Approved November 2009

Situation and Response Analysis Report on Malaria in the SADC Region

ORIGINAL IN
ENGLISH

Acknowledgements

This work was made possible through the collaboration of the Southern African Development Community (SADC) Secretariat with Member States and various stakeholders. The Secretariat would like to acknowledge all the contributions.

Member States of SADC, through their programme managers and other focal points for Malaria, provided information about Member States programmes, and coordinated discussions with other stakeholders during the field assessments. Additionally, programme managers reviewed drafts and provided valuable technical input and guidance for the Framework. Senior government officials in the Communicable Diseases Project Steering Committee reviewed final drafts and made recommendations to facilitate finalisation and subsequent approval of the document at the joint SADC Ministerial Meeting of Ministers of Health and Ministers responsible for HIV and AIDS.

The Framework also benefitted from collaborating partners, including the World Health Organization (WHO), MACEPA and the African Malaria Network Trust (AMANET). The SADC Secretariat wishes to thank them for their technical inputs in reviewing various drafts of the document, as well as for participating in technical meetings to discuss the Framework. The consultant for this work was JHPIEGO, which collected data from the Member States and produced a situation and response analysis report that informed the development of the regional Minimum Standards. In addition, the consultant provided valuable technical inputs and prepared various drafts of the report.

At the SADC Secretariat the work was led by the Directorate of Social and Human Development and Special Programmes, specifically the SADC Communicable Diseases Project team.

The Report would not have been possible were it not for the financial support provided by the African Development Bank via their grant to SADC on Communicable Diseases (HIV and AIDS, TB and malaria). Furthermore, the Secretariat wishes to acknowledge the financial assistance from the Joint Financing and Technical Collaboration Agreement for co-funding the consensus-building workshop.

ISBN: 978-99968-0-207-2

The contents for this publication are the sole responsibility of SADC. The designations employed in the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the SADC Secretariat concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitations of its frontiers or boundaries.

The mention of specific companies, organizations, or certain manufacturers products does not imply that they are endorsed or recommended by the SADC Secretariat in preference to others of a similar nature that are not mentioned.

For more Information

Directorate of Social and Human Development
And Special Programs
SADC Secretariat
Private Bag 0095
Gaborone, Botswana
Tel (267) 395 1863
Fax (267) 397 2848
Email: registry@sadc.int
Website: www.sadc.int

Table of Contents

ACRONYMS AND ABBREVIATIONS

ACT	Artemisinin-based combination therapy
AMANET	African Malaria Network Trust
ANC	Antenatal care
BCC	Behaviour change communication
CCM	Community case management
CHWs	Community health workers
CMS	Central Medical System
DHS	Demographic Health Survey
DRC	Democratic Republic of Congo
FANC	Focused Antenatal Care
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
HBM	Home-based management
HMIS	Health Management Information System
ICCM	Integrated community case management
IPT	Intermittent preventive treatment
IMCI	Integrated management of childhood illnesses
IRS	Indoor residual spraying
IST	In-service training
ITN	Insecticide-treated nets
IVM	Integrated vector management
JSI	John Snow Inc.
LLINs	Long-lasting insecticide-treated nets
LSDI	Lubombo Spatial Development Initiative
MCH	Maternal and child health
MICS	Multiple Indicator Cluster Survey
MIS	Malaria indicator survey
MOH	Ministry of Health
MRC	Medical Research Council
M&E	Monitoring and evaluation
NGO	Nongovernmental organisation
NMCP	National Malaria Control Programme
NTD	Neglected tropical diseases
OVCs	Orphans and vulnerable children
PCR	Polymerase chain reaction
PDA	Personal digital assistant
PMI	President's Malaria Initiative
PNLP	Programme National de Lutte contre le Paludisme
PSI	Population Science International
RBM	Roll Back Malaria
RDT	Rapid diagnostic testing
RH	Reproductive health
RMCC	Regional Malaria Control Commission
SADC	Southern African Development Community
SP	Sulfadoxine-Pyrimethamine
WHO	World Health Organization

EXECUTIVE SUMMARY

Malaria remains a disease of public health significance in the SADC region. It is responsible for 20% of childhood deaths and in excess of 30% and 40% of outpatient visits and hospitalisations, respectively. WHO has estimated that three-quarters of the population residing in this region is at risk of contracting malaria, including 35 million children younger than five years of age and approximately 8.5 million pregnant women. As national borders become increasingly porous, a harmonised and coordinated effort within the region is essential for malaria control.

It is with that intention that the SADC Secretariat has commissioned the development of harmonised regional standards for malaria. The "Malaria Elimination Pathway", a dynamic framework that tracks Member States through the various stages of malaria control and elimination was used to analyse the findings.

A literature review followed by a site assessment visit by a group of malaria experts was used to gather information—and the findings are presented in this report. Best practices and challenges are identified across transmission zones and interventions, as well as crosscutting categories, such as policies, funding, human resources, procurement and supply, monitoring and evaluation (M&E), partner coordination and integration, gender and equity, and cross-border initiatives.

While Member States have made significant progress in several areas and are closer to achieving their Roll Back Malaria (RBM) targets, there are also several challenges that Member States need to overcome in order to achieve elimination.

For the zero-transmission Member States, there have been exemplary efforts in surveillance and "active case investigation and finding" in one of the Member States that can be replicated as a best practice across this transmission zone. Surveillance is critical for the zero-transmission Member States to prevent reintroduction or introduction of malaria.

For low, unstable-transmission Member States, the vector control strategies (specifically indoor residual spraying, IRS) have been very successful and have exceeded the RBM targets. Successful cross-border programmes with high-transmission Member States (such as the Lubombo Spatial Development Initiative, LSDI) have brought valuable lessons. Maintaining strong vector control strategies, as well as surveillance, to move toward elimination is the key for Member States in the low-unstable, transmission zones.

While countries in the high, stable and mixed transmission zones receive the bulk of donor funding and have introduced some commendable strategies and practices, there are also significant gaps that need to be addressed to achieve a harmonised malaria control for the region.

Across the transmission zones, policies and strategies on malaria were in place, but the dissemination to all cadres needs to be improved. Funding and resources for malaria have increased significantly, especially via the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria and the President's Malaria Initiative (PMI), as well as via commitments from Member States themselves.

However, sufficient funding for malaria is still a challenge, specifically for middle-income Member States and cross-border programmes. Human resources were seen as a major gap, and some states were using community health workers as a task shifting measure, as well as for providing services in hard-to-reach areas.

A system is needed to monitor the quality of drugs and commodities, and the availability of unapproved and substandard drugs in the market. The consistency and quality of the data flow from the lower levels of the health system could be improved in several states. National Malaria Control Programmes (NMCP), where they exist, should take leadership in partner coordination and management. In addition, malaria should be made a ministerial priority (just as HIV and AIDS was) in order to achieve elimination.

The detailed findings from the situation and analysis report identify the areas for standards development. A brief summary of the implications of the standards is presented with each category.

1. INTRODUCTION

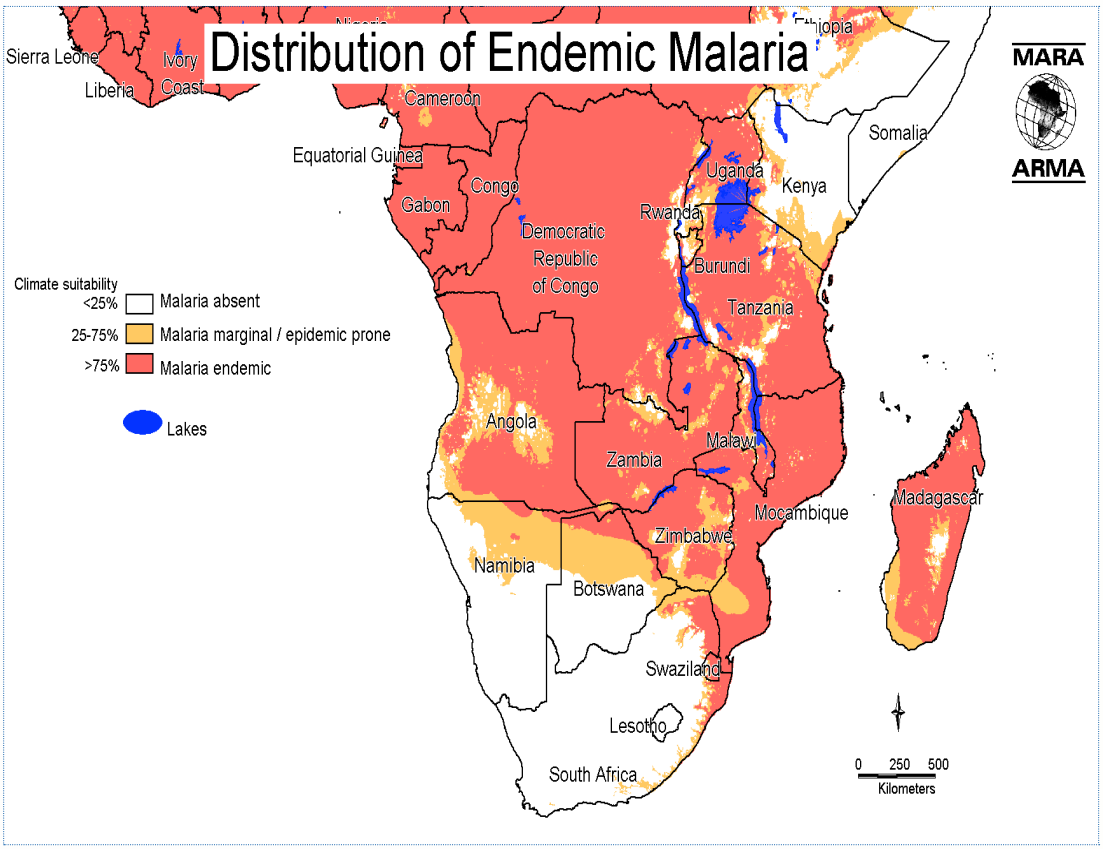
1.1 Overview of malaria in the SADC region

Malaria kills more than one million people each year globally, most of them children younger than five years of age and almost 90% of them in sub-Saharan Africa.[1] In the Southern African Development Community (SADC) region, malaria accounts for more than 30% of outpatient visits, 40% of hospitalisations and one in five childhood deaths (see Figure 1).[2]

The World Health Organization (WHO) estimates that three-quarters of the population residing in the SADC region is at risk of contracting malaria, including 35 million children younger than five years of age and approximately 8.5 million pregnant women.[3] Table 1 (below) contains a detailed overview of the malaria epidemiology and burden in SADC Member States. Malaria is responsible for an estimated 300 000–400 000 deaths in this region annually.[4] Malaria transmission varies considerably in southern Africa, and comprises areas with both stable and unstable transmission of malaria, as well as malaria-free areas. Malaria in the region ranges from highly endemic, stable, year-round malaria in the north of the region to a lack of the disease in the farthest southern and eastern island reaches. In between, one finds areas of low transmission, unstable, epidemic and/or seasonal malaria. There are also areas where malaria transmission has been halted, but still could favour malaria transmission if Member States are not vigilant. Finally, there are also unique areas of urban malaria, where the disease is rare, but cases do occur due to movement between rural and urban areas, or where micro-environments (such as urban agriculture) might enable focal transmission. Programme activities and thus, standards are expected to vary according to the epidemiological reality of a given setting.

This variation could pose a challenge to developing region-wide programming standards, but since Member States are moving in the same direction towards malaria elimination, the theme of region-wide standards should address the necessary steps along the pathway toward elimination.

Figure 1: Malaria transmission in SADC Member States



1 *http://www.malaria.org.za/Malaria_Risk/General_Information/general_information.html.*
2 *http://www.rollbackmalaria.org/MemberStateaction/docs/sarn/sarnSCMeetingSep2009.pdf.*
3 *http://www.rollbackmalaria.org/MemberStateaction/docs/sarn/sarnSCMeetingSep2009.pdf.*
4 *http://globalhealthsciences.ucsf.edu/pdf/E8MinResolution_20090303.pdf.*

SADC Member States have seen success in reducing malaria transmission.[5] Significant progress has been made in reducing the burden of malaria by scaling up proven interventions, such as indoor residual spraying (IRS), insecticide-treated nets (ITNs) and/or long lasting insecticide treated nets (LLINs), intermittent preventive treatment (IPTp), rapid diagnostic tests (RDTs) and Artemisinin-based combination therapies (ACTs). Despite these successes, several Member States in the SADC region continue to contribute significantly to the number of malaria cases and deaths in Africa.[6]

Plasmodium falciparum is the main parasite and is responsible for more than 90% of the malaria in this region. P. malariae and P. ovale can also cause mild disease in sub-Saharan Africa.[7] P. vivax malaria was seen mainly in Mauritius. Transmission patterns vary across the SADC Member States and display endemic, seasonal and epidemic manifestations of malaria occurrence.[8] Table 1 shows the different types of malaria transmission that occur in SADC Member States.

Table 1: Overview of malaria epidemiology and burden in SADC Member States

Member State	Main parasite	Transmission pattern	# Reported malaria cases/Yr (Probable and confirmed)	No. of admitted cases/yr	No. of malaria deaths/yr
Angola	P. falciparum, P. malariae, P. vivax	All year	3,432,424 2007	106,345 2008	9,465 2008
Botswana	95% P. falciparum	Dec–April	17,886 2008	–	8 2010
DRC	P. falciparum	All year	5,371,196 2008	299,158 2008	18,928 2008
Lesotho	NA[9]	NA	NA	NA	NA
Madagascar	P. falciparum	North all year Sept–June	352,520 2008	5,367 2008	276 2008
Malawi	P. falciparum	All year round with peak in Nov-May	4,986,779 2008	181,248 2008	7,748 2008
Mauritius	P. vivax	–	42 2007	–	0
Mozambique	P. falciparum	Nov–July	4,831,491 2008	120,259 2008	4,424 2008
Namibia	P. falciparum	Northeast Jan–April	119,771 2008	4,907 2008	172 2008
Seychelles	–	–	–	–	–
South Africa	P. falciparum	3 northern provinces Oct–April	6072[10] 2009	–*	45 2009
Swaziland	P. falciparum	Except southeast Nov–May	5,881 2008	178 2008	5 2008

5 *http://www.theglobalfund.org/documents/publications/overviews/2006_SouthernAfricaOverview/Southern_Africa_Overview_HighRes.pdf.*
6 *World Malaria Report, 2008, WHO.*
7 *http://www.dpd.cdc.gov/dpdx/HTML/Frames/MR/Malaria/body_Malaria_page2.htm#Geographic%20Distribution*
8 *http://www.malariajournal.com/content/pdf/1475-2875-3-37.pdf.*
9 *Misiani, E, Groepe, A, Kok, G. et al. (2010), Annual Review and Planning Meeting, Zanzibar, 2010*
10 *Misiani, E, Groepe, A, Kok, G. et al. (2010), Annual Review and Planning Meeting, Zanzibar, 2010*

Member State		Main parasite	Transmission pattern	# Reported malaria cases/Yr (Probable and confirmed)	No. of admitted cases/yr	No. of malaria deaths/yr
United Republic of Tanzania	Mainland	P. falciparum	Sept–Aug	10,566,201 2008	–*	20,782 2006
	Zanzibar			102,293 2007	–*	187 2007
Zambia		P. falciparum	All year with peak in Nov–May	3,080,301 2008	149,964 2008	3,781 2008
Zimbabwe		P. falciparum	Pockets with transmission from 0 up to 11 months to all year transmission[11]	1,003,846 2008	5,332 2007	222 2007

