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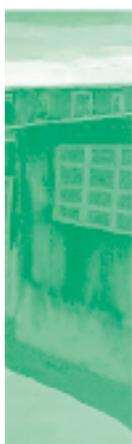


Despite major advances in medical technology in the last century, Southern Africa still faces major problems with the prevention and control of malaria and tuberculosis. Today Southern Africa's situation is not very different from that of Europe two centuries ago.

The control of communicable diseases especially malaria cannot be achieved solely through national activities. Rapid globalisation, migration, ease and swiftness of transportation all mean that countries need to complement their national activities with regional ones, through standardisation of approaches to the prevention and control of diseases, sharing of information and best practices, which in turn contribute to effective use of resources.

The Southern Africa Development Community (SADC) has placed prevention, control and treatment of key communicable diseases on its agenda. Malaria and TB, are one of the five priorities for the health sector for 1999-2002 period, and they are likely to continue being a priority in the next 10 years Regional Indicative Strategic Development Plan (RISDP).

This chapter explores some of the reasons for this state of affairs including: the factors that perpetuate it, the challenges for the SADC, the opportunities that exist and the possible ways to address continued high morbidity and mortality due to malaria and TB.





Introduction

The Southern Africa Development Community (SADC) is made up of 14 countries, namely: Angola, Botswana, Democratic Republic of Congo (DRC), Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Seychelles, Tanzania, Zambia and Zimbabwe. The total population of the region is 193 million.¹

The objective of SADC is to achieve development and economic growth, alleviate poverty, enhance the standard and quality of life of the people of Southern Africa and support the socially disadvantaged through regional integration.²

SADC is one of the Regional Economic Community (REC) within the African Union (AU), and all RECs are expected to implement AU programmes, including the New Partnership for Africa's Development (NEPAD). The health aspirations for SADC and NEPAD are similar. Alleviation of poverty and the control of communicable diseases objectives features in both SADC and NEPAD programmes.

Several sectoral programmes, hosted by individual SADC countries, have been established by the organisation. The Health Sector was established in 1997 and was allocated to South Africa.

The goal of the Health Sector is to attain an acceptable standard of health for all citizens by promoting, coordinating and supporting the individual and collective efforts of Member States. Within this goal are two aims:

- To reach specific targets within the objective of 'Health for All' by 2020 in all Member States based on the primary health care strategy; and
- To ensure that health care is accessible to all within each Member State's economic reality.



SADC Health Sector

The rationale for the establishment of the SADC Health Sector was the acknowledgement of the contribution that regional cooperation can make in addressing health problems of the region. The coordination of the SADC Health Sector was assigned to South Africa, until the restructuring of the institution in 2002. In September 2002 the activities of the Health Sector moved to a centralised SADC Secretariat in Gaborone, Botswana.

The SADC Health Sector's comparative advantage is that it is part of a regional organisation that was established by a treaty. Decisions of the SADC Summit of Heads of State and Government, or the Council of Ministers or Sectoral

a The SADC Parliamentary Forum (SADC PF) <http://www.parliament.gov.zm/sadc.htm>



Committees of Ministers are binding to Member States. Various protocols are also signed by the SADC Member States and these are also legally binding once two thirds of Member States have ratified them. The SADC Health Protocol was signed in August 1999, and as at the end of August 2002, seven member states had ratified it. It needs two additional states to ratify for it to enter into force.

Communicable diseases, including malaria and TB, are one of the five priorities for the Health Sector for the period 1999-2002, and they are likely to continue being priorities when SADC develops its 10 year Regional Indicative Strategic Development Plan.

Epidemiology of Malaria and TB in SADC

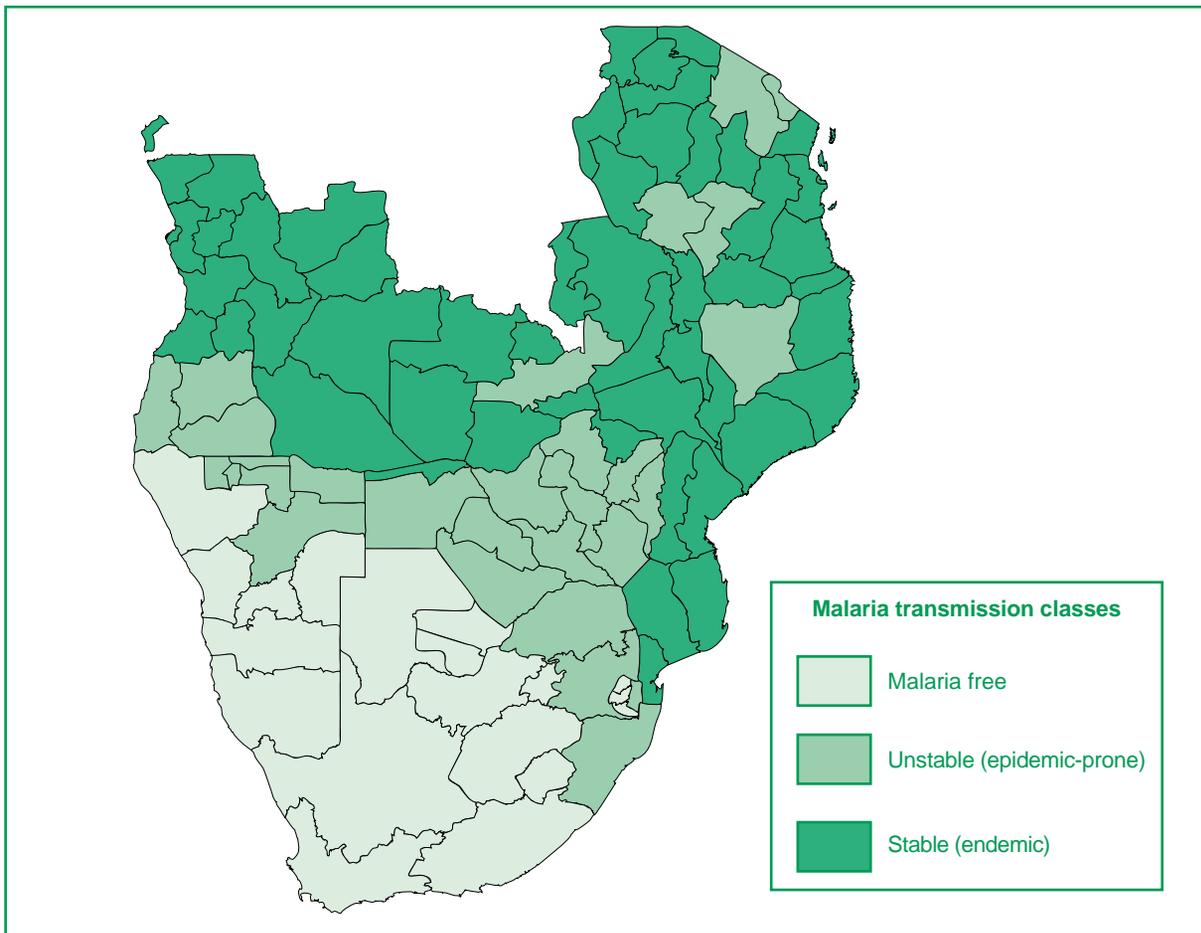
“The Commission has always insisted that the fight against malaria must be waged not as a separate and isolated task but as part of a general social, economic and sanitary campaign by an enlightened public health service which is able to obtain assistance from other Government departments and from unofficial agencies, and to secure continuity of action and unity of purpose.”
League of Nations: Second General Report of the Malaria Commission (1927).

