

AFRICAN UNION

الاتحاد الأفريقي



UNION AFRICAINE

UNIÃO AFRICANA

Addis Ababa, ETHIOPIA P. O. Box 3243 Telephone +251115-517700 Fax : +251115-517844
Website : www.africa-union.org

ASSEMBLY OF THE AFRICAN UNION

Eleventh Ordinary Session

30 June – 1 July 2008

Sharm El-Sheikh, EGYPT

Assembly/AU/5(XI)

STATUS REPORT ON MALARIA

**PREPARED IN FRAMEWORK OF PROGRESS REPORT ON THE
IMPLEMENTATION OF THE COMMITMENTS OF THE
MAY 2006 ABUJA SPECIAL SUMMIT ON HIV/AIDS,
TUBERCULOSIS AND MALARIA (ATM)**

TABLE OF CONTENTS

Topic	Page
Executive Summary	1-2
Background	3-6
Situation Analysis	
• Leadership at National, Regional and Continental Levels	6
• Resource Mobilization	6-10
• Prevention, Treatment, Care and Support	10
• ITNs	10-11
• Intermittent Preventative Treatment of Malaria in Pregnancy	12-13
• Treatment coverage	14
• Indoor Residual Spraying (IRS)	15
• Access to Affordable Medicines and Technology	18-19
• Research and Development	19
• Partnership and Advocacy	19-20
• Monitoring, Evaluation and Reporting	20-21
Conclusion and Recommendations	22
References	23
Annexes	24-26

EXECUTIVE SUMMARY

The AU Heads of State and Government adopted the Abuja Declarations and Plans of Action in 2000 and 2001, committing themselves to intensifying the fight against HIV/AIDS, TB, Malaria and other infectious diseases (ORID). At their Abuja Special Summit of May 2006, they reaffirmed these pledges and committed themselves to scaling up action towards universal access to HIV/AIDS, TB and Malaria services with renewed vigour. In April 2007, the African Union launched the Malaria Elimination Campaign during the 3rd Session of the AU Conference of Ministers of Health. They also adopted the Africa Health Strategy, as an approach to harmonized Health and Development Strategies in Africa. This Report describes the progress made in the implementation of these targets with special focus on the implementation of the 11 programme areas outlined in the implementation of the Abuja Call for Accelerated Action towards Universal Access to Services. It has been compiled from several published and unpublished reports on the malaria situation in Africa as at end of 2007, unless otherwise stated.

All countries in Africa have established RBM coordinating bodies and, developed Malaria Strategic Plans (MSPs). By 2004, only 4 nations had achieved the goal of devoting 15% government expenditure to health with a regional average of 8.8 %. Several initiatives to increase funding for malaria control have emerged and include the Global Fund (GFATM), World Bank Booster Programme (WBB), the Presidents' Malaria Initiative (PMI) and The Islamic Development Bank. To date, the GF has committed 1.7 billion US \$ to malaria control in Africa and about US \$ 645 million from various sources was spent on malaria control in Africa.

To increase access to malaria control interventions, 74% of countries have waived taxes on anti-malarials, 64% have removed taxes or introduced waivers on ITNs while about half have waived taxes and tariffs on nets, netting materials and insecticides. In 2006-2007, over 33 million ITNs were distributed through campaigns in 22 countries. About 25% of households own at least one mosquito net of any type, while 12 % own at least one ITN. By 2007, 7 countries had achieved more than 40% household owning at least 1 ITN. On average, 8% of children under-five sleep under an ITN. However, ITN use by children under five has exceeded 40% in Rwanda, the Gambia, Guinea Bissau, Sao Tome and Principe and Guinea Bissau. Use of ITNs by pregnant women is even lower at 5%.

All the 35 countries where IPTp is recommended have adopted the policy but only 20 countries are implementing country-wide. Coverage with IPT is less than 10%. However, some countries like Zambia 61%, Malawi 45% and, the Gambia 33% have achieved higher IPT coverage.

All countries except 2 have adopted ACTs as 1st line treatment for malaria, with 25 already implementing the policy. Across the region, 34% of children with fever received an anti-malarial treatment. However, in the Gambia (52%), Tanzania (51%), Ghana (48%) and Sierra Leone (45%) received anti-malarial treatment within 24 hours mostly with chloroquine which is no longer effective. Use of ACT is very low; in some 14 countries with 2005-7 data, the median proportion of children under five years with fever receiving an ACT was only 2%.

By end of 2007, 25 out of the 42 malaria endemic countries in the region had included IRS in their national strategy. Of these, 17 routinely implement IRS as a major malaria control intervention while six are piloting IRS in a few districts. In the 2006-2007 malaria season a total of about 5 million units/structures were sprayed with an operational coverage in target areas of about was 83% protecting about 21 million people.

Several initiatives to increase access to malaria control commodities have emerged. The Affordable Medicines facility for Malaria (AMFm) was established to bring down the cost of ACTs and help phase out the monotherapies to avoid the development of resistance. The Global RBM partnership was established in 1998. Consequently, all countries in the African region have established partnerships at the country level. Also, sub-regional RBM partnerships networks (SRNs) have been established that bring together all key partners in the sub-region to consolidate support for malaria control in the respective countries.

Since 2000, 25 April has been commemorated as Africa Malaria Day. Regional events have been held across the sub-region and nationally. The commemoration of Africa Malaria day has firmly place malaria on top of the agenda in many countries. In 2007, 25 April was also declared World Malaria Day and the 1st anniversary of the World Malaria was marked on 25 April 2008 with the theme "*A Disease Without Borders*".

Data from over 25 household surveys conducted in 2005-2007 has been used to compile this report. All the countries in the sub-region have functional HMIS although interpretation of the trends in malaria cases and deaths is difficult due to incomplete reports, non-standardized reporting and reliance mostly on clinical diagnosis. However, in selected countries that have scaled up interventions but also have more consistent and complete data, such as Eritrea, Kenya, Rwanda, Sao Tome and Principe, South Africa, Swaziland and Zanzibar Island in the United Republic of Tanzania, there have been reductions in malaria cases and deaths at health facility level.

Most countries in Africa are moving towards universal access to malaria prevention and control among all at risk of malaria. Malaria Elimination has been discussed in several AU sessions but much needs to be done before many countries are ready for malaria elimination and subsequently, eventual eradication.

Member states have made moderate progress towards achieving targets set at the Abuja 2000, 2001 and 2006 and by RBM Partnership and the MDGs. Great political

commitment, adoption of better policies as well as increased funding for malaria control from governments, development agencies and funding initiatives have contributed enormously to these gains. However none of the countries with the Malaria burden has achieved all the targets.

1. Background

1.1 Malaria Control Targets

Abuja Declaration 2000, By 2005

- At least 60% of those suffering from malaria should be able to access and use correct, affordable and appropriate treatment within 24 hours of onset of symptoms
- At least 60% of those at risk of malaria, particularly pregnant women and children under 5 years of age should benefit from suitable personal and community protective measures such as ITNs
- At least 60 % of all pregnant women who are at risk of malaria, especially those in their 1st pregnancies, should receive IPT
- At least 60% of the epidemic-prone countries will have capacity to detect early and respond appropriately to malaria epidemics.

By 2010

Halve the malaria mortality for Africa's people by 2010.

RBM Partnership and World Health Assembly Resolution 2005

By 2010

- 80% of people at risk of malaria are protected by appropriate vector control methods such as ITNs, IRS
- 80% of malaria patients are diagnosed and treated with effective anti-malarial medicines e.g. the artemisinin-based combination therapies (ACTs) within one day of onset of illness.
- In high transmission areas, 80% of pregnant women receive intermittent preventive treatment (IPTp)
- The malaria burden is reduced by 50% in comparison with the 2000 levels

By 2015

- Malaria morbidity and mortality are reduced by 75% in comparison to 2005
- Malaria-related MDGs are achieved
- Universal and equitable coverage with effective interventions.

Millennium Development Goals

- Target 8: to have halted by 2015 and begun to reverse the incidence of malaria and other major disease.
 - Indicator 21. Incidence and death rates associated with Malaria
 - Indicator 22. Proportion of population in malaria-risk areas using effective malaria prevention and treatment measures.

1.2 Special Summit on HIV/AIDS, Tuberculosis and Malaria¹

In May 2006, Heads of State and Government of the African Union held a special summit on HIV/AIDS, Tuberculosis and Malaria, to review the status of implementation of Declarations and Frameworks for Action on the 2000 Abuja Summit on Roll Back Malaria, and the 2001 Abuja Summit on HIV/AIDS, TB and ORID. During the summit, the Heads of State and Government adopted the “*Abuja Call for Accelerated Action towards Universal Access to HIV/AIDS, Tuberculosis and Malaria services*”².

The call collectively resolved dedication to a comprehensive remedial effort anchored on an implementation mechanism that addresses the following program areas:

- i: Leadership at National, Regional and Continental Levels
- ii: Resource mobilization
- iii: Protection of Human Rights
- iv: Poverty Reduction, Health and Development
- v: Strengthening Health Systems
- vi: Prevention, Treatment, Care and Support
- vii: Access to Affordable Medicines and Technologies
- viii: Research and Development
- ix: Implementation at national level
- x: Partnerships
- xi: Monitoring, Evaluation and Reporting

1.3 Africa's move from Malaria Control to Elimination

The Africa Malaria Elimination Campaign also takes into account the variation in the burden and epidemiology of malaria in the different regions of the continent. It defines the focus of malaria control and elimination through incremental programming for elimination by region within the member states. Countries with high burden of malaria will aim at disease control thus reducing malaria as a public health problem through the Scaling Up for Impact (SUI), with a long-term goal of eliminating malaria, while the immediate direction in countries with low burden of malaria will be elimination of malaria. Countries that succeeded malaria elimination as well as those countries currently are free of malaria will aim to maintain the malaria-free status.

