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# Acronyms

ACT	Artemisinin-based Combination Therapy
AIDS	Acquired Immune Deficiency Syndrome
AMREF	African Medical and Research Foundation
ANC	Antenatal Care
C-IMCI	Community Integrated Management of Childhood Illness
EARN	Eastern Africa Roll Back Malaria Network
GDP	Gross Domestic Product
GSP	Global Strategic Plan
HBMF	Home-based Management of Fever
HIV	Human Immunodeficiency Virus
IDP	Internally Displaced Population
IPT	Intermittent Preventive Treatment
IRS	Indoor Residual Spraying
ITN	Insecticide-treated Net
LLIN	Long-lasting Insecticidal Net
MCH	Maternal and Child Health
MDGs	Millennium Development Goals
NGO	Non-governmental Organisation
OSP	Organisational Strengthening Programme
PHAST	Participatory Hygiene and Sanitation Transformation
PIA	Priority Intervention Area
PJMS	Project Management Information System
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother to Child Transmission
PSI	Population Services International
RBM	Roll Back Malaria
RDT	Rapid Diagnostic Test
SP	Sulfadoxine-Pyrimethamine
UNICEF	United Nations Children's Fund
VHA	Vulnerability and Health Alliance
WHO	World Health Organisation

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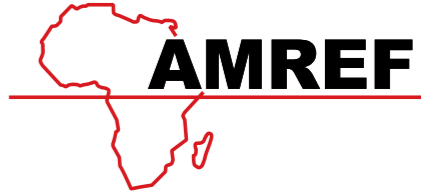




**Foreword**

# Foreword

Director General AMREF



Malaria continues to place an unacceptable burden on the most vulnerable populations in sub-Saharan Africa, where around 90% of all malaria-related mortality is observed. It is estimated that at least a million people still die of the disease annually. Pregnant women, infants and young children are particularly at risk, especially those living in remote rural areas without adequate access to formal healthcare. Poverty is both a driver and a consequence of malaria. At least 6 of the 8 Millennium Development Goals will simply not be reached in Africa unless the disease is brought under control.

Despite these facts the global community has reason to be optimistic. As stated in the Roll Back Malaria Global Strategic Plan for 2005-2015, an arsenal of effective tools now exists for the prevention and treatment of malaria. Furthermore, affected countries are currently benefiting from a level of political will not seen since the failed eradication era of the 1950s. The financial resources available to battle malaria have increased substantially and this trend will hopefully continue. The combination of sustained political will and significant resource mobilisation provide a glimmer of hope. It is arguably unrealistic to suggest that malaria can be eradicated from much of tropical Africa, but it is entirely reasonable to assume that the burden can be reduced such that malaria is no longer considered a priority public health problem. To achieve this goal, two essential objectives must be met. First, proven, evidence-based, interventions must be rapidly scaled up to achieve high and equitable coverage. Second, the formal health systems in every malaria endemic country must be strengthened and adequately linked to the communities they serve. Without the latter, the former cannot be sustained in the long-term.

AMREF has long appreciated the need to strengthen health systems in order to ensure sustained, appropriate healthcare delivery. In this regard, the prevention and control of malaria serves as merely one, albeit important, programmatic entry point. Furthermore, AMREF recognises that as we scale-up with proven interventions, every effort must be made to prioritise the most in need, the most vulnerable, the most remote, and to identify and document how best to reach such groups. The drive to ensure adequate linkage between the most vulnerable communities and peripheral levels of the health system lies at the heart of this newly revised Malaria Prevention and Control Strategy.

Dr Michael Smalley  
Director General  
AMREF

# Foreword

## Executive Secretary Roll Back Malaria Partnership



The Roll Back Malaria (RBM) Partnership has firmly established the fight against malaria as a high priority development issue. The Abuja Declaration 2000, followed by UN Decade to Roll Back Malaria, the inclusion of malaria in the Global Fund in 2002, malaria as central to poverty alleviation promoted during G8 summits, and the introduction of new initiatives such as World Bank Malaria Booster Programme and US President's Malaria Initiative, provide evidence of the current global momentum to tackle the scourge once and for all.

At the 5th Forum of the RBM Partnership in Yaoundé in November 2005, the Global Strategic Plan (GSP) 2005-2015 was launched charting the necessary course all partners must take to achieve the RBM global targets as well as realize 6 out of 8 Millennium Development goals in malaria endemic countries.

The GSP outlines consensus on policy and strategy adopted by the Partnership to attain measurable results within specific timeframes. The 5th Forum ended with a Call to Action for all stakeholders to implement the Strategic Plan at country level at the scale required to achieve impact.

Harmonization of all partners' efforts around a single country scale-up plan is a key condition for the successful deployment of nationwide malaria control. The RBM Partnership recognizes the role of non-governmental organizations as central to this success, especially those with strong community based programmes.

AMREF represents NGO health care providers on the RBM Partnership Board. They play a pivotal role in ensuring that non public sector providers are adequately mobilized around the "three-ones" and also deploy their service delivery capacity to support national scale up operations. The RBM Partnership also benefits from AMREF's strong experience in strengthening communities' malaria control response and actively sharing lessons between communities, thus facilitating strong ownership of malaria control at household level.