Malaria transmission in the region can be broken down into three classes. There are:

- Malaria free
- Malaria unstable (epidemic prone)
- Malaria stable (endemic) areas.

Botswana, Namibia, South Africa, Swaziland and Zimbabwe, have predominantly unstable transmission and are thus epidemic areas. Lesotho, Mauritius and Seychelles do not have locally acquired malaria, and all their cases are imported. The remaining countries are endemic. Figure 1 is an illustration of the distribution of malaria in SADC. It must be noted that DRC is in the malaria endemic area.

Figure 1: Malaria transmission in Southern Africa – SADC countries



Excluding the DRC, where statistics for malaria were not available, it is estimated that 19-21 million people get malaria each year, and it is estimated that between 200 000 and 300 000 people die of malaria each year due to lack of access to basic health care.²

In malaria epidemic areas, all populations are at risk and are susceptible to malaria as a result of not developing sufficient immunity against malaria parasites. In malaria endemic areas the populations mostly at risk are children under 5 years, pregnant women and the immuno-compromised people. In all three groups there is lower immunity than in the general population. Malaria is a major cause of mortality among children in Southern Africa. Tables 1 and 2 indicate the total malaria mortality in the region (excluding the DRC) for all ages and for the under-fives. According to the estimates of the Southern Africa Malaria Control (SAMC) programme, 20% of all under-five mortality in Angola, Malawi, Mozambique, Tanzania and Zambia is due to malaria.

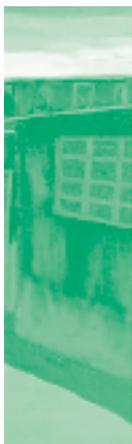


Table 1: Malaria Mortality in SADC countries (All Ages) 2001²

Country	Malaria deaths per annum	Malaria mortality per 1 000
Angola	49 232	4.1
Botswana	413	0.3
Malawi	44 165	4.3
Mozambique	67 028	4.2
Namibia	393	0.2
South Africa	691	0.0
Swaziland	254	0.3
Tanzania	96 470	3.0
Zambia	27 999	3.2
Zimbabwe	13 672	1.1

Table 2: Malaria Mortality in SADC countries (Under-fives) 2001²

Country	Under-five malaria deaths per annum	Under-five malaria mortality per 1 000
Angola	18 619	38.2
Botswana	100	1.9
Malawi	12 957	36.7
Mozambique	19 269	32.4
Namibia	104	2.0
South Africa	162	0.1
Swaziland	56	1.9
Tanzania	35 547	29.6
Zambia	10 725	27.5
Zimbabwe	1 493	4.0

Malaria incidence in the SADC region is comparable to that of other developing countries, especially those in Africa. One hundred countries in the world are considered malarious, and out of these, almost half are in sub-Saharan Africa. The incidence of malaria worldwide is estimated to be 300-500 million clinical cases per year, with about 90% of these occurring in sub-Saharan Africa. Malaria in sub-Saharan Africa is mostly caused by *Plasmodium falciparum* which is thought to kill between 1.1 and 2.7 million people worldwide, of which, 1 million are children less than 5 years.³

In malaria endemic areas, malaria consumes a considerable proportion of public health system resources. Recent estimates by WHO Southern Africa Malaria Control suggest that, malaria is responsible for:

- 30%-50% of inpatient hospital admissions



- Up to 50% of outpatient consultations
- 40% of total public expenditures on health.

According to the unpublished SADC Health Annual Report – 2001, SADC countries (excluding DRC), reported approximately 14.8 million cases of malaria in 2001. While there may be considerable overestimation due to misdiagnosis, malaria clearly remains a major public health problem in the region.