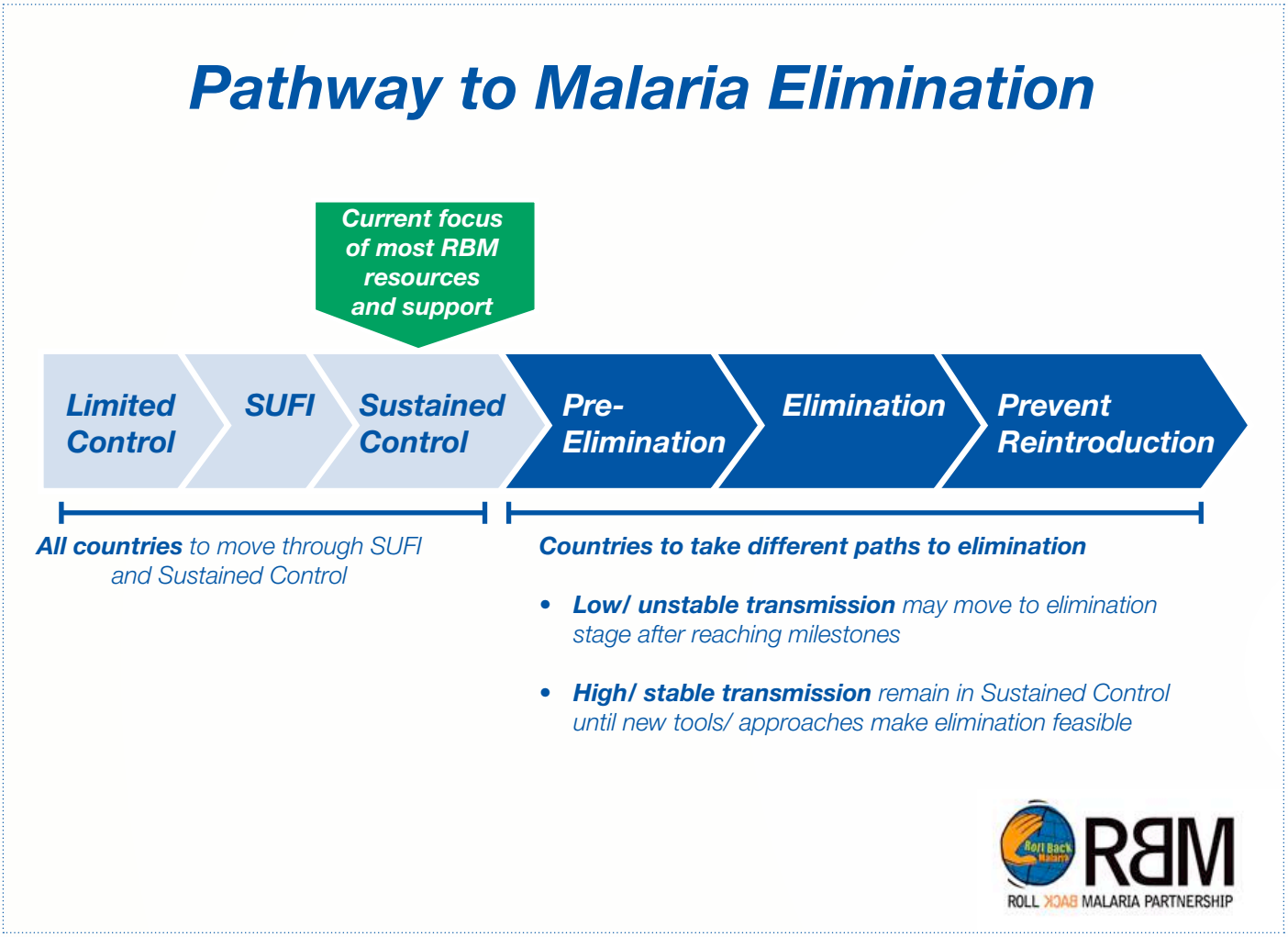
**No data was available.*

The SADC region has some exemplary malaria control programmes, which can be used as case studies, which potentially could be expanded to involve other regions.

- The Lubombo Spatial Special Development Initiative (LSDI, a three-Member State malaria control initiative covering southern Mozambique, Swaziland and northeastern South Africa) reportedly has reduced malaria incidence by more than 80%.[12]
- In Madagascar, more than three million ITNs were distributed between 2001 and 2006, and approximately 250 000 households were sprayed with IRS. As a result, the number of malaria patients reported in 2007 was less than half the number reported in 2001-2003.[13]
- Zambia has maintained health information records in all its health facilities since 2000, and has been successful in making ACTs available nationwide. The Member State is reported to have reduced malaria related deaths[14] by 60% between 2006 and 2008.
- The island of Zanzibar in the United Republic of Tanzania has successfully established ITN and ACT distribution channels to reduce malaria incidence by more than 80% since 2003.[15] Zanzibar has established an early epidemic detection system at 52 health facilities to identify malaria hotspots to protect and sustain its achievements.

11 *(http://www.mara.org.za/pdfmaps/ZimMonthsRisk.PDF)*
12 *http://www.theglobalfund.org/documents/publications/overviews/2006_SouthernAfricaOverview/Southern_Africa_Overview_HighRes.pdf.*
13 *World Malaria Report, 2008, WHO.*
14 *http://www.unicef.org/esaro/5479_5847.html; http://ipsnews.net/news.asp?idnews=48586*
15 *http://www.unicef.org/infobycountry/tanzania_53431.html; http://www.fightingmalaria.org/pdfs/AFM_Zanzibar_March08.pdf*

Figure 2: Pathway to Elimination—Second Element of the Conceptual



1.2 Conceptual framework

A conceptual framework guided the process of learning about malaria programming experiences, best practices and needs in the region. One key variable in the framework is the wide variety of transmission or epidemiological zones, even within individual Member States—from highly endemic, stable, year-round malaria, to malaria epidemics and a lack of the disease.

The second key variable in the process was the Roll Back Malaria (RBM) Pathway to Elimination. As shown in Figure 2, the Pathway recognises that malaria control is not a static process. As Member States scale up and sustain interventions, they can move into a pre-elimination phase and eventually become certified as having eliminated the disease. Even when Member States are certified, programming must continue as long as malaria transmission occurs in neighbouring Member States and regions. Not only do interventions and standards therefore vary by location, but they should also evolve over time as the transmission features change due to successful programming.

1.3 Major transmission zones and interventions

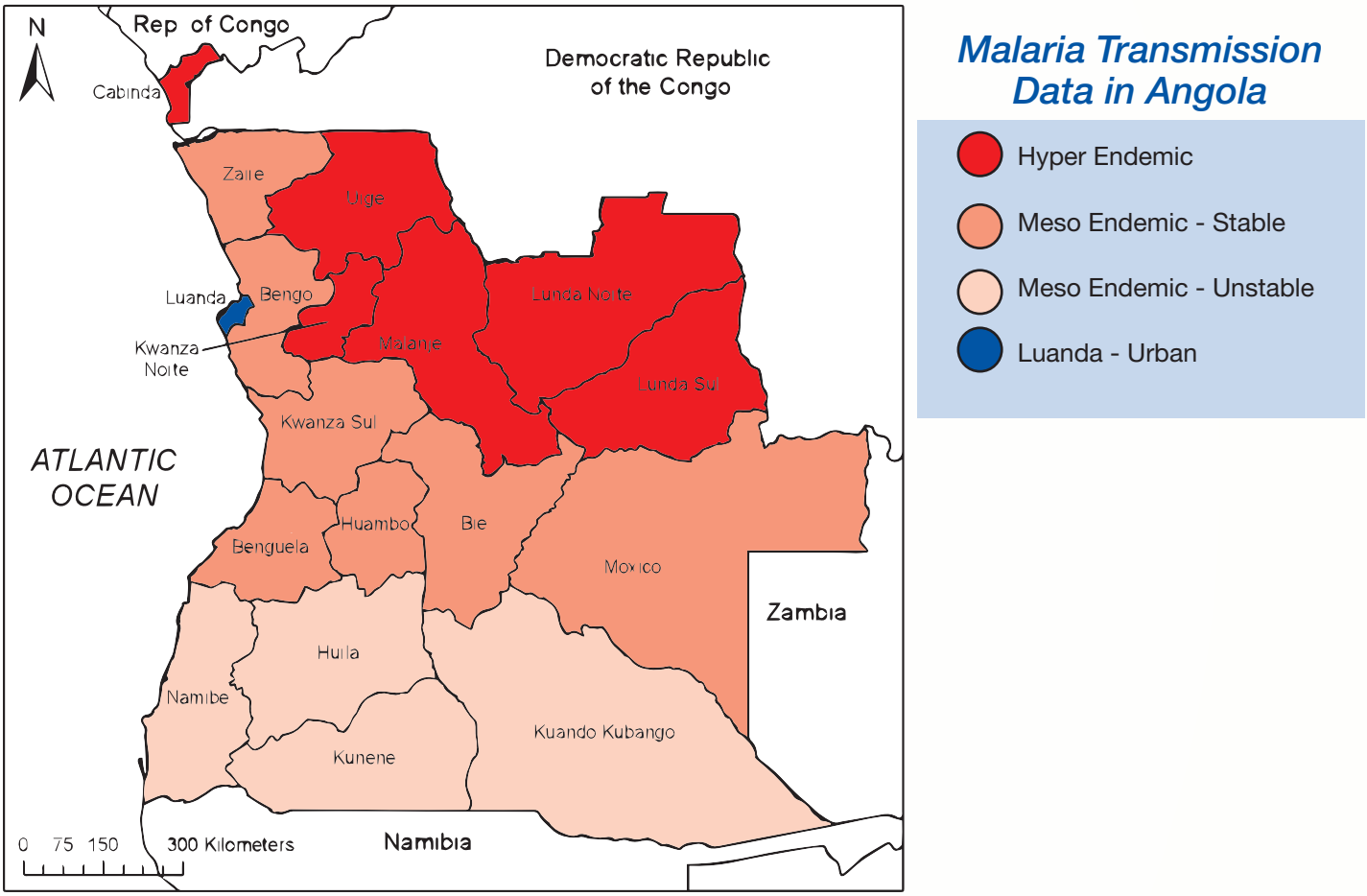
In addition to the "Pathway to Elimination Framework" described earlier, Member States in the SADC region can also be categorised by the level of transmission. As shown in Figure 1, there are three malaria transmission zones:

- High, stable and mixed transmission;
- Low, unstable transmission; and
- No current transmission.

The SADC region (except for the Democratic Republic of Congo, DRC) also constitutes the Roll Back Malaria South Africa Regional Network (SARN)[16], and has the most diverse malaria transmission environments of the four RBM regional networks.

High, stable transmission zones constitute those areas in the SADC region where malaria cases occur throughout the year, with or without seasonal peaks. In these Member States, the full WHO intervention package of IRS, ITNs or LLINS, IPT, RDTs, and ACTs has been adopted. Eight out of the 15 SADC Member States—Angola, DRC, Malawi, Mozambique, Madagascar, Tanzania, Zambia, and Zimbabwe—are in this category.

Figure 3: Transmission Variations



Low, unstable transmission Member States characteristically have low incidence rates of malaria, which are non-continuous and are prone to epidemics. Botswana, Namibia, South Africa, and Swaziland fall in this transmission zone. All interventions from the high-transmission zone (except for the IPTp) are also applicable to the low-transmission zone. Areas with no current transmission have eliminated malaria or never had malaria. Their goal is to avoid the introduction or re-introduction of malaria. Three SADC Member States—Lesotho, Mauritius and Seychelles—are in this transmission zone. The major interventions for these Member States are surveillance, case detection and management of imported cases, and health information.

In addition to the regional malaria transmission zones, some Member States also have variations in epidemiological patterns within their borders, and therefore have multiple zones (as shown in Figure 3, using Angola as the example).

16 *http://www.rbm.who.int/mechanisms/sarn.html*

2. PURPOSE OF THE ASSESSMENT

The overall objective of the assessment was to determine the requirements and possibilities for developing and implementing harmonised minimum standards for malaria prevention, treatment, and control in the SADC region. This would be done by exploring the availability of, and compliance with national/international malaria guidelines on the part of individual Member States' National Malaria Control Programmes (NMCPs). To that end, the Jhpiego assessment teams visited each Member State over a four-month period from January 2010 to April 2010 (see the table in Annex C).

The objectives of the Member State assessments were to:

- Assess policies, protocols, and guidelines;
- Critically review the different needs of children, men and women (including pregnant women);
- Assess capacity to implement national programmes;
- Assess the integration of gender equity with policies and programming; and
- Identify best practices and challenges in overall malaria policies and programming.

The goal of the assessment team was to compile and analyse the main findings of each Member State assessment in order to compile a picture of the status of malaria control in the SADC region and determine the key requirements and constraints for regional malaria standards.

Those findings were adapted to develop a harmonised set of minimum standards for malaria control to be led by SADC and for adoption by individual Member States.

This document presents the findings from a multi-phase assessment of the status of malaria control initiatives in the SADC region.

3. METHODOLOGY FOR THE ASSESSMENT

The assessment began with a desk review of grey and peer-reviewed literature, malaria policies, guidelines, and programmes at the national, regional and international levels, leading to an inception report. As a part of the assessment process, a semi-structured interview and the facility observation guides were developed for use during field visits to SADC Member States. Subsequently, the team leader and technical experts assessed the best practices and challenges for malaria control in the individual SADC Member States.

In each Member State, the assessment team conducted key informant interviews and facility visits, using the standardised interview and observation guides (provided in Annex A and B, respectively). Detailed information on the timeline of the visit is shown in Annex C. The selection of the interviews was done in coordination with the SADC Secretariat and NMCPs, when possible. Typically, the technical team met with the following stakeholders:

- Senior manager of the National Malaria Control Programme;
- HIV and AIDS managers, TB managers,
- Representatives of WHO and UNICEF;
- Representatives from the President's Malaria Initiative,
- Global Fund;
- Government, corporate, and foundation donors;
- Treatment and antenatal care facilities, when feasible; and
- Other stakeholders, as appropriate and feasible.

Following each Member State visit, the information gathered during the key informant interviews was compiled into a Member State-level assessment report. The report presented relevant information on policies and guidelines; human resource and infrastructure; funding and resources; procurement and supply management; access to control and

treatment; cross-border concerns; and issues pertaining to different epidemiological zones. The findings from these visits informed this analysis report and the overall harmonised minimum standards for the region. The site assessment was constrained by several logistical factors, including limited time in Member States, difficultiessecuring appointments with stakeholders, and additional approval requirements to visit facilities in some Member States. The views expressed by the interviewees may at times be subjective. The analysis could have benefitted from further community and facility visits that were restricted due to timing, logistical factors and the need for ethical clearance in some Member States (involving the collection of primary data).

4. RESULTS

The findings from the Member State assessments are presented here in two categories:

- By interventions specific to three different transmission zones; and
- By crosscutting themes applicable to all Member States.

Each section presents the findings from the visits, the gaps that were identified, and the implications for the harmonised standards for the region.

4.1 Interventions

4.1.1 Zero transmission

While Lesotho, Mauritius and Seychelles are grouped as malaria-free countries, there are some variations. Seychelles has successfully eradicated the Anopheles mosquito from the island, while malaria is not indigenous to Lesotho or Mauritius. But all three countries are at threat for imported cases of malaria, and they should prepare for the introduction or reintroduction of malaria.

Interventions such as surveillance and case detection and management are crucial for preventing the introduction or re-introduction of malaria. Key findings in these Member States are iterated below under the appropriate headings.

Surveillance
Both Mauritius and Seychelles are taking active measures to prevent the introduction or re-introduction of malaria. Mauritius has an exemplary system of active surveillance and case investigation for travelers (see Figure 4). Mauritius also carries out entomological surveys at least once a month for at-risk areas. Seychelles prepares weekly infectious disease reports compiled from all health facilities, and these are used to make informed decisions and identify possible outbreaks.

Lesotho has always been malaria-free due to the geographical and climatic conditions that prevail there. Consequently, malaria is not currently prioritised in Lesotho. However, it does have an active disease surveillance system and Health Management Information System (HMIS) that can serve as a platform for malaria surveillance.

Gaps identified in surveillance are in the areas of policy, documentation and capacity building. One of the Member States in the zero transmission zone had no defined policy to prevent the introduction of malaria. This Member State was not taking any measures to document imported cases and therefore was unable to define or assess its burden of malaria. Another Member State did not have any active surveillance system for tourists or people returning from malaria-endemic Member States, and relied on people presenting at health centres with fevers. The Member States in this zone also identified a need for capacity building for epidemiology and management of health statistics.

Case detection and management
In Mauritius, a central government unit performs diagnosis (using microscopy) and treatment of malaria. By law, all private health facilities have to report suspected cases of malaria to the Ministry of Health. Malaria treatment drugs are not sold at private pharmacies, and have to be procured through the Ministry of Health. In Seychelles, diagnosis is done through peripheral blood smear, and testing is done for both vivax and falciparum strains. All imported drugs in Seychelles have to be registered and must meet quality control measures.

