WPS4674

POLICY RESEARCH WORKING PAPER 4674

Reaching the Millennium Development Goals:

Mauritania Should Care

Alessandro Magnoli Bocchi
Nicola Pontara
Khayar Fall
Catalina M. Tejada
Pablo Gallego Cuervo

The World Bank
Africa Region
Poverty Reduction and Economic Management
July 2008

Policy Research Working Paper 4674

Abstract

Mauritania is a resource-rich developing country. As many other African nations, it will not reach most of the Millennium Development Goals, unless the authorities commit to accelerating progress. To succeed by 2015, the government needs to: mobilize additional financial resources, introduce policy changes at the sector level, and strengthen the links between strategic objectives and the budget. Adopting the Millennium Development Goals as the overarching development framework will keep policy-makers focused on concrete results and help them avoid the so-called "natural resource curse." This paper calculates the total cost of the Millennium Development Goals and financing gap (on aggregate and for each goal); recommends changes in domestic sector policies; and proposes ways to integrate the Millennium Development Goals into the budget process. Over 2008-2015, the total cost of reaching the goals in Mauritania and the resulting financing gap stand at, respectively, around 9 and 3 percent of non-oil gross domestic product on average per year. Education is the most expensive goal in absolute terms, but the individual financing gaps are widest for poverty reduction and improving maternal health. On the policy side, sector strategies need to be aligned with the goals and resources allocated more than proportionally to the disadvantaged groups, mainly at the local level.

This paper—a product of Africa Region, Poverty Reduction and Economic Management —is part of a larger effort in the department to help Governments reach the Millennium Development Goals. Policy Research Working Papers are also posted on the Web at http://econ.worldbank.org. The authors may be contacted at amagnoli@worldbank.org and npontara@worldbank.org.

Reaching the Millennium Development Goals: Mauritania Should Care[1]

Alessandro Magnoli Bocchi
World Bank, Washington DC, USA

Nicola Pontara
World Bank, Washington DC, USA

Khayar Fall
Ministry of Economy and Finance, Nouakchott, Mauritania

Catalina M. Tejada
World Bank, Washington DC, USA

Pablo Gallego Cuervo
London School of Economics, London, UK

JEL Classification: C-20, C-53, H-50, H-68, O-21

Key words: Mauritania, Millennium Development Goals, Costing, Public Expenditures, Public Policies.

[1] We are grateful to the Mauritanian authorities for their support, notably Hassen Ould Zein (Economic Advisor to the Prime Minister) and Mohyedine Ould Sidi Baba (Advisor to the Minister of Economy and Finance). We thank Guisset Djalel (data collection), Pierre Lenaud, Elianne Tchapda and Cristina Otano (logistical support). We also thank for insight and comments Hans Logren and Boris Samuel (modeling), Hawa Wague Cissé, Bakari Coulibaly (public expenditure management), and Vincent Turbat (health). The findings, interpretations, and conclusions are our own and should not be attributed to the World Bank, its Executive Board of Directors, or any of its member countries. The usual disclaimers apply.

Table of Contents

Figures

Tables

Boxes

Annexes

Introduction

Mauritania is rich in natural resources, but its human development is low. Natural resources constitute the backbone of the Mauritanian economy. For decades, iron ore and fisheries have contributed to the public coffers. In 2006, the country joined the rank of oil-exporters. However, both exports and growth have been unable to bring about significant human development over the years. The 2007 Human Development Index (HDI) ranked Mauritania 137th out of a total of 177 countries (UNDP 2007).

To improve the living standards of the population and sustain broad-based growth, the authorities need to achieve the Millennium Development Goals (MDGs). The government has laid out an ambitious strategy to propel the country into the middle-income group in the medium-term (GIRM 2007a).[2] To achieve this, Mauritania needs to differentiate growth beyond natural resources, and ensure that all segments of the population – 47 percent of which still lives in poverty (GIRM 2006) -- benefits from inclusive broad-based growth.

