

# THE COST OF MEETING THE MDGs IN ZAMBIA

A RESEARCH REPORT COMMISSIONED  
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### Abbreviations/Acronyms

AIDS	Acquired Immune Deficiency Syndrome
APRM	African Peer Review Mechanism
ARV	Anti-Retroviral
BHCP	Basic Health Care Package
CFA	Commission for Africa
CSO	Central Statistical Office
GDP	Gross Domestic Product
GER	Gross Enrolment Rate
GRZ	Government of the Republic of Zambia
HIPC	Highly Indebted Poor Country
HIV	Human Immunodeficiency Virus
IFMIS	Integrated Financial Management Information Systems
ITN	Insecticide Treated Nets
LCMS	Living Conditions Monitoring Survey
MDG	Millennium Development Goals
MFNP	Ministry of Finance and National Development
MOE	Ministry of Education
MTEF	Medium Term Expenditure Framework
NDP	National Development Plan
NEPAD	New Economic Partnership for African Development
NER	Net Enrolment Rate
ODA	Overseas Development Assistance
PRSP	Poverty Reduction Strategy Paper
UNDP	United Nations Development Programme
UPE	Universal Primary Education
VCT	Voluntary Counselling and Testing
WHIP	Wider Harmonisation In Practice
ZCCM	Zambia Consolidated Copper Mines
ZDHS	Zambia Demographic and Health Survey

## Executive Summary

### Introduction

Five years ago, the international community agreed and signed up to the United Nations' Millennium Declaration. The promise made then and reaffirmed on successive occasions was that no country would go without the additional resources to achieve the Millennium Development Goals or MDGs. This paper is offered in support of that pledge. We have produced an assessment of the costs of achieving the MDGs in Zambia based on the best available data. We have produced a figure for the level of additional finance that is required from financial sources both in Zambia and from the wider aid community. Where data has not been available we have come up with indicative assessments that err on the side of conservative forecasts. Where there has been an absence of hard reliable data, we have made estimates that should be regarded as indicative rather than definitive.

We have constructed Zambia's MDG financing gap – the level of additional funding required – and some MDG policy actions and now look to the Government of the Republic of Zambia (GRZ) and official donor community to come up with the necessary finance and policy responses to achieve the MDGs. In particular, we look to the official donor community to fulfil their pledge made at the Monterrey Financing for Development Conference and in the G8 Africa Action Plan that no "country genuinely committed to good governance and economic reform should miss out on achieving the MDGs through lack of finance". It is up to all parties now to fulfil their side of this important international development compact.

Our study finds that Zambia will need to increase public investment in social services, basic infrastructure and environmental management. The findings in this paper give provisional estimates of the costs. The estimates suggest that to reach the MDGs, government as well as cooperating partners must double their financing to this area between 2006 and 2015. We also recommend that a much more comprehensive costing exercise should be undertaken with full participation of key stakeholders, especially policy makers and implementers. However, the findings in this study give a good estimate of what resources would be required in order for Zambia to reach the Goals and these results should be acted on with the urgency that our joint poverty reduction efforts require.

The MDGs confer clear sets of obligations on the Zambian government and donor community to address and eventually overcome her development challenges. Classified as one of the Highly Indebted Poor Countries (HIPC) and ranked 164 out of 177 countries on the UN's Human Development Index<sup>1</sup>, the country faces major challenges to overcome poverty and meet the human development targets set out in the Millennium Development Goals.

While the MDGs represent an ambitious set of targets, this paper argues that with renewed commitment, it is possible for the country to overcome the challenges and meet the MDGs. Currently, the government is in the process of formulating a National Development Plan (NDP). The NDP should spell out the objectives and strategies of achieving that vision in the next five years. Another important process taking place is formulation of a Joint Assistance Strategy (JAS) by cooperating partners and government. This paper is intended to guide cooperating partners to harmonise their assistance to Zambia. Without aligning these two processes behind the achievement of the MDGs, there is little hope that these Goals will be met. We believe that the priorities in both the NDP and the JAS must be tailored to meeting the MDGs.

It is our hope that this paper will help in setting the right priorities and funding levels, in the NDP and JAS, to meet the Goals. The key purpose of our paper is to deduce the total investment required in order for Zambia to reach its MDGs and also come up with the additional financing requirements for

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<sup>1</sup> This is a ranking according to the latest Human Development Index for 2004 published by the UNDP.

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reaching the MDGs. Government, and cooperating partners (and in one projected scenario private households) are assumed to contribute to this effort.

### Methodology

We acknowledge that there are differences of approach in costing the MDGs. For instance, the earlier UN studies relied on per unit costing and coverage data for population while the World Bank's studies use more rigorous methods. As a result, different costing studies have come up with varying results. It is evident that existing methodologies for costing the MDGs have weaknesses and there is no consensus on which method to use. Aware of these short-comings, we use the UNDP Millennium Project method and, where data is inadequate, we rely on the per-unit cost approach used in earlier UNDP costing studies. Despite the weaknesses of these methods we still have confidence that the cost estimates we produce here are based on the best given data and models. As a result, the costings presented here should be taken as indicative rather than definitive.

### Findings

The main findings of the study are as follows:

- Zambia will need to invest on average US\$110 per capita per year in capital and operating expenditures towards meeting the MDGs. Since investments can be scaled up only gradually, development financing needs to rise from US \$ 87.8 per capita in 2005 to US \$ 129.5 per capita by 2015. These costs do not include technical cooperation for capacity building and other purposes, emergency assistance or other ODA that does not directly finance the capital or operating costs of MDG interventions.
- In line with the UN's "Monterrey consensus", Zambia will need to expand its domestic resource mobilisation to finance MDG-based poverty reduction strategies. A rising share of these costs will be financed from domestic resources but still there is a financing gap<sup>2</sup> of up to US \$56.7 per capita per year and the amount increases to US\$60.4 per capita in 2015.
- We present two scenarios for identifying Zambia's "MDG financing gap<sup>3</sup>":
  - In the "**lower case scenario**" we assume households contribute to service charges in addition to tax rises from US\$559.1 million in 2005 to US\$901.6 million in 2015, with an annual average of US\$803 million. In per capita terms, the financing gap rises from US\$48.9 per capita in 2005 to US\$60.4 per capita in 2015, with an average annual per capita of US\$56.7.
  - However we also produce a "**higher case scenario**". We propose this scenario in the belief that in a country with high levels of endemic poverty, it is not feasible to propose further costs on households that, for the most part, are struggling to meet existing financial commitments. In this preferred scenario we assume, along with their international undertakings that official donors will, where recipient governments genuinely share the MDG vision, to meet outstanding financing gaps. In this scenario, where there are no private household contributions, the MDG financing gap increases slightly.

In sum, we outline lower and upper case scenarios of future donor financing depending on assumptions of the political and economic feasibility of additional household contributions to the MDGs in a country where the majority live in absolute poverty.

- **In the "lower case scenario" (where there are extra household contributions) we find that for the MDGs to be met, the additional donor contributions in 2005 should amount to US\$559.1 million rising to US\$901.6 in 2015.**

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<sup>2</sup> This is the gap when we assume that households make contributions through service charges.

<sup>3</sup> The "MDG financing gap" is the proportion of a country's MDG investment needs that cannot be financed through existing levels of donor aid, domestic resource mobilisation by government and by households.

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- In the “higher case scenario” (where we exclude household contributions) we find that the additional donor contributions required in 2005 is US\$ 622.9 million rising to US\$1.04 billion in 2015.

### Recommendations\*

#### *Focusing on MDGs Interventions*

The achievement of the MDGs in Zambia represents a considerable challenge for all agents of the nation’s development. As well as scaling up MDG expenditures, there are changes needed in policy interventions and institutions. The following outlines some required changes by donors and the GRZ:

- If the GRZ is to be able to implement its plan with a genuine commitment to achieving the MDGs, the unacceptable volatility and unpredictability of donor flows must end. Donor pledges must be based on MDG financing requirements, with sets of conditions jointly negotiated with the GRZ and domestic stakeholders in the development process. Those conditions should be aligned with country-owned development priorities. And donor pledges should be met with timely and full disbursements.
- Government must re-align Zambia’s national policies to be consistent with MDG-related interventions. This should entail shifting resources and commitments from low to high priority areas in line with the MDGs.
- To ensure that the National Development Plan is fully consistent with the MDGs, the government must conduct a comprehensive and detailed MDG-costing exercise in all relevant sectors and that this will become the basis for the MTEF and NDP.
- In line with their international undertakings, Zambia’s cooperating partners should set their ODA contributions to fill the MDG financing gaps. This will require a shift in the determination and setting of donor financing for low-income countries. Currently the donor approach does not base pledges of financial support on the basis of a needs-based assessment to achieve the MDGs. Donors need to shift away from the current approach where their aid contributions are based on the level of finance they are willing to afford and towards the position where long term aid financing is determined by the imperative of achieving the MDGs. Such a change will substantially improve the predictability of aid and therefore, potentially, enhance its effectiveness.
- In support of the MDGs, much of the donor financing should increasingly come in form of budget support. With improved budget performance in terms of transparency, participation and accountability, more cooperating partners should align their development assistance around a country-owned plan. This should happen through mobilising their support behind MDG financed budgets that are transparent, accountable and have been designed by a wide group of stakeholders. Such a shift will require changes in donor policies including a change in aid financing rules, government improving the GRZ’s financial and budgetary management to ensure the reliability and accountability of financial management. A first step towards this will require implementing the Integrated Financial Management Information Systems (IFMIS) reforms.
- Savings from debt cancellation must be spent on programmes and sectors consistent with achieving the MDGs.
- To share a common development vision between Zambian stakeholders, the Zambian government and donors, there is a need to strengthen harmonisation among cooperating partners. This process should be an agenda driven by government.

#### *The need for extra financing*

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\* In some years the disbursement of donor aid has amounted to less than 50 percent of pledges. In a country heavily dependent on donor financing, medium term expenditure planning and policy-making is difficult if not pointless when donor financing is so adrift of “indicative assessments”.

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As set out above, our estimated costings of the MDGs show the need for considerable up scaling of external assistance. Our experience of debt relief to date suggests that the additional development finance should be provided, as much as is possible, in the form of debt relief. The small amounts of debt relief received so far have been delivered in a manner that has helped build country ownership of the management of the freed up resources. However, we argue that the economic policy conditions associated with debt relief and with aid have a poor record of success in Zambia. Indeed, we are able to point to key areas where economic policy conditions have been particularly harmful to impoverished people. We therefore urge the total cancellation of Zambia's outstanding external debts without economic policy conditions. We do however believe that there has to be public accounting for how the proceeds are used. We therefore urge conditions for debt relief that are set with the broadest group of Zambian stakeholders that can monitor and account for how the proceeds are used.

In addition, the vulnerability of the Zambian economy to adverse economic shocks also warrants changes to donor contingent financing facilities. Shocks such as oil prices and drought if drastic can spell a huge blow to the ability of the country to reach the intended Goals despite adequate financing. There is therefore need for flexible emergency support in the form of grant aid in times of shocks. Government as well as donors must put aside additional emergency funds that would be used in times of natural calamities and adverse shocks.

The Commission for Africa and indeed the Millennium Project both underscore the need for increased investments in infrastructure to enhance regional economic development. It is therefore recommended that government engages fully and proactively in the NEPAD and the African Peer Review Mechanism (APRM) so as to harness any regional investment opportunities that lead to increased investment in infrastructure and consequently competitiveness.

### *Accountability Issues*

In certain instances, increased dependence on external financing entails government becoming more accountable and transparent to cooperating partners and less to its citizenry. We accept the development consensus that pro-poor policy works best where there is "country ownership" of that policy. It is therefore important for donors to make civil society participation in national developmental programmes an important part of their dialogue with the GRZ. To assist in this, government must pass the Information Bill so that the public can have easy access to relevant data and information.

### *Immediate Areas of Focus*

In a country faced by such widespread and diverse developmental challenges, there is obviously a need for far-reaching policy reforms and investments. As well as including a wider group of domestic stakeholders in designing and sharing a national development vision, we believe that the prospects of achieving the MDGs are enhanced if all relevant groups are included in determining how increased resources are going to be used. While aid is best utilised where capacity for managing it has already been developed, we believe there are a series of first-step interventions that government can start on or enhance immediately. These are based on the Millennium Project recommendation.

- Dropping user fees in essential health care, hiring all unemployed teachers and medical staff, raising public sector salaries to enhance capacity so as to attract well-trained experts in the public service.
- Large scale training, particularly for community health workers, agriculture extension workers and community based experts in infrastructure.
- Financing for HIV/AIDS, bed-nets for Malaria and TB control.

### 1 Introduction

In September 2000, Zambia together with 190 other countries signed the Millennium Declaration at the United Nations Millennium Summit. This event confers clear obligations on the Zambian government to address and eventually overcome her development challenges. Classified as one of the Highly Indebted Poor Countries (HIPC) and ranked 164 out of 177 countries on the UN's Human Development Index<sup>4</sup>, the country faces major challenges to overcome poverty and meet the human development targets set out in the Millennium Development Goals.

Costing of the Millennium Development Goals (MDGs) is a key step in helping the country deduce the financial demands for reaching the MDGs and reduce poverty in the coming decade – a chance the country cannot afford to miss. The UN's Millennium Project has just released its report on costing the global need for meeting the MDGs and estimates that a typical low income country in 2006 will need to invest around US\$70 – US\$80 per capita in capital and operating expenditures toward meeting the goals. Since investments can be scaled up only gradually, the financing will be lower at the beginning of the period and rise to between US\$120 – US\$160 per capita towards the end of the period (UN Millennium Project, 2005).

Although these estimates give a rough idea on how much a low income country will require in meeting its MDGs, there is need to get country-specific estimates that will help in implementing MDG-consistent policies. This paper is therefore a contribution in coming up with the investment requirements for Zambia to reach the MDGs. Although imprecise due to lack of adequate data, the estimates must be taken as necessary first estimates. The paper identifies the financing gaps in achieving the MDGs in Zambia by 2015 and also highlights the role of official donors in filling that gap.

The methodology used in collecting and analysing data for this report involved a review of literature and also discussions with key stakeholders. It is important to mention that due to data inadequacies, the estimates must be taken as indicative rather than definitive estimates.

The paper is organized as follows: Section 2 gives the economic and social context; Section 3 gives trends in government financing of poverty and aid flows; Section 4 gives a review of progress towards the MDGs; Section 5 gives the methodology; Section 6 presents the findings on the cost and financing gap; and Section 7 gives the conclusion and recommendations.

### 2 Economic and Social Context

#### 2.1 The Economy

Since independence, Zambia's economic mainstay has been copper. Copper has on average accounted for more than 70 percent of export earnings each year. However, the lack of investments and volatile copper prices on the international market have largely accounted for the gradual decline in the production of copper for over four decades in Zambia. As a result of the poor performance of the copper and metals sector, Zambia's economic performance has been unsatisfactory.

