

**Republic of Zambia
Ministry of Health
National Malaria Control Center**

NATIONAL MALARIA CONTROL ACTION PLAN

2011

Table of Contents

Acronyms	4
Executive Summary.....	7
CHAPTER 1. Intorduction	8
1.1 Background	8
1.2 Epidemiology of Malaria in Zambia	9
1.3 Major achievements in 2010	10
1.4 Challenges in 2010	10
1.5 Main objectives in 2010.....	10
CHAPTER 2. Insecticide Treated Nets (ITNS).....	11
2.1 Goal	12
2.2 Objectives for 2011	12
2.3 Key achievements in 2010	12
2.4 Challenges	13
2.5 Actions to be taken in 2011	13
2.6 Support needs for District Action Plans	14
2.7 Support needs for Partner Action Plans	15
CHAPTER 3. Indoor Residual House Spraying (IRS).....	21
3.1 Aim	21
3.2 Objectives.....	21
3.3 Achievements made in 2010	21
3.4 Challenges experienced in 2010	22
3.5 Planned 2011 Actions	22
3.6 Key support to Provinces and Districts	22
CHAPTER 4. Entomology	27
4.1 Objective	27
4.2 Specific Objective	27
4.3 Targets.....	27
4.4 Key Entomology Achievements in 2010	27
4.5 Challenges	28
4.6 Actions to be taken in 2011	28
4.7 Support for the District Action Plan.....	28
CHAPTER 5. Case Management	31
5.1 Objective	31
5.2 Specific Objectives	31
5.3 Action and progress in 2010	31
5.4 Major challenges in 2010.....	32
5.5 Progress on 2010 case management plans	32
5.6 Case Management Activities, 2011	32
CHAPTER 6. Operations research.....	39
6.1 Goal	39
6.2 Objectives.....	39
6.3 Outputs	39
2010 Planned Activities and status.....	39

6.4 Challenges	40
CHAPTER 7. Information, Education, Communication/Behaviour Change Communication (IEC/BCC) and Advocacy.....	43
7.1 Goal	43
7.2 Objective	44
7.3 Strategies	44
7.4 Expected outputs	44
7.5 Indicators	44
CHAPTER 8. Performance, monitoring and evaluation	54
8.1 Objectives.....	54
8.2 Key achievements in 2010	54
8.3 Challenges	55
CHAPTER 9. Malaria epidemic preparedness and early warning system.....	59
9.1 Achievements during 2009	59
9.2 Challenges	60
9.3 Objective	60
9.4 Target	60
9.5 Part 1: Strengthening malaria epidemic preparedness	60
9.6 Part 2: Setting up and strengthening a malaria early warning system	61
9.7 Part 3: Emergency Funding	61
9.8 Budget Justification.....	61
CHAPTER 10. Program Management.....	65
10.1 Objective	65
10.2 Progress.....	65
10.2.1 Policy, program planning and design.	65
10.2.2 Organizational alignment and coordination	65
10.2.3 Human Resource Management	65
10.2.4 Financial Management	65
10.2.5 Program implementation.....	65
10.3 Challenges	65
10.4 Focus for 2011.....	66
1.1 Develop and disseminate malaria policy	67
Annex 1 List of Technical Officers and Contact email addresses	70
Annex 2: Partners, Area of support and specific activities	71

Acronyms

ACT - Artemisinin Based Combination Therapy

BCC - Behavior Change Communication

CBOs - Community Based Organizations

CDC - Centres for Disease Control

CHAZ - Churches Health Association of Zambia

CHWs - Community Health Workers

CSO - Central Statistical Office

DFID - Department for International Development

DHMTs - District Health Management Teams

DHO - District Health Office

DMO – District Medical Office

DMMU - Disaster Mitigation Management Unit

ECZ - Environmental Council of Zambia

FANC - Focused Antenatal Care

GFATM - Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria

GRZ - Government of the Republic of Zambia

HMIS - Health Management Information System

HMM - Home Management of Malaria

IEC - Information, Education and Communication

IPT - Intermittent Preventive Therapy

IRS - Indoor Residual House Spraying

ITNs - Insecticide Treated Nets

IVC - Integrated Vector Management

IVCC - Innovative Vector Control Consortium

JICA - Japanese International Cooperation Agency

JSI - John Snow Incorporated

LLINS - Long Lasting Insecticidal Nets

M & E - Monitoring and Evaluation

MACEPA - Malaria Control and Evaluation Partnership in Africa

MC - Malaria Consortium

MDGs - Millennium Development Goals

MIP - Malaria in Pregnancy

MIS - Malaria Indicator Survey

MoH - Ministry of Health

MSL - Medical Stores Limited

NGOs - Non-Governmental Organizations

NHC - Neighborhood Health Committee

NHSP - National Health Strategic Plan

NMCC - National Malaria Control Centre

NMCP - National Malaria Control Programme

PHLWAS - People Living with HIV/AIDS

PHO - Provincial Health Office

PMI - US President's Malaria Initiative

PMTCT - Prevention of Mother to Child Transmission

PRA - Pharmacy Regulatory Authority

PSI - Population Service International

RAPIDS - Reaching HIV/AIDS Affected People with Integrated Development and Support

RBM - Roll Back Malaria

RDTs - Rapid Diagnosis Tests

RTI - Research Triangle Institute

SADC - Southern Africa Development Community

SFH - Society for Family Health

TDR - Tropical Diseases Research Centre

UNICEF - United Nations Children's Fund

UNZA - University of Zambia

USAID - United States Agency for International Development

UTH - University Teaching Hospital

VCT - Voluntary Counseling and Testing

WB - World Bank

WHO - World Health Organization

ZABCOM - Zambia Business Coalition against Malaria

ZANIS - Zambia News and Information Services

ZBSCCP – Zambia Behavioral and Social Change Communication Programme

ZISSP – Zambia Integrated Systems strengthening Programme

ZNBC - Zambia National Broadcasting Corporation

Executive Summary

Malaria is still a major public health problem. In 2010 there was an estimated 4.2million cases of malaria with 4834 deaths. The Government of Zambia through Ministry of Health continues to prioritize efforts to control malaria.

The 2011 action plan marks the beginning of the implementation of the 2011-2015 National Malaria Strategic Plan (NMSP). The NMSP seeks to build on previous successes of the 2006-2010 NMSP and consolidate its gains through an evidence based approach. In the past five years three malaria indicator surveys and one program review have been successfully conducted. These among others have provided the evidence base for some of the policy decisions. The goal of the MIS was to evaluate progress towards achieving goals set in the NMSP 2006-2010, and the MPR evaluated the national malaria program with an aim to improve the operational performance and the delivery of interventions, in order to reduce morbidity and mortality.

Overall, there has been remarkable documented progress in malaria control in Zambia over the last decade, with above 60% decline in morbidity and mortality. Epidemiologically, Zambia can be stratified into three malaria epidemiological categories as opposed to being broadly endemic as was the case in the past.

The action plan will continue to focus on the key intervention areas with the new dimension of consolidating gains achieved so far. The interventions encompass both preventive and curative approaches. The preventive interventions include; Integrated Vector Management (IVM) whose aim is to strengthen capacity to deliver interventions, entomology monitoring and surveillance. Indoor residual Spraying of structures and mass distribution and promotion of use of long Lasting Insecticide Treated mosquito nets (LLIN), with emphasis on children under 5 years and pregnant women are two main activities under IVM. In addition there is larval source management and environmental management. Specifically for malaria in pregnancy Intermittent Presumptive Treatment is conducted for all pregnant women.

The curative interventions are prompt and effective malaria case diagnosis and treatment, with an emphasis on confirmatory diagnosis taking recognizance of Zambia's epidemiological variation with regard to malaria Coupled with a sound program management, strengthened operations research, monitoring, surveillance and evaluation, intensified and localized advocacy, information and communication activities, Zambia is poised to make even greater gains towards "a malaria free Zambia.

CHAPTER 1. Introduction

1.1 Background

Zambia is a landlocked country in southern Africa, lying between 8 and 18 degrees south latitude and between 20 and 35 degrees east longitude, and at an altitude of between 1000 and 1500 meters above sea level. The country covers an area of 752,612 square kilometers and has an estimated population of 13 million people, with 61 % in the rural areas and 39 % in urban areas.

Zambia shares boundaries with Angola in the west, Namibia southwest, Zimbabwe and Botswana in the south, Democratic Republic of the Congo and Tanzania in the north, and Malawi and Mozambique in the east. The country is divided into 9 provinces and 72 districts for administration. Most of Zambia's population is concentrated in the capital city, Lusaka and along towns and cities from Livingstone in the southern part of the country along the line of rail to the copper belt.

Malaria remains a major public health problem in Zambia. In 2010, there was an estimated 4.2 million cases of malaria (both confirmed and unconfirmed) country wide. A total of 4834 deaths were recorded. The Government of Zambia through the Ministry of Health has prioritized efforts to mitigate the effects of malaria. These efforts are outlined in the National Health Strategic plans (NHSP) and the National Malaria Strategic Plan. Government believes in equitable distribution of effective malaria preventive and curative services as close to the house hold as possible.

The key preventive interventions are: Indoor residual spraying of structures in eligible areas, promotion and distribution of long lasting treated insecticide nets, especially for children under the age of five years and pregnant women, and intermittent preventive therapy (IPT) of malaria in pregnancy. The main curative interventions are; scaling up and sustaining laboratory diagnosis for confirmation of malaria cases (both microscopy and rapid diagnostic tests) prior to commencement of treatment, ensuring prompt and effective treatment of suspected malaria cases according to national guidelines, within 24 hours of onset of symptoms.

Zambia has made remarkable progress in malaria control over the last five years. In 2006, malaria incidence was 412 cases per 1000, in 2007 the incidence was 358 cases per 1000, and in 2009 251 cases per 1000.

In the year 2010, the third National Malaria Indicator survey was done. This was a nationally representative house hold survey assessing coverage of key malaria interventions and malaria related burden among children under the age of five years. In the same year, a malaria program review (MPR) was conducted. The aim of the review

was to improve performance and refining or re-defining strategic direction and focus, by reviewing progress and performance of country programs within the national health and development agenda.

1.2 Epidemiology of Malaria in Zambia

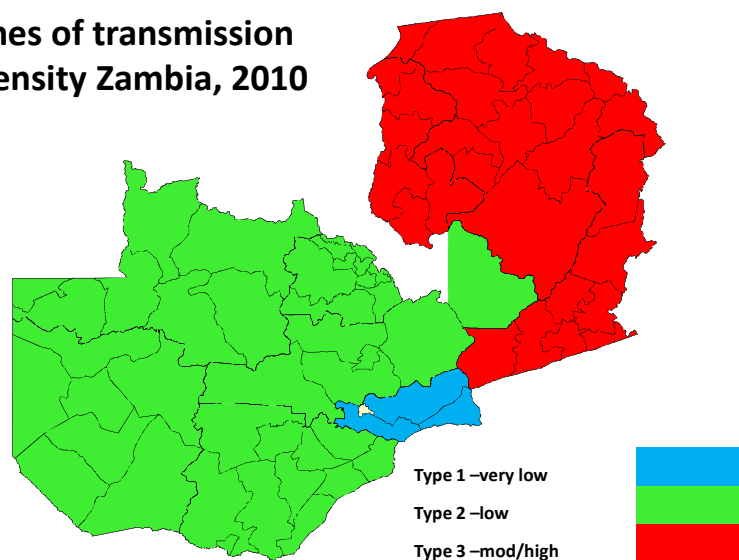
The main plasmodium species responsible for malaria transmission in Zambia is *Plasmodium falciparum* which accounts for about 98% of the national reported cases of malaria in the country. The main vectors are *Anopheles funestus*, *An. gambiae* and *An. Arabiensis*. Transmission of malaria is throughout the year with peaks in the rainy season from November to April. In the recent past routine data, special studies and national surveys have indicated a downward trend in malaria with epidemiological transition in certain parts of the country. Zambia is now stratified into 3 main as follows:

Category 1: Areas with less than 1% parasite prevalence (Lusaka district and environs)

Category 2: Areas with parasite prevalence between 1% and less than 10% (Central, Copperbelt, North-Western, Southern and Western Provinces)

Category 3: Areas with parasite prevalence greater than 20% (Eastern, Luapula and Northern Provinces)

Zones of transmission intensity Zambia, 2010



1.3 Major achievements in 2010

- Zambia has continued to maintain success in many areas of the country
- Continued availability of first line anti malarial drugs for uncomplicated malaria at all levels of care
- Revision and updating of guidelines on diagnosis and treatment of malaria completed.
- Distributed over 1 million LLITNs
- Coverage with one ITN increased from 62.3% (2008) to 64.3%.
- Utilization of nets for children under five and pregnant women rose from 41.1% and 43.2% to 49.9% and 45.9% respectively.
- Demonstrated combined impact of IRS and ITNs on malaria vectors in 18 sentinel sites.
- Determined the insecticide resistance profiles of major malaria vectors in 12 selected districts
- Conducted comprehensive program review
- Conducted 3rd malaria indicator survey

1.4 Challenges in 2010

- Unpredictable funding from both GRZ and partners
- Restructuring in M.O.H negatively impacted on the program as in some positions were omitted on the establishment.

