

# Millennium Development Goals

## Malawi 2002 Report

Prepared by

Maxton Grant Tsoka  
Nebert Nyirenda  
Earnest Hayes  
Osten Chulu

In collaboration with

Lawrence Haji  
Patrick Zimpita  
Edward Kataika  
Henry Damson  
Timothy Mkandawire

February 2002

## Foreword

The Heads of State and Government adopted the Millennium Declaration at the Millennium Summit. The Declaration synchronises a set of inter-related and mutually reinforcing goals and targets into a global agenda of poverty issues. The Millennium Development Goals (MDGs) are not new, they have been derived from a global conference held in the 1990's and from international law and norms developed over the previous fifty years. However, the MDGs centre on eight of the key areas and these include:

1. Eradicate poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

As a follow up to the Millennium Declaration, it has been decided that country reports should be written indicating progress made on six of the eight MDGs. The country reports are meant for raising awareness, advocacy and focus the country's development agenda on poverty issues. The six refined MDGs are:

- Halve the proportion of the world's people living on less than US\$1/day by 2015.
- Halve the proportion of the population without sustainable access to safe drinking water by 2015.
- Ensure that children everywhere, boys and girls alike, will be able to complete a full course of primary schooling by 2015.
- Halve under-5 child mortality by 2015.
- Reduce by 3/4 maternal mortality by 2015.
- Begin to reduce the incidence of HIV/AIDS by 2015.

This Malawi report, together with others, is also to be used as an input into a global report on MDGs to be presented by the UNDP at the March 2002 Monterrey Financing for Development Conference in Mexico. The analysis of the requirements for the achievement of the MDGs have mostly been derived from and based on sectoral medium term policy frameworks, strategic plans, investment plans and the MPRSP. In most cases, the MPRSP policies, strategies, activities and costing have been used since these are the more recent and reliable. Likewise, financial resource requirements are based on existing cost estimates. Where the cost estimates are based on the MPRSP, an average for the three-year period is used and prorated up to 2015. Human resource requirements are based on proposed strategies and activities.

The estimating of revenue, economic growth and other macroeconomic variables utilised models being used by Government. Likewise, projections on primary school enrolment took advantage of a model developed by the Centre for Education Research and Training but in use by Government education planners.

## ACRONYMS

CEM	Country Economic Memorandum
CMS	Central Medical Stores
CRC	Convention on the Rights of a Child
CRECOM	Creative Communication
DEPD	Department of Economic Planning and Development
DEVPOL2	Statement of Development Policies 1985-1996
EFA	Education for All
EPD	Economic Planning Division
EHP	Essential Health Package
FPE	Free Primary Education
GABLE	Girls attainment in Basic Literacy and Education
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GNP	Gross National Product
GOM	Government of Malawi
HDI	Human Development Index
HSA	Health Surveillance Assistant
IHS	Integrated Household Survey
MDGs	Millennium Development Goals
MDHS	Malawi Demographic Health Survey
MPRSP	Malawi Poverty Reduction Strategy Paper
MSMEs	Micro, Small and Medium Enterprises
MTEF	Medium Term Expenditure Framework
MOEST	Ministry of Education, Science and Technology
MOHP	Ministry of Health and Population
MOWD	Ministry of Water Development
NEC	National Economic Council
NER	Net Enrolment Rate
NGO	Non-governmental Organization
OVP	Office of the Vice President
PAP	Poverty Alleviation Programme
PFPs	Policy Framework Papers
RHU	Reproductive Health Unit
SAPs	Structural Adjustment Programmes
SIPs	Sector Investment Programmes
STI	Sexually Transmitted Infections
SWAPs	Sector-wide Approaches
TOT	Training of Trainers
TBA	Traditional Birth Attendants
UN	United Nations
UNDP	United Nations Development Programme
VCT	Voluntary Counselling and Testing

## CONTENTS

1	Background .....	1
1.1	Socio-Economic Profile.....	1
1.2	Economic Developments Since 1990.....	1
1.3	Relevant Planning Frameworks and Strategies Over the Decade.....	5
2	Status of the Millennium Development Goals .....	6
2.1	Income Poverty .....	6
2.2	Access to Potable Water.....	7
2.3	Completion of a Full Course of Primary School.....	7
2.4	Under-Five Mortality .....	8
2.5	Maternal Mortality.....	9
2.6	HIV/AIDS Incidence .....	10
2.7	Assessment of Overall Progress.....	10
3	Reaching the Millennium Development Goals.....	11
3.1	Reducing the Income Poverty .....	11
3.2	Increasing the Access to Potable Water .....	12
3.3	Achieving Primary Schooling for All.....	14
3.4	Reducing Under-Five Mortality .....	19
3.5	Reducing Maternal Mortality.....	20
3.6	Reducing HIV/AIDS Incidence.....	21
3.7	Overall Resource Requirements.....	23
4	Conclusions .....	24

## FIGURES

Figure 1:Real GDP Growth Since 1990 .....	2
Figure 2: Trends in Inflation and Nominal Exchange Rate .....	3
Figure 3 Share of Services on Total Spending.....	3
Figure 4: Proportion With Access to Water.....	7
Figure 5: Trends in GER.....	8
Figure 6: Trends in Dropout Rate .....	8
Figure 7: Actual and Target U5MR Trends.....	9
Figure 8: Actual and Target MMR .....	10
Figure 9: Dropout Rates by Class and Gender.....	14
Figure 10: Trends in NER.....	15

## **TABLES**

Table 1: Socio-economic Profile and Human Development Indicators .....	1
Table 3: Trends in Public Finance Indicators Since 1990 .....	4
Table 4: Trends in Selected Human Development Indices.....	4
Table 6: Access to Potable Water .....	7
Table 7: Selected Primary Education Indicators .....	8
Table 8: Financial Resource Requirements for Income Poverty Reduction .....	12
Table 9: Planned Activities For Increased Access to Potable Water .....	13
Table 10: Levels of Selected Educational Indicators .....	17
Table 11: Financial Resource Requirements .....	18
Table 12: Overall Cost Estimates.....	23
Table 13: Gross Resource Envelope, 2002 –2015 .....	24

## **BIBLIOGRAPHY**

Bibliography.....	26
-------------------	----

## **APPENDICES**

Appendix 1: Projecting Poverty Measures .....	29
Appendix 2: Annualised Cost and Revenue Estimates .....	35

## 1 Background

### 1.1 Socio-Economic Profile

Malawi is one of the poorest countries in the world as well as the Sub-Saharan Africa. With a GNP per capita of US\$190 and HDI of 0.397 in 1999, Malawi ranked eighth and twelfth from the bottom, respectively. Underlining the high food insecurity, adult illiteracy, mortality of infants, children and expectant mothers and adult HIV/AIDS prevalence, close to two-thirds of the population is estimated to live in poverty. See Table 1.

**Table 1: Socio-economic Profile and Human Development Indicators**

Indicator	Value	Year
GNP Per Capita	190	1999
Population in millions	11	1999
Population below poverty line (%)	65.3	1998
Population without food 4-6 months before harvest (%)	50	2000
Population (rural) with chronic food insecurity (%)	55	2000
Population unable to satisfy their basic calorific needs (%)	40	2000
Adult literacy (%)	59.2	1999
Adult literacy - male (%)	73.8	1999
Adult literacy - female (%)	45.3	1999
Combined primary, secondary and tertiary GER (%)	73	1999
Primary GER (%)	132	1999
Primary NER (%)	78	1999
Life Expectancy at birth (years)	40.3	1999
Population expected to live up to 40 years (% of cohort)	50.4	1995-2000
Population with access to essential drugs (%)	44	1999
Population with access to safe water (%)	57	1999
Population with access to sanitation facilities (%)	77	1999
Proportion of under-five children stunted (%)	48	1995-2000
Infant mortality rate (number per 1,000 live births)	104	2000
Under-5 mortality rate (number per 1,000 live births)	189	2000
Maternal mortality rate (number per 100,000 live births)	1120	2000
HIV/AIDS prevalence rate (% of the 14-49 age group)	15.96	1999

Source: UNDP (2001a), NSO (2001), World Bank (2001), UN (2001), GoM (2001).

### 1.2 Economic Developments Since 1990

Sustained economic growth has been very difficult to achieve in Malawi during the 1990's. See Table 2. The macroeconomic performance of the economy during the period 1990-2000 was largely influenced by both political and climatic developments. This period was characterised by episodes of drought, deterioration in the terms of trade and macroeconomic management slippage.

The economy was disrupted between 1992 and 1995 when non-humanitarian donor aid to Malawi was suspended to force the Government to accept political liberalisation.

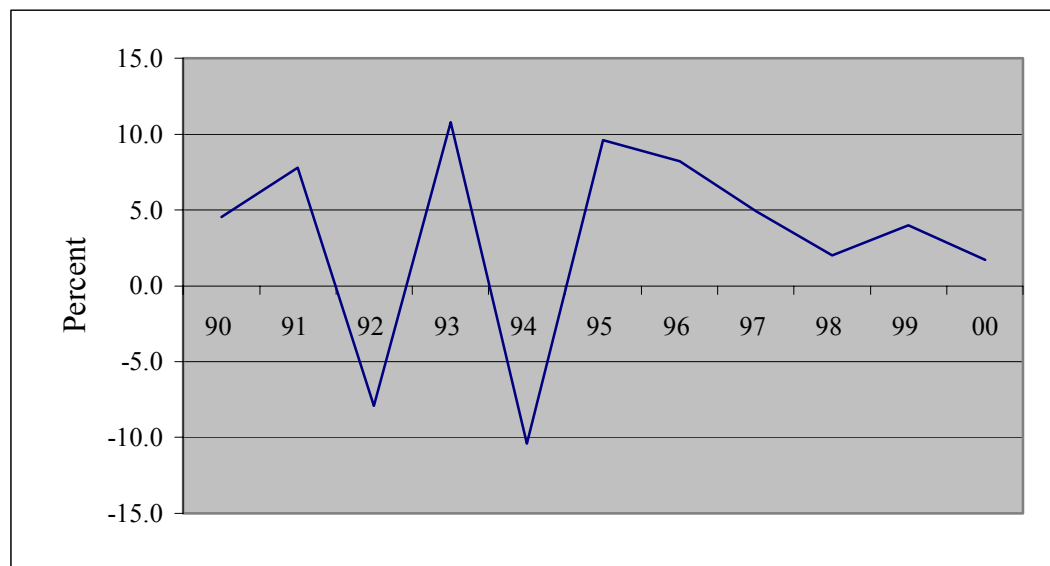
**Table 2: Basic Macroeconomic Indicators**

	1994	1995	1996	1997	1998	1999	2000
GDP growth rate	-10.4	9.6	8.2	4.9	2	4	1.7
Inflation rate (average, %)	34.7	83.1	37.7	9.1	29.8	44.8	29.6
Domestic savings/GDP (%)	-3	-0.3	3	0.9	6	3.1	3.1
Investment/GDP (%)	29.1	17	11.6	12.2	13.3	14.8	15.9
Interest rate (lending rate, %)	31	47.3	45.3	28.3	37.7	53.6	53.6
Current account deficit/GDP (incl. grants, %)	-13.4	-1.7	-7.7	-10.5	-2.5	-8.3	-4.9
Exchange rate (MK/US\$, average)	8.7	15.3	15.3	16.4	31.1	44.1	59.5
External debt/GDP (%)	150.6	139.1	88.6	90.8	142.7	144.0	150.3

Source: World Bank (2001), *Malawi Public Expenditures: Issues and Options*, Table 1.1

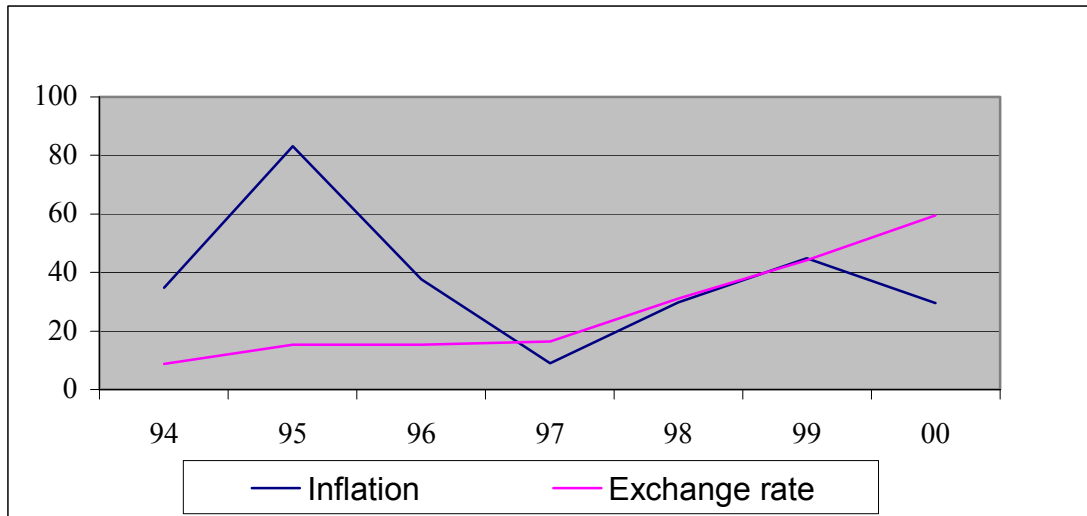
From 1994-2000, the annual average growth rate for the period averaged 4 per cent. This growth was mainly attributed to strong agricultural performance, combined with booming economic activity in the distribution sector. Whereas meaningful poverty reduction is expected from sustained high economic growth of over 5 percent, GDP growth in early 1990s followed a very unpredictable pattern. Periods of high growth were followed by periods of negative growth up to 1994 due to droughts. Between 1995 and 2000 GDP growth has been declining (See Figure 1).