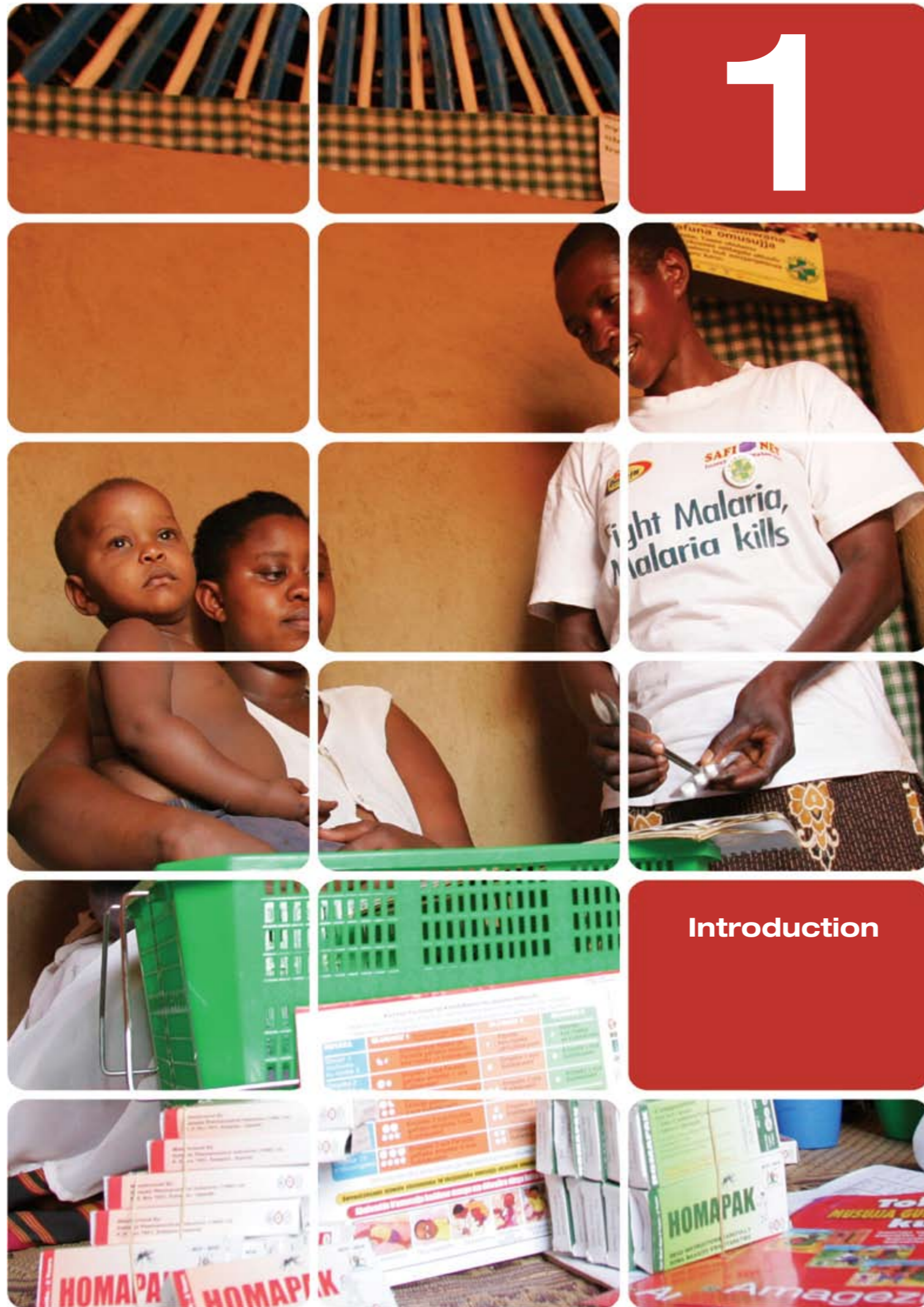
AMREF is recognized for making significant contributions in the identification of best practices, and for generating the required evidence base to inform policy and strategy development and adaptation.

We therefore welcome AMREF's development of an institutional strategy clearly setting out its proposals to support malaria control at scale and committing to work together with other partners in a transparent and accountable way.

We wholeheartedly congratulate AMREF for its leadership and anticipate that this step will encourage other NGO constituency members to follow suit.

Dr Awa Marie Coll-Seck  
Executive Secretary  
Roll Back Malaria Partnership





# Introduction

## 1.1 The Malaria Burden

Malaria is the most important parasitic disease in the world. As many as 1.5 million deaths occur each year, with up to five hundred million clinical episodes, the majority in sub-Saharan Africa. Children under the age of five years and pregnant women bear the major burden of the disease as a result of immature and weakened immunity respectively. On the African continent a child dies of malaria every 30 seconds. Children that survive malaria episodes may suffer from anaemia and cerebral complications that affect long-term development. Low birth weight in infants, often a result of malaria infection during pregnancy, undermines the chance of survival. In the eastern and southern African region, an estimated 30% of all recorded deaths during pregnancy are attributed to malaria infection.

The interaction between HIV and malaria in adults is now well documented. In areas of stable malaria transmission, infection and fever rates among HIV infected adults increase. In areas of unstable malaria transmission, HIV co-infection is associated with severe forms of malaria and death. Certain anti-malarial therapies also appear less effective among HIV-infected adults. Pregnant women are especially vulnerable to HIV and malaria co-infection, suffering more episodes of malaria and adverse birth outcomes. Furthermore, acute malaria episodes result in elevated HIV viral loads. This relationship is of particular concern in sub-Saharan Africa where both diseases show a significant degree of geographical overlap.

Despite the fact that malaria has been studied extensively, only recently has the socio-economic impact of the disease been fully appreciated. Malaria is now recognised as a disease of poverty. Infection leads to a reduction in community and household productivity and income generation. In addition, malaria also results in significant levels of household expenditure for treatment and preventive measures (up to 25% of available income). It is estimated that malaria accounts for a 'growth penalty' of up to 1.3% of Gross Domestic Product (GDP) across Africa, translating into an economic burden of US\$12 billion annually.

## 1.2 The RBM Partnership Global Strategic Plan 2005-2015

The RBM Partnership GSP 2005-2015, sets out the following targets:

- By 2005:
  - Coverage of vulnerable groups with recommended treatment and prevention measures increases significantly towards achieving the Abuja targets.
- By 2010, for all socio-economic quintiles:
  - 80% of people at malaria risk are protected by locally appropriate vector control methods (insecticide-treated nets, indoor residual spraying and environmental management).
  - 80% of malaria patients are diagnosed and treated with effective anti-malarial medicines, such as artemisinin-based combination therapy (ACT), within one day of the onset of illness.
  - 80% of pregnant women in areas of stable transmission receive intermittent preventive treatment (IPT)
  - Malaria burden is reduced by 50% compared to 2000
- By 2015:
  - Malaria morbidity and mortality is reduced by 75% in comparison to 2005, not only by national aggregate but particularly among the lowest socio-economic quintiles.
  - Malaria-related MDGs are achieved, not only by national aggregate but particularly among the lowest socio-economic quintiles.
  - There is universal and equitable coverage with effective interventions.

The approach adopted by the RBM partnership to achieve these targets highlights a number of key issues and provides a clearer focus for members of the partnership, namely: ensuring that poverty does not serve as a barrier to proven interventions; that coverage and access with proven interventions is equitable; that civil society and the private sector is actively engaged; that more support is obtained for operational research addressing appropriate policy formulation and adoption of best practices; and that stronger emphasis is placed on community-level involvement.

### 1.3 Malaria: A Priority Intervention Area For AMREF

AMREF was founded in 1957 (as the Flying Doctors Service of East Africa) and since that time has understood the importance of malaria, especially at community level. In 1983, AMREF established a dedicated Malaria Unit and soon after was credited for being one of the first agencies to help evaluate the impact of insecticide-treated nets (ITN) at community level (now a major intervention adopted by the Roll Back Malaria initiative). The organisation has also played an important role in training health professionals in malaria treatment and prevention practices, has been active in monitoring drug efficacy and has been influential in strengthening effective and appropriate diagnostic services throughout eastern Africa.

In 2000, malaria prevention and control was identified by AMREF as one of six priority programming areas. In addition, the Director General initiated an organisational analysis in 2002 to ensure AMREF remained at the forefront of health development on the continent. This analysis led to the conception and implementation of the Organisational Strengthening Programme (OSP), for which the following goals were identified:

- Refine AMREF's strategic direction by ensuring its priority intervention areas focus on those components where it can have most impact.
- Ensure that AMREF retains its strength of working with and through communities whilst at the same time ensuring technical excellence.
- Integrate AMREF's programmes to ensure that good practices and AMREF's experiences are extracted for sharing internally and externally.
- Ensure that AMREF's organisational arrangements are appropriate and transparent encouraging effective performance and supporting consistent management, including the application of accountability throughout the institution.