The table below shows that, on average, national output growth was less than 2 percent in the 1970s, 1980s and 1990s. Moreover, during the 1990s, at the time of liberalisation, the economy recorded the lowest ever average growth of GDP of 0.3 percent per year. During the same time because of price decontrols and a floating foreign exchange policy, inflation averaged 70.9 percent. On the overall, the

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main cause for Zambia's poor economic performance is attributed to lack of diversification away from the copper industry to other sectors such as agriculture and tourism.

**Table 1: Average Macroeconomic Indicators**

	1970s	1980s	1990s	2000s
GDP Growth Rate	1.5	1.4	0.3	4.2
CPI Inflation Rate	10.2	36.1	70.9	22.0
Domestic Savings/GDP (%)	33.2	14	7.1	
Investment/GDP (%)	30.2	16.2	14.1	
Interest Rate (lending rate %)	7.8	16	54.7	40.4
Current Account Deficit/GDP (%) (Including Grants, %)	-6.6	-10.8	-4.7	-19.0
Exchange Rate (Kwacha)	0.7	4.8	903.1	4219.8
External Debt/GDP %	64.5	171.9	204.1	193.3

*Source: World Bank, 2003 and author's own calculations.*

Further reasons for Zambia's poor economic performance include:

- The lack of timely structural reforms aimed at reducing the cost of inefficient public enterprise.
- Macroeconomic instability in particular high inflation and high interest rates which deter private sector investments.
- Adverse terms of trade shocks.
- Rapidly declining public and private investments.
- A huge and unsustainable external debt that has especially in the 1990, tied large parts of the country's domestic budget to external debt servicing while key sectors such as health and education remained under-funded.

Economic policy, from independence until 1990, was characterised by the pursuit of a command-type of economy where the government owned the majority of enterprises. In addition, most of these were set up as import substitution industries. This led to inefficiencies in production and lack of re-capitalisation, especially after copper prices started falling in the early 1970s. By the 1980s, restructuring of the economy became inevitable. However, a real commitment to restructuring the economy only emerged with the ushering in of a new government in 1991.

Economic reform during the 1990s included:

- Exchange rate liberalisation.
- Trade reforms aimed at simplifying the tariff structure, removal of quantitative restrictions and transformation of the trade regime into one of the most open economies in the Southern African region.
- Privatisation of state-owned companies including the copper mining conglomerate ZCCM.
- Successive currency devaluations.
- Agricultural liberalisation.
- Price de-controls
- Downsizing the public sector through retrenchments.

All these measures have not yet yielded a satisfactory path of economic growth nor improved social conditions. On average, the Zambian economy recorded only 0.3 percent growth in the 1990s. Yet, from 2000 to 2004, the economy has shown signs of recovery with growth recorded above the growth of the population. The table below shows that the minimum growth in the 2000s has been 3 percent, with an average of 4.2 percent. Inflation has remained relatively high making the goal of macroeconomic stability elusive. Moreover, the exchange rate between the Kwacha and the United States Dollar has been stable despite being so at deeply depreciated prices.

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**Table 2: Zambia: External Debt Service after Debt Relief Mechanisms 2004-2023 (US\$'Millions)**

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Debt Services (Incl. new debt)	448.6	447	213.3	244.3	264.5	268	318.1	326.1	314.1	391.3
After Traditional Relief	429.9	118.6	86.3	116.7	147.7	129.5	166.2	167.9	149.4	117.7
After Enhanced HIPC	405.3	107.4	84.1	114.5	145.5	127.2	164	165.6	147.1	115.5
<b>After Bilateral Beyond HIPC</b>	<b>403.1</b>	<b>104</b>	<b>79.6</b>	<b>108.9</b>	<b>139</b>	<b>119.9</b>	<b>106.5</b>	<b>100.6</b>	<b>75.2</b>	<b>39.8</b>
Total Reduction in Debt Servicing	45.5	343	133.7	135.4	125.5	148.1	211.6	225.5	238.9	351.5

**Continuation**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total Debt Services (Incl. new debt)	295.3	257	268.4	275.2	285.7	301.2	303.6	305.7	314.5	227.9
After Traditional Relief	120.5	79	76.5	75	77.6	83.2	88.8	156.6	160.9	163.7
After Enhanced HIPC Assistance	118.2	76.7	74.2	72.8	75.3	80.9	86.5	153.9	157.6	160.2
<b>After Bilateral Beyond HIPC</b>	<b>41.9</b>	<b>46.5</b>	<b>47.3</b>	<b>47.8</b>	<b>50.8</b>	<b>52.8</b>	<b>55.4</b>	<b>119.6</b>	<b>119.9</b>	<b>119.1</b>
Total Reduction in Debt Servicing	253.4	210.5	221.1	227.4	234.9	248.4	248.2	186.1	194.6	108.8

Source: IMF, 2005.

Zambia is classified as a Highly Indebted Poor Country (HIPC). Both Zambia's external and internal debts are high, but it is the huge external debt and the country's poor export performance qualified the country for HIPC treatment. Before qualification to the Decision Point of the enhanced HIPC in 2000, Zambia's external debt stood at US\$ 6.5 billion, more than twice the GDP. In 2004, Zambia's debt stock stood at US\$ 7.1 billion. With Decision Point qualification, debt servicing started reducing but marginally. Now, with the qualification of Zambia to the Completion Point early this year, it is expected that Zambia's debt stock will reduce by halve over a period of not less than 20 years. Further debt reduction will emerge following on the resolutions of the 2005 G7 Summit. The relief will release additional resources but certainly not enough to resolve Zambia's vulnerability to falling again into unsustainable debt positions or sufficient to meet the additional financing requirement to achieve the MDGs.

**Table 3: Macroeconomic Performance 1998-2004**

	1998	1999	2000	2001	2002	2003	2004
Real GDP Growth (%) at 1994 Prices	-1.9	2.2	3.6	4.9	3	5.1	5.0
Nominal GDP US\$' Billions	3.15		3.24	3.64	3.78	4.32	4.41
Exchange Rates (K/US\$)	1862.2	2385.8	4108.8	3607.3	3930.7	4661.6	4790.5
Inflation rates %	30.6	20.6	30.1	18.7	26.7	17.2	17.5
Interest Rates (Lending rate %)		40.3	39.1	45.8	45.4	40.5	31.0
External Debt/GDP %	208.2	207.7	255.0	199.7	172.6	146.0	160.0
Investment/GDP %			17.4	19.0	22.0	25.6	24.3
Current Account Deficit/GDP %	-8.5	-15.4	-25.4	-20.8	-15.8	-14.1	-11.9
Foreign Debt Service/GDP %	4.4	4.1	4.2	5.4	6.7	8.3	
Foreign Debt Service/Exports %	16.7	17.2	12.8	22.6	30.0	31.9	20.0
Government Revenue/GDP %		17.7	19.4	19.2	17.9	17.9	18.4
Domestic Debt/GDP %							

Source: Ministry of Finance and National Planning, Macroeconomic indicators, November 2004.

### Poverty Situation and the MDGs

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Income poverty is one of the key challenges that Zambia is facing especially during the last two decades. Table 4 below shows the trends in income poverty using the national CSO national datum line which is far below the international datum line of less than a dollar a day.

**Table 4: Trends in Income Poverty (percentages) 1991-2003**

Year	Zambia		Rural		Urban	
	Overall Poverty	Extreme Poverty	Overall Poverty	Extreme Poverty	Overall Poverty	Extreme Poverty
1991	69.7	58.2	88.0	80.6	48.6	32.3
1993	73.8	60.6	92.2	83.5	44.9	24.4
1996	69.2	53.2	82.8	68.4	46.0	27.3
1998	72.9	57.9	83.1	70.9	56.0	36.2
2003	67.0	46.0	74.0	52.0	52.0	32.0

**Sources:** LCMS 1998; LCMS 2002/2003; *The Evolution of Poverty in Zambia 1990-1996*; 2000 Census of Population and Housing Analytical Report.

The following observations can be deduced from the table above:

- Between 1991 and 2003, there has been a marginal decline in the proportion of people living in poverty from 69.7 percent in 1991 to 67 percent in 2003. However, some years in between experienced even higher poverty incidences with the highest being recorded in 1993 (73.8 percent).
- Compared to overall poverty, extreme poverty has decreased substantially between 1991 (58.2 percent) and 2003 (46 Percent).
- The majority of the rural people live in poverty. Yet there has been a notable decline in rural poverty from 88 percent in 1991 to 74 percent in 2003. In addition, the levels of extreme poverty in rural areas have also declined substantially from 80.6 percent during 1991 to 52.0 percent in 2003.
- Compared to rural poverty, urban poverty has been lower. Between 1991 and 2003, there was an increase in urban poverty from 48.6 percent (1991) to 52.0 percent (2003). Urban extreme poverty has remained around 32 percent although there have been fluctuations in the years in between 1991 and 2003. For example in 1993, extreme urban poverty was 24.4 percent and increased to as high as 36.2 percent in 1998.

Looking at income poverty from a gender point of view reveals that the proportion of female-headed households that face extreme poverty is higher than that of male-headed ones. The table below shows that more than half of the female-headed households were facing extreme poverty.

**Table 5: Poverty Incidence by Gender of Household Head**

Type of Households	Incidence of Poverty (%)			Total	Total Number of Households
	Very Poor	Moderately Poor	Not poor		
Male Headed	43	51	6	100	1,541,437
Female Headed	58	39	3	100	464,240
All Zambia	47	48	5	100	2,005,677

Source: LCMS, 2002-2003.

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Women are over-represented in quantitative poverty data. But also women living in poverty face a high degree of vulnerability and systematic adverse discrimination across all areas. Some of the reasons for this include<sup>5</sup>:

- Women have lower levels of formal education than men. With the invidious choices faced by poorer households, girl children face earlier exclusion from school than boys. As a result, 29 percent of women had no education but only 24 percent of the men had no education in 1998. During the same year, 15.6 percent of the male population had completed grade 10 or higher but the corresponding percentage for females was only 8.5 percent.
- Women have a very small share in formal employment. Only 12 percent of the formal employment in 1996 accrued to females while the remaining 88 percent accrued to males.
- Women are at a much higher risk of contracting HIV/AIDS.
- There is an overrepresentation of women in single-headed households.

### 3 Trends in Government Financing of Poverty and Aid Flows

In 2005, Zambia's national budget is projected to be about US\$ 2.1 billion (K 9.78 trillion). Of this amount, 64 percent is domestically financed and the remainder is financed externally as project (29 percent) and programmes (7 percent) support. From past experience, it is possible to conclude that not all the donor support may be received (MFNP, 2005).

For instance in 2004, a total of US\$789.1 million was pledged as external aid out of which US\$475.6 million was to be in form of project support and US\$313.5 million as programme support. Yet, according to the government *Economic Report* (2004), only US\$297.9 million accounting for 38 percent of the total funds was actually received. Out of the estimated US\$298.0 million that was received, US\$233.3 million or 78.2 percent was for project support and the remainder of US\$64.8 million was programme support.

We believe that it is unacceptable for donors to expect the GRZ to engage in medium term financial planning with any real seriousness while the volatility and unpredictability of donor support persists.

Between 2000 and 2002, Zambia received an annual average of \$595million in net Official Development Assistance (ODA); in 2002 ODA represented 18% of national income, and over 40% of total public expenditure. For instance, 43% of the education budget is externally funded and more than 60% of the budget for basic education. In recent years, the top five donors in volume terms have been the World Bank, International Monetary Fund (IMF), European Community, Japan and UK (Action Aid UK, 2004).

The official aid (that falls within the MDG category) by sector and donor country in 2004 is given in the table below:

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<sup>5</sup> Obtained from Zambia's PRSP, 2002-2004.

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Table 6: AID Disbursements for 2004 (in million US\$)

	Agriculture	Energy	Infrastructure	Health	Education	Water and Sanitation	Gender and HIV/AIDS	Total	As % of Grand Total
<b>Canada</b>				3.86	1.62			5.48	1%
<b>DCI</b>				5.4	7.67	3.64	3.64	20.35	5%
<b>Denmark</b>	0.25		10.54	6.46	11.9	2.21	1.7	33.06	7%
<b>Finland</b>	0.4				3.3			3.7	1%
<b>Germany</b>			5		0.36	18.6	0.8	24.76	6%
<b>Japan</b>	4.27		0.96	4.94	8.31	7.1	4.94	30.52	7%
<b>Netherlands</b>	3.12			17.6	22.62		1.97	45.31	10%
<b>Norway</b>	4.63		3.82		14.32		4.63	27.4	6%
<b>Sweden</b>	6	0.65		13.2				19.85	4%
<b>UK</b>	1.3			3.2	17.5	1.3	2.7	26	6%
<b>USAID</b>	3.72			11.7	5.89		47.73	69.04	15%
<b>EC</b>	1.26		10.71	0.5	4.28			16.75	4%
<b>IMF</b>									0%
<b>World Bank</b>	21.15	18.22	27.05	9.33	22.25	1.47	7.3	106.8	24%
<b>FAO</b>	1.3						0.2	1.5	0%
<b>ILO</b>									0%
<b>UNDP</b>							0.76	0.76	0%
<b>UNFPA</b>				1			0.3	1.3	0%
<b>UNHCR</b>	0.76		1.17	1.17	0.77	0.32	0.15	4.34	1%
<b>UNICEF</b>				3.24	1.75	1.61	0.43	7.03	2%
<b>WHO</b>				4.05			0.96	5.01	1%
<b>TOTAL</b>	48.16	18.87	59.25	85.65	122.5	36.25	78.21	448.9	100%
<b>As % of Total</b>	11%	4%	13%	19%	27%	8%	17%	100%	

Source: Joint Assistance Strategy (JASZ) Summary Report, 2005. P. 12.

The table reveals that total aid closely linked to attaining MDGs in Zambia totalled US \$448.9 million, with the World Bank accounting for 24 percent followed by USAID at 15 percent. However, USAID's funding is mostly tied in projects and not budget support. This makes it difficult to align with government priorities because in certain instances parallel structures are formed that weakens the performance of government institutions. Regarding sectors, Education accounted for the highest aid (27 percent) followed by health at 19 percent and Gender and HIV/AIDS at 17 percent.

It is however worth noting that the total aid to Zambia including sectors not directly related to MDGs stood at US\$885.75 million. The difference mainly went for macroeconomic purposes such as Balance of Payment (BOP) support.

The above aid figures are indeed above the projections in the Medium Term Expenditure Framework (MTEF) for 2004 to 2007. This perhaps shows how unreliable aid projections can be because of the huge difference between projections and actual disbursements and poses a serious question on the

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reliability of medium to long term aid pledges, especially when aid is always conditioned on very stringent measures that often reflect donor-driven, as opposed to country-driven, priorities.

