,004,000.00	64,138,107.63
SMC	5,988,301.78	3,041,310.58	2,946,991.19
iCCM	8,491,629.55	4,378,451.52	4,113,178.03
LLINs Mass Campaign	63,790,043.56	25,677,321.48	38,112,722.08
LLINs Continuous Distribution	18,212,245.53	10,721,598.67	7,490,646.86
IRS	96,364,927.00	15,527,355.00	80,837,572.00
Entomological monitoring	546,150.00	346,500.00	199,650.00
Health Information/ M&E	9,085,116.45	5,973,492.04	3,111,624.41
Programme Management	5,545,074.57	3,298,649.24	2,246,425.34
ACSM/ BCCE (For Case Management and ITNs)	5,533,547.64	2,916,661.22	2,616,886.42
Total gap and requests ($US)	**318,517,032.71**	**95,734,747.07**	**222,782,285.64**

The funding request made in this concept note seeks to fill these gaps through allocative and above allocation request aimed at achieving high impact in priority programme areas. Ghana received an indicative funding allocation of $125,101,951. The bulk of this allocation ($116,402,029) was derived from reprogramming of existing funds from ongoing Global fund grants with an additional allocation of approximately $8.7m. The reprogramming also involved seeking additional funds from government and partners in order to free up GF resources that had already been allocated to activities such as training for case management, monitoring and evaluation activities and ACSM/BCC.

ALLOCATIVE FUNDING REQUEST

The request from the allocative funds comes from $95,734,747 since approximately $30 million from the allocation is estimated to be invested in 2014 on ongoing activities supported by the Global fund. The total funding need, available resources, sources of funding and gaps have been summarized in Table 2 (see section 2.1). Approval has been received from the Global Fund to apply available resources to meet priority programme needs in 2015 and 2016 while request for 2017 will be made from above allocation. The rational for selection of modules and prioritization of intervention areas are described in section 3.3.

Case Management Module

Case management in public and private not-for-profit facilities has been prioritized above all the other intervention areas. The case management module includes facility-based treatment, iCCM, private sector co-payment and severe malaria. Using the current allocation over the period to the end of 2016, there are no gaps in ensuring universal coverage for Case Management**.** The details of the allocative request are shown in Table 6A.

Facility-Based treatment: This includes parasitological diagnosis and antimalarial treatment in public and private-not-for-profit health facilities. GoG and other partners (DFID, USAID/PMI) will also support facility-based treatment. Key activities to be funded include procurement of 1,693,023 RDTs for 2105 and 8,996,493 RDTs for 2016 which will cover a nationwide diagnostic target of 73% and 75% respectively and 10,162,224 ACTs in 2016 to cover a nationwide treatment target of 95%. Additional activities will include supervisory visits for laboratory staff, printing of diagnosis guidelines and quality assurance of ACTs and RDTs.

Table 6A: Allocative request for case management

Intervention	Allocative request($)	Year for which request is made	Comments
Facility-based treatment	13,868,222.03	2015, 2016	Fully requested for (100%)
iCCM	4,378,451.52	2015, 2016	Fully requested for (100%)
Severe malaria	1,342,185.29	2016 (no gap in 2015)	Fully requested for (100%)
IEC/BCC for case management	1,061,375.02	2015, 2016	Fully requested for (100%)
Private sector co-payment (ACTs)	8,004,000.00	2015	Total need for 2015 is $24,779,314.86 32% of total need for 2015 is requested from allocative.

The country will take steps to ensure that products procured are subjected to quality assurance throughout the supply chain. In addition, staff of NMCP and Ghana FDA will be trained at the newly established United State Pharmacopeia Centre for Pharmaceutical Advancement and Training on post market surveillance. The request for this has been integrated into the facility-based treatment requests.

iCCM: Table 6A summarizes the allocative request for iCCM. The fund requested is for treatments for a population of 643,127 for 2015 and 1,046,972 for 2016 which cover the entire gap in targeted communities in selected districts.

IEC/BCC For Case Management: Activities will include airing promoting proper case management through TV, radio, print and also at the community levels. The funding gap is $ 2,396,570.48, out of which $1,061,375 is requested from the allocative fund for 2015 and 2016.

Severe Malaria: The allocative fund will provide 293,897 doses of injection Artesunate in 2016 which covers 100% of gap. Artesunate injections procured with GF funds in 2014 will spill-over to 2015 and provide all needs for 2015.

Private Sector Co-payment: The total funding need is $72,142,108. There is no support from other sources. In 2015 $8,004,000 is being requested from the allocative fund which will procure 8,658,336 ACTs to sustain this high priority and high impact initiative.