Evidence-based guidelines for the management of imported cases was lacking in one of the Member States. The current treatment drugs available in one Member State—Chloroquine, Primaquine, Sulfadoxine-pyrimethamine (SP), Quinine and Mefloquine—are not consistent with anti-malaria policies or efficacy patterns in the SADC region. Treatment is left at the discretion of the doctor. The presence of offshore companies manufacturing counterfeit drugs was also identified as a challenge. ACT was not available in at least one of the Member States.

Health education
Health education for the general population is one of the methods of vector control in Mauritius, while the "Communication for Behavioural Impact" programme focuses on cleaning the environment and treating wastewater resources. However, it was found that malaria was not included in the health education package of one of the Member States.

Integrated vector management
This strategy is adapted in line with the needs of the Member State and in the context of national efforts to prevent the emergence of malaria. Mauritius and Seychelles spray their ports every six months. Additionally, Mauritius deploys vector control teams every 20 days for spraying to minimise the mosquito population and it conducts follow-up counterchecks through the central unit. Since Mauritius has other vector-borne diseases, bed nets are provided for vulnerable populations in hospitals. All individuals travelling out of Mauritius and Seychelles to malarial Member States are provided with chemo-prophylaxis. Gaps identified were the absence of vector control measures in one of the Member States and the unavailability of ITNs in another.

Implications for development of standards on interventions for zero-transmission Member States

1. Develop a policy to prevent the introduction of malaria in areas that have eliminated or have never had malaria;

2. Develop appropriate health education programmes that assure adequate information on malaria reaches populations who live in malaria-free Member States but who are likely to visit malaria-prone areas;

3. Align treatment regimens for imported malaria cases with current WHO evidence-based treatment regimens for malaria in the SADC region;

4. Strengthen surveillance and documentation systems for imported malaria cases, using pre-existing systems such as port health (where appropriate);

5. Address the issue of maintaining adequate stocks of drugs while avoiding drug wastage due to low caseloads; and

6. Build capacity for surveillance (including entomological) and guidelines available to support surveillance activities.

Box 1: Best practices: Active case investigation and finding

Active case investigation and finding

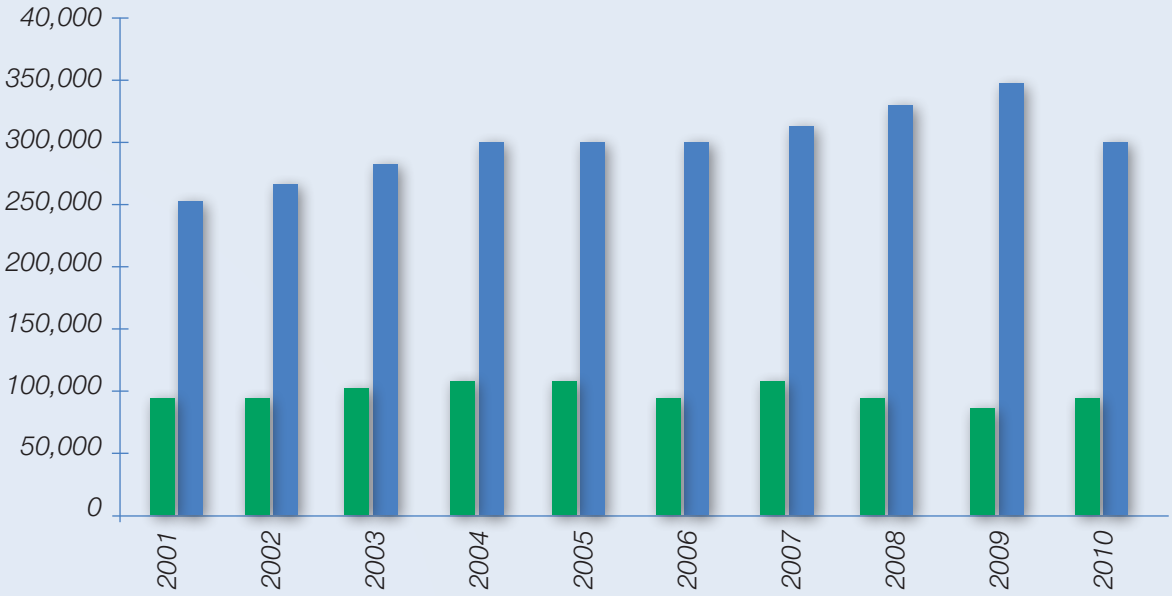
In Mauritius, all passengers are screened at the two ports of entry (airport and seaport) and are required to identify the Member State they are arriving from. If they are arriving from a malaria-prone area, health inspectors will follow up with them in accordance with a specific regimen that includes taking blood slides to test for malaria. The protocol for following up passengers is 42 days. They are visited four times during that period within 15-day intervals, and a blood smear is taken at each visit. Health surveillance officers used to travel from house to house to inquire about fever cases, but they have shifted to targeting those most likely to have contracted the disease. Blood smears are taken irrespective of whether patients exhibit symptoms. For tourists, health officers are in contact with hotel managers, who alert them if anyone experiences high fevers.

4.1.2 Low, unstable transmission

Botswana, Namibia, South Africa and Swaziland have low, unstable transmission and are preparing for elimination. The challenge they face is that they share borders with malaria-endemic Member States and that high volumes of population movement occur across those borders. For these Member States (and any Member State moving towards malaria elimination). Cross-border malaria control activities supported by solid surveillance systems is cardinal.

Integrated vector management
South Africa and Swaziland have strong IRS programmes with demonstrable reductions in malaria incidence and vector populations. Figures 4 and 5 show the progression of IRS coverage for South Africa and Swaziland from 2001 to 2010. As can be seen, total population coverage exceeds the RBM target of 80%. A strong partnership between Member States is evident in the LSDI programme (involving Mozambique, South Africa and Swaziland) (see Box 2, below). The Member States also maintain good documentation of vector management and its impact at the national level.

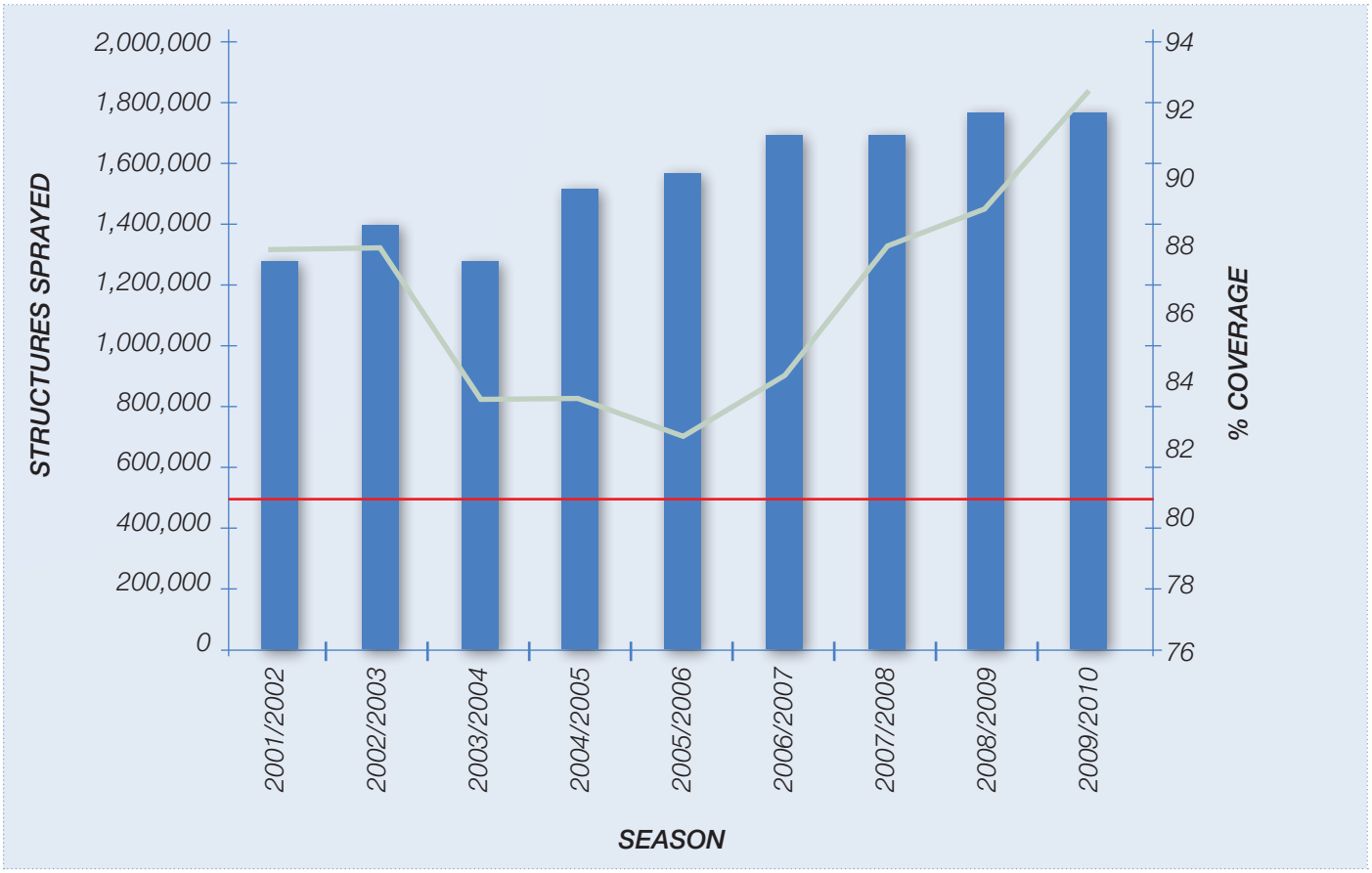
Figure 4: IRS coverage for Swaziland, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total structures sprayed	91641	90672	96158	100483	98915	92377	102541	94766	91678	93003
Total population protected by IRS	249005	258970	278556	293520	293520	293520	308196	330210	355893	311865
% population protected	80%	80%	80%	82%	84%	84%	84%	96%	97%	85%

Source: Presented at the Annual Review and planning meeting in Zanzibar, September 2010.

Figure 5: IRS Coverage for South Africa, 2002-2010



Source: Presented at the Annual Review and planning meeting in Zanzibar, September 2010.

Surveillance

Disease surveillance in Namibia involves a weekly monitoring system. Currently, Namibia is piloting a system of active case detection in the Omaheku region, with standards for index testing. Member States are periodically re-plotting their epidemic threshold. South Africa has a strong entomological surveillance unit, and disease surveillance in that Member State is health facility-based, with and cases reported on a daily basis.

Even though Botswana has experienced a documented reduction in malaria mortality in recent years, epidemic preparedness and response is in place and constitutes a unique component of the Botswana programme than can be emulated by others. Botswana is also planning a malaria indicator survey with local funding, which demonstrates important domestic commitment to obtaining accurate data for planning.

In Swaziland a good surveillance system based on GIS technology has been established, allowing cases to be located and investigated within seven days. Entomological surveillance is also ongoing via window traps. Challenges identified included limited data flow from the peripheral to national level. Human resource gaps in the area of surveillance were identified (such as a lack of entomologists). An early warning system for epidemics needs to be established. Surveillance systems need to be linked with improving case management and improved availability and use of RDTs is required. Signs of weakness, such as late reporting and limited supportive supervision to ensure reporting, were evident.

Integrated vector management

A strong linkage between research and vector management exists. South Africa and Swaziland have a management committee that is tied to the Medical Research Council (MRC, in South Africa), which helps to move the research agenda to support vector control as an integral part of the cross-border LSDI programme. Namibia supports a free net distribution programme that, together with social marketing, has increased coverage. National government contribution to key vector control strategies is significant. For instance, the Namibian Government is rolling IRS in eight out of the nine endemic regions, targeting the areas of highest prevalence. Larviciding is conducted as an environmentally friendly option. Botswana runs a coordinated net procurement process (with the assistance of UNICEF) that helps unify large and small NGO contributions to malaria control.

A few gaps were also identified. Consistent use of ITNs is a challenge due to people's belief that they are at low risk of contracting malaria. Limited manufacture of DDT causes stock-outs (currently, only one manufacturer in India exists). For Member States introducing IRS as Namibia is doing, support is still required to achieve scale up. Improper use of nets (including for fishing) was observed and can cause to environmental problems.

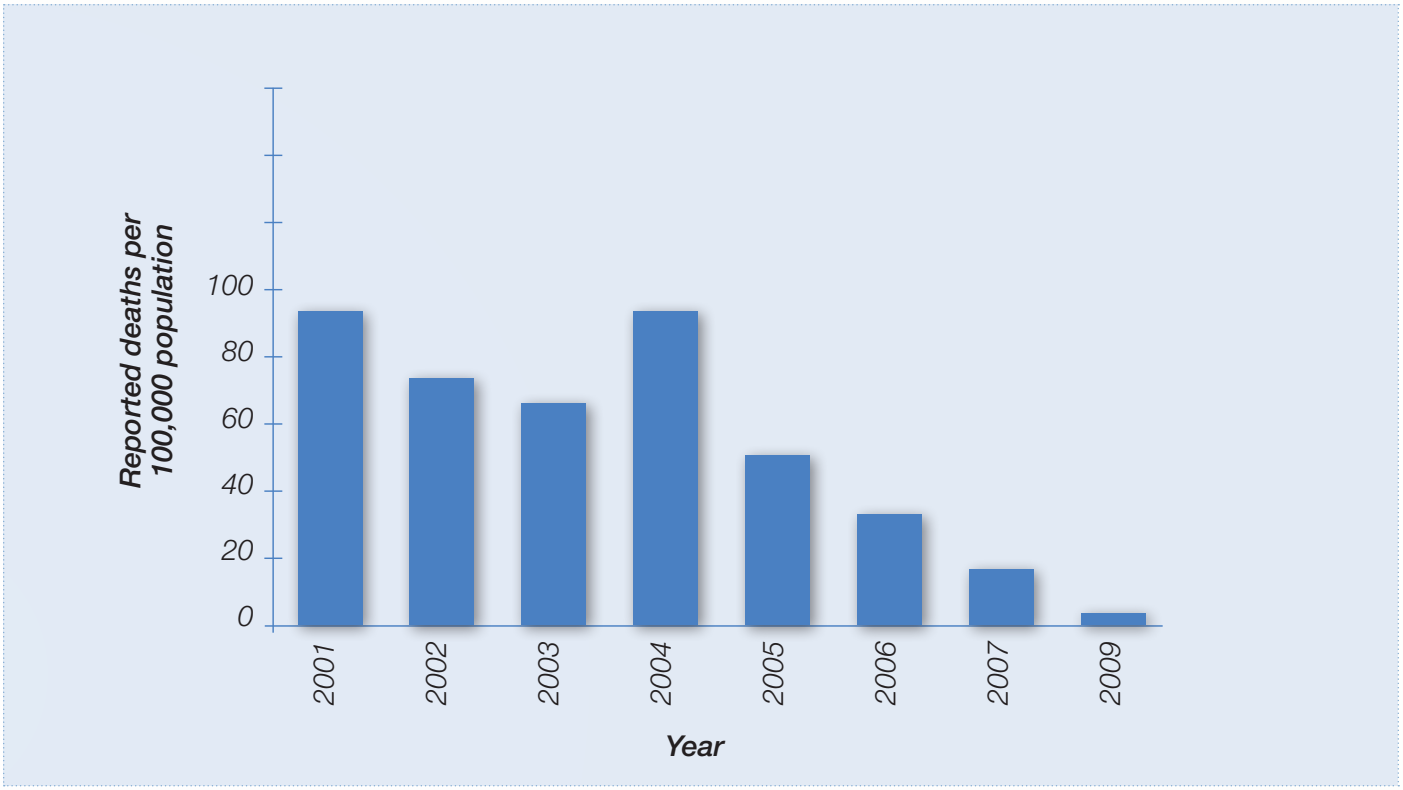
Case management

Case management is aligned with WHO guidelines using RDTs and ACTs in these Member States. In Botswana, a change in malaria drug policies to ACTs has been supported with guidelines and training manuals. In some Member States, there is recognition of different epidemiological zones within the Member State: for instance, IPT is only used where it is appropriate in Namibia. Botswana and Namibia are using polymerase chain reaction (PCR) and dried blood spots for diagnosis. A lesson learnt was that when ACT and RDT were introduced together, acceptance increased for both. South Africa has a good system of diagnosis and treatment all the way down to the primary health level. Diagnosis guidelines are missing for some Member States. Competency for diagnosis with RDTs by clinical staff exists, but strong quality assurance measures are needed. As in many places, health workers are slow to accept the validity of RDT results and use these to guide treatment—elimination cannot occur without proper parasitological diagnostic procedures being in place. Reporting on combination drugs and RDT consumption is not accurate in some Member States. As malaria incidence drops due to the spread of efficacious interventions, people appear to be losing their natural immunity to malaria and those who do get sick are experiencing more severe disease.