**Table 7: Donor Grant Inflow Projections 2004-2007**

	2004		2005		2006		2007	
	US\$' M	% of Total	US\$' M	% of Total	US\$' M	% of Total	US\$' M	% of Total
Project Grants	221.25	86%	310.65	76%	416.40	77%	478.40	80%
Programme Grants	37.1	14%	96.2	24%	123.1	23%	122.7	20%
<b>Total</b>	<b>258.3</b>	<b>100%</b>	<b>406.9</b>	<b>100%</b>	<b>539.5</b>	<b>100%</b>	<b>601.1</b>	<b>100%</b>
Exchange Rate	4800		5000		5000		5000	5000

Source: 2005-2007 Medium-Term Expenditure Framework and the 2005 Budget by the Ministry of Finance and National Planning, Lusaka, Zambia.

To a large extent, the level of resources available for public expenditure over the next three years will be determined by the level of donor assistance in form of grants identified as programme and project grants. In the 2005-2007 period, government anticipates enhanced programme grant assistance, which will be sourced from the bilateral cooperating partners, and directed to general expenditures. The new source of programme grants is being referred to as Wider Harmonisation in Practice (WHIP) general budget support. Until recently, the main avenues for donor inflows have been through project and programme assistance. However, from 2005 donor inflows are in line to steadily shift towards the general budget support (given as grants), which has been termed WHIP general budget support (see MTEF 2005-2007).

**Table 8: Programme Support: 2000-2004 (in US\$'Millions)**

	2000	2001	2002	2003	2004
United Kingdom	21.7	0	0	0	0
USAID	1.5	0	0	0	0
Netherlands	8.4	20.6	0	0	0
France	0	0	0	0	0
China	0	0	0	2	0
Germany	0	0	0	0	0
Others	0	0	0	0	0
Total Bilateral Financing	31.6	20.6	0	2	0
World Bank	140	43.9	56.3	19.9	20.7
IMF	26.5	95.3	173	0	0
EU	0	10.5	68.7	34.9	44.1
ADB	13.3	0	13.2	0	0
Total Multilateral	180	150	311	54.8	64.8
Total Programme Support	212	170	311	56.8	64.8

Source: Ministry of Finance and National Planning.

According to a senior government official at the MFNP, government prefers direct budget support as opposed to project aid. This is so because of the transaction costs that tend to come with project aid in the form of endless rounds of visiting mission teams, with meetings and separate reports that have to

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be prepared for differing donor specifications<sup>2</sup>. For instance, in 2003, 120 donor missions took place in Zambia across all sectors, excluding the World Bank and IMF (*see* Action Aid UK, 2004).

The ministry official further cited the length and frequency of meetings as a problem, since they occupy the time of civil servants for several days and hence diverting energy from effective management of other official duties. The government official also expressed concern at the unpredictability and unreliability of donor inflows given the bureaucratic ‘roadblocks’ in some of the donor capitals before money can be released.

However, it is worth noting that with Zambia having attained the HIPC Completion Point in April 2005, government anticipates an improvement in both the quantities and qualities of aid. For instance, government has just announced that all Paris Club creditor nations except one have decided to write-off 100 percent of Zambia’s debt. In the interests of building donor confidence amongst Zambia’s cooperating partners that development resources are well spent and achieving the desired poverty reduction goals, there is need for government to build institutional capacities to manage these anticipated increases in aid inflows. This, in turn should be anchored on transparent budgeting processes. A government’s capacity to make good use of development assistance is greatly influenced by the level of transparency and efficiency of budget systems, by the degree of decentralisation of resources and responsibilities, and by the quality of existing accountability mechanisms<sup>4</sup>.

Many donors are now streamlining policy conditionalities and aligning their support to home-grown development plans. In the Zambian context donors are expected to align their support to the National Development Programme (NDP), which is currently under design. Several donors have justified the issue of conditionalities tied to their support on account of the fiduciary responsibility to ensure that money goes to intended beneficiaries. This is a legitimate concern for donors that have to account for the proceeds of public resources to their domestic constituents and taxpayers. But there is a trade off. Donor insistence on exacting conditionalities on aid results in the recipient GRZ having less time and policy latitude to devise priorities that respond to the priorities identified by domestic stakeholders. While donors take on risks in any move to budget support aid modalities, we believe that these should be acceptable where the GRZ moves towards more transparent and accountable budgeting processes.

**Table 9: Domestic Revenues 2005-2007**

	2005 Projection		2006 Projection		2007 Projection	
	K'Billio ns	% of GDP	K'Billio ns	% of GDP	K'Billio ns	% of GDP
<i>Domestic Revenue</i>	1.19	18.3%	1.34	18.3%	1.51	18.3%
<i>Nominal GDP</i>	6.49	100.0%	7.33	100.0%	8.24	100.0%
Taxes	1.12	17.3%	1.26	17.3%	1.42	17.3%
Earmarked	0.02	0.3%	0.03	0.4%	0.03	0.3%
Non-Taxes	0.03	0.4%	0.03	0.5%	0.04	0.5%
Exceptional Revenue	0.02	0.2%	0.02	0.2%	0.02	0.2%

*Source:* Dollar Estimates Calculated from MoFNP MTEF, 2002-2007 using K4800/US\$.

The table above shows that domestic revenue as a percentage of GDP will be 18.3 percent. The bulk of this is expected to come from indirect and direct taxes. In value terms, domestic revenue for government is expected to be in excess of US\$1 billion starting in 2005. Government domestic

<sup>2</sup> Based on the interview the researcher had with a Chief Economist in the Department of Economic and Technical Cooperation (ETC) at the Ministry of Finance and National Planning on 10<sup>th</sup> May, 2005.

<sup>4</sup> “Can more aid be spent in Africa?” by Paolo de Renzio *see* [http://www.odi.org.uk/publications/opinions/30\\_aid\\_africa\\_jan05.html](http://www.odi.org.uk/publications/opinions/30_aid_africa_jan05.html).

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financing of the national budget has revolved around 17-18 percent of GDP since 1998. However from our calculations, only about 40 percent of the domestic revenue is actually spent on MDG-related interventions.

On a sector level, only the health and education sectors experience better donor coordination on sector programmes. For this reason, the paper looks at the financial performance in the two sectors.

### Health

Total health expenditure increased more than five-fold from K172 billion in 1995 to K917 billion in 2002. The increase was more remarkable for the period 2000 to 2002. However, in real terms total health expenditure remained stagnant implying that the sharp increases recorded were largely compensating for increases in prices and did not translate in increased delivery of health service outcomes.

As a percentage of GDP, total health expenditure between 1995 and 1998 grew from 5.7 percent to 6.9 percent but declined to 5.7 percent in 1999 and remained around 5.6 percent during the rest of the period. Government health expenditure as a percentage of GDP averaged around 2 percent. As a percentage of total government expenditure, government health expenditure averaged around 6.6 percent falling far below the 15 percent commitment of the Abuja and Maputo Declarations by African Heads of States of which Zambia is a signatory.

**Table 10: Key Health Finance Indicators 1999-2002]**

YEAR	THE AS % OF GDP	GHE AS % OF GDP	GHE AS % TGE*	PER CAPITA THE** US\$	PER CAPITA GHE*** US\$
1995	5.7	2.1	6.5	21.9	8.1
1996	6.2	2.0	7.2	21.3	6.8
1997	6.4	2.0	7.7	25.5	8.0
1998	6.9	2.0	6.5	22.0	6.4
1999	5.7	2.0	6.7	17.4	6.0
2000	5.6	1.5	4.9	17.6	4.8
2001	5.5	2.2	7.0	19.0	7.7
2002	5.6	2.1	6.7	19.7	7.5
2003	4.8			16.7	

Notes: \* *TGE stands for total government expenditure*

\* *THE stands for total health expenditures including expenditures by government, donors and households*

\* *GHE stands for total government expenditures on health care.*

Source: National Health Accounts, 2004 (draft report).

Per capita health expenditure ranged between US \$20 and US\$ 25 between 1995 and 1998. This was around the minimum amount required to finance the Basic Health Care Package estimated at US \$22.7<sup>6</sup> (Costing the Basic Health Care Package in Zambia, 2004) but significantly below the at US \$34 set by the WHO Commission for Macroeconomics and Health. But the years between 1999 and 2002 showed an unacceptable per capita decline in health spending ranging US \$17 – US \$19.

<sup>6</sup> Estimate does not include HIV/AIDS treatment.

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**Table 11: Health Expenditure by Source**

	1999		2000		2001		2002	
	Amount K Million	%	Amount K Million	%	Amount K Million	%	Amount K Million	%
MOFNP	146,037	34.4	153,437	27.3	293,770	40.6	348,284	38.0
Employers	50,256	11.8	59,156	10.5	54,739	7.6	62,506	6.8
Households	178,401	42.0	223,777	39.8	248,153	34.3	305,021	33.2
Donors	38,905	9.2	101,091	18.0	104,257	14.4	176,811	19.3
Other Sources	11,147	2.6	25,380	4.5	22,202	3.1	24,835	2.7
<b>Total</b>	<b>424,745</b>	<b>100</b>	<b>562,841</b>	<b>100</b>	<b>723,121</b>	<b>100</b>	<b>917,457</b>	<b>100</b>

### Trends of Funding to the Education Sector

Since the early 1980s, the education sector has suffered from insufficient and declining levels in public funding (MOE, 1996). Massive reductions occurred in the real public expenditure for education between 1982 and 1991. Between 1989 and 1996, annual real spending on the sector has been in the range of US\$ 70 – US\$ 75 million per year for a sector that has more than 1.5 million students in primary schools, 200,000 in secondary schools and 12,000 in third-level institutions. (MOE, *Ibid*).

In a country that in its post-Independence period had Africa's best record of spending on education now finds the Budget allocation on education to be the lowest in the Southern African Region. About 20 percent of total domestic budget was allocated to education in 2001 compared to 25–30 percent in other countries in the region (MOE, 2003a). During the past five years, the education budget has remained at about 2 percent of GDP compared to 5-6 percent in neighbouring countries. The table below shows the allocation to education as a percentage of GDP over the period 1998-2004.

**Table 12: Trends in Education Expenditure**

	Education as a Percentage of GDP		
	Education Expenditure including Aid	Domestic Expenditure on Education	External Expenditure on Education
1998	2.3	2.3	0.0
1999	2.7	2.1	0.6
2000	2.8	2.0	0.8
2001	3.7	2.6	1.1
2002	4.1	2.9	1.2
2003			
2004			

Source: Ministry of Education (2003a).

Total expenditure on education in 2004 was K756.62 billion (US\$ 157.94 million) of which 69 percent was spent on personal emoluments, 56 percent on basic education and 11 percent on secondary education (MOE, 2004). In terms of the cross-benefits to other MDG related sectors, we find the decline in education spending particularly unacceptable.

## 4 Progress Towards the MDGS<sup>7</sup>

### 4.1 MDG Status

The UNDP (2003) report reveals that Zambia will not achieve most of its MDGs goals especially while the support to too many sectors remains weak. The table below shows the status of delivering MDGs in Zambia:

Table 13: Zambia's Progress Towards MDGs

Goal / Target	Will the target be met	State of National Support
<b>Extreme Poverty:</b> halve between 1990 and 2015, the proportion of people living in extreme poverty.	unlikely	Weak but improving
<b>Hunger:</b> halve, between 1990 and 2015, the proportion of people who suffer from hunger.	unlikely	Weak but improving
<b>Universal Primary Education:</b> ensure that by 2015, children everywhere, boys, girls alike, will be able to complete a full course of primary schooling.	Potentially	Strong
<b>Gender Equality:</b> eliminate gender disparity in primary and secondary education preferably by 2005 and to all levels of education no later than 2015.	Probably	Fair
<b>Child Mortality:</b> reduce by 2/3 between 1990 and 2015 the under-five mortality rate.	Potentially	Fair
<b>Maternal Health:</b> reduce by 3/4 between 1990 and 2015, the maternal mortality rate.	Unlikely	Weak but improving
<b>HIV/AIDS:</b> have halted by 2015: and begun to reverse the spread of HIV/AIDS.	Potentially	Fair
<b>Malaria and other diseases:</b> have halted by 2015, and begun reversing the incidence of malaria and other major diseases.	Potentially	Fair
<b>Environmental Sustainability:</b> integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.	Potentially	Weak but improving
<b>Water sanitation:</b> halve by 2015 the proportion without sustainable access to safe drinking water and basic sanitation.	Potentially	Weak but improving

Source: UNDP (2003) *Zambia Millennium Development Goals Progress Report*.

The key point to be made from the above table is that if policy support by government and other stakeholders remains weak, most of the MDGs will not be met. However, an improvement in financial

<sup>7</sup> Section relies heavily on the UNDP (2003), *Zambia Millennium Development Goals Progress Report*.

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support in management – and, we believe, in country ownership – will enhance the prospects in the country achieving the Goals. In order to appreciate how much progress Zambia is making in meeting the MDGs, the table below gives a summary towards each target.

**Table 14: MDG Indicators for Zambia**

<i>Indicator</i>	1990	2000	2015 Target	Can Target be met*?
<b>Income Poverty</b>				
Proportion living in extreme poverty	58	58	29	No
<b>Hunger</b>				
- proportion of underweight children (under -five years of age)	25%	28%	12.5%	No
- proportion of stunted children	40%	47%	20%	No
- proportion of wasted children	51%	5%	2.5%	Yes
<b>Education</b>				
- net enrolment in primary education	80%	76%	100%	Yes
Girls	69%	75%	100%	Yes
Boys	71%	71%	100%	Yes
- proportion of pupils starting grade one who reach grade seven	64%	73%	100%	Yes
for girls	57%	66%	100%	No
for boys	71%	80%	100%	No
- literacy rate of 12-24 years old	75%	70%	100%	No
Females	71%	66%	100%	No
Males	79%	75%	100%	No
<b>Gender</b>				
- proportion of girls to boys in primary school	98%	98%	100%	Yes
- proportion of girls to boys in secondary school	92%	90%	100%	Yes
- ratio of literate females to males	90%	80%	100%	Yes
<b>Child Mortality</b>				
- under-five mortality rate (per 1,000 live births)	191	163	63	No
- Infant Mortality Rate (IMR)	107	95	36	No
<b>Maternal Health</b>				
- Maternal Mortality Rate (MMR) (per 100,000 live births)	649	729	162	No
<b>HIV/AIDS</b>				
- ZDHS HIV prevalence rate	-	16%	16%	Yes
<b>MALARIA</b>				
- Incidence (per 1,000)	-	900		
- Fatality rates (per 1,000)	11	48		
- New cases of Malaria (per 1,000)	255	377	121	
<b>Environmental/Sustainability</b>				
- proportion of land covered by forest	59.8%	59.6%		
- proportion of land protected to maintain biological diversity	38.8%	39.2%		
- GDP (K'millions) per unit of energy used in – Tons of Oil Equivalent (TOE)	1.29	1.60		
- carbon- dioxide emission per capita	0.30	0.20		
- proportion of population using solid fuel	88%	85.2%		
<b>Water</b>				
- proportion of households with safe drinking water	48%	51%		
- proportion of households with access to improved sanitation	17%	15%		
<b>Global Partnership for Development</b>				
ODA Share in GDP	6%	7%		
ODA Per Capita (\$)	34	25		

Source: UNDP (2003) *Zambia Millennium Development Goals Report*.