The Africa Malaria Elimination Campaign

The main goal of the Africa Malaria Strategy is to reduce the burden of malaria with the ultimate aim of elimination through ensuring universal free or highly subsidized access to prevention and treatment interventions, and to contribute to the socio-economic development of the people of Africa in support of making progress towards

¹ Special Summit of African Union on HIV and AIDS, Tuberculosis and Malaria (ATM). Abuja, Nigeria. 2-4 May, 2006. Sp/Assembly/ATM/2(I). Rev 3

² Abuja Call for Accelerated Action towards Universal Access to HIV and AIDS, Tuberculosis and Malaria services in Africa. Sp/Assembly/ATM/2(I). Rev 3

the Millennium Development Goals by 2015 and the WHO Malaria Strategies. Through incremental steps, African countries will subsequently aim to eliminate malaria and interrupt local transmission. The planning needs to be country specific in order to deal with the timelines required to reach the preparatory stages of elimination. The general direction to move from malaria control to elimination through incremental programming;

a) High Transmission Areas (referred to as Group 1)

In most of the African countries, malaria transmission is intense with high levels of malaria morbidity and mortality. Although the Abuja Report of the Abuja Declaration found that considerable progress had been made, the current status of coverage with anti-malarial interventions is unlikely to produce impact by 2010. For the countries not mentioned below (the rest of Africa) they are considered to have high transmission of malaria even though some countries may have some malaria free areas within their borders. For these countries, the direction of the Africa Malaria Elimination Campaign is to have universal coverage of preventive and treatment interventions against malaria in order to reduce the burden of malaria to levels where it is no longer a public health concern. The interventions would consist of indoor residual spraying (IRS), use of insecticide treated materials (ITMs), intermittent preventive treatment (IPT) including other related prevention measures, and diagnosis and treatment (combination therapies) of malaria with universal access to these interventions. Sustainable financing for the implementation of malaria interventions and strong advocacy for social and community mobilisation for sustained delivery and use are critical for achieving impact. In addition, strong surveillance and health information systems as appropriate and strong inter-country and cross border collaboration are critical in order to achieve reduction in the burden. Once this stage is completed, the duration of which depends on the efforts and achievements of individual countries, this group of countries would subsequently aim to move on to the stage of malaria elimination.

b) Low Transmission Areas (referred to as Group 2)

The intensity of transmission and incidence of malaria in countries such as Algeria, Botswana, Namibia, South Africa, Swaziland, the Comoros, Cape Verde, Sao Tome and Principe is relatively low and involves parts of the countries. There have been improvements in access to anti-malarial measures, as well as promising impacts on malaria prevention and control efforts. For these countries, the immediate direction of the Africa Malaria Strategy is to move from malaria control to elimination, as a logical extension of the successes in malaria control achieved by these countries. The approach in these countries should be the implementation of anti-malaria program deliberately aimed at elimination. These programmes combine intensive efforts to control the disease locally through facility based case management, active case detections and treatment approach, strong surveillance system and targeted vector control with extensive inter-country collaboration for screening and follow-up of imported cases. Through the incremental stage, these countries will subsequently aim to maintain a malaria-free status.

c) Transmission has been interrupted (referred to as Group 3)

Countries including Egypt, Libya, Tunisia, Mauritius and the Seychelles in which interruption of malaria transmission was declared recently, the policy of the Malaria Strategy will be prevention of malaria re-introduction and, subsequent certification of malaria elimination.

1.4 Scope of Report and Methodology

In the Abuja summit 2006, the Heads of State and Government specifically requested for periodic reports on the status of implementation according to the programme areas that are relevant to malaria in section 1.2 above, targets set in the Abuja Declarations, the RBM Strategic plan and the MDGs. The report has been compiled from published and unpublished reports that have been reviewed, summarized and synthesized to give an overall view of the situation in the region. Where possible, data are presented in the form of tables, graphs and charts to allow comparison across the region. Given that some of the data are survey-based it has not been possible to have recent data on all the countries as the attention has been paid to 2005-2007 data except for trend analysis in countries with two data points after the year 2000.

2. Situation Analysis

2.1 Leadership at National, regional and continental Levels

Since 2000, all countries in the region established RBM coordinating bodies and also developed Malaria Strategic Plans (MSPs) in line with recommended WHO strategies. Currently, 18 countries have developed second generation MSPs or are in the process of finalizing them. These MSPs have been useful for guiding and coordinating partner involvement in malaria control as well as in mobilizing resources from the GFATM.

2.2 Resource Mobilization

Countries committed themselves to increase government expenditure on health. By close of 2004, the only governments that were devoting at least 15% of government expenditure on health were Burkina Faso 15.3 %, Liberia 20.1%, Malawi 28.8 % and Rwanda 16.5%³. The regional average is 8.8 % while the global average is 14.3% as shown in table 2.

Since 2001, several initiatives to increase funding for malaria control have emerged to complement government expenditure on health as well as other bilateral and multilateral arrangements in individual countries. The major initiatives funding traditional malaria control include the Global Fund (GFATM), World Bank Booster Programme (WBB), the Presidents' Malaria Initiative (PMI) and The Islamic Development Bank. The Bill and Melinda Gates Foundation is a major funder of malaria research aimed at developing or improving malaria control tools.

³ WHO (2007) World Health Statistics.

The GFATM through rounds 1-7 has so far committed 23% of grant resources to malaria⁴. To date, 1.7 billion US \$ have been committed by the fund to malaria control in Africa of which 55% has been disbursed as shown in table 3.

⁴ <http://www.theglobalfund.org> (accessed on 8 April 2008)

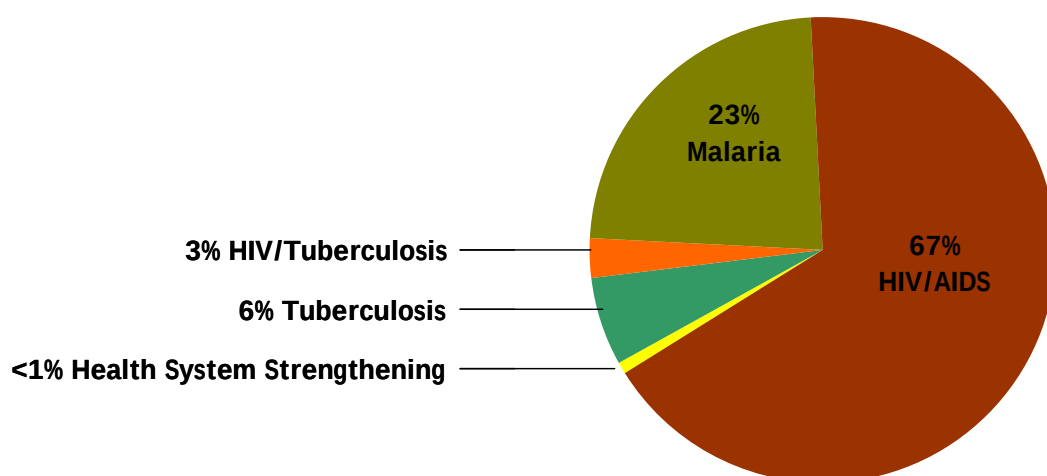


Fig 1: GFATM Allocation of funds by disease entity.

Source: www.theglobalfund.org

The Presidents' Malaria Initiative (PMI) is a US government project that has committed 1.2 billion US \$ to malaria control in 15 high burden countries in Africa. The World Bank Booster Programme has earmarked 500million US \$ for phase 1 as at October 2007. The Islamic Development Bank has launched a malaria initiative, committing US \$ 20 million to malaria control in 3 countries in 2007.

It is estimated that in 2007, about US \$ 645 million was spent on malaria in Africa as shown in table 1.

Table 1: Analysis of funds available for malaria control in Africa in 2007

Agency	Amount	% of total
UNITAID	16,126,378	2%
Global Fund	284, 247,775	30%
National Government	183,752,784	20%
PMI/USAID	154,306,523	17%
World Bank	99,079,739	11%
Other	191,853,866	20%
TOTAL	645,119,290	

Source: Adapted from RBM (2007) Malaria Landscape Report

Countries have received technical support from WHO and other RBM partners in proposal development which is a pre-requisite for accessing the funds as well as grant negotiation and implementation support.