Health education (transmission-specific)

A behaviour change communication (BCC) strategy is underway in Namibia and is expected to be implemented with support from the Global Fund. In Namibia, improving awareness and knowledge about malaria played a major role in increasing intervention coverage and reducing malaria cases and mortality since 2001 (see Figure 6). Botswana has several successful examples of community involvement, including the use of existing structures such as village health committees, drama groups, and health education assistants. Early care seeking is an issue, although this is more the case for adults than children. Traditional healers were found to play an active role in malaria control, and Governments can use them as conduits to increase demand for malaria care and treatment.

Figure 6: Malaria trends: malaria mortality per 100 000 population, Namibia, 2001-2009.



Source: Malaria Annual Review and Planning meeting, Zanzibar, November 16-18.

Implications for development of standards for low, unstable transmission Member States

1 .Build capacity for entomological surveillance and early warning systems to detect epidemics;

2. Develop comprehensive BCC package to support the elimination effort;

3. Strengthen data collection and management systems to ensure timely availability of high quality data for management and decision-making at all levels of the health care systems;

4. Address human resources in terms of knowledge and skills, numbers and retention to support the elimination effort;

5. Develop appropriate guidelines for IPT, diagnosis and case management of malaria;

6. Assure availability of DDT for Member States relying on this for malaria control and eventual elimination;

7. Promote the exchange of knowledge, skills and technical expertise among SADC Member States;

8. Set up mechanisms to make essential technical support available to support Member States that are introducing new interventions; and

9. Developing models for pre-elimination and prevention of reintroduction may not be possible without international support (especially funding).

Box 2: Best Practices: The Lubombo Spatial Development Initiative[17]

The Lubombo Spatial Development Initiative (LSDI), a cross-border collaboration between Swaziland, Mozambique and South Africa was cited as a best practice on several fronts. The LSDI began in 1999 and has been supported by the Global Fund. The initiative was promoted to Governments not as a malaria control project but as a development (economic) project in which malaria was identified as an impediment to development. This resulted in strong buy-in from heads of states and ministers. The inauguration of the malaria control programme constituted the formation of the Regional Malaria Control Commission (RMCC), which comprises scientists, control experts and health specialists from the three participating Member States. Leadership and a strong coordination mechanism focused the activities. The initiative helped address the problem of malaria cases crossing from one Member State to another. The LSDI resulted in harmonised guidelines and practices for malaria control across the participating Member States.

4.1.3 High, stable and mixed transmission

The high, stable or mixed transmission Member States in SADC include Angola, DRC, Madagascar, Malawi, Mozambique, Tanzania, Zambia and Zimbabwe. These Member States are endemic but have zones where epidemics can occur. The intensity of transmission also varies within Member States. Among the Member States in this category, Zimbabwe has mixed transmission (see Figure 1), and includes areas or districts where there are either no, low or high transmission. The fact that one of the high transmission districts borders a high-burden country such as DRC means that Zimbabwe has to implement high transmission strategies in such areas.

These Member States have taken on a control strategy that includes integrated vector management consisting of use of ITNs/LLINs; IRS and in some cases larviciding and environmental control; early detection and prompt treatment with ACT, including diagnosis using RDTs; and intermittent preventive treatment during pregnancy. A number of challenges were identified during the Member State visits and they related mainly to the implementation of these strategies. These Member States also receive the bulk of donor funding (for example, from the Global Fund and the U.S. President's Malaria Initiative) in the region.

Intermittent preventive treatment
Five Member States in this category provide IPT via antenatal care services or focused antenatal care. The WHO Afro package for malaria prevention and management is provided in four of the Member States. Zambia has achieved the Abuja target for IPT coverage of 60% and is progressing toward the RBM target of 80%. Mainland Tanzania reported 28% coverage in 2008, while Zanzibar reported 51%. Coverage in Angola was reported at 3% in 2007, and in Mozambique it was 16% in the same year.[18] Clearly, the Member States while making progress toward the target still have a long way toward achieving the target.

Several gaps are helping cause such low coverage rates. In some Member States, most women make at least one antenatal clinic visit, but do not return for subsequent visits or do so very late in their pregnancy, which makes it difficult to receive the requisite doses of IPTp. Stock-outs of sulfadoxine-pyrimethamine (SP) for IPTp were also observed to varying degrees in some states, and these hinder progress towards meeting the IPTp indicator targets. As some Member States are switching to ACTs, SP uptake is lagging behind. In some instances, the promotion of ACT has undermined SP uptake (due to its highly publicised lack of efficacy, including high levels of drug resistance that render it inappropriate for case management). SP was also being used inappropriately for treating malaria when RDTs were negative (this was reported in two Member States). Controversy regarding the provision of IPTp at community level was observed. In one Member State there is an ongoing trial to resolve contentious issues surrounding community-based IPTp.

Integrated vector management
Member States are delivering some level of integrated vector control package. For instance in DRC, Malawi and Zambia, larviciding is complimented with limited IRS. Angola is also using larviciding as a complimentary method. Guidelines were available for integrated vector management (IVM) in DRC, Malawi and Zambia. Reliance on more than one insecticide (based on entomological studies, as appropriate for different areas) was observed in Mozambique.

17 *LSDI Annual Report 2009 available from MRC Durban, South Africa*
18 *Data reported at the 2010 SARN annual review meeting, Zanzibar.*

Zanzibar has done blanket spraying for IRS for the past few years and is now moving to targeted spraying using its early epidemic detection system. Zimbabwe is using a personal digital assistant (PDA) to list structures for IRS and has established community net production clubs. Several mechanisms to promote net use were observed in Zambia, including the cost-effective methods of directly supplying nets from agents to districts, bypassing the NMCP.

A universal coverage policy was not supported with sufficient funds in three of the Member States, and this led to problems in acquiring sufficient LLINs and IRS. In all the Member States, disposal of old ITNs or LLINs has not been resolved and mechanisms for net replacement are lacking. Distribution is a challenge in hard-to-reach areas in all of the Member States. There are opportunities to maximise resource utilisation of IRS and LLINs or ITNs, for example by timing the distribution of IRS with high season.

While children and pregnant women (and their husbands), whether HIV-infected or not, are adequately covered by current strategies for distribution, single males living with HIV have not been addressed. Limited capacity in some Member States to monitor resistance to Pyrethoids was observed. Environmental management of insecticides was lacking or non-existent in several of the Member States.

Surveillance

Mozambique maintains sentinel surveillance sites, and data are submitted on a weekly basis with integrated public health information. All Member States have surveillance activities and recognise their importance. Malawi, Zambia and Zimbabwe engage their research institutions to support surveillance activities. Zanzibar has instituted a Malaria Early Epidemic Detection System, which monitors weekly data from 52 health facilities to detect hotspots of malaria. It is also conducting routine entomological monitoring for mosquito surveillance at seven sites. Zimbabwe has a commendable surveillance system with strong entomological monitoring and insecticide efficacy testing (see Box 3).

There is a need to support the scale up of surveillance activities with additional trained and skilled personnel. For Member States that had a surveillance system in place, surveillance guidelines were not available at all health service delivery levels. Malaria was not considered a notifiable disease in some states, even though this is an important step toward malaria elimination. Entomological monitoring and insecticide efficacy testing was found lacking in several of the Member States.

Case detection and management

Several good practices were observed in this area. Five Member States have treatment guidelines that are aligned to evidence-based WHO guidelines for the management of malaria. Parasitological confirmation of malaria prior to treatment was seen in several states. In order to limit the misuse of SP for the treatment of fever, Zambia is making it available in antenatal care clinics only when it is more likely to be used exclusively for IPTp.

The innovative Affordable Medicines for Malaria programme has also been initiated via the Global Fund. The goal is to heavily subsidise ACTs to make them more affordable to end-users and to out- compete monotherapies and other non-recommended drugs for malaria treatment. Tanzania is one of the Member States participating in this programme.

Policies and guidelines for managing cases with symptoms but negative RDT results were found to be lacking in several Member States. As a result, there is limited capacity to perform differential diagnosis for RDT-negative patients at health facility level. In some states, the treatment guideline is yet to include the use of RDTs and the introduction of injectable arteminisin for severe malaria.

There were some challenges observed with implementation of ACTs and RDT's, including the following:

- Training and roll-out of ACT was delayed following the adoption of policy, which led to lower than anticipated ACT uptake;
- Training in malaria case management was not rolled out to private sector providers, some of which may serve large numbers of patients; and
- In some cases, introduction of RDT was done during low malaria transmission season, which resulted in a number of negative results. Such results could reduce confidence in the ability of RDTs to detect malaria and thus increase the inappropriate use of treatment.

Other challenges were related to medicines and included:

- Cross-border leakage of drugs;
- Importation of substandard drugs and monotherapy;

- Lack of regulation of malaria medicines resulting in availability of non-agreed malaria medicines in the private sector, including adult packets of Coartem, adult packets of Artesunate-Amodiaquiine, SP, monotherapy artesunate drugs, and even chloroquine; and

- Limited monitoring for drug resistance for ACTs and Pyrethoids BCC and health education.

In Zimbabwe, Population Science International (PSI) only recently established a communication strategy for LLINs, but the evaluation showed improved case management and rapid uptake of LLINs owing to significant behaviour change. Community malaria management committees and practices (such as the neighbour-to-neighbour or child-to-child approach) were found to be effective in addressing resistance to ITNs, LLINs and IRS rolls-out.

Mass campaigns and linkages to other programmes (such as immunisation days) were observed in some Member States. Zambia is using several strategies to promote net distribution and usage, including door-to-door campaigns, mass free net distribution, and advocacy for traditional leaders and community health workers.

A post-conflict Member State with limited infrastructure, the DRC uses community health workers as a part of its strategy to provide primary health care through community case management. The health workers are recognised as official cadres. Limited availability of IEC and BCC materials in clinics and communities was observed in some Member States. Programmes for promoting and monitoring bednets were lacking or weak in several Member States.

BCC efforts are a challenge because they create demand for commodities (such as ACTs, and SP for pregnant women) that are often out of stock at facilities. The integration of BCC efforts with other IMCI and RCH programmes needs to improve. In some Member States, community health workers work on a voluntary basis, but receive incentives from supporting partners. However, it is unclear how the community health workers will continue to be motivated once those partners leave.

Implications for development of standards for high, stable and mixed transmission zones:

1. Strengthen logistics management to avoid stock-outs of any kind;

2. Clarify guidelines for SP, RDTs and ACT use. Specifically SP should be used for IPT only and not treatment;

3. Document good practices for dissemination;

4. Mobilise funds to close the gap for universal coverage;

5. Address hard-to-reach, marginalised or other vulnerable groups;

6. Streamline policy deployment/guidelines at all levels of health facilities;

7. Replace and/or dispose of damaged nets;

8. Build capacity for monitoring the efficacy of insecticides and drugs, as appropriate;

9. Fully engage the private sector;

10. Create opportunities for learning among Member States;

11. Build human resource capacity to support the rapid scale-up of malaria control and advancement along the elimination pathway;

12. Ensure equity of access, especially for men living with HIV; and

13. Prevent cross-border leakage of drugs.

Box 4: Best practices: Surveillance systems

Zimbabwe has established a commendable system for surveillance and M&E regarding malaria control, which other Member States can learn from. Detection of epidemics of malaria occurs via a notification system that uses radio transmissions or telephone communication (rapid notification senders) to report malaria cases to the NMCP, This facilitates the identification of epidemics and malaria hot spots. The system allows continuous communication between the NMCP and all other levels of health care. The system also includes case management audits every two years and drug efficacy surveys every year, and hit as established 16 sites for vector bionomics. The National Institute for Health Research maintains strict control of the quality and efficacy of all insecticides that are imported and utilised for malaria vector control.

4.2 Crosscutting issues

The crosscutting issues are programmatic matters that are relevant to all transmission zones. Ten categories were identified under this section and they are listed accordingly. Each category outlines the findings from the assessment visits and identifies the main gaps. The implication for standards is presented at the end of the section.

4.2.1 Policy and strategy

All except one of the SADC Member State have national policies and roadmaps for malaria, but they are at different stages of developments and are undergoing updates. Malawi has a national policy that addresses all levels of health care for malaria control, which is currently under revision. The policy provides guidance to all players in malaria control (government, partners, NGO or community-based). Botswana and Swaziland are updating their national malaria strategies to reflect elimination goals. Changes in malaria drug policies to ACTs are being supported with guidelines and training manuals in Botswana. In South Africa, the identification and implementation of malaria control strategies is appropriate to the epidemiological patterns of the disease.

Swaziland regularly updates its policy, based on scientific evidence, and it has adequate guidelines for all major malaria control interventions. Tanzania has a five-year strategic plan with policies and guidelines adapted from WHO. It uses cascade orientations to train health workers. Zambia has developed a well-coordinated participatory system of developing guidelines and policy documents, with a technical group that is composed of various partners, and training and research institutions that are responsible for malaria control interventions. Zambia is using government circulars to alert and compel health workers to adopt new guidelines and policies. As a post-conflict Member State

where the formal health system is not highly functional, the DRC is using primary health care (through community health workers) and mobilising faith-based groups as interim strategies to extend health care coverage. Along with several best practices, some gaps were identified. Not all Member State policies were up to date. In one Member State, the policies had been in draft form for a lengthy period and partners were basing their work on that draft policy. At least one Member State was in the process of adopting the ACT policies and guidelines, while several were missing diagnosis guidelines on RDTs.

Ambiguity in relation to diagnostic versus presumptive management of malaria and the use of rectal artesunate has not been addressed. In several Member States, the policies were not distributed well among health workers (public and private), and copies of policies and guidelines were not easily available at health facilities. Member states in the low, unstable zone identified the need for an operational guideline for elimination. Not all national strategies provide for adapting to changes in epidemiological patterns that result from the intensified malaria control activities of Member States or from different epidemiological patterns within a Member State. For example, strategies may be unclear about when a Member State should deploy both IRS and ITNs/LLINs, when nets are sufficient; and what the necessary support actions are at various stages of elimination.

Lags in policy adoption and rollout were observed in at least two Member States, and they led to low uptake of Acts. In one Member State, malaria does not seem to appear in any policy documents, and is mentioned only in laboratory operational documents (for disease diagnosis). The Member State does not see itself as threatened by the re-introduction of malaria. At least one other Member State is still missing a BCC strategy or guideline for malaria. The role of community-based management of malaria is still controversial and needs to be addressed in both policies and guidelines.

Implications for the development of standards for policies and strategies:

1. Develop policies related to the elimination effort and accompany ith with guidelines for deployment;
2. Align policies with the up-to-date WHO guidelines on prevention and control;
3. Disseminate policies and guidelines at all level of health care system;
4. Develop operational guidelines for elimination;
5. Adapt to changes in epidemiological patterns and for different epidemiological patterns within a state;
6. Develop policies for community based malaria where appropriate; and
7. Prevent lags between policy adoption and rollout.

4.2.2 Funding and resources

In general, there has been an increase in funding for malaria in the region, both from extern donors and from Member States' themselves. For instance, the Government of Malawi has dramatically increased its funding to malaria control (approximately 12 million dollars in 2010), in addition to funds accessed through the Swaps mechanism. This constitutes about 22% of the total cash flow to the programme. The government contribution promotes ownership of the malaria control activities and enables the NMCP to conduct activities that are not covered under donor funding.