**Figure 1: Real GDP Growth Since 1990**



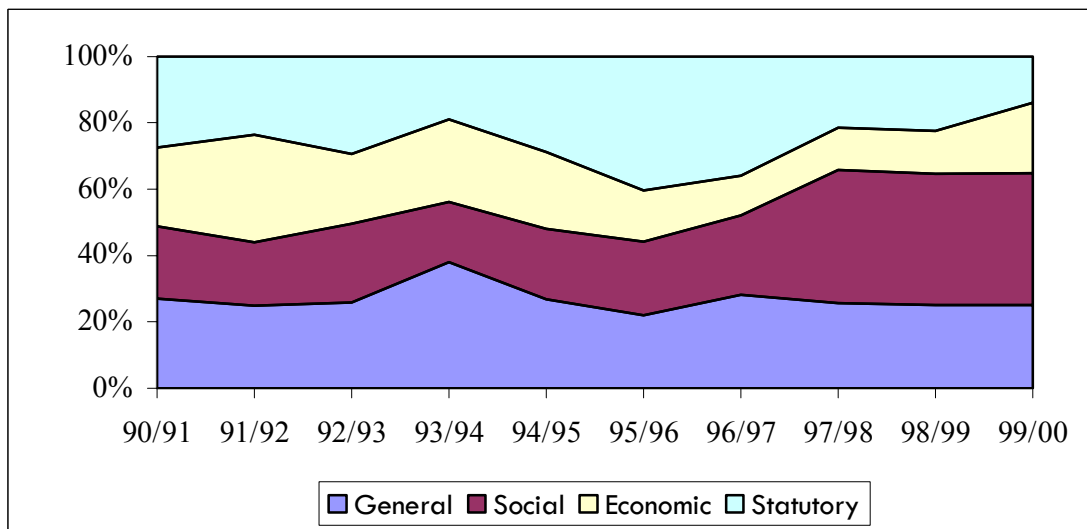
The fiscal position has not been healthy either, especially when grants are excluded. The fiscal imbalances are generally mirrored in current account balance in the external sector whose consistent deficits have been funded by grants and loans. On the ground, the imbalances have been translated into persistent devaluations and depreciations of the Malawi Kwacha and consequently high inflation rates as depicted in Figure 2.

**Figure 2: Trends in Inflation and Nominal Exchange Rate**



One positive aspect is that there has been increased spending on social services, especially in education since 1995/96 (Figure 3). The social services consumed an average of 31 percent of total public expenditure while the education sector consumed an average of 46 percent of the social service expenditure, i.e. 14 percent of the total budget over the period 1994/95-1999/2000. See also Table 3.

**Figure 3 Share of Services on Total Spending**



The combination of the Government spending and the general income poverty has persistently influenced human development of the population. For example, GNP per capita and HDI rank took upward and downward swings, averaged only US\$198 and 16 from the bottom in the 1990s. There have been some indicators that registered some progress. The main ones are the HDI itself, infant and under-five mortality rates, combined enrolment and adult literacy. Negative progress has been attributed to HIV/AIDS and maternal mortality problems (Table 4).

**Table 3: Trends in Public Finance Indicators Since 1990**

	90/91	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00
<i>(% of GDP)</i>										
<b>Public expenditure</b>	<b>25.7</b>	<b>23.9</b>	<b>27.0</b>	<b>26.2</b>	<b>42.0</b>	<b>31.2</b>	<b>23.9</b>	<b>26.6</b>	<b>29.5</b>	<b>30.1</b>
<b>Total revenue and grants</b>	<b>21.6</b>	<b>21.7</b>	<b>20.9</b>	<b>20.6</b>	<b>26.7</b>	<b>25.5</b>	<b>21.0</b>	<b>18.4</b>	<b>24.0</b>	<b>24.4</b>
<b>Domestic revenue</b>	<b>19.5</b>	<b>18.4</b>	<b>17.9</b>	<b>17.6</b>	<b>15.9</b>	<b>17.6</b>	<b>16.3</b>	<b>14.9</b>	<b>17.7</b>	<b>17.5</b>
<i>(% of total PE)</i>										
<b>General Services</b>	<b>27.0</b>	<b>24.8</b>	<b>25.8</b>	<b>38.1</b>	<b>26.7</b>	<b>21.9</b>	<b>28.1</b>	<b>25.6</b>	<b>25.0</b>	<b>25.0</b>
<b>Social Services</b>	<b>21.7</b>	<b>19.1</b>	<b>23.8</b>	<b>18.0</b>	<b>21.3</b>	<b>22.2</b>	<b>23.9</b>	<b>40.2</b>	<b>39.5</b>	<b>39.7</b>
<i>of which :Education</i>	<i>51.0</i>	<i>47.3</i>	<i>49.9</i>	<i>49.4</i>	<i>53.3</i>	<i>57.1</i>	<i>44.8</i>	<i>46.0</i>	<i>37.8</i>	<i>36.9</i>
<i>Health</i>	<i>31.3</i>	<i>34.7</i>	<i>33.7</i>	<i>30.1</i>	<i>37.5</i>	<i>32.4</i>	<i>24.2</i>	<i>18.7</i>	<i>26.4</i>	<i>21.5</i>
<b>Economic Services</b>	<b>23.8</b>	<b>32.4</b>	<b>21.0</b>	<b>25.0</b>	<b>23.0</b>	<b>15.4</b>	<b>12.0</b>	<b>12.7</b>	<b>13.1</b>	<b>21.3</b>
<b>Other Services</b>	<b>27.5</b>	<b>23.6</b>	<b>29.4</b>	<b>18.9</b>	<b>28.9</b>	<b>40.4</b>	<b>36.0</b>	<b>21.5</b>	<b>22.4</b>	<b>14.0</b>

Source: Malawi Public Expenditures - Issues and Options

The 20/20 Initiative - Malawi Country Study

Ministry of Finance

**Table 4: Trends in Selected Human Development Indices**

	1990	1991	1992	1993	1994	1995	1997	1998	1999
GNP per capita (US\$)	200	230	230	200	170	146	210	210	190
Real GDP per capita (PPP\$)	640	800	820	710	694	773	710	523	586
Life Expectancy (years)	48.1	44.6	45.6	45.5	41.1	41	39.3	39.5	40.3
AIDS Cases (per 100,000)		51.6	52.8	49.2	47.3	36.6	505.4		
HDI Rank (from bottom)	21	17	18	18	15	14	16	12	12
Human Development Index	0.168	0.260	0.330	0.321	0.320	0.334	0.399	0.385	0.397
Combined Enrolment (%)		38	46	47	67	76	75	75	73
Infant mortality rate	144	143	143	142	147	137	135	134	132
Child mortality rate			233	221	219	217	215	213	211
Adult literacy rate	47	45	53.9	54.7	55.8	56.4	57.7	58.2	59.2

Source: HDR 1993 to 2001

### 1.3 Relevant Planning Frameworks and Strategies Over the Decade

#### Overall Policy Frameworks

The period 1990 to 2000 was influenced by a number of policy frameworks. The second Statement of Development Policies (DEVPOL2) which run from 1987 to 1996 was still operational in the first four years of the decade. DEVPOL2 was supported by PFP's, the National Program of Action for the Survival, Protection and Development of Children in the 1990s (NPASPD), produced in response to the international consensus and conventions such as EFA and CRC. After the change of Government in 1994, the new Government launched the Poverty Alleviation Programme (PAP). Sectoral policy frameworks and other planning tools such as MTEF, SIPs and SWAPs supported PAP. Later, in 1996 the Government embarked on long-term perspective study to define the future of the Country. The study culminated in the Malawi Vision 2020 which was launched in 1998. However, both PAP and Malawi Vision 2020 lacked effective implementation mechanisms. As a result, since 2000, Government has taken advantage of the HIPC-led PRSP to produce a Malawi PSRP as a first step in the implementation of the Malawi Vision 2020.

#### Sectoral Planning Frameworks and Strategies

##### **Frameworks and Strategies for Pro-poor Growth in the 1990s**

The key message in the policy frameworks in the 1990's stressed the need for growth with equity. This was to be achieved through greater involvement of the private sector, particularly in agriculture, micro and small enterprises and informal sectors. As a result, specific measures were undertaken to create an enabling environment including trade liberalisation, tax reform, privatisation of parastatals, review and repeal of out of date legislation and administrative procedures and processes, creation of institutions to support the private sector, clearing the backlog of maintenance and undertaking new investments in economic infrastructure.

##### **Frameworks and Strategies for Increased Access to Potable Water in the 1990s**

The main goal of the NPASPD under sub-sector of water was the provision of safe drinking water to all by the year 2000. The main strategy was the rehabilitation of old water schemes and provision of more wells and rural piped water schemes. Community involvement was considered crucial. The community was to provide labour in the construction and maintenance of the rural piped water schemes, repair teams, volunteer pump caretakers and water committees for rural water schemes.

Government developed a Water Resources Management Policy and Strategies in 1994 to ensure that a large proportion of the population have access to potable water, among other objectives. The backbone of the strategy was again community involvement in the management and maintenance of water supply systems in their areas.

##### **Frameworks and Strategies for Increased Access to Primary Education**

In the early 1990's, the policy can be characterised as cautious and targeted increased access to education. Through GABLE girls were not required to pay school fees as long as they did not repeat. Government introduced free primary education starting with standard 1 in 1990/91 and that cohort and subsequent ones were not required to pay fees. By 1994, standards 1 to 4 were free. The new Government in 1994/95 school year introduced free primary education and abolished school uniform requirement. This greatly affected access

positively. However, this was followed, in the same year, with high drop out rates negating the gains in the access arena.

## Framework and Strategies for Reducing Infant, Child and Maternal Mortality and HIV/AIDS Incidence in the 1990s.

In the 1990's, the policy frameworks (National Health Plan and NPASPD) focused on Primary Health Care (PHC) with '*... particular attention ... given to the provision of services for mothers and children, including services concerned with nutrition, child spacing, and a range of priority disease programmes including, most recently, AIDS*' GOM (1987:112). All policy frameworks emphasised reduction in infant, child and maternal mortality rates and HIV/AIDS incidence.