Table 2: Government Expenditure on Health by year 2004

Country	Total expenditure on health as % of GDP	General government expenditure on health as % of total expenditure on health	General government expenditure on health as % of total government	External resources for health as % of total expenditure on health	Per capita government expenditure on health at international dollar rate
Algeria	3.6	72.5	8.4	0	121
Angola	1.9	79.4	4.4	9.1	30
Benin	4.9	51.2	9.8	10.2	21
Botswana	6.4	62.9	10.5	2.5	317
Burkina Faso	6.1	54.8	15.3	26.8	42
Burundi	3.2	26.2	2.3	17.6	4
Cameroon	5.2	28	10.5	5.3	23
Cape Verde	5.2	75.8	12.3	20.7	171
Central African Republic	4.1	36.8	10.9	47.7	20
Chad	4.2	36.9	9.5	7	15
Comoros	2.8	56.9	8	18.3	14
Congo	2.5	49.2	4.4	3.6	15
Cote d'Ivoire	3.8	23.8	4.6	5	15
Democratic Republic of the Congo	4	28.1	7.3	19.1	4
Equatorial Guinea	1.6	77.1	7	3.8	172
Eritrea	4.5	39.2	4.2	59.6	11
Ethiopia	5.3	51.5	9.4	35.2	11
Gabon	4.5	68.8	13.9	1.3	182
Gambia	6.8	27.1	5.9	23	24
Ghana	6.7	42.2	8.4	29.9	40
Guinea	5.3	13.2	4.5	9.5	13
Guinea-Bissau	4.8	27.3	3.5	31.6	8
Kenya	4.1	42.7	8.2	18.3	37
Lesotho	6.5	84.2	13.4	8.7	117
Liberia	5.6	63.9	20.1	37.8	14
Madagascar	3	59.1	8.7	45.5	17
Malawi	12.9	74.7	28.8	59.4	43
Mali	6.6	49.2	12.8	13.8	27
Mauritania	2.9	69.4	5.3	20.2	30
Mauritius	4.3	54.7	9.8	1.4	282
Mozambique	4	68.4	9.1	55.9	29
Namibia	6.8	69	13.5	16.9	281
Niger	4.2	52.5	10.3	21.3	14
Nigeria	4.6	30.4	3.5	5.6	16
Rwanda	7.5	56.8	16.5	37.1	72

Sao Tome and Principe	11.5	86.2	13.1	53.3	122
Senegal	5.9	40.3	9.8	12.8	29
Seychelles	6.1	75.3	10.2	2.4	478
Sierra Leone	3.3	59	7.8	35.4	20
South Africa	8.6	40.4	10.8	0.5	302
Swaziland	6.3	63.8	11.2	9.5	234
Togo	5.5	20.7	6.9	8.9	13
Uganda	7.6	32.7	10	25.2	44
United Republic of Tanzania	4	43.6	8.5	27.1	12
Zambia	6.3	54.7	12.8	36.3	34
Zimbabwe	7.5	46.1	8.9	13.1	64
AFRO	6	43.9	8.8	9.2	47
Global	8.7	55.9	14.3	0.3	434

Source: Adapted from WHO (2007) World Health Statistics

Table 3: Status of implementation of Malaria Global Fund Grants as at 31 March 2008

Country	Round	2-Year Funding (USD)	5-Year Funding (USD)	Funds Disbursed (USD)	2-year % disbursed	5-year % disbursed
Angola	3	35,029,872	35,029,872	31,273,309	89%	89%
	7	32,512,650	78,470,624	-	-	-
Benin	1	2,973,150	2,973,150	2,955,032	99%	99%
	3	2,145,813	2,145,813	2,027,272	94%	94%
	7	14,652,196	24,490,417	-	-	-
Burkina Faso	2	7,499,988	7,499,988	7,119,071	95%	95%
	7	19,093,226	41,432,214	-	-	-
Burundi	2	40,487,004	40,487,004	19,449,502	48%	48%
Cameroon	3	31,781,187	31,781,187	19,636,091	62%	62%
	5	15,862,047	26,993,635	3,249,624	20%	12%
Central African Republic	4	16,663,897	16,663,897	10,377,530	62%	62%
Comoros	2	2,485,878	2,485,878	2,119,383	85%	85%
Cote d'Ivoire	6	10,987,490	21,066,500	4,325,690	39%	21%
Democratic Republic of Congo	3	53,936,609	53,936,609	47,450,938	88%	88%
Equatorial Guinea	5	12,906,111	25,999,072	7,283,488	56%	28%
Eritrea	2	7,911,425	7,911,425	5,883,769	74%	74%
	6	5,943,130	13,374,247	1,011,501	17%	8%
Ethiopia	2	73,875,211	73,875,211	70,599,857	96%	96%
	5	59,113,829	140,687,413	54,870,206	93%	39%
Gabon	4	9,348,388	9,348,388	8,616,322	92%	92%
	5	4,443,168	20,025,684	3,531,771	79%	18%
Gambia	3	13,861,866	13,861,866	10,389,134	75%	75%
	6	9,145,120	20,234,923	4,594,102	50%	23%
Ghana	2	8,849,491	8,849,491	8,729,474	99%	99%
	4	38,887,781	38,887,781	34,802,301	89%	89%
Guinea	2	6,893,509	6,893,509	5,125,461	74%	74%
	6	17,339,248	26,978,776	861,693	5%	3%
Guinea-Bissau	4	3,613,397	3,613,397	1,878,727	52%	52%
	6	3,438,484	12,816,656	267,735	8%	2%
Kenya	2	27,700,377	27,700,377	4,640,447	17%	17%
	4	81,749,756	186,096,553	57,138,768	70%	31%
Liberia	3	12,140,921	12,140,921	12,140,921	100%	100%
	7	12,695,907	37,380,198	-	-	-
Madagascar	1	2,000,063	2,000,063	2,000,063	100%	100%
	3	10,035,054	10,035,054	8,476,620	84%	84%
	4	41,140,706	41,140,706	38,920,730	95%	95%
	7	26,095,449	69,199,450	-	-	-
Malawi	2	37,631,810	37,631,810	17,957,714	48%	48%

Country	Round	2-Year Funding (USD)	5-Year Funding (USD)	Funds Disbursed (USD)	2-year % disbursed	5-year % disbursed
	7	34,839,182	62,000,902	-	-	-
Mozambique	2	28,149,603	28,149,603	18,672,445	66%	66%
	6	25,591,825	36,747,308	5,794,450	23%	16%
Multi-country Africa(RMCC)	2	21,432,343	21,432,343	18,330,996	86%	86%
	5	6,501,141	21,232,348	5,336,245	82%	25%
Namibia	2	6,235,950	6,235,950	5,055,109	81%	81%
	6	8,538,063	14,438,658	5,589,556	65%	39%
Nigeria	2	20,994,149	20,994,149	20,241,784	96%	96%
	4	74,542,287	74,542,287	35,523,950	48%	48%
Rwanda	3	39,023,049	39,023,049	17,676,232	45%	45%
	5	39,649,362	39,649,362	28,140,771	71%	71%
Sao Tome and Principe	4	3,484,859	3,484,859	2,453,215	70%	70%
	7	4,234,962	8,698,492	-	-	-
Senegal	1	4,285,714	4,285,714	1,526,770	36%	36%
	4	28,778,260	28,778,260	21,725,500	75%	75%
	7	30,302,135	68,029,925	-	-	-
Sierra Leone	4	8,886,123	14,855,611	6,956,097	78%	47%
	7	10,011,250	26,108,640	-	-	-
Swaziland	2	1,820,500	1,820,500	1,137,515	62%	62%
Tanzania	1	79,825,087	79,825,087	18,260,733	23%	23%
	4	76,086,764	76,086,764	54,201,787	71%	71%
	7	20,707,304	52,545,829	-	-	-
Togo	3	5,885,906	5,885,906	4,220,865	72%	72%
	4	10,694,981	10,694,981	5,541,215	52%	52%
	6	6,976,629	10,770,258	3,616,885	52%	34%
Uganda	2	23,211,300	23,211,300	21,054,781	91%	91%
	4	66,432,148	158,047,079	59,071,374	89%	37%
	7	51,422,198	125,571,990	-	-	-
Zambia	1	39,273,800	39,273,800	24,145,873	61%	61%
	4	43,495,326	43,495,326	22,460,576	52%	52%
	7	18,003,233	37,502,022	-	-	-
Zanzibar (Tanzania)	1	1,153,080	1,153,080	1,153,080	100%	100%
	4	8,438,788	8,438,788	5,270,954	62%	62%
Zimbabwe	1	8,559,911	8,559,911	8,250,984	96%	96%
	5	20,121,670	28,491,009	6,798,371	34%	24%
TOTAL		1,690,460,090	2,462,200,849	937,912,359	55%	38%

Source: GFATM – <http://www.theglobalfund.org> (accessed on 8 April 2008)

2.4 Prevention, Treatment, Care and Support

Following the Abuja Declaration of 2000, several countries have scaled up use of malaria prevention and control measure such as ITNs, IPT and IRS.

2.4.1 Insecticide Treated Nets (ITNs)

To increase the access to malaria control interventions, 74% of countries have waived taxes on antimalarials, 64% have removed taxes or introduced waivers on ITNs while about half have waived taxes and tariffs on nets, netting materials and insecticides.

Since 2002, several countries have prioritized the rapid scale up of ITN use by targeting mainly young children and pregnant women with free or highly subsidized ITNs.

In 2006-2007, over 33 million ITNs were distributed in 22 countries, mainly through integration with immunization campaigns and maternal and child health services. This has resulted in a dramatic increase in ITN coverage to about 50% in those countries. However, the ITN use at household level is consistently lower than ITN possession due to inadequate communication about consistent use of ITNs. Also, distribution of free ITNs through routine EPI and ANC services is still very low.