Vector Control Module

Using the current allocation over the period to the end of 2016, there are no gaps in ensuring universal coverage for vector control. The proposed submission includes provision for 100% coverage for the whole country with one of two vector control interventions (either LLINs or IRS) to the end of 2016. The gaps previously described for vector control interventions (specifically IRS) in 2016 are the costs associated with scale up of IRS to replace LLINs in districts which are targeted for IRS in the national strategy. Hence, provision of incentive funding for IRS would result in the substitution of IRS for LLINs in the given districts and not for implementation of IRS where no interventions are currently planned)

Table 6B: Allocative Request for Vector Control

Intervention	Allocative request($)	Year for which request is made	Comments
LLIN- Mass Campaign	25,677,321.48	2015	Fully Requested for (100%)
LLIN – Continuous Distribution	10,721,598.67	2015, 2016	Fully Requested for (100%)
IRS (excluding IEC/BCC)	15,527,355.00	2015, 2016	Fully Requested for (100%)
Entomological monitoring	346,500.00	2015, 2016	Fully Requested for (100%)
IEC/BCC for vector control	1,852,226.20	2015, 2016	Fully Requested for (100%)

Long Lasting Insecticidal Nets (LLINs)

Routine distribution of LLINs will be nation-wide (excluding IRS areas) targeting pregnant women through ANC, children under one through EPI, and school children through school distribution. For each particular year in the areas where mass campaign is ongoing, there will be no distribution through schools. All the needs for 2015 (682,734 LLINs) and 2016 (2,724,209 LLINs) is being requested for in the Allocative fund.

Mass campaign is also targeted at all individuals in areas where there will be no IRS. There Available nets will cover approx. 50% of the population in 2014 mass campaign. Funding for 6,213,034 LLINs is being requested from allocative fund for the remaining 50% of the population due for mass campaign in 2015. Promotion for use of available LLINs in all districts countrywide through an aggressive ACSM strategy will be embarked upon. The request for funds includes procurement of LLINs for mass campaign and continuous distribution.

Indoor Residual Spraying (IRS)

Allocative request of $15,527,355 is being made for 2015 and 2016 to cover all 11 districts (9 old geo-administrative districts demarcation) in Upper West region with malaria parasite prevalence above 51%, and Obuasi, a mining area of economic importance with ongoing successful IRS programme (Refer to

Figure 4, Section 1.2). This will cover a population of 1,060,102 in 2015 and 1,081,881 in 2016. Spraying will be done with a long lasting insecticide, Actellic 300CS once every year.

Specific Prevention Intervention (SPI)

Table 6C: Allocative request for SPI

Intervention	Allocative request	Year for which request is made	Comments
IPT in pregnancy	639,000.00	2015, 2016	Fully Requested for (100%)
Seasonal malaria chemoprevention (SMC)	3,041,310.58	2016	Fully Requested for (100%)

Intermittent Preventive Treatment in Pregnancy (IPTp)

This budget will cover implementaion of IPTp nationwide through antenatal clinics where pregnant women will be given SP under a directly observed process by health workers. The procurement of SP, clindamycin, folic acid will be funded by GoG and so no request is made from Global Fund for procurement of commodities for IPTp. The allocative request will cover training of Health workers in IPTp, training NGOs to monitor pregnant women and supporting them to provide advocacy, communication and social mobilization activities at the community level in collaboration with CHOs. This targets achievement of IPTp3 coverage of 55% in 2015 and 60.7% in 2016.

Seasonal Malaria Chemoprevention (SMC)

SMC implementation in 2015 will cover door-to-door distribution of amodiaquine and sulphurdoxine-pyremethamin (AQ-SP) to 293,625 children by trained volunteers with information dissemination, social mobilization and supervision in Upper West region. DFID will support SMC implementation in Northern region (2015-2016). Allocative request is made for only 2016 due to available GF funds for 2015 due to spillover from 2014 implementation.

Health Information Systems and M&E Module

Request will support data quality audit, strengthening of national health information system/DHIMS and documentation center, conduct facilitative supervision at all levels as well as operational research and Malaria Indicator Survey. See Table 6D for details. The DHIMS strengthening will be coordinated by Policy, Planning, Monitoring and Evaluation Division (PPME) of GHS for larger health system.

Table 6D: Allocative Requests for Health Information and M&E

Intervention	Allocative request	Year for which request is made	Comments
Routine reporting (DHIMS, etc.)	3,280,297.24	2015, 2016	Fully Requested for (100%)
Surveys	2,111,197.80	2015, 2016	Fully Requested for (100%)
Others (Malaria Mapping, dissemination, etc.)	582,000.00	2015, 2016	Fully Requested for (100%)

Programme Management Module

The allocative request will cover cost for utilities, stationery, human resource cost, meetings with private sector and NGOs, Malaria Interagency Coordinating Committee (MICC), regional and national stakeholders, maintenance of infrastructure and office equipment and vehicle running cost. Funds will contribute to personnel training and planning for efficient procurement and supply management of medicines and other health products to benefit the entire health system. A request of $3,298,649 is made from the allocative fund; details in Table 6E.