## 2 Status of the Millennium Development Goals

### 2.1 Income Poverty

The international focus on poverty at the turn of the 1990s forced Government and its development partners to think of measuring poverty for poverty monitoring. The World Bank in particular, attempted to measure poverty in 1992 and 1995 using whatever available data there was at the time. In the 1992 exercise, the World Bank profiled poverty in Malawi as comprising nearly 55 percent of the population, out of which nearly 20 percent were ultra-poor. The 1995 exercise, poverty incidence was estimated to be 60 percent. The results of the two exercises were not comparable despite being done by the same institution because of data differences. Data for the 1992 exercise were obtained from two different types of surveys. One was conducted in 1990/91 titled Household Expenditure and Small Scale Enterprises Activities (HESSEA) covering both rural and urban areas and another, 1991/1992 titled National Sample Survey of Agriculture (NSSA), covering mainly rural areas. The 1995 exercise used 1992/93 NSSA.

On the basis of a 'purpose-built' 1997/98 survey titled Integrated Household Survey (IHS), poverty incidence was estimated at 65.3 percent, affecting nearly 6.3 million of the people (Table 5). The survey also revealed that about 28.7 percent of the population live in dire poverty (89.8 percent rural and 10.2 percent urban areas, respectively).

Despite the earlier attempts to estimate the poverty incidence as early as 1992, the inconsistencies between the poverty estimates for 1990, 1992 and 1998

make it difficult to undertake a meaningful MDG gap analysis. Since the most comprehensive poverty analysis was done for 1998, the base for this exercise is therefore the 1998 poverty estimate. In this case, the MDG target for 2015 is a poverty incidence of 32.7 percent. Assuming a simple straight-line reduction in poverty incidence, this means an annual reduction in the poverty incidence of roughly 2 percent. However, the reduction rate in poverty incidence is influenced by other

**Table 5: Poverty Incidence, Gap and Severity**

	Headcount (% of population)	Poverty gap index	Poverty severity index
<b>Poverty</b>			
National	65.3	0.23	0.12
Rural	58.6	0.23	0.12
Urban	6.7	0.19	0.10
<b>Ultra-Poverty</b>			
National	28.7	0.09	0.04
Rural	25.8	0.09	0.04
Urban	2.9	0.07	0.03

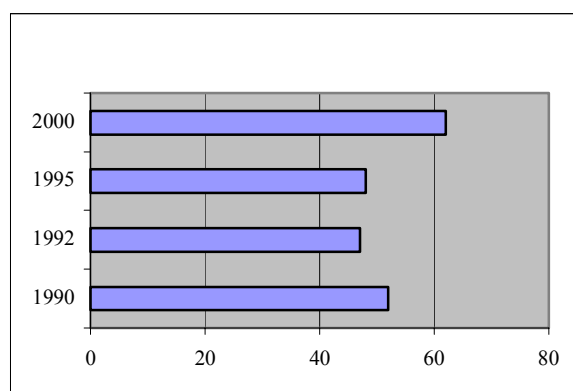
**Source: National Economic Council (2000) Profile of Poverty in Malawi, 1998.**

parameters such as behaviour of gini-coefficient. With more pro-poor growth, human resource development and vulnerability protection, the reduction can be greater than the average 2 percent.

## 2.2 Access to Potable Water

Access to potable water within one kilometre has not changed much since 1990. According to DEVPOL-2, 47 percent of the rural population and 85 percent of the urban population (averaging 52 percent of the entire population) in 1985 had access to potable water. In 1992, access was lower than the 1985 level for the rural areas. It has been the intensive sinking of boreholes since 1996 that has increased the rural coverage to 58 percent. In 2000, access had increased to 62 percent. However, urban water supply has not kept pace with urban population growth. See Figure 4 and Table 6.

**Figure 4: Proportion With Access to Water**



On the basis of the 1985 statistics, the millennium goal in 1990 was to increase the national access from 52 percent to 78 percent by 2015. With coverage of 62 percent in 2000, access had increased close to 1 percent increase per annum. Assuming a similar progression, it would take sixteen years to achieve the target. That would mean in 2016. Thus the gap in this millennium development goal is achievable because government is

planning to increase the number of boreholes and water schemes, intensify the maintenance of existing boreholes and water schemes. Currently, there are 17,000 hand pumps capable of serving 4 million people and 56 rural gravity-piped water supply schemes with over 10,000 taps capable of serving 1.2 million. Unfortunately, about 40 percent of these are not functional.

**Table 6: Access to Potable Water**

*(Percent of households within 1 km of a source)*

	Rural	Urban	Malawi
<b>1990</b>	47	85	52
<b>1992</b>	42	89	47
<b>1995</b>	44	92	48
<b>2000</b>	58	85	62

**Source:** GOM (1991), NEC (2000b), MOWD

## 2.3 Completion of a Full Course of Primary School

The MDG states that by 2015 all children everywhere, boys and girls alike, should be able to complete a full course of primary schooling. To achieve the MDG there is need for 100 percent net enrolment and completion rates. This means that the dropout rate should be

reduced to zero. According to Table 7 these rates are far from ideal and they are compounded by other quality factors that keep children out of school like lack of physical infrastructure and overcrowded classes

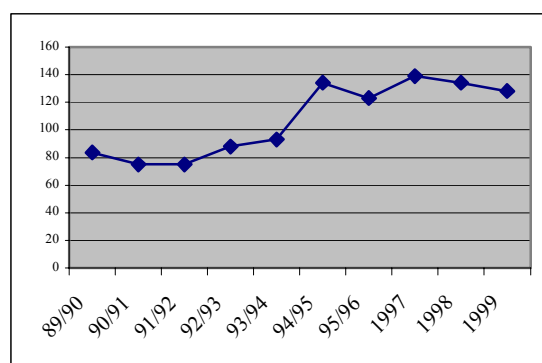
**Table 7: Selected Primary Education Indicators**

Rates and ratios	90/91	91/92	92/93	93/94	94/95	95/96	1997	1998	1999	2000
Gross admission	114	164	159	177	276	225	206	195	182	
Net admission	36	33	10	48	75	80	81	82	78	
Gross enrolment	75.1	75.1	87.9	93	134	123	139			128
Net enrolment	54.2	60	55.9	71.4	95.7	95.5	101	100	66	65
Trained teacher	71	86	87	84	58	67	51	50	54	62
Pupil/teacher	78	71	68	68	62	59	-	67	63	82
Pupil/classroom	96	116		115	162	189	156	204	93	93
Dropout	11	13	12	17	27	11	16	11	11	10
Repetition	17	20	18	18	29	15	15	15	14	15
Transition	8	13	12	9	9	9	8	11	11	10
Participation-girls	45	46	47	48	47	47	48	49	48	48

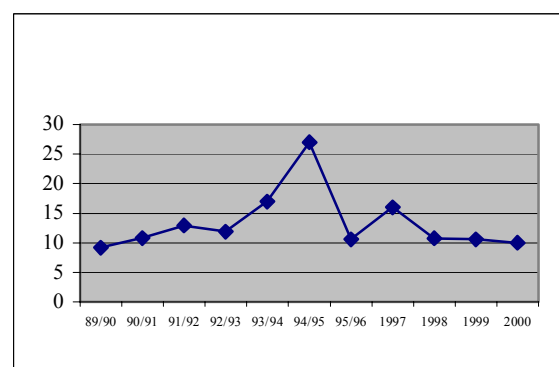
Source: MOEST

As can be seen, the enrolment gains witnessed by the introduction of FPE were quickly countered by high dropout rates. See Figures 5 and 6

**Figure 5: Trends in GER**



**Figure 6: Trends in Dropout Rate**

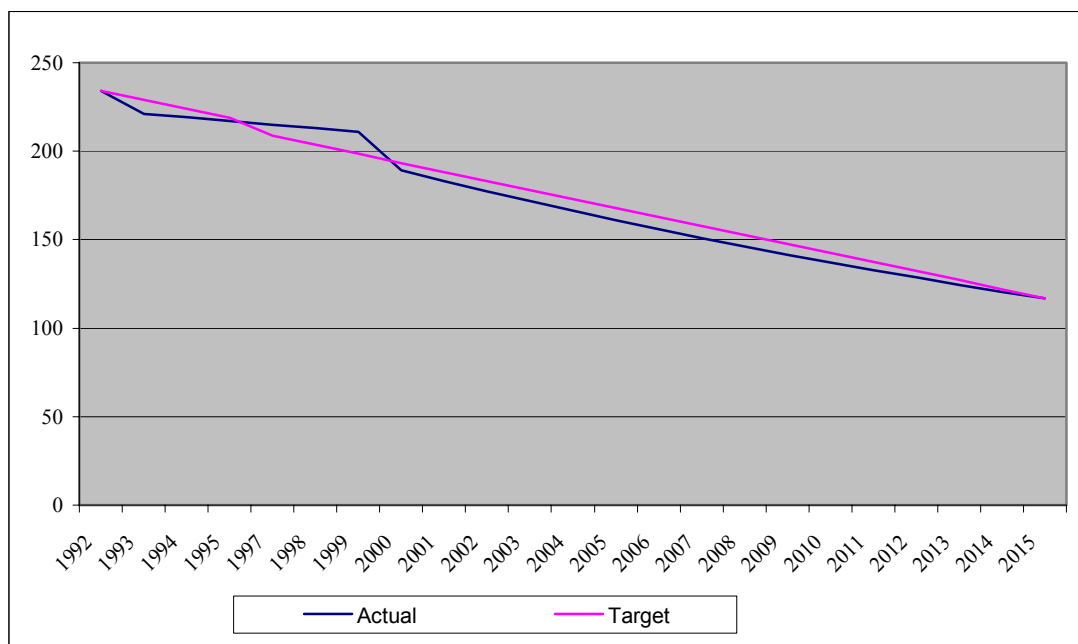


Clearly, the gap between the millennium goal of 100 percent completion rates or zero dropout rates is overwhelming. To achieve the goal would require a lot of effort. It is noted that Government's planned completion rate for the same 2015 is 55 percent. This gives an idea of how difficult the Government considers the task of achieving the target to be. However, with radical policy shifts and commensurate resource allocation this goal can be achieved.

## 2.4 Under-Five Mortality

According to the 1992 MDHS, under-five mortality rate was 234 deaths in every 1,000 live births. The millennium development goal required reducing the 1990 rate by fifty percent by 2015. Taking the 1992 as the base rate, the goal means that the rate should be reduced to 117 deaths per 1,000 live births by the year 2015. The results of the 2000 MDHS show that the under-five mortality was 189 deaths per 1,000 live births. That level was already above the target for 2000. See Figure 7.

**Figure 7: Actual and Target U5MR Trends**

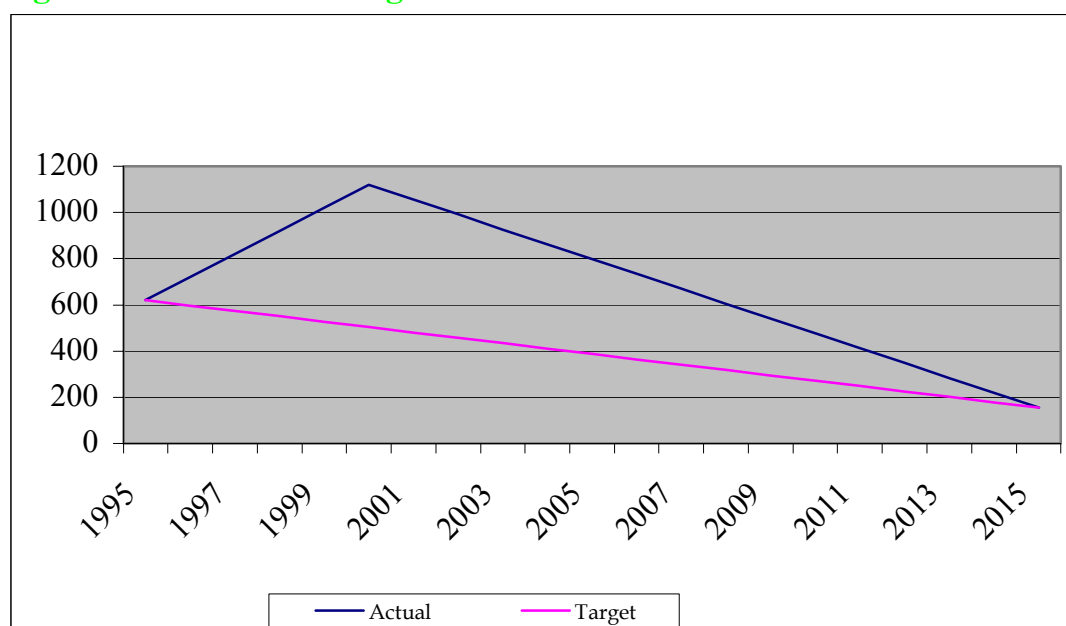


If the trend from 1995 to 2000 continues, then the target would be reached much faster. This is why we conclude that if the planned activities are implemented, the target is achievable.