Tuberculosis

The number of TB cases in the SADC region has been rising in recent years, due to the severe HIV/AIDS epidemic. While the SADC sub-region constitutes 23% of the total population of the continent, it has over the years contributed approximately 44% of all annually registered TB cases. The highest TB notification rates in the world, (ranging from 100 to 600 TB cases per 100 000 population), are reported in this sub-region.⁴ Table 3 shows the number of reported TB cases.

Table 3: Number of TB cases registered in the SADC Region between January and December 2000^a
Cases registered in all areas (DOTS^b and non-DOTS)

Country	SM+VE ^c	SM-VE ^d	NNSD ^e	NEP ^f	Relapse	Total
Angola	8 528	4 510	337	837	300	14 512
Botswana	3 091	847	3 942	1 231	181	9 292
DRC	36 123	8 089	0	13 785	2 630	60 627
Lesotho	3 041	1 486	1 352	2 520	424	8 823
Malawi	8 265	8 849	0	5 734	758	23 606
Mauritius	115	14	0	23	8	160
Mozambique	13 257	4 037	0	2 262	917	20 473
Namibia	3 911	2 198	2 327	1 437	601	10 474
Seychelles	11	7	0	2	0	20
South Africa	77 391	7 362	9 030	13 535	3 951	111 269
Swaziland	1 823	2 950	248	583	273	5 877
Tanzania	24 049	17 624	0	10 997	1 772	54 442
Zambia	12 927	25 222	0	10 202	1 455	49 806
Zimbabwe	15 455	16 079	0	8 837	0	40 371
Total	207 987	99 274	17 236	71 985	13 270	409 752
Proportion	50.8	24.2	4.2	17.6	3.2	100

b DOTS (Directly Observed Treatment Short-course)

c Sputum smear positive

d Sputum smear negative

e New no smear done

f New extra pulmonary

According to the Draft World Health Organization (WHO) Africa Regional Office (AFRO) TB Surveillance report, a total of 409 752 cases of TB were registered in the SADC region in 2000.

Five Southern African countries, DRC, Mozambique, South Africa, Tanzania and Zimbabwe are among the 22 countries in the world that account for 80% of the world's TB burden.

Obstacles to control

The biggest obstacles to control of malaria and TB in the region are poverty, weak health systems, and inadequate resources.

Poverty

Malaria has been variously defined as a 'social', 'entomological' a 'rural', a 'poverty' or a 'socio-economic' problem.

Poverty and disease are inter-linked and poverty is the underlying factor in both malaria and TB. It is therefore not surprising that developing and poor countries in the world have the highest rates of these diseases. Affected communities are resource-poor, have limited access to health and other social services and low levels of literacy. Equally, treatment-seeking behaviour may be influenced by lack of education as well as inability to pay transport, consultation and treatment fees at health facilities.

At the same time, diseases affect poverty. In poor households, a greater proportion of income is likely to be spent on treatment than in richer households. A negative spiral thus develops with disease causing and deepening poverty, which, in turn, exacerbates inequalities in society.

Half^g of the countries in SADC are listed as least developed, while others are placed either as low-income, lower middle-income and upper middle-income categories. Table 4 shows the Gross Domestic Product (GDP) per capita of SADC countries.

^g Angola, DRC, Lesotho, Malawi, Mozambique, Tanzania, Zambia.

Table 4: GDP per Capita (US\$) of SADC Countries⁵

Country	GDP per capita, 2000
Angola	2 187
Botswana	7 184
DRC	765
Lesotho	2 031
Malawi	615
Mauritius	10 017
Mozambique	854
Namibia	6 431
Seychelles	12 508
South Africa	9 401
Swaziland	4 492
Tanzania	523
Zambia	780
Zimbabwe	2 635

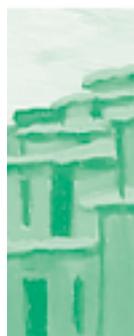
Weak health systems

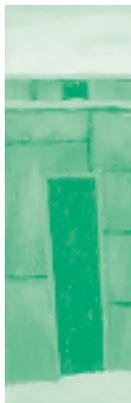
Spending on health has generally been reducing in a number of countries. This has led to weakening of public health systems, especially in poorer countries. The Commission on Macroeconomics and Health report notes that in some of the world's poorest countries, the coverage of many basic interventions is falling.⁶ This is despite the evidence that well funded health interventions can make a difference in accelerating socio-economic growth, and can lead to eradication of diseases such as polio.

A number of countries in the region rely on donor support to fund their health programmes. This includes services for disease prevention and control, like immunisation, TB and malaria programmes. Between 1981 and 1986, external assistance for health sector development, from official and private voluntary sources averaged more than US\$ 1.50 per capita in sub-Saharan Africa, equivalent to 20% of average government expenditure on health. By 1990 this had climbed to US\$ 2.50.⁷ This reliance on external partners makes country programmes vulnerable should any donor stop supporting the country. Equally, challenging is how to match the country and donor needs.

Inadequate resources

According to the Report of the Commission on Macroeconomics and Health, it is estimated that US\$ 30-US\$ 45 per person is required to cover essential interventions including the most commonly occurring communicable diseases. However, in 1997 most low-income countries spent about \$ 11 per capita on





health. Thus a financing gap of between US\$ 19 and US\$ 34 (56%-76%) per person exists in most low-income countries.⁶

Low-income countries find it very hard to access additional resources for health due to a limited general national budget. A number of SADC countries are also Highly Indebted Poor Countries (HIPC), and have to use their scarce national resources to pay off their debt burdens. The repayment of debt often has to supersede allocation to national needs such as health and education.