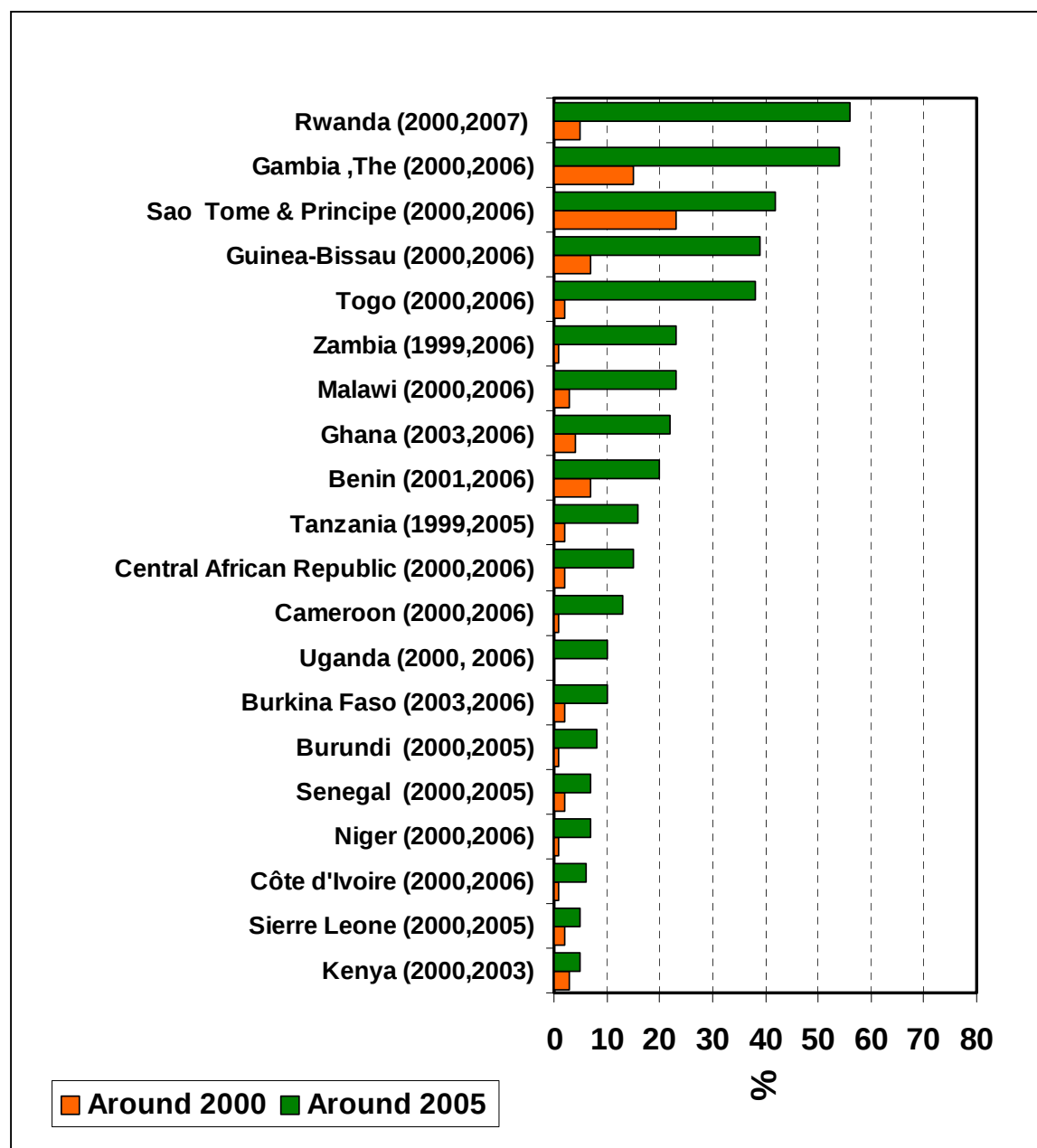
Across the region, 25% of households own at least one mosquito net of any type. However, some countries such as Guinea Bissau 79%, Congo 76%, and Niger 69 % have much higher coverage with any net. With regard to insecticide-treated nets (ITNs), about 12 % of households have at least one ITN. By end of 2006, some countries had achieved high coverage rates with ITNs such as Rwanda 50%, the Gambia 50%, Guinea Bissau 44%, Niger 43% and Togo 40%⁵.

On average, 8% of children under-five sleep under an ITN. All countries in the African Region with trend data available showed that ITN use among children aged less than 5 years has increased at least thrice in 19 countries since 2000 as shown in figure 2. ITN use by children under-five years in 2006-2007 had exceeded 40% in Rwanda, the Gambia, Guinea Bissau, Sao Tome and Principe and Guinea Bissau as shown in Fig 1. In spite of these gains, ITN use still falls far short of the regional and global targets.

Use of ITNs by pregnant women is a key intervention for prevention of malaria. Across the region, it is estimated that only 5% of pregnant women sleep under an ITN. Some countries with recent data (2003-2007) have achieved higher coverage levels such as Benin 20%, Rwanda 60%, Eritrea 50%, Kenya 37% and Malawi 15%.

⁵ UNICEF & RBM (2007) *Malaria & children progress in Intervention coverage*

Fig 2. Trends in ITN use in children under 5 years of age in 19 countries.



Source: Adapted from UNICEF & RBM (2007) Malaria & children progress in Intervention coverage. Additional data from unpublished MIS reports.

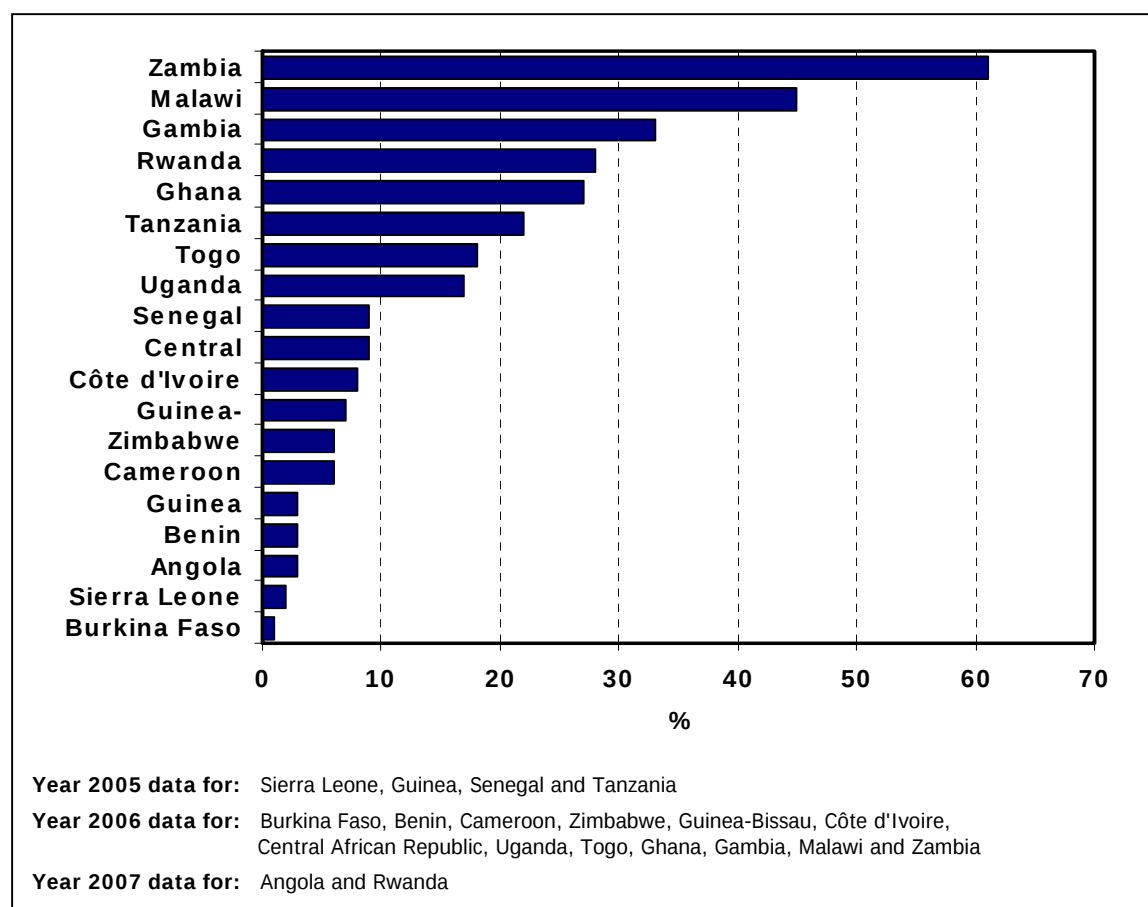
2.4.2 Intermittent Preventative Treatment of Malaria in pregnancy

Intermittent Preventive treatment of malaria in pregnancy using at least 2 doses of SP is a safe and effective way for protecting both the mother and her unborn child from malaria. By the end of 2007, all the 35 countries where IPTp is recommended had adopted the policy but only 20 countries were implementing it country-wide and the rest on a limited scale. Coverage with IPT has remained low with most countries with recent data having coverage less than 10%. However, some countries like Zambia 61%,

Malawi 45% and, the Gambia 33% have higher IPT coverage principally because they adopted the policy much earlier as shown in figure 2⁶.

The potential for scaling up IPT in malaria-endemic countries is linked closely to the coverage and quality of Antenatal Consultation (ANC) programmes since the 2 doses are usually administered at ANC in the second and third trimester of pregnancy. Across the region, more than two-thirds of pregnant women were attended to at least once by skilled health personnel during their pregnancy. However, very few attend ANC up to 4 times as recommended by WHO while others report too late to receive the two doses. For example, in Uganda (2001) whereas more than 92% of pregnant women attended ANC at least once, only 42% attended up to 4 times while in Kenya (2003) it was 88% and 52% respectively

Figure 3: IPT Coverage in select countries 2005-2007.



Source: Adapted from UNICEF & RBM (2007) Malaria & children progress in Intervention coverage. Additional data from unpublished MIS reports.

⁶ UNICEF & RBM (2007) Malaria & children progress in Intervention coverage.