- *Using a linear scale-up*

## 5 Methodology

### 5.1 Review of Costing Methodologies

This section reviews some of the methodologies that have been used in assessing the financial need / gap to reach the MDGs. The studies have been categorised in two – Global studies and National studies. The burgeoning of cost estimates for attaining the MDGs has given rise to heated debates over the most appropriate methodology to obtain consistent and reliable figures (Heaty, 2003). Politically, cost estimates which result in high financing gaps would not be well received by co-operating partners while low estimates may actually result in the countries failing to reach the Goals.

Since the purpose of this study is to come up with financing and cost estimates for meeting the MDGs at national level, only the different national costing methodologies are reviewed in this paper<sup>8</sup>. Looking at country costing studies of the MDGs, there are four broad methodologies that differ significantly. These included methodology used in the costing of UNDP country studies, the World Bank initiated studies, the Millennium Project Studies and the Commission for Africa (CFA) study. Below we review the approach under each of these studies.

#### 5.1.1 UNDP Country Studies

In recognition of the need to get more precise country cost estimates, the UNDP conducted a number of studies in selected African countries and the Philippines in Asia. In Africa, the countries covered included Cameroon, Malawi, Uganda and United Republic of Tanzania. The methodology used is summarised below:

##### **Income Poverty**

The percentage of the population living below the national poverty line is a function of two key elements: the size of the economy and the distribution of the resources within it. Country teams attempted to estimate the level of growth under different distributional scenarios that would be required to shift the necessary percentage of the population across the national poverty line. Determining the growth rates required to realise the income poverty goal relied in most cases on observed “elasticities”, which predict the degree to which income poverty falls every increment of average income levels.

##### **Education**

Based on population cohort projected and estimated units cost, progress towards 100% net enrolment was costed assuming a linear progression. These estimates were augmented by the costs of quality improvements in education, including falls in teacher-pupil ratios, class size and increasing density of textbooks.

##### **HIV/AIDS**

The country studies attempted to reflect the cost of the national plans, usually including the costs of Anti-Retroviral drug (ARVs) treatments. No attempt was made to quantify the economic costs of non-intervention that, in the case of some countries, would be large and compromise or even reverse the performance of all other indicators.

##### **Health**

Estimates were based on the projected costs based on the projected costs such as health sector intervention as immunisations, family planning, control of infectious diseases, and the required numbers of the health facilities and trained personnel.

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<sup>8</sup> For a detailed review and critique of the different MDG costing methodologies, see Heaty (2003).

### **Water and Sanitation**

By deriving per capita expenditure requirements, estimates were made on the basis of the projected populations and effort required to expand access to the target levels.

Of the MDG targets, the models only focused on income poverty, primary education, child mortality, maternal health, HIV/AIDS and water. A gender perspective was also developed across the sectors when data was available.

The main weaknesses of these studies are the partial coverage of sectors and lack of taking into account the spill-over effects (Heaty, 2003). For example, investment in education may have indirect effects in the health sector because literate people may access health services and practices in more effective ways compared to those who are illiterate.

### **5.1.2 The World Bank Project**

The World Bank focused on 18 countries: Tanzania, Uganda, Ethiopia, Mozambique, Benin, Burkina Faso, Madagascar, Mali, Mauritania, Indonesia, Vietnam, Bangladesh, Pakistan, India, Bolivia, Honduras, Albania and Kyrgyz Republic.

The World Bank approach is embedded in the Poverty Reduction Strategy Papers (PRSPs) defined by each country. It considers the framework provided by the PRSP and is the basis for calculating the amount of additional aid required. The parameters of the estimated additional requirements are three-fold:

- Existing policies and institutions and the pace at which these might be strengthened over time.
- Poverty incidence and more generally the extent of investment needs vis-à-vis the MDG targets.
- Current levels of aid.

However this approach is not clear as to whether its 'model' actually measures the additional financing requirements to achieve the MDGs or simply higher levels of human development based on the targets fixed in the Poverty Reduction Strategy.

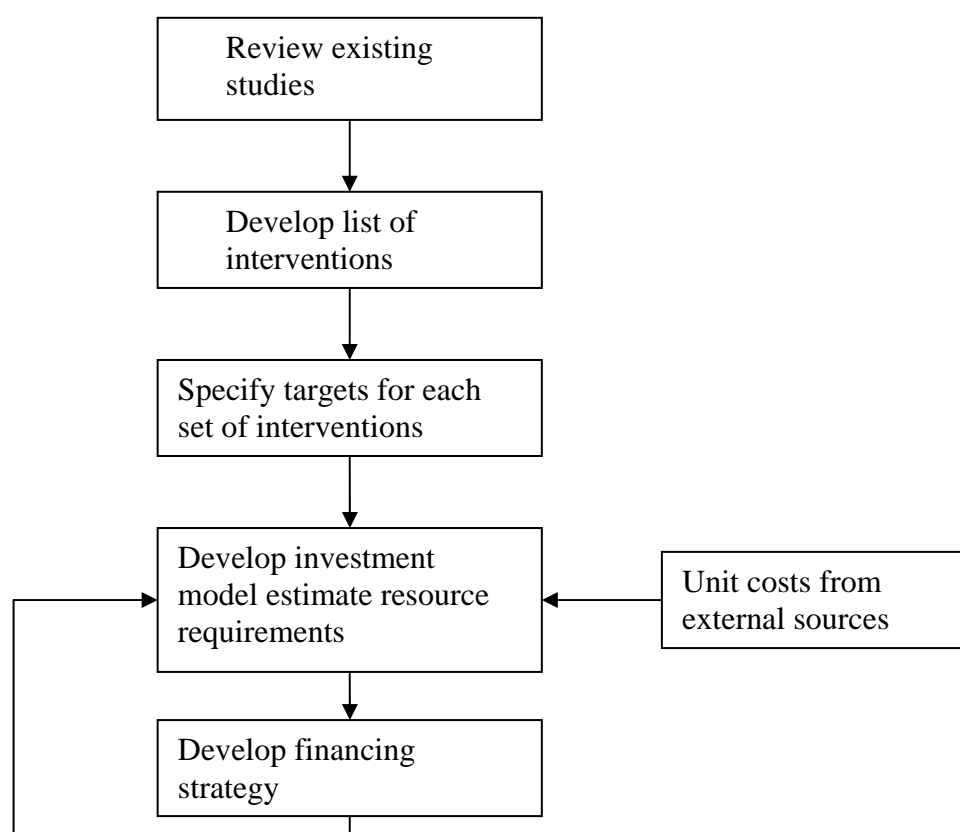
### **5.1.3 The Commission for Africa (CFA) Methodology**

The CFA has estimated the amount of aid needed for Africa. It advocates investments in higher education and in science and technology. It urges support for the African Union's role in promoting peace and security and rejects the notion that the private sector will be willing to finance most of Africa's infrastructure and instead advocates a major increase investment in infrastructure financed by African governments and aid agencies. In addition, the CFA advocates that the international community place less emphasis on debt sustainability criteria for appropriate levels of debt relief and shift to broader human development criteria. Overall, the CFA calls for a doubling of aid flows over the next three to five years.

### **5.1.4 Millennium Project Methodology**

The Figure below summarises the method used by the Millennium Project:

*Figure: Summary of Country-Study methodology.*



### Summary

Although no single methodology stands out as superior seems to be the best, the Millennium Project approach provides a more comprehensive methodology. It avoids double counting and also takes into account external influences (Millennium Project (2004) *Millennium Development Goals Needs Assessments, Country case studies of Bangladesh, Cambodia, Ghana, Tanzania and Uganda – working paper*).

### 5.2 Costing Methodology

Overall, this study has used a combination of the Millennium Project methodology and in some cases where Needs Assessment Models were not accessible, we used the UNDP methodology as a way of filling the gap. Below is an outline of the exact methodology used.

#### Poverty

Based on the UNDP Studies approach, there has been an attempt to come up with the necessary growth that would halve the number of people living in extreme poverty between 1990 and 2015. These growth estimates are derived based on the elasticities of poverty to economic growth. No cost estimates are included because it is assumed that interventions in all the sectors are aimed at, or at least consistent with, stimulating growth (Millennium Project (2004) country case studies).

#### Hunger

Under hunger, the methodology used is that of the Millennium Project. Three broad sets of actions to reduce hunger are considered;

- i. Increasing agricultural productivity
- ii. Supporting other rural income generating activities, and

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- iii. Promoting nutrition. Under nutrition section interventions include (using 1990 as the base year):
- Increasing agricultural productivity; Achieve food security of at least half of the food insecure rural households by 2015.
  - Supporting rural income generation by providing at least half of the food insecure households with access to storage facilities, credit, value added food processing services and marketing organisations by 2015.
  - Promoting nutrition: provide targeted interventions to at least half of the proportion of malnourished children and women by 2015.

### Education

The methodology is based on the Millennium Project (2004) approach. Included in the needs assessment are primary education needs, secondary education needs and adult literacy and<sup>9</sup> early childhood.

### Gender

The approach is based on the UNDP method. Unit costs are calculated based on the average costings contained in Zambia's PRSP document and these are used to measure the required national needs based on the population projection. Thus the goal is that of equality based on the PRSP concept.

### Health

The overall health estimates are based on the per capita costs based on the Basic Health Care Package and the HIV/AIDS projections based on Kombe *et al.*, (2003).

However within the health sector, the costs associated with the following goals are based on the Millennium Project methodology:

- Goal 4: Reduce Child Mortality.
  - Target 5: Reduce by two-thirds between 1990 and 2015, the under-five mortality rate.
  - Used per unit costs on immunisation, the costs exclude treatment of diseases.
- Goal 5: Improve Maternal Health.
  - Target 6: Reduce by three-quarters between 1990 and 2015, the Maternal Mortality ratio.
  - Used the Millennium Project Approach.
- Goal 6: Combat HIV/AIDS malaria and other diseases.
  - Target 7: Have halted the increase by 2015 and begun to reverse the spread of HIV/AIDS.
  - Relied on a study by Kombe *et al.*, (2004) and used per unit cost to come up with projections on treatment and voluntary counselling and testing (VCT). At the moment it covers prevention measures.
  - Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.
  - Use the Millennium Project methodology.

### Environmental Sustainability

- Goal 7: Ensure environmental sustainability.
  - Target 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental assets
  - Due to the nature of this topic, costing for this area is yet to be worked on.

### Water and Sanitation

The analysis is based on Millennium Development Goals target 10.

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<sup>9</sup> See Millennium Project (2004) *Country studies for reasons of including secondary and adult education*.

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Target 10: “Halve, by 2015, the proportion of people living without sustainable access to safe drinking water”.

- Used the Millennium Approach and Needs Assessment Tool.

### **Improving the lives of slum dwellers**

Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100million slum dwellers.

- We use the Millennium Project method. We get the estimated number of slum dwellers from the UNHabitat and use a per-unit cost for elevating one person from a slum situation. This involves upgrading some slums and also providing legally enforceable property rights for the slum dwellers.

### **Science and Technology**

Target 18: In co-operation with the private sector, make available the benefits of new technologies, especially information and communication.

- No estimates are there for this section but it is included in the other segments of the costs. This is because Science and Technology is important for development and has a cross-cutting issue.

### **Energy**

Based on UNDP unit costs approach and unit costs are based on PRSP projections.

### **Transport Infrastructure**

We adopted the UNDP unit cost approach and the estimates are based on the PRSP estimate.

## **5.3 Methodology of Financing Projections**

### **Economic Growth**

To calculate government resources that can be mobilised domestically, we need to project per capita GDP growth until 2015 since GDP levels in part determine the scope of government resource mobilisation. Following the Millennium Project (2005) method, we assume that the per capita GDP of Zambia will grow annually at 2.2 per cent per annum between 2003 and 2015. This growth projection is slightly lower than the IMF macroeconomic assumptions in the HIPC Completion Point Document 2005. We choose a less optimistic assumption on economic growth rates to compensate for the IMF’s historically over-generous forecasts.

### **Government Contributions**

To estimate domestic government resource mobilisation we use data from the Economic Report for 2005, national budgets and MoFNP Macroeconomic Indicators 2004. The analysis consists of the following three steps:

- The share of government spending on the MDGs as a proportion of total spending is calculated by adding up national government expenditures on the following areas: health, education, gender, water and sanitation, environment, rural development, slum dwellers, science and technology, energy and transport infrastructure, and dividing by total expenditure. We exclude spending on public administration, law and order, and defence.
- The domestically financed MDG, expenditure is then calculated by multiplying the ratio of MDG expenditure to total government revenues.
- The proportion of domestic spending on the MDG is then calculated as a percentage of GDP.

### **Private out-of-pocket spending**

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We follow the Millennium Project approach to estimate the amount that households will contribute. We have divided the population into three segments based on the CSO LCMS 2002-2003 quintile income shares and budget data. The first segment (T1) consists of households who fall under extreme poverty according to the CSO National Poverty line measures. We assume that these households are unable to afford some very basic non-food needs and assume that these households will not contribute to either capital or operating costs because their income is insufficient to meet food and other basic needs.

The second segment of households (T2) has levels of per capita income that are above the extreme poverty bracket as per CSO poverty measures but below the national poverty line. These households are expected to partially cover operating as well as capital costs. The remainder of the population (T3) is assumed to be able to pay for a significant share of the operating and capital costs. Below we summarise our assumptions.

<b>Hunger</b>		%	<b>Water Supply</b>		%	
Capital cost rural	T1	0	Capital cost urban	T1	0	
	T2	0		T2	40	
	T3	0		T3	90	
Operating costs rural	T1	0	Capital cost rural	T1	0	
	T2	50		T2	40	
	T3	0		T3	90	
<b>Secondary Education</b>						
Capital cost	T1	0	Operating cost urban	T1	10	
	T2	25		T2	70	
	T3	50		T3	100	
Operating cost	T1	0	Operating cost rural	T1	10	
	T2	50		T2	70	
	T3	100		T3	100	
<b>Energy</b>						
<b>Sanitation and Waste Water Treatment</b>						
All costs	T1	0	Capital cost urban	T1	0	
All costs	T2	50		T2	40	
All costs	T3	100		T3	90	
				Capital cost rural	T1	0
					T2	40
					T3	90

## 6 Findings: Cost of Meeting the MDGs and Financing

### 6.1 Poverty

Analysing the trends in income poverty, the UNDP (2003) concludes that Zambia will not meet this MDG and observes that the state of national support to meet this goal is weak but improving. This improvement is attributed to the creation and the implementation of the PRSP which has improved government's focus on poverty reduction priorities.