Table 6E: Allocative Requests for Programme Management

Intervention	Allocative request	Year for which request is made	Comments
Policy, planning, coordination and management	2,612,756.64	2015, 2016	Fully Requested for

Grant management	233,725.00	2015, 2016	Fully Requested for
Others	452,167.60	2015, 2016	Fully Requested for

ABOVE ALLOCATION FUNDING REQUEST

Due to funding limitation and with the approval of the Global Fund, all requests in 2017 have been made above allocation. The total request above allocation for all modules is $225,936,177. The following interventions have above allocation request in 2015 and/or 2016: IRS (2015, 2016), private sector co-payment for ACTs (2015, 2016) and SMC (2016). Detail rationale for prioritization and expected impact of above allocation request is described in Section 3.3.

Table 7: Ranking above allocation request in descending order of priority

Intervention area	Above allocation request	Year of request
Facility-based treatment (ACTs and RDTs), includes IEC/BCC for case management	$15,653,755.10	2017
Severe Malaria	$2,069,862.04	2017
IPTp	$577,000.00	2017
LLIN Continuous (routine ANC, EPI and Schools)	$7,490,646.86	2017
iCCM	$4,113,178.03	2017
Cross cutting : HIS/M&E and Programme Management	$5,358,049.75	2017
LLIN mass campaign	$38,112,722.08	2017
SMC	$2,946,991.19	2017
Entomological monitoring	$199,650.00	2017
IRS (includes IEC/BCC)	$81,407,023.00	2015,2016,2017
Private sector co-payment	$64,138,107.63	2015,2016,2017

The above allocation request for Facility-based treatment is to procure 9,730,807 RDTs to increase 2016 target of 75% diagnostic coverage to 80% in 2017 and 9,298,604 ACTs to achieve the set target of 97% in 2017 from 95% in 2016. For severe malaria the amount requested for will procure additional 239,067 treatment doses to enable us cover 100% of the total need for 2017.

The above allocation amount for IPTp is to implement activities to increase the coverage of IPTp3 from 60.7% in 2016 to 65.5% in 2017.

Above allocation request for continuous LLIN distribution in 2017 will procure 1,794,941 LLINs to cover all risk groups (pregnant women, children through EPI and schools) targeted for 2017.

The additional above allocative request for iCCM will be for treatments for 1,589,847 children in 2017 which covers 100% of targeted population.

Cross cutting above allocation funding request will be a continuation of programme management and HIS/M&E activities in 2017 as described under the allocative funding.

In 2017 50% of population is to be covered through LLINs mass campaign and the remaining 50% in 2018. This above allocation request will procure 7,648,482 nets for 2017 mass campaign.

Above allocation request for SMC is to enable progression to UER and NR in 2016 (310,932 children; 41% of gap) and 2017 (774,912 children; 100% of gap) based on result of evaluation of implementation in Upper west region in 2015.

Above allocation amount of $199,650 is requested to continue entomological monitoring, vector bionomics and insecticide resistance management in 2017.

Above allocation request for IRS will cover 36 remaining IRS-targeted districts in Upper East and Northern regions (excluding the 4 PMI supported districts in Northern region) in 2015 and 2016. This will cover a population of 2,397,724 in 2015, and 3,619,275 in 2016. Request for 2017 will cover all 52 IRS-targeted districts to protect a population of 4,810,084. Priority will be given to UWR in the above allocation request in 2017 to ensure continuity of activities started in previous years. IEC/BCC for IRS has above allocation request of $152,328 for 2015, $192,859 for 2016 and $224,264 for 2017 to support the implementation.

Above allocations request for Private sector co-payment will procure 44,092,047 doses of ACTs to cover 68% of 2015, and 100% of 2016 and 2017 needs in the private sector.

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

1. Rationale and expected Impact for Selection and Prioritization of Modules and Interventions

The rationale for prioritizing these modules was guided by the revised NSP 2014-2020 which was developed based on lessons learnt and recommendations from the Malaria Programme Review conducted in 2013.

The rationale for prioritization of these modules and **allocative** requests are summarized as follows:

***Case management*:**

Consistently under five malaria case fatality have been reducing and there is need to sustain the gains through increasing access to QA ACTs. Hence the prioritization of facility based case management to ensure ACT commodity security. MPR identified high rate of presumptive diagnosis as a major challenge requiring remedial actions in provision quality assured diagnostic services. With support from Global fund, GoG and other partners, there have been high proportions (> 85%) of malaria cases treated with antimalarials in health facilities and community level over the years (2007-2013); this justifies the prioritization of malaria diagnostics and antimalarials (ACTs and injection Artesunate) for public sector and private-not-for profit facilities and iCCM. It is expected that the target for under five case fatality will improve from 0.53% in 2015 to 0.48% in 2017.