However, with current policies and resources (both national and external), Mauritania is unlikely to reach most of the MDGs. As of today, only gender equality in primary and secondary education (MDG_3) can be reached, while the poverty reduction goal (MDG_1) is at risk. The probability of reaching the other MDGs including the primary school retention rate and all the health-related goals is minimal. The country may reach the goal for HIV/AIDS, given its low prevalence, and – given recent progress – the goal for maternal mortality (GIRM 2007).

The authorities should consider the MDGs as the centerpiece for the development strategy of Mauritania. The MDGs provide a valuable set of result-oriented monitoring indicators. Adopting them as the government's overall development framework will keep policy-makers focused on concrete results; help them avoid the so-called "natural resource curse"[3]; and ultimately increase the likelihood that reforms will be kept on track. Indeed, establishing a credible roadmap to achieve the MDGs (i.e.: invest resources to reduce poverty and promote human development) can mitigate the risk of reduced commitment to reform due to the easing of resource constraints, notably if oil production picks up in the future.

To accelerate progress towards the MDGs, more resources and better policies are needed. Over 2008-2015, simulations show that the total cost of reaching the MDGs and the resulting financing gap are, respectively, 8.9 and 3.2 percent of non-oil GDP on average per year. Education is the most expensive goal in absolute terms, but the financing gaps are widest for poverty reduction and improving maternal health. On the policy side, sectoral strategies need to be better aligned with the MDGs, and resources allocated more than proportionally to the disadvantaged groups, notably at the local level.

---

[2] In 2006, the country's Gross Domestic Product (GDP) was US$2.7 billion, which conferred a per capita Gross National Income (GNI) of US$938 on its 2.9 million people.

[3] Evidence suggests that resource-rich developing countries lag the resource-poor countries in terms of per capita income (Sachs and Warner 2001) and the quality of institutions and governance (Sala-i-Martin and Subramanian 2003).

This can be achieved only if the links between MDGs and public resources are strengthened, through improved sector strategies.

This paper is structured as follows. Section 1 takes stock of progress made to date in reaching the MDGs and discusses the likelihood of achieving each goal. Section 2 discusses the methodology and the data sources. Section 3 presents for each MDG the current situation and trend, and illustrates both the cost and the financing gaps of reaching each goal. Section 4 proposes key policy changes and suggests how the ”costing of the MDGs” exercise can be linked to the existing budget elaboration process to link the available resources to the government’s objectives. Section 5 summarizes the main results and presents the key recommendations that emerge from the analysis.

1. MDGs in Mauritania: Progress to Date

The government has set ambitious targets to improve the country's human development. The objectives of the PRSP-2 are closely aligned with the MDGs, and in some cases exceed them (Table 1). For instance, the PRSP-2 target for poverty incidence (at 25 percent) is more ambitious than its corresponding MDG (at 28 percent). The same is true for the retention rate. By contrast, recognizing slow progress in reducing maternal and child mortality and expanding access to safe-drinking water, the PRSP-2 targets in these areas are less ambitious than the corresponding MDG targets.

Table 1. MDGs in Mauritania: Performance, Targets, and Likelihood

MDG Between *1990 and 2015*	**Past Performance**		**Targets**		**Likelihood** *(with current resources and policies)*
			PRSP-2	**MDG**	
	1990	**2004**	**2015**	**2015**	
Goal 1. Eradicate extreme poverty and hunger					
Target 1. Halve the % of people with income of < $1-a-day					
Indicator 1. Poverty incidence (% below national poverty line)	56.6	46.7	25.0	28.0	**Low**
Goal 2. Provide primary education for all					
Target 3. Ensure that all children complete primary school					
Indicator 7. % of pupils starting grade 1 who reach grade 5	73.8	40.2	100.0	78.0	**Low**
Goal 3. Promote gender equality and empower women					
Target 4. Eliminate gender disparity in education					
Indicator 9. Ratio girls / boys in primary and secondary					
Indicator 9a. Ratio of girls to boys in primary education	72.0	99.0	100.0	98.0	**High**
Indicator 9b. Ratio of girls to boys in secondary education	n/a	85.0	100.0	98.0	**High**
Goal 4. Reduce child mortality					
Target 5. Reduce by 2/3 the under-five mortality rate					
Indicator 13. Under-five mortality rate (per 1,000)	137.0	135.0	55.0	45.7	**Low**
Indicator 14. Infant mortality rate (per 1,000)	126.0	87.0	40.0	42.0	**Low**
Goal 5. Improve maternal health					
Target 6. Reduce by 3/4 the maternal mortality ratio					
Indicator 16. Maternal mortality (per 100,000 live births)	930.0	747[a]/[1]	300.0	232.0	**Low/medium**
Goal 6. Combat HIV/AIDS, malaria and other diseases					
Target 7. Halt and begin to reverse HIV/AIDS					
Indicator 18. HIV prevalence (%)	0.52	1.77	<1	0.68	**Medium**
Target 8. Halt and begin to reverse malaria + other diseases					
Indicator 21. Prevalence of malaria (%)	12.7	8.85	n/a	4.78	**Low**
Indicator 23. Prevalence of tuberculosis (%)	0.13	0.40	n/a	0.24	**Low**
Goal 7. Ensure environmental sustainability					
Target 10. Halve the % of people without water / sanitation					
Indicator 30. % population with sustainable access to water	37.0	40.0	75.0	68.0	**Low**

Source: GIRM 2006, 2007, http://www.unmillenniumproject.org/reports/index.htm.

[a] Corresponds to 2001. 1/ Latest estimate: 684 (GIRM 2007b), not available when this analysis was carried out.

However, with current resources and policies, Mauritania is highly unlikely to reach most of the MDGs. Only MDG_3 (gender equality) is at hand; with MDG_1 (poverty reduction) also a possible – if unlikely – candidate, as it depends on the successful interaction of sustained growth and effective delivery of pro-poor programs. In primary education, reaching 100 percent retention rate, in the light of the negative performance in recent years (Figure 4), also seems unlikely. In addition, Mauritania is off-track with respect to the health-related MDGs, barring the HIV/AIDS indicator and possibly maternal mortality if recent progress is sustained.

2. Data and Methodology

The data and methodology were agreed with the Mauritanian authorities and main development partners. Extensive consultations were carried out to: (i) ensure a common understanding of the data sources and methodology; (ii) clarify the limitations of the exercise to all parties (Box 1); and (iii) make sure that the exercise could be owned by the Mauritanian authorities, independently of future technical assistance. In this respect, the emphasis was put on developing a simple methodology, adapted to the context of Mauritania. Each update of the database and modification of the methodology was carried out in full consultation and partnership with the Mauritanian authorities.

Box 1. Data and Methodology: Limitations

Data are scarce. The calculation of the cost and financing gap for certain MDG targets was not carried out due to data scarcity. As a result, within MDG_{1-7}, this exercise focuses on the 8 targets and eleven indicators listed in Table 1 (for the full list of goals, indicators and targets, see http://www.un.org/millenniumgoals/). Moreover, the absence of data on sectoral interactions (e.g.: synergies in social services delivery), led to the use of a partial - instead of general - equilibrium model.

A partial-equilibrium accounting model. As the methodology needs to be easy-to-grasp and use, the accounting model utilized in this study abstracts from general-equilibrium considerations, for three reasons.

First, exogenous factors as diverse as macroeconomic shocks or a fast expansion of private provision of social services are difficult to forecast. To overcome this challenge, the model utilizes the latest IMF macro-framework, which endogenizes – hence not allowing for exogenous *ad hoc* calibrations – all key macro issues (i.e. foreign aid inflows, the possible resulting exchange rate appreciation, the dynamics of labor demand and supply, the public crowding out of private investment, and their effect on economic growth).

Second, this study narrowly focuses on the achievement of the MDGs, a sub-set of the country's development strategy. Hence, it only calculates the cost of the few key inputs that – in Mauritania – are directly linked with the achievement of each MDG (i.e., to reduce child mortality, key factors are the access to a health post, specialized personnel and drugs). Other crucial inputs for the overall improvement of education, health and water and sanitation (such as public infrastructure) have not been factored into the calculations. As a result, underestimation of the effective cost is possible.

Third, the absence of data on synergies between sectors does not allow for the elaboration of a general-equilibrium approach. Undeniably, the steady achievement of some goals will help the attainment of others: for example, a higher income, better education, and improved access to clean drinking water should improve women's health outcomes, and – as a consequence – reduce child mortality and malnutrition. Alas, country-specific (or even general) information on these interactions is not available. As these sectoral synergies are not captured, overestimation of the effective cost, via double-counting, is possible, especially in the very last years.

Main parameters and key assumptions of the model. For each of the seven goals[4], intermediate yearly targets (indicated with MDG_{1-7}) were developed for the period 2008-

[4] The eighth goal, Develop a Global Partnership for Development (MDG_8), is not considered, as it refers to donor nations.

2015. These targets have been estimated by establishing a linear projection between the 1990 value and the 2015 objective. The Mauritanian expected outcomes – as declared in the government's plan – are indicated with $M_{1\text{-}7}$. The resulting projected gap in coverage is calculated over time as the MDG target minus the Mauritanian expected outcome (i.e. $MDG_{1\text{-}7}$ minus $M_{1\text{-}7}$), and is represented with $X_{1\text{-}7}$. Respectively, $CI_{1\text{-}7}$, $CR_{1\text{-}7}$ and $C_{1\text{-}7}$ indicate the investment, recurrent and total average unit cost. $B_{1\text{-}7}$ designates the official budget projections allocated to each MDG, by both government and donors. Finally, $F_{1\text{-}7}$ represents the projected financing gap per MDG, i.e. the required change in budget projections – to be obtained via either cross-sector reallocations or new negotiation of extra resources with donors and lenders.

A partial-equilibrium accounting model calculates the cost and financing gap. For each goal, the data were collected and projected along three building blocks: (i) the unit cost, or $C_{1\text{-}7}$; (ii) the gap in coverage, or $X_{1\text{-}7}$; and (iii) the official budget projected allocations, or $B_{1\text{-}7}$. The unit costs are Mauritania-specific[5] and not constant, as they factor in both the expected macroeconomic performance (i.e. growth, inflation, and exchange rate do influence the unit cost) and the social services delivery's decreasing returns to scale. The Mauritanian expected outcomes are quantified explicitly in the government's plan only for 2010 and 2015; for the remaining years, the values were extrapolated with a linear projection. The official budget allocation includes past, current, and projected amounts.

Five key equations. Equation (1) represents the main hypothesis. For every year, each target (represented with MDG_i) is multiplied by its average unit cost. Subsequently, the financing gap is obtained by subtracting the official budget projection.

$$(1) \qquad \sum_{t=2008}^{2015} \left\{ \sum_{i=1}^{7} \left[(MDG_i * C_i) - B_i \right] \right\}_t = \sum_{t=2008}^{2015} \left(\sum_{i=1}^{7} F_i \right)_t$$

Equation (2) is the main identity and the accounting model's working assumption. Each year, the projected gap in coverage ($MDG_{1\text{-}7}$ minus $M_{1\text{-}7}$), multiplied by the average unit cost, is equal to the required change in budget allocation, which represents the financing gap.

$$(2) \qquad \sum_{t=2008}^{2015} \left\{ \sum_{i=1}^{7} \left[(MDG_i - M_i) * C_i \right] \right\}_t = \sum_{t=2008}^{2015} \Delta \left(\sum_{i=1}^{7} B_i \right)_t = \sum_{t=2008}^{2015} \left(\sum_{i=1}^{7} F_i \right)_t$$

Equation (3) provides, for advocacy purposes, the net present value (NPV) of the summation of the financing gaps. By so doing, the cost of reaching the MDGs can be compared with the NPV of key revenues (debt forgiveness, oil, etc.) and expenditures.

[5] When local costs were not available, standardized international costs for the region were used.

$$(3) \qquad NPV \sum_{t=2008}^{2015} \left\{ \sum_{i=1}^{7} \left[\left(MDG_i * C \right)_i - B_i \right] \right\}_t = NPV \sum_{t=2008}^{2015} \left(\sum_{i=1}^{7} F_i \right)_t$$

For MDG_1, the poverty reduction value is calculated through a simplifying assumption. Equation (4) assumes that poverty reduction is mostly driven by the growth of the economy, via the elasticity[6] of non-oil GDP on poverty.[7] The residual reduction is achieved through government spending, indicated with E_p. This shows the expenditure that each year needs to be allocated to poverty reduction programs to close the gap with the MDG_1 target (or the expected cost of reaching each year's poverty target), once the reduction of poverty associated with economic growth has been taken into account. Hence, for the period 2008-2015 equation (4) constructs an indicator, normalized between zero and one, by which the required change in poverty spending, or ΔE_p, is equal to one minus the change in the elasticity of non-oil GDP on poverty.[8]

$$(4) \qquad \underset{t=2008}{\overset{2015}{t}} \left(\Delta P = \Delta e_{y/p}; \Delta Ep \right)_t \Rightarrow \underset{t=2008}{\overset{2015}{t}} \left(\Delta Ep = 1 - \Delta e_{y/p} \right)_t$$

Once equation (4) determines ΔE_p, equation (5) calculates E_p, by multiplying ΔE_p by the budget allocated to poverty reduction programs in the previous year. Then, the financing gap for MDG_1 is obtained with Equation (1), by subtracting from E_p the budget projection already officially allocated to poverty reduction programs.

$$(5) \qquad \underset{t=2008}{\overset{2015}{t}} \left(E_p \right)_t = \underset{t=2008}{\overset{2015}{t}} \left[\left(\Delta Ep \right)_t * \left(B_p \right)_{t-1} \right]$$

[6] In this paper we assume linearity between growth and poverty reduction – i.e.: growth reduces poverty uniformly across population's quintiles. However, according to the evidence shown in recent literature, the elasticity of poverty reduction with respect to growth is not linear, especially in Africa – i.e.: the poorest the population, the lower the lifting effect of growth (Easterly, 2007).

[7] Between 2008 and 2015, the elasticity of non-oil GDP with respect to poverty is calculated by using the available yearly projections for both non-oil GDP growth and poverty incidence until 2015.

[8] The change in the required poverty spending is equal to the change in the absolute value of the elasticity of poverty on non-oil GDP; in this simulation however, it is calculated the other way, as it is easier to grasp intuitively.

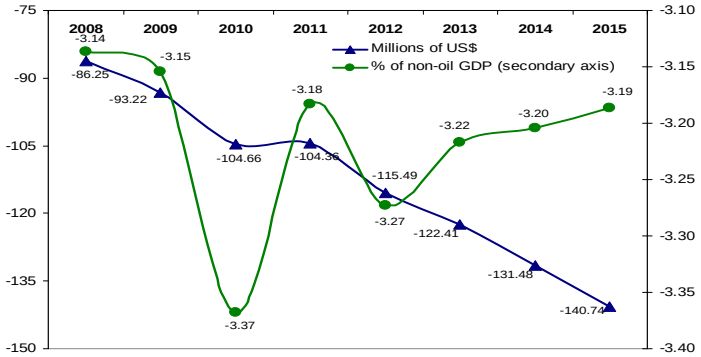
3. How Much Will the MDGs Cost?

3.1 Total Cost and Financing Gap

For the period 2008-2015, the model estimates the total cost of reaching the MDGs and the corresponding financing gap. The information can be broken down per MGD and per year, and can be expressed as a percentage of GDP[9], in