1.5 Main objectives in 2010

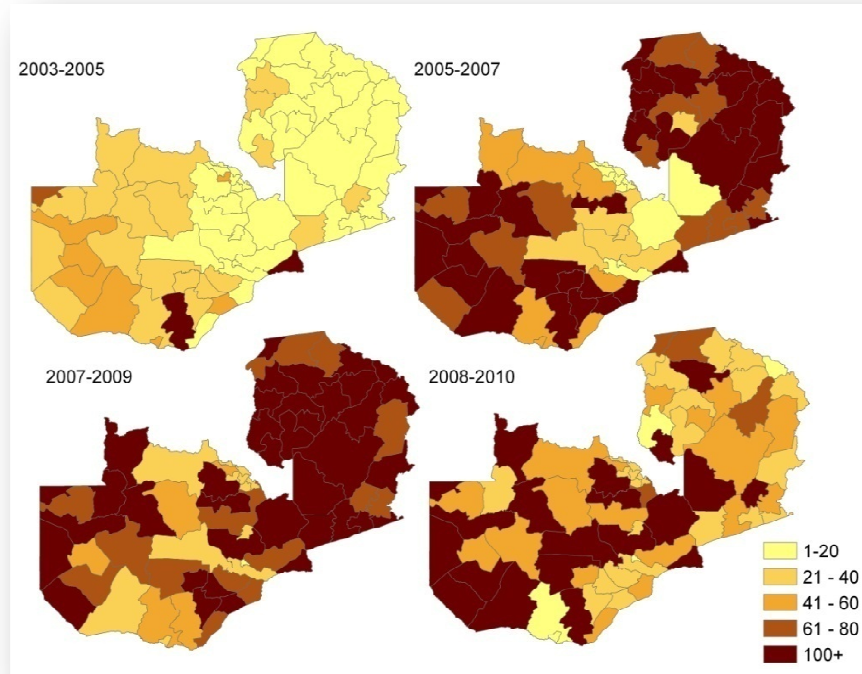
- To increase capacity to conduct malaria research and develop national capacity for evidence based programming
- To ensure Universal Coverage (UC) of LLINs through appropriate channels by December 2011 and maintained through to 2015.
- IRS successfully conducted in 54 districts
- Increase district ownership of IRS evidenced through local resource mobilization

CHAPTER 2. Insecticide Treated Nets (ITNS)

Integrated Vector Management (IVM) remains the cornerstone of malaria prevention and control with focus on Indoor Residual Spraying, Environmental Management and the distribution of Insecticide Treated Nets (ITNs). ITNs have been proven to be an effective way of preventing and controlling malaria and as such Zambia continues to scale up efforts to ensure adequate resources are mobilized for the procurement and distribution of ITNs to households.

Over the years, support to the ITN programme has increased significantly and this is evident from the noted increase in coverage between 2003 and 2010. Currently, the Ministry of Health is supported by the World Bank, GFATM, PMI, Zambia Anglican Council, MACEPA and DFID in the procurement of ITNs. In terms of programme implementation support has continued to grow with MOH partnering with NGOs, private sector, line ministries and other public institutions.

The maps below show how the ITN programme has progressed over the years and provide guidance to implementing partner to focus with low coverage and high parasite prevalence rates.



Besides procurement and distribution of ITNs, IEC/BCC as well as Monitoring and Evaluation have been critical to the programme and have provided an insight on the weak and strong areas of the programme. It is for this reason that the two support interventions will be embraced in the 2011 Action Plan with strengthened coordination with the Technical Working Groups of the respective interventions.

2.1 Goal

By 2015, to have at least 80% of people living in malaria risk areas using appropriate malaria vector control measures.

2.2 Objectives for 2011

To ensure Universal Coverage (UC) of LLINs through appropriate channels by December 2011 and maintained through to 2015.

2.3 Key achievements in 2010

2009 was marked with delayed ITN procurements however in March 2010 the Ministry of Health procured 215,000 ITNs with support from the GFATM which were distributed between September and December 2010 in six (6) districts namely Chinsali, Mporokoso, Namwala, Itezhi Tezhi, Mambwe and Nyimba as per distribution plan below:

Province/District	No. of nets allocated
Southern	
Namwala	26,000
Itezhi Tezhi	29,700
Northern	
Mporokoso	54,100
Chinsali	43,100
Eastern	
Nyimba	5,000
Mambwe	23,100
CSO	34,000
TOTAL	215,000

PMI procured 400,000 LLINs in June 2010. The PMI-funded project, Partnership for Integrated Social Marketing or PRISM project distributed 390,000 of these nets to antenatal clinics in public health facilities countrywide. Other achievements were noted from the 2010 Malaria Indicator Survey results which showed a slight increase in both coverage with at least ITN and utilization in children under five and pregnant women

compared to the 2008 MIS. Coverage with one ITN has risen from 62.3% (2008) to 64.3%, while utilization for children under five and pregnant women rose from 41.1% and 43.2% to 49.9% and 45.9% respectively for the two years. ITN ownership showed variations from one province to another with all provinces except Luapula Province achieving and surpassing the 60% Abuja target.

The 2010 MIS results could have been higher if the country had procured all the planned ITNs for 2009. However, ITN procurements were delayed to late fund disbursements and as such procurements only commenced the fourth quarter of 2009 with the first consignment of ITNs procured with support from GFATM.

2.4 Challenges

- Late disbursement of funds which had a negative impact on effective programme implementation with almost all districts not receiving any ITNs in most part of 2010.
- Limited funds for districts to distribute ITNs up to household level
- Low utilization rates due to non availability of ITNs on communities/households as they were not available in country.

2.5 Actions to be taken in 2011

NMCP shall ensure the following actions are taken:

- Review all ITN guidelines
- Forecast and quantify national ITN needs
- Procurement and distribution of 5, 017, 665 ITNs as shown in table below:

Source	2011	
	Firm commitments	Planned
<i>Global Fund</i>		
MoH Round 4	454,815	
MoH Round 4 Phase 2	582,850	
MoH Round 7 Year 3		500,000
CHAZ Round 7 Year 3	50,000	
<i>PMI</i>		
MIP Programme (PRISM/SFH)	900,000	611,000
Mass distribution (MOH)	500,000	
<i>World Bank</i>	1,500,000	
<i>DFID(STEPS OVC)</i>	1,000,000	
<i>Zambia Anglican Council</i>	30,000	
TOTAL	5,017,665	1,111,000

- Ensure Universal Coverage (UC) is achieved in all target areas through scaled up door-to-door campaigns. This campaign shall ensure that all sleeping spaces in every target household are covered regardless of whether there is IRS or not as there are adequate ITNs in 2011 with no gaps as long as all commitments are fulfilled
- Strengthen routine distributions through MIP and EPI by the development of an ITN maintenance plan
- Support other ITN distribution strategies (Equity, COMBOR, MSHP) through resource mobilization and provision of TA to all stakeholders
- Expand and strengthen employee based schemes (ZABCOM)
- Conduct needs assessment in districts and determine number of worn-out nets for replacement during campaigns as well as develop a plan for the disposal of worn-out nets (following WHO recommendations)
- Develop a plan for the disposal of worn-out nets (following WHO recommendations)
- Strengthen support for local leaders and all other stakeholders to increase utilization rates
- Work with other stakeholders to procure and distribute ITNs for Epidemic Preparedness and Response
- Strengthen the partnership with the Zambia Wildlife Authority (ZAWA), Ministries of Agriculture and Fisheries as well as the Zambia Police Service to prevent use of ITNs for fishing
- Support the IEC/BCC TWG to increase ITN use through communication
- Regularly update the ITN database
- Review the unit cost for the distribution of ITNs at the household level

2.6 Support needs for District Action Plans

Supportive supervision to the districts has been adequately planned for in 2011 if successful implementation of ITN programmes is desired. Key areas to be addressed include:

- Development of district ITN databases which shall be updated quarterly and shared with central level.
 - Provide ongoing technical support to the districts in collecting data on ITN coverage and utilization rates in order to improve the ITN database
- Involve PHO and DHO in the review of the National ITN Guidelines to enhance ownership
- Ensure all districts have Malaria Task Force Committees that will regularly meet to discuss ITN programme implementation
- Mobilize resources to support NHCs as they have proven to be a key partner in the programme

2.7 Support needs for Partner Action Plans

The Ministry of Health realizes the importance of strong and broad partnerships for programme success and as such will provide a platform for partner coordination with NMCC.

All partners will work in line with the NMCP policy and guidelines, and distribution of ITNs will be guided by the Ministry of Health with priority given to areas with high parasite prevalence rates. Expected outputs from this strengthened partnership, as in 2010 include:

- Increased stakeholder participation
- Continued resource mobilization
- Improved reporting systems to all stakeholders
- Well coordinated ITN programme implementation giving priority to areas identified in the 2010 Forecast Plan.
- In addition, this ensures that budgeting for malaria control is a priority for both the government and its partners.

National Malaria Control Action Plan - 2011

Activities	Indicator	Target	Source of Funds	J	F	M	A	M	J	J	A	S	O	N	D	Est. Cost USD (\$)	Funding USD (\$)	Gap USD (\$)	Potential Impl. Partners	
Objective : Increase ITN coverage and monitoring in all districts																				
Mass Distribution																				
Quantification and forecasting ITN needs/gaps	No. of logistics and planning meetings held	72	JSI/USAID DELIVER			X			X			X			X					MoH, JSI, CHAZ, SFH,
Support districts to conduct needs assessment in N. Western and Western provinces	No. of districts supported	14	GRZ	X	X	X	X	X	X	X	X	X	X	X	X					MOH, WB,
Procure 5,017,665 ITNs @ \$5/ITN	No. of ITNs procured	5,017,665	GFATM, WB, PMI, DFID	X	X	X	X	X	X							25,088,325	25,088,325	0		GFATM, WB, PMI, ZAC, DFID
Store and distribute 5,017,665 ITNs @ \$1/ITN	%age of population that slept under an ITN the previous night	5,017,665	GFATM, SFH, WB, PMI		X	X	X	X	X	X	X	X	X	X	X	5,017,665	4,062,850	954,815		MOH and all ITN stakeholders
Monitor door-to-door campaign exercise @\$1,537/district (11 Southern, 12 Northern, 8 Eastern, 7 Luapula, 7 N. Western, 7 Western)	No. of campaigns monitored	52	WB, GFATM, JSI		X	X	X	X	X	X	X	X	X	X	X	69,165	23,716	45,449		MOH and all ITN stakeholders

National Malaria Control Action Plan - 2011

Procure 80,000 ITNs to be distributed through ZAC @ \$5	No. of ITNs procured	80,000														400,000	400,000	0	MOH, PMI, JSI, ZAC	
Support implementation and monitoring of MIP/Equity programme and other vulnerable populations																				
Procure 753,173 ITNs @\$5/ITN	No. of ITNs procured	753,173	PMI		X												3,765,865	3,765,865	0	MOH, PMI, SFH, USAID
Store and distribute ITNs @ \$1/ITN	No. of ITN stored and distributed to beneficiaries	753,173	SFH, PMI			X	X	X	X	X							753,173	753,173	0	PMI, SFH
Determine demand for ITNs through MIP in antenatal clinics for district ITN (for U5s and PW)	No. of health facilities evaluated		SFH, NMCC	X	X	X														
Develop and distribute MIP stamps to health facilities	No. of stamps developed and distributed to health facilities	1,400	SFH				X	X	X	X										
Conduct review meetings in 9 provinces	No. of review meetings developed	9 provinces	NMCC, SFH			X	X	X	X	X	X	X	X	X						
Objective 2: Increase ITN utilization																				
Support district reporting on utilization in Northern, Eastern and Luapula Provinces	No. of districts supported	27 districts	NMCC and partners			X	X	X	X	X	X	X	X	X						