Challenges in Malaria Prevention, Control and Treatment

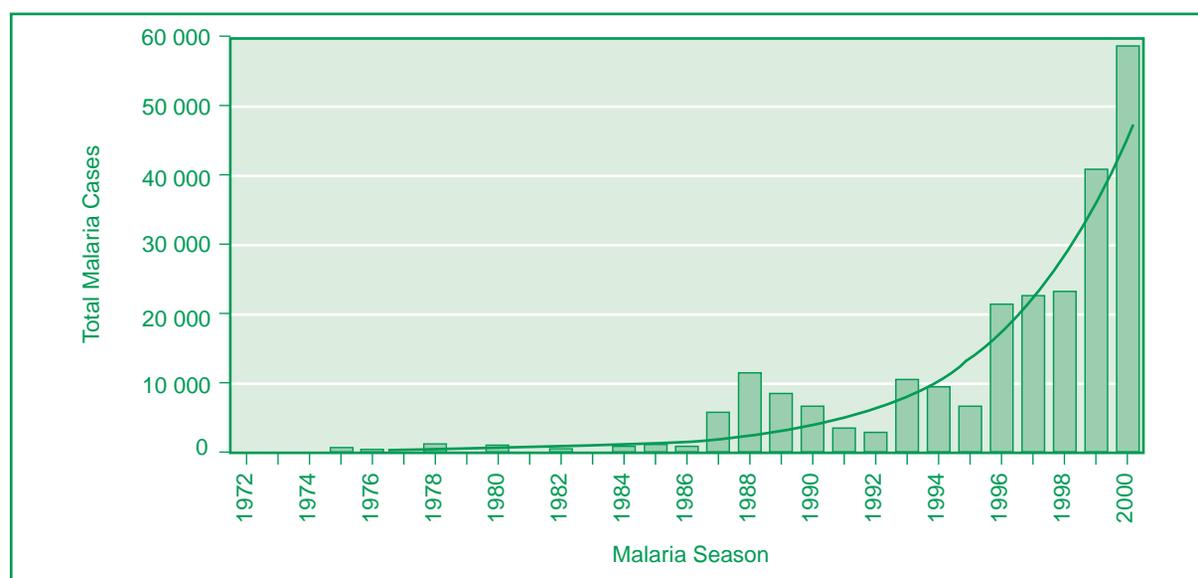
Africa and the Global Malaria Eradication Programme



Africa was left out of the Global Malaria Eradication programme of the 1950s. This meant that the burden of mosquitoes and malaria parasites was never addressed, as was the case in other regions of the world. By the time the eradication programme was discontinued in the Americas, Europe and Asia, the burden of disease in those regions had dropped markedly and control measures could be used to sustain lower levels of malaria.

Malaria control in Africa is thus disadvantaged as there was never any meaningful well-funded systematic programme to reduce the disease burden. South Africa did however benefit from the eradication era as massive resources were put into the malaria programme with extensive indoor residual spraying programmes that shifted malaria prevalence from as far inland as around Pretoria in the 1940s, to the present malaria transmission areas, which are mainly around the north eastern borders of the country. However, there has been a marked increase in malaria transmission in South Africa since 1996, as shown in Figure 2.

Figure 2: Malaria case totals for South Africa aggregated by season from July 1971 to June 2000⁸





New challenges for the region have been the increased development of resistance to insecticides and drugs by mosquitoes and parasite respectively. The recent increase in malaria cases has been attributed to these 2 factors.

The Regional Malaria Control Commission (RMCC) found that the underlying reasons for the increase were difficult to quantify, but two proven factors were the rediscovery of *Anopheles funestus* in sprayed houses in the malaria areas, which had been shown to be resistant to synthetic pyrethroids (the insecticide used to spray the houses) and the high levels of resistance to first line malaria treatment in KwaZulu-Natal (sulphadoxine/pyrimethamine) caused by the *Plasmodium falciparum*.

Resistance to drugs



Community based drug efficacy studies conducted in KwaZulu-Natal showed parasitological resistance levels greater than 62% to sulphadoxine/pyrimethamine. Based on these facts, the first line therapeutic drug for malaria had to be revised and the decision was taken to change from monotherapy to a drug combination of artemisinin and lumefantrone (co-artemether), which was introduced in KwaZulu-Natal in February 2001.¹⁰

According to WHO and SAMC, drug resistance towards chloroquine appears to be growing in the region. Botswana, Malawi, South Africa and Tanzania use Sulphadoxine-pyrimethamine as their first line drug. Mozambique, and Zimbabwe are currently reviewing their drug policy with continued monitoring of drug resistance, while Namibia and Swaziland continue to use chloroquine. In 2002 Zambia changed its treatment policy by adopting Artemether-Lumefantrine (Coartem®)^h

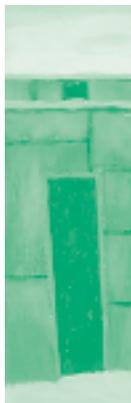
Challenges in TB control

The main challenges for the SADC TB programme, as defined by the Southern Africa TB Control Initiative (SATCI) are:

High prevalence of HIV/AIDS

As stated before, HIV/AIDS has worsened the TB situation in the region. The impact of HIV/AIDS on the TB programmes is felt in the increased caseloads, crippling even the most effective TB control programmes. This situation is likely to get worse before getting better as the large number of HIV infected people get sick and many SADC countries start experiencing the peak effects of the AIDS epidemic. In most SADC countries, the proportion of TB cases attributable to HIV infection ranges from 50%-80%, and up to 40% of deaths in people living with HIV/AIDS (PLWA) are believed to be due to TB.⁴

h Personal communication, Central Board of Health, Zambia.