In relation to the malaria programme, the OSP also recommended that the organisation focus its capacity building, research and advocacy activities around the following niche areas (areas in which AMREF has a comparative advantage as an organisation):

- Case management (including diagnostic services strengthening)
- Provision of insecticide-treated nets (ITN/LLIN) at community level
- Malaria control and prevention in pregnancy
- Behaviour and social change communication in support of all interventions

In part, this document reflects the recommendations of the OSP report. The aim is to set out a revised and clearly defined strategic framework which takes into account AMREF's comparative strengths, while also considering the goals and objectives of the Roll Back Malaria Partnership Global Strategic Plan 2005-2015 and the specific goals and objectives of the RBM sub-regional networks.

The revised framework also takes into consideration the establishment of the Roll Back Malaria (RBM) movement in May 1998 and international targets for malaria prevention and control declared at the start of the 21st century. The Abuja Summit targets, the Millennium Development Goals, the UN General Assembly's Special Session on Children and the Yaoundé Call to Action are of particular relevance. All have shared objectives of relevance to malaria prevention and control. A full description of these targets and goals are provided in the appendix.





# The AMREF Corporate Malaria Prevention And Control Strategy 2006-2010

## 2.1 Goal

AMREF's malaria programme activities will continue to be formulated around relevant and urgent operational research questions which will, through the dissemination of findings, seek to inform global policy and practice (particularly in relation to the health needs of the poorest, most vulnerable and hard to reach sectors of society in Africa).

The overall goal in this context is:

'To prevent malaria related morbidity and mortality within poor, vulnerable and hard to reach communities in Africa.'

## 2.2 Purpose

The overall purpose is:

'To ensure that individuals, especially children under five years and pregnant women, within poor, vulnerable and hard to reach populations, understand the causes of malaria and its signs and symptoms; are able to access accurate diagnostic services and effective treatment as close to the home as possible; and have access to personal and community preventive measures, with an emphasis on long-lasting insecticidal nets and intermittent preventive treatment.'

## 2.3 Implementation Approaches

Since its formation, AMREF has worked closely with the ministries of health in the eastern and southern Africa region (particularly, Kenya, Tanzania, Uganda, South Africa, Sudan, Ethiopia and Somalia). In this regard, AMREF adopts a health systems approach recognising that the greatest barrier to good health among poor communities in Africa is the separation of communities from formal peripheral health systems (which suffer capacity constraints). Health interventions are in principle available, but fail to reach many, especially the poor, as insufficient attention is paid to health system functionality as a whole and the crucial interaction between communities and primary health delivery services. AMREF believes that getting health systems to work, and interact with all intended beneficiaries, is the main challenge for the next 10 years.

In this context, the AMREF malaria programme will work with malaria country partnerships, through the National Malaria Control Programme teams within Ministries of Health, thus avoiding the creation of parallel systems. Projects, built around operational research questions, will address specific constraints affecting the scale-up of technically sound, evidence-based interventions (primarily, but not limited to, ITN/LLIN distribution, effective diagnosis and treatment and intermittent preventive treatment). Priority is given to populations identified as particularly vulnerable due to their geo-political, socio-economic and biological status.

### 2.3.1 Community and Peripheral Health System Capacity Development

Communities and health service personnel should be involved in programme conception and implementation. As aptly stated by Urban Jonsson (former UNICEF Regional Director for the Eastern and Southern Africa Regional Office), "the solution to the malaria problem lies where it is most keenly felt – at community level." Despite various publications on the subject, too few health development organisations actually maintain this community or peripheral health system-centred participatory approach. Often the result is that community members become passive receivers of commodities, services and didactic 'health education' messages instead of being key actors in the process. Meanwhile, peripheral health personnel rarely have the capacity to be able to effectively interact with affected communities. Community members (inc. service providers) have the right, and the ability, to play an essential role in the development of their own communities through informed decision making and action. The RBM partnership calls for "stronger emphasis to be given to community based advocacy and social mobilisation", recognising this as a "vital process to increase demand and use of interventions." AMREF has traditionally been a strong voice in 'community based health care' approaches, advocating for the rights

of disadvantaged community members to be recognised and for their participation to be seen as an essential aspect of programme implementation.

There are a number of interventions available for malaria prevention and control that should be delivered at community level with the active engagement of community members and peripheral health system staff. For example, the provision of long-lasting insecticidal nets (LLINs) and the implementation of appropriate diagnostic services and community or home-based management of malaria (HMM).

AMREF advocates for the employment of participatory communication methodologies as a means of ensuring proper utilisation of interventions by household members, preferably with the involvement of peripheral health staff and other key service deliverers. Specifically, in the context of malaria control, such methodologies (and other innovative communication strategies) seek to ensure that individuals at community level are able to: (a) correctly identify the signs and symptoms of both uncomplicated and severe malaria, and recognise the key biological risk groups; (b) identify routes of transmission and methods for blocking these routes; and (c) are aware of the appropriate action to be taken when seeking curative care.

Participatory communication tools have been used for some time within the water and sanitation (PHAST) and agriculture (PLA/PRLA) sectors. More recently, they have been adapted for community-based malaria control. AMREF is engaged in developing and testing participatory communication methodologies for malaria programming. The aim is to create flexible, modular packages that can be adapted to the local context and used throughout the region. Key partner organisations in this regard include the United Nations Children's Fund (UNICEF), who first adapted the PHAST approach for malaria control in Mozambique during 2000. Through the utilisation of such tools, AMREF and its partners are able to ensure that programme implementation is achieved not only within communities but also by communities.

#### Identifying the most vulnerable

AMREF seeks to 'improve the health of disadvantaged people across Africa as a means for them to escape poverty and improve the quality of their lives.' By focusing on the most disadvantaged communities, AMREF has an opportunity to help governments address key bottlenecks that hinder progress towards targets such as the Millennium Development Goals.

Although the need to respond to particularly vulnerable groups is widely recognised, there are still outstanding problems surrounding the very definition of the term 'vulnerability' and how organisations can therefore translate policy into operational practice. In a policy briefing paper published by the Malaria Consortium and Liverpool School of Tropical Medicine's Vulnerability and Health Alliance (VHA), a framework for conceptualising and reviewing vulnerability is presented. The paper highlights the need to go beyond recognising only the biologically vulnerable populations for diseases such as malaria due to the sheer size of such groupings, and instead create a "concept of vulnerability that increases both the sensitivity and effectiveness of health interventions targeting the most vulnerable groups."