## 2.5 Maternal Mortality

The situation in maternal mortality is precarious. In 1992, the maternal mortality rate was estimated to be 620 deaths per 100,000 live births. The millennium development goal calls for the reduction of the rate by seventy-five percent by 2015. In other words, the maternal mortality rate is to be reduced by 465 to 155 deaths per 100,000 live births. However, instead of a reduction, the rate has almost doubled to 1120 deaths per 100,000 according to the estimates of the 2000 MDHS. Thus while it would have been easier to meet the target in 1992, it is even more challenging now to move from 1120 to 155 deaths per 100,000 live births. See Figure 8.

**Figure 8: Actual and Target MMR**



## 2.6 HIV/AIDS Incidence

The millennium development goal on HIV/AIDS required countries to begin to reduce the incidence of HIV/AIDS immediately. Unfortunately, there was no systematic data collection of HIV/AIDS statistics in 1990. Even now in 2002, it is difficult to collect data and statistics on HIV and AIDS. However, statistics on HIV prevalence are available starting from 1995. In 1995, it was estimated that 13.8 percent of the 14-49 years age group were living with the HIV. The prevalence kept on increasing reaching 16.4 percent in 1999. The estimate has gone down to 15.0 percent in 2000. According to the UNDP's Human Development Report, AIDS cases rose from 52 per 100,000 cases in 1991 to 505 in 1997. On the basis of the HIV incidence among the sexually active population, it is concluded that the country has not yet begun reducing the HIV incidence.

## 2.7 Assessment of Overall Progress

Of the five MDGs, only two (i.e. increasing access to potable water and reducing under-five mortality) can be viewed as achievable with minimum changes in policy and increases in resource allocation. Reducing maternal mortality and income poverty are the most difficult MDGs for the country to achieve. The slow behaviour change is also making the immediate reduction in HIV infection difficult to attain. In general, the five MDGs are achievable only with radical changes in policies, attitudes, mindsets, and political and technical commitment.

### 3 Reaching the Millennium Development Goals

#### 3.1 Reducing the Income Poverty

##### Challenges, Policy Framework and Strategies

Malawi faces the challenging task of halving the proportion of people living in extreme poverty by 2015. According to the rough calculations done above, the poverty incidence is expected to decline by 2 percent if this goal is to be achieved. On the basis of different income distribution patterns, that target can only be achieved with economic growth of about 3.8 percent to 6.0 percent per annum. See Appendix 1 for details. The lower limit of 3.8 percent is achievable, noting that real GDP growth averaged 4.2 percent during the period 1990 to 2000. Although it is estimated that the composition of GDP would not vary substantially, the MPRSP proposes to allocate more resources to rural areas, infrastructure and support for small and micro-enterprises, thereby triggering more sustainable and equitable growth through improving the productivity of labor intensive sectors and narrowing the gap between modern and backward sectors in agriculture, manufacturing, and services.

Malawi's economy has been extremely vulnerable to internal and external shocks. Therefore, this requires the provision of greater incentives for economic development to broaden income and employment opportunities for the urban and rural poor. However, higher and sustained growth requires a conducive environment for economic growth, particularly in sectors involving traditional agriculture and small production units and both urban and rural micro-enterprises. In these sectors, the levels of productivity and competitiveness will be increased through concrete actions in the areas of rural development, road infrastructure, technical assistance and technology, development of micro- and small enterprises, development of micro-finance and land access and tenure, which are the strategic objectives for increasing opportunities for the population and which have more short- and medium-term effects on growth.

Thus, the major policy shift will aim at improving the productive conditions, ensuring property rights, and expanding employment options to the rural population. This will include the provision of production infrastructure such as irrigation and micro-irrigation systems, rural electrification and roads, rural telephones, legal security in land tenure, and technical and technological support in the production, marketing and management of primary agricultural and rural activities. This will make it possible to increase agricultural yields and enhance the productivity of other rural economic activities such as tourism and handicrafts, thereby adding to the diversification of employment opportunities and increased incomes.

Micro-finance services will be deepened and diversified to expand spatial coverage. This will help MSMEs to establish links among themselves and with larger businesses that can generate a sustained export supply consistent with the demand and quality requirements of international markets. A greater role for MSMEs is also anticipated in the domestic market through active participation in the provision of goods and services, such as the construction and maintenance of roads, construction of irrigation and micro-irrigation works and basic sanitation at all levels.

MPRSP has identified clustering as an important element of small firm production organisation. Malawi will place emphasis on the development of competitive industry clusters through integration of key industries, suppliers, supporting industries, critical supporting business services, requisite infrastructure and institutions. Value chains with significant backward and forward linkages, domestic spin-offs and value added will be developed with greater involvement of the MSMEs.

#### Human Resource Requirements

The development of small production units and urban and rural MSMEs calls for expertise, reform in the regulatory environment, strong coordination between the public and private sectors, and development of the non-financial services targeted to the poor such as training, business management, marketing and provision of information – as an instrument for enhancing efficiency and competitiveness in these units.

#### Financial Resource Requirements

It has been estimated that the country will require nearly MK112 billion up to 2015 to reduce income poverty by 50 percent (Table 8). Although the policy reforms and institutional capacity building are not resource intensive, the bulk of the funding is required in the building of supportive infrastructure to ensure effective supply response.

**Table 8: Financial Resource Requirements for Income Poverty Reduction**

	(MK m)		
	2002-2005	2005-2015	2002-2015
Support for increased agricultural development and food security	7,941.66	17,149.01	25,090.67
Sustainable utilisation of natural resources	2,367.57	5,112.47	7,480.04
Development of MSMEs	1,219.95	2,634.33	3,854.28
Promotion of formal sectors	1,252.85	2,705.37	3,958.22
Trade development services	2,910.71	6,285.31	9,196.02
Rural infrastructure	10,740.05	23,191.79	33,931.84
Protection of the most vulnerable	6,130.24	22,477.55	28,607.79
<b>Total</b>	<b>32,563.03</b>	<b>79,555.83</b>	<b>112,118.86</b>

*Note: MK68=US\$1 in February 2002*

### 3.2 Increasing the Access to Potable Water

#### Challenges and Required policy framework

The current revised ‘Water Resources Management Policy and Strategies’ is good enough to ensure that the proportion of the population with potable water increases and remains high. The policy and strategies have been re-enforced by the draft MPRSP. The planned development of new rural piped water schemes, construction of communal water points in urban areas, rehabilitation of existing schemes and maintenance of boreholes by communities will go along way in meeting the target. One of the critical elements in the policy framework is to ensure sustainability through community involvement in the planning, construction and maintenance of the water supply systems. The challenge is to ensure continued community commitment, continuous training of community committees and availability spares for the repair teams.

### Human resource requirements

The major human resource requirement has to do with training of maintenance teams and water point committees. Each of the twenty-seven districts must have technical staff whose full time assignment is to train the teams and committees. This will involve recruiting technical staff in each region, train them in their assigned districts as trainers and then establish and continuously train team and committee members in about 7,000 rural communities. Further, each Traditional Authority will have a water support group and for each district there will be a water supply monitoring and evaluation system. All these require human resources and capacity.

### Financial resources requirements

Public (government) financial resources will be required to finance all rural water supply projects and activities. There are four activities in the rural areas. The cost of these is MK2,458 million (Table 9). This would finance the construction of 12 new and rehabilitation of 15 water schemes, the drilling of 11,000 boreholes, the construction of 4 ground water storage gravity supply schemes and the construction of 5 community based dams, apart from capacity building in maintaining the water supplies and protecting the environment. For urban areas, Government will work with urban and peri-urban water supply parastatals by either guaranteeing their loans or sourcing loans on their behalf. The cost of those urban and peri-urban water projects (US\$43.09m) are also in Table 9.

**Table 9: Planned Activities For Increased Access to Potable Water**

No	Activity	Total Cost (MKm)	US\$m
1	Develop capacity in rural communities and institutions	189	2.8
2	Develop and maintain water supply	912	13.41
3	Promote, develop and manage water resources	1,291	18.99
4	Protect environment and catchment areas in rural areas	66	0.97
	<i>Rural Water Supply</i>	<b>2,458</b>	<b>36.15</b>
1	Provision of potable water to peri-urban centres	1,665	24.49
2	<i>Provision of potable water to urban centres</i>	1265	18.60
	<i>Urban and Peri-urban Water Supply</i>	<b>2,930</b>	<b>43.09</b>
	<i>Total</i>	<b>5,388</b>	<b>79.24</b>

**MK68=US\$1**

### Resource management system

Currently, resource management in the water sector is centralised. However, with the decentralisation taking hold, there are plans to shift most of the resource management to district assemblies. This is why most of the capacity building activities are concentrated at district, area and community levels.

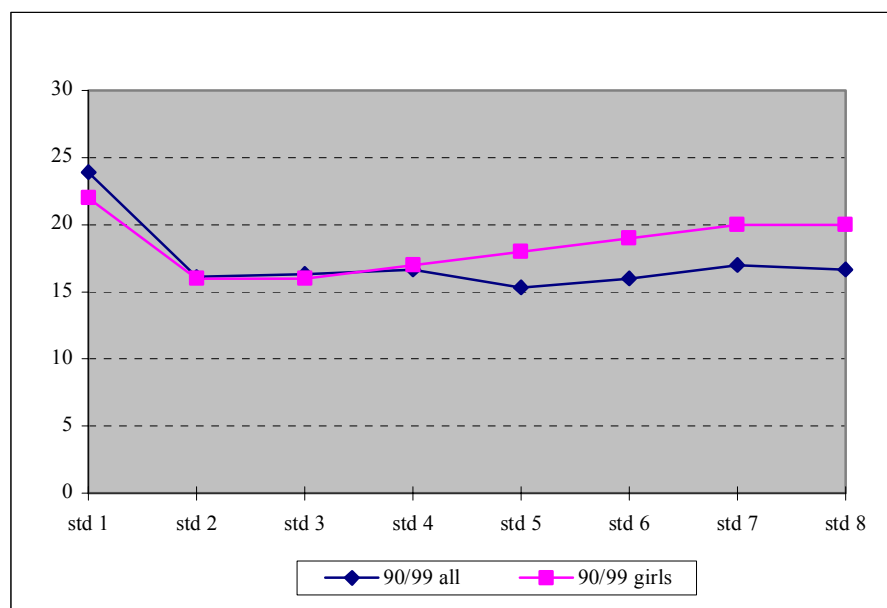
### 3.3 Achieving Primary Schooling for All

#### Challenges and Policy Framework Required

Schooling for all requires that all boys and girls, normal or physically challenged, complete primary education. This requires open and easy access for all regardless of gender or physical condition as well as a conducive home and school environment. As a start, parents must be willing to send their children to start, attend and continue with school. Children themselves must be willing to go to school and learn in class.

A number of surveys<sup>1</sup> have found that some parents tolerate school children in their care to absent themselves or drop out of school. Others even encourage them to do so, especially if they are girls. Poverty and low value attached to education are major causes of this parental behaviour. The surveys also found out that pupils drop out of school out of their choice citing reasons like poverty, poor quality of education and opportunity cost of education. Girls are said to drop out to get married or are forced out due to pregnancies. Dropout rates by gender clearly shows that girls drop out at a faster rate when they grow up. See Figure 9.