Multiple drug resistance to TB

Estimates of Multiple Drug Resistance (MDR) to TB in SADC put the problem at 1% of all new patients and 4% of all retreated patients in South Africa, 1.1% of all patients in Zambia and less than 2% of all patients in Zimbabwe.⁹

Lack of adequate human resources to manage TB and HIV/AIDS

Capacity in the management of TB and HIV/AIDS is limited due to human resource constraints. As country health systems have become poorer, they have found it more difficult to replace or train their human resources adequately. In most countries the increasing number of TB patients has accentuated the need for additional workers. Health workers are also not spared to HIV/AIDS and some have succumbed to the disease. Also sustaining human resources for DOTS programmes in poor communities has been an ongoing challenge.



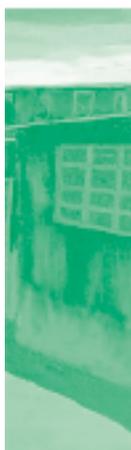
Health sector reforms

The ongoing Health Sector Reforms in the SADC countries have led to basket funding and a move away from vertical programmes. While this is good for the health system as a whole as it can lead to general strengthening of the system, the immediate impact on dedicated vertical programmes like TB and malaria can be destabilising initially, leading to poor morale and a slump in programme performance. Health Systems can also suffer from a loss of experienced and technical staff through movement during restructuring and the resultant lack of appreciation for the specialised technical aspects of TB and malaria.³



Slow DOTS expansion

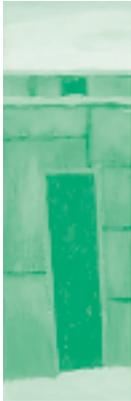
DOTS coverage ranges from 36% in Angola to 100% in most other countries while the average regional detection and treatment success rates are 60% and 70% respectively. The global target by year 2005 is for a case detection rate of 70% and a treatment success rate of 85%.



Why a Regional Response to Malaria and TB?

The control of communicable diseases especially malaria cannot be achieved solely through national activities. The rapid globalisation of the world, migration, ease and swiftness of transportation all means that countries need to complement their national activities with regional ones. A regional response complements country responses through standardisation of approaches to the prevention and control of disease, sharing of information and best practices. It also contributes to effective use of resources.

The SADC regional response to both malaria and TB is a combination of activities by mainly WHO AFRO, and the SADC Health Sector. There is



collaboration between the two organisations, with mutual attendance of meetings and joint planning. For example the SADC TB plan was developed with assistance from WHO which also funded some of the SADC Health Sector TB activities.

SADC health sector response

Response to malaria

SADC political commitment for combating malaria is high. In 2000 two Malaria Consultation Meetings attended by five SADC Health Ministers from Botswana, Mozambique, South Africa, Swaziland and Zimbabwe, were held in response to the increased risk of malaria epidemics in the flood-affected Member States following cyclone Elaine.



One of the outcome these meetings was the ministerial endorsement of a regional framework for malaria control. This framework was presented and endorsed by the Annual SADC Health Ministers meeting in Malawi in May 2000. A task force was established to draw up an effective SADC malaria control plan. The plan was based on the framework adopted by the Ministers at both meetings, and the SADC Health Ministers formally adopted the SADC Malaria Control Plan in April 2001. The policy framework of the malaria plan is as follows:

Vector control, and insecticide resistance

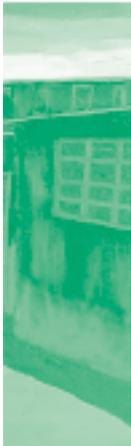


The Southern African region has used vector control measures with great success in keeping malaria under control. Given the unstable nature of malaria in Southern Africa, vector control through residual house spraying is a major strategy to be employed. This will be done through:

- ◇ Proper timing of spraying activities
- ◇ Use of insecticides to which vector sensitivity is known
- ◇ Stratification of malaria risk areas for targeted spraying
- ◇ Monitor vector susceptibility.

Surveillance, forecasting and epidemic preparedness

Collection of epidemiological, environmental, geographical, meteorological and entomological data are essential for forecasting epidemics. The information system is to be strengthened through the following:

- 
- ◇ Creation of sentinel sites at various localities within the region to provide comprehensive data that can be used to forecast epidemics
 - ◇ Regular sharing of information collected at a regional level to facilitate the early detection and monitoring of epidemics.



Case management

Prompt and correct diagnosis and appropriate treatment of malaria cases is essential for effective case management. This is to be achieved through:

- ❖ Strengthening clinical and laboratory diagnosis
- ❖ An efficient drug distribution system
- ❖ Developing clear treatment regimens using evidence based methods
- ❖ Training of staff in treatment regimens
- ❖ Continued monitoring of drug resistance.

Drugs, Insecticides and, Insecticide treated materials (ITMs)

It is essential to ensure the availability of quality, cost effective drugs, insecticides and insecticide treated materials as these collectively form the cornerstone of malaria control programmes. This will be ensured by:

- ❖ Exploring regional bulk procurement of drugs and insecticides
- ❖ Having a central quality control centre utilising standard criteria for evaluating quality of drugs and insecticides
- ❖ Responsible use of both insecticides and drugs
- ❖ Discouraging monopolies in drugs and ITMs supplies.

Operational research

Operational research should be coordinated in the region to achieve a balance between basic and operational research, which focuses on problems that need to be addressed by malaria control programmes. This can be ensured through:

- ❖ Sharing of research capacity
- ❖ Harmonisation, where possible of research priorities
- ❖ Building research capacity within the region.