Specifically for private sector copayment, the private sector has a more efficient countrywide distribution network and systems. This network facilitates increased access to high quality and affordable ACTs to deprived areas thereby enhancing improved case management. For instance, availability in private retail outlets increased from 25% in 2009 to 83% in 2012 due to implementation of AMFm. (AMFm Independent Evaluation Report, 2012). Hence the need to continue private copayment mechanism to avoid a reversal of the gains made under the AMFm.

Vector control

It has been shown that sustained utilization of LLNs at over 80% or higher will reduce transmission to pre-elimination levels over time. In terms of overall performance, the percentage of households owning at least one treated net increased from 3% in 2003 to 49% in 2011. This justifies the need to sustain and improve further the ownership and use of LLINs through continuous distribution and mass campaigns supported by a sustained IEC/BCC campaign.

IRS:

The NSP has identified the need to rapidly reduce the burden of infection and associated deaths in high burden areas of the country (parasitaemia > 40%) and areas of economic importance as a priority; and has chosen IRS as one of the strategies to achieve this. This is supported by evidence of a reduction in malaria cases from 6800 cases in 2006 to 400 cases in 2008 in Obuasi. Furthermore, in the PMI supported district, prevalence of malaria parasitaemia showed a decline from pre-IRS prevalence of 52.5% in 2010 to post-IRS prevalence of 47.7% in 2012. More significant decline to 20.6% was observed with the change of insecticide from April to October 2013. (Abuaku et al, 2014, unpublished). In line with this, the 3 three northern regions with highest burden of malaria were selected. Obuasi, a mining district of economic importance, was additionally selected because it has made tremendous gains in controlling malaria from 2006 to date through IRS intervention. This makes it one of the few districts in Ghana that is well positioned to achieve pre-elimination in the next five years, if these gains can be maintained.

IPTp: Ghana has achieved high coverage for two doses of IPTp (65%) by consistent funding from partners and GoG, as well as existing GF grants. The need to sustain this priority intervention and scale up implementation to attain national and WHO targets justifies this request the allocative funding.

SMC: The area targeted for SMC (UW, UE and NR) are known to have highest disease burden and it is highly seasonal. This intervention is targeting the vulnerable age-group of under-five years known to be at the highest risk of mortality from malaria. The intervention has the potential to add to high impact gains

from LLINs or IRS. There will be no allocative request in 2015 for UW region, which has the highest malaria prevalence, due to availability of committed funds from 2014. Allocation of $3,041,311 is requested for 2016 to include UE and NR after successful evaluation of UW 2015 implementation.

Cross-cutting Program Areas:

Priority cross-cutting programme areas including programme management, surveillance, monitoring and evaluation, as well as advocacy and behavior change communication are essential for successful implementation of other prioritized interventions, and have therefore been prioritized for allocative funding in 2015 and 2016. Some cross cutting activities such as those of SM&E will strengthen the overall health system.

Rationale and Impact for Above Allocation Funding Request

In order sustain and increase the gains made in facility-based treatment , an above allocation request is made to increase 2016 target of 75% diagnostic coverage to 80% in 2017 and use of ACTs to achieve the set target of 97% in 2017 from 95% in 2016. As already indicated in section 3.2 for severe malaria the above allocation amount will procure additional 239,067 treatment doses to enable us cover 100% of the total need for 2017.

The above allocation amount for IPTp is to implement activities to increase the coverage of IPTp3 from 60.7% in 2016 to 65.5% in 2017.

Above allocation request for continuous LLIN distribution in 2017 will procure 1,794,941 LLINs to cover all risk groups (pregnant women, children through EPI and schools) targeted for 2017.

The additional above allocative request for iCCM will be for treatments for 1,589,847 children in 2017 which covers 100% of targeted population.

Cross cutting above allocation funding request will be a continuation of programme management and HIS/M&E activities in 2017 as described under the allocative funding.

In 2017 50% of population is to be covered through LLINs mass campaign and the remaining 50% in 2018. This above allocation request will procure 7,648,482 nets for 2017 mass campaign to maintain universal coverage. The proportion of population at risk potentially covered by LLINs will increase from 91% in 2015 to 100% in 2017. Ghana therefore seeks above allocation to support this high priority and high impact intervention failing which over several millions of those at risk will not have effective protection from malaria infections with increased risk of upsurge in incidence of clinical cases and fatality.