National Malaria Control Action Plan - 2011

Encourage formation of district malaria task forces and partnerships for promoting ITN use and discouraging ITN mis-use in Northern, Eastern and Luapula Provinces	No. of district MATFs formed	27 districts	NMCC and partners			X	X	X	X	X	X	X	X	X				
Promote and monitor ITN utilization	%age of population who slept under an ITN the previous night	27	NMCC, CSH, SFH			X	X	X	X	X	X	X	X	X				
Promote targeted IEC/BCC for improving ITN use among school age children	%age of school going children that slept under an ITN the previous night	10	NMCC/MOH, MOE, CSH, SFH	X	X	X	X					X	X	X	X			
Promote IEC/BCC activities to sensitize communities on ITN utilization	No. of IEC/BCC activities conducted	74	NMCC, CSH, SFH	X	X	X	X	X	X	X	X	X	X	X				
Strengthen coordination at central, provincial, district and health centre levels																		
Support quarterly meetings of the National ITN Technical	No. of quarterly ITN TWG meetings held	4	NMCC and partners		X			X			X			X				

National Malaria Control Action Plan - 2011

Working Group coordinated through the National Malaria Control Centre																			
Conduct coordinated malaria review meetings in 9 provinces – including covering ITN guidelines, IVM and other IRS issues	No. of review meetings held	9	NMCP			X	X	X	X	X	X	X	X	X					
Support stakeholder meetings	No. of stakeholder meetings supported	10	NMCP			X	X	X	X	X	X	X	X	X					
Review and disseminate all ITN Guidelines	No. of ITN guidelines reviewed and disseminated	2	NMCP			X													
Quarterly update of ITN Database	No. of updates conducted	4	NMCC		X			X			X			X					
Develop ITN database at district level and support district reporting on beneficiary coverage	No. of districts supported in the development of an ITN database	27	NMCP			X	X	X	X	X	X	X	X	X					
Strengthen Employer Based Schemes through Zambia Business Coalition against Malaria																			
Strengthen employer based schemes	No. of new companies implementing	5	NMCP			X	X					X	X						NMCC

National Malaria Control Action Plan - 2011

	employer based schemes																		
Monitor progress of employer based schemes	No. of schemes monitored	10	NMCP		X	X		X	X		X	X							MOH, MACEPA
Strengthen COMBOR Project implementation																			
Support implementation of project	No. of projects supported		WB		X	X	X	X	X	X	X	X	X	X	X	100,000	73,380	26,620	MOH, WHO
Monitor project	No. of projects monitored		WB		X	X	X	X	X	X	X	X	X	X					
Support all districts – Epidemic Preparedness																			
Procure 10,000 ITNs @ \$5/ITN	No. of ITNs procured	10,000	GFATM												50,000				
Store and distribute 10,000 LLINs @ \$1/ITN	No. of ITNs stored and distributed to target groups	10,000	GFATM				X					X	X	X	10,000				
Identify eligible districts/areas for ITN distribution	No. of districts identified and supported		GRZ					X	X	X	X								
TOTAL																			

1. There are no distribution funds for GFTAM (454,815) and PMI (500,000) ITNs thus the gap of \$ 4,062,850 (\$ 1/ITN).

CHAPTER 3. Indoor Residual House Spraying (IRS)

The strategic direction for the implementation of Indoor Residual Spraying (IRS) will depend on the scientific evidence for decision making in the selection of insecticides and prioritization areas with high malaria incidence in the districts. In this context, detailed assessments of the districts eligible for IRS will be conducted, commencing with the current 54 districts. The remaining 18 districts will be assessed with a view of including districts that will be ready to put the structure for implementation. These requirements include; adequate storage, transport, personnel, well coordinated partnership, district willingness to own the programme. With this strategy, it is anticipated that at least two thirds of the Zambian population will be protected from malaria in the 2011 to 2012 malaria transmission period with IRS.

The total expected budget to conduct IRS in this year is approximately \$ 7, 718,000

In this year implementation will revolve around the following core activities;

1. Strengthened coordination at all levels of implementation.
2. Comprehensive Assessments of needs at all levels
3. Review and revision of overall IRS cycle of activities and IEC materials
4. Evidence based IRS implementation
5. Surveillance for insecticide resistance
6. Strategic Environmental Assessments

3.1 Aim

The main aim is to ensure that malaria incidence is reduced in all the districts conducting t IRS in accordance with the National Health policy and the malaria control projections.

3.2 Objectives

1. To ensure that at least 85% of all the targeted structures / households are protected by the end of 2011.
2. To ensure that at least 75% of the targeted population in all the eligible districts are protected from malaria by the end of 2011.

3.3 Achievements made in 2010

1. Needs Assessments and supervisory visits where conducted in all the 54 districts
2. Capacity building for the Trainers of Trainers and Spray operators where conducted adequately and timely
3. All the requirements (logistics and finances) for the districts where provided. District ownership of the programme was enhanced by local resource mobilization
4. 2010 IRS post spray meeting was conducted successfully
5. Enumeration of structures/households was done in.... districts

3.4 Challenges experienced in 2010

1. Proper Logistical management was lacking during implementation of the intervention.
2. Some districts could not mobilize adequate resources for them to commence spraying timely.
3. Partial disbursement of funds to some districts affected operations
4. Inadequate and untimely reporting of weekly activities by some districts
5. Some of the commodities such as insecticides came in late hence affecting the entire operations.

3.5 Planned 2011 Actions

With over 54 districts (2,000,000 structures) projected to be conducting IRS in 2011, a well coordinated programme at all levels of implementation will be cardinal. A comprehensive needs assessments will be required to ensure that logistic , stock management of insecticides are improved, forecasting and projections of requirements is adequately addressed for effective implementation and the human resource required is also well prepared. With more rural districts being included in the program, it is anticipated that IRS will considerably contribute to the reduction of malaria cases countrywide.

3.6 Key support to Provinces and Districts

The following needs have been identified for support to provinces:

- Strengthen systems to coordinate logistical management and resources mobilisation in all the provincial headquarters
- Strengthen surveillance for insecticide resistance in the provinces
- Coordinate districts focus on prioritizing areas with high malaria incidence

The following needs have been identified for support to districts:

- Strengthen logistical management and stock control Strengthen systems for insecticide resistance surveillance and prioritization of highly malaria affected areas
- Support districts in community and stakeholders strengthening and corporation.
- Capacity building for training, supervision, data management and analysis and implementation of IRS.

National Malaria Control Action Plan - 2011

Activities	Indicator	Target	Suggested Time Frame For Implementation												Est. Cost (US\$)	Gap	Partners	
			J	F	M	A	M	J	J	A	S	O	N	D				
			1	2	3	4	5	6	7	8	9	10	11	12				
Objective: To ensure that at least 85% of the targeted structures and population in the targeted districts are protected by the end of 2011																		
1.0 Specific Objective: To coordinated all IRS activities are in the country																		
1.0 National level IRS Coordination																		
1.1	Coordination of IRS and National programme at national, provincial and district as well as partners	# of Activities coordinated	All year round	X	X	X	X	XX	XX	X	X	X	X				NMCC (No cost implications)	
2.0 Specific Objective: To determine the National IRS Needs determined																		
Activity 2.0 District IRS Needs Assessments																		
2.1	Conduct needs assessment for the earmarked districts	# Districts Needs Assessments conducted	72	X	X												35,000	GRZ, PMI
3.0 Specific Objective: To provide Technical Assistance in Management , Micro-planning and for effective IRS implementation																		
Activity 3.0 Technical Assistance (TA) & Supportive visits																		
3.1	Conduct TA in the eligible IRS districts	# of districts visited TA			X		X		X								45,000	GRZ,PMI, GRZ,PMI,World Bank

4.0 Specific Objective: To conduct enumeration of structures in 18 newly selected districts																		
Activity 4.0 Geo-coding and Mapping of Households																		
4.1	GIS training and enumerations in the earmarked districts	# of districts trained and enumerated	18					X	X	X	X	X	X			80,000		GRZ,MACEPA,PMI
5.0 Specific Objective: To procure and distribute t all the IRS commodities in the 54 districts																		
Activity 5.0 Procurement and distribution of IRS commodities																		
5.1	Procurement of spray pumps, accessories, PPE, insecticide	# of spray pumps accessories, PPE, insecticides	500spray pumps & accessories, 500,000sachets, 3,000 sets of PPEs					X	X	X	X					2,500,000		PMI,GRZ,WB,
5.2	Commodities distribution	# of districts receipt of commodities	54						X	X	X					35,000		PMI,GRZ,WB
6.0 Specific Objective: To produce and Review all the IRS materials																		
Activity 6.0 : Production and Review of IRS materials																		
6.1	Production of IRS materials (leaflets, flyers, posters)	# of leaflets, flyers, and posters produced	10,000leaflets,100,000 flyers, and 50,000posters					X	X	X	X					900,000		WB,GRZ, WHO,MACEPA,PMI
6.2	Review of IEC materials , IRS guidelines and IRS cycle	# of meetings	1						X							10,,000		WHO, MACEPA, PMI, KCM,MCM, GRZ

7.0 Specific Objective: To conducted supervision and monitoring in the eligible districts.											
Activity 7.0 : Supervision and Monitoring											
7.1	Conduct supervisory and monitoring activities	# of visits	3						X X X	45,000	GRZ, PMI
8.0 Specific Objective: To provide capacity for Trainers of Trainers for the provincial and district supervisory staff.											
Activity 8.0 : Conduct Training of Trainers											
8.1	Approximately 200 DHO and PHO personnel identified and trained	# of staff trained	200						X	700,000	GRZ,PMI ,WB,
9.0 Specific Objective: To ensure that all the implementing districts conducted cascade trainings.											
Activity 9.0 : District Cascade Trainings											
9.1	Eligible districts recruit and train spray operators for 21 days	# of staff trained	3,000						X	800,000	DHO,PHO,HSSP,NMCC,UNZA,MCM,KCM
10.0 Specific Objective: To ensure that IRS is conducted in all the eligible districts.											
Activity 10.0 : Conducting IRS in the eligible districts											
10.1	Eligible districts implementing IRS	# of implementing districts	54						X X X	2,200,000	GRZ,WB

11.0 Specific Objective: To ensure that all the environmental safeguards for IRS are in place.															
Activity 11.0 : Environmental safeguards, storage and waste disposal mechanisms															
11.1	Strategic environmental Assessments	facility# of districts	18							100,000	GRZ, WB				
11.2	Collection of empty sachets and IRS waste from districts	# of districts' waste collected	15						X X	18,000	GRZ,PMI and local supplier				
12. Surveillance, Insecticide Resistance monitoring and baseline data collection															
12.1	Insecticide resistance routine monitoring surveillance system	# of surveillance done			X	X	X	X	X	X	X	X	X	100,000	GRZ, MTC, PMI,IVCC
12.2	Baseline data collection													50,000	GRZ, PMI
	Grand Total													7,7218,000	

CHAPTER 4. Entomology

Decreasing the number of infectious malaria vectors, coupled with an effective case treatment policy can effectively reduce disease transmission. In this regard, the National Malaria Control Programme (NMCP) has embarked on an integrated vector management (IVM) strategy. Whilst indoor residual spraying (IRS) and insecticide treated nets (ITNs) are the main IVM interventions, they are supplemented by Larval Source Management (LSM) using larviciding and environmental management. Following the consistent implementation of effective malaria control interventions, the epidemiological landscape of the disease in Zambia has shifted from country-wide endemicity to three distinctly different strata. To this effect, improving the vigor of entomological surveillance is essential in facilitating the evidence-based implementation of the IVM approach.

4.1 Objective

To conduct research in malaria entomology in order to facilitate the prevention and control of the disease

4.2 Specific Objective

To provide and enhance efficient, evidence-based, cost-effective, environmentally sound and appropriate combinations of regulatory and operational vector control strategies with measurable impact on transmission risks.