**Figure 9: Dropout Rates by Class and Gender**

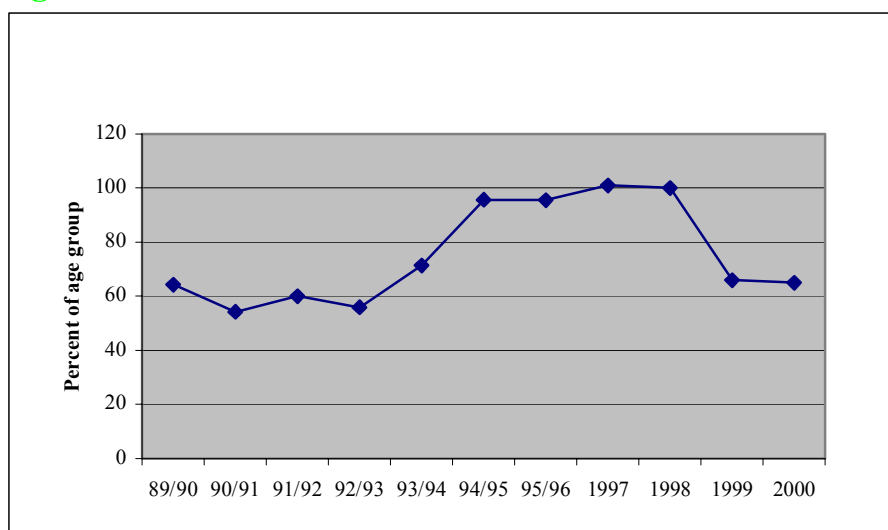


School environment also contribute to the high drop out. Overcrowding and lack of recreation facilities contribute to the dropping out in junior classes. Lack of gender-sensitive teaching staff, physical infrastructure and school environment in general contribute to girls' high drop out rates in senior classes.

Further, about 25 percent of surveyed households never attended school. Their own lack of appreciation of school is passed on to their children in the form of lukewarm attitude towards school, even in this era of FPE. This is why there are still out of school children. See Figure 10, which proves that there are children still not in school.

<sup>1</sup> See Tsoka (2000), NEC (1999), Kadzamira and Chibwana (1999), NEC (2000) and Chilowa, et al (2001)

**Figure 10: Trends in NER**



As already indicated, the current education policy and the MPRSP address problems of access, equity and quality. In particular, there are plans to increase the number of schools, permanent classrooms, sanitation facilities, teachers especially qualified ones, teacher houses, desks and teaching and learning materials. They also provide for special education for children with learning disabilities. However, they are not strong enough to ensure that all school going age children enrol and stay in school regardless of the regressive attitudes of parents, themselves and sometimes school management.

To achieve the MDG, the country requires concerted effort. Government and its development partners work to improve the pupil-teacher, pupil-classroom, pupil-desk ratios and sanitation facilities, among others. In the short-term there is need for massive civic education and community mobilisation. The radio campaign embarked on by the State President advocating primary education by urging parents, teachers and children to play their part is highly commendable and should continue. In the medium and long run, there is need for institutionalised compulsory education. The State President's campaign should then be stepped up by also stressing the fact that a child has a right to education and that both parents and the state are obliged to provide the education to the child as enshrined in the Malawi Constitution and internationally accepted by the CRC and Jomtien Declaration, which Malawi is party to.

Kadzamira and Chibwana (1999) made a comprehensive proposal on what needs to be done to achieve EFA in 2013. A list of some of the key proposals relevant to this MDG is in Test Box below

### **Text Box 1: Policy Proposals for EFA**

#### **Improving quality**

- Improve the quality of the learning environment by providing teaching and learning materials and basic furniture like desks and chairs.
- Improve physical facilities by rehabilitating and maintaining school infrastructure (classrooms, teacher houses and toilets) apart from constructing new ones.
- Train unqualified and under-qualified teachers
- Provide professional support and in-service training for teachers
- Improve conditions of service for teachers by increasing their salaries in real terms and opportunities for career advancement.
- Improve allocation of teachers and other resources between and within schools by allocating more qualified teachers to junior classes and rural areas

#### **Reducing direct cost of education**

- Provide basic learning materials like exercise books, pencils and pens and abolish school-specific fees
- Provide fee-waivers for girls in secondary school to encourage them to complete primary education
- Introduce attendance-related school feeding programmes during periods of drought and in areas where school attendance is a problem

#### **Reducing the opportunity cost of schooling**

- Adjust school calendar to suit agriculture pattern and traditional activities that conflict with school

#### **Reducing gender bias in schools**

- Increase number of female teachers in rural areas and senior classes and head teachers
- Increase gender awareness among teachers by conducting gender training for teachers, heads and administration
- Promote gender-sensitive learning environment by assigning similar chores to both boys and girls, eliminate intimidation and harassment of girls by boys and male teachers
- Promote single-sex classes in science subjects

#### **Reducing cultural impediments to schooling**

- Carry out continuous community sensitisation on long-term basis until people's attitudes and behaviour change
- Promote high-level community participation and parental involvement through the school committee
- Encourage entry at six years and not later to reduce the chance of dropping due to age heterogeneity especially among girls
- Intensify adult education since educated parents are more likely to send their children to school
- Introduce compulsory education to transmit positive messages about government's intentions and everyone's responsibilities

#### **Measures to address poor health**

Provide water near or at the school

For compulsory primary education to work there will be need to set up proper enforcement mechanisms. The easiest will be to use the traditional leadership and school committees. Each traditional leader will have to ensure that all parents enrol and send their school-going age children to school. The school committee together with the traditional leadership will

need to establish area level monitoring groups. This would work if community and opinion leaders were convinced of the value of education.

For this study, Table 10 presents key indicators and targets that are required by 2015 if the goal is to be achieved. The education cost estimates that follow (Table 11) are based on these.

**Table 10: Levels of Selected Educational Indicators**

Indicator	1990 (unless stated)	2000 (unless stated)	2015 Targets
Girl's enrolment (share %)	30	48	50
Perm. Classroom/Pupil ratio	1:102	1:114	1:80
Toilet/Pit latrine: pupil ratio	-	1:250	1:15
Perm House/Teacher ratio	1:3	1:2	1:1
Q-teacher/Pupil Ratio	1:80	1:123	1:60
Rural schools with 60:1 p/teacher (%)	-	15	100
Textbook/Pupil ratio	1:2	1:2	1:1
Desk/ Pupil Ratio	1:7	1:7	1:2
Dropout rate	(94/95) 24	(1999) 9	5
Repetition rate (%)	21	(1997) 15	(std1-7) 5 (std 8) 10
Completion rate (%)	-	(1997) 20	100
Gross Enrolment Ratio (GER)	68	132	100
Net Enrolment Ratio (NER)	50	(1996) 83	95

### Resource Management System Required

Resource management has proved to be difficult in the education system. Apart from misallocation of teachers within a school, district and division, there is misallocation of resources between inputs. Managers at all levels of the education system require capacity building apart from extra hands through recruitment and training or redeployment.

Another activity that requires human resources is the social mobilisation campaign. Schooling for all campaign requires human resources at community, district and national level. Using a modified GABLE model, each community will require "Education For All" (EFA) campaigners. The campaigners will have to be trained by district level EFA campaigners who will be supported by a national level team. The national level team will provide TOT to the district teams. To ease possible human resource constraints at the national level, CRECOM, the NGO famous for the social mobilisation campaigns for girls education in the 1990s, could be sub-contracted to assist in the training of district teams.

Further, there is need for recruitment and training of new teachers. The training of new teachers requires training institutions. The current training institutions capacity (classrooms, beds, dining facilities and tutors) is far out-stripped by demand for places. This will require the construction of new teacher training schools and expansion of capacities of the existing ones.

### Financial Resources required

Given the current (2000) situation and the 2015 targets for the selected few indicators in Table 9, the financial resource requirements for filling the gap are presented in Table 11.

**Table 11: Financial Resource Requirements**

Indicator	2000	2015 Requirement	Resource Gap	Unit Cost (in MK)	Total Cost (MK) for the gap
Girl's places	1,448,147	1,818,777	370,630	-	-
Permanent classrooms	26,465	45,469	19,005	516,000	9,806,448,850
Toilets/pit latrines	12,068	242,504	230,436	25,000	5,760,891,133
Qualified teachers	24,528	60,626	36,098	150,000 <sup>2</sup>	5,414,648,354
All teachers	36,792	60,626	23,834	899,415 <sup>3</sup>	21,436,245,061
perm teacher houses	18,396	60,626	42,230	376,250	15,888,929,366
T/books (3 core subts)	1,508,486	3,637,553	2,129,067	750	1,596,800,250
Desks	430,996	1,818,777	1,387,781	2,500	3,469,451,250

The total cost for the **additional** resources required is **MK63.4 billion**, an annual average cost of **MK4.2 billion**. Note that the cost estimates exclude operating, rehabilitation and maintenance costs. They also do not include social mobilisation campaigns and required increased expenditures on supervision, teaching and learning materials. The annual cost estimate for basic education in the three-year period in MPRSP is MK8.8 billion. Assuming that half of the MK8.8 billion is for the cost elements excluded in Table 10, an annual cost estimate of about **MK5 billion** is apparently realistic for the MDG. This then gives a total requirement of **MK70 billion** for the period up to 2015.

### Resource management system required

As already seen, Government resource allocation towards the education sector has been very commendable in the 1990s especially after the introduction of FPE in 1994/95. However, there are intra-sectoral allocation problems in the system. Funding of quality inputs like teaching and learning materials, furniture and supervision has been negligible even with the increased allocation to education. One of the factors contributing to this has been no proper assessment of funding requirements in line with the sector's needs and priorities. For example, the development budget is not based on sector needs but rather on availability of donor support for a particular activity of the donor's liking. Furthermore, there is little determination, if at all, of future recurrent costs implications of the donor-funded projects. In general, there is no forward planning of resource requirements thereby hindering the efficiency and cost-effectiveness of the educational system.

What is required is a management, finance, and planning capacity assessment in the education system to identify the skills needed for key players and then recruit and/or training them to fill the identified capacity gaps. Since the use of MTEF has the potential of reducing most of the problems faced by the education system, the proposed capacity building should be based on MTEF as a management, planning and financing tool.

Although, there has been some decentralisation to zones, the education financing system should be further decentralised. Like in the health sector, there should be speedy

<sup>2</sup> Est. Unit cost for training a primary school teacher.

<sup>3</sup> Average wage bill for a primary school teacher (in 15 years).

decentralisation to the district level. The new structures should be introduced together with the MTEF so as to inculcate the good principles implicit in the MTEF in the district management team.

### 3.4 Reducing Under-Five Mortality

#### Challenges and Policy framework requirement

The trend in the under-five mortality rate has been encouraging over the past decade although it is still high by international standards. The positive trend is due to the implementation of the EPI with immunisation coverage as high as 80 percent in 2001. The high mortality rate is due to a myriad of causes but the major causes are high incidence of malaria among children and pregnant mothers (resulting in anaemia and low birth weight of the children) and water and food-borne diseases.

The current National Health Plan attempts to address most of the epidemiological and health system problems that affect infant and child morbidity and mortality. The government has also developed a National Malaria Policy to specifically deal with this number one killer disease among the under-five children. This is over and above the Integrated Management of Childhood Illnesses (IMCI) approach that government adopted to deal with the major causes of morbidity and mortality among infants and children (malaria, diarrhoeal diseases, respiratory infections and nutrition deficiencies). Efforts to reduce infant and child mortality will be linked to HIV/AIDS prevention strategies like the voluntary counselling and testing (VCT) for HIV/AIDS and prevention of mother to child transmission of HIV/AIDS (PMTCT). These are meant to reduce the risk of HIV infection of unborn children.

Further, to move away from the vertical approach to health interventions, the government has developed a package of essential health services, dubbed Essential Health Package (EHP), again targeting the major conditions including HIV/AIDS and incorporating preventive, educational and clinical services delivered through the community, health centres and district hospitals. The MPRSP also proposes to concentrate on the EHP.

#### Human resource requirements

The main human resource requirements are at community and district levels. There is need to increase knowledge and skills of key players in breast feeding management as well as general feeding, food preparation and feeding of young children. There is also need to raise awareness of key players, including traditional leaders, on the care for pregnant and lactating mothers, use of sanitation facilities, family and personal hygiene and general home health practices. This requires recruitment and training of trainers of trainers and front line health workers, including health surveillance assistants, at district and community levels, respectively. Likewise, there is need for proper staffing of health centres and district hospitals. Fortunately, the planned EHP has already included the human resource requirements.