In South Africa, the national government funds the entire NMCP, even as malaria incidence diminishes. The Member State has avoided inconsistent implementation of control activities caused by funding gaps. Swaziland's Government has also consistently funded the NMCP, without relying on donor funding, while Namibia's Government is trying to cover the core costs of health services (including salaries, medicines, infrastructure and lab services) with some external financial support from the Global Fund, USAID, and WHO.

Private, for-profit organisations are heavily involved in malaria control in Zambia, particularly in increasing access to LLINs and in-door residual spraying. The companies include commercial banks, the mining corporations and manufacturing firms. In Mozambique, a few private industries are supporting malaria control as part of their commercial operations, but there are no national-level corporate contributions to malaria control. Angola, on the other hand, is one of the largest recipients of corporate funding for malaria prevention and control in the region. Development assistance for all SADC states is presented in Annex D.

Member States in the zero and low transmission categories have limited or no donor funding for malaria, even though there is major donor support in some of those states goes for HIV and AIDS and Tuberculosis programmes. Middle-income Member States (such as Botswana, Namibia and South Africa) are less attractive to donors. Also a middle-income Member State, Mauritius does not receive large amounts of external donor funding, although it receives some funding from WHO's biennium programme and via UNDP. Because Seychelles is classified as a middle-income Member State, it is not eligible to apply for donor funds—even though it wishes to invest more in malaria-related surveillance of visitors and increased mosquito surveillance. Meanwhile, Member States that do receive external donor funds are also facing shortfalls. Tanzania's NMCP has a US $500 million shortfall, which is especially affecting IRS.

At least two Member States were engaging in activities of questionable cost-effectiveness, such as fogging. Some other Member States were lagging with respect to finance utilisation and accountability procedures to facilitate the smooth submission of accurate data to funding agencies.

Implications for the development of a funding and resources strategy:

1. Cost the strategic/business plan for malaria;
2. Advocate for an increase in Member State funding commitment to malaria control; and
3. Advocate for funding for middle-income Member States to move toward elimination.


4.2.3 Human resources

While human resources are a major challenge for all Member States, there were some best practices that deserve being highlighted. Several Member States are employing task shifting. In Namibia, task shifting integrates former lay counsellors who conduct HIV tests, and the country is also considering shifting microscopy so that nurses can do it. Mozambique has a malaria coordinator in each province, and community health workers provide ACTs and use RDTs at community level. In Zimbabwe, community health workers provide services in remote or inaccessible areas, and strong coordination was observed between the NMCP and training institutions. For example, the NMCP trains nurse tutors and trainers in malaria control.

After Malawi improved its compensation packages for health workers, staff retention improved. The NMCP actively engages training institutions around curriculum development, supervision of health workers and field-based training of health workers. In Zambia, the technical working groups incorporate education and training institutions in order to increase uptake of new guidelines, while Swaziland regularly trains its malaria control cadres. The high staff turnover observed in several Member States is a significant challenge to malaria control efforts. In some Member States it is very difficult to recruit public health doctors into the public sector, and shortages of medical and nursing schools lead to reliance on foreign doctors. Health facility personnel are overstretched and supportive supervision is often lacking.

In several Member States, the curricula need to be updated with evidence-based practices. Some Member States lack staff in environmental health and disease control. Training for private sector pharmacy employees is limited or lacking in several Member States, and coordination between the NMCP and training institutions is weak in some Member States, which leads to shortages of graduates trained in malaria control. Community health workers provide health promotion, but they are seldom part of the formal health system.

Southern Africa needs at least one additional regional training centre (apart from Nazareth) to rapidly build the knowledge skills that are required to achieve malaria elimination. WHO's recommendation for minimum standards for NMCP staffing structures at the national level includes national malaria programme manager with focal personnel in:

- Case management;
- Vector control and prevention;
- Laboratory services and quality control;
- Epidemiology surveillance and data management
- Planning, monitoring and evaluation;
- Administration;
- Training; and
- IEC.

Member States reported several gaps in relation to that framework.

Zimbabwe reported gaps in M&E and administration (specifically finance), while Malawi reported shortages at all levels of health care (especially for M&E and IEC personnel). Zambia reported gaps in data monitoring management, while increased malaria control activities necessitated the redrafting of the human resources assessment plan. Angola reported having a malaria focal person in each municipality, and funding from Cuba has enabled it to post a larvicide official from Cuba in each district. Although Mozambique has a malaria focal person in each province, the NMCP lacks laboratory diagnosis capacity, leaving clinics reliant on the national laboratory. Zambia and Malawi also reported district level focal persons.

In low transmission areas, WHO recommends 1-2 focal persons in target provinces and districts with malaria foci. South Africa and Swaziland reported adequate human resources for current level of programming needs, while the six endemic districts in Botswana reported the presence of a focal person for malaria.

Implications for development of standards for human resources:

1. Develop an integrated human resource plan;
2. Adopt task shifting when appropriate;
3. Recognize community health workers for community case management, where appropriate;
4. Strengthen linkages between the NMCP and pre-service and in-service training;
5. Ensure that curricula are up-to-date;
6. Strengthen supportive supervision at facility level;
7. Address the need for an additional regional training center for malaria; and
8. Recommend the WHO minimum framework for the NMCP staff structure.

4.2.4 Procurement and supply

While procurement and supply management was commonly cited as a weakness, there were some best practices. In Botswana, Namibia, South Africa and Zimbabwe, medicines generally are highly regulated and cannot be purchased without prescriptions. In Namibia, drugs are supplied through a Central Medical System (CMS), which uses open tenders to procure medicines, and regions and districts are able to order their supplies from the CMS. Stock-outs are rare in Namibia, and there is a government commitment to set aside funds for procurement every year. The Ministry of Health created a reserve fund for all medications for treating life-threatening conditions. In addition, the CMS has its own functioning monitoring system. Medicines are highly regulated, as are pharmacies. Prescriptions are needed to obtain most medicines. There are few pharmacies in rural areas, and most people visit public clinics to get ACTs, which are free-of-charge. NGOs can only distribute medications through health facilities. In Botswana, a coordinated net procurement process with UNICEF assistance helps unify large and small NGO contributions to malaria control. (Angola is now piloting an innovative project involving ACT sales through private pharmacies.)

In Mozambique, a coordinated mechanism for borrowing or sharing malaria control resources among provinces exists during times of emergency. Zambia employs a pharmaceutical and logistics officer and supply chain manager and has pipeline software for forecasting and quantifying procurement. John Snow Inc. (JSI) is currently employing innovative models to improve logistics management in Zambia. Malawi has a national quality control laboratory, which tests all incoming drugs for quality. In Seychelles, all imported drugs need to be registered (using WHO guidelines) and quality control is exercised. In recent years Tanzania has shifted its drug procurement system at district level from a “push” to a “pull” system that is called the Integrated Logistics System. The system has been rolled out nationwide, and supervision of the system is being worked strengthened.

In Member States with low caseloads, expired RDTs and a lack of buffer stocks to counteract epidemics were problems. Insufficient supply of commodities and limited infrastructure for distribution was observed in some Member States. Several Member States need to increase their national capacities for drug testing to achieve quality control of the large influx of antimalarial drugs. Medical stores supporting Member States to manage drug distribution need support to strengthen their fleets for transporting drugs and other commodities, and additional storage space may also be required.

The issue of local manufacturers as a source of malaria commodities also arose. The challenges of local manufacturers meeting standards for WHOPES (insecticides) and pre-qualification (malaria drugs) is a concern for Member States that now depend on overseas suppliers (at higher cost and involving more bureaucracy). Examples of private sector partners and locally grown Artemisia annual were mentioned, efforts that could link into broader national development goals by providing small farmers with opportunities to grow this crop.

Cross-border leakage of drugs, as well as imports of substandard drugs and monotherapies was observed in several Member States. ACTs sometimes pass their expiry dates because of reluctance to prescribe and use them, or because of a lag between ACT policy and procurement. Forecasting was identified as a major challenge. In one Member State, retail audits of private pharmacies showed that SP and monotherapies still existed in that sector.

Implications for development of standards for procurement and supply:

1. Ensure strong regulation of medications;
2. Establish a national drug testing laboratory to monitor the quality of drugs;
3. Ensure the procurement of commodities that have undergone the pre-qualification process from WHO;
4. Develop cross-border programmes to prevent cross-border leakage of drugs;
5. Strengthen staff training in procurement and supply management;
6. Monitor for expired drugs and RDTs due to low case loads; and
7. Invest in tools for forecasting.

4.2.5 Monitoring & evaluation

As Member States move toward elimination, a strong M&E system is important. Malawi and Mozambique have a comprehensive notational malaria M&E plan, while Swaziland has established databases for all key programme activities (including those related to budget monitoring for Global Fund grants) that support timely implementation of activities in line with grant burn-up targets. In Zambia, the HMIS now includes indicators and data collection tools for malaria. The system is being computerised and monthly audits are conducted. In addition to the HMIS, Zambia has other sources of data collection. The NMCP maintains an impressive database on mosquito nets that is updated on a monthly basis and that provides detailed information on net consignments and distribution.

The HMIS was generally weak in most other Member States and most programmes personnel did not believe that the data being provided were timely or of high quality. Existing databases are not sufficiently comprehensive. Even where the system appeared to be working, there were complaints about frontline personnel's lack of interest and/or inability to use data at the point of collection.

Also observed were challenges in relation to data (such as IPT coverage) that are not collected within the HMIS data and that therefore are unknown in some Member States. Data collection challenges were also attributed to a lack of skilled personnel in several Member States. Problems with timely and adequate data flows from districts to provinces and the national level were observed in several Member States. Administrative burdens added to the problems experienced by health staff at MCH clinics hav. Due to large caseloads, providers often do not have the time to appropriately record interventions in their registers, making it difficult to evaluate actual coverage.

Implications for development of standards for M&E:

1. Ensure timely collection of high quality and adequate data;
2. Train frontline health workers in data collection and management skills; and
3. Integrate registers/data collection tools to minimise the burdens placed on staff.

4.2.6 Partner coordination and integration

In Namibia, malaria coordination is primarily government-led but the high HIV AIDS prevalence absorbs the resources. Angola's use of a national, provincial and municipal NGO for mapping helps plan interventions. Mozambique has built a strong interfaith alliance to fight malaria. In Zambia, the partnership is well coordinated through the NMCP, and a broad-based malaria task force established at district level includes businesspeople, NGOs, line ministries and interested community members. The NMCP plays a leading role in Malawi and is actively pursuing collaboration with other disease control programmes, such as TB, reproductive health (RH), and HIV and AIDS.

In Botswana and Swaziland, annual national malaria conferences provide a good opportunity for partners and district health personnel to share and learn. In the DRC, partners work in solidarity with the national malaria control programme (Programme National de Lutte contre le Paludisme (PNLP)) The intervention methods and modalities are decided at the national level and partners roll them out in a similar and coordinated way in their respective health zones. Many faith-based organisations are providing health services in the DRC.

In Mauritius, malaria is integrated into a larger Vector Control and Communicable Disease Control unit, which performs all diagnosis and treatment for malaria. Seychelles still participates in RBM meetings because if the disease were to be re-introduced to the islands, it would take a heavy toll. In several Member States, coordination is needed to achieve universal coverage, not just coverage of vulnerable groups. Several Member States lack local partners, especially in private sector.

Also identified were gaps in communication between the NMCP and districts. Collaboration between RH and the NMCP was found to be weak in several Member States. Coordination between major programmes such as malaria, HIV and AIDS, and TB is necessary at the strategy and implementation levels, but this was to be lacking generally. Member States still struggle to integrate disease control activities to increase the efficient of use of resources and to increase effectiveness. Interestingly, malaria control programmes and partners recognise the need for integration, but they seem reluctant to spearhead such a process with other disease control efforts and broader public health programmes (such as maternal and child health). In some Member States that are moving toward elimination, malaria has a low profile and the NMCP has limited access to decision-making levels in the Ministry of Health.

Implications for development of standards for partner coordination and integration:

1. Where appropriate, transform NMCPs into directorates (as has been done for HIV and AIDS, and TB);

2. NMCPs should lead partnership coordination where appropriate;

3. Pursue collaboration with other disease programmes (especially HIV and AIDS, TB and RH); and

4. Partner with private sector and local agencies.

4.2.7 Cross-border activities

It is impossible for one Member State to sustainably move to elimination when malaria continues to occur in neighbouring countries. Population movements between low and high transmission areas lead to continued spread of the disease, emphasising the critical importance of cross-border activities.

Accordingly, a Trans-Kunene Malaria Initiative has been proposed between Angola and Namibia (many Angolans enter Namibia to access health services). The initiative aims to train Angolans to begin conducting IRS on their side of the border, as well. Two donors appear interested in funding this initiative. Angola is considering using indoor lining instead of household spraying. In Botswana cross-border collaboration (with Namibia, for example) in planning activities focuses on key transmission districts and has been developed in two areas. Unfortunately, donor funding has not materialized (see Figure 8).

All the Member States recognised the key role of effective cross-border anti-malaria activities, even though considered it a higher priority than others. Cross-border control efforts face two main challenges. One is financial support, since donors tend to focus on Member State-specific pledges. The LSDI is unique in its cross-border efforts, and Member States are anxious to replicate this model in other locations. Another challenge is the leakage of malaria drugs and supplies across borders. Member States do not have the capacity to enforce pharmaceutical controls and, as a result, monotherapies and other inappropriate medicines easily enter the marketplace.

Implication for development of standards for cross-border initiatives:

1. Advocate and mobilise funds for cross-border activities; and

2. Establish platforms to discuss opportunities for cross-border initiatives.

4.2.8 Gender and equity

Generally, the malaria control programmes are addressing issues of gender and equity by pursuing universal access to interventions such as LLINs and case management. Few interventions address the underlying poverty and sociocultural limitations that hinder access to malaria control interventions. In Malawi, the malaria control programme promotes gender equity, and it has been sensitised to gender issues. In both Malawi and Zambia, equity is addressed through universal access to all efficacious interventions to control malaria. Pregnant women's needs have been specifically addressed through provision of IPTp and ITNs/LLINs, as indicated by the prevailing epidemiological patterns.


Gaps identified in several Member States included high rates of illiteracy among women and their dependency on men for making decisions. Pockets of underserved populations, such as migrant workers in mining and fishing in difficult-to-reach areas were identified.

4.2.9 Research

Some Member States have fostered ties between research/academic institutions and their malaria control programmes. Zimbabwe has a National Institute for Health Research that monitors stringent control of the quality and efficacy of all insecticides. Zambia's Tropical Disease Research Center supports drug efficacy testing for anti-malaria drugs, while Malawi's Malaria ALERT Centre conducts sentinel site surveillance on behalf of the NMCP. In Tanzania, the NMCP collaborates with research institutions that include the National Institute for Medical Research, the Ifakara Health Institute and Muhimbili National Hospital.

Operational research is needed to address social and managerial issues, not only vector and medical issues. A number of operational research needs exist, including best practices for elimination programme management, addressing the tripartite living situation of rural residents and basic KAP information. But funding to support such work is a challenge. The DRC is planning a study on zero vector lining, which is applied to the inside walls of homes. Mauritius is interested in testing the sterile insect technique whereby male mosquitoes are sterilised and released into the environment to compete with fertile mosquitoes. (Mauritius has already applied the technique successfully with fruit flies, and is working with Cyberdorf in Austria to master the breeding techniques.) Since operational research that addresses priorities identified by Governments is more likely to be translated into policy, it is important to engage Governments (particularly the NMCPs) in setting the research agenda.

Implications for development of standards for the research:

1. Strengthen ties between research/academic institutions and malaria control programmes; and

2. Engage Government in setting the research agenda.

5. PROGRESS TOWARD ROLL BACK MALARIA INDICATORS

The RBM partnership highlighted the following targets for 2010, in accordance with the Abuja targets, and as outlined in the Global Malaria Strategic Plan, 2005–2015:

- 80% of people at risk of malaria are protected by locally appropriate vector control methods, such as ITNs, IRS (where appropriate), and, in some settings, other environmental and biological measures;

- 80% of malaria patients are diagnosed and treated with effective anti-malaria medicines (such as ACT) within one day of onset of illness;

- 80% of pregnant women receive IPTp in areas of stable transmission; and

- The malaria burden is reduced by 50% from the 2000 levels.