4.3 Targets

- To enhance evidence-based vector control in 74 districts by December 2011.
- To strengthen supplementary vector control strategies in 18 districts by December 2011.
- To build entomological surveillance capacity in 18 districts by December 2011.
- To establish a viable insecticide resistance management strategy.
- To expand the entomology laboratory at NMCC by December 2011.

4.4 Key Entomology Achievements in 2010

- Demonstrated the impact of IRS and ITNs on malaria vectors in 18 sentinel sites for the malaria decision support system (MDSS) project.
- Determined the insecticide resistance profiles of major malaria vectors in IRS and ITN operational settings of 12 spatially segregated districts.
- Implemented larviciding using *Bacillus thuringiensis* var. *israelensis* in 8 districts of the eastern province as a resistance management strategy.

- Evaluated the residual efficacy of pyrethroids; etofenprox (Vectron™ 20WP), lambda-cyhalothrin (Icon® 10CS) and bifenthrin (Bistar® 10WP) for IRS.

4.5 Challenges

- Limited funding for scaling up monitoring of insecticide resistance in major vectors of malaria for both IRS and ITNs districts.
- Regulatory and legislative frameworks not reviewed due to lack of funding
- Limited work space in the insectary and lack of capacity to locally conduct biochemical and molecular analysis on mosquito samples

4.6 Actions to be taken in 2011

- To determine vector bionomics and monitor the quality and efficacy of IRS and ITNs in operational settings.
- To monitor insecticide resistance profiles of malaria vectors in 18 districts
- To develop and implement a viable insecticide resistance management strategy
- Implementation of larval source management
- To systematically review regulatory and legislative frameworks
- To build capacity in entomology surveillance in 18 districts
- To support IVM review meetings and conduct supervisory visits
- To support IVM infrastructure

4.7 Support for the District Action Plan

District action plans need support for:

- Building capacity for entomological surveillance including insecticide resistance monitoring
- Provision of guidelines for the Larval Source Management applicators
- Technical assistance support by districts to communities
- Districts support for advocacy, social mobilization and inter sectoral collaboration.

National Malaria Control Action Plan - 2011

Activities	Indicator	Target	Suggested Time Frame For Implementation												Est. Cost (US\$)	Gap	Partners		
			J	F	M	A	M	J	J	A	S	O	N	D					
			1	2	3	4	5	6	7	8	9	10	11	12					
Objective: To conduct research in malaria entomology in order to facilitate the prevention and control of the disease.																			
Specific Objective: To provide and enhance the efficient, evidence-based, cost-effective, environmentally sound and appropriate combinations of regulatory and operational vector control strategies with measurable impact on transmission risks																			
Activity 1: To determine vector bionomics and monitor the quality and efficacy of IRS and ITNs in their operational areas																			
1.1	Determine vector bionomics including species characterization, feeding and resting behavior, infectivity and density	# of districts surveyed	18	X	X	X	X	X	X	X	X	X	X	X	X	X	150,000.00		NMCC/DHO/HSSP/UNZA/GRZ
1.2	Monitor insecticide decay rates for IRS and ITNs to determine their quality and efficacy including durability	# of districts surveyed	18	X	X	X	X	X	X	X	X	X	X	X	X	X	50,000.00		GRZ/ZISSP
Activity 2: To monitor insecticide resistance profiles of malaria vectors in 18 districts																			
2.1	Conduct vector susceptibility assays to DDT, pyrethroids, carbamates and organophosphates	# of districts surveyed	36	X			X			X				X			150,000.00		GRZ/MTC/ZISSP
Activity 3: To develop and implement a viable insecticide resistance management strategy																			
3.1	Enhance surveillance and Evaluate new insecticide as alternatives to DDT and conventional pyrethroids	# of insecticides evaluated and utilized operationally	4	X			X			X				X			200,000.00		GRZ/ZISSP/Chemical companies
Activity 4: To Implement Larval Source Management																			
4.1	Procure commodities and conduct larviciding and EM in the IVM context	# of districts covered	18	X	X	X	X	X	X	X	X	X	X	X	X	X	1,146,600		GRZ /PHO/DHO

National Malaria Control Action Plan - 2011

Activity 5: To systematically review regulatory and legislative frameworks																	
5.1	Review/update vector control legislature, policies, guidelines and action plans	# of reviews conducted	72				X	X	X	X	X	X	X		75,000.00		NMCC/ GFATM
Activity 6: To build capacity in entomology in 18 districts																	
6.1	Train 3 EHTs from 18 districts in Entomology	# of districts monitored	18	X			X			X			X		86,049.00		ZIISP/GRZ
Activity 7: To support IVM review meetings and supervisory visits																	
7.1	Hold vector control TWG meetings (LLINs, IRS, Insecticide Resistance and IVM)	# of meetings visits conducted	6	X			X			X			X		50,000.00		MoH/NMCC/ PHO/ DHO
Activity 8: To support IVM infrastructure																	
8.1	Support entomological infrastructure (expansion of entomological laboratory) and running costs	# of buildings expanded	1				X	X	X	X	X	X	X	X	304,000.00		ZIISP/GRZ
8.2	Establish database on IVM to facilitate evidence-based implementation of interventions	# of Data bases established	1	X	X	X	X	X	X	X	X	X	X	X	25,000.00		GRZ/ZIISP
TOTAL															2,236,649		

CHAPTER 5. Case Management

The essential components of malaria case management are; disease recognition or prompt diagnosis, clinical and parasitological diagnosis, treatment with effective drugs, referral where necessary and counseling and follow up. In doing so, the principal objective of case management, which is to shorten the course of illness, prevent illness from becoming severe and preventing death is achieved.

It is important to ensure appropriate management of patients by health care providers at different levels of service delivery. This can be achieved by provision of duly updated malaria diagnosis and treatment guidelines to all healthcare providers coupled with periodic in-service training and quality technical and supportive visits.

The deployment of case management in an area takes into account the epidemiology of the area in question, the population at greatest risk including young children and pregnant women, residents of certain geographical areas and risk groups as well as the seasonality of malaria. This is coupled with knowledge of local patterns of resistance of parasites to the anti-malarial drugs.

5.1 Objective

To have 90% of all malaria suspected cases in all the districts receive parasitological analysis and prompt effective treatment and 90% of pregnant women receive malaria management and prevention by the end of 2011.

5.2 Specific Objectives

- Scale up and strengthen health workers capacities for malaria diagnosis and treatment
- To build quality control/ assurance capacity in malaria and case management
- To improve and sustain access to efficacious anti-malarial and supplies, and laboratory commodities in the public sector.
- Improve and scale up case management of malaria in the private sector.
- Strengthen implementation of home management of malaria using RDTs and ACTs
- Strengthen the pharmaco-vigilance system
- Strengthen treatment and prevention of malaria in pregnancy.

5.3 Action and progress in 2010

- A continued supply of all anti-malarial drugs
- Revision and updating of guidelines on diagnosis and treatment of malaria completed.

5.4 Major challenges in 2010

- Unpredictable funding from both GRZ and partners.
- Adherence to the diagnostic test results still remains a challenge with ACTs being used for other fevers other than malaria
- Weak logistics management still persists at district and health facility level.

5.5 Progress on 2010 case management plans

Anti-malarial commodities were quantified and purchased

5.6 Case Management Activities, 2011

Broad Objective: By the end of 2011, to have 90% of all malaria cases in all the districts receive parasitological analysis and prompt treatment.

National Malaria Control Action Plan - 2011

Activities	Indicator	Target	Source of Funds	J	F	M	A	M	J	J	A	S	O	N	D	Est. Cost USD (\$)	Funding USD (\$)	Gap USD (\$)	Potential Impl. Partners
Objective 1.0 to strengthen health care capacity in malaria diagnostics and treatment																			
1.1 Printing of national laboratory and treatment guidelines	# of guidelines printed	3000	ZISSP		x	X										16,667			ZISSP
1.2 Development and distribution of malaria diagnosis bench aids	# of bench aids developed	700 copies	PMI,IMAD,GRZ,ZISSP, MACEPA,WB,CIDRZ ,Lutheran													5,000			ZISSP
1.3 Training of 60 Laboratory personnel in quality malaria microscopy	# of Lab. Staff trained in microscopy diagnosis	60	PMI /IMaD, GRZ,ZISSP,MACEPA , Lutheran,WB,CDRZ	X	X											50000			PMI /IMaD, GRZ,ZISSP, MACEPA, Lutheran, WB,CDRZ
1.4 Implement malaria quality Assurance in 100 microscopy sites	# microscopy sites implementing microscopy QA	100 sites	PMI /IMaD, GRZ,ZISSP,MACEPA , Lutheran,WB,CDRZ				X				X				X	100,000			PMI /IMaD, GRZ,ZISSP, MACEPA, Lutheran, WB,CDRZ
1.5 Implement malaria quality Assurance in 100 RDTs sites	# of RDTs sites implementing QA		PMI /IMaD, GRZ,ZISSP,MACEPA				X				X				X	30,000			PMI /IMaD, GRZ,ZISSP, MACEPA

National Malaria Control Action Plan - 2011

1.6	Conduct review meeting to assess the impact of OTSS	Meeting conducted		PMI /IMaD , GRZ,ZISSP,MACEPA , Lutheran, WB, CDRZ					X								30,000			PMI /IMaD, GRZ,ZISSP, MACEPA, Lutheran, WB,CDRZ
1.7	Training of 1,000 health workers in effective use of RDTs	# of health workers trained		PMI /IMaD, GRZ,ZISSP,MACEPA , Lutheran, WB, CDRZ		X	X		X	X			X	X	X		30,000			PMI /IMaD, GRZ,ZISSP, MACEPA, Lutheran, WB,CDRZ
1.8	Finalization and printing of laboratory manual	# of copies printed and distributed	1000	PMI /IMaD, GRZ,ZISSP,MACEPA , Lutheran, WB, CDRZ			X	X	X								5,000			PMI /IMaD, GRZ,ZISSP, MACEPA, Lutheran, WB,CDRZ
1.9	Dissemination of guidelines	# of provinces, districts with guidelines	72 districts	ZISSP			X	X	X	X	X	X	X	X	X	X	Integrate in other activities			NMCC ,ZISSP
2.0	In-service training of HCW in guidelines	# of workers trained	1400	ZISSP			X	X	X	X	X	X	X	X	X	X	50,429			GRZ, ZISSP
2.1	Supervisory technical support visits at provincial/district level	# Of visits	16	GRZ			X			X			X			X	49,277			GRZ
2.2	Case management TWG meetings	# of meetings held	4	GRZ/ZISSP			X			X			X			X	3200			GRZ/ZISSP

Objective 2.0 Improved access to efficacious anti-malarials and supplies																			
2.1 Develop proposal for funding for anti-malarials	Proposal done		GRZ	X	X	X	X									3000		3000	
2.2 Forecasting and procurement of anti-malarials	Quantification report, number of Coartem doses bought and distributed	ACTs 6,221, 553 SP 400,000 doses	GF,PMI/USAID/DELIVER,DFID			X	X	X								5,809,686		Nil 900,000 doses procured	DFID PMI
2.3 Procurement of RDTs		5,000,000	PMI /IMaD, GRZ,ZISSP,MACEPA, Lutheran, WB, CDRZ			X	X	X	X			X	X	X		3,500,000			
2.4 Procurement of malaria microscopy agents			PMI /IMaD, GRZ,ZISSP,MACEPA, Lutheran, WB, CDRZ			X	X	X	X			X	X	X		200,000			
2.4 Training in drug logistics Mx	# of HCW trained	72	USAID/DELIVER							X	X					48,683.35			
Ensure access to efficacious malaria case Management in private sector																			
3.1 Stakeholders meeting to share guidelines	Meeting held	1						X								20,000		20,000	
3.2 Train private HCWs	# trained																		
Objective 4.0 Strengthen																			