In order to ascertain whether Zambia will meet this goal first requires an assessment or projection of how much economic growth is required to meet this goal. Estimating this growth involves two steps. First, it involves calculating the elasticity of poverty to economic growth and inequality. And second, using the elasticity estimates, the required growth of the economy is estimated.

To estimate the required economic growth, this study relies on the findings of McCulloch *et al.*, (2000). Using CSO household surveys of 1991, 1996 and 1998, McCulloch *et al.*, estimates the

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relationship between poverty, growth and inequality. The study used CSO official poverty<sup>10</sup> line that is far lower than the \$1/per day threshold. According to McCulloch, this is because the \$1/day poverty line is extremely high in the Zambian context.

Using the same official poverty line, the UNDP (2003) shows that the goal to eradicate extreme poverty and particularly halving it between 1990 and 2015, implies a target of reducing extreme poverty from 58.1 percent in 1991 to 29.1 percent in 2015. Table 15 below shows that extreme poverty in 2003 stood at 46 percent. Yet, the key question still remains, how much growth must be generated in order to reach the set target?

According to the study by McCulloch *et al.*, the elasticity of extreme poverty to growth was estimated at -0.60, -0.53 and -0.73 in 1991, 1996 and 1998 respectively. These elasticities translate into an average elasticity of extreme poverty to growth of -0.62. Furthermore, the same study estimated elasticities of extreme poverty to inequality of 0.22, 0.04 and 0.32 for 1991, 1996 and 1998 respectively. These estimates give an average elasticity of extreme poverty to inequality of 0.193. As can be seen from the inequality elasticity coefficient, inequality in Zambia is not the major determinant of poverty levels (McCulloch, *Ibid*).

### Prospects for Growth

Table 15 below shows the poverty projections with different GDP growth assumptions. From this table it is clear that to meet the target of reducing the proportion of people in extreme poverty by half by 2015 can only be achieved by sustaining an annual growth of 8 percent and above. Such type of growth is unprecedented in Zambia. However, comparable growth rates have been achieved in some non-oil producing sub-Saharan economies. Mozambique and Uganda have both achieved sustained growth rates of this magnitude principally because of their status as early recipients of enhanced levels of debt relief and aid inflows.

**Table 15: Poverty Projections at Different Economic Growth Rates with Different Growth Scenarios**

Table 2: Poverty Projections at Different Economic Growth Rates (Assuming 3 % population growth) 2005-2015													
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
<b>National Extreme Poverty Projections</b>													
Growth at 8 %	46.0	44.6	43.2	41.9	40.6	39.3	38.1	36.9	35.8	34.6	33.6	32.5	31.5
Growth at 9 %	46.0	44.3	42.7	41.1	39.6	38.1	36.7	35.3	34.0	32.8	31.6	30.4	29.3
Growth at 10 %	46.0	44.0	42.1	40.3	38.5	36.8	35.2	33.7	32.3	30.9	29.5	28.2	27.0

Source: Author's own calculations.

Premised on a continued performance of the mining and agricultural sectors, the Ministry of Finance and National Planning holds a positive outlook for the future. According to the Medium Term Expenditure Framework (MTEF) 2005-2007, the Zambian government projects a GDP growth of five percent and a reduction in inflation down to 5 percent by 2007. It is unlikely that inflation will go down to single digits as projected largely because the main structural causes of high prices stem from markets in food and fuel. The price setting here is beyond the control of the GRZ.

<sup>10</sup> As mentioned above CSO used K46,286.00 for general/overall poverty and K32,232.00 for extreme poverty.

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Table 16: MTEF Growth Assumptions 2005-2007

	2005	2006	2007
Real GDP Growth	5	5	5
Inflation Rate (end-year)	15	10	5
Nominal GDP (K'Billion)	31172	35174	39542
Current Account Deficit Incl grants % of GDP	-3.9	-3.7	-3.8
Domestic Borrowing % of GDP	1.6	1.2	0.6
GLR months of imports	1.5	1.7	1.9

Source: MoFNP MTEF 2005-2007.

A remaining concern is the vulnerability of Zambia's agricultural sector to drought. This raises the question of whether any of the projected growth estimates are attainable. Nonetheless, copper production is on the increase due to new mines and prices are rising due to increased international demand. If it is to meet the goal of halving the people living in extreme poverty by 2015, then Zambia's growth of 5 percent per annum is certainly not enough.

### 6.2 Hunger

Despite Zambia's having vast resources of fertile land, and holding two-fifths of Southern Africa's water reserves, her agricultural productivity still remains largely rain-fed. As a result, in years of drought, many households become food insecure. According to the 2000-2002 ZDHS, 19% of Zambian households face chronic food insecurity. There are more food insecure households in rural areas (24%) than in urban areas (11%). Most children who face hunger suffer from under nourishment. 47% of the children are stunted of which 52% are in rural areas (UNDP, 2003).

According to the UNDP (2003) and surveys from CSOs such as the *Programme Against Malnutrition (PAM)* and the CCJDP, this situation is attributable to high poverty levels, unfavourable agricultural practices, inadequate market access, droughts and floods, lack of water security, labour shortages and HIV/AIDS. While food insecurity is attributable to other poverty-related vulnerabilities, there are some key interventions – including increasing agricultural inputs and extension services, affordable rural credit, agricultural production and other rural income generating activities – that can raise the nutritional status of many households.

Key assumptions include:

- Increasing the percentage of households that are smallholder to 50% by 2015.
- Increasing the households' affordable access to chemical fertilizers from the current 90% to 100% by 2015.
- Increasing the percentage of smallholder farm households with access to wells from 5% in 2000 to 50% by 2015.

Based on these and other assumptions, interventions for reducing hunger include those targeted at agricultural households, non-agricultural households and nutrition for school children and vulnerable people including HIV/AIDS patients.

Tables 17 and 18 show the cost needed to meet the hunger MDG. It is estimated that a total of US\$1,656.8 million<sup>11</sup> will be required over the period 2005 – 2015. The expenditure on the "hunger MDG" must be US\$150 million per year with an average per capita cost per year of US\$11.

<sup>11</sup> This amount refers to the total investments needed in the sector and does not necessarily mean additional amount.

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**Table 17: Total Cost of Hunger Key Interventions**

Total Cost Estimates in US\$ Million	2005	2010	2015	% of Total 2010	Total 2005-15	Average 2005-15	% of Total over Period
<b>Agricultural Production</b>							
Capital Costs	11.1	31.6	62.7	22%	365.3	33.2	22%
Operating Costs	18.9	48.9	94.5	34%	572.0	52.0	35%
<i>Sub-total</i>	<i>30.0</i>	<i>80.5</i>	<i>157.2</i>	<i>56%</i>	<i>937.3</i>	<i>85.2</i>	<i>57%</i>
<b>Other Rural Income Generation</b>							
					0.0		
Capital Costs	3.3	4.4	5.3	2%	47.5	4.3	3%
Operating Costs	0.0	0.0	0.0	0%	0.0	0.0	0%
<i>Sub-total</i>	<i>3.3</i>	<i>4.4</i>	<i>5.3</i>	<i>2%</i>	<i>47.5</i>	<i>4.3</i>	<i>3%</i>
<b>Nutrition</b>							
Capital Costs	0.0	0.0	0.0	0%	0.0	0.0	0%
Operating Costs	6.0	33.0	69.2	25%	384.4	34.9	23%
<i>Sub-total</i>	<i>6.0</i>	<i>33.0</i>	<i>69.2</i>	<i>25%</i>	<i>384.4</i>	<i>34.9</i>	<i>23%</i>
<b>Awareness</b>							
Capital Costs	0.0	0.0	0.0	0%	0.0	0.0	0%
Operating Costs	1.0	1.0	1.0	0%	11.4	1.0	1%
<i>Sub-total</i>	<i>1.0</i>	<i>1.0</i>	<i>1.0</i>	<i>0%</i>	<i>11.4</i>	<i>1.0</i>	<i>1%</i>
<b>Capacity</b>							
<i>Sub-total</i>	<i>8.1</i>	<i>23.8</i>	<i>46.5</i>	<i>17%</i>	<i>276.1</i>	<i>25.1</i>	<i>17%</i>
<b>Total Cost per Capita \$</b>	<b>48.5</b>	<b>142.7</b>	<b>279.3</b>	<b>100%</b>	<b>1656.8</b>	<b>150.6</b>	<b>100%</b>

**Table 18: Per Capita Costs for Hunger Interventions**

Per Capita Total Cost Estimates US\$	2005	2010	2015	% of Total 2015	Average 2005-15	% of total over period
<b>Agricultural Production</b>						
Capital Costs	1.0	2.4	4.2	22%	2.4	22%
Operating Costs	1.7	3.7	6.3	34%	3.8	35%
<i>Sub-total</i>	<i>2.6</i>	<i>6.1</i>	<i>10.5</i>	<i>56%</i>	<i>6.2</i>	<i>57%</i>
<b>Other Rural Income Generation</b>						
Capital Costs	0.3	0.3	0.3	2%	0.3	3%
Operating Costs	0.0	0.0	0.0	0%	0.0	0%
<i>Sub-total</i>	<i>0.3</i>	<i>0.3</i>	<i>0.3</i>	<i>2%</i>	<i>0.3</i>	<i>3%</i>
<b>Nutrition</b>						
Capital Costs	0.0	0.0	0.0	0%	0.0	0%
Operating Costs	0.5	2.5	4.6	25%	2.5	23%
<i>Sub-total</i>	<i>0.5</i>	<i>2.5</i>	<i>4.6</i>	<i>25%</i>	<i>2.5</i>	<i>23%</i>
<b>Awareness</b>						
Capital Costs	0.0	0.0	0.0	0%	0.0	0%
Operating Costs	0.1	0.1	0.1	0%	0.1	1%
<i>Sub-total</i>	<i>0.1</i>	<i>0.1</i>	<i>0.1</i>	<i>0%</i>	<i>0.1</i>	<i>1%</i>
<b>Capacity</b>						
<i>Sub-total</i>	<i>0.7</i>	<i>1.8</i>	<i>3.1</i>	<i>17%</i>	<i>1.8</i>	<i>17%</i>
<b>Total Cost per Capita \$</b>	<b>4.2</b>	<b>10.8</b>	<b>18.6</b>	<b>100%</b>	<b>11.0</b>	<b>100%</b>

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### 6.3 Education

According to UNDP (2003), universal primary education (UPE) is one of the MDGs that may be achieved by Zambia. Net enrolment rate (NER) at primary education level stood at 76 percent in 2003. The target is to reach an NER of 100 percent by 2015. There is a slight disparity between boys and girls as regards enrolments at primary education level. During 2003, the NER for boys was 71 percent while that for girls was 75 percent. Although enrolment levels for girls look high, the number of girls who complete primary school (grade seven) is lower for girls. During the same year, 2003, the proportion of pupils starting grade 1 who reach grade 7 was 80 percent for boys and only 66 percent for girls. Thus achieving UPE also implies that ensuring that both girls and boys are accorded full primary education regardless of their gender.

Zambia's PRSP (2002) and the Transitional National Plan (2003) identify education as the key social sector in the country's poverty reduction effort. This prioritisation has helped government to focus its attention on this sector. However, there is still more that needs to be done in terms of earmarking resources for the sector, especially if the MDG for UPE by 2015 is to be met.

#### Cost Projections

The Ministry of Education in 1996 undertook cost projections for achieving its national policy goal "Educating Our Future", within which UPE was included. Assuming a population growth rate of 3.2 percent, the ministry projected a total minimum additional capital cost of achieving the National Policy (excluding other costs involved in restructuring and decentralisation) at US \$ 728 million over a period of 20 years beginning 1996 at 1996 prices. Of that amount, US\$193 million is aimed at achieving and sustaining a 100 percent universal lower and middle basic education (grades 1-7), and US\$ 331 million earmarked for upper basic education (grades 8-9).

Between 2006 and 2015, the projected additional resources required for achieving universal lower and middle basic is US\$111.44 million, upper basic is US\$ 187.28 million, and US\$421.51 million for the overall sector policy. Table 19 below shows the projected additional resources required by the Ministry of Education.

**Table 19: MOE Projected Costs for Education Interventions**

Year	Projected Cost in US\$ million			Total
	Lower and Middle Basic	Upper Basic	High School	
1996	1.42	7.76	0.00	21.93
1997	1.34	12.17	0.00	25.58
1998	7.61	17.37	0.00	24.98
1999	7.00	13.55	3.93	24.49
2000	7.03	14.59	9.72	31.34
2001	4.38	17.21	11.76	33.34
2002	2.55	14.66	12.48	29.59
2003	4.55	16.81	14.22	35.57
2004	2.79	16.63	14.62	34.03
2005	2.58	12.16	14.36	29.09
<b>Sub Total</b>	<b>81.38</b>	<b>144.12</b>	<b>81.08</b>	<b>306.59</b>
2006	4.53	17.07	17.09	38.69
2007	4.31	8.62	15.53	28.47
2008	11.83	8.33	12.39	32.55
2009	12.11	19.94	6.15	38.19
2010	12.37	21.08	7.59	41.04
2011	12.72	21.29	7.66	41.67
2012	12.95	22.18	13.22	48.36
2013	13.26	24.05	13.79	51.11
2014	13.49	24.96	14.35	52.80
2015	13.86	19.77	15.01	48.64

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<i>Sub Total</i>	<i>111.44</i>	<i>187.29</i>	<i>122.79</i>	<i>421.52</i>
<i>Grand Total</i>	<i>192.82</i>	<i>331.41</i>	<i>203.87</i>	<i>728.11</i>

Source: GRZ (1996), p. 174.

In this study we project cost and human resource requirements based on the methodology used by the Millennium Project. The table below shows the requirements in terms of classroom infrastructure and teachers for Zambia to attain the Universal Primary Education MDG.

Key assumptions include:

- Increasing the NER for primary schools from 82.7% in 2005 to 100% by 2007.
- Increasing primary completion rate from 64% in 2004 to 90% by 2015.
- Increasing primary school pupil-to-teacher ratio from 53 in 2005 to 40 by 2015.
- Increasing the transition rate from 87% in 2005 to 90% by 2015.

Based on these and other assumptions, cost projections are made based on interventions including increasing human resources, books and other key educational requirements. Table 13 below shows the estimated human resource requirements.