2.4.3 Treatment Coverage

Since 1998, most countries in the sub-region have established sentinel sites for drug efficacy monitoring. Based on the results, all countries except Swaziland and Algeria have reviewed their antimalarial treatment policies and adopted ACTs as 1st line treatment for malaria.

By the end of 2007, 25 countries are implementing an ACT treatment policy with 20 of them implementing countrywide⁷. Availability of funds from the GFATM and other funding initiatives has enabled countries to implement the new treatment policies. The policy change from chloroquine to ACT for malaria treatment has slowed down the implementation of home management of malaria (HMM). By the end of 2007, none of the countries has implemented ACT use in home management of malaria except in a few pilot projects.

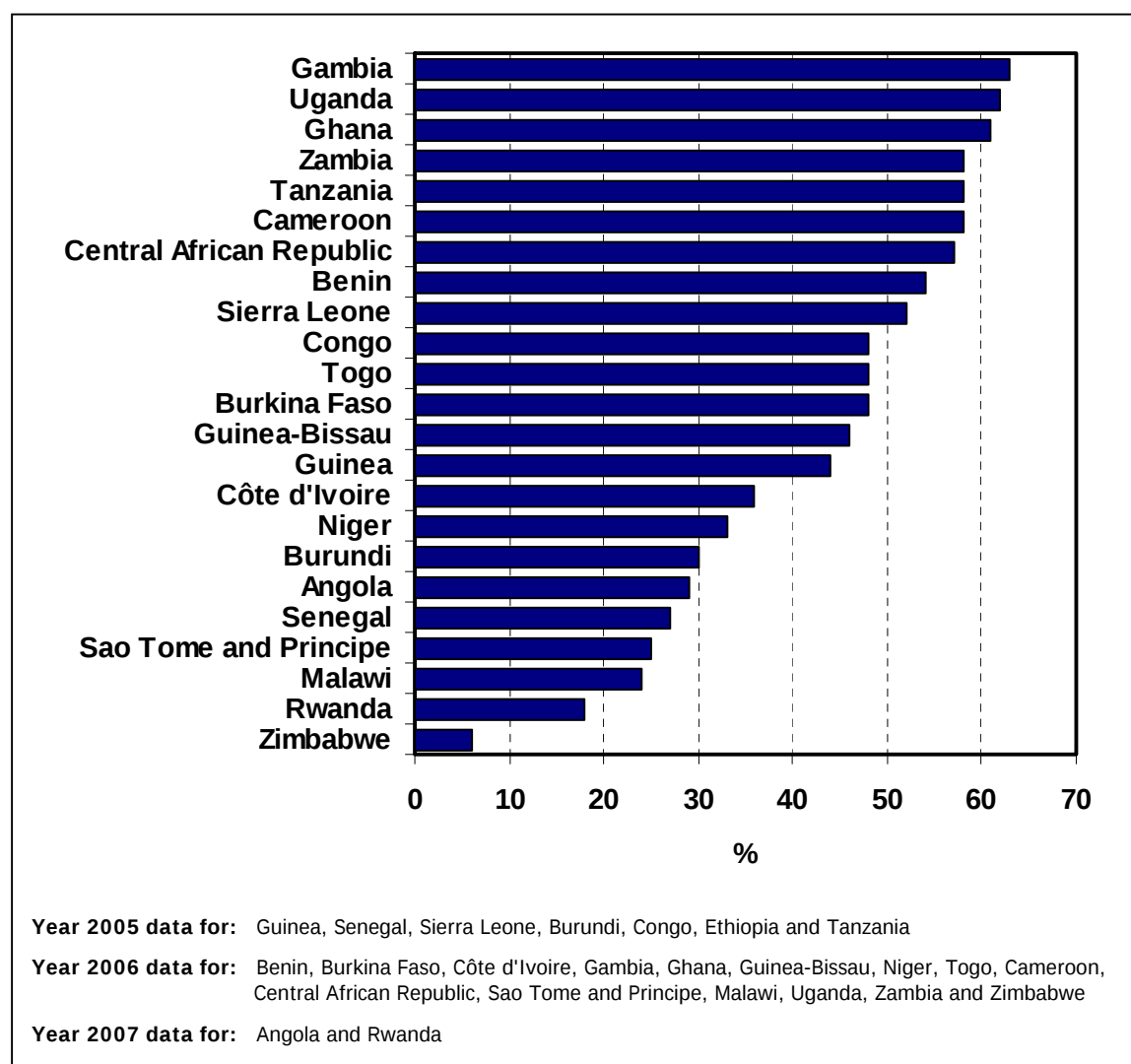
Across the region, 34% of children with fever receive any antimalarial treatments. In countries with data for 2005-2006, access to any antimalarial medicine ranged from 5% to 62% as shown in figure 2. During the same surveys, it was estimated that children in the Gambia 52%, Tanzania 51%, Ghana 48% and Sierra Leone 45% received antimalarial treatment within 24 hours. Although some countries may have achieved the Abuja target, most of these treatments were with chloroquine and other less-effective medicines⁸.

In the 14 countries with recent data that have adopted the ACT policy, the median proportion of children under five years with fever receiving an ACT was only 2% (range ≤ 1 to 13). The major constraints to scaling up ACTs in these countries are funding since the medicines are more expensive and inadequate supply chain management infrastructure.

⁷ WHO Reports.

⁸ UNICEF & RBM (2007) Malaria & children progress in Intervention coverage.

Figure 4: Access to any anti-malarial medicine by febrile children in 2005-2007.



Adapted from UNICEF & RBM (2007) *Malaria & children progress in Intervention coverage*.

2.4.4 Indoor Residual Spraying (IRS)⁹

Since 2005 there is a renewed interest in large-scale IRS programs as a major component of malaria control effort. Several countries have included IRS in their malaria control strategy, while others have expanded existing programs.

By end of 2007, 25 out of the 42 malaria endemic countries in the WHO African region had included IRS in their national strategy for malaria control, as shown in Fig 4. Of these, 17 routinely implement IRS as a major malaria control intervention; six are piloting IRS in a few districts, while 2 are planning pilot implementation with a view to scaling up. In Botswana, Cape Verde, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius,

⁹ WHO/AFRO (2007) *Overview of the Implementation of Indoor Residual Spraying of Insecticides for Malaria Control in the WHO African Region 2006 - 2007*

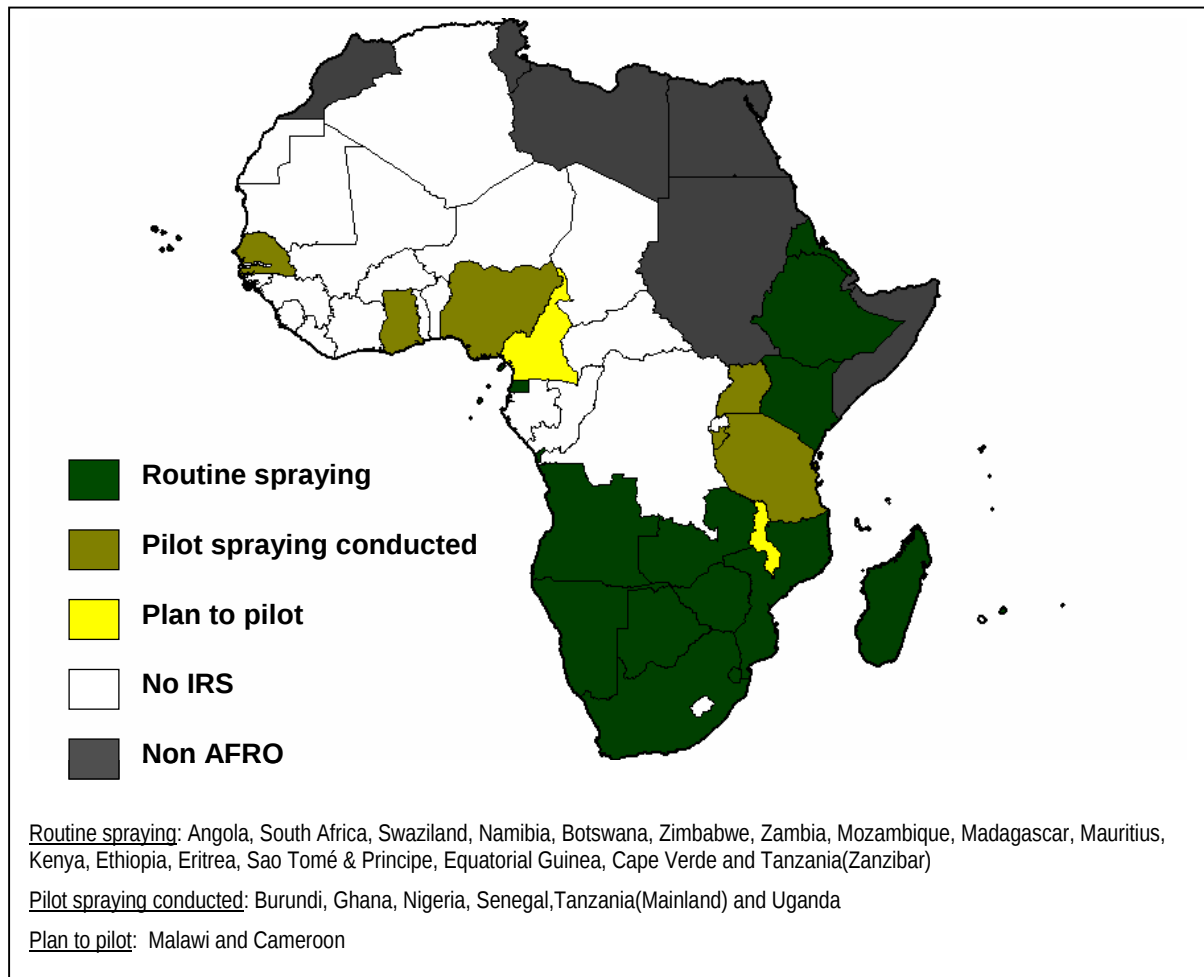
Namibia, South Africa, Swaziland and Zimbabwe IRS is routinely applied to prevent and control malaria epidemics. In Equatorial Guinea, Mozambique, Sao Tome & Principe, Tanzania (Zanzibar Island) and Zambia IRS is applied mainly in stable malaria transmission areas. With the exception of in Equatorial Guinea, some places in Ethiopia, Lubombo Spatial Development Initiative (LSDI) and Zanzibar Island IRS campaigns are conducted once a year. In Ghana, a mining company has introduced IRS to protect a whole municipality where its staff lives.