National Malaria Control Action Plan - 2011

pharmacovigilance of anti-malarials																				
4.1 Stakeholders meeting to strengthen PVS	Meeting held	1	GRZ			X											20,000		20,000	GRZ
4.2 Review and update guidelines in PVS	Guidelines updated		GRZ			X											5,000		5,000	PRA
4.3 Training of HCWs in PVS	# of workers trained	72	GRZ					X	X								40,000		40,000	PRA/GRZ
Objective 5.0 Strengthen Home Mx of malaria strategy																				
5.1 Revise training manual	Manual developed	5000	ZISSP			X	X	X									21,047			ZISSP
5.2 Train CHWs in malaria case x and RDTs in 15 districts	# of CHWs trained	600 CHW 15*40							X	X	X	X	X	X			49,608.80			GRZ/ZISSP
5.3 Monitor and evaluate CHWs activities	# of districts and CHWs assessed									X	X	X	X				20,000			GRZ, ZISSP
Objective 6.0 Strengthen treatment and prevention of malaria in pregnancy																				
6.1 Do needs assessment of IPT and FANC in 18 districts	# of districts assessed	18	ZISSP,GRZ		X	X	X										12,660			ZISSP, GRZ

National Malaria Control Action Plan - 2011

6.2 Scale up training in FANC in 18 districts	# of districts trained	18							X	X	X				19,000		19,000	GRZ, ZIISP
6.3 Supportive supervision to 20 districts for IPT	# of districts visited	20	GRZ					X	X	X	X				5,976			GRZ
6.4 procurement and distribution of haemocues	# of haemocues procured	200i	GRZ							X	X	X	X		100,000		100,000	
6.5 Procurement of haemocue cuverttes	# number procured	500,000	GRZ					X	X	X	X				537,500		537,000	
6.6 Hold meeting with stakeholders	Meeting held	1	ZIISP				X								1000			
7.0 Strengthening of malaria diagnosis																		
7.1 PMI /IMaD, GRZ,ZIISP,M ACEPA, Lutheran,WB ,CDRZ	# of districts visited	30	PMI /IMaD, GRZ,ZIISP,MACEPA , Lutheran,WB,CDRZ	X	X	X	X			X	X		X	X	50,000			PMI /IMaD, GRZ,ZIISP, MACEPA, Lutheran, WB,CDRZ
7.2. Conduct OTSS to 500 health facilities		500	PMI /IMaD, GRZ,ZIISP,MACEPA , Lutheran,WB,CDRZ				X			X			X		100,000			PMI /IMaD, GRZ,ZIISP, MACEPA,

National Malaria Control Action Plan - 2011

																			Lutheran, WB,CDRZ
7.3.Map malaria parasite rates and species in 20 districts and country wide respectively		20	PMI /IMaD, GRZ,ZIISP,MACEPA , Lutheran,WB,CDRZ	X	X	X	X	X	X	X	X	X	X	X	x	30,000			PMI /IMaD, GRZ,ZIISP, MACEPA, Lutheran, WB,CDRZ
7.4.Creating and maintaining a malaria microscopy diagnosis inventory of centers data base			PMI /IMaD, GRZ,ZIISP,MACEPA , Lutheran,WB,CDRZ	X	X	X	X	X	X	X	X	X	X	X	X	10,000			PMI /IMaD, GRZ,ZIISP, MACEPA, Lutheran, WB,CDRZ
7.5. Asses and implement new malaria diagnosis methods (PCR,LAMP & ELISA)			PMI /IMaD, GRZ,ZIISP,MACEPA , Lutheran,WB,CDRZ				X	X	X	X	X	X	X	X	X	500,000			PMI /IMaD, GRZ,ZIISP, MACEPA, Lutheran, WB,CDRZ
7.6. Determination of malaria parasite species in the country.			PMI /IMaD, GRZ,ZIISP,MACEPA , Lutheran,WB,CDRZ			X	X	X	X	X	X	X	X	X	X	350,000			PMI /IMaD, GRZ,ZIISP, MACEPA, Lutheran, WB,CDRZ

CHAPTER 6. Operations research

The National Malaria Control Program remains committed to implement evidence based programming at all levels to meet the National malaria control objectives, needs and provide strategic direction. The research agenda is defined by the various malaria program areas through the guidance of the operations research technical working group. Thus data generated is in line with the program needs and aims to ensuring that best practices are explored, adopted and implemented. In this regard, the Operations Research Unit has a mandate to provide timely, accurate, and relevant information regarding the effectiveness of various malaria control interventions. This information is shared with all stakeholders, such as implementers, policy makers, funding agencies, and academic institutions. In addition to this the operations unit also aims to increase research capacity at all levels of program implementation.

6.1 Goal

To provide timely and sound evidence to guide implementation of malaria control and inform policy decision-making.

6.2 Objectives

- To develop national capacity for evidence-based programming
- To identify operations research priority areas
- To increase partner participation in malaria related research
- To disseminate research findings in a timely manner
- To increase capacity to conduct malaria research

6.3 Outputs

Research findings influence policy formulation and decision and programming

2010 Planned Activities and status

Activity	Status	Partners / Support
Anti-malarial drug efficacy monitoring (revised protocol developed)	Deferred to 2011 due to late dispersal of funds	WHO,GF, GRZ
Health worker and patient compliance to use of artemether lumefantrine	Deferred to 2011 due to non availability of funds	GF, GRZ
Training district staff in malaria research	Deferred to 2011 due to non availability of funds	MACEPA, GRZ
Hold malaria research technical working group meetings	1 meeting conducted	GRZ

Dissemination at scientific meetings	Conducted – attended 4 scientific meetings	MACEPA, BU, MRC, PMI
Publications in peer reviewed journals	Conducted - 2 publications in Malaria Journal	GRZ
Finance malaria research proposals for masters level students & DHMTs	Deferred to 2011 due to lack of funds	MACEPA, GRZ
Proposal writing workshop for 2012 priority areas	Deferred to 2011 due to lack of funds	GRZ
Active case detection –Case study	Deferred to 2011 due to non disbursement of committed funds	WB, MACEPA , GF, GRZ
non-instrumented diagnostic platform (NINA) needs assessment	Conducted assessment	MACEPA
NMCC/ Malaria Transmission Consortium study initiation for measurement of malaria transmission in Luangwa district	Activity ongoing	Gates Foundation
Malaria Program Review	Conducted operations research needs assessment	GRZ, WHO, PMI , UNICEF
Malaria Indicator Survey	Training , Supervision and report writing	MACEPA, PMI , GRZ
Development of regional Operations Research proposals (3 study areas identified)	3 proposals developed (ongoing)	WHO , GRZ
Development of National Health Research Bill	Ongoing	GRZ
Development of RDT utilization assessment	Ongoing	Harvard
Development of surveillance strategy for low transmission area in Zambia	Ongoing	PMI, GRZ

6.4 Challenges

- Non availability of committed funds
- Lack of dedicated server for research data storage
- Transport for field activities

National Malaria Control Action Plan - 2011

Activities	Indicators	Targets	Suggested Time Frame for Implementation												Est. Cost US\$	Partners
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
			1	2	3	4	5	6	7	8	9	10	11	12		
Antimalarial therapeutic efficacy testing	-% ACPR of first line antimalarial txt	3 districts		x	x	x	x								100,000	WHO,OR-TWG,PMI, DMOs, PMOs
Health worker and patient compliance to use of artemether lumefantrine	-% HW compliance -% patient compliance Factors affecting compliance	10 districts							x	x	x				50,000	GF,OR-TWG, WB, DHMTs, PHOs
Active case detection - case study	Study conducted	3 districts	x	x	x	x	x	x	x	x	x	x	x	x	200,000	MACEPA , WB, TDR,DMOs, PMOs, OR-TWG
Impact evaluation of malaria control interventions	Study conducted	3 districts					x	x	x						70,000	WB, GRZ, TDR
RDTs compliance study	Study conducted							x	x	x					100,000	WB, GRZ, TDR, HARVARD
Training district staff in malaria research	-No. of trained staff	15 districts (280 staff)						x		x		x			130,000	MACEPA,TDR, CHAINAMA
Hold malaria research technical working group meetings	-No. of TWG meetings held	4 quarterly meetings			x			x			x			x	40,000	GRZ, OR TWG, MACEPA
Attend scientific meetings	-No. of meetings attended	Meetings attended	x	x	x	x	x	x	x	x	x	x	x	x	50,000	MACEPA,GF, WB, UNICEF, WHO, PMI, OR-TWG

National Malaria Control Action Plan - 2011

Dissemination of research findings through website	Findings disseminated	Findings disseminated	x	x	x	x	x	x	x	x	x	x	x	x	10,000	OR TWG, MACEPA, WB
Publications in peer reviewed journals	-No. of peer reviewed publications	Publications	x	x	x	x	x	x	x	x	x	x	x	x	50,000	MACEPA,WHO WB, OR TWG
Finance malaria research proposals for masters level students & DHMTs	-No. of students supported -No. of DHMTs supported	10 Masters students supported 5 DHMTs supported	x	x	x	x	x	x	x	x	x	x	x	x	20,000	OR-TWG, MACEPA,
Proposal development for selected priority research areas for 2012	No. of proposals developed	5 proposals developed											x		20,000	OR TWG,GRZ
Implement regional proposals for operations research	Studies conducted	Reports and publications							x	x	x	x	x		120,000	SADCC, WHO, PMI, ZISSP, MACEPA, IST, PMOs, DHMTs, TWGs
Implement collaborative research for NMCC/MTC project	Study conducted	Reports and publications	x	x	x	x	x	x	x	x	x	x	x	x	100,000	MTC, Gates Foundation, DMOs, PMOs

CHAPTER 7. Information, Education, Communication/Behavior Change Communication (IEC/BCC) and Advocacy

Advocacy, Information, Education and Communication (IEC)/Behaviour Change and Communication (BCC) and community mobilisation strategies have played a critical role in malaria control and prevention. The reduction in the malaria burden in the country is also attributed to the fact that communication interventions have been fully integrated in the National Malaria Strategic Plan and annual action plans. During the past five years, the National Malaria control programme focused on scaling-up the package of proven interventions. IEC/BCC interventions were critical in the success of scale up of interventions. A strong partnership was created for Implementation of IEC/BCC action plans. The major focus was on mobilising communities for participation in malaria control through use of various channels and engagement of the media and traditional and civic leaders.

The IEC/BCC efforts were targeted at individual, household and community levels. Through these efforts major achievements were seen during the past 5 years particularly successive increase in levels of knowledge and increased uptake of interventions such as use of treated insecticide nets and indoor residual spraying. However, there still remains a significant gap between knowledge levels and practice of recommended behaviours in ITN usage, acceptance of IRS and IPT, as well as early care seeking behaviours such as prompt testing and treatment.

If the goal of reducing malaria incidence by 75% of the 2010 baseline and deaths near zero and all-cause mortality by 20% in 2015 is to be achieved, Advocacy and communication activities for behaviour change need to be intensified and localized, taking into the needs of the communities as the scale up of interventions continues. This calls for prioritisation and implementation of evidence based strategies that will have the most impact at the community level. The focus therefore for the next five years will be to boost community involvement, build capacity for IEC/BCC implementation at various levels, increase financial and material resources for IEC/BCC, strengthen partnerships across various sectors and strengthen the evidence base for implementation through monitoring and evaluation based on agreed-upon indicators.

7.1 Goal

The goal of the National Malaria Control and Prevention Programme (NMCP) is to reduce the incidence of malaria and deaths by 75 percent by the end of 2011. In this regard, the goal of Advocacy, IEC/BCC and community mobilisation is to contribute to this goal by increasing the awareness and knowledge and skills on malaria prevention and control, increasing the uptake of interventions and promoting appropriate care seeking behaviour.

7.2 Objective

By 2015

1. Behaviour Change communication and social mobilisation capacity is strengthened at all levels to ensure that at least 90% of people at risk have appropriate knowledge on malaria and practice recommended behaviours for prevention and treatment.
2. Increase use/uptake of malaria prevention and control interventions to at least 85%.

7.3 Strategies

1. Strengthen capacities for advocacy and Behaviour Change Communication
2. Harmonise the design and production of messages and materials to increase demand and uptake of malaria interventions.
3. Increase evidence-based and targeted multi-media campaigns.
4. Improve and strengthen community mobilization
5. Strengthen Research, Monitoring and Evaluation of IEC/BCC activities by tapping into new and innovative technologies to improve timeliness, feedback and use of BCC

7.4 Expected outputs

1. Package of advocacy materials and programmes for malaria control developed and used for information and resource mobilisation
2. Malaria focal point staff trained in IEC/BCC planning and implementation at all levels.
3. Capacity built for media to disseminate regular information on malaria and awards given to deserving journalists/institutions for good coverage of issues
4. Annual national multi- media campaign on malaria for key interventions conducted.
5. A malaria control communication strategy for the period 2011-2015 developed.
6. A package of evidence based IEC materials and programmes for specific malaria interventions developed and distributed/disseminated to the target audiences.
7. Formal structures/mechanisms are developed at national provincial and district levels to engage partners in planning, coordination, dissemination, monitoring and evaluation of effective IEC/BCC plans and activities.
8. Community driven initiatives for malaria control established/supported at district level.
9. Evidence generated for developing effective IEC/BCC strategies through KAP studies, rapid appraisals, reviews etc.