Community mobilisation

A high level of awareness on malaria in the community is critical for effective control of malaria, as without their participation control programmes cannot be effective. Communities will be mobilised through health education to:

- ❖ Recognise signs and symptoms of malaria
- ❖ Develop early treatment seeking behaviour
- ❖ Utilise personal protective measures
- ❖ Provide home based treatment.

Capacity building

Given that the burden of malaria is growing, it will be important to ensure sufficient and sustainable human resource development within the region, by:

- ❖ Identifying and supporting centres of excellence that are used for regional training
- ❖ Promoting study tours and sharing of expertise.

Source: SADC Health Sector Coordinating Unit



Activities

Despite its approval by Ministers in 2001, no funds were secured for the SADC Malaria Plan. Activities that took place were therefore those that could be funded by Member States. One such activity was the celebration of SADC Malaria Day.

Resource mobilisation for the Plan is now also being done within the framework of the Global Fund to Fight AIDS, TB and Malaria (GFATM). Commitment to increasing resource mobilisation for health was given impetus when the African Heads of States and Governments committed themselves in Abuja, Nigeria on 27 April 2001 to set a target of allocating at least 15% of annual budgets to improvements in health. In August 2001, the SADC Council of Ministers agreed to the monitoring of this target.



WHO Southern Africa Malaria Control and Roll Back Malaria

Within WHO AFRO, which serves forty-six African countries, the Southern African Malaria Control (SAMC) programme was set up in 1997, with the support of Department for International Development (DIFD) and Australian Government's overseas aid programme (AusAid). This was after the Organisation for African Unity (OAU) adopted the Harare Declaration on Malaria Prevention and Control in the context of African Economic Recovery and Development. SAMC serves Angola, Botswana, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania and Zimbabwe.

SAMC describes its comparative advantage as providing technical leadership in public health and malaria. It has the capacity, with its partners, to mobilise science, medicine and academy to support malaria control.

The SAMC is the main body in the SADC region charged with overseeing the implementation of the WHO initiated Roll Back Malaria.



Lubombo Spatial Development Initiative: Malaria Control Programme

The malaria control programme of the Lubombo Spatial Development Initiative (LSDI), serves as a good example of regional collaboration multisectoral and private public partnerships.

The LSDI is a concerted programme by the governments of Swaziland, Mozambique and South Africa to encourage new investment in the geographical area broadly comprising eastern Swaziland, southern Mozambique, and northeastern KwaZulu-Natal in South Africa. In July 1999, President Mbeki, President Chissano and His Majesty, King Mswati III signed the General Protocol which puts in place a platform for regional cooperation and delivery.

The LSDI malaria control programme was officially inaugurated by the 3 country ministerial signing of a protocol of agreement, during October 1999. The signing of this protocol legally constituted the RMCC, a commission



comprised of malaria scientists, and control and public health specialists from the three countries.

Baseline surveys were conducted by RMCC in December 1999, in 8 localities in Maputo Province, Mozambique; 4 localities in Swaziland; and 3 localities in South Africa to document the extent of the malaria problem prior to malaria vector interventions in these areas and to allow for post intervention comparison. These surveys were on *Plasmodium falciparum* infections (prevalence), entomological data, and knowledge, practices and behaviour in the affected communities.

Results from the first prevalence survey revealed that there was a marked difference in prevalence rates between the three countries. The lowest infection rates were recorded in Swaziland where the prevalence ranged from 1% to 5%. In KwaZulu-Natal, the prevalence varied between 9% and 42%; and in Mozambique between 22% and 90%. RMCC conducts annual surveys of plasmodium infection prevalence as part of its programme.

In South Africa, in 2001, malaria cases in KwaZulu-Natal decreased by over 75% from the previous year. Cases in Swaziland and southern Mozambique decreased by over 60% and 40% respectively. This is thought to be partly a result of the re-introduction of DDT spraying and the change of the first-line treatment for malaria to co-artemether, as well as a regional approach to malaria control in the LSDI.ⁱ

This regional approach led to a review of the type of insecticide used by Mozambique. In 1999, *A. funestus* resistance to synthetic pyrethroids had been recorded in KwaZulu-Natal, and tests showed similar resistance in Mozambique.⁸ Agreement was thus reached to change the insecticide to carbamates. The value of regional interaction is thus important.

i Personal communication, South African Department of Health.



The case of DDT – Key Developments

The use of DDT increased enormously on a worldwide basis after World War II, primarily because of its effectiveness against the mosquito that spreads malaria and the lice that carry typhus. The World Health Organization estimates that during the period of its use approximately 25 million lives were saved.

DDT seemed to be the ideal insecticide as it is cheap and of relatively low toxicity to mammals (oral LD50 is 300 to 500 mg/kg). However, problems related to extensive use of DDT began to emerge in the late 1940s. Many species of insects developed resistance to DDT, and DDT was also discovered to have a high toxicity toward fish.

DDT was the insecticide used in South Africa for indoor malaria mosquito control from the 1940s until 1996 when synthetic pyrethroids were introduced.

The use of DDT is regulated by the United Nations Environment Programme (UNEP), as a persistent organic pollutant (POP).^j

In response to reports in the region of resistance by mosquitoes to the newer synthetic pyrethroids, a decision was thus taken by the SADC Health Ministers in May 2000 to support the continued use of DDT for malaria control.

The meeting of the Intergovernmental Negotiating Committee for a Legally Binding Treaty on Certain Persistent Organic Pollutants (POPs) that took place in December 2000, Johannesburg SA resolved to keep DDT on the list of chemicals that can be used for health purposes, specifically for malaria control. The final resolution taken by the meeting accommodated the use of DDT for countries that appear in the DDT Registry. South Africa and Swaziland have since applied for the continued use of DDT and this was granted.