**Table 20: Human Resource and Infrastructure Needs of the Education Sector in Zambia**

Human Resource and Infrastructure needs	2005	2010	2015	Total 2005- 2015	Average 2005- 2015
<b>Number of Teachers</b>					
Primary Education	37850	54094	70103	598766	54433
Secondary Education	33162	34255	36306	378921	34447
<b>Total</b>	<b>71012</b>	<b>88349</b>	<b>106409</b>	<b>977687</b>	<b>88881</b>
<b>Number of Classrooms</b>					
Primary Education	56328	71114	80117	775879	70534
Secondary Education	21331	30449	41493	339253	30841
<b>Total</b>	<b>77658</b>	<b>101562</b>	<b>121610</b>	<b>1115131</b>	<b>101376</b>

Table 21 shows the total and per capita cost estimates for the interventions to achieve UPE. From the table, the total cost of meeting the UPE goal is estimated at US\$1,759.7 million in the 11-year period 2005–2015. This translates into an average cost of US\$159.97 million per year. In other words, a total expenditure of US\$12 per capita has to be invested in the education sector.

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Table 21: Total Cost of Education Interventions

Total Cost Estimates in US\$ Million	2005	2010	2015	% of Total in 2015	Total 2005- 2015	Average 2005- 2015	% of Total Over Period
<b>Primary Education</b>							
Capital Cost	37.2	13.2	15.0	14%	198.1	18.0	20%
Operating Cost	44.5	70.6	91.9	86%	784.1	71.3	80%
<b>Total</b>	<b>81.8</b>	<b>83.7</b>	<b>107.0</b>	<b>100%</b>	<b>982.3</b>	<b>89.3</b>	<b>100%</b>
Cost per Student (\$)	41.9	33.8	39.1			36.3	
<b>Secondary Education</b>							
Capital Cost	3.4	6.3	8.9	10%	69.3	6.3	9%
Operating Cost	45.5	61.4	84.3	90%	688.9	62.6	91%
<b>Total</b>	<b>49.0</b>	<b>67.6</b>	<b>93.2</b>	<b>100%</b>	<b>758.2</b>	<b>68.9</b>	<b>100%</b>
Cost per Student (\$)	33.0	35.4	39.0			35.6	
<b>Adult Literacy</b>							
<b>Cost</b>	<b>1.2</b>	<b>1.8</b>	<b>2.3</b>		<b>19.3</b>	<b>1.8</b>	
<b>Total</b>	<b>131.9</b>	<b>153.1</b>	<b>202.5</b>		<b>1759.7</b>	<b>159.9731</b>	

Per Capita Total Cost Estimates in US\$	2005	2010	2015	% of Total in 2005	Average 2005- 2015	% of Total over Period
Primary Education	7.1	6.3	7.6	54%	6.7	56%
Secondary Education	4.3	5.1	6.2	44%	5.1	43%
Adult Literacy	0.1	0.1	0.2	1%	0.1	1%
<b>Total Cost per Capita (\$)</b>	<b>11.5</b>	<b>11.5</b>	<b>13.9</b>	<b>100%</b>	<b>12.0</b>	<b>100%</b>

### 6.4 Gender

Gender equality is an important goal if Zambia is to achieve the full potential of development. Females lag behind males in education attainment, non-agricultural employment and participation in politics (UNDP, 2003). The ratio of literate females to males (15-24 year olds) declined between 1990 and 2002, while the Zambian education system is characterised by a gender disparity especially at secondary school level and higher, these disparities later manifest in the labour market where women are disadvantaged. The score of women in formal wage employment in the non-agricultural sector, declined from 39% in 1990 to 35% in 2000.

The consistent adverse experience felt disproportionately by females in the education, employment and health sectors culminates in a situation in parliament where despite some improvements. In 1991, only 6% of the members of parliament were female. This figure rose to 10% in 1996 and to 12% in 2001 but still falls well below the SADC requirement of 30% (UNDP, 2003).

We attempt partial estimation of the cost of interventions that aim at costing the gender interventions. The total cost for gender interventions is estimated at US\$22.9 million in 2005 rising marginally to US\$30.1 million in 2015.

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### 6.5 Health General

The total cost of interventions under the health sector is found by summing costs for prevention and treatment of HIV/AIDS, malaria, and maternal health, and the cost for meeting the basic health care package (BHCP). These costs are certainly lower because they do not include training and management costs. Based on these assumptions the total cost for MDG-type interventions in health is US\$28.4 per capita in 2005, increasing to US\$32.2 per capita in 2015, with an average of US\$30.1 per capita per year.

**Table 22: Total Cost of Health Sector Interventions**

Health Total Cost Estimates in US\$ Million	2005	2010	2015	% of Total in 2015	Total 2005-2015	Average 2005-2015	% of Total over Period
HIV/AIDS Prevention	19.6	22.7	25.7	5%	249.4	22.7	6%
HIV/AIDS Treatment	45.3	73.7	116.7	24%	843.2	76.7	19%
TB	10.2	11.8	13.4	3%	129.8	11.8	3%
Malaria Prevention	-0.8	0.0	20.6	4%	20.0	1.8	0%
Malaria Treatment	47.0	54.3	67.3	14%	610.7	55.5	14%
Maternal Health	13.0	15.0	17.1	4%	167.4	15.2	4%
Other*	190.5	220.1	222.9	46%	2383.0	216.6	54%
<b>Total Cost</b>	<b>324.7</b>	<b>397.7</b>	<b>483.6</b>	<b>100%</b>	<b>4403.6</b>	<b>400.3</b>	<b>100%</b>

\* Includes costing for Child Health Interventions and other interventions under the Basic Health Care Package.

**Table 23: Per Capita Cost for the Health Sector**

Total Per Capita Cost Estimates US\$	2005	2010	2015	% of Total in 2015	Average 2005-2015	% of Total over Period
HIV/AIDS Prevention	1.7	1.7	1.7	5%	1.7	6%
HIV/AIDS Treatment	4.0	5.5	7.8	24%	5.7	19%
TB	0.9	0.9	0.9	3%	0.9	3%
Malaria Prevention	-0.1	0.0	1.6	5%	0.1	0%
Malaria Treatment	4.3	4.6	5.3	17%	4.7	16%
Maternal Health	1.2	1.3	1.4	4%	1.3	4%
Other	16.4	15.9	13.5	42%	15.7	52%
<b>Total Per Capita Cost</b>	<b>28.4</b>	<b>30.0</b>	<b>32.2</b>	<b>100%</b>	<b>30.1</b>	<b>100%</b>

#### 6.5.1 Child Health:

Zambia's immunisation coverage has remained at similar levels for the past few years. According to the WHO and UNICEF's best estimates, the DTP3 coverage in 2000 was 78%. The national immunisation programme's objectives were to increase and maintain routine immunisation coverage for all childhood antigens (BCG, measles, OPV, DPT) to 90% by 2004; to increase and maintain TT2+ coverage in pregnant women to 60%.

This study has not estimated explicitly the costs for meeting the child health target under the MDGs. However, this cost is estimated along with other costs under the BHCP. The WHO<sup>12</sup> estimates the costs of immunisations to be in the range of US\$3 million per year. In 2000, Zambia spent US\$1.7 million to deliver routine immunisation services and US\$1.3 million on supplementary immunisation activities. The programme's specific spending on routine immunisation service equated to about

<sup>12</sup> WHO official website.

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US\$5.5 per DTP3 vaccinated child as US\$0.16 per capita. Spending on routine immunisation rose in 2002 to US\$2.4 million, an increase of 41% due to the purchase of cold chain equipment for the programme. The government expenditures on the immunisation programmes increased from \$0.1 thousand in 2000 to US\$0.3 thousand in 2002. Immunisation does not give the full cost of interventions for meeting child health requirements. But in order to meet the child health targets there is a need for both immunisation and treatment of certain diseases, including malnutrition.

According to WHO, resource requirements for the programme are projected to increase with increasing expenditures on new vaccines. The average annual resource requirements during 2003 - 2012 for the national immunisation programme and estimated to be US\$9.5 million. About half of the funding is considered as secure during these years. During 2003-2012, gap in funding for the NIP is on average US\$4.9 million each year if probable funding is not included, and drops to US\$1.8 million if probable funding is included.

### 6.5.2 Malaria

Malaria is endemic throughout Zambia and continues to be a major public health concern. It is a leading cause of morbidity and second highest cause of mortality, especially among pregnant women and children under the age of five (ZDHS 2001-2002). GRZ estimates that there are more than 3.5 million cases and 50,000 deaths per year. Malaria accounts for 37 per cent of all out-patient attaches in Zambia.

Since 1999, Zambia has been involved in the international efforts to control malaria under the Roll Back Malaria (RBM) initiative. The initiative's goal is to ensure that by 2005 at least, 60% of those at risk of malaria, particularly pregnant women and children under-five benefit from the most suitable combination of personal and community protective measures such as Insecticide-Treated mosquito Nets (ITNs)<sup>13</sup>.

The total cost for Malaria prevention and treatment in order to reach the Malaria MDG target is US\$4.8 per capita per year. The cost will rise from US\$4.3 per capita in 2005 to US\$6.9 per capita in 2015.

### 6.5.3 HIV/AIDS

The per unit costs for treatment and voluntary counselling and testing are based on Kombe *et al.*, (2003). They estimate the per unit cost of anti retroviral therapy (ART) per patient to be US\$488 and the cost of voluntary counselling and testing per person at US\$3.64. Regarding ART, we assume that 15.6 percent of the total population of Zambia is HIV positive and that 10 percent of those positive are clinically eligible to receive ART. We also assume that the proportion of infected people remains at 15.6 percent through out the period: 2005-2015. These assumptions translate into a total number of 179,000 HIV patients requiring ART in 2005 and the number rising to 238,000 in 2015.

On prevention programmes we use the estimates in the National Aids Council strategic plan ending 2005. Based on that plan, we estimate the per capita cost of prevention programmes at US\$1.7.

Based on these assumptions, we estimate the per capita cost of HIV/AIDS prevention and treatment in 2005 to be US\$5.7 rising to US\$9.5 in 2015, with an annual average of US\$7.4.

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<sup>13</sup> For details on projected costs for malaria interventions see tables 21 & 22 above.

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### 6.6 Water and Sanitation

There is a critical need to improve access to safe water and sustain facilities in order to improve the living standards of both urban and rural communities. Access to safe drinking water in Zambia has increased slightly from 48% in 1992 to 51% in 2002. Regarding sanitation, 17% of the households had access to improved sanitation in 1990. Access to sanitation declined to 15% in 2000. The situation is worse in rural areas with only 2% of the households in rural areas having proper toilet facilities in 2002 compared to 39% of urban households.

Key assumptions include:

- Increasing access to portable water to 65% and 99% by 2015 in rural and urban sectors respectively.
- Reducing the percentage of water supply that is defective in household generation, public stand post, etc., to 25% by 2015.
- Increasing access to sanitation to 85% in rural areas and urban areas.

Based on these assumptions the estimated total costs of meeting the water and sanitation MDG targets is US\$470 million over the 11-year period, with an average per annum cost estimate of US\$42.7 million. On per capita terms, the cost estimate is US\$3.2 per year.

**Table 24: Cost of Key Water Sector Interventions**

Total Cost Estimates in US\$' Million	2005	2010	2015	% of Total in 2015	Total 2005-2015	Average 2005-2015	% of Total over period
<b>Water provision</b>							0
Capital cost - rural	16.9	21.9	26.5	17%	239.4	21.8	15%
Operating cost - rural	3.0	8.3	14.8	9%	94.0	8.5	6%
<b>Sub Total rural</b>	<b>19.9</b>	<b>30.2</b>	<b>41.3</b>	<b>26%</b>	<b>333.4</b>	<b>30.3</b>	<b>21%</b>
<b>Capital cost - urban</b>	11.2	11.0	14.4	9%	306.2	27.8	19%
Operating cost - urban	14.0	20.5	28.4	18%	211.8	19.3	13%
Sub Total urban	25.2	31.5	42.7	27%	518.0	47.1	32%
<b>Total</b>	<b>45.1</b>	<b>61.8</b>	<b>84.0</b>	<b>54%</b>	<b>851.4</b>	<b>77.4</b>	<b>53%</b>
<b>Sanitation</b>							
Capital cost - rural	5.9	6.7	7.8	5%	74.3	6.8	5%
Operating cost - rural	3.5	5.5	7.5	5%	60.7	5.5	4%
<b>Sub Total rural</b>	<b>9.4</b>	<b>12.3</b>	<b>15.3</b>	<b>10%</b>	<b>135.0</b>	<b>12.3</b>	<b>8%</b>
Capital cost - urban	16.9	19.1	23.9	15%	371.0	33.7	23%
Operating cost - urban	3.5	14.5	22.0	14%	149.8	13.6	9%
<b>Sub Total urban</b>	<b>20.4</b>	<b>33.6</b>	<b>45.9</b>	<b>29%</b>	<b>520.8</b>	<b>47.3</b>	<b>32%</b>
<b>Total</b>	<b>29.8</b>	<b>45.8</b>	<b>61.2</b>	<b>39%</b>	<b>655.8</b>	<b>59.6</b>	<b>41%</b>
<b>Waste Water Treatment</b>							
Rural				0%			0%
Urban	3.6	7.6	10.9	7%	97.0	8.8	6%
<b>Total</b>	<b>3.6</b>	<b>7.6</b>	<b>10.9</b>	<b>7%</b>	<b>97.0</b>	<b>8.8</b>	<b>6%</b>
<b>Hygiene Education</b>	<b>0.5</b>	<b>0.6</b>	<b>0.6</b>	<b>0%</b>	<b>8.3</b>	<b>0.8</b>	<b>1%</b>
<b>Total cost (\$m)</b>	<b>79.1</b>	<b>115.8</b>	<b>156.7</b>	<b>100%</b>	<b>1612.5</b>	<b>146.6</b>	<b>100%</b>

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Per Capita Total Cost Estimates in US\$	2005	2010	2015	% of Total in 2015	Average 2005-2015	% of Total over period
<b>Water provision</b>						
Capital cost - rural	1.5	1.7	1.8	17%	1.6	15%
Operating cost - rural	0.3	0.6	1.0	9%	0.6	6%
<b>Sub Total rural</b>	<b>1.7</b>	<b>2.3</b>	<b>2.7</b>	<b>26%</b>	<b>2.3</b>	<b>20%</b>
<b>Capital cost - urban</b>						
Operating cost - urban	1.0	0.8	1.0	9%	2.2	20%
Operating cost - urban	1.2	1.5	1.9	18%	1.4	13%
Sub Total urban	2.2	2.4	2.8	27%	3.6	32%
<b>Total</b>	<b>3.9</b>	<b>4.7</b>	<b>5.6</b>	<b>54%</b>	<b>5.8</b>	<b>53%</b>
<b>Sanitation</b>						
Capital cost - rural	0.5	0.5	0.5	5%	0.5	5%
Operating cost - rural	0.3	0.4	0.5	5%	0.4	4%
<b>Sub Total rural</b>	<b>0.8</b>	<b>0.9</b>	<b>1.0</b>	<b>10%</b>	<b>0.9</b>	<b>8%</b>
Capital cost - urban	1.5	1.4	1.6	15%	2.6	23%
Operating cost - urban	0.3	1.1	1.5	14%	1.0	9%
<b>Sub Total urban</b>	<b>1.8</b>	<b>2.5</b>	<b>3.1</b>	<b>29%</b>	<b>3.6</b>	<b>32%</b>
<b>Total</b>	<b>2.6</b>	<b>3.5</b>	<b>4.1</b>	<b>39%</b>	<b>4.5</b>	<b>41%</b>
<b>Waste Water Treatment</b>						
Rural	0.0	0.0	0.0	0%	0.0	0%
Urban	0.3	0.6	0.7	7%	0.7	6%
<b>Total</b>	<b>0.3</b>	<b>0.6</b>	<b>0.7</b>	<b>7%</b>	<b>0.7</b>	<b>6%</b>
<b>Hygiene Education</b>						
	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0%</b>	<b>0.1</b>	<b>1%</b>
<b>Total cost per capita (\$)</b>	<b>6.9</b>	<b>8.7</b>	<b>10.4</b>	<b>100%</b>	<b>11.1</b>	<b>100%</b>

### 6.7 Transport and Infrastructure

Although not directly linked to any MDG, investment in transport and infrastructure generally is a key ingredient to attaining the Millennium Goals. Investments in infrastructure have spill-over effects to all other sectors of the economy in terms of cheap and efficient transportation systems. This is the reason why we have included a component of costs for transport and infrastructure interventions.