7.5 Indicators

1. Levels of Knowledge on malaria
2. Use of ITN among Children under five who sleep under a net (%)
3. Use of ITN among pregnant women (%)

4. Use of INT among household members (%)
5. Uptake of IPT for pregnant women through ANC visits (%)
6. Number of cases with malaria treated within 24 hours
7. IEC programmes and Materials produced
8. Advocacy kits produced
9. Number of community initiatives for malaria control supported
10. Increase in resources allocated for malaria IEC in national action plan
11. Increase in resources mobilised for BCC/IEC from partners
12. Number of new partners for IEC/BCC
13. Number of coordination mechanisms strengthened/established

National Malaria Control Action Plan - 2011

IEC/BCC and Advocacy																				
	Indicator	Target	Suggested Time Frame for Implementation												Est. Cost (US\$)	Fundin g	Gap	Partners		
			J	F	M	A	M	J	J	A	S	O	N	D						
			1	2	3	4	5	6	7	8	9	10	11	12						
Activity 1.0 Coordination																				
1.1	Hold quarterly Technical Working Group meetings	Number of meetings held	4		x			x			x				x				-	
	Sub Total																		-	
Activity 2.0 Support and Monitor implementation of BCC Action Plans																				
2.1	Review of Community radio stations proposals	Number of proposals reviewed and recommended	20					x												
2.2	Support malaria programming in community radio stations	Community radio stations supported	32 Radio stations						x	x	x	x	x	x	x					CHAZ, MACEPA, DHMTs
2.3	Monitor radio stations programming of malaria programmes	Radio stations monitored	30 Radio Stations						x	x	x	x	x	x	x					MACEPA, CHAZ, PMOs
2.4	Monitor implementation of BCC District Action Plans (Trained district staff and Religious leaders)	District BCC Action Plans implemented	9 Provinces							x	x	x	x	x	x					MACEPA, Anglican Council, PMOs, CHAZ
2.5	Support implementation of District Action Plan (Chilubi, Kaoma, Mongu) to discourage misuse of nets including travel of national staff	Number of Districts supported	3						x		x		x							MACEPA, WB
2.6	Hold planning with	Meetings held							x											Ministry

National Malaria Control Action Plan - 2011

	Ministry of Education to School Health Action Plan																		of Education
2.7	Integration of malaria School Health programme(Ministry of Education)	School activities supported						x	x	x	x	x	x	x					Global Fund, MoE
2.8	Support to Anglican Church for religious groups	Num of dists/rel. Group supported	35					x	x	x									MACEPA
	Sub Total																		
Activity 3.0																			
3.1	Conduct training for District staff	Orientations conducted	4 Provinces			X	x		x		x								Global Fund, ZANIS, WHO
3.2	Develop district BCC Action Plans	Number of Actions Plans developed	1 per District			X													
3.3	Conduct training for ward councillors	Orientation for ward councillors held	9			x		x	x	x	x	x	x	x					MACEPA, Ministry of Housing and Local Governme nt, District Councils
	Sub Total																		
Activity 4.0 Multi –media campaign																			
4.1	Sub-contract partner to develop an awareness	Organisation sub-contracted	5 Provinces																World Bank, SFH

	campaign of ITN utilization																				
4.2	Produce and disseminate IEC materials through mass media	Materials produced and disseminated		X	X	X	X	X	X												Global Fund
4.3	Placement of radio spots on ZNBC radio One and two												X	X	X						UNICEF
4.4	Production and airing of BCC materials and programmes – PMI Malaria Operational Plan (MoP)	Number of materials and programmes developed and aired											X	X	X						PMI//BSC CP
4.5	Production of a UAM television spot	Spot					X	X													MACEPA
4.6	Broadcast of the UAM Television spot	Frequency							X	X											MACEPA & Private Sector
4.7	Production of UAM Radio spot	Num/type of spots							X	X											MACEPA
4.8	Placement of UAM Radio spot	Frequency							X	X											MACEPA
	Sub Total																				
Activity 5.0 Participation in National and International Events																					
5.1	Technical meetings	Technical meeting held/minutes	Three						X	X											
5.2	Participation in International Trade Fair and Agriculture Show	Number of activities held	2 shows						X	X											ZNBC, ZANIS,
5.3	Commemoration of World Malaria Day	WMD Commemorated	Countrywide			X															UNICEF, WHO,

																																							PMI/ZISSP /ZBSCCP, MACEPA, GF, Malaria Consortiu m, SFH, CHAZ
5.4	Commemoration of SADC Malaria Week	SADC Malaria Week Commemorated	Countryw ide																																			UNICEF, PMI/ZISSP /ZBSCCP WHO, MACEPA, MC SFH, CHAZ	
5.5	Participation in Public Service Day	# of activities held	One																																				
5.6	Participation in the International Women's Day	# of activities supported/held																																					
	Sub Total																																						
Activity 6.0 Development of IEC/BCC/Advocacy Materials																																							
6.1	Review of radio and television spots and other materials	materials reviewed	all			X	X	X	X																														MACEPA, PMI/ZBSC CP ZNBC, ZANIS,
6.2	Production on drama documentaries (local Languages)	Drama docs produce	7 local lang			X	X	X	X																														UNICEF, PMI/ZBSC CP WHO, MACEPA, GF, CHAZ

6.3	Development of Advocacy Information kits	Information kits developed	2	X	X													UNICEF, PMI /ZBSCCP, WHO, MACEPA, CHAZ
6.4	Development of communication materials for Active Case Detection and implementation in three (3) districts	IEC materials for ACD developed	3 Pilot districts						X	X	X	X	X					UNICEF, PMI/ZBSC CP WHO, MACEPA,S FH, CHAZ
6.5	Develop materials for the tourism sector and hospitality sectors	Number and type of materials developed											X	X	X			UNICEF, PMI/ZBSC CP WHO, MACEPA,S FH, CHAZ
6.6	Development of IEC/BCC materials for the private sector and implementation in selected areas	Number of materials developed																World Bank, ICTWG, PMI/ZBSC CP Private Sector
	Sub Total																	
Activity 7.0 Orientation of various stakeholders																		
7.1	Hold orientation for the second House of Chiefs	Orientation mtg held	1								X							House of Chiefs, MACEPA, WHO, PMI/ZBSC CP UNICEF, MLGH

7.2	Documentation of best practices in Chiefdoms	Visitation to chiefdom, Documentation	1		x														House of Chiefs, MACEPA, PMI/ZBSC CP WHO, UNICEF
7.3	Hold orientation for Zambia Police and Marines	No. of Police Officers and Marines Oriented	1		X	X													Zambia Police, Ministry of Home Affairs, Ministry of Agriculture
7.4	Hold orientation for medical private practitioners	Orientation held	1		X														CM TWG
7.5	Orientation of community based groups (NHCs, MA, CHWs, TBAs, CBOs, PHLWAs)	No. of Community organizations oriented	4				X	X	X	X	X	X	X	X					Anglican Church, CHAZ,
7.6	Orientation and monitoring of Child Health Week activities	No. of districts monitored	8																Child Health Unit, UNICEF, GF, PMI/ZBSC CP/ZISSP
7.7	Hold orientation for private sector (commercial, i.e. MTN, Total, ZAIN and tourism)	No. of private sector oriented and co-opted as partners	10																MACEPA, ZACCI,

National Malaria Control Action Plan - 2011

7.8	outline Social Mobilisation	No. of activities undertaken	9 Provinces			x	x	x	x	x	x	x	x	x						Global Fund, UNICEF, PMI/ZBSC CP/
7.10	Hold meeting to engage the private sector in malaria control	No. of private sector partners engaged	5			X														World Bank
	Sub Total																			
Activity 8.0 Broadcasting, mobile video shows and other interventions																				
8.1	Broadcast of radio advertisement on community radio stations	Number of radio spots broadcast	30			X	X	X	X	X	X	X	X	X						CHAZ, MACEPA, WHO, UNICEF, SFH, ZANIS, GF, PMI/ZBSC CP
8.2	Broadcast of radio spots on ZNBC and MUVI TV	Number of TV spots	2			X	X	X	X	X	X	X	X	X						MACEPA, UNICEF
8.3	Conduct mobile video shows	Number of shows	54							x	x	x	x	x	x					SFH, MACEPA, ZANIS
8.4	Launch of Malaria CD	Number of CDs	1 Launch	X	X	X	X													Musicians, ZANIS, ZNBC, Community Radio Stations
8.5	Conduct media Tour	Media tour conducted	1										x							MACEPA, SFH

8.6	Integrate malaria in Education Broadcasting Services	Malaria integrated	-																	MoE,
8.7	Launch of Malaria Comic Book	Number of Comic Books	Launch							x										UNICEF, MoE
8.8	Annual Malaria Prayer Night	Prayer night activities held											x							Anglican Council, CHAZ, MC
8.9	4 th Malaria Media Awards	Number of Journalists awarded												x						MACEPA, CHAZ, Anglican Council, Private Sector,
	Sub Total																			

CHAPTER 8. Performance, monitoring and evaluation

Relevant information for monitoring and evaluating progress in national malaria control comes from many sources and stakeholders. Collecting, analyzing, interpreting, and reporting on the strategic information from stakeholder's forms a crucial part of national M&E activities. Strategic information is guided by available standards and norms for defining key malaria monitoring and evaluation indicators for measuring progress and program performance, as well as overall national or program goals and objectives. Several efforts to define and standardize relevant indicators exist. It is expected that evidence-based monitoring and evaluation will facilitate the documentation of progress made towards the achievement of 2011 – 2015 Strategic Plan goals and targets and the targets of the United Nations Millennium Development Goals (MDGs) by 2015.

8.1 Objectives

- To strengthen Coordination in Surveillance, monitoring and evaluation
- To strengthen capacities for malaria surveillance, monitoring and evaluation (SME)
- To strengthen malaria data management systems

8.2 Key achievements in 2010

- Successfully conducted a third Malaria Indicator Surveys (2006,2008 and 2010) to assess status of the coverage of malaria interventions and burden of disease
- Supported enumeration of additional IRS districts for expansion
- Supported operational research data collection for district-based evaluations in Luangwa and Nyimba districts
- Supported the quantification of ITN needs at district level through a national ITN forecast and ITN distribution monitoring
- Supported development of national malaria surveillance activities including a national profile of malaria surveillance information district data collections on parasitological confirmed registers for trend analysis and protocol development for surveillance as an intervention

- Supported training on M&E and survey methodology at the University of Zambia Masters of Public Health programme
- Developed and published quarterly M&E Newsletters as one of the feedback mechanisms to stakeholders

8.3 Challenges

- Data quality and completeness, timelines of reporting by districts still remains a challenge.
- Lack of funds for monitoring of planned activities.