AMREF and its partners will continue to be actively engaged in addressing key questions and challenges highlighted in this policy briefing paper and others as they become available. It is clear that socio-economic/poverty mapping, health system performance league tables, and endemic malaria risk maps, inform national level planning. Other useful data sets include vaccination coverage rates and information regarding ITN/LLIN access through retail or public sector channels. In addition, AMREF firmly believes that communities themselves have the ability, and the right, to inform the process. An important aspect of vulnerability is the frequent lack of power to exercise decision making, so it is appropriate that the most vulnerable have a say in defining targeting criteria. In this regard, AMREF and its collaborating partners actively assist communities with defining such criteria for targeting in areas of high malaria incidence and poor socio-economic status, criteria that can be remodelled for nationwide macro-level application and adapted for other public health priorities.

#### Fostering programme linkages: opportunities and challenges

It is recognised that there are opportunities for programme partnerships, whereby certain health service delivery models are built upon to ensure maximum impact with limited resources. Examples of such programme partnerships include: Family Health/MCH/Well Child Clinic services; Antenatal Care (ANC) services; Community Capacity Development (CCD)

activity (for example, through Community-IMCI); and the combination of ITN/LLIN distribution with the Expanded Programme of Immunisation (EPI) and vaccination outreach campaigns.

However, a key question is how can AMREF support ministries in extending the reach of these services beyond the formal health system? It is vital this be addressed if there is to be accelerated progress towards the Millennium Development Goals and targets set out in the RBM Global Strategic Plan, particularly within the lowest socioeconomic quintile.

AMREF is well placed, especially with its strong community-based health care approach and partnership with ministries of health at national and district level, to develop and test models for extending the reach of such programme partnerships. Examples of such initiatives include the delivery of ITN/LLIN as part of vaccination mobile outreach campaigns; extended community delivery of ANC services in areas where formal purpose-built facilities do not exist (investigating, for example, the utilisation of traditional birth attendants); and evaluating the community-based utilisation of rapid diagnostic test kits (RDTs) in support of the home-based management of fever with Artemisinin-based Combination Therapy (ACT) in areas of low transmission.

Of increasing concern is the geographical overlap and relationship between HIV/AIDS and malaria (see 1.1). Malaria and HIV-1 are the two most important public health issues affecting sub-Saharan Africa. As many as 25 million Africans are currently infected with HIV-1 and as many as 500 million suffer from malaria each year. Therefore, interaction between these two infections is a significant public health concern for the 21st Century. Public health and medical staff at all levels across Africa need to be aware of the proven association and the immediate interventions that can be deployed as a result.

In this regard, AMREF advocates for the following:

- In malaria endemic areas, HIV-infected patients need to be encouraged to avoid malaria infection, because of the increased risk of clinical disease. The most obvious and appropriate intervention in this regard, is the provision, and consistent use, of insecticide-treated (or long-lasting insecticidal) nets
- Pregnant women and their foetuses are likely to benefit from anti-malarial prophylaxis in the form of Intermittent Preventive Treatment (IPTp), in areas of stable malaria transmission, delivered largely through Antenatal Care (ANC) services or community systems during the second and third trimesters. At least three doses of SP (sulphadoxine-pyrimethamine) during this period is currently recommended
- HIV-infected individuals benefit from cotrimoxazole prophylaxis, with daily doses recommended for all symptomatic adults and children living with HIV. However, this antifolate drug is similar to SP and there is a risk of hastened anti-malarial drug resistance developing in malaria parasites where cotrimoxazole use is widespread. The World Health Organisation recommends that pregnant HIV-infected women should not receive IPT with SP if already receiving cotrimoxazole. In addition, HIV-infected patients receiving cotrimoxazole prophylaxis with malaria symptoms should be treated with drugs other than SP. Clearly, with the introduction of Artemisinin-based Combination Therapies for malaria treatment and prophylaxis in many countries, this problem will be addressed to some extent during the 5-year life of this strategy document.

## 2.4 Evidence-based, Proven Interventions: Informing The Scale-up Process

AMREF has an obligation to ensure that effective, evidence-based public health interventions are available to all, regardless of socio-economic status. A number of proven techniques and tools which lead to a reduction in the level of malaria morbidity and mortality have been identified (for example, insecticide-treated nets or long-lasting insecticidal nets and the provision of prompt and effective treatment with ACT). AMREF will assist with the overall scale-up process by conducting operational research which addresses identified constraints.

### 2.4.1 Accurate diagnostics and appropriate case management

It is estimated that malaria accounts for up to 60% of all health facility visits in the eastern African region. However, due to poor health care coverage and other factors, much of the malaria-related illness and death actually occurs in the home, therefore going unreported. There are numerous reasons for this including: a lack of awareness at community level regarding the signs and symptoms of disease (severe malaria in particular) and the need for rapid treatment seeking behaviour; lack of transport and infrastructure to access the limited number of health care facilities; and reliance on traditional healing practices or the informal private sector which often delay appropriate treatment-seeking behaviour.

Without doubt, the malaria burden is felt most among remote, isolated, rural communities. These communities have very limited access to the formal health care system and rarely have access to reliable and accurate information regarding malaria, its prevention and control. In such areas, AMREF will pursue the following, (where appropriate through the community integrated management of childhood illness, C-IMCI, package):

- Through the design, testing and subsequent application of innovative participatory communication methodologies, improve recognition of malaria signs and symptoms (especially for severe malaria) and treatment seeking behaviour among pregnant women and children less than five years of age
- Advocate for and work with ministries to expand the reach of home-based management of malaria services with pre-packaged (unit-dose) medicines (chiefly Artemisinin-based Combination Therapies)
- Strengthen health system diagnostic services at all levels and encourage the utilisation of rapid diagnostic test kits (RDTs), where microscopy is unfeasible, following field evaluation at peripheral facilities and community level in accordance with national guidelines
- Ensure the control of anaemia among pregnant women, lactating mothers and children is an integral component of malaria programming (micronutrient supplementation with vitamin A and iron)
- Strengthen the capacity of peripheral health facilities to effectively manage severe malaria and improve community referral practices

### 2.4.2 Ensuring equitable access to long-lasting insecticidal nets (LLIN)

Insecticide-treated nets (ITN) and long-lasting insecticidal nets (LLIN) are proven, cost effective tools for malaria prevention. They are particularly appropriate in the sub-Saharan African context (where the most important mosquito vectors blood-feed at night and indoors). Widespread coverage with ITNs, as part of large-scale, randomised controlled trials, in a number of African countries has been shown to reduce all-cause child mortality by 17%. Despite widespread demand and recent efforts to accelerate the scale-up process, coverage throughout sub-Saharan Africa is still relatively low. One of the common reasons listed by community members is affordability; the price of a full cost, private sector, net representing a large proportion of household income. As a result, an increasing number of governments are now adopting large scale free (or highly subsidised) delivery systems, targeted at the biologically most vulnerable (pregnant women and children under five years of age). In this regard, AMREF's primary interest is equitable coverage, ensuring ITN/LLIN access to high risk groups in the lowest socio-economic quintile (including those in particularly hard to reach areas). In pursuit of this, the following approaches are encouraged by AMREF:

- Develop nationally applicable vulnerability models for the targeting of free, or very highly subsidised, ITN/LLIN distribution operations
- Through the application of participatory communication tools, developed with communities and host ministries, improve awareness and use of LLIN especially among pregnant women and children less than five years and the re-treatment rates of conventional nets (ITN)
- Develop and test models for the distribution of ITN/LLINs as part of routine or campaign style delivery systems
- Explore methods of expanding ITN/LLIN delivery to pregnant women in areas where ANC services are limited or do not exist
- In areas where ITN/LLIN use may not be appropriate (possibly among some nomadic societies and certain emergency situations) develop and test culturally acceptable and realistic methods for preventing human-vector contact (for example, treated bedding, clothing and/or shelter material)

### 2.4.3 Malaria prevention and control during pregnancy

Pregnant women are one of the key biological risk groups for malaria in sub-Saharan Africa (and are especially vulnerable if also infected with HIV). In endemic, stable transmission settings (which predominate in tropical or 'middle' Africa), pregnant women develop some immunity to the disease, and therefore infections are normally asymptomatic. However, severe maternal anaemia is often observed and there is an increased risk of maternal mortality as a result. Placental infection and maternal anaemia can result in low infant birth weight, higher infant mortality rates and impaired childhood development. Ill effects are most apparent in the first and second malaria-exposed pregnancies. In unstable or epidemic prone settings, malaria infection in pregnant women may result in severe clinical illness and death, spontaneous abortion or premature delivery or stillbirth.

The following interventions for malaria prevention and treatment in pregnancy are recommended by the World Health Organisation: Intermittent Preventive Treatment (IPT); Insecticide-treated and Long-lasting Insecticidal Nets (ITN/LLIN); and case management of illness and anaemia.

In support of the RBM Partnership GSP and in accordance with the 'WHO Strategic Framework for Malaria Control during Pregnancy in the African region 2004', AMREF will pursue the following:

- Through the application of participatory communication tools, improve awareness among pregnant women (at community level and during health facility visits) of the risks of malaria, encouraging prompt treatment seeking behaviour; use of insecticide-treated and long-lasting insecticidal nets (ITN/LLIN); and utilisation of intermittent preventive treatment (IPTp) where appropriate
- Through Antenatal Care services (ANC), help ensure that all pregnant women receive ITN/LLIN free of charge (assuming national policy position is supportive) and investigate possibilities for extension of such services beyond the reach of existing health facilities. Free (or very highly subsidised) delivery of ITN/LLIN to all pregnant women should be advocated, especially in areas of high HIV/AIDS prevalence (see section 1.1 and 2.3.3).
- Help ensure pregnant women (and lactating mothers) have access to micronutrients (vitamin A and iron) for the control and prevention of malaria-related anaemia
- Help ensure pregnant women access prompt and effective treatment

## 2.5 Monitoring And Evaluation For Evidence-based Advocacy

AMREF continues to formulate all of its malaria programme activities around key operational research questions that seek to inform policy and practice. It is therefore essential that AMREF uses suitable and technically robust social or epidemiological research methods to monitor, evaluate and inform its programme activities. The overall aim is to measure, quantitatively, programme effectiveness and to demonstrate to decision and policy makers the benefits of the interventions or modes of operation utilised by AMREF. As a result, monitoring and evaluation activities are inextricably linked with those relating to communication and advocacy.

Evidence-based advocacy is only possible if programmes contain strong monitoring and evaluation components. Such components must include adequate baseline and final evaluation surveys as well as routine process monitoring. The various types of M&E indicators utilised during project implementation can be broadly categorised as relating to programme processes or population level results. Both are equally important. When assessing the final outcome and resulting impact of programmes, the collation of data pertinent to well-defined and realistic population level indicators is of central importance.

### 2.5.1 Programme and population level indicators

AMREF will utilise indicators of inputs, processes and outputs for monitoring programme processes.

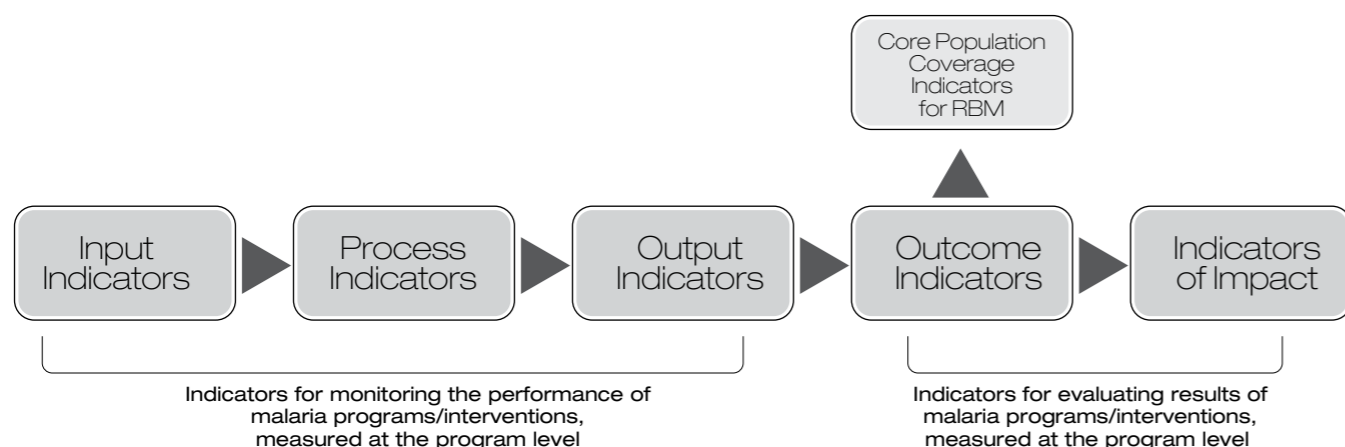
- Input indicators: level of resources available (e.g. funding available for the procurement of ITN/LLIN)
- Process indicators: verification of implementation (e.g. ITN/LLIN purchased and ready for distribution)
- Output indicators: measurement of programme performance (e.g. number of ITN/LLIN distributed to a particular

It is acknowledged that there is a substantial amount of empirical evidence to support the efficacy of the adopted RBM technical interventions and strategies. Increasing coverage with these interventions will therefore result in a reduction in malaria-related morbidity and mortality. However, because of the inherent difficulties of evaluating impact indicators (i.e. measuring a reduction in morbidity and mortality) and attributing them to a particular programme, greater emphasis is placed on monitoring population-level outcome indicators.

AMREF will primarily utilise **outcome** indicators for **measuring population level results** (and national surveys - DHS/MICs/MIS for assessing **impact** over time).

- **Outcome indicators:** measurement of medium term population-level results (e.g. level of ITN coverage achieved among the target population that is attributable to the project)
- **Impact indicators:** measurement of reduction in morbidity and mortality

The flow chart below illustrates the relationship between the various levels and types of indicator.