#### Financial resource requirements

The MPRSP estimates an annual cost of MK5.5 billion which translates into MK77 billion by 2015 for the EHP and an annual cost of MK143million or MK2 billion up to 2015 for the nutrition program. This gives a total of MK79 billion.

### Resource management system required

The move towards decentralisation is taking root in the health sector. Currently, district health services are funded directly and each district is developing a district implementation plan. Again, once approved the plans will be funded directly. This approach will improve the health status greatly since the planners are those that are close to the communities. The key is the capacity of the district planners to work with communities in order to come up with realistic district goals, objectives, strategies and activities.

## 3.5 Reducing Maternal Mortality

### Challenges and Policy framework required

The increase in maternal mortality rate from 620 to 1120 deaths per 100,000 live births is of concern, especially if the target is to be achieved. The underlying factors for this include poor diet, low access to general and maternal health care services; high incidence of malaria compounded by limited availability of free drugs at community level; high HIV/AIDS incidence among pregnant mothers; and high demand of maternal health care services due to low uptake of modern family planning services. Another factor is teenager pregnancies. Some of these lead to complications during delivery or attempted abortions.

The low access to maternal health care services will be dealt with by intensive recruitment of TBAs and midwives, apart from providing transport between the TBAs and health centres and health centres and hospitals, re-orienting HSAs to deal with maternal cases and increasing the number of health centres to reduce the distance to the nearest health facility. The low availability of anti-malarial drugs at community level will be dealt with by the establishment and stocking of drug revolving funds. The low uptake of family planning services will be dealt with by the National Safe Motherhood Policy. The policy, among others, promotes Youth Friendly Health Services, integrates PMTCT and strengthens VCT services targeted at mothers and their partners. In addition it propagates the upgrading of TBAs and expanded role of HSAs in the provision of preventive health.

### Human resource requirements

Most of the human resource requirements are at district and community levels. Just like under the under-five mortality MDG, each district will require a dedicated team to run the community mobilisation campaigns. Apart from that there will be need for trainers of trainers to conduct training of community-level personnel that would conduct individual counselling and provide education on reproductive rights. At community level, there will be need to recruit and train the counsellors and educators and also birth attendants. At health facility level, there will be need to train and upgrade health care managers. Again, the EHP has already factored in human resource requirements for all basic services.

### Financial Resource requirements

On the basis of the Draft Framework of the National Strategic Action Plan for Safe Motherhood, the cost for the period 2003-2015 is MK3.466 billion. The costing was comprehensive and took into consideration the magnitude of the problem. However, the challenge is the implementation of the action plan.

### Resource management system required

The Safe Motherhood Program is managed at headquarters level (Coordinator of Reproductive Health Units (RHU). The RHU work with district hospitals the Central Medical Stores (CMS). The magnitude of the problem requires management of the

problems to be decentralised to the district level. There is need to have strong RHUs in each district to deal with the problem.

### 3.6 Reducing HIV/AIDS Incidence

#### Challenges and Policy framework required

The magnitude of the pandemic is far misrepresented by statistics. In 1999, for example, the overall HIV-seroprevalence in adult women aged between 15 and 49 was 24 percent (26% urban, 27% peri-urban and 12% rural) yet this only represents a fraction of actual HIV prevalence due to under reporting and miss-diagnosis. What is clear from even the under-reported figures is that the HIV incidence has not started going down but that it is on the increase generally. This increase is despite an almost universal HIV/AIDS awareness. What is the problem is the translation of the high knowledge levels into positive behaviour change.

There is some reluctance in the use of condoms (even for those who fail to abstain from sexual activities) and the free VCT centres. According to the 2000 MDHS, prevalence of condom use with any partner was low (5% for women and 14% for men). Likewise, condom use with non-cohabiting partner is still low, 29 percent for women and 39 percent for men from 20 percent and 38 percent, respectively, in 1996). These condom use statistics are very low in relation to the hidden high HIV prevalence and indeed the magnitude of the pandemic. The same survey found that only 15.2 percent and 8.5 percent of sexually active men and women, respectively, ever went for an HIV testing. Considering that testing and counselling assists in making decisions about fertility and sexual activities, these statistics are indeed low.

The survey also found that 67 percent of women and 77 percent of men knew that HIV infection could be avoided by abstaining from sexual relations. Notwithstanding this knowledge, 38 percent of unmarried women and 67 percent of unmarried men had sex with non-cohabiting sexual partners. Again, as many as 34 percent of women and 29 percent of men knew that HIV can be avoided by limiting the number of sexual partners, avoiding sex with partners who have multiple partners and especially prostitutes yet 1 percent of married women and 17 percent of married men reported having sex with non-cohabiting partners. This is clearly a recipe for increased contraction of HIV considering that condom use is very low.

Negative social attitudes towards sex and condoms and cultural attitudes and poverty are blamed for the slow or no translation of the HIV/AIDS knowledge into behaviour change. Culturally men are tolerated to have multiple partners, either through polygamous unions or extra-marital sex relations. Some cultures encourage young girls to have sexual relations with men after their menarche. Other young men and women go for multiple partners just for fun. In some cases, from an early age, women driven by poverty, engage in pre-marital and extra-marital sex with multiple partners just to earn some money. Again, condom use is viewed as 'unnatural' and a taboo within families even when there is need to protect a sex partner. Above all, there is some resignation among the sexually active population.

With these highly embedded attitudes, some of them, at an early age, the HIV/AIDS pandemic requires more than casual civic education, voluntary counselling and testing and advertisements of condoms. There is need to 'shock' the culture and the social fabric just as the HIV/AIDS pandemic has done to the demographics. The 1999 Policy Analysis

Initiative pinned its hopes on the youth who have yet to form their attitudes towards sex through proper and continuous sex education by parents and teachers. It also proposed mandatory testing for those seeking government scholarships to universities, training institutions and secondary school and preparing to marry. It further contemplated mandatory testing and re-testing for the sexually active age group in the long run. It concluded that the 'unreasonableness' of the mandatory test for all far outweighs the 'unreasonableness' of an HIV partner infecting an unsuspecting non-HIV sex partner with its far-reaching negative externalities.

The current HIV/AIDS Strategic Plan does not go that far. Likewise, the MPRSP mirroring the HIV/AIDS Strategic Plan on HIV/AIDS concentrates on (i) prevention of infection among the youth by incorporating HIV/AIDS in school curricula at all levels, increased adolescent reproductive health services (VCT and management of STIs) and downplaying of initiation rites, (ii) abstinence and increased use of condoms, including female ones, distribution and education, (iii) control of mother to child transmission and (iv) promotion of VCT underlined by the introduction of the service at health centre, district and referral hospitals. These strategies ought to be complemented by the seemingly radical strategies aiming at protecting the youth and the HIV-free adults, at some cost of infringing some rights.

#### Human resource requirements

The HIV/AIDS prevention campaign is under-resourced. The campaign is mainly done by NGOs. The National Aids Council has just been constituted. Likewise, the National AIDS Secretariat has just been revived. Most of its activities and positions are donor-funded. Disregarding the capacities in NGOs and CBOs, the campaign requires human resources at district and community levels. The introduction of HIV/AIDS counselling and testing units at district hospitals and health centres requires human resources to manage them. This will require staff recruitment and/or redeployment and training and/or re-training of the staff in counselling and testing of HIV.

#### Financial Resource requirements

The comprehensive HIV/AIDS management plan is estimated to cost US\$2.5 billion. This plan includes preventive services, curative services (provision of Anti-RetroVirals (ARVs)) and mitigation against the costs of the impact. The plan is to be funded by the National AIDS council (US\$240m); Government (US\$391m); HIPC resources (US\$591.4m); external donors (US\$468.2m); user-fees by households (US\$542.0); employer medical scheme contributions (US\$318.6); among others. The US\$2.5 billion translates into MK170 billion in 2002 Malawi Kwacha. However, this cost estimate includes non-preventive activities.

The MPRSP cost estimate for the preventative services for the period 2002/3 to 2004/5 is MK520.89 million or MK174 million per annum. Using this cost estimate the HIV/AIDS prevention campaign would cost a total of MK2.4 billion by the year 2015. However, the campaigns proposed by the HIV/AIDS Strategic Plan and translated by MPRSP are not intense enough to begin to reduce the HIV incidence. More financial resources would be required to set up VCT in all health centres, district hospitals and CHAM hospitals.

#### Resource management system required

The HIV/AIDS prevention campaign is highly centralised. The campaign is to be managed by a programme manager who is planned to report to the controller of clinical services at

the ministry headquarters. Under the programme manager will be the Central Unit with officers individually responsible for counselling services, management of ARVs, supervision of services, PMTCT control services, STI control services, civic education (IEC) and technical services (accounts, data collection and analysis). This vertical service delivery will not survive the decentralisation drive. In the longer run this structure will change leaving only few services (drug regimens determination, procurement, security, logistics and supervision, operational research, programme monitoring and evaluation and collaborative arrangements with research institutions and specialists) to be delivered centrally.

### 3.7 Overall Resource Requirements

Table 12 presents a summary of the estimates of financial requirements to achieve the six MDGs. Annual estimates from 2002/3 to 2014/5 are presented in Appendix 2. In terms of domestic revenue, the MDG would consume an average of 52.2 percent over the period but moving from a high of 87 percent to 47 percent, as domestic revenue increases faster than the cost. Likewise, as a ratio of GDP, the MDG cost moves from 16 percent to 10 percent and averaging 12 percent.

**Table 12: Overall Cost Estimates**

<b>Millennium Development Goal</b>	<b>Base Level</b>	<b>Current level</b>	<b>Target level</b>	<b>Cost (MKb)</b>	<b>Cost (US\$b)</b>
Halve the proportion of the population in poverty (%)	65.3	65.3	32.7	112.1	1.65
Halve the proportion of the population without potable water (%)	48	42	24	5.4	0.08
Achieve universal primary education (%)	20	20	100	70.0	1.03
Halve under-five mortality (per 1,000 live births)	234	189	117	79.0	1.16
Reduce by three-quarters maternal mortality (per 100,000 live births)*	620	1120	155	3.466	0.05
Begin to reduce HIV/AIDS incidence (%)	13.8	15.0	<13.8	2.4	0.035
<b>TOTAL</b>				<b>272.366</b>	<b>4.005</b>

Funding for the programs and projects under the MDG and poverty reduction strategy components will depend on fiscal revenue, macroeconomic targets, and access to external funding. In order to ease fiscal limitations, it is necessary to improve tax administration, ensure that taxation is progressive, develop effective tax evasion detection systems, and revise special taxation arrangements.

Given the restrictions faced by the public sector, major efforts will be made to involve the private sector in the financing and provision of social services. With regard to external funding, debt relief assistance under the HIPC Initiative will release additional resources for poverty reduction strategy.

Table 13 presents projected resource envelopes, which are deliberately based on realistic assumptions, utilising past experience and technical knowledge. If the MPRSP is fully implemented and there are no negative external shocks, growth and revenues may be higher than projected.

The gross resource envelope (total resources available, excluding FDI and domestic private sources) is derived from projections of total domestic taxation and non-tax revenue, in addition to conservative estimates of donor inflows. The annualised projections are in Appendix 2.