National Malaria Control Action Plan - 2011

Activities	Indicator	Target	Source of Funds	J	F	M	A	M	J	J	A	S	O	N	D	Est. Cost USD (\$)	Funding USD (\$)	Gap USD (\$)	Potential Impl. Partners
Strengthen Coordination in Surveillance, Monitoring and Evaluation (SME)																			
Quarterly Technical Working group meetings on SM&E at national and district among M&E stakeholders	Number of meetings held			X			X			X			X						All partners
Support to ad hoc technical working groups for thematic areas, including SM&E for other TWGs	Number of thematic groups supported			X	X	X	X	X	X	X	X	X	X	X	X				
Support to regional and global linkages in SME	Number of meetings attended	2		X						X									
Participate in the weekly MOH National Health M&E meetings	Meetings attended	all																	
Support annual reviews of NMSP and Annual Action plans	Number of review conducted	1								X									

National Malaria Control Action Plan - 2011

Strengthen capacities for malaria surveillance, monitoring and evaluation (SME)																	
Develop and disseminate SME Strategic Plan 2011-2015	SME plan disseminated	1			X	X	X										
Conduct district malaria surveillance and monitoring and supportive supervision	Number of visits conducted	15			X	X	X	X	X	X	X	X	X	X			
Train District/Provincial staff in SME (HMIS procedures, malaria data use and integration workshops)	Number of provincial trainings conducted	9					X	X	X	X							
Develop and disseminate monthly and quarterly disease trend and commodity tracking bulletin	Number of bulletins produced and disseminated	12			X	X	X	X	X	X	X	X	X	X			
Conduct Provincial/district data audits (at least all 9 per year)	Number of data audits conducted	9			X	X	X	X	X	X	X	X					

Strengthen malaria data management systems																	
Conduct Health Facility Surveys	Number of surveys	1					X										
Update and review malaria databases (NMCC malaria databases; programmatic monitoring datasets including for ITN distributions, IRS spraying and facility reporting)	Number of database reviewed and updated.	On going			X	X	X	X	X	X	X	X	X	X	X	X	
Development and implementation of Monitoring and Evaluation Job Aids	# of districts using M&E Job Aids	72	World Bank			X	X	X									
Donor reporting	Quarterly reports produced					X		X			X				X		
Continue utilizing www.nmcc.org.zm for communication of M&E related products and documents	Website updated				X	X	X	X	X	X	X	X	X	X	X	X	

CHAPTER 9. Malaria epidemic preparedness and early warning system

Malaria epidemics are associated with either *Plasmodium falciparum* or *Plasmodium vivax* parasite species. In Zambia *P. vivax* is not commonly found unless imported into the country. Over 98% of the parasite species found in the country is *P. falciparum*. This species is associated with severe forms of the disease. The country has three important vector species namely; *Anopheles gambiae sensu stricto (s.s)*, *Anopheles arabiensis* and *Anopheles funestus* as a secondary vector. *An. gambiae* is one of the most efficient vectors in the world. This vector predominates in the country especially during the peak transmission period November to April every year. Based on a combination of altitude and temperature information, an unstable malaria area appears to be most probable on the plateau. Districts that are located on the plateau tend to experience a break in transmission due to cool temperatures during the cold, dry season - May to August. This results in low herd immunity of the resident population in these areas. This area constitutes an epidemic zone. From the above information, a fact emerges that all the precursors of a malaria epidemic do exist in Zambia. In addition, natural disasters like floods, droughts and population displacements which could precipitate an epidemic by altering the ecoepidemiological situation do occur from time to time, the last being in 2008 when the country experienced severe floods in some districts in the country. The country has a strong malaria control programme based on RBM principles but it is still scaling up most of the preventive interventions to meet or exceed the Abuja targets especially now as the country adopts the elimination strategy. The investment that goes into the programme is enormous with funding from GRZ, GFTAM, WB, PMI, MACEPA and other bilateral partners. A break down in any of the interventions could lead to a malaria epidemic or correctly put a resurgence of malaria. A malaria epidemic is always associated with high mortalities and morbidity. Such a situation would negate all the progress made by the Malaria Control Programme so far. The Action Plan on malaria epidemic prevention for 2010 is an attempt to make it possible to detect and forecast malaria epidemics early so as to put in place prevention and control measures to avert the negative impact of a malaria epidemic.

9.1 Achievements during 2009

- Two epidemic prone districts were visited and supervision conducted.
- Impact of floods in 2009 were assessed in Mambwe and Namwala districts
- The Epidemic preparedness Working Group met several times in the year to address several issues (review of routine surveillance data at regular intervals,

Drafting of the emergency appeal support for flood affected populations in southern province etc.).

- A training of Trainers for threshold calculations and utilization was held for provincial staff.
- The epidemic Preparedness Technical Working Group met on a quarterly basis during the year.
- For the establishment of the malaria early warning system, collaboration was strengthened between NMCC and institutions (e.g. DMMU, Zambia Red Cross, ZMD, NFNC, NAC, CSO, MACO and MOH – HMIS/IDSR etc.) whose information and data could be used as a basis for setting up of indicators for the early warning system.
- WB supported two activities: surveillance for malaria, strengthening

9.2 Challenges

- Inadequate funding for the procurement of logistics for emergency / epidemic preparedness.
- Inadequate funding to carry out the training in epidemic preparedness.
- Inadequate funding to set up a functional MEWS

9.3 Objective

To reduce morbidity and mortality arising from malaria epidemics to below 5% of the average figures

9.4 Target

Detect malaria epidemics within two weeks of occurrence and institute measures to control the epidemic within less than two weeks from the time of detection

The 2010 Action Plan for malaria epidemic preparedness addresses the challenges encountered in 2009 as well as trying to complete the essential activities not done in 2009. The 2010 Action plan activities have been divided into three parts:

- Strengthening Malaria Epidemic Preparedness
- Set up and Strengthening Malaria Early Warning Systems
- Establishing an Emergency Funding

9.5 Part 1: Strengthening malaria epidemic preparedness

Preparedness is all about being prepared to control an epidemic of malaria should it occur. With a good Early Warning System (see below) an epidemic can be detected early. There must be an emergency plan with guidelines in existence. Logistics and

trained personnel should be available or readily mobilized. Control measures must be instituted early enough before the epidemic curve reaches its peak.

9.6 Part 2: Setting up and strengthening a malaria early warning system

Malaria Early Warning Systems provide incremental early warnings based on known meteorological (rainfall, temperature), environmental, social or occupational (e.g. migration, agricultural developments) risk factors and other potential indicators, in order to enhance malaria epidemic preparedness and prevention. Continuous monitoring and measurement of the precursors and vulnerability trends and dynamics will make it possible for the abnormal situation (epidemic) to be identified early enough for contingency plans and appropriate mitigatory stakeholder response mechanisms to take effect in a timely manner. Prediction is possible only if (i) sufficient information about past events is available, (ii) information can be quantified as numerical data, and (iii) aspects of the past pattern are highly likely to continue into the future. Early warning indicators such as temperature and rainfall can predict the time and place of an epidemic; population vulnerability indicators will predict the severity of the disease outcome in the event of an epidemic. Epidemiological indicators are important in confirming both the onset and occurrence of the epidemic.

9.7 Part 3: Emergency Funding

In the event of an epidemic being detected and confirmed, there should be a readily available fund to meet the operational cost of implementing a control plan. Logistics will have been procured already under part 1.

9.8 Budget Justification

The budget initially, appears big. But once epidemic preparedness logistics are procured, staff trainings conducted and operational systems established the subsequent budgets for the years to follow will be smaller while surveillance for epidemic detection will be strengthened leading to faster early detection and effective control of the epidemics if and when detected.

National Malaria Control Action Plan - 2011

Epidemic Preparedness Action Plan GANTT Chart																				
Activities	Indicator	Target	Suggested Time Frame for Implementation												Est. Cost (US\$) \$1=K4,500	Funding	Gap	Partners		
			J	F	M	A	M	J	J	A	S	O	N	D						
			1	2	3	4	5	6	7	8	9	10	11	12						
Objectives:																				
Activity 1.0 Epidemic Preparedness																				
1.1	Procure logistics for epidemic response	Response kits and logistics procured & available at all provincial levels & nmcc	2,000 ITNs, 300 pumps, 2,000 sachets of insecticides, 2,000 RDTs, , 350 sets of PPEs			x											350,000	Nil	350,000	GRZ, WB
1.2	Distribute epidemic logistics to the provincial levels	Response kits and logistics procured & available at all provincial levels	9 provincial HQs with epidemic control buffer stocks					x									15,000	Nil	15,000	GRZ, WB
1.3	Refurbishment of central storage facilities of epidemic control commodities at provincial levels	Epidemic storage facilities available	9 storage facilities refurbished				x	x	x				x				25,000	Nil	25,000	GRZ
1.4	Support TWG meetings	Epidemic preparedness TWM held	5 meetings held		x								x				5,000	5,000	Nil	GRZ
Activity 2.0 Training and supervision – (capacity building)																				
2.1	Training of staff in 5 + 1 remaining provinces in epidemic surveillance	Focal points trained in epidemic surveillance	5 + 1 provinces' district staff trained										x	x	x	x	49,000	Nil	49,000	GRZ, WB
2.2	Epidemic surveillance supervision	H/Fs using malaria thresholds	9 provinces visited	x	x	x	x	x	X	x	x	x	x	x	X		48,500	Nil	48,500	GRZ

National Malaria Control Action Plan - 2011

2.3	Review of IDSR guidelines to strengthen malaria component	Malaria component strengthened	Revised IDSR guidelines									x	x	x					22,000	Nil	22,000	GRZ
2.4	Update epidemic preparedness guidelines	Updated guidelines	Updated guidelines distributed to all H/Fs																20,000	Nil	20,000	GRZ
Activity 3.0 Attendance at Regional meetings																						
3.1	Attendance at SARCOF meeting	Meeting attended	1 meeting											x					5,000	Nil	5,000	GRZ
3.2	Attendance at MALOF meeting	Meeting attended	1 meeting											x					5,000	Nil	5,000	GRZ
3.3	Study tours	Best practices learnt in epidemic surveillance	1 week visit to Zanzibar													X			5,000	Nil	5,000	GRZ
4.0 Establishment and maintenance of a MEWs																						
4.1	Selection of some health facilities within epidemic prone areas to be sentinel sites	Sentinel sites selected	20 sites selected		x	x	x												15,000	Nil	15,000	GRZ
4.2	Networking with other sectors for the provision of data and information for use in a MEWs	Meetings held with relevant sectors	Data & information sent to NMCC at agreed intervals				x	x	x										20,000	Nil	20,000	GRZ, WB
4.3	Support to sectors providing data and information	Operational costs met by participating sectors						x	x	x	x	x	x	x	x	x			20,000	Nil	20,000	GRZ

4.4	Establishing a computerized malaria epidemic sentinel surveillance system - MEWs + Technical Assistance in establishing the system	Procurement of computers, printers, design and establishment of a database and accessories	Operational MEWs												x	x	x	x	110,000	Nil	110,000	GRZ, WB
Activity 5.0 Emergency funding																						
5.1	Drafting of an emergency plan	Emergency plan available	Districts to have malaria emergency plans																10,000	Nil	10,000	GRZ
5.2	Emergency fund	Availability of funds to cover operational costs during and when investigating reported outbreaks	Ability to ensure rapid response to reports and outbreaks	x	x														200,000	Nil	200,000	GRZ
TOTAL																			924,500	5,000	919,5000	

CHAPTER 10. Program Management

The National Malaria Control Centre is a department in the Directorate of Public Health and Research in the Ministry of Health.

10.1 Objective

To strengthen program management capacities in order to achieve program goals at all levels.

10.2 Progress.

10.2.1 Policy, program planning and design.

NMCC continues to share best practices from the various interventions country wide as evidenced by remarkable progress in malaria control. In light of this, Zambia continues to uphold international recognition as a Best Practice country.

10.2.2 Organizational alignment and coordination

NMCC continues to improve co-ordination at National, Provincial and District level. There has been continued support from various stakeholders in malaria control activities. A list of the stakeholders and their area of support is attached in the appendix. The technical working groups continue to be of great benefit in program implementation and technical support.

10.2.3 Human Resource Management

There is a continuation of efforts to improve staff competencies through continued education.

10.2.4 Financial Management

The accounts unit has continued to provide quarterly financial reports .The unit also worked in collaboration with the MOH accounts unit in preparing financial reports for donor funded activities.

10.2.5 Program implementation

Utility bills were paid for and vehicles serviced. NMCC staff participated in the Malaria Program Review.