During their annual sectoral meeting held in Pretoria in April 2002, SADC Health Ministers decided to explore a block application as a region for using DDT, and this is still being pursued.

The adoption of the use of DDT by the SADC Health Ministers did not preclude countries from taking individual country positions on the use of the substance. The malaria control programme of the LSDI is a good example of choices being made by countries. South Africa and Swaziland use DDT to control mosquitoes, while Mozambique uses carbamates, as it still opposes to the use of DDT.

SADC Response to TB

The Southern Africa Tuberculosis Control Initiative (SATCI) is an initiative aiming at a cooperative fight against tuberculosis in the SADC Region. Unlike other SADC Health Sector subcommittees that had to be established by the SADC Health Ministers after 1997, SATCI was an initiative that was established by the SADC TB managers in 1995. It was later approved as a technical subcommittee of the SADC Health Sector.

The overall purpose of SATCI is to promote a strong foundation and facilitate necessary change for effective TB control throughout the SADC Region.

^j Persistent Organic Pollutants (POPs) are chemical substances that persist in the environment, bio-accumulate through the food web, and pose a risk of causing adverse effects to human health and the environment. With the evidence of long-range transport of these substances to regions where they have never been used or produced and the consequent threats they pose to the environment of the whole globe, the international community has now, at several occasions called for urgent global actions to reduce and eliminate releases of these chemicals.

SATCI in particular, aims to promote the goals of the WHO framework for TB control and related endorsed international activities like the STOP TB initiative.⁹

Activities

Some of the activities of SATCI are:

- Training of laboratory workers in TB diagnostics
- Production of a TB laboratory manual and a TB/HIV pocket guide for health workers
- Training using the TB electronic register
- Conducting a study on the bulk procurement of TB drugs.

WHO response

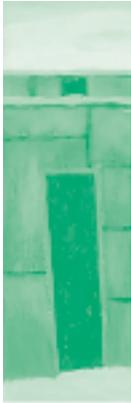
The current WHO AFRO TB Control Strategic Plan 2001-2005 identifies DOTS as the key strategy for controlling TB in the Africa region and has further identified several approaches to help increase population coverage with quality DOTS services in the context of overall Health sector development plans. This includes the promotion of public-private mix in the delivery of TB services, increased access to quality anti-TB drugs, phased implementation of collaborative HIV/AIDS and TB control strategies in all countries severely affected by the dual TB/ HIV epidemic, community TB care initiatives and monitoring and evaluation of the epidemic and control programme activities.

Stop TB initiative

WHO launched the Stop TB Initiative in Bangkok in November 1998. This initiative is a partnership of organisations hosted by WHO that aims to accelerate control of TB by expanding the global coalition of partners working to control the disease, pushing TB higher on the international political and health agendas, and significantly increasing the investment in TB control.¹⁰

One of the major achievements of the initiative has been the Global Drug Fund, which aims to provide universal availability of TB drugs in improved forms, specifically fixed drug combinations, to achieve more cures and minimise the emergence of drug resistance.

The initiative focuses on 22 countries (i.e. large countries with the highest burden and on smaller ones with very high incidences) within SADC, DRC, Mozambique, South Africa, Tanzania and Zimbabwe are part of the initiative.



Global Fund to Fight AIDS, TB, and Malaria

The UN Secretary General, Mr Kofi Annan, established this fund during the UN General Assembly Special Session (UNGASS) on HIV/AIDS of June 2001. Its establishment was following the suggestion of the African Heads of State and Government in Abuja, Nigeria in April 2001 that such a fund be established. The fund is intended to serve as a means for mobilising resources to address the challenge of the TB and malaria epidemics and the threat posed by HIV/AIDS.

The fund has established eligibility criteria for countries to use as a guide for applying for funds. All applications are to have the approval of country coordinating mechanisms (CCM).

SADC several countries were successful in securing funds from the GFATM. Out of a total disbursement to countries in the region totalling around US\$ 321 million, US\$ 220 million was for HIV/AIDS, \$ 71 million for TB/HIV/AIDS, and almost \$ 30 million for malaria. Unfortunately no funds were awarded for TB, although US\$ 60 million was pending to Zambia for TB, should some revisions be made to their proposal. A summary of the allocations to countries in the region is shown in Table 5. SADC continues to monitor the allocation of funds by the GFATM, and advocates at all times for the use of burden of disease as a criterion for allocation of funds. SADC is represented by South Africa as an alternate member to Uganda on the Board of the Fund and should thus able to influence Board decisions.

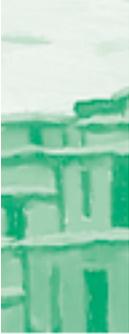


Table 5: First round allocation of funds to SADC countries by the Global Fund to Fight AIDS, TB and Malaria¹¹