In addition, the RBM partnership also targets reducing malaria morbidity and mortality by 75% (compared with 2005), achieving the malaria-related Millennium Development Goals, and ensuring universal and equitable coverage of effective interventions. Tables 2a and 2b present the values of these indicators as measured in the last available survey (based on the RBM web site), as well as the figures presented at the September 2010 SARN annual review meeting held in Zanzibar.

Table 2A: Progress toward Roll Back Malaria (A-N)

	Angola	Botswana	DRC	Madagascar	Malawi	Mozambique	Namibia
% households with at least 1 net	32.6 2006–07	*	28 DHS 2007	61.7 DHS 2008–09	51.4 MICS 2006	37.5 MIS 2007	24.8 DHS 2006
% households with at least 1 ITN	27.5 2006–07	9 2007	9.2 DHS 2007	59 DHS 2008–09	37.8 MICS 2006	15.8 MIS 2007	20.2 DHS 2006
% children <5 slept under any bed net previous night	20.7 2006–07	*	19 DHS 2007	49.5 DHS 2008–09	31.2 MICS 2006	9.7 DHS 2003	12.1 DHS 2006
% children <5 slept under ITN previous night	17.7 2006–07	7 2006	5.8 DHS 2007	60 DHS 2008–09	24.7 MICS 2006	6.7 MIS 2007	10.5 DHS 2006
% pregnant women slept under any bed net previous night	24.6 2006–07	*	20 DHS 2007	50.3 DHS 2008–09	*	*	10.6 DHS 2006
% pregnant women slept under ITN previous night	22.0 2006–07	4 2006	7.1 DHS 2007	46.2 DHS 2008–09	26 DHS 2006	7 2007	8.8 DHS 2006
Persons per net	*	1.5 2007	*	*	*	*	*
% pregnant women in stable transmission zone that got SP for IPTp	4.1 2006–07	*	12.1 DHS 2007	11.8 DHS 2008–09	*	*	27.8 DHS 2006
% pregnant women in stable transmission zone got IPTp2	2.5 2006–07	*	5.1 DHS 2007	6.7 DHS 2008–09	46.7 MICS 2006	20.3 MIS 2007	10.6 DHS 2006
% children <5 with fever received anti-malaria drug	29.3 2006–07	*	*	19.7 DHS 2008–09	23.9 MICS 2006	23 MIS 2007	9.8 DHS 2006
% children <5 with fever received anti-malaria drug within 24 hours	18.2 2006–07	4 2006	17.3 DHS 2007	8.1 DHS 2008–09	21 MICS 2006	17.6 MIS 2007	*
% children <5 with fever received ACT	1.6 2006–07	*	*	*	0.20 MICS 2006	4.5 MIS 2007	2.4 DHS 2006
% households receiving IRS past 12 months	2.3 2006–07	*	*	98 RTI	90 2007	52.4 MIS 2007	*

Table 2b: Progress toward Roll Back Malaria (S–Z)

	South Africa	Swaziland	Tanzania Mainland	Tanzania Zanzibar	Zambia	Zimbabwe
% households with at least 1 net	*	6.1 DHS 2006	56 THMIS 2008	82 THMIS 2007	50 MIS 2008	20.3 DHS 2005–2006
% households with at least 1 ITN	*	4.40 DHS 2006	62 THMIS 2008	82 THMIS 2007	62 MIS 2008	20.3 DHS 2005–2006
% children <5 slept under any bed net previous night	*	.70 DHS 2006	35 THMIS 2007	69 THMIS 2007	27 MIS 2006	6.70 DHS 2005–2006
% children <5 slept under ITN previous night	*	1 DHS 2006	25 THMIS 2007	59 THMIS 2007	41 MIS 2006	2.9 DHS 2005–2006
% pregnant women slept under any bed net previous night	*	.90 DHS 2006	35 THMIS 2007	64 THMIS 2007	42 2008	6.8 DHS 2005–2006
% pregnant women slept under ITN previous night	*	.90 DHS 2006	26 THMIS 2007	51 THMIS 2007	24 MIS 2006	3.2 DHS 2005–2006
% pregnant women in stable transmission zone got SP for IPTp	*	*	*	*	*	*
% pregnant women in stable transmission zone got IPTp2	*	1 DHS 2006	30 THMIS 2007	53 THMIS 2007	66 MIS 2008	6.30 DHS 2005–2006
% children <5 with fever received anti-malaria drug	*	.60 DHS 2006	*	*	58 MIS 2006	4.7 DHS 2005–2006
% children <5 with fever received anti-malaria drug within 24 hours	*	1 DHS 2006	34.4 2008	34.1 2008	29 MIS 2008	3.7 DHS 2005–2006
% children <5 with fever received ACT	*	*	14 THMIS 2007	8.4 THMIS 2007	*	*
% households receiving IRS past 12 months	*	*	95 THMIS 2007	95 THMIS 2007	39 MIS 2007	15.2 DHS 2005–2006

** Data not available*

While most Member States are making progress, only a few have achieved the RBM target.

6. DISCUSSION

In general, the assessment visits revealed that malaria is recognised by most of the SADC Member States as a high priority disease and there is national and political will to address this. In the last decade with the advent of global fund, PMI, and an increased funding commitment from the Member States themselves there has been significant progress in Abuja targets. The Member States have shown a great degree of ownership toward their malaria programmes. There is also a strong consensus that malaria is not a national but a regional and a global problem, and therefore cross-border programmes and initiatives is the way forward. In light of these significant achievements, the findings from the assessment visits are discussed below.

6.1 Zero transmission zones

For the malaria-free parts of the SADC region, it is imperative that SADC develops guidelines for preventing malaria entry or re-entry into malaria-free Member States. There should be a generic standard for preventing malaria entry or re-entry, and this could entail introducing:

- Efficient entomological surveillance systems;
- Active case finding of malaria cases;
- Standardised treatment regimens with efficacious drugs for imported malaria cases; and
- Health education to ensure that populations are aware of malaria and can recognise it.

These actions should be backed up with a policy document in each Member State. Mauritius' integrated surveillance system could provide a model for malaria-free Member States. While Mauritius and Seychelles are relatively wealthy, Lesotho might require SADC support in mobilising fiscal and technical support to set up surveillance systems and to conduct active case finding. SADC's role could include identifying a pool of technical experts to support Member States in these endeavours to ensure that technically sound systems are put in place.

6.2 Low, unstable transmission zones

For these Member States (and any Member State moving towards malaria elimination), cross-border malaria control activities supported by solid surveillance systems is cardinal. Of particular importance in these Member States is timely and appropriate malaria case management, using both rapid diagnostic tests and ACTs. While these efforts should be focused in areas where transmission already occurs, there should be provision for rapid deployment of diagnostic and treatment capacity in areas where epidemics could occur. This requires a strong logistical, procurement and supply system (and funding for such a system).

The LSDI is a good model that can be extended to the rest of the SADC region to support the malaria elimination effort. SADC can develop regional guidelines for operationalising cross-border activities, drawing on lessons learnt from the LSDI. Strong regional M&E and surveillance systems are critically important in this effort, as is the generation of timely, high-quality data.

While most Member States with high, stable transmission receive donor funding support, there is a troubling lack of donor funding for Member States with low or no current transmission and for Member States classified as middle-income countries. Consequently, the Governments of Botswana and South Africa are providing most of the funds needed for their malaria efforts. There is concern that these Member States need special attention to develop models for pre-elimination and prevention of malaria reintroduction. It will be difficult to develop and standardise such models without donor support.

6.3 High, stable, mixed transmission zones

In terms of case management, the biggest challenge for these Member States is assuring access to effective diagnosis and treatment with effective drugs in the context of weak health systems, poor infrastructure, limited fiscal and human resource, lapses in managing logistics, weak bureaucratic systems for purchasing, and a heavy dependence on suppliers outside Africa. Obtaining consistent brands of diagnostic kits was also reported as a challenge in some Member States. This situation calls for establishing efficient procurement and supply management systems that are supported by efficient logistical management and information systems. In Zambia, JSI is testing two models that have shown good results. If successful, SADC could take the lead in providing the requisite technical and fiscal assistance to set up a procurement and supply management system that is relevant to the region.

Timely availability of high quality commodities was also as a challenge. It might be worthwhile for SADC to explore supporting local companies to become qualified to produce quality-assured products (such as treated nets, for example). The sourcing of RDTs of a consistent brand and quality has to be addressed.

In addition, Member States experiencing challenges in relation to access are testing community delivery models of key interventions to control malaria. Various models are being explored using community health workers of varying qualifications, some of whom are paid some not or receive donor-provided incentives. There is a need to harmonise the approaches to community-based delivery of health care in ways that take into account the qualifications of personnel, compensation, updated technical abilities and the legal environments of Member States.

The human resource deficit (in terms of both the quality and quantity of personnel) was another common issue raised by Member States. SADC needs to play a leading role in addressing human resource development and retention, including introducing mechanisms to ensure that the region trains adequate numbers of personnel to cover the range of activities essential for the malaria elimination endeavour. The region might have to consider setting up a regional centre of excellence to ensure that health workers are appropriately trained and updated in state-of-the-art practices.

M&E was cited as a challenge for most Member States, many of which lack both the capacity and a sense of urgency for introducing robust M&E systems. Measurement processes are somewhat disjointed or rudimentary in most Member States and are often driven by partners rather than by the NMCPs. Member States need to be assisted to set up cost-effective M&E systems that are able to generate timely and high-quality data that can be used for programme management and assessing intervention performance. While special studies like the Malaria Indicator Surveys are useful, a good and efficient monitoring system is not only cost-effective, but more useful because data is available continuously (rather than having to wait for a year or two before assessing performances or taking or tailoring programme management decisions).

Strong databases to cover the information relating to the various aspects of malaria control (including expertise available in the region) would boost the elimination effort. These databases should be regionally accessible. Yet, the databases observed in Member States were very limited. For example, Zambia had a database only for ITNs/LLINs, while Zimbabwe had one only for dealing with commodity control. Member States are also struggling with data quality. Data management and use is important for malaria control, and investments are needed to improve this aspect of an effective malaria control effort. Entomological surveillance is done in some Member States, but it needs to occur in a standardised manner across the region, with results availability to all Member States. Currently, South Africa, Swaziland and Zimbabwe conduct quality entomological surveillance, and these Member States could assist the rest of the region in setting up a strong system.

Strategic deployment needs to be addressed with regional guidelines since epidemiological patterns shift as malaria control activities are intensified. Such guidelines should help Member States determine when to deploy both IRS and ITNs/LLINs or when nets alone are sufficient, and what support activities are needed at the various stages of elimination. In some Member State visits it was not evident that malaria control personnel understood these issues.

The integration of disease control activities to increase efficiency and effectiveness is another challenge. Regional guidelines on the functional relationship between major disease control programmes (such as malaria, Tuberculosis and HIV and AIDS) are needed. Stronger integration of these programmes would result in better utilisation of resources and strengthened health systems overall. Member States seem to recognise this issue, but seem unable to join forces to discuss the modalities of integration. Consequently, integration is very limited and lacks extensive impact. SADC may have a role to play in encouraging its Member States to address this matter with greater enthusiasm, from policy to health facility levels.

The decentralisation of health systems in some Member States (such as Malawi, Zambia and Zimbabwe) is viewed both positively and negatively. In some cases there is a concern that control is lost since districts exercise their autonomy and are not always supportive of the priorities set by the national control programme. On the other hand, the additional income from basket funding that goes directly to districts was seen to support the implementation of some malaria activities.

Another issue that surfaced was the need to elevate NMCPs to the level of Directorate in the Ministry of Health, with direct access to the Permanent Secretary. It was felt that if malaria is to be eliminated it should be treated as an emergency (in the manner of HIV and AIDS). Partnerships exist in high-burden Member States and coordination seems adequate. However, in some cases Member States had little control over which brands of commodities were purchased. Standards should be set for the purchasing of items by partners that support malaria control programmes.

Funding for malaria programmes varies across the region. The United States Government and the Global Fund provide support in seven Member States classified as either high, stable transmission or mixed transmission (Angola, DRC, Madagascar, Malawi, Mozambique, Tanzania and Zambia). A major concern by some of the Member States was the low contribution of national budgets to malaria control. It was felt that this reduces the autonomy and decision-making powers of Member States. The heavy dependence on external funding also often delays the availability of commodities. Activities not covered by external funding rarely get off the ground. It is important that SADC Member States explore mechanisms for increasing national contributions to malaria control programmes and a standard should be set for national funding of those activities. A related issue is the cost-effective use of resources for achieving maximum impact.

Generally, the malaria control programmes are addressing issues of gender and equity by pursuing universal access to interventions such as LLINs and case management. There are few interventions for addressing the underlying poverty and sociocultural limitations that hamper access to malaria control interventions. BCC and IEC programmes exist in most Member States but it is not clear to what extent they are affecting equity and supporting the elimination of gender-based hindrances. (Zimbabwe has evaluated the impact of its communication strategy, but the results were not yet available). Gender and equity need greater attention. Regionally, it would be helpful to identify and document both effective and ineffective practices, and set up mechanisms for disseminating the information to inform malaria control programmes.

7. CONCLUSION

In conclusion, the Member State assessment identified both exemplary practices and challenges for the treatment, control and prevention of malaria in the SADC region. The findings apply to several areas: policies and strategies, coordination among stakeholders, funding and resources, human resources and capacity building, procurement and supply management, M&E and sentinel surveillance, access to interventions, cross-border concerns, and community participation and education.

A summary of exemplary practices and of recommendations based on Member State experiences is provided in Annex E. The commonly observed gaps and best practices have informed the set of minimum harmonised standards for malaria control for the SADC region. Once adopted, these standards can ensure harmonised progress toward malaria elimination in the SADC region.


Annex A: SADC MEMBER STATE INTERVIEW GUIDE

Member State: _____

Partner/Respondent Agency: _____

Greetings: We are working with SADC to help develop malaria programming standards for the region. Prior to our visit, we collected documents and studies about malaria policies, programmes and research in the Member State. We are now talking to key malaria stakeholders, like you, to validate what we found in documents, find out how policies and programmes are actually being implemented, collect any additional programme documents that might be available, and most importantly, to learn from stakeholders about exemplary practices and lessons learned about malaria elimination in this Member State that can form the foundation of regional programming standards.

We ask you to share your thoughts about malaria control efforts generally in the Member State, as well as from the perspective of your own programme or agency. Your views are very important, and we therefore intend to keep your comments confidential. In that light, please note that this is not an evaluation of an individual Member State's malaria control efforts, but an effort to help Member States learn from each other to reach the common goal of eliminating malaria. Thank you for your assistance.

1. Policy

a. What are the effective dates of this Member State's current malaria policy?

b. What types of policy- and programme-related documents are you aware of (such as guidelines, standards, action or business plans, strategies, financial roadmaps, etc.)?

c. What guidance from regional and international partners was received in developing the current national malaria policies and programmes? (Probe whether these were based on international standards and best practices)

- Please describe any existing gaps in policies that are affecting the acceleration of malaria prevention and control.

d. Do the current malaria policy and programme guidelines address the country as a whole, or are there variations in malaria control for different regions/areas or different population groups?

- Please describe any variations and the rationale for such.

e. To what extent are policies and guidelines being disseminated to frontline health care providers in understandable and easy-to-follow language?

- Please give examples of this process (for example, in-service or cascade training, orientation sessions, and coverage).
- Is the implementation of these policies monitored?
- If so, describe the monitoring process and use of findings; if not, what are the constraints?
- Have updates to guidelines been incorporated into pre-service training programmes for health care workers?

f. Please give examples of the integration of malaria into other health guidelines and policies.

- Are malaria guidelines integrated into policies for related technical areas, such as reproductive health, and HIV and AIDS?
- Are related technical guidelines integrated into malaria policy, as well?
- Please comment on any gaps in integration.

g. Please describe which stakeholders are involved in malaria policy and guideline development, updating and dissemination processes in this Member State. Suggest improvements in the process.

h. Based on this discussion of achievements, please suggest lessons learned and national "best practices" in policy and guideline formulation that could form the basis of malaria programme standards in this Member State, as well as in the SADC region.