In the 2006-2007 malaria season a total of about 5 million units/structures were sprayed using different groups of insecticides. Average operational coverage¹⁰ in target areas was 83% ranging from 16% in Kenya to 98% in Madagascar. A total of about 21 million people were protected as shown in table 2. Reduction in malaria cases and deaths in countries deploying IRS has been documented in Botswana, Equatorial Guinea, Eritrea, Madagascar (in the IRS targeted areas), Mauritius, South Africa, Swaziland and Tanzania (Zanzibar), where the IRS programs are generally adequately resourced technically and financially.

Although there is a renewed interest in scaling up IRS even in highly endemic areas in Africa, there are several challenges to overcome before full scale up. In most of the countries that have just adopted IRS, there is limited technical capacity for effective and efficient management of IRS programmes. Clearly if the African region is to go to scale with IRS considerable and sustained investments will be needed.

¹⁰ Number of structure actually sprayed in comparison to the number that was planned to be sprayed

Fig 5: Status of indoor residual spraying in the WHO Africa region, 2007



Adapted from WHO/AFRO (2007) Overview of the Implementation of Indoor Residual Spraying of Insecticides for Malaria Control in the WHO African Region 2006 - 2007

Table 3: Summary of IRS country profiles, 2006-2007 malaria seasons

Country	Total population (million)	Population at risk (million)	Population covered (million)	Average operational coverage (%) [1]
Angola	15.4	15.4	0.65	95
Botswana	1.7	0.7	0.43	73
Burundi	7	6.6	0.098	96.5
Cape Verde	0.23	0.23	--	--
Eritrea	3.6	2.4	0.2	93
Ethiopia	73	50	5.98	87.2
Equatorial Guinea	0.5	0.5	--	60
Ghana	21.5	21.5	0.23	--
Kenya	32	22	0.55	16
Madagascar	18	18	1.25	98
Mauritius[2]	1.2	--	--	--
Mozambique	19	19	5.7	91
Namibia	2	0.7	0.4	86
Sao Tomé & Príncipe	0.15	0.15	0.14	87
South Africa	45	4.5	4	83
Swaziland	1	0.5	0.4 (80% of at risk)	93
Tanzania/Mainland	33	32	--	--
Tanzania/Zanzibar	1.2	1.2	1.02	96
Uganda	26	24.7	0.49	96
Zambia	11	11	0.77(40% of at risk)	84
Zimbabwe	12	5.5	2.2 (68% of at risk)	82

Source: Adopted from WHO/AFRO (2007) Overview of the Implementation of Indoor Residual Spraying of Insecticides for Malaria Control in the WHO African Region 2006 – 2007

2.5 Access to affordable medicines and technologies

Globally, ACTs are the recommended 1st line treatment for uncomplicated malaria. As a result, all but 2 countries in AFRO have adopted this policy. As discussed earlier, there is always a lag between adoption of the policy and implementation due to cost of medication, weak procurement and supply systems, etc.

Since 2003, there has been an increase in the production and procurement of ACTs. In addition, funding initiatives such as the Global Fund, PMI, World Bank Booster Programme and UNITAID have provided funding to countries to implement the ACT policies. As a result, there is a marked increase in the procurement of ACTs globally. Whereas only 3,000,000 ACT doses were procured in 2003, in 2006 over 100,000,000 doses were procured globally.

The Affordable Medicines facility for Malaria (AMFm) was established to bring down the cost of ACTs. The facility will also ensure that the Artemisinin monotherapies

are also phased out to reduce the risk of rapid development of resistance to the therapy. About 4 ACTs are in the pipeline to be launched soon.

To ensure sustained ACT supply, production of Artemisia the raw ingredient for production of ACTs has increased with several African countries involved in cultivation of *Artemisia annua*.

Over the last 5 years several long-lasting insecticides treated net (LLINs) brands have come on the market. Provision of LLINs eliminates the need for re-treatment of the nets if their efficacy is to be maintained. LLINs do not require retreatment during the lifespan of the net ensuring sustained efficacy of the product. The funding initiatives mentioned above have procured the bulk of ITNs, insisting on purchase of only LLINs in the last 3 years.

Since 2004, global production of ITNs has doubled from 30 million in 2004 to 63 million in 2006¹¹. This increase in ITN production coupled with availability of resources and development of novel distribution channels has led to a steep rise in nets procured and distributed to end-users. Most of the nets are distributed free to end users while others are highly subsidized ensuring more equitable access to ITNs.

However there are several challenges with forecasting of needs and ensuring timely flow of information on these commodities, from the producers, suppliers and consumers. Unless these factors are addressed, there is a risk of shortage of ACTs in the future.

2.6 Research and Development

MOH have established mechanisms for developing and coordinating priority research agenda. There is continuing collaboration with TDR and other research initiatives such as the Malaria Vaccines Initiative (MVI), the Malaria Medicines Venture (MMV) all supported by Bill and Melinda Gates Foundation to improve implementation and develop novel technologies.

2.7 Partnerships and Advocacy

The RBM partnership was established in 1998. Consequently, all countries in the African region have established partnerships at the country level. Also, sub-regional RBM partnerships networks (SRNs) have been established that bring together all key partners in the sub-region to consolidate support for malaria control in the respective countries. The SRNs are Eastern Africa (EARN), Western Africa (WARN), Central Africa (CARN) and Southern Africa (SARN).

Since 2000, 25 April has been commemorated as Africa malaria day. Regional events have been held across the sub-region as well as at the national level in respective countries. The commemoration of Africa Malaria day has increased the visibility of malaria and has put it on top of the agenda in many countries. In 2006 the

¹¹ UNICEF & RBM (2007) Malaria & children progress in Intervention coverage.

World Health Assembly resolved to commemorate World Malaria Day which is on the same date as Africa malaria day.

The AU Heads of State and Government Special Summit on HIV/AIDS, TB, and Malaria that was supported by WHO as well as the call for universal access were major catalysts for these achievements. Collaboration between WHO and key funding partners and initiatives enabled countries access additional funds. A key constraint is limited managerial capacity at country level leading to low absorption of, and failure to solicit for additional funding.

2.8 Monitoring, Evaluation and Reporting

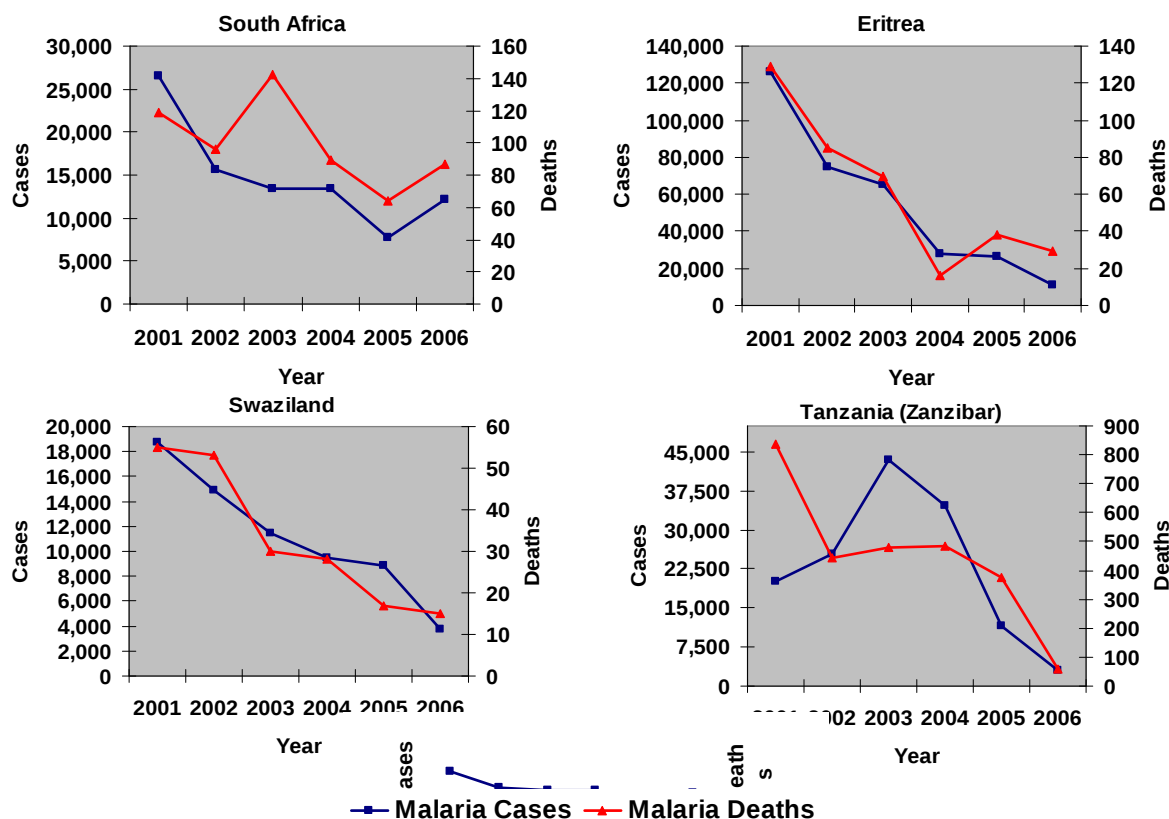
NMCPs need accurate, relevant and effective monitoring and evaluation systems to demonstrate progress towards achieving set targets. All the countries in the sub-region have functional HMIS; some are implementing IDSR and have regular DHS, MICS or MIS surveys that provide information on coverage of interventions at household level. Data from over 25 household surveys conducted in 2005-2007 has been discussed in other sections of this report.