Proposals/Components Approved for Funding with No or Minor Adjustments					
Country	Agency	Title	Component	Year 1 in US\$ millions	Total in US\$ millions
Malawi	National AIDS Commission	The Comprehensive HIV/AIDS management strategy for Malawi	HIV/AIDS	13	19.6
Tanzania	CCM Tanzania	National insecticide treated nets implementation plan (NATNETS) support	Malaria	4.16	19.8
South Africa	KwaZulu-Natal Provincial Coordinating Mechanism (KZN PCM)	Enhancing the Care of HIV/AIDS infected and affected patients in resource-constraint settings in KwaZulu-Natal	HIV/TB	11.49	71.97
South Africa	CCM South Africa (South African National Aids Council – SANAC)	Strengthening national capacity for treatment, care and support related to HIV and TB, building on successful behaviour change	HIV	13.37	93.31
Tanzania	Zanzibar Global Fund CCM	Implementation of new malaria treatment policy in Zanzibar	Malaria	0.41	1.15
Zambia	CCM Zambia	Zambia's Coordinated Proposal to Combat HIV/AIDS, TB and Malaria	HIV	19.86	92.85
Zimbabwe	CCM Zimbabwe	Proposal to strengthen and scale up disease prevention and care for HIV/AIDS, TB and Malaria in Zimbabwe (2002)	Malaria	4.75	8.88
Zimbabwe	CCM Zimbabwe	Proposal to strengthen and scale up disease prevention and care for HIV/AIDS, TB and Malaria in Zimbabwe (2002)	HIV	5.3	14.1

The SADC regional proposal was submitted to the GFATM during the first call for proposals. The proposal was not considered, as it had not been signed by all 14 SADC country coordinating mechanisms.

Despite requests to be allowed to submit proposals through a single mandated signatory, the GFATM insisted that 14 signatures had to be obtained from countries for the Fund to consider proposals from SADC. During the second round of proposals that closed in September 2002, SADC managed to submit three proposals on HIV/AIDS, TB and Malaria. The collation of signatures was a major challenge, but ultimately all these were duly submitted.



In the future, consideration will have to be given to identifying a single signatory that can be recognised by the Fund. The most likely possibility is using the Chairperson of the SADC Council of Ministers, to sign on behalf of all member states.

Conclusions

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- The SADC region is facing serious threats to the well being of its citizens. The HIV/AIDS epidemic has led to a worsening of the already bad TB situation, and as the AIDS epidemic progresses the TB epidemic will get worse.
 - Malaria has never been well controlled in most SADC countries and funding has always been inadequate, given the magnitude of the problem.
 - Both malaria and TB programmes are not doing well mainly due to poorly functioning health systems.
 - Good control measures exist for both TB and malaria and WHO is giving leadership on technical matters.
 - Innovative ways of addressing funding for health care are being implemented, in the form of Roll Back Malaria, Stop TB and the Global Fund to fight AIDS, TB and Malaria.
 - A regional approach to these diseases enhances country initiatives and can lead to synergies between country programmes.



Recommendations

- 1 African leaders need to continue to advocate for the control of communicable diseases and to maintain the world's attention on the impact these disease have on development.
- 2 In order to ensure more accurate data for guiding countries to set specific and realistic targets and strategies towards the 2005 Global Stop TB targets, and to monitor programmes and trends, a uniform surveillance system that facilitates accurate quantification of the TB burden, needs to be established at both country and regional levels.
- 3 More funding for public health services is essential for the success of the TB and malaria programmes. Monitoring how much is spent on health, and on individual programmes is a good start. Countries should make an effort to allocate more resources for health.
- 4 Regional programmes should be encouraged and strengthened. Regional organisations have a role to play in the sharing of experiences on disease control, in standardise control measures where applicable, and in monitoring the performance of all countries in the region.
- 5 The new advocacy and funding mechanisms such as the Stop TB Initiative, Roll Back Malaria Initiative and the GFATM should be supported. Resources are available through these initiatives and countries must submit proposals. Involvement by countries can also ensure that these funding mechanisms address the funding of health systems, in addition to programmes.
- 6 Since communities are a prerequisite for the success of TB and malaria programmes their participation should be encouraged and strengthened.



References

- 1 World Health Organization (Geneva), The World Health Report 2000. Health Systems: Improving Performance. Geneva: WHO; 2000.
URL: <http://www.who.int/whr2001/2001/archives/2000/en/>
- 2 World Health Organization (Geneva), WHO Southern Africa Malaria Control.
URL: http://www.malaria.org.zw/malaria_burden.html
- 3 World Health Organization (Geneva), WHO Expert Committee on Malaria, 20th Report, 892, WHO, 2000.
URL: <http://mosquito.who.int/docs/ecr20.pdf>
- 4 World Health Organization African Regional Office, 2000 TB Case Finding and 1999 Treatment Outcomes Report, Tuberculosis Control Program, WHO AFRO Regional Office, 2002.
- 5 Human Development Report 2002, United Nations Development Programme.
Published for the United Nations Development Programme (UNDP), New York, Oxford, 2002.
URL: <http://hdr.undp.org/reports/global/2002/en/>
- 6 Jeffrey Sachs, Macroeconomics and Health: Investing in Health for Economic Development, Report of the Commission on Macroeconomics and Health, World Health Organization, 2001 (p 56).
URL: http://www3.who.int/whosis/cmh/cmh_report/e/e/htm/000-200/000-200.html



- 7 Better Health in Africa, Experiences and Lessons Learned, A World Bank Publication, The International Bank for Reconstruction and Development, Washington 1994 (p 152).
URL: <http://publications.worldbank.org/ecommerce/>
- 8 Regional Malaria Control Commission, Lubombo Spatial Development Initiative.
URL: <http://www.lubombo.org.za>
URL: http://www.malaria.org.za/lodi/Overview/Regional_Malaria_Control_commi/regional_malaria_control_commi.html
- 9 Southern African Development Community Health Sector Coordinating Unit, Tuberculosis, Defying a Common Foe. Southern Africa Tuberculosis Control Initiative, TB Advocacy Report, 2000.
- 10 WHO Stop TB Initiative.
URL: www.stoptb.org
- 11 Global Fund to Fight AIDS, TB and Malaria.
URL: <http://www.globalfundatm.org/>