Above allocation request for SMC is to enable continuation in 2017 in UW and in UE and NR (774,912 children; 100% of gap) based on result of evaluation of implementation in Upper west region in 2016. This will maintain 80% coverage of children targeted for SMC in 2017.

Above allocation amount of $199,650 is requested to continue entomological monitoring, vector bionomics and insecticide resistance management in 2017.

Above allocation request for IRS will cover 36 additional districts in Upper East and Northern regions (excluding the 4 PMI districts in Northern region) in 2015, 2016 and 2017. Upper west region will only need above allocation request in 2017.

IEC/BCC for IRS has above allocation request of $152,328 for 2015, $192,859 for 2016 and $224,264 for 2017. With above allocation funding the IRS program will be scaled-up to 35 districts (22 old geo-administrative districts demarcation) in additional high malaria burden districts in Upper East and the Northern Region.

Above allocations request for Private sector co-payment will procure 44,092,047 doses of ACTs to cover 68% of 2015, and 100% of 2016 and 2017 needs in the private sector. Discontinuation of the copayment

will result in decreased access to high quality affordable treatments and this will compromise the quality of malaria case management.

IRS

An above allocation request of $81,407,023 is made for IRS (including IEC/BCC) to cover 35 additional districts. Additional population to be protected by IRS will be 2,157,951(90%) in 2015, 3,257,348 (90%) in 2016 and 4,329,076 (90%) in 2017.

Private sector co-payment

A request for $64,138,108 above allocation is made for the private sector co-payment mechanism. This will provide additional 44,092,047 ACTs by 2017.

iCCM

An amount of $4,113,178 has been requested form the above allocation funding for iCCM to reach 556446 children (35% of children in targeted communities) in 2017

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

This question is <u>not</u> 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.

Ghana as a lower middle income country is required to ensure that at least 50% of the investment from GF is made for key impact interventions targeted at population most in need including underserved and key populations. This conditions has been met since more than 80% of the requested funds will be devoted to high impact preventive interventions (IRS and LLINs) and treatment services (including RDTs and ACTs) meant for the whole populace including vulnerable populations (under five and pregnant women) and hard to reach, poor rural households. Furthermore most of the targeted interventions such as IRS and SMC are biased towards the three northern regions which are deprived and underserved.

½ PAGE SUGGESTED

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.

a. The proposed implementation arrangement reflects a dual-track financing arrangement involving both the government (MOH/GHS) and a non-government sector (AGAMal) Principal Recipients (PRs)
b. The two PRs will be implementing different modules of the grant. AGAMal will implement the module on Indoor Residual Spraying, whilst MOH/GHS implements the other modules. The CCM will ensure that the PRs implement as per the grant agreement through the work of the Malaria Oversight Committee (comprising members and non-members) of the CCM. The Malaria Interagency Coordinating Committee (MICC), which is an advisory committee for malaria control in the country, will work to ensure there is proper coordination and harmonization. In addition both PRs will be represented on the specific working group under the MICC related to their area of work to ensure standardization and improved coordination. The MOH/GHS through its representation of the NMCP on the board and the scientific advisory committee of AGAMal will ensure that MOH/GHS makes the needed input into the work of AGAMal. In addition, AGAMal will provide progress report to MOH/GHS, whilst there will be regular feedback to AGAMal on the activities of MOH/GHS.
c. The sub recipients are yet to be identified.
   For PR1 (MOH/GHS): this PR will not be working with sub recipients but will be working with implementing partners to ensure the various activities outlined in this grant are carried out. The implementing agencies include:
   - the civil society organizations (such as Coalition of NGOs in Malaria): who will focus on IEC/BCC and follow up of pregnant women at the community.
   - academic and research institutions (such as NMIMR, Kintampo, Dodowa and Navrongo health research institutions): who will undertake research
   - Society for Private Medical and Dental Practitioners: for training, supervision and organization of malaria control activities in the private-for-profit health centers
   - Food and Drug Authority: ensuring anti-malaria drug quality and pharmacovigilance
   - Pharmacy Council: for ensuring quality pharmacy practice

   For PR2(AGAMal); will work with implementing agencies such as
   - research institutions: to undertake research
   - the police: background and screening of spray operators
   - community agents: for community mobilization and advocacy
   - private medical laboratories: medical surveillance for spray operators

d. For both PRs, the implementing agencies access funds through submitting proposals which are reviewed. The finalized and accepted proposals are processed for funds to be released to the implementers as per agreed contract. The work of the implementing agencies is supervised

by the PRs in addition to the required progress and finalized reports they submit. The implementing agencies are only paid the full amount for implementation if they fulfill all the terms of the contract.

e. CBOs involved in IEC/BCC and sensitization for malaria control at community level include women groups and youth groups among others.