2. Member State achievements

a. Please describe this Member State's major achievements in its efforts to control malaria.

b. If not mentioned above, please comment on any achievements in the following intervention areas:

- Integrated vector management/control (ITNs, LLNs and/or IRS—probe for other approaches);
- Malaria case management—diagnosis and treatment;
- Malaria control in pregnancy, including IPTp as relevant, case detection/management and ITNs;
- Behavior change communication;
- Monitoring and evaluation;
- Disease surveillance;
- Health systems strengthening and integration of health care delivery; and
- Procurement and supply management.

c. For each achievement, describe the factors that made it possible.

d. Have there been any programme shortcomings, and why did they occur?

e. Based on this discussion of achievements, please suggest national "best practices" and lessons learned that could form the basis of malaria programme standards in this Member State, as well as in the SADC region.

3. Pathway to elimination

Consider the pathway to malaria elimination that ranges across the following phases:

- Control interventions have begun, but are not widespread;
- Control interventions have been scaled up, reaching universal coverage;
- Control interventions have been maintained, such that malaria mortality has declined by 50%;
- Pre-elimination with strong surveillance for case detection;
- Elimination with no recorded transmission; and
- Prevention of reintroduction.

a. Where along the pathway would you place your Member State? Please explain your answer.

b. If not mentioned specifically, to what degree has each of the following interventions been implemented—for example, control started, scale-up, maintained control? For each intervention, are there focal areas within the Member State?

- ITNs/LLINs (where on the pathway, where in the Member State?)
- Case detection and management (where on the pathway, where in the Member State?)
- Intermittent preventive treatment in pregnancy and/or infancy (where on the pathway, where in the Member State?)
- Other integrated vector management activities—specify (where on the pathway, where in the Member State?)


4. Transmission zones

a. What, if any, are the different epidemiologically and ecologically different malaria transmission zones/areas in this Member State? (Please use list below to probe)

- Endemic, year-round transmission
- Meso-endemic, stable but seasonal transmission
- Meso-endemic, unstable and epidemic transmission
- Urban malaria with low transmission, but some pockets of higher transmission

b. Please describe how national malaria control efforts address the malaria situation in each of these transmission settings (see list in 2b above).

c. How does your agency respond to the different transmission settings?

d. What, if any, are the particular challenges to adapting programming to the different types of transmission settings in this Member State (see list in 3b above)?

5. Member State challenges and gaps

a. Please describe the remaining challenges and gaps in this Member State's efforts to control malaria.

b. If not mentioned above, please comment on any challenges/gaps in the following intervention areas:

- Integrated vector management/control;
- Malaria case management—diagnosis and treatment;
- Malaria control in pregnancy, including IPTp as relevant, case detection/management and ITNs;
- Behavior change communication;
- Monitoring and evaluation;
- Health systems integration and strengthening;
- Procurement and supply management.

c. For each challenge or gap, outline the factors responsible.

d. From the foregoing, please suggest key lessons for improving malaria programming in this Member State and in the region.

6. Agency contributions and challenges

a. Please describe your agency's role in malaria prevention and control. Please explain whether your agency is responsible for particular interventions and/or for particular sections of the Member State. Are there specific targets that your agency is trying to achieve? If yes, what are they?

b. Please describe the major contributions that your agency has made toward this Member State's achievements (see list in 2b above).

c. For each achievement, describe the factors that made this possible.

d. Please share with us any project, reports or documents that may help us understand your activities, interventions and achievements.

e. Please describe the main challenges facing your agency in helping control malaria in this Member State (see list in 5b above).

f. For each challenge, outline the factors responsible.

g. From the foregoing, please suggest key lessons for improving malaria programming in this Member State and in the region.

7. Structures

a. Briefly describe the structures (and partnerships) that exist to support and coordinate malaria prevention and control efforts.

b. Are these structures or forums formally constituted? (If yes, how often do they meet?)

c. Which key stakeholders in public, private and NGO sectors are involved?

d. Would you say that these structures are adequate and representative or not, and why?

e. Please provide suggestions for improvement.

f. From the foregoing, please suggest key lessons and best practices for improving malaria programming in this Member State and in the region.

g. If minutes of these partnership meetings exist, could you please share them with us?

8. Coordination

Please provide examples and suggestions for improvement for each section

a. Are reproductive/maternal health and malaria control programmes working together to effectively implement MIP prevention and control?

b. Are malaria control and child health programmes effectively working together to ensure access to appropriate treatment, bed nets and possible IPT for children less than five years of age?

c. Are malaria control and AIDS control programmes collaborating to address the malaria prevention needs of people living with HIV?

d. Are malaria control and laboratory and diagnostic programmes working together to effectively address malaria diagnostics?

e. Are malaria control and research institutions collaborating on disease surveillance?

f. How is malaria programming linked with national and sub-national essential drug/supply procurement and supply processes?

g. Are the private sector and NGOs involved in planning, training and other aspects of malaria programming?

h. From the foregoing, please suggest key lessons and best practices for improving malaria partner coordination in this Member State and in the region.

9. Decentralisation

a. Does the health structure of the Member State follow a decentralised system?

b. If yes, how much power is delegated to the district/regional/provincial level?

c. Are programmes effectively integrated at the district/regional/provincial level?

d. How does this system affect malaria programming?

e. From the foregoing, please suggest key lessons and best practices for improving malaria programming in this Member State and in the region.


10. Please tell us about any cross border control efforts

a. Which Member States are involved?

b. How is coordination and standardisation of effort achieved?

c. Specifically what measures are taken to ensure that malaria is not or will not be re-introduced into your Member State once you are in the elimination phase?

- For example, are there specific measures for travellers coming from malaria endemic areas?
- How are possible new cases of malaria identified?

d. Are there any entomological surveys conducted presently or planned for the future? Please describe contingency plans for finding malaria vectors that have been re-introduced.

e. From the foregoing, please suggest key lessons and best practices for improving cross-border malaria programming in this Member State and in the region.

11. Please talk about the malaria data collection, analysis and use processes in this Member State.

a. What are the main sources of malaria data used in national programming, as well as in your own agency's work?

b. How is malaria programming linked into the national health management information system?

c. Explain if and how national malaria data provide information on service utilisation based on geographical area, gender, age, educational level, etc. that can help target programmes better.

d. Please provide examples and suggestions for improvement in malaria data collection, analysis and dissemination.

e. Please comment on efforts to achieve the following and give examples of specific actions:

- Timeliness of malaria data reporting;
- Use of data for good decision-making;
- Quality (validity and reliability) of malaria data.

f. From the foregoing, please suggest key lessons and best practices for improving malaria data management in this Member State and in the region.

12. Please describe what you know about the procurement and supply management and logistics processes for malaria control efforts in this Member State.

a. Talk about the different and/or coordinated procurement and supply management, logistics and monitoring processes for the major malaria commodities such as nets, drugs, RDTs, insecticides, etc.

b. What are the strengths of the procurement and supply management processes in this Member State? What contributed to them?

c. What are the challenges for the procurement and supply management processes in this Member State? What contributed to them?

d. From the foregoing, please suggest key lessons and best practices for improving malaria PSM and logistics processes in this Member State and in the region.

13. Human Resources

a. Generally, do appropriate and adequate levels of human resources exist to support programme implementation?

- Does adequate and appropriate staffing exist for each of the major malaria interventions we have been discussing?
- Please talk about established vs. temporary positions.
- Please talk about why shortfall exists and what is being done about it.

b. Comment on whether appropriate staffing for malaria programming exists at national, district and other levels.

c. How are the growing demands of HIV prevention and care affecting malaria prevention and control?

d. For those cadres providing the bulk of malaria treatment, do they have the necessary mandate to treat effectively (for example, allowing nurses to treat or stabilise cases of severe malaria, or allowing community health workers to perform malaria tests)?

e. In what ways are community health workers being mobilised to address malaria control services at the grass roots level?

- Please talk about front line auxiliary staff.
- Please talk about community volunteers.
- Do they receive supervision and support from the district level? Please describe.

f. From the foregoing, please suggest key lessons and best practices for improving malaria programming in this Member State and in the region

14. Financial resources

a. Please tell us about the adequacy of monetary resources available at the Member State level to support scale up of malaria prevention and control.

b. Are you aware of this Member State's roadmap process for identifying and meeting funding gaps? If "yes", please comment.

c. Comment on the resources available for the major malaria programme intervention areas, including how they relate to your own agency.

d. Specifically comment on the availability of resources for supportive activities such as BCC, M&E, partnership coordination, training/capacity building, etc., including how it relates to your own agency

e. What contributions are made by public/government, donor, private and NGO sources?

f. Please identify the major funding gaps as related to types of malaria intervention and various transmission zones and areas.

g. What are the Member State's and your organisation's plans to leverage additional resources?

h. Describe the system for malaria programme funding/spending.

i. Is the Member State using a decentralised system for health spending?

j. How are financial responsibilities shared among partners?

k. Specifically comment on how sub-national levels like regions, provinces and districts receive and use funds.

l. Are districts or provinces allocating their own funds to malaria prevention and control?

m. From the foregoing, please suggest key lessons and best practices for improving malaria programming in this Member State and in the region

15. Please tell us about efforts to ensure equity in implementing malaria control efforts.

a. Generally in this Member State, how accessible and well-utilised are gender-related health services (for example, antenatal care and family planning)?

b. How well are health services for pregnant women integrated into malaria control efforts?

- Are women able to access insecticide-treated/long-lasting insecticidal nets early in pregnancy to prevent malaria in pregnancy or do pregnant women have to wait until they give birth at a health facility, which offers no "net protection" during pregnancy?
- Are insecticide-treated/long-lasting insecticidal nets available at antenatal care clinics free of charge or at a subsidised rate?
- (If IPT is used in this Member State) Are supplies of sulfadoxine-pyrimethamine (SP) for intermittent preventive treatment in pregnancy (IPTp) available at antenatal care clinics for prevention or are the supplies only available in a pharmacy.
- Are there clear guidelines about reserving SP only for IPT?
- What is done to ensure that SP is only used for IPT so that its efficacy is preserved and adequate stocks are available for IPT only?
- Please describe any efforts to introduce and use IPT for infants and children.

c. Does decision-making power in the household affect access to treatment? If so, how does the malaria control programme address this?

- How do household dynamics affect access to and use of ITNs and malaria treatment? How does the malaria control programme address this?
- What are the broader gender issues of household and community access to resources (for example, ability to earn and use funds) that impact on the malaria control programme?

d. How is the malaria programme working to ensure access to all vulnerable and disenfranchised groups—remote rural areas, people living with HIV, youth (particularly adolescent girls), the poor, ethnic minorities, migrants, etc.?

- How is the malaria programme collaborating with other development efforts to address any social imbalances (for example, income generation, education, etc.)?
- How are financial responsibilities shared among these different development efforts?

e. From the foregoing, please suggest key lessons and best practices for improving equity of implementing malaria programming in this Member State and in the region.

16. Recommendations

a. Please offer any additional ideas on the best practices and key lessons learned about malaria control that have not been covered above.

b. Are there specific best practices and lessons based on different transmission settings?

c. What is needed to move the Member State to the next stage on the pathway to elimination?

d. What are the specific programmatic needs?

e. What are the supportive, health systems needs?

f. What opportunities exist to improve malaria prevention and control with the realisation of immediate results?

[Please remember to collect any reports, studies, guidelines and documents that we do not already have, including relevant organograms, service flow charts, etc.]


Annex B: SADC Member State Visit Clinic Observation Guide

Local Health Facility Observations

Name of Member State:..... Name of District: .....

Location of Facility: ..... Type/Level of Facility: .....

Number of Professional Staff: ..... Number of Support Staff:.....

1. Status/titles of persons met

1.		6.	
2.		7.	
3.		8.	
4.		9.	
5.		10.	

2. National policies and guidelines—list below copies of any national malaria policies and guidelines that are available in the facility

Type/Name of document	Number on hand	Freely available to staff (yes/No)

3. Stock taking

Malaria commodity	Amount in stock now	Days out-of-stock in past 3 months	Reasons for stock-outs, if any
ACTs—AL			
ACTs—AA			
Other Anti-malarial drugs (specify)			
Sulfadoxine-pyrimethamine (SP)			
LLINs			
RDTs			
IRS pesticides			
Malaria IEC Materials (specify)			
Other			

4. Monitoring and evaluation—which of the following are available?

Type of record/ form used	Focus on	Stock of forms available (Y/N)	Which malaria interventions included?				
			ITNs	IPTp	RDT	ACTs/Rx	Other
Health cards	ANC						
	Child Health						
	Other						
Registers	ANC						
	OPD						
	In-Patient						
	Campaigns						
	Other						
Summary forms for clinic	ANC						
	Child Health						
	OPD						
	In-Patient						
	Campaigns						
	Other						
Graphs showing progress/services	ANC						
	Child Health						
	Campaigns						
	Other						

5. Major malaria partners in the community/catchment area

Partner	Role	Contribution cash, kind

6. Partnership mechanisms—comment on set up of any coordinating mechanisms among partners, including efforts to involve civil society, NGOs and the private sector.

7. Best Practices in this facility/community in implementing the malaria programme.

8. Challenges and bottlenecks in implementing the malaria programme.

9. Other notes, observations, comments.


Annex C: Time Table for Member State Visits

TRAVEL SCHEDULE FOR FIELD ASSESSMENT VISITS									
Team Member	Feb	March				April			
	Wk4	Wk1	Wk2	Wk3	Wk4	Wk1	Wk2	Wk3	Wk4
William Brieger		Angola 27–5	Botswana 6–12	Mozambique 12–20					
Natalie Hendler	DRC 22–26	Namibia 1–5	Tanzania 8–12				Mauritius 11–13 Seychelles 14–16		
Chilunga Puta				Zambia 16–21	Zimbabwe 21–26		Malawi 6–11 RSA 11–15	Swaziland 15–19	Lesotho 19–21

Annex D: Development Assistance for Malaria in SADC Member States

Table D.1: External assistance for malaria

MEMBER STATE	MILLIONS USD 2000–2007
ANGOLA	68
BOTSWANA	–
DRC	62
LESOTHO	–
MADAGASCAR	63
MALAWI	63
MAURITIUS	–
MOZAMBIQUE	95
NAMIBIA	11
SEYCHELLES	–
SOUTH AFRICA	3
SWAZILAND	1
TANZANIA/ZANZIBAR	155
ZAMBIA	88
ZIMBABWE	17

Table D.2: Major malaria donors in SADC Member States

MEMBER STATE	MAJOR DONORS[¥]	YEAR	ESTIMATED AMOUNT IN MILLIONS, USD	COMMENTS
Angola	GFATM Round 3	2005–2008	35.0	Angola is finishing Phase II of Round 3.
	GFATM Round 7	2008–2013	32.5	
	PMI	2006–2010	57.0	
	MOH	2005–2012	29.5	Donates to USAID and Jhpiego for activities.
	ExxonMobil	2005–2010	19.9	
Botswana	MOH	2005	391,131	More emphasis on HIV and AIDS.
DRC	GFATM Round 3	2008–2009	53.9	Focus on ITNs, case management, IPTp
	GFATM Round 8	Sept 2008	145.5	Submitted proposal to scale up for impact
	USAID	2007–2009	–	Axxes project (drug mgmt system, IPT, ITN)
	World Bank	2007–2011	–	PMURR[19], PARSS[20]
	UNICEF-JICA	2007–2011		LLINs, IPTp, ACTs
Lesotho	–	–	–	–
Madagascar	GFATM Round 1	2003–2005	2	
	GFATM Round 3	2004–2006	10.4	Social marketing of ITNs
	GFATM Round 4	2005–2007	74.9	Community LLINs; epidemic detection
	GFATM Round 7	2008	26	LLINs, ACTs
	PMI	2009	16.7	
	UNITAID	2007–2009	5	
Malawi	GFATM Round 2	2005–2007	36.7	ITN, IPT, Case management,
	GFATM round 7	2008–2010	36.5	Home-based management of malaria, LLIN
	PMI	2006–2011	27.0[21]	Procure ITNs, fund ART drugs, IRS, M&E
	World Bank	2006	5M	Health sector support
Mauritius	–	–	–	–
Mozambique	GFATM Round 6		33.3	3m ACT treatments, 800,000 LLINs
	UNITAID	2008–2009	4.8	7.2m ACT treatments, 3m LLINs, USD 5m IRS
	PMI/USAID	2009–2010	>25	48,000 LLINs
	PEPFAR	–	–	See South Africa LSDI below.