Data from the HMIS and IDSR although available at country level are not always reported timely or even used. Clearly, there is a need to improve on the timelines and completeness of this data as well as using it for action. For example, Completeness of reporting on malaria morbidity and mortality remains a challenge in Africa. Reports received from countries in 2005 show a variation of completeness from 40% to 99% with a median of 68%. This level of completeness has to be factored in when interpreting the results.¹² For example, the number of countries reporting notified malaria cases to WHO has dropped dramatically except in the years when the data is solicited from countries by the region to compile periodic reports.

Interpretation of the trends in malaria incidence and deaths using available data is difficult due to incomplete reports, non-standardized reporting and reliance mostly on clinical diagnosis. However, in selected countries that have scaled up interventions but also have more consistent and complete reporting, such as Eritrea, Kenya, Rwanda, Sao Tome and Principe, South Africa, Swaziland and Zanzibar Island in the United Republic of Tanzania, there have been substantial reductions in malaria cases and deaths at health facility level, as shown in figure 6.

¹² WHO/AFRO 2006 Africa Malaria Report 2006.

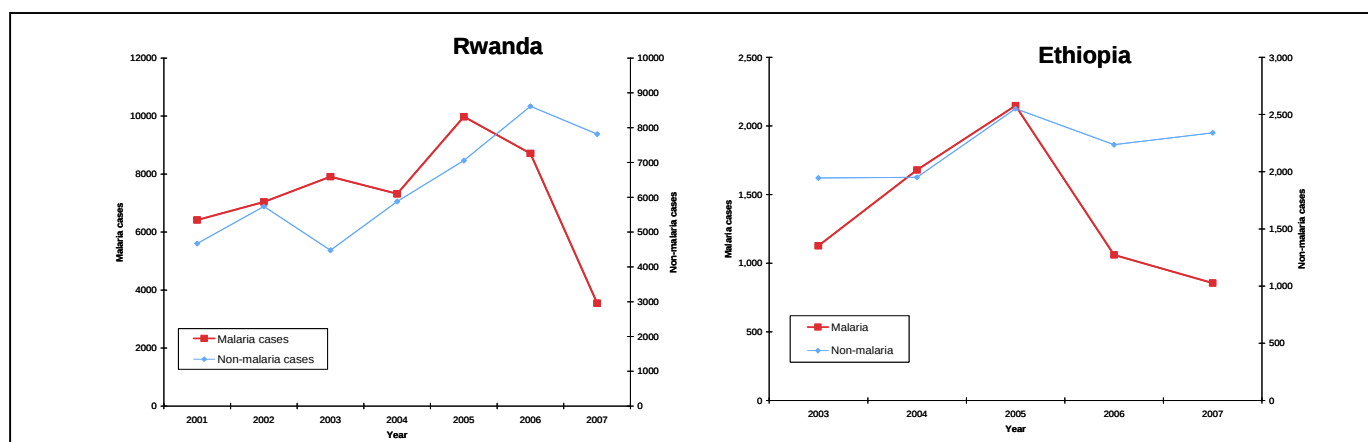
Figure 6: Examples of countries with declining malaria cases at health facility level 2001 - 2006



Source: Country reports to WHO.

To assess the impact of Global Fund activities, assessments in a sample of health facilities in Ethiopia and Rwanda show a marked decline in malaria cases and deaths that could be attributed to scaling up ITNs and ACTs as shown in figure 7.

Figure 7: Malaria Cases compared to other non-malaria cases in selected health facilities in Rwanda and Ethiopia.



Source: WHO/GMP Global fund Success Stories 2007.

2.9 Implementation at national level

Most countries in the region are moving towards universal access to malaria prevention and control among all at risk of malaria. Increasingly, countries are implementing a comprehensive package of interventions in the same geographical area for impact.

Malaria Elimination has been discussed in several AU sessions. Much needs to be done before more countries are already for elimination

The “Three ones” principle has been adopted in several countries. Although all the countries have up to date malaria strategic plans and country coordinating mechanisms less than 5 have comprehensive and costed Malaria M & E plan.

3.0 Conclusions and Recommendations

3.1 Conclusions

Member States have made moderate progress towards achieving targets set at the Abuja 2000, 2001 and 2006, RBM and MDGs. Great political commitment, adoption of better policies as well as increased funding for malaria control from governments, development agencies and funding initiatives. However, few governments have achieved the target of devoting at least 15% government expenditure on health. Coverage of key malaria control interventions has increased in several countries. In spite of these laudable achievements, there is a lot more required if the set targets are to be achieved. Currently very few of these countries are likely to achieve the RBM, Abuja or MDG targets. A major constraint to achieving these targets has been weak health systems characterized by inadequate human resources, poor infrastructure as well as failure to implement a comprehensive package of interventions in the same geographical area for impact. Note should be made that a few countries in Africa do not have the Malaria burden. However, they need to be very vigilant as Malaria can easily be re-introduced or imported.

3.2 Recommendations.

The following recommendations are made for action at Member State Level:

- i. Countries should increase funding for the health sector and in particular malaria prevention and elimination;
- ii. Partnerships at country level should be strengthened and properly coordinated to optimize utilization of resources while avoiding duplication
- iii. Investment should be made in strengthening health systems without which scaling up malaria control cannot happen.
- iv. Expansion of access to ACTs, ITNs and other malaria control interventions to all at risk of malaria should be undertaken.
- v. Procurement and supply chain management infrastructure should be strengthened to enhance access to malaria control and prevention services.

- vi. Surveillance, Monitoring, Evaluation and Reporting should be ensured to monitor progress and prevent re-introduction.

The African Union

- Effectively implement the AU Commission HIV and AIDS Strategic Plan and AWA Strategic Framework 2005-2007;
- Promote regional integration and collaboration in the areas of Disease Control;
- Ensure that HIV and AIDS Tuberculosis and Malaria are catered for in the NEPAD Health Strategy;
- Ensure that malaria prevention and control is accelerated with the goal to eliminate malaria in Africa by 2010 using all available control strategies
- Coordinate in broad partnership with Civil Society and the private sector, the effective implementation of the Abuja Call and report annually to the AU Assembly.

Regional Economic Communities and Regional Health Organizations are requested to undertake the following:

- Intensify the implementation of inter-country and cross-border health initiatives;
- Coordinate inter-country efforts and provide support to Member States;
- Mobilize resources for HIV and AIDS, Tuberculosis and Malaria programmes in their respective regions;
- Report back to us through the AU Commission on the progress made in the implementation of this Call;
- accelerate the prevention and control of malaria, learning from best practices on the continent with the aim of eliminating malaria in Africa using all available control strategies including indoor residual spraying, use of insecticide-treated nets, ACT combination therapy and intermittent preventive therapy

The UN Agencies and Development Partners are called upon to:

- To further develop and support comprehensive frameworks and mechanisms of well-coordinated partnerships, particularly public, private, civil society, regional and international including donors, to promote universal access to prevention, treatment, care and support for HIV and AIDS, TB and Malaria;

**ANNEX I: CURRENT STATUS IN AND GAP ANALYSIS OF AFRICAN COUNTRIES VIS-À-VIS KEY
MALARIA CONTROL INDICATORS AND TARGETS²²**