To improve the quality of care in the private sector (where a large proportion of people continue to be treated, and where private sector copayment funds will be directed), there will be continued engagement with the private sector through their associations for trainings, dissemination of policies and guidelines to improve care in their outlets. Reporting templates have been developed together with the private sector. At the wholesaler's level, first-line buyers will report on quantities of ACTs distributed, to whom, their location and the pricing to second line buyers. Community Practice Pharmacists Association and Licensed Chemical Sellers (LCSs) Association will be trained on the reporting tools to be used, how to capture data on tests done, test outcomes and treatments given. Their executive committees will be mandated to ensure submission of reports on quarterly basis. Pharmacists have been trained in RDT deployment and LCSs will be trained to conduct the RDT test in their retail outlets following findings from Operational Research that showed that communities are willing to be tested.

1-2 PAGES SUGGESTED

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.

1 PAGE SUGGESTED

As noted in section 3.2 above, Ghana received an indicative funding allocation of $125,101,951. The bulk of this allocation ($116,402,029 US) was derived from reprogramming of existing funds from ongoing Global fund grants originally scheduled to end Feb 2015. It is anticipated that $30 million would have been utilized on existing activities by the time the request would have been approved. Hence, the request to the Global Fund actually comes from $95,734,184 including an additional allocation of approximately $8.7m. The reprogramming involved seeking additional funds from government and partners in order to free up GF resources that had already been allocated to activities such as training for case management, monitoring and evaluation activities, supervision and ACSM/BCC.

Furthermore, all the partners involved in malaria control activities provided information on specific areas they will be funding during the period 2015-2017 through a series of consultative meetings between the NMCP and the partners during which mapping of partner support was undertaken. These were also taken into account to arrive at the gaps for the request to the Global Fund for specified activities to avoid duplication. The CCM also provided additional platforms during which funding of various activities by partners for HIV, TB and Malaria were harmonized in terms training, monitoring and evaluation, and supervision activities and programme management to avoid duplication. DFID is supporting capacity building for resource mobilization. For round 8, GF support was for health workers institutional training in highly endemic areas in UWR, UER and NR. The rest of country was supported by PMI as well as pre-service training. PMI is also committed to supporting M&E, On-site Training and Supportive Supervision (OTSS) for laboratory and clinical staff, BCC and supply chain management issues and these were also taken into consideration in arriving at gaps for the funding request to Global Fund.

The **HSS Component of the malaria concept note** totals $7,303,638 constituting 7.63% of allocative request as shown in Table 8 and 9.

Table 8: HSS Split by Module and Activities from Allocative Request 2016-2016

Modules	Activity (or activities)	2015	2016	Total
Program Management:	Grant management	114,500.00	119,225.00	233,725.00
Program Management:	Other	33,000.00	60,300.00	93,300.00
Program Management:	Policy, planning, coordination and management	-	-	-
HSS-Health information systems & M&E:	Routine reporting	450,993.64	381,331.60	832,325.24
Case Management:	Integrated community case management	2,745,409.20	3,398,878.32	6,144,287.52
HSS: Total				**7,303,637.76**
% of Total Allocative Request ($95,734,747) invested in HSS				**7.63%**

Table 9: Summary of Modular Allocation with HSS Component 2015-2016

Modules	Allocation Amount (USD)	Allocation %
Vector control	54,125,001.35	56.54%
Case management	22,513,006.35	23.52%
Specific prevention interventions (SPI)	3,680,310.58	3.84%
Health information systems and M&E	5,141,166.80	5.37%

Program management	2,971,624.24	3.10%
HSS	7,303,637.76	7.63%
Grand Total	**95,734,747.07**	**100%**

4.3 Minimum Standards for Principal Recipients and Program Delivery				
Complete this table for each nominated Principal Recipient. For more information on minimum standards, please refer to the concept note instructions.				
PR 1 Name	MOH/GHS	**Sector**	**GOVT**	
Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?		X Yes ☐No		
Minimum Standards		**CCM assessment**		
1. The Principal Recipient demonstrates effective management structures and planning		The PR has systems and structures in place for the planning, organization, management and delivery of health services at all levels in the country. The PR has capacity to manage resources such as government funds at national, regional and district levels by the respective BMCs using approved and verifiable financial management structures. Earmarked funds are captured by broad areas in the health sector program of work and forms part of the program of work for the divisions, which are responsible for the implementation at the program levels. The programs provide guidance to the implementing levels or agencies to develop implementation activities.		
2. The Principal Recipient has the capacity and systems for effective management and oversight of sub-recipients (and relevant sub-sub-recipients)		The PR has capacity for effective SR oversight and management; however, the PR will only work with implementing agencies such as Society for Private Medical Practice, Pharmaceutical Society of Ghana, etc. The track record of the PR is evidenced by successful implementation of previous GF grants success from round 2, Round 4 rated A, Rolling continuation Channel Funding and Round 8 approved grants.		
3. The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud		The PR's internal control system is adequate to prevent and detect fraud and misuse of funds even though there is room for improvement. Since the OIG audit of the financial management system in 2010 a number of recommendations		