Outcome indicators of population coverage for RBM technical strategies and interventions.

RBM Technical Strategies	Indicator of Population Coverage
Insecticide-treated or long-lasting insecticidal nets (ITN/LLIN)	1. Proportion of households with at least one ITN/LLIN 2. Proportion of children under five years old who slept under an ITN/LLIN the previous night
Prompt access to effective treatment	3. Proportion of children under five years old with fever in last 2 weeks who received anti-malarial treatment according to national policy within 24 hours from the onset of fever
Prevention and control of malaria in pregnancy	4. Proportion of pregnant women who slept under an ITN/LLIN the previous night 5. Proportion of women who received intermittent preventive treatment for malaria during their last pregnancy

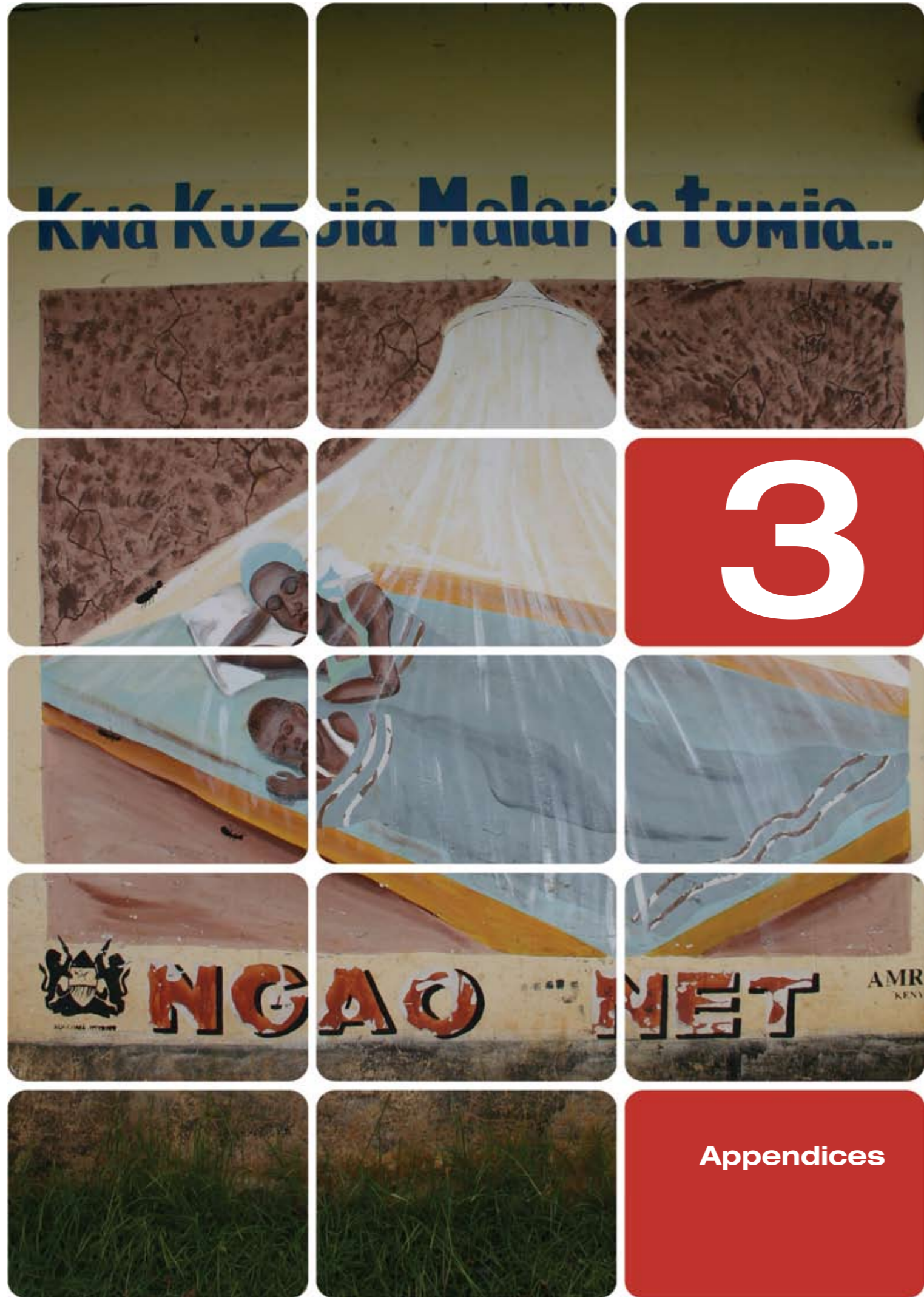
## 2.5.2 Advocacy for change

The ultimate aim of AMREF is to ‘improve the health of disadvantaged people across Africa as a means for them to escape poverty and improve the quality of their lives.’ In order to fulfil this mandate, AMREF must exert influence beyond the limited geographical scope of its individual programmes and in so doing influence the wider policy environment at national, regional and global levels. To do this, results generated from programme-level monitoring and evaluation activity will be disseminated through a variety of channels.

AMREF represent the NGO sector on the Roll Back Malaria Board at a global level. In addition, AMREF are active members of the Eastern Africa RBM Network (EARN), and are elected members of the coordinating team, and thus play an important role within several country partnerships and NGO alliances. In addition, AMREF has an excellent working relationship with the WHO Africa Regional Office (AFRO) and associated inter-country teams. Links with such co-ordination and technical support mechanisms provides AMREF with an excellent opportunity to influence policy and practice at a variety of levels.

Additional communication channels include dynamic and regularly up-dated websites, national, regional and international media, an extensive global network of fund-raising and advocacy offices, attendance and representation at conferences and technical review meetings and the publication of findings in technical briefing papers and peer-reviewed international journals.





## Appendices

### 3.1 Internationally Agreed Targets For Malaria Prevention And Control

#### 3.1.1 Abuja Summit Targets

African leaders committed themselves to an intensive effort to halve the malaria mortality for Africa's people by 2010, through implementing strategies and actions for Roll Back Malaria, as agreed at the Summit.

In addition, they agreed to:

- Catalyse actions at regional level to ensure implementation, monitoring and management of Roll Back Malaria;
- Initiate actions at country level to provide resources to facilitate realisation of RBM objectives;
- Work with partners towards stated targets, ensuring the allocation of necessary resources from private and public sectors and from non-governmental organizations
- Create an enabling environment in their countries which will permit increased participation of international partners in malaria control actions.

The Leaders resolved to initiate appropriate and sustainable action to strengthen the health systems to ensure that by the year 2005:

- at least 60% of those suffering from malaria have prompt access to, and are able to correctly use, affordable and appropriate treatment within 24 hours of the onset of symptoms;
- at least 60% of those at risk of malaria, particularly children under five years of age and pregnant women, benefit from the most suitable combination of personal and community protective measures such as insecticide treated mosquito nets and other interventions which are accessible and affordable to prevent infection and suffering
- at least 60% of all pregnant women who are at risk of malaria, especially those in their first pregnancies, have access to Intermittent Preventive Treatment.