Zambia has a gazetted road network of approximately 37,000 km of which 6,476 km are paved bituminous and surfaced to class 1 standards. The gravel and earth roads account for 6,478 km and 21,967 km respectively. In addition, there are about 30,000 km of ungazetted community road network (MOFNP, 2002).

According to the Millennium Project (2004), countries need to meet a minimum road density of 0.5 kilometres per 1,000 persons in order to meet the MDGs. A paved road network of 6,476 km for Zambia translates into a paved road density of 0.58 km, slightly higher than the threshold used by the Millennium Project.

On this basis, it was assumed that for Zambia to meet the millennium requirements for the MDG roads target, the country should maintain its existing road network and only expand when the road density declines in later years due to population pressures. We therefore just assume the costs for maintaining the gazetted road network.

Per unit cost assumptions include:

- Cost for resurfacing paved roads per kilometre is US\$27, 600.
- Cost for putting up a new road US\$1, 380, 000 per kilometre.

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- Cost of creating gravel community roads is US\$500 per kilometre.

On the basis of these assumptions, the total cost for transport infrastructure investments is estimated at US\$2,722.7 million over the 11-year period. On average, the country must spend US\$247.5 million per year on this sector. On per capita basis, the cost translates into US\$18.7 per year between 2005 and 2015.

**Table 25: Road Maintenance Costs**

	2005	2010	2015	As a % of 2015 Cost	Total	% of Total	Average	% of Total
Paved Roads	178.74	405.06	450.55	88%	3,501.99	84%	187.87	50%
Gravel Roads	48.66	48.66	48.66	10%	535.30	13%	48.66	13%
Other Roads	10.98	10.98	10.98	2%	120.82	3%	48.66	13%
<b>Total</b>	<b>238.38</b>	<b>464.71</b>	<b>510.19</b>	<b>100%</b>	<b>4,158.11</b>	<b>100%</b>	<b>378.01</b>	<b>100%</b>

### *Per Capita Costs US\$*

	2005	2010	2015	As a % of 2015 Cost	Average 2005-2006	% of Total
Paved Roads	15.61	30.52	29.97	88%	23.44	84%
Gravel Roads	4.39	3.67	3.24	10%	3.70	13%
Other Roads	0.99	0.83	0.73	2%	0.83	3%
<b>Total</b>	<b>20.82</b>	<b>35.01</b>	<b>33.94</b>	<b>100%</b>	<b>27.97</b>	<b>100%</b>

### Energy

Energy is an important sector that has an impact on all the MDGs. According to the 2002/2003 LCMS, only 15% of the households use electricity for cooking. Due to time limitations of collecting sufficient data, the cost estimates of the energy sector are based on the Millennium Project (2004) findings in 5 countries; Bangladesh, Cambodia, Ghana, Tanzania and Uganda. In all these countries the cost on energy for meeting the MDGs is close to the education costs in all the 5 countries. Therefore, cost estimates for Zambia, though no simulations have been done, are assumed to range closely to the education costs.

On per capita basis, we assume that in 2005, expenditure on energy should be US\$5 per capita rising linearly to US\$10 per capita in 2015, in line with the education estimates for Zambia. Therefore, the total cost on energy is estimated at US\$1, 113.7 million over the 11-year period, translating into US\$101.2 millions per year on average.

### **6.8 Summary of Total Cost and Financing Gap**

The table below summarises the total amount of investments required for Zambia to meet the MDGs. According to the table, Zambia will need to invest on average US\$110 per capita per year in capital and operating expenditures towards meeting the Goals. Since investments can be scaled up only gradually, the financing will rise from US \$ 87.8 per capita in 2005 to US \$ 129.5 per capita by 2015. A rising share of these costs will be financed from domestic resources but still there is a financing gap

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of up to US \$56.7 per capita per year and this increases to US\$60.4 when growth rates increase to the extent that poor households are in a position to contribute to the cost through general taxes.

In other words, Zambia will need to invest US\$1.5 billion on MDG interventions per year in order to meet the Goals. The MDG investment needs will rise gradually from US\$1 billion in 2005 to US\$1.9 billion in 2015. It is assumed that these costs should be made largely from domestic resources. However, even after raising government expenditure and household contributions significantly, there is a large financing gap that remains. We assume that government expenditure on MDGs should rise from 8 percent of GDP in 2005 to 12 percent of GDP by 2015. This entails government spending of US\$446.1 million on MDGs in 2005 to US\$1 billion in 2015. The implication here is that government must more than double its contribution on MDG-targeted interventions. In this “lower case scenario” assume that in areas such as water, health and energy, households should make additional contribution to taxes. The contribution here is assumed to be through service charges. Under this scenario, the proportion of private household contributions should rise from US\$63.8 million in 2005 to US\$142 million in 2015.

**Table 26: Summary of Costs and Financing for MDGs**

	Year 2005		Year 2010		Year 2015		Over the Full Period 2005-2015			
	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Overall Total \$'M	Average Per Year \$'M	Average Per Capita \$	Average % of GDP
Hunger	48.5	4.2	142.7	10.8	279.3	18.6	1,656.8	150.6	11.0	2%
Education	131.9	11.5	153.1	11.5	202.5	13.9	1,759.7	160.0	12.0	3%
Gender Equality	22.9	2.0	26.5	2.0	30.1	2.0	291.7	26.5	2.0	0%
Health	324.7	28.4	397.7	30.0	483.6	32.2	4,403.6	400.3	30.1	7%
Water and Sanitation	79.1	6.9	115.8	8.7	156.7	10.4	1,612.5	146.6	11.1	2%
Improving lives of slum dwellers	45.3	4.0	34.1	2.6	51.6	3.4	498.3	45.3	3.4	1%
Energy	57.2	5.0	99.6	7.5	150.3	10.0	1,612.5	146.6	7.5	2%
Roads	238.4	20.8	464.7	35.0	510.2	33.9	4,158.1	378.0	28.0	6%
Other	57.2	5.0	66.4	5.0	75.2	5.0	729.3	66.3	5.0	1%
<b>Total</b>	<b>1005.3</b>	<b>87.8</b>	<b>1500.5</b>	<b>113.0</b>	<b>1939.4</b>	<b>129.5</b>	<b>15,993.1</b>	<b>1520.2</b>	<b>110.0</b>	<b>25%</b>
<i>Economic Output(GDP)</i>		399.3		445.2		496.4			446.3	100%

*First Scenario (with Household contributions through "user fees").*

### **Financing**

A: Households	63.8	5.6	99.1	7.5	142.4	9.5	1106.8	100.6	7.5	2%
B: Government	382.4	33.4	601.7	45.3	895.4	59.6	6782.4	616.6	45.8	10%
<b>Total Domestic Contribution</b>	<b>446.1</b>	<b>39.0</b>	<b>700.8</b>	<b>52.8</b>	<b>1037.9</b>	<b>69.0</b>	<b>7889.3</b>	<b>717.2</b>	<b>53.3</b>	<b>12%</b>
<b>C: Domestic Financing Gap</b>	<b>559.1</b>	<b>48.9</b>	<b>799.7</b>	<b>60.2</b>	<b>901.6</b>	<b>60.4</b>	<b>8103.9</b>	<b>803.0</b>	<b>56.7</b>	<b>13%</b>

*Second Scenario (without Household "user fees").*

Government	382.4	33.4	601.7	45.3	895.4	59.6	6782.4	616.6	45.8	
<b>Domestic Financing gap</b>	<b>622.9</b>	<b>54.4</b>	<b>898.8</b>	<b>67.7</b>	<b>1044.0</b>	<b>69.9</b>	<b>9210.7</b>	<b>903.6</b>	<b>64.2</b>	

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As a result, the MDG financing gap<sup>14</sup> rises from US\$559.1 million in 2005 to US\$901.6 million in 2015, with an annual average of US\$803 million. In per capita terms, the financing gap rises from US\$48.9 per capita in 2005 to US\$60.4 per capita in 2015, with an average annual per capita of US\$56.7.

We also produce a “higher case scenario” that omits additional household contributions. We propose this “higher case” model because we are all too aware of the country’s experience in the recent past where the levying of user fees in health and education – even where there was an official “fee waiver” policy for poorer income groups – had disastrous social costs. Our finding in this the second “higher case” scenario, where it is assumed there are no private household contributions, the MDG financing gap increases slightly. Without household contributions, the financing gap becomes US\$622.9 million in 2005 to US\$1 billion by 2015. This also suggests a doubling of donor support and much of this should come in form of direct budget support.

**Table 27: Official Projected AID Disbursements 2005**

	Agriculture	Energy	Infrastructure	Health	Education	Water and Sanitation	Gender and HIV/AIDS	Total	As a % of Total
<b>Canada</b>				3.93	1.62			5.55	1%
<b>DCI</b>				5.4	7.37	3.76	4	20.53	5%
<b>Denmark</b>	0.51		11.73	5.95	11.73	2.21	1.7	33.83	8%
<b>Finland</b>	0.65				5.4			6.05	1%
<b>Germany</b>					0.03	21.4	0.7	22.13	5%
<b>Japan</b>								0	0%
<b>Netherlands</b>	3.12			18	14.07	0.63	1.77	37.59	8%
<b>Norway</b>	3.89		2.55		14.58		4.73	25.75	6%
<b>Sweden</b>	6.4	1.7		12.9				21	5%
<b>UK</b>	0.1			10.7	10.6		9.2	30.6	7%
<b>USAID</b>	5.36			12.7	5.89		59.58	83.53	19%
									0%
<b>EC</b>	0.6		40.3	3.78	3.78			48.46	11%
<b>IMF</b>									0%
<b>World Bank</b>	13	18.17	27.81	6	18.82	0.81	8.81	93.42	21%
									0%
<b>FAO</b>	1.35						0.15	1.5	0%
<b>ILO</b>									0%
<b>UNDP</b>							1.6	1.6	0%
<b>UNFPA</b>				1			0.3	1.3	0%
<b>UNHCR</b>	0.41		0.93	0.93	0.5	0.24	0.1	3.11	1%
<b>UNICEF</b>				3	2	2	0.46	7.46	2%
<b>WHO</b>				4.5			0.28	4.78	1%
									0%
<b>TOTAL</b>	35.39	19.87	83.32	88.79	96.39	31.05	93.38	448.2	100%
<b>As a % of Total</b>	8%	4%	19%	20%	22%	7%	21%	100%	

Source: Joint Assistance Strategy (JASZ) Summary Report, 2005. P. 12.

<sup>14</sup> The MDG financing gap is the proportion of a country’s MDG investment needs that cannot be financed through domestic resource mobilisation by government and households.

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Comparing the gaps with actual projected official donor aid commitments for 2005 reveals that more resources are needed to be added to the existing levels of aid. Table 27 below shows that the total aid pledged in 2005 is US\$448.2 million. Past experiences show that not all of this money goes to actual programmes, part is which is spent on administering the aid particularly if the aid is tied to specific projects.

We can summarise by saying that the actual donor pledges for 2005 are far below the required amounts for 2005. According to the estimations in this report, in 2005, the MDG gap for Zambia is US\$559.1 million, assuming that government and households have fulfilled their parts. Notwithstanding, the inadequacies of donor pledges, the actual gap in extra financing<sup>15</sup> for 2005 would be US\$ 111 million. This entails that existing donor pledges are far below the required amounts. Moreover, donor pledges are for very short periods. This means there are, as yet, no donor financial commitments beyond 2005.

## 7 Conclusions and Recommendations

### 7.1 Conclusions

Five years ago, the international community made a Millennial Declaration. The promise made then and on successive occasions was that no country would go without the additional resources to achieve the MDGs. This paper is offered in support of that pledge. We have produced an assessment based on the available data of what level of additional finance is required from financial sources both in Zambia and the wider aid community. Our figures are based on the best available data and where this has not been available, with indicative assessments that are on the side of conservative estimates. In the absence of hard reliable data, we have made estimates that should be regarded as indicative rather than definitive.

We have constructed Zambia's MDG financing gap and now look to the Government of the Republic of Zambia to come up with the necessary policy actions to fill this gap. But also, we look to the international donor community to fulfil their pledge made at the Monterrey Financing for Development Conference and in the G8 Africa Action Plan that no "country genuinely committed to good governance and economic reform should miss out on achieving the MDGs through lack of finance. It is up to all parties now to fulfil their side of this important international development compact.

Our study finds that Zambia will need to increase public investment in social services, basic infrastructure and environmental management. The findings in this paper give provisional estimates of the costs. The estimates suggest that to reach the MDGs, government as well as cooperating partners must double their financing between 2006 and 2015. A much more comprehensive costing exercise should be done with full participation of key stakeholders, especially policy makers and implementers. However, the findings of this study give a good estimate of what resources would be required in order for Zambia to reach the Goals.

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<sup>15</sup> that the additional amount required after donor pledges are subtracted is US\$111 million.

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Zambia will need to invest on average US\$110 per capita per year in capital and operating expenditures towards meeting the Goals. Since investments can be scaled up only gradually, the financing will rise from US \$ 87.8 per capita in 2005 to US \$ 129.5 per capita by 2015. The costs do not include technical cooperation for capacity building and other purposes, emergency assistance or other ODA that does not directly finance the capital or operating costs of MDG interventions.

In line with the Monterrey consensus, Zambia will need to expand its domestic resource mobilisation to finance MDG-based poverty reduction strategies. A rising share of these costs will be financed from domestic resources but still there is a financing gap<sup>16</sup> of up to US \$56.7 per capita per year and the amount increases to US\$60.4 per capita in 2015.