No.	Country/Intervention	Percentage of Households with at least one insecticide treated net			Percentage of febrile children receiving antimalarial medicines on the same or next day			Percentage of Pregnant Women receiving Intermittent Preventive Treatment		
		2003-2006	Gap to 2005 Target (Abuja) (60% coverage)	Gap to 2010 Target (80% coverage)	2003-2006	Gap to 2005 Target (Abuja) (60% coverage)	Gap to 2010 Target (80% coverage)	2003-2006	Gap to 2005 Target (Abuja) (60% coverage)	Gap to 2010 Target (80% coverage)
1	Algeria	-	-	-	-	-	-	-	-	-
2	Angola	-	-	-	-	-	-	-	-	-
3	Benin	25%	-35%	-55%	25%	-35%	-55%	3%	-57%	-77%
4	Botswana	-	-	-	41%	-19%	-39%	-	-	-
5	Burkina Faso	23%	-37%	-57%	19%	-41%	-61%	1%	-59%	-79%
6	Burundi	8%	-52%	-72%	-	-	-	3%	-57%	-77%
7	Cameron	20%	-40%	-60%	38%	-22%	-42%	6%	-54%	-74%
8	Central African Republic	17%	-43%	-63%	42%	-18%	-38%	9%	-51%	-71%
9	Chad	-	-	-	-	-	-	-	-	-
10	Comoros	8%	-52%	-72%	-	-	-	-	-	-
11	Congo	-	-	-	22%	-38%	-58%	-	-	-
12	Congo, Dem. Rep. of the	-	-	-	-	-	-	-	-	-
13	Cote d'Ivoire	6%	-54%	-74%	26%	-34%	-54%	8%	-52%	-72%
14	Djibouti	18%	-42%	-62%	3%	-57%	-77%	-	-	-
15	Equatorial Guinea	-	-	-	-	-	-	-	-	-
16	Eritrea	-	-	-	2%	-58%	-78%	-	-	-
17	Ethiopia	3%	-57%	-77%	1%	-59%	-79%	-	-	-
18	Gabon	-	-	-	-	-	-	-	-	-
19	Gambia, The	50%	-10%	-30%	52%	-8%	-28%	33%	-27%	-47%
20	Ghana	19%	-41%	-61%	48%	-12%	-32%	27%	-33%	-53%
21	Guinea	1%	-59%	-79%	14%	-46%	-66%	3%	-57%	-77%
22	Guinea-Bissau	44%	-16%	-36%	27%	-33%	-53%	7%	-53%	-73%
23	Kenya	6%	-54%	-74%	11%	-49%	-69%	4%	-56%	-76%
24	Lesotho	-	-	-	-	-	-	-	-	-
25	Liberia	6%	-54%	-74%	-	-	-	-	-	-
26	Madagascar	-	-	-	-	-	-	-	-	-
27	Malawi	36%	-24%	-44%	20%	-40%	-60%	45%	-15%	-35%
28	Mali	-	-	-	-	-	-	-	-	-
29	Mauritania	1%	-59%	-79%	12%	-48%	-68%	-	-	-
30	Mozambique	-	-	-	8%	-52%	-72%	-	-	-
31	Namibia	-	-	-	-	-	-	-	-	-
32	Niger	43%	-17%	-37%	25%	-35%	-55%	0%	-60%	-80%
33	Nigeria	2%	-58%	-78%	25%	-35%	-55%	1%	-59%	-79%
34	Rwanda	15%	-45%	-65%	3%	-57%	-77%	0%	-60%	-80%
35	Sao Tome and Principe	36%	-24%	-44%	17%	-43%	-63%	-	-	-
36	Senegal	20%	-40%	-60%	12%	-48%	-68%	9%	-51%	-71%
37	Sierra Leone	5%	-55%	-75%	45%	-15%	-35%	2%	-58%	-78%
38	Somalia	12%	-48%	-68%	3%	-57%	-77%	1%	-59%	-79%
39	South Africa	-	-	-	-	-	-	-	-	-
40	Sudan	-	-	-	-	-	-	-	-	-
41	Swaziland	-	-	-	-	-	-	-	-	-
42	Tanzania, United Rep. of	23%	-37%	-57%	51%	-9%	-29%	22%	-38%	-58%
43	Togo	40%	-20%	-40%	38%	-22%	-42%	18%	-42%	-62%
44	Uganda	16%	-44%	-64%	29%	-31%	-51%	17%	-43%	-63%
45	Zambia	44%	-16%	-36%	37%	-23%	-43%	61%	-1%	-19%
46	Zimbabwe	9%	-51%	-71%	3%	-57%	-77%	6%	-54%	-74%

UNICEF & RBM, Malaria & Children, Progress in Intervention Coverage, 2007, pp. 51-55.

Countries	Annex 2 Key malaria indicators																			
	Proportion of households owning at least one ITN		Proportion of children under five years who slept under an ITN		Proportion of pregnant women sleeping under an ITN		Proportion of under fives with fever who received an antimalarial		Proportion of under fives with fever who received an antimalarial within 24 hours of onset of fever		Proportion of pregnant women who received at least two doses of IPT in the last pregnancy		Reported malaria (clinical or confirmed) cases		Reported confirmed malaria cases		Reported malaria (probable or confirmed) deaths		Reported confirmed malaria deaths	
	%	Year	%	Year	%	Year	%	Year	%	Year	%	Year	Number	Year	Number	Year	Number	Year	Number	Year
AFRO																				
Western																				
Algeria													293	2005			0	2005		
Benin	25	2006	20	2006	20	2006	54	2006	25	2006	3	2006	861,847	2006			1,392	2006		
Burkina Faso	23	2006	10	2006	3	2003	48	2006	41	2006	1	2006	2,060,867	2006			8,083	2006		
Cape Verde													70	2006			8	2006		
Côte d'Ivoire	6	2006	6	2006			36	2006	26	2006	8	2006	1,075,017	2006			136,862	2006		
Gambia	50	2006	49	2006			63	2006	52	2006	33	2006	266,188	2006						
Ghana	19	2006	22	2006	3	2003	61	2006	48	2006	27	2006	3,511,452	2006	460,965	2006	2,832	2006	293	2006
Guinea	1	2005	0	2005	0	2005	44	2005	14	2005	3	2005	834,835	2006	12,416	2006	490	2006		
Guinea-Bissau	44	2006	39	2006			46	2006	27	2006	7	2006	148,720	2006			507	2006		
Liberia	6	2005	3	2005									1,105,272	2006			877	2006		
Mali			8	2003	19	2003			36	2003			1,022,592	2006			1,914	2006		
Mauritania	1	2003/4	2	2003/4			33	2003/4	12	2003/4			188,025	2006			10,736	2006		
Niger	43	2006	7	2006	7	2006	33	2006	25	2006	0	2006	622,127	2006			1,150	2006		
Nigeria	2	2003	1	2003	1	2003	34	2003	25	2003	1	2003	2,734,459	2006			4,556	2006		
Senegal	20	2005	7	2005	9	2005	27	2005	12	2005	9	2005	1,555,310	2006	49,366	2006	1,678	2006	1,678	2006
Sierra Leone	5	2005	5	2005			52	2005	45	2005	2	2005	160,666	2006	8,620	2006	70	2006	20	2006
Togo	40	2006	38	2006			48	2006	38	2006	18	2006	566,450	2006		2006	819	2006		2006
Central																				
Angola													2,283,097	2006	1,029,198	2006	10,220	2006	6,634	2006
Burundi	8	2005	8	2005			30	2005	19	2005			1,334,944	2006			1,178	2006		
Cameroon	20	2006	13	2006	1	2004	58	2006	38	2006	6	2006	634,507	2006	280,496	2006	930	2006		
Central African Republic	17	2006	15	2006			57	2006	42	2006	9	2006	114,403	2006			865	2006		
Chad			1	2000			32	2000					46,233	2006			815	2006		
Congo	8	2005	6	2005	4	2005	48	2005	22	2005			157,757	2006			253	2006		

DRC			1	2001			52	2001					5,008,956	2006			24,347	2006		
Equatorial Guinea			1	2000			49	2000												
Gabon													118,104	2006	29,250	2006	79	2006	50	2006
Rwanda	50	2007	56	2007	60	2007	18	2007	11	2007	28	2007	1,418,762	2006	648,955	2006	2,347	2006		
Sao Tome and Principe	36	2006	42	2006			25	2006	17	2006			7,293	2006	5,146	2006	26	2006	16	2006
Eastern & Southern																				
Botswana	<u>9</u>	<u>2007</u>	<u>7</u>	<u>2007</u>	<u>6</u>	<u>2007</u>	<u>10</u>	<u>2007</u>	<u>4</u>	<u>2007</u>			23,514	2006	4,615	2006	125	2006		
Comoros			9	2000			63	2000					54,830	2006	14,360	2006	56	2006	0	2006
Eritrea	<u>73</u>	<u>2004</u>	<u>48</u>	<u>2004</u>	<u>50</u>	<u>2004</u>	4	2002	<u>8</u>	<u>2004</u>			20,203	2006	6,547	2006	42	2006	25	2006
Ethiopia			2	2005	1	2005	3	2005	1	2005			3,759,960	2006	589,619	2006	1,357	2006		
Kenya	50	2006	51	2006	37	2006	27	2003	11	2003	4	2003	7,958,704	2006			337	2006		
Lesotho																				
Madagascar			0	2000			34	2003/4					1,003,766	2006			409	2006		
Malawi			23	2006	15	2004	24	2006	20	2006	45	2006	4,204,468	2006			7,132	2006		
Mauritius													16	2005			0	2005		
Mozambique							15	2003	8	2003			6,269,434	2006			5,026	2006		
Namibia							14	2000					293,224	2006			1,252	2006		
Seychelles																				
South Africa													12,098	2006	12,098	2006	87	2006	87	2006
Swaziland			0	2000			26	2000					3,757	2006	3,757	2006	15	2006	15	2006
Tanzania	23	2004/5	16	2004/5	16	2004/5	58	2004/5	51	2004/5	22	2004/5	10,566,201	2006	2,981	2006	20,835	2006	43	2006
Uganda	16	2006	10	2006	10	2006	62	2006	29	2006	17	2006	573,963	2006			435	2006		
Zambia	44	2006	23	2006	24	2006	58	2006	37	2006	61	2006	4,731,338	2006			6,484	2006		
Zimbabwe	9	2005/6	3	2005/6	3	2005/6	5	2005/6	3	2005/6	6	2005/6	1,535,877	2006			488	2006		

Sources: UNICEF Multiple Indicator Cluster Studies (MICS); Demographic and Health Surveys (DHS); Malaria Indicator Surveys; ITN Distribution Post Campaign Surveys; Ministry of Health
Other surveys at sub-national level

Note: (Blank) No Information available