Institutional capacity Development

The COMBOR program is still running and has support of NMCC

10.3 Challenges

The continued reduced and unpredictable funding

10.4 Focus for 2011

NMCC will continue to strengthen the program management areas already mentioned. Some of outstanding activities are:

- Strengthening the Public Health Act. Health IRS statutory instrument for mandatory spraying and ITN policy.
- Provide staff retention scheme including medical and educational scheme
- Put in place Malaria focal persons at District and Provincial levels.
- Strengthen and sustain procurement and distribution of commodities systems

National Malaria Control Action Plan - 2011

Activities	Indicator	Target	Source of Funds	J	F	M	A	M	J	J	A	S	O	N	D	Est. Cost USD (\$)	Funding USD (\$)	Gap USD (\$)	Potential Impl. Partners
1.0 Strengthen Central level policy and co-ordination																			
1.1 Develop and disseminate malaria policy	Policy document						X	X	X	X	X	X							All partners
1.2 Facilitate Stakeholders meetings	Number of meetings held	At least 4 meetings					X		X						X	11,035		11,035	GRZ,MACEPA
1.3 Support annual operational planning meetings	Meetings held	2										X	X			8,448		8,448	GRZ,MACEPA
2.1 Designate and train malaria focal persons at provincial and district level	Officers identified and trained	Focal persons available		x	x	x	x	x	x	x	x	x	x	x	X	35,000		35,000	GRZ
2.2 Rehabilitate storage for commodities and office space	Adequate storage and office space							x	x	x	x	x	x	x	X	20,000		20,000	GRZ,MACEPA
2.3 Support procurement of office equipment and operations		Equipment procured							x	x	x	x				3,806		3806	MACEPA,GRZ
3.0 Strengthen performance monitoring																			
3.1 Conduct quarterly performance monitoring in 9 provinces							x		x			x			X	20,000		20,000	GRZ

National Malaria Control Action Plan - 2011

3.2 Evaluate procurement and supplies management of malaria commodities	Hold quarterly meetings to review supply/procurement					x				x				x			700		700	GRZ,JSI
4.0 Strengthen human resource capacities																				
4.1 Support participation in malaria planning and management course					x	x	x	x	x	x	x	x	x	x	x			15000		GRZ, MACEPA,WB
4.2 Revise and standardize training curricula for pre-service and in-service training with training institutions	Meeting held with training institutions to input into curriculum													x	x		700		700	GRZ
5.0 Strengthen procurement supply management																				
5.1 Co-ordinate quantification, procurement of antimalarials	Meet with relevant s/holders				x	x	x	x	x	x	x	x	x	x	x		Nil		NIL	GRZ routine meetings
5.2 Develop resource mobilization plan and funding proposal	Plan developed Proposals done	Steady availability of resources								x	x	x	x	x	x		200		200	GRZ,MACEPA x
6.0 Administrative activities																				
6.1 Servicing of vehicles, fuel & oil	Transport available	vehicles running			x	x	x	x	x	x	x	x	x	x	x		318,000		318,000	GRZ
6.1 maintenance of buildings and grounds	Adequate structure available													x		175,909		175,909	GRZ,MACEPA	

National Malaria Control Action Plan - 2011

6.2 Maintenance of furniture and equipment	Adequate equipment /furniture available											x					2800		2800	GRZ,MACEPA
6.3 Payment of utility bills(water, electricity, phones		All bills settled			x	x	x	x	x	x	x	x	x	x	x		24,000		24,000	GRZ,MACEPA
6.4 Procure stationery and cleaning materials	Materials bought				x	x	x	x	x	x	x	x	x	x			5000		5,000	GRZ,MACEPA
6.5 Replace office computers, printers, upgrade internet Commemoration of public days	Reliable information management																83,000		83,000	GRZ,WB,MAC EPA,GF
6.6 Procure lawn mowers	Surroundings maintained	2										x					1,700		1,700	GRZ

Annex 1 List of Technical Officers and Contact email addresses

Name	Designation	Email Address
Dr Victor Mukonka	Director – Public Health & Research /Malaria	vmukonka@yahoo.com
Dr Mulakwa Kamuliwo	Acting Deputy Director – Public Health & Research /Malaria	mkamuliwo@yahoo.co.uk
Dr Chibesa Sichitamba Wamulume	Case Management Officer	drchsichitambawamulume@yahoo.com
Mr Emmanuel Chanda	Chief Entomologist	emmanuel_chanda@yahoo.co.uk
Mr Hawela B Moonga	Chief Parasitologist	mhawela@yahoo.co.uk
Ms Pauline Wamulume	Principal IEC officer	pwamulume@gmail.com
Mr Wambinji Kapelwa	Epidemiologist	wkapelwa@nmcc.org.zm
Ms Cecilia Katebe	Principal ITNs officer	ceciliakatebe@yahoo.co.uk
Mrs Mercy Mwanza Ingwe	Surveillance & Information Officer	mmwanza@nmcc.org.zm
Mr Chadwick Sikaala	Principal IRS officer	chsikaala@yahoo.co.uk
Mr Busiku Hamainza	Principal Operations Research Officer	bossbusk@gmail.com

National Malaria Control Center, PO Box 32509, Lusaka, Zambia

Tel: +260211282455

Fax: +260211282427

Annex 2: Partners, Area of support and specific activities

Name of Cooperating Partners	Area of Support	Activities
World Health Organisation (WHO)	Technical support	<ul style="list-style-type: none"> • Development of Key documents such as guidelines, manuals, standards etc • Supports staff to attend local and international meetings and conferences
United Nations Children's Fund (UNICEF)	Technical Financial	<ul style="list-style-type: none"> • Development of Key documents such as guidelines, manuals, standards etc • Supports implementation of activities • Assists in procurement of commodities
The World Bank	Financial Training	<ul style="list-style-type: none"> • Procurement of commodities such as ITNs, RDTs, IRS Chemicals and personal protective equipment • Supports operational implementation • Supports training of staff in specific priority areas • Supports operational research/study in Logistics and Supply Chain management in both Public and Private sectors
DFID	ITNs Technical support Funding	<ul style="list-style-type: none"> • Procurement of malaria commodities • Technical inputs to program implementation • Funding support
United States Agency for International Development (USAID)/President's Malaria Initiative (PMI) PMI provides funding to Partners to implement activities (Zambia Integrated	<ol style="list-style-type: none"> 1. IRS 2. ITNs 3. Case management 4. Diagnosis QA 5. IPTp 6. IEC/BCC 7. Supply chain management 8. Monitoring & Evaluation 	<ul style="list-style-type: none"> • Procurement of IRS pesticides, spraying equipment and protective wear. Training in IRS. Support for IRS implementation. Technical support for environmental management, and resistance management. • Procurement and distribution of ITNs • Procurement of anti-malarial drugs

System Strengthening Program (ZISSP). IMAD, Communication Support for Health (CSH), Partnership for Integrated Social Marketing (PRISM), UDAID/DELIVER, Research Triangle Institute (RTI) and Tropical Disease Research Centre (TDRC)	9. Health systems strengthening 10. Donor Collaboration 11. Operational research	and RDTs. Training of health workers in diagnosis and treatment. <ul style="list-style-type: none"> • Training health workers in IPTp and procurement of SP. • Support for IEC/BCC activities to increase uptake of the key interventions • Strengthen the national logistics and pharmaceutical management system for malaria commodities • Support drug efficacy studies. Support establishment of a surveillance system in Lusaka. Support NMCC to strengthen M&E activities • Place 6 malaria technical advisors at NMCC. Support NMCC staff travel and training • Support the salary and administration costs of the WHO malaria NPO • ITN durability study and SP efficacy study in IPTp.
Implementing Partners		
Name of Cooperating Partners	Area/type of Support	Activities
Churches Health Association of Zambia (CHAZ)	Case Management ITN IEC	<ul style="list-style-type: none"> • Procurement and distribution of ACTs, RDTs, ITNs using funds from GF (PR) • Conducts sensitisation activities • Training of health workers • Logistics and Supply Management
Society for Family Health	ITN M & E Social Marketing	<ul style="list-style-type: none"> • Distribution of ITNs • Education through social marketing
Zambia Anglican Council (ZAC)	ITN IEC/ BCC Case Management in Anglican Council Health institutions	<ul style="list-style-type: none"> • Distributes ITNs through the Nets for Life and Cross Border malaria prevention initiative Programmes supported by a Consortium of partners who

		include Standard Chartered Bank, Episcopal Relief and development Exxon mobile, Coca-Cola
Malaria Consortium	Technical Case Management Training M&E IEC/BCC	<ul style="list-style-type: none"> • Pilot to increase access to subsidized RDTs and ACTs in the private sector, in Northern and Eastern Province • Integrated community case management in Luapula Province
STEP/OVC	ITNs	<ul style="list-style-type: none"> • Distribution of ITNs through door-to-door campaigns
World Vision	IEC/BCC materials production, Technical support in design and development of IEC/BCC activities Procurement and distribution of ITNs	<ul style="list-style-type: none"> • Advocacy • ITN distribution
Communication Support for Health (CSH)	IEC/BCC materials production, Technical support in design and development of IEC/BCC activities	<ul style="list-style-type: none"> • Review of IEC/BCC strategies • Design, development, implementation and evaluation of ITN campaign and other routine campaigns • Review and development of materials • Production of IEC/BCC electronic products • Development of IEC/BCC training manuals • Training/orientation of IEC/BCC programme officers at central and provincial levels • M&E of IEC/BCC activities and interventions
Malaria Transmission Consortium (MTC) project	Operational Research	<ul style="list-style-type: none"> • Developing tools for measuring transmission. • Evaluation of impact of interventions • Vector behaviour and Insecticide resistance

Lutheran Church of Zambia	IEC/BCC ITNs	<ul style="list-style-type: none"> • Sensitisation of members in catchment areas • Procurement and distribution of ITNs
Malaria Control and Evaluation Partnership in Africa	Programme Management M & E IEC Operations Research ITNs	
Private Sector		
Konkola Copper Mines plc	IVM/IRS <ul style="list-style-type: none"> • Programme Management • Technical Support 	<ul style="list-style-type: none"> • Carries out IRS in three districts • Distributes ITN • Carries out larval control activities • Training
Mopani Copper mines	IVM/IRS	<ul style="list-style-type: none"> • Assist in IRS implementation, environmental manipulations and management • Technical assistance to NMCC
Lumwana Copper Mines	IVM/IRS	<ul style="list-style-type: none"> • Assist in IRS implementation
Mazabuka Sugar Estate	IVM/IRS	<ul style="list-style-type: none"> • Implementation of IRS, larviciding and biological strategies
Environmental Council of Zambia	IRS	<ul style="list-style-type: none"> • Regulatory role in the application of environmental safeguards
Research Triangle Institute (RTI)	IRS	<ul style="list-style-type: none"> • Assist in environmental safeguards
Total Zambia Ltd	Sensitization	<ul style="list-style-type: none"> • Carries out sensitization within its organization mainly targeting employees
MTN	IEC ITNs Resource mobilization	<ul style="list-style-type: none"> • Fundraising activities to raise money for various malaria activities • Supports sensitization of community • Procures ITNs
Zambian Breweries Plc	IEC ITNS	<ul style="list-style-type: none"> • Procures ITNs for its employees • Conducts sensitization within its business premises

Standard Chartered Bank	Procurement of ITNs	<ul style="list-style-type: none"> Support the Zambia Anglican Council in partnership with other members of the consortium in implementing the “Nets for Life Programme”
Research Institutions/Academia	Areas of support	Activities
TDRC	Research	<ul style="list-style-type: none"> Clinical trials Entomology Molecular biology Parasitology Epidemiological studies
Macha	Research	<ul style="list-style-type: none"> Entomology Epidemiology and GIS SMS Reporting system Molecular Biology Malaria Diagnosis – using saliva Malaria – Active Case Detection
UNZA	Research	<ul style="list-style-type: none"> Academic programs in public health, parasitology and epidemiology Fellowships/In service training activities at the School of Medicine Fellowships, scholarships and attending scientific meetings through the School of Medicine and the University Teaching Hospital Malaria Research Unit and the Malaria Training and Research Capacity Building in Southern Africa.
Media	Area of Support	
Zambia National Broadcasting Corporation	<ol style="list-style-type: none"> Information dissemination Education Communication 	<ul style="list-style-type: none"> Coverage of malaria events Production of programmes Broadcast of programmes
Zambia News and Information Services, Ministry of Information and Broadcasting	<ol style="list-style-type: none"> Information dissemination Education Communication 	<ul style="list-style-type: none"> Production of programmes Broadcast of programmes Coverage of malaria events Press accreditation of foreign Journalists visiting Zambia

Daily Newspapers	<ol style="list-style-type: none">1. Information dissemination2. Education3. Communication	<ul style="list-style-type: none">• Coverage of malaria events• Writing and placement of news and feature articles respectively
Community Radio Stations	<ol style="list-style-type: none">1. Information dissemination2. Education3. Communication	<ul style="list-style-type: none">• Coverage of malaria events• Production of programmes• Broadcast of programmes