**Table 13: Gross Resource Envelope, 2002 –2015**

<b>Base Scenario</b>					
	<b>2002/3</b>	<b>2003/4</b>	<b>2004/5</b>	<b>2005-15</b>	<b>2002-15</b>
Domestic revenue	25,857	28,459	31,522	436,237	526,229
Of which non tax revenue	2,678	2,758	2,838	37,635	45,583
Grants & Loans	4,727	4,727	4,727	137,189	151,368
Domestic financing	-1,399	-3,245	-4,597	-45,930	-55,211
HIPC	3,877	4,507	4,937	13,962	27,283
<b>Total</b>	<b>33,061</b>	<b>34,447</b>	<b>36,589</b>	<b>541,417</b>	<b>649,669</b>

<b>Optimistic Scenario</b>					
	<b>2002/2003</b>	<b>2003/2004</b>	<b>2004/2005</b>	<b>2005- 2015</b>	<b>2002-2015</b>
Domestic revenue	26,503	29,840	33,649	419,792	515,167
Of which non tax revenue	2,475	2,649	2,824	32,765	41,039
Grants & Loans	4,727	4,727	4,727	137,189	151,368
Domestic financing	-1,399	-3,245	-4,597	-45,970	-55,211
HIPC	3,877	4,507	4,937	13,962	27,283
<b>Total</b>	<b>33 708</b>	<b>35 828</b>	<b>38 716</b>	<b>524 973</b>	<b>638 607</b>

Considering that the projected total cost for all the MDGs is MK272 billion, the total resource envelope of MK639 billion is apparently sufficient. However, it should be noted that there are many other activities government is to undertake on top of those related to the MDGs. Further, there have been problems in the costing of the social mobilisation campaigns and human resources. Regarding cost of human resources, no attempt has been made to consider improving the conditions of service for the civil servants involved in the implementation of the activities under the MDGs. An attractive remuneration package for primary school teachers and paramedics would increase the resource requirements rather considerably.

#### 4 Conclusions

Malawi Government and its development partners from within and outside have tried to put right policies and strategies that would assist in achieving the MDGs. All the efforts of the 1990s have been crystallised in the MPRSP. The MPRSP has synthesised all pro-poor policies and strategies that were in place and those that were not and realistically costed them. For some MDGs like maternal mortality and HIV/AIDS incidence, there is still need to include more strategies.

Nevertheless, if the MPRSP is implemented, the country is bound to witness some achievement of the MDGs. The challenge that the country faces in this area is

implementation. Historically, the country has been known for developing good policies and strategies. Political and technical will have lacked despite declared war on 'poverty, ignorance and disease' under the old government or declared development goal of 'poverty alleviation' and later 'poverty eradication' under the current government.

Implementation of the proposed strategies also depends on capabilities and commitment of the human resources. There are two challenges facing the country, especially the civil service. The capacities of most of the frontline staff are not fully developed. Further, their remuneration package is not high enough to motivate them to work hard. To achieve the MDGs, there is need to improve significantly the incentive structure of the frontline staff. This is a major challenge as long as the development management continue to be centralised. This leads to the next challenge.

Currently, the development management is sectoralised and centralised. Government has put the policy on decentralisation but implementation of this policy is very slow. The cautious implementation is in contrast with the speed the famous FPE was introduced. However, without decentralised development management it will be very difficult to achieve the MDGs.

Finally, the last challenge has to do with the fact that Malawi is donor-driven. Without donor commitment towards the MDGs there is very little the Government can do to achieve, even the easiest of the MDG. Currently, there is some donor commitment towards the MPRSP and indeed the MDGs. However, donor commitment is dependent on many factors some of which are independent of the how noble the MDGs are. There are also signs of donor fatigue disguised by stringent and unreasonable conditionalities, at times. Overall, Malawi can achieve most of the MDGs with commitment by all development partners. The policy environment is conducive. With government and donor commitment, proper human resource development, efficient and effective financial resource management and decentralised development management, the country is bound to see its poverty reduced, its children, mothers and citizens saved from unnecessary illnesses and deaths.

## Bibliography

Bloch, G and Chilowa, W. 1999. The Impact on Poverty of Donor Macro-Financial Support in Malawi. Department for International Development, Central Africa.

Chilowa, W, J Kadzandira, Devereux, S. 2001. Social Policy in Southern Africa: The Case of Malawi. IDS-CSR Collaborative Research Programme. Zomba.

DEPD. 1988. Statement of Development Policies 1987-1996. Office of President and Cabinet. Government of Malawi.

EPD. 1971. Developing Malawi. Economic Planning Division. Office of the President and Cabinet. Lilongwe.

GOM. 2001. Malawi Poverty Reduction Strategy Paper. 3<sup>rd</sup> Draft. PRSP. Lilongwe

\_\_\_\_\_. 1995. Rural Water Supply and Sanitation in Malawi: Sustainability through Community Based Management. Lilongwe

\_\_\_\_\_. 1991. National Programme of Action for the Survival, Protection and Development of Children in the 1990s. Lilongwe.

GOM and World Bank. 1998. Malawi AIDS Assessment Study. Report No.: 17740 MAI.

Kadzamira E and Chibwana, M. 1999. Gender and Primary Schooling in Malawi. Forum for African Women Educations and Institute of Development Studies. Brighton.

MOHP. 2001. The Draft Framework of the National Strategic Action Plan for Safe Motherhood 2002-2007.

MOHP, et al. 2001. The Comprehensive HIV/AIDS Management Strategy for Malawi. Draft Submitted to the Global Fund to Fight HIV/AIDS, TB and Malaria.

MEPD. 1995. Policy Framework for Poverty Alleviation Programme. PAP Coordinating Unit, Ministry of Economic Planning and Development. Lilongwe.

Milner, G, et al. 2001. The Quality of Education: Some Policy Suggestions Based on a Survey of Schools. SACMEQ Policy Research Report No. 7, UNESCO. Paris

MOEST. 2001. Education Indicators. Ministry of Education, Science and Technology.

\_\_\_\_\_. 2001. Education Sector Policy & Investment Framework (PIF). Lilongwe

\_\_\_\_\_. (Various). Malawi Education Basic Statistics. Ministry of Education. Lilongwe.

MOHP. 2001. Malawi Essential Health Package: Costs and Preliminary Costing. EHP Working Group. Lilongwe

\_\_\_\_\_. 2000. Indicators: Routine Monitoring for Improving Quality and Coverage of Health Services. Lilongwe

MOWD. 1998. Water Resources Development Policy and Strategies. Malawi Government. Lilongwe

NEC. 2001. The Determinants of Poverty in Malawi, 1998. Poverty Monitoring Unit of the Poverty Monitoring System. Lilongwe.

\_\_\_\_\_. 2001. Malawi Poverty Strategy Reduction Paper. Third Draft Report

\_\_\_\_\_. 2000a. Profile of Poverty in Malawi, 1998. Poverty Monitoring Unit of the Poverty Monitoring System. Lilongwe.

\_\_\_\_\_. 2000b. Statistical Booklet on Poverty. Poverty Monitoring System.

\_\_\_\_\_. 2000c. Vision 2020: The National Long-Term Development Perspective for Malawi. A Summary. Lilongwe.

\_\_\_\_\_. 2000d. Qualitative Impact Monitoring: Preliminary Report. Lilongwe.

\_\_\_\_\_. 1998a. Vision 2020: National Long-Term Perspective Study. National Economic Council. Lilongwe

\_\_\_\_\_. 1998b. Qualitative Impact Monitoring: Research Results. Lilongwe.

NSO. 2000. Integrated Household Survey Statistical Abstract. Draft Report. Government of Malawi. Zomba.

NSO and ORC Macro. 2001. Malawi Demographic and Health Survey 2000. Government of Malawi. Washington.

NSO and Macro International. 1994. Malawi Demographic and Health Survey 1992. Government of Malawi. Washington, DC

OVP. 1999. Policy Analysis Initiative. Government of Malawi. Lilongwe.

Tsoka, M. 2001. Literature review on Malawi's Social Policy. CSR-IDS Collaborative Research, Zomba.

\_\_\_\_\_. 2000. Complementary Panel Survey: First Round Preliminary Results. Poverty Monitoring System. Centre for Social Research.

\_\_\_\_\_. 1997. Review of Development Programs and Use of Research Information in Malawi. Centre for Social Research. Zomba.

Tsoka, M (ed). 1999. Malawi's Initial CRC Report to UN. Ministry of Gender, Youth and Community Services. Government of Malawi. Lilongwe.

\_\_\_\_\_. (ed). 1998. The 20/20 Initiative: Malawi Country Study. Draft Final Report. Ministry of Finance. Lilongwe.

Tsoka, M and Zoani A. 1996. Monitoring of the 20/20 Initiative – A Situation Analysis. Centre for Social Research. Zomba

UNDP. Human Development Report (various issues). UNDP. New York. New York.

UN System in Malawi. 2001a. Common Country Assessment of Malawi: 2001 Report. Lilongwe.

\_\_\_\_\_. 2001b. United Nations Development Assistance Framework: Malawi 2002-2006. Lilongwe.

World Bank. 2000. Attacking Poverty: World Development Report 2000/2001. World Bank. Washington, DC.

\_\_\_\_\_. 2000. Malawi Public Expenditures: Issues and Options. Africa Region.

\_\_\_\_\_. 1989. Sub-Saharan Africa: From Crisis to Sustainable Growth. Washington, DC

## Appendix 1: Projecting Poverty Measures

### Conventional Wisdom

Conventional wisdom has it that as an economy grows, and income distribution improves, poverty levels are bound to decline. The basis for poverty reduction in this conventional wisdom is that increased real growth of income in an economy will provide for more resources to be available for the population. This increased income will lead to reductions in the levels of poverty if it is accompanied by efforts toward redistribution of income. Indeed there are other factors that play a critical role in the reduction of poverty. The level of urbanisation for instance, is crucial in determining the rate at which poverty is reduced. A Shift in the population from rural areas to urban areas tends to reduce national poverty levels while lower levels of poverty are almost always observed in urban areas<sup>4</sup>.

### Malawi Defies Conventional Wisdom

There are cases where income growth does not translate into reduced poverty levels. This is mainly attributable to the distributive effect. When growth is neutral, changes in poverty will originate from changes in average income of the population and/or demographic changes. If growth is skewed towards the non-poor sector, the re-distributive effect will reduce the impact of growth on poverty, while on the contrary, more equitable growth will increase the impact of growth on changes in poverty (World Bank 2001). At best one would expect, in the former case that growth in income levels will make some segments of the population richer, but not necessarily impoverish other segments of the population, assuming that income distribution remains unchanged. In situations where growth in income is followed by worsening poverty levels, the most likely reason would either be deteriorating income distribution or unprecedented increases in population. The former is more plausible in situations of political upheaval while the later is more likely to follow population build-up following wars or natural calamities.

Malawi's poverty indicators defy any of these explanations. Table A1-1 shows the poverty scenarios in various years from 1989 till the latest and most elaborate household survey in 1998.

Table A1-1. Historical View of Poverty Indicators

Year	Poverty Headcount			Income (GDP)	Inequality Index -Gini coef		
	Malawi	Urban	Rural		Malawi	Urban	Rural
1989	55	9	60	9061.6			
1990	54	65	60	9493.9			
1992			54	8511.7	0.62		0.57
1998	65.3	54.9	66.5	12567.9	0.401	0.52	0.374

Sources:

1989: World Bank 1990

1990: World Bank 1990 using NSSA<sup>5</sup> income data (rural areas only)

1992: World Bank 1995 using NSSA income data (rural areas only)

1998: NEC 2000 using Integrated Household Survey data

<sup>4</sup> See World Bank – Interim PRSP for Bolivia (2001)

<sup>5</sup> NSSA – National Sample Survey of Agriculture

With the exception of 1992, which was a bad drought year, all the other years show reasonable growth in income. For 1989, the urban poverty headcount of 9% seems a little odd, considering that a subsequent survey in 1990 puts it at 65%. For the years 1989 and 1990, NSSA data was used which only dealt with farm households in rural areas, hence an urban comparison could not be made. What is striking about table 1. is that whereas income levels are rising, and income distribution is getting better with the national gini coefficient moving from 0.62 in 1992 to 0.401 in 1998, poverty levels seem to be getting worse, from 54% in 1992 to 65.3% in 1998 totally defying the previously stated conventional wisdom.

Indeed it is true that these figures should be taken with a pinch of salt. To begin with, the methods employed to derive the early poverty estimates were considerably different from those employed in the 1998 IHS data set. Attempts to replicate the IHS methodology on the earlier data set proved next to impossible with any degree of confidence in the results. The problems faced included reconciling income vs. consumption as household welfare measures and in appropriately Malawi Kwacha values from 1990 or 1995 to April 1998 price. Although results were obtained, they were nonsensical, indicating unrealistically low levels of poverty in 1998. NEC (2000) reports that “..no trends can be established by comparing the current (IHS) analysis with previous analyses or through using earlier methods with the IHS data. The most that an informed observer of poverty in Malawi can say is that poverty does not seem to be declining. However, it must be noted that the evidence is not strong enough for one to infer that poverty levels are actually increasing.”