	have been implemented to strengthen weaknesses in the internal control systems including pre audit and post audit of all procurement services. In addition qualified financial management staff have been employed at the program level to deal with all financial matters professionally.
4. The financial management system of the Principal Recipient is effective and accurate	The PR's financial management system has improved since the OIG audit of the PR in 2010. A number of financial management systems are in place for effective and accurate reporting systems. The system also ensures financial data quality through capturing of financial information for accurate preparation of bank reconciliation statements, fixed assets register, tracking activity balances which are consistent with the Global Fund reporting requirements. The introduction of a computerized financial management system recently called "Great Plain" has further improved financial management.
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	The PR's storage system in terms of warehousing capacity for health products has improved over the years. The capacity of the Central Medical Store has improved in terms of storage capacity and staffing. The PR has also benefited from the GF's support for HSS by the addition of new regional medical stores where there was none and refurbished 6 out of the ten regional medical stores to provide adequate capacity, condition, integrity and security of health products using modern storage practices.
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	The PR has a Central Medical Store (CMS) from where health products are distributed through two approaches: a push system and a pull system. The CMS is equipped with a transportation arrangement. The current capacity permits occasional and limited distribution to regional level. Regional Medical Stores (RMS) consequently undertake most of the transportation of health products from the central level. Each of the ten regional stores is also equipped with a 10 trucks to support transportation of drugs and logistics from the central medical store and distribute them to the health facilities form where end users access the commodities.
7. Data-collection capacity and tools are in place to monitor program performance	Data-collection tools which were fully integrated into the national system are being implemented and used for data collection at facility and district levels where data is entered into the District Health Information Management Systems (DHIMS) for transmission to region and national. Data management staff at all levels has been oriented on the harmonized tools. However, there is a need to beef up staff and build capacity at district level to support data entry and processing.

8. A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately	There exists a nationwide functional routine reporting system. The web-based district health information management system (DHIMS) has been in use since 2012.
9. Implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-country supply chain	The Food and Drugs Authority has the mandate to ensure the quality of medicinal product. The FDA conducts post shipment and post marketing surveillance at authorized ports of entry and along the supply pipeline respectively to ensure quality of the commodities. Drug Quality and Adverse Event Monitoring, are being followed up by the Food and Drugs Authority and samples of anti-malarials are randomly collected and basic tests carried out to determine quality. The Pharmacy Council ensures maintainance of professional standards for pharmacy practitioners.

4.3 Minimum Standards for Principal Recipients and Program Delivery

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

PR 2 Name	AngloGold Ashanti (Ghana) Malaria Control Limited	**Sector**	**Private**
Does this Principal Recipient currently manage a Global Fund grant(s) for this disease component or a cross-cutting health system strengthening grant(s)?	X Yes ☐No		
Minimum Standards	**CCM assessment**		
10. The Principal Recipient demonstrates effective management structures and planning	AngloGold Ashanti has in place time-tested mechanisms which ensure accountability and responsible use of funds. The PR has ensured corporate transparency, accountability and auditing. The existing financial / accounting systems in place have been utilised for the management of GF funds. The PR has successfully managed the Round 8 Global Fund Grant for IRS since 2011 and has consistently received A-ratings for 4 consecutive periods for grant management.		
11. The Principal Recipient has the capacity and systems for effective management and oversight of sub-recipients (and relevant sub-sub-recipients)	The PR has capacity for effective SR oversight and management, however, the PR currently works with no SRs, but utilizes existing community systems such as Community-based Volunteers, Opinion leaders and existing local Government administrative structures to facilitate grant implementation. Other implementers used include service providers such as 3rd party laboratories for medical surveillance, research		