The Leaders also pledged to:

- Develop mechanisms to facilitate the provision of reliable information on malaria to decision-makers at household, community, district and national levels, to enable them take appropriate actions
- Reduce or waive taxes and tariffs for mosquito nets and materials, insecticides, anti-malarial drugs and other recommended goods and services that are needed for malaria control strategies
- Allocate the resources required for sustained implementation of planned Roll Back Malaria actions;
- Increase support for research (including operational research) to develop a vaccine, other new tools and improve existing ones;
- Commemorate this Summit by declaring April 25th each year as African Malaria Day

#### 3.1.2 Millennium development goals

By 2015 all 189 United Nations Member States have pledged to:

- Eradicate extreme poverty and hunger
  - *Reduce by half the proportion of people living on less than a dollar a day*
  - *Reduce by half the proportion of people who suffer from hunger*
- Achieve universal primary education
  - *Ensure that all boys and girls complete a full course of primary schooling*
- Promote gender equality and empower women
  - *Eliminate gender disparity in primary and secondary education preferably by 2005, and at all levels by 2015*

- Reduce child mortality
  - Reduce by two thirds the mortality rate among children under five
- Improve maternal health
  - Reduce by three quarters the maternal mortality ratio
- Combat HIV/AIDS, malaria and other diseases
  - Halt and begin to reverse the spread of HIV/AIDS
  - Halt and begin to reverse the incidence of malaria and other major diseases
- Ensure environmental sustainability
  - Integrate the principles of sustainable development into country policies; reverse loss of environmental resources
  - Reduce by half the proportion of people without sustainable access to safe drinking water
  - Achieve significant improvement in lives of at least 100 million slum dwellers, by 2020
- Develop a global partnership for development

### 3.1.3 World fit for children

The UN General Assembly's Special Session on Children was held in May 2002 and was attended by 69 Summit-level participants and 190 high-level national delegations. The following goals were set in conformity with the outcomes of the 2002 Special Session on Children and other recent United Nations conferences, summits and special sessions of the General Assembly:

- Reduction in the infant and under-five mortality rate by at least one third, in pursuit of the goal of reducing it by two thirds by 2015
- Reduction in the maternal mortality ratio by at least one third, in pursuit of the goal of reducing it by three quarters by 2015
- Reduction of child malnutrition among children under five years of age by at least one third, with special attention to children under two years of age, and reduction in the rate of low birth weight by at least one third of the current rate
- Reduction in the proportion of households without access to hygienic sanitation facilities and affordable and safe drinking water by at least one third
- Development and implementation of national early childhood development policies and programmes to ensure the enhancement of children's physical, social, emotional, spiritual and cognitive development
- Development and implementation of national health policies and programmes for adolescents, including goals and indicators, to promote their physical and mental health
- Access through the primary health-care system to reproductive health for all individuals of appropriate ages as soon as possible and no later than 2015

The following strategies and actions were proposed to achieve these goals and targets with specific reference to malaria:

*(1) Ensure that the reduction of maternal and neonatal morbidity and mortality is a health sector priority and that women, in particular adolescent expectant mothers, have ready and affordable access to essential obstetric care, well-equipped and adequately staffed maternal health-care services, skilled attendance at delivery, emergency obstetric care, effective referral and transport to higher levels of care when necessary, post-partum care and family planning in order to, inter alia, promote safe motherhood.*

*(2) Provide access to appropriate, user-friendly and high-quality health-care services, education and information to all children.*

*(4) Promote child health and survival and reduce disparities between and within developed and developing countries as quickly as possible, with particular attention to eliminating the pattern of excess and preventable mortality among girl infants and children.*

*(10) Strengthen early childhood development by providing appropriate services and support to parents, including parents with disabilities, families, legal guardians and caregivers, especially during pregnancy, birth, infancy and early childhood, so as to ensure children's physical, psychological, social, spiritual and cognitive development.*

*(11) Intensify proven, cost-effective actions against diseases and malnutrition that are the major causes of child mortality and morbidity, including*

*reducing by one third deaths due to acute respiratory infections; reducing by one half deaths due to diarrhoea among children under the age of five; reducing by one half tuberculosis deaths and prevalence; and reducing the incidence of intestinal parasites, cholera, sexually transmitted infections, HIV/AIDS and all forms of hepatitis, and ensure that effective measures are affordable and accessible, particularly in highly marginalized areas or populations.*

*(12) Reduce by one half the burden of disease associated with malaria and ensure that 60 per cent of all people at risk of malaria, especially children and women, sleep under insecticide-treated nets.*

*(15) Strengthen health and education systems and expand the social security systems to increase access to integrated and effective health, nutrition and childcare in families, communities, schools and primary health-care facilities, including prompt attention to marginalized boys and girls.*

*(23) In efforts to ensure universal access to safe water and adequate sanitation facilities, pay greater attention to building family and community capacity for managing existing systems and promoting behavioural change through health and hygiene education, including in the school curriculum.*

*(24) Address any disparities in health and access to basic social services, including healthcare services for indigenous children and children belonging to minorities.*

### 3.2 AMREF position statement on IRS and vector control

As a member of the African RBM sub-regional networks (such as EARN) and the RBM Working Group on Scalable Vector Control, AMREF supports the WHO position that both insecticide-treated nets (ITN/LLIN) and indoor residual spraying (IRS) are effective and appropriate interventions for the African region. The decision as to which intervention to employ should be evidence-based, taking into account local epidemiological parameters and criteria identified by the World Health Organization.

Indoor residual spraying is most appropriate in areas of unstable or epidemic malaria transmission, for example in the eastern African highlands and desert fringe areas.

In order to be effective, IRS operations first require detailed reconnaissance of the target area. Sufficient human and material resources need to be deployed to ensure timely insecticide application (before the rainy season) and 80% coverage of unit structures achieved. Strong management supervision and monitoring capacity, with extensive logistical support, is essential.

The majority of successful IRS operations are vertically delivered by national ministries or, in complex emergency areas, by specialist NGOs with a focus on refugee and IDP settings. It is not a comparative strength of the African Medical and Research Foundation and, therefore, will not generally be pursued as part of the corporate malaria prevention and control strategy (although support to government-led IRS operations in the form of community sensitization and communication campaigns may be provided).

In relation to other approaches to vector control, AMREF will continue to play an important role in the development of community-based ITN/LLIN distribution strategies that specifically seek to ensure high coverage of particularly vulnerable and hard to reach communities.

Source reduction, as a means to reduce vector breeding sites, may be justifiable in especially arid areas, with a limited number of clearly defined breeding sites and particular vector species present (e.g. in parts of the Horn of Africa). However, throughout the majority of AMREF's operating area, the main vector responsible for malaria transmission is the mosquito *Anopheles gambiae* s.s, by far the most important in equatorial Africa. This vector species readily breeds in transient, rain-fed pools such as those formed in ruts in the road and hoof prints following short periods of rainfall. Therefore, large-scale drainage of marshlands, rivers and streams in areas where this vector predominates is not recommended. This approach is unlikely to result in a significant health impact for the communities involved and may result in the depletion of important

surface water supplies for agriculture and livestock management.