19 *Emergency Multisectoral Reconstruction and Rehabilitation Programme (French acronym).*
20 *Health Sector Rehabilitation Support Project (French acronym).*
21 *Only the 2010 budget allocation could be located.*

MEMBER STATE	MAJOR DONORS¥	YEAR	ESTIMATED AMOUNT IN MILLIONS, USD	COMMENTS
Namibia	MoH GFATM Round 2 GFATM Round 6 WHO UNICEF	Annually 2003 2007 Annually Annually	7.1 9.1 13.5 100,000 50,000	–
Seychelles	–	–	–	–
South Africa	GFATM for LSDI Round 2 Round 5 extension RCC	2003–present	47.5	South Africa gets no Global Fund funding for malaria, but its Medical Research Council received funding for inter-Member State LSDI (Mozambique, South Africa and Swaziland)
Swaziland	GFATM Round 2 GFATM Round 8 LSDI I	2003–2008 2009–2011 1999–2007	1.4 5 –	Received less than 5% of the total funding. See LSDI in South Africa above
Tanzania	GFATM Round 1 GFATM Round 4 GFATM Round 7 GFATM Round 8 PMI World Bank	2003–2007 2005–2007 2008–2013 2009–2014 2009 2007–2009	78.1 76.0 20.7 100.4 35 25	TNVS Provision of ACTs RDTs, ACTs in private sector, M&E Catch-up Campaign for Under-5, BCC Universal LLITN campaign, M&E ACTs. Larviciding U-5 Catch Up Campaign, re-treatment
Zanzibar	GFATM Round 1 GFATM Round 4 GFATM Round 8 MOH PMI	 2004–2006 2009–2014 2009 2006–2009	1.1 8.5 5.1 0.1 9	Policy and guidelines, Acts ACTs, ITNs ACTs, case management, pharmacovigilance IRS
Zambia	GFATM Round 1 GFATM Round 4 GFATM Round 7 PMI World Bank	2003–2005 2005–2007 2008–2010 2006–2011 2005–2012 –	39.2 42.7 17.7 55.4 20.0 –	IEC, ITNs training of health workers improved case management, IRS, ITNs coordination Scaling up interventions, surveillance programme support Health system performance

MEMBER STATE	MAJOR DONORS¥	YEAR	ESTIMATED AMOUNT IN MILLIONS, USD	COMMENTS
Zimbabwe	GFATM Round 1	2003–2005	8.6	Diagnosis, management at community and primary health care level
	GFATM Round 5[22]	2006–2008	20.1	Community education, case management and drug efficacy monitoring
	GFATM Round 8[23]	2009–2011	67.1	
	JICA, DFID		–	Health systems strengthening

LSDI = Lubombo Spatial Development Initiative [22] [23]

¥ All GFATM amounts are amounts approved.

Table D.3: Overview of Global Fund grant disbursements

MEMBER STATE	PRINCIPAL RECIPIENT	ROUND	MAXIMUM APPROVED	AMOUNT DISBURSED (USD)	TOTAL APPROVED	TOTAL DISBURSED
Angola	UNDP	3	35,029,872	34,833,588	67,542,520	50,760,638
	MOH	7	32,512,648	15,927,050		
Botswana	–	–	–	–	–	–
DRC	UNDP	3	53,936,609	53,936,608	199,457,413	120,809,481
	PSI	8	145,520,804	66,872,873		
Lesotho	–	–	–	–	–	–
Madagascar	PSI	1	2,000,063	1,872,363	113,070,056	76,101,807
	UGP	3	10,035,054	10,002,421		
	UGP & PSI	4	74,939,490	49,516,830		
	PSI & UGP	7	26,095,449	14,710,193		
Malawi	MOH	2	36,773,714	17,957,714	106,489,972	36,640,918
	National Govt.	7	36,545,312	18,683,204		
	N/A	9	33,170,946	0		
Mauritius	–	–	–	–	–	–
Mozambique	MOH	2	28,149,603	23,489,200	128,904,638	36,612,895
	MOH	6	33,353,933	13,123,695		
	NA	9	67,401,102	0		
Namibia	MOH	2	9,103,621	6,199,265	22,657,190	14,649,836
	MOH	6	13,553,569	8,450,571		
Seychelles	–	–	–	–	–	–
South Africa	–	–	–	–	–	–

22 *An additional grant of USD 11.8M was granted to UNDP by the Global Fund in 2009.*
23 *Awarded to UNDP.*

MEMBER STATE	PRINCIPAL RECIPIENT	ROUND	MAXIMUM APPROVED	AMOUNT DISBURSED (USD)	TOTAL APPROVED	TOTAL DISBURSED
Swaziland	NERCHA	2	1,478,928	1,477,328	6,530,483	4,039,028
	NERCHA	8	5,051,555	2,561,700		
Tanzania	MOH	1	78,079,834	70,222,011	186,945,897	186,945,897
	MOH	4	76,086,764	75,086,764		
	MOH	7	20,707,304	10,170,104		
	MOH	8	100,427,017	31,467,018		
Zanzibar	MOH	1	1,153,080	1,153,080	14,783,655	11,116,112
	MOH	4	8,438,788	8,438,788		
	MOH	8	5,191,787	1,524,244		
Zambia	CHA& MOH	1	39,273,800	38,673,791	99,711,531	70,539,875
	CHA& MOH	4	42,721,807	28,422,833		
	CHA& MOH	7	17,715,924	3,443,251		
Zimbabwe	MOH	1	8,559,911	8,250,984	95,763,395	50,404,585
	UNDP/MOH	5	20,121,670	19,740,979		
	UNDP	8	67,081,814	22,412,622		
Total Amount	**1,041,856,750**				**658,621,072**	

CHA = Churches Association of Zambia; NERCHA = The National Emergency Response Council on HIV and AIDS of the Government of the Kingdom of Swaziland; UGP = Unite de Gestion des Project d'Appui Secteur Sante; RTNACT = The Registered Trustees of the National AIDS Commission Trust of the Republic of Malawi

Table D.4: PMI investments

MEMBER STATES	BUDGET (IN USD, MILLIONS)				
	FY05	FY06	FY07	FY08	FY09
Angola	1.74	7.5	18.6	18.8	18.7
Madagascar	–	–	–	16.8	16.7
Malawi	–	2.045	18.5	17.85	17.7
Mozambique	–	6.3	18	19.8	19.7
Tanzania	2	11.5	27	34	35
Zambia	–	–	9.5	14.8	14.7


Annex E: Overview of Member State recommendations and best practices

	TRANSMISSION	ELIMINATION	BEST PRACTICES
ANGOLA	Endemic for malaria. MIP and case management are being implemented nationwide. Zonal differences have been applied to vector control measures.	Has achieved less than 60% of the RBM 2005 targets. No zone is close to sustained control. Recommended strategies are: • Strengthen logistic management and donor funding. • Focus on surveillance, M&E. • Strengthen diagnostic capability; • Tailor elimination efforts to transmission zones and scale up.	IRS activities are focused on low-transmission areas near the border with Namibia. NMCP not targeting nets in areas with extremely low levels of malaria transmission, such as urban Luanda.
BOTSWANA	Increasing incidence of malaria over the last few years.	No systematic plan for malaria elimination since 2002; low uptake of interventions. Should: • Strengthen malaria diagnosis. • Develop an M&E plan, update database. • Use BCC to encourage uptake of interventions by communities. • Use social marketing campaigns to promote ITNs.	Focusing interventions on high-transmission areas bordering DRC
DRC	Malaria endemic. Malaria control is challenging due to poor road infrastructure and weak health systems.	Far from elimination. Should focus on: • Scaling up interventions. • Mass distribution of LLINs. • Large potential for improvement in IPTp during ANC visits. • Restricting IRS to high-transmission areas. • Preventing overuse of Artesunate monotherapy to prevent increase in resistance.	NMCP has been making strong strides in coordinating donors and partners (including faith-based partners) to cover the whole Member State. DRC has been effectively using community health workers and CCM to expand health services to hard-to-reach populations.
LESOTHO	Currently, there is no local transmission of malaria and all cases are imported.	No indigenous malaria. Should identify strategies to avoid reintroduction of malaria by establishing: • An effective surveillance system to detect all cases of imported malaria. • A system to ensure that all malaria cases are effectively treated.	None identified

	TRANSMISSION	ELIMINATION	BEST PRACTICES
MADAGASCAR	Malaria was reintroduced due to inadequate control measures. Should consider strategies to prevent reintroduction.	Has potential to reach elimination. Continued progress depends on stable political environment. Should: • Strengthen surveillance and detection to promptly identify malaria epidemics. • Improve diagnostic capacity. • Revise malaria strategy to incorporate measures to prevent reintroduction.	The Member State is partnering with private companies to harvest locally grown Artemisia in order to manufacture ACTs. Has implemented a community mobilisation approach known as "Champion Commune," which has shown results in primary health care.
MALAWI	Still has worrisome levels of malaria transmission. Should: • Scale up best practices identified through research to Member State-wide programmes (move out of project mode). • Put in place process and impact evaluation systems Member State-wide to develop databases that can inform programme implementation to increase effectiveness and achieve population-level impact in reducing malaria transmission. • Close data gap evident from the literature review.	Is far from elimination and needs to focus on scaling up for impact. To achieve this, it is recommended that the Member State urgently: • Addresses the human resources-related issues. • Strengthens its logistic management systems. • Scales up integration of malaria control activities with well-established and functioning delivery systems (for example, ITNs delivery linked to immunisation campaigns. • Strategically strengthens partnership coordination.	Has demonstrated the utility of communities in improving health care delivery through operational research, and it is recommended that: • Identified bottlenecks be documented and addressed from a programme perspective. • What works should be scaled up, having addressed perceived limitations (examples include the community-based IMCI and IPTp community-based delivery).
MAURITIUS	Although the anopheles vector still exists, malaria has been eliminated from the island.	No longer any indigenous malaria, but it has the potential to return. Efforts need to continue on: • Active case detection. • Vector control. • Provision of chemoprophylaxis to residents travelling to malaria endemic Member States.	Vigilant active case detection. All travellers are screened at the ports of entry and those from malaria endemic Member States are followed up regularly by surveillance officers. Excellent diagnostic capabilities, primarily by microscopy. A strong public health system that covers the entire population.


	TRANSMISSION	ELIMINATION	BEST PRACTICES
MOZAMBIQUE	Malaria endemic. Epidemics in the aftermath of tropical cyclones. Two sentinel surveillance sites are monitoring transmission weekly with the intention of adding more centres.	Elimination is proceeding through the LSDI and entering the scale-up phase. National strategy should: • Account for malaria prevention in the aftermath of natural disasters. • Provide intervention for internally displaced persons. • Improve integration between HIV and malaria programmes for targeting ITNs. • Take research to scale by adding IPTi as part of comprehensive malaria control package.	The LSDI has supported research that has shown that the effect of using dual vector control measures (IRS and ITNs) is synergistic and it has been successfully employed in some regions. Faith-based organisations are involved in sharing basic malaria messages with their congregations. Community health workers/agents provide ACTs at the community level and use RDTs. They keep detailed records and their curriculum has been updated. More community health workers are needed
NAMIBIA	Mixed transmission zone with large part of the Member State malaria free, but the northern part with unstable, epidemic malaria. Northern part of the Member State also where most of the population lives.	Has made headway toward successful implementation of interventions. The Member State should: • Strengthen cross-border initiatives (Trans Zambezi and Trans-Kunene). • Shift focus to active case detection, quality diagnostics, sustained behavior change, and disease and entomological surveillance.	Overall public confidence in the health system and high use of facilities. Strong, centrally controlled, pharmaceutical management systems. Awareness-raising efforts played a large role in increasing intervention coverage and reducing malaria related morbidity and mortality.
SEYCHELLES	Malaria free. Has eradicated the anopheles vector.	Good measures in place to prevent reintroduction, including vector control at ports of entry and chemoprophylaxis for travellers. The Member State should continue these efforts and consider instituting active case detection and entomological monitoring, as well.	Excellent health information systems with weekly use of data for decision-making.
SOUTH AFRICA	Has limited transmission and it is recommended that collaborative activities between the Member State and its endemic neighbours should be strengthened if malaria is to be eliminated. South Africa is a major destination and it might prove difficult to eliminate the parasite pool maintained by infected human beings.	Is poised to move from the control to the pre-elimination phase. To achieve pre-elimination status, it should: • Strengthen the targeted provision of ITNs to young children, pregnant women and HIV-infected groups. • Implement integrated vector management, scaling up of ITNs to complement IRS. • Participate in multi-Member State malaria elimination programmes. • Strengthen programme surveillance and M&E. • Strengthen laboratory diagnostic capacity.	IRS has been successfully used by the Member State and this experience should be shared with Member States struggling to start IRS.

	TRANSMISSION	ELIMINATION	BEST PRACTICES
SWAZILAND	Has reduced transmission substantially, but the Member State is epidemic-prone. It is recommended that the Member State not only sets up a sentinel site surveillance system as planned, but also maintains and strengthens a system for tracking where malaria cases are coming from (especially as the Member State moves toward elimination).	Is targeting elimination by 2015. Recommendations include: • Strengthen vector control and management by adopting distribution of ITNs complementing the IRS distribution. • Strengthen RDT and microscopy at facility level. • Address gap in human resources. • Strengthen surveillance systems.	IRS has been successfully used by Swaziland, and this experience (practical and technical aspects) should be shared with Member States struggling to start IRS, such as Malawi.
TANZANIA/ZANZIBAR	Tanzania is almost entirely malaria endemic. Zanzibar is in pre-elimination stage: malaria rates have decreased to less than 1% in most parts.	Biggest challenge is bringing interventions to scale through weak health systems. Recommendations include: • Strengthen distribution channels for nets, ACTs and IPTp. • Improve supply chain management to prevent frequent stock-outs of drugs. • Continue improving surveillance systems. • Zanzibar should focus on maintaining strong surveillance systems, good diagnostics and prompt malaria control measures to prevent reintroduction.	National scale-up of performance quality standards for delivering MIP services in the context of antenatal care. The Tanzania National Voucher Scheme, a public-private partnership for pregnant women and caregivers of infants. Government instituted cadre of district-level malaria/IMCI focal persons used for implementation of interventions and advocacy for local government budgeting towards malaria. Zanzibar's Malaria Early Epidemic Detection System, which monitors weekly data for outbreaks and uses mobile technology to facilitate reporting.


	TRANSMISSION	ELIMINATION	BEST PRACTICES
ZAMBIA	Is predominantly endemic for malaria and still has substantial scale-up to do. To further reduce transmission, it is recommended that: • Efforts should be made to devise nationwide systems to deliver malaria control interventions to the vulnerable but hard-to-reach groups. • Successful models of service delivery (for example, strategic integration of ITN delivery with the EPI programme) should be scaled up. • Zambia should seriously address the issue of disrupting malaria transmission in hard-to-reach areas and deliberately design partnership activities to deal with this aspect.	Zambia should move out of project mode and rapidly scale up for impact.	Has a very good model for partnership coordination and collaboration that should be documented and shared with other Member States that are struggling in this area.
ZIMBABWE	Has sizeable transmission and should: • Rapidly get its malaria control programme fully functional. • SADC should consider special assistance to Zimbabwe to help it strengthen malaria control.	Needs to collaborate very closely with other SADC malaria control programmes in order to move quickly out of the current malaise toward scaling up for impact (if necessary exchange visits should be organised).	Zimbabwe has a good surveillance system for insecticide efficacy and picking up malaria epidemics. This could be shared with the rest of the region. It has also a good quality control system for all insecticides coming into the Member State.

Directorate of Social & Human Development & Special Programs SADC Secretariat

Private Bag 0095
Gaborone, Botswana
Tel: (267) 395 1863
Fax: (267) 397 2848
Email: registry@sadc.int
Website: www.sadc.int

ISBN: 978-99968-0-207-2