	institutions for entomological and epidemiological monitoring and the police service for employee background checks. These implementers are usually engaged on contract basis to conduct specific activities.
12. The internal control system of the Principal Recipient is effective to prevent and detect misuse or fraud	AngloGold Ashanti deploys rigorous internal control systems and mechanism for fraud detection and prevention. The company conducts regular internal audits of various aspects of the program each year initiated from Corporate Office. At the program level, an officer responsible for governance provides regular oversight. The PR also reports to a Board of directors which has been recently put in place by AngloGold to provide oversight for its IRS programme.
13. The financial management system of the Principal Recipient is effective and accurate	AngloGold Ashanti currently engages the services of two Chartered Accountants to provide oversight for grant management. The company also utilizes efficient software (SUN System) for financial management of the grant. The system has demonstrated significant accuracy since its introduction in 2012.
14. Central warehousing and regional warehouse have capacity, and are aligned with good storage practices to ensure adequate condition, integrity and security of health products	AngloGold Ashanti has 2 major storage facilities at Obuasi and Wa, with a total capacity of 50,000 cubic feet. Additional storage facilities are available in each implementing district with capacities to store up to a month's supply of insecticides in most cases. The storage facility in Wa is a section of the Regional Medical Stores provided by the Ghana Health Service. All facilities are equipped with air-conditioners for temperature control, fire extinguishers and other relevant features which guarantee product safety.
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	Insecticide distribution systems have been efficiently developed over time. There is sufficient bulk storage space at the national level. Transportation of insecticides is outsourced to transportation companies which are certified by the Environmental Protection Agency. Insecticide distribution plans are mapped out and rigorously followed to guarantee constant supply of insecticide in all implementing districts. At the district level, logistics distribution and storage is further facilitated by a containerized truck and double cabin pick-up trucks procured for this purpose.
16. Data-collection capacity and tools are in place to monitor program performance	Data-collection and management tools and systems have been developed for IRS data collection, collation and analysis on a weekly basis. Other monitoring and evaluation systems exist for programmatic and epidemiological monitoring.
17. A functional routine reporting system with reasonable coverage is in place to report program performance timely and accurately	There is a system in place for IRS Operations data collection and collation on a daily basis to facilitate weekly coverage reporting. All districts submit weekly reports on spray coverage for collation at national level.

18. Implementers have capacity to comply with quality requirements and to monitor product quality throughout the in-country supply chain	In-country systems exist for insecticide quality assessment. These include insecticide quality assessment, batch testing and other entomological assays conducted on-site at the time of delivery to ascertain product efficacy. Additionally, pre-shipment and destination testing systems have been introduced to further assure the quality of insecticides which are procured from WHOPES recommended suppliers.

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.

Risks

1. The most important risk to the programme is the worsening of Insecticide resistance. Currently there is evidence of pyrethroid resistance as well as emerging deltamethrin resistance. The IRS program focuses on carbonates and organophosphates, which are more expensive. Insecticide resistance may render classes of insecticides ineffective and neutralize the benefits of IRS.
2. The ITN programme is at risk of a decrease in its effectiveness because insecticides used in nets are pyrethroids. Mosquitoes have developed resistance to this as indicated by EIR studies by Noguchi. The failure of net owners to sleep under their net is another area of risk to the ITN programme.
3. Provider behaviour is the most important risk to the case management programme. Despite continued drive to encourage testing before treating most providers give medications based on clinical symptoms. Non-adherence to negative test results is also a major risk since this leads to over-consumption and misuse of antimalarial medications.
4. Reliance on external donor funding puts this plan at risk of not fulfilling its accelerated malaria control efforts especially with the Global Fund's new funding models that has drastically reduced funding to malaria control in Ghana.
5. Another risk is the failure of partners and the government to release pledged fund which will affect funding to implement planned activities.
6. Weaknesses in procurement and supply chain management in MOH/GHS pose a major internal risk to programme implementation leading to stock-out of commodities or over-stocking and expiry of commodities.
7. Inadequate reporting by lower levels through DHIMS2 is still problematic resulting in incomplete and inconsistent data.

Mitigation measures

1. Continue to do surveillance for insecticide resistance and use findings to inform choice of insecticides.
2. In spite of pyrethroid resistance, ITNs need to be used because of their physical barrier protection and repellence. Limiting use of LLINs to areas not covered by IRS, will also improve ITN effectiveness. Intensified and sustained education on the importance of sleeping under ITNs every night can help decrease the misuse of nets.

3. The NMCP, in collaboration with partners, has come up with guidelines and provided training in the new case management guidelines, to health care providers in all regions. This training needs to be repeated biannually to assure that the majority of clinical care providers have heard the message that testing should be done before a diagnosis of malaria is made and that the lab test results can be trusted. Using person-to person campaign will be explored.
4. Develop a financial sustainability plan that will help to mobilize resources domestically and also from donors who are still interested in helping to sustain the gains made in malaria control in Ghana. Secondly, Parliament will be lobbied through malaria Champions, and corporate Ghana will be encouraged to invest in malaria based on an investment case.
5. Supply chain master plan is geared towards addressing the supply chain management issues
6. The introduction of a computerized financial management system recently called GIFMIS is geared towards improving financial management, and will be further strengthened to improve financial management.

1-2 PAGES SUGGESTED

CORE TABLES, CCM ELIGIBILITY AND ENDORSEMENT OF THE CONCEPT NOTE

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