Bush clearing is a frequently cited but misguided method of controlling malaria vectors in sub-Saharan Africa and proven ineffective as long ago as 1946.

In countries where AMREF operates, the organisation will not support environmental management as a means to reduce malaria-related morbidity and mortality, although it may engage in operational research to inform policy and practice around this issue.

### 3.3 AMREF position statement on ITN/LLIN distribution

AMREF recognises the value of the market segmentation approach to ITN/LLIN distribution. In such a model the development of the commercial sector is encouraged (achieving full cost recovery and sustainability for the long-term). Social marketing and market priming are seen as interim strategies towards this goal. Free (and highly subsidised) distribution to the lowest socio-economic quintiles (and particularly hard to reach populations) is seen as an essential component of the model in order to achieve sustained equitable coverage.

As a health development organisation, AMREF is committed to the needs of populations identified as particularly vulnerable because of their socio-economic and/or geo-political status (especially children under five years and pregnant women). Therefore, AMREF supports the public sector by providing free, or in certain scenarios very highly subsidised, nets to such communities. Through operational research, AMREF seeks to identify effective ways to ensure populations in the lowest socio-economic quintiles (and in geographically remote areas) have equitable access to this essential public health intervention.





## Further Reading

1. AMREF  
<http://www.amref.org/>
2. The Abuja Declaration and the Plan of Action  
[http://www.rbm.who.int/docs/abuja\\_declaration\\_final.htm](http://www.rbm.who.int/docs/abuja_declaration_final.htm)
3. The Yaoundé Call to Action  
[http://www.rollbackmalaria.org/forumV/docs/YaoundeCall\\_to\\_Action-en.pdf](http://www.rollbackmalaria.org/forumV/docs/YaoundeCall_to_Action-en.pdf)
4. The Roll Back Malaria Partnership  
<http://www.rbm.who.int/cgi-bin/rbm/rbmportal/custom/rbm/home.doc>
5. The WHO Global Malaria Programme  
<http://www.who.int/malaria/>
6. WHO Global Malaria Programme on-line publications page  
<http://www.who.int/malaria/publications.html>
7. The RBM Partnership Global Strategic Plan 2005-2015  
[http://www.rollbackmalaria.org/forumV/docs/gsp\\_en.pdf](http://www.rollbackmalaria.org/forumV/docs/gsp_en.pdf)
8. The World Bank RBM Global Strategy and Booster Programme  
<http://siteresources.worldbank.org/INTMALARIA/Resources/377501-1114188195065/WBMalaria-GlobalStrategyandBoosterProgram-June2005.pdf>
9. World Malaria Report 2005  
<http://rbm.who.int/wmr2005/>
10. Malaria Control Today: Current WHO Recommendations  
[http://www.who.int/malaria/docs/MCT\\_workingpaper.pdf](http://www.who.int/malaria/docs/MCT_workingpaper.pdf)
11. Changing Malaria Treatment Policy to Artemisinin-based Combinations  
[http://www.rollbackmalaria.org/docs/mmss/act\\_implementationguide-e.pdf](http://www.rollbackmalaria.org/docs/mmss/act_implementationguide-e.pdf)
12. The RBM Strategy for Improving Access to Treatment through Home Management of Malaria  
[http://www.who.int/malaria/docs/RBM\\_Strategy\\_HMM\\_sm.pdf](http://www.who.int/malaria/docs/RBM_Strategy_HMM_sm.pdf)
13. Scaling up Home-based Management of Malaria: From Research to Implementation  
<http://www.who.int/malaria/docs/ScalingupHMMresearchtoimplementation.pdf>
14. Interim notes on selection of type of malaria rapid diagnostic test in relation to the occurrence of different parasite species: Guidance for national malaria control programmes  
<http://www.who.int/malaria/docs/interimnotesRDTS.pdf>
15. Malaria Rapid Diagnostic Tests information  
web-page <http://www.wpro.who.int/rdt/>

16. WHO malaria microscopy publications

<http://www.who.int/malaria/microscopy.html>

17. Protecting Vulnerable Groups in Malaria-endemic Areas in Africa through Accelerated Deployment of Insecticide-treated Nets

<http://www.who.int/malaria/rbm/Attachment/20050318/RBM-UNICEF-english3.pdf>

18. Targeted subsidy strategies for national scaling up of insecticide-treated netting programmes – Principles and approaches

[http://rbm.who.int/partnership/wg/wg\\_itn/docs/ts\\_strategies\\_en.pdf](http://rbm.who.int/partnership/wg/wg_itn/docs/ts_strategies_en.pdf)

19. Malaria Control in Complex Emergencies: An interagency handbook

[http://www.who.int/malaria/docs/ce\\_interagencyhbbook.pdf](http://www.who.int/malaria/docs/ce_interagencyhbbook.pdf)

20. United Nations Children's Fund. Mozambique - Human Rights Approach During Emergencies.

[http://www.unicef.org/rightsresults/index\\_23693.html](http://www.unicef.org/rightsresults/index_23693.html)

AMREF will also keep abreast of emerging issues, being actively engaged in operational research relating to: vaccine research and field trials, novel vector control tools, the monitoring of drug resistance patterns, changes in malaria risk for peri-urban poor populations and the application of satellite-derived data for the mapping and forecasting of malaria risk in the sub-region. Communities may include static rural villages, schools, nomadic populations, urban informal settlements, displaced groups etc.

AMREF recognises that biological vulnerability remains key and also that there is a need to give sufficient focus to children and families living with HIV/AIDS when conceptualising and implementing malaria projects.

This policy is under review at the time of going to press as a result of wide-spread resistance to sulphadoxine-pyrimethamine (SP) in the sub-Saharan region and the adoption of Artemisinin-based Combination Therapies (ACT) some of which are not yet proven safe for use in pregnancy.

Low birth weight infants are particularly prone to iron deficiency and require supplementation and careful monitoring of hemoglobin levels. Impaired childhood development can, in part, be explained by iron deficiency. AMREF will therefore use malaria prevention and control as a programmatic base for the control and reduction of anaemia.

From: Roll Back Malaria, MEASURE Evaluation, WHO, UNICEF. 2004. Guidelines for Core Population Coverage Indicators for Roll Back Malaria: To Be Obtained from Household Surveys. MEASURE, Calverton, Maryland.

AMREF acknowledge that although these indicators were adopted globally at the time of going to press that processes change, health information systems improve over time and new, innovative interventions require new M&E tools. AMREF will ensure that developments in the M&E field are taken into account during the life time of this 5 year strategic plan and that project implementation planning is adapted accordingly.





The African Medical and Research Foundation  
[www.amref.org](http://www.amref.org)