Despite this assertion, it still remains puzzling that poverty levels are increasing with increased incomes and improved income distribution.

### An Analytical Approach to Poverty Measurement Projections

The process of determining reductions in poverty incidence involves two tasks to be carried out. First, there is a need to know the extent of poverty incidence by determining the numbers of people below the poverty line; and second, to determine how the numbers can be reduced. The former has received considerable scrutiny from a number of studies in the past such as the UNDP’s Situation Analysis of Poverty, the World Bank’s Profile of Poverty in Malawi, and recently, the Integrated Household Survey reports among others. In addition, a number of literature exists outlining the determinants of poverty in the country as well as perceptions of poverty both from the point of view of official authorities and the society itself.

Economic stability, it is widely believed, is essential for poverty reduction. In resource-constrained countries, economic stability is a key determinant of sustained economic growth, which is itself an important element poverty reduction. However, Ames, Brown, Devarajan and Izquierdo (2001)<sup>6</sup> caution that macroeconomic stability by itself does not ensure high rates of economic growth, there are other structural measures such as regulatory reform, privatisation, civil service reform, improved governance, trade liberalization and banking sector reform which are essential to sustained growth. Moreover, growth alone is not sufficient for poverty reduction. Growth associated with progressive distributional changes will have a greater impact on poverty than growth, which leaves distribution unchanged. In this regard, policies that improve the distribution of income and assets within a society, such as land tenure reform, pro-poor public expenditure, and

---

<sup>6</sup> Ames B, Brown W, Devarajan S and Izquierdo A.,(2001), Macroeconomic Policy and Poverty Reduction, World Bank, Washington D.C.

measures to increase access to financial markets by the poor, will also form essential elements of a country's poverty reduction strategy.

When assessing the sensitivity of poverty to growth and inequality, the approach most favoured by institutions such as the World Bank is the elasticity approach. Elasticities measure percentage changes of one variable as a consequence of percentage changes in a related and relevant variable. For instance, in basic economics, one can examine percentage changes in quantities demanded as a result of percentage changes in the price of the commodity in question. The relationship between changes in the quantity demanded as a consequence of changes in its price is known as the price elasticity of demand. Likewise, one could talk about the income elasticity of poverty, which would be defined as:

$$\frac{\text{Percentage change in poverty}}{\text{Percentage change in income}}$$

In a more robust manner, assessments of the sensitivity of poverty to growth and inequality can be expressed through the estimation of the elasticities generated by the statistical ratios between the relevant variables. The Bolivian study, for instance, takes the assessment of poverty (Pt) as being causally determined by the increase in income (Wt) and an inequality index (Dt). Increases in income can be proxied by the national GDP while the inequality index can be any measure usually the gini coefficient<sup>7</sup>. The rates of change (elasticities) can be modelled with the following three equations:

$$\Delta \text{LogPt} = \varpi + \gamma \Delta \text{LogWt} + \delta \Delta \text{LogDt} + v \quad (1)$$

$$\Delta \text{LogDt} = \alpha + \beta \Delta \text{LogWt} + \varepsilon \quad (2)$$

$$\Delta \text{LogPt} = \alpha + \lambda \Delta \text{LogWt} + \eta \quad (3)$$

These three equations estimate growth relationships between income, inequality. Equation (1) is used to estimate gross elasticity parameters of poverty as it relates to growth ( $\gamma$ ) and inequality ( $\delta$ ). These gross elasticity parameters are affected by the ratio between inequality and growth ( $\beta$ ) in equation (2). The net ratio between poverty and growth ( $\lambda$ ) is shown in the third regression and is expressed as a function of the first two regressions:  $\lambda = \gamma + \delta\beta$ . (World Bank 2001)

The fundamental requirement for such an analysis to take place is the availability of reliable household survey data, comparable over different periods. As has been illustrated in Table 1 above, the various household surveys that Malawi has had were undertaken for varying reasons. The NSSA was specifically for agricultural households and had therefore no urban component, whereas the IHS covered all households comprehensively. It would be a lot more beneficial in terms of poverty analysis if subsequent surveys similar to the IHS could be conducted to facilitate such an analysis. In the absence of similarly comparable data, existing information on urban and rural poverty headcounts and income gini coefficients were used in cases where they actually have been compiled. In the years where no data exists or where data is dubiously suspect, specific assumptions were made concerning the missing values.

<sup>7</sup> The gini coefficient gives an indication of how equitable the distribution (of income or expenditure) is across the population. A gini coefficient of zero results if all households have exactly the same level of consumption and expenditure – perfect equity. A coefficient of one implies a situation where all except one member of the population have no consumption or expenditure.

## Data Assumptions

### Poverty Headcounts

- In 1989, the urban poverty headcount of 9% appears to be dubiously low when compared to other subsequent survey estimates. The 1990 headcount figure of 65% seems more in line and hence, a value of 65% was ascribed to the 1989 poverty headcount.
- 1992 had no urban poverty headcount. 1989 had a headcount value of 65% while 1998 had 54.9. A middle value of 60% was taken to account for the poverty headcount in 1992.

### Gini Coefficients

- The gini coefficient for rural areas for 1989 was estimated at 0.62 and 0.60 for 1990 on the basis of reducing ginis in the subsequent years (0.57 in 1992 and 0.374 in 1998).
- Urban gini coefficients were estimated arbitrarily at 0.69 in 1989, 0.68 in 1990 and 0.67 in 1992. A gini of 0.52 was estimated in the IHS for 1998.

### GDP

- Rural GDP was taken to include all agricultural GDP and that of ownership of dwellings. The rest of GDP was construed to be urban based.

With this somewhat complete picture, ordinary least square regressions were done for urban and rural areas to arrive at elasticities as described in the methodological approach. The net elasticities for rural and urban areas resulting from the regressions are given below:

**Table A1- 2: Derivation of Net Elasticities from Historical Data**

	Rural	Urban
$\gamma$ (growth elasticity)	0.57	0.71
$\delta$ (inequality elasticity)	0.38	1.07
$\beta$ (growth and inequality)	-0.77	-1.16
$\lambda$ (net elasticity = $\gamma + \delta\beta$ )	0.27	-0.54

The net elasticity of poverty and growth reflects the ratio historically observed between growth and inequality. The rural data implies that poverty incidence increases with increasing levels of income by a factor of 0.27 whereas the urban data indicates that poverty incidence would decline by a factor of  $-0.54$ <sup>8</sup>

### Projecting Poverty

These elasticities are then used to project poverty levels based on this historical analysis. The projections are based on the premise that elasticities do not change over time, and that the level of urbanisation remains the same hence the urban-rural dichotomy analysed here represents the distribution of population currently in place. Once projections of income are

<sup>8</sup> A 1% increase in income would lead to a  $-0.54$  percent decline in poverty.

independently calculated, it then becomes possible to project poverty indices for urban (u) and rural (r) areas with the following equations.

$$P_t^u = P_{t-1}^u(1+\lambda^u y_t^*) \quad (4)$$

$$P_t^r = P_{t-1}^r(1+\lambda^r y_t^*) \quad (5)$$

In addition to the base scenario using historically generated inequality and poverty indices, sensitivity analysis is undertaken first, with a drastic improvement in income distribution and second, with moderate redistribution. This is done on the same GDP projections.

**Table A1-3. GDP projections using OLS estimation**

	GDP
2002	13957.2
2003	14296.7
2004	14597.1
2005	14917.7
2006	15238.3
2007	15558.9
2008	15889.6
2009	16224.7
2010	16768.0
2011	17100.9
2012	17497.2
2013	17893.4
2014	18289.7
2015	18685.9

The projections in Table A1- 3 assume no drastic changes in the economic structure of the country, and the predominating sectors of agriculture, manufacturing, distribution and producers of government services continue to contribute significantly to the economy. Projections of the poverty headcount based on these projected GDP values are given in Table A1-4.

**Table A1-4:Poverty Headcount**

	GDP	Survey based headcount (65.3% poor)		Poverty headcount with major redistribution		Poverty headcount with <b>moderate</b> redistribution		Poverty headcount with poverty elasticity of -0.82	
		Urban 54.9	Rural 66.5	Urban 54.9	Rural 66.5	Urban 54.9	Rural 66.5	Urban 54.9	Rural 66.5
1999	0.04	53.84	67.16	52.91	64.19	53.51	64.82	53.27	64.53
2000	0.06	53.21	67.54	51.75	62.77	52.69	63.83	52.31	63.37
2001	0.08	52.54	67.96	50.50	61.27	51.82	62.77	51.29	62.13
2002	0.11	51.77	68.43	49.06	59.52	50.81	61.55	50.11	60.70
2003	0.13	51.06	68.87	47.73	57.90	49.88	60.42	49.02	59.38
2004	0.15	50.44	69.26	46.57	56.50	49.07	59.44	48.07	58.23
2005	0.17	49.79	69.65	45.37	55.04	48.23	58.42	47.08	57.03
2006	0.20	49.16	70.04	44.19	53.61	47.40	57.42	46.12	55.86
2007	0.22	48.54	70.43	43.03	52.21	46.59	56.44	45.17	54.71
2008	0.24	47.91	70.81	41.87	50.79	45.78	55.45	44.21	53.56
2009	0.26	47.29	71.20	40.71	49.39	44.97	54.47	43.26	52.41
2010	0.29	46.31	71.81	38.87	47.16	43.68	52.91	41.76	50.58
2011	0.31	45.72	72.17	37.78	45.83	42.92	51.98	40.86	49.50
2012	0.33	45.04	72.59	36.51	44.29	42.03	50.91	39.82	48.23
2013	0.36	44.37	73.00	35.27	42.78	41.16	49.85	38.80	47.00
2014	0.38	43.72	73.40	34.05	41.31	40.31	48.82	37.80	45.79
2015	0.40	43.08	73.79	32.86	39.86	39.47	47.81	36.83	44.61

**Appendix 2: Annualised Cost and Revenue Estimates**  
*Million Malawi Kwacha*

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total
<b>MDG</b>															
Income Poverty	10,854	10,854	10,854	7,232	7,232	7,232	7,232	7,232	7,232	7,232	7,232	7,232	7,232	7,232	112,119
Access to Water	385	385	385	385	385	385	385	385	385	385	385	385	385	385	5,388
Education for All	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	70,000
Under-5 Mortality	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	5,643	79,000
Maternal Mortality	248	248	248	248	248	248	248	248	248	248	248	248	248	248	3,466
HIV/AIDS Incidence	171	171	171	171	171	171	171	171	171	171	171	171	171	171	2,400
<b>TOTAL Cost</b>	<b>22,301</b>	<b>22,301</b>	<b>22,301</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>18,679</b>	<b>272,373</b>
<b>TOTAL Cost (US\$)</b>	<b>328</b>	<b>328</b>	<b>328</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>275</b>	<b>4,005</b>
Domestic Revenue - low	25,857	28,459	31,522	39,658	39,658	39,658	39,658	39,658	39,658	39,658	39,658	39,658	39,658	39,658	522,075
All Resources - low	33,061	34,447	36,589	49,220	49,220	49,220	49,220	49,220	49,220	49,220	49,220	49,220	49,220	49,220	645,514
GDP - low base	135,936	140,047	144,159	148,271	152,382	156,494	160,606	164,717	168,829	172,941	177,052	181,164	185,276	189,387	2,277,261
GDP - high base	133,703	143,491	153,279	163,068	172,856	182,644	192,432	202,220	212,008	220,818	229,627	238,437	247,246	256,055	2,747,884
<b>Ratios (%)</b>															
MDG cost/Revenue	86.2	78.4	70.7	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	47.1	52.2
MDG cost/All Resources	67.5	64.7	61.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	42.2
MDG cost/GDP (low)	16.4	15.9	15.5	12.6	12.3	11.9	11.6	11.3	11.1	10.8	10.6	10.3	10.1	9.9	12.0
Revenue/GDP (low)	19.0	20.3	21.9	26.7	26.0	25.3	24.7	24.1	23.5	22.9	22.4	21.9	21.4	20.9	22.9