In other words, Zambia will need to invest US\$1.5 billion on MDG interventions per year in order to meet the Goals. The MDG investment needs will rise gradually from US\$1 billion in 2005 to US\$1.9 billion in 2015. It is assumed that these costs should be made largely come from domestic sources. However, even after raising government expenditure and household contributions significantly, there is a large financing gap that remains. We assume that government expenditure on MDGs should rise from 8 percent of GDP in 2005 to 12 percent of GDP by 2015. This entails government spending of US\$446.1 million on MDGs in 2005 to US\$1 billion in 2015, implying that government must more than double its contribution on MDG-targeted interventions. We also produce two scenarios with higher and lower case financing implications for donors where the former involves no additional household contributions. In the latter case, we assume that in areas such as water, health and energy, households make additional contribution to taxes. The contribution will be through service charges. In this instance, the proportion of private household contributions rises from US\$63.8 million in 2005 to US\$142 million in 2015.

Consequently, the MDG financing gap<sup>17</sup> rises from US\$559.1 million in 2005 to US\$901.6 million in 2015, with an annual average of US\$803 million. In per capita terms, the financing gap rises from US\$48.9 per capita in 2005 to US\$60.4 per capita in 2015, with an average annual per capita of US\$56.7. However with the second scenario where it is assumed no private household contributions, the MDG financing gap increases slightly.

In the “higher case scenario” where there are no additional household contributions, the financing gap becomes US\$622.9 million in 2005 to US\$1 billion by 2015. This also suggests a doubling of donor support and much of which should come in form of direct budget support...

In brief, we outline lower and upper case scenarios of future donor financing depending on assumptions of the political and economic feasibility of additional household contributions to the MDGs in a country where the majority live in absolute poverty.

- **In the "lower case scenario" (with extra household contributions) the required additional donor contributions in 2005 is US\$559.1 million rising to US\$901.6 in 2015.**
- **In the “higher case scenario” (without household contributions) the required additional donor contributions in 2005 is US\$ 622.9 million rising to US\$1.04 billion in 2015.**

According to the Millennium Project (2005) only about 25 percent of official bilateral assistance supports directly MDG investment needs at country level<sup>18</sup>. This implies that even though Zambia has a high per capita aid quotient, much of it is not MDG-relevant, especially in the current context where very few of donors have aligned their financing towards the PRSP.

<sup>16</sup> This is the gap when we assume that households make contributions through service charges.

<sup>17</sup> The MDG financing gap is the proportion of a country's MDG investment needs that cannot be financed through domestic resource mobilisation by government and households.

<sup>18</sup> See Millennium Project (2005) page 240.

### 7.2 Recommendations

#### Focusing on MDG Interventions

- ☑ Government must re-align its national policies focusing on MDG-related interventions. This should entail shifting resources from low to high priority areas in line with the MDGs.
- ☑ If the GRZ is to be able to plan and implement its plan with a genuine commitment to achieving the MDGs, the unacceptable volatility and unpredictability of donor flows must end. Donor pledges must be based on MDG financing requirements, with sets of conditions jointly negotiated with the GRZ and domestic stakeholders in the development process. Those conditions should be aligned with country owned development priorities. And donor pledges should be met with timely and full disbursements.
- ☑ Government must ensure that the National Development Plan being formulated will encompass fully MDG-consistent interventions. Thus the government must conduct a comprehensive MDG-costing exercise in all relevant sectors and this would become the basis for the MTEF and NDP.
- ☑ Cooperating partners should set their ODA contributions to fill the MDG financing gaps. This will require a shift in the determination and setting of donor financing to low-income countries. Currently the donor approach does not base pledges of financial support on the basis of a needs-based assessment to achieve the MDGs. Donors must shift away from the current approach where they provide only the level of finance they are willing to afford, irrespective of their international undertakings to achieve the MDGs. They should now be moving towards long term financing within a broader MDG perspective with substantially improved predictability of aid and therefore, potentially, enhance its effectiveness.
- ☑ In support of the MDGs, much of the donor financing should come in form of budget support. But this depends on many factors including donor headquarters changing aid financing rules, government improving budget performance by implementing the Integrated Financial Management Information Systems (IFMIS), transparency and accountability of government and improved dialogue between donors and government.
- ☑ Savings from debt cancellation must be spent on MDG-consistent interventions.
- ☑ With improved budget performance in terms of transparency, participation and accountability, more cooperating partners should align their development assistance around a country-owned plan. This should happen through mobilising their support behind an MDG financed budgets that are transparent, accountable and have been designed by a wide group of stakeholders.
- ☑ There is need to strengthen harmonisation among cooperating partners. This process should be an agenda driven by government.
- ☑ We propose the scaling up approach which would allow for the government to enhance its capacity to deal with implementation of MDG interventions.

#### The Need for Extra Financing

In addition to financing the MDG Investment needs, the country also needs additional support for capacity building and total debt cancellation in order to improve the absorptive capacity of aid and also to ensure that resources remain in the country because of absence of external debt service obligations.

Shocks such as oil prices and drought if drastic can spell a huge blow in the ability of the country to reach the intended Goals despite adequate financing. There is therefore need for flexible emergency support in the form of grant aid in times of shocks. Government as well as donors must put aside additional emergency funds that would be used in times of natural calamities and adverse shocks.

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The Commission for Africa and indeed the Millennium Project underscore the need for increased investments in infrastructure particularly from a regional perspective. It is therefore recommended that government engages fully and proactively in the NEPAD and African Peer Review Mechanism (APRM) so as to harness any regional investment opportunities that may lead to increased investment in infrastructure and consequently competitiveness.

### **Accountability Issues**

In certain instances, increased dependence on external financing entails government becoming more accountable and transparent to cooperating partners and less to its citizenry. It is therefore important for donors to make civil society participation in national developmental programmes an important requirement. In addition, government must pass the information bill so that the public can have easy access to information.

### **Real Macroeconomic Implications of Aid**

Since much of the externally financed government spending will be devoted to the no-tradable sector, an appreciation of the real exchange rate is possible. To contain the exchange rate appreciation, there is need for appropriate monetary policy and other policy measures<sup>19</sup> to ensure that any increased foreign currency flowing in a country as aid do not necessarily lead to an over-valued local currency a situation which may trigger more imports and less exports.

### **Immediate Areas of Focus**

Below are some of the first interventions that government can start on or enhance immediately. This is based on the Millennium Project recommendation.

- Dropping user fees in essential health care, hiring all unemployed teachers and medical staff, raising public sector salaries to enhance capacity so as to attract well-trained experts in the public service.
- Large scale training, particularly for community health workers, agriculture extension workers and community based experts in infrastructure.
- Financing for HIV/AIDS, bed-nets for Malaria and TB control.

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<sup>19</sup> See Millennium Project (2005) page 247 for more detailed views on the effect of increased foreign aid flows on the macroeconomic situation of an economy.

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## APPENDIX A: Millennium Development Goals

<p><b>GOAL 1</b> Eradicate poverty and hunger</p>	<p><b>Target 1</b> Halve between 1990 and 2015 the proportion of people whose income is less than US\$1 per day. <b>Target 2</b> Halve between 1990 and 2015, the proportion of people who suffer from hunger.</p>
<p><b>GOAL 2</b> Achieve universal primary education</p>	<p><b>Target 3</b> Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.</p>
<p><b>GOAL 3</b> Promote gender equality and empower women</p>	<p><b>Target 4</b> Eliminate gender disparity in primary and secondary education, preferably by 2005 and in all levels of education no later than 2015.</p>
<p><b>GOAL 4</b> Reduce child mortality</p>	<p><b>Target 5</b> Reduce by 2/3 between 1990 and 2015, the under-five mortality rate.</p>
<p><b>GOAL 5</b> Improve maternal health</p>	<p><b>Target 6</b> Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.</p>
<p><b>GOAL 6</b> Combat HIV/AIDS, Malaria and other diseases</p>	<p><b>Target 7</b> Have halted by 2015 and begun to reverse the spread of HIV/AIDS. <b>Target 8</b> Have halted by 2015 and begun to reverse the incidence of Malaria and other major diseases.</p>
<p><b>GOAL 7</b> Ensure Environmental sustainability</p>	<p><b>Target 9</b> Integrate the principle of sustainable development into country policies and programmes and reverse the loss of environmental resources. <b>Target 10</b> Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. <b>Target 11</b> Have achieved by 2020 a significant improvement in the lives of at least 100 million slum dwellers.</p>
<p><b>GOAL 8</b> Develop a global partnership for development</p>	<p><b>Target 12</b> Develop further an open, rule-based, predictable, non-discriminatory trading and financial system (including a commitment to good governance, development, and poverty reduction - both nationally and internationally). <b>Target 13</b> Address the special needs of Least Developed Countries including</p>

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tariff – and quota-free access for Least Developed Countries' exports, enhanced programme of debt relief for Heavily Indebted Poor Countries (HIPCs) and cancellation of official bilateral debt and more generous official development assistance for countries committed to poverty reduction.

***Target 14***

Address the special needs of land-locked developing countries and small island developing states (through the programme of action for the sustainable development of small island developing states and 22<sup>nd</sup> General Assembly Provisions.

***Target 15***

Deal comprehensively with debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

***Target 16***

In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.

***Target 17***

In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries.

***Target 18***

In cooperation with the private sector, make available the benefits of new technologies especially information and communication technologies.

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### APPENDIX B: FINANCING OF MDGS BY SECTOR

#### A. Households Contributions

	Year 2005		Year 2010		Year 2015		Over the Full Period 2005-2015			
	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Overall Total \$'M	Average Per Year \$'M	Average Per Capita \$	Average % of GDP
Hunger	11.9	1.0	34.4	2.6	62.3	4.1	364.6	33.1	2.4	
Education	32.4	2.8	36.9	2.8	45.2	3.1	387.3	35.2	2.6	
Gender Equality	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Health	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Water and Sanitation	19.4	1.7	27.9	2.1	35.0	2.3	354.9	32.3	2.4	
Improving lives of slum dwellers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Energy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Roads	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Total</b>	<b>63.8</b>	<b>5.6</b>	<b>99.1</b>	<b>7.5</b>	<b>142.4</b>	<b>9.5</b>	<b>1106.8</b>	<b>100.6</b>	<b>7.5</b>	

#### B. Domestically Financed Government Expenditures

	Year 2005		Year 2010		Year 2015		Over the Full Period 2005-2015			
	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Overall Total \$'M	Average Per Year \$'M	Average Per Capita \$	Average % of GDP
Hunger	18.5	1.6	57.2	4.3	128.9	8.5	702.6	61.1	4.6	
Education	50.2	4.4	61.4	4.6	149.4	6.4	746.3	64.9	5.0	
Gender Equality	8.7	0.8	10.6	0.8	129.8	0.9	123.7	10.8	0.8	
Health	123.5	10.8	159.5	12.0	0.0	14.8	1867.5	162.4	12.5	
Water and Sanitation	30.1	2.6	46.4	3.5	0.0	4.8	683.8	59.5	4.6	
Improving lives of slum dwellers	17.2	1.5	13.7	1.0	0.0	1.6	211.3	18.4	1.4	
Energy	21.8	1.9	39.9	3.0	128.9	4.6	683.8	59.5	3.1	
Roads	90.7	7.9	186.3	14.0	150.3	15.6	1763.4	153.3	11.6	
Other	21.8	1.9	26.6	2.0	0.0	2.3	309.3	26.9	2.1	
<b>Total</b>	<b>382.4</b>	<b>33.4</b>	<b>601.7</b>	<b>45.3</b>	<b>0.0</b>	<b>59.6</b>	<b>6782.4</b>	<b>616.6</b>	<b>45.8</b>	

#### C. Required Total External Budget Support (Scenario one: With Household Private Contributions)

	Year 2005		Year 2010		Year 2015		Over the Full Period 2005-2015			
	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Annual Total \$'M	Per Capita \$	Overall Total \$'M	Average Per Year \$'M	Average Per Capita \$	Average % of GDP
Hunger	27.0	2.4	76.1	5.7	129.8	8.7	839.5	79.6	5.7	
Education	73.4	6.4	81.6	6.1	94.1	6.5	891.7	84.5	6.2	
Gender Equality	12.7	1.1	14.1	1.1	14.0	0.9	147.8	14.0	1.0	
Health	180.6	15.8	211.9	16.0	224.8	15.0	2231.3	211.5	15.5	
Water and Sanitation	44.0	3.8	61.7	4.7	72.9	4.9	817.1	77.4	5.7	
Improving lives of slum dwellers	25.2	2.2	18.2	1.4	24.0	1.6	252.5	23.9	1.8	
Energy	31.8	2.8	53.1	4.0	69.9	4.7	817.1	77.4	3.9	
Roads	132.6	11.6	247.7	18.7	237.2	15.8	2107.0	199.7	14.4	
Other	31.8	2.8	35.4	2.7	34.9	2.3	369.5	35.0	2.6	
<b>Total</b>	<b>559.1</b>	<b>48.9</b>	<b>799.7</b>	<b>60.2</b>	<b>901.6</b>	<b>60.4</b>	<b>8103.9</b>	<b>803.0</b>	<b>56.7</b>	

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### D. Required Total External Budget Support (Scenario one: Without Household Private Contributions)

	Year 2005		Year 2010		Year 2015		Over the Full Period 2005-2015			
	<i>Annual Total \$'M</i>	<i>Per Capita \$</i>	<i>Annual Total \$'M</i>	<i>Per Capita \$</i>	<i>Annual Total \$'M</i>	<i>Per Capita \$</i>	<i>Overall Total \$'M</i>	<i>Average Per Year \$'M</i>	<i>Average Per Capita \$</i>	<i>Average % of GDP</i>
Hunger	30.1	2.6	85.5	6.4	150.3	10.0	954.2	89.5	6.4	
Education	81.7	7.1	91.7	6.9	109.0	7.5	1013.4	95.1	7.0	
Gender Equality	14.2	1.2	15.9	1.2	16.2	1.1	168.0	15.8	1.2	
Health	201.2	17.6	238.2	17.9	260.3	17.4	2536.1	238.0	17.6	
Water and Sanitation	49.0	4.3	69.4	5.2	84.4	5.6	928.7	87.1	6.5	
Improving lives of slum dwellers	28.0	2.5	20.4	1.5	27.8	1.9	287.0	26.9	2.0	
Energy	35.5	3.1	59.6	4.5	80.9	5.4	928.7	87.1	4.4	
Roads	147.7	12.9	278.4	21.0	274.6	18.3	2394.7	224.7	16.3	
Other	35.5	3.1	39.8	3.0	40.5	2.7	420.0	39.4	2.9	
<i>Total</i>	622.9	54.4	898.8	67.7	1044.0	69.9	9210.7	903.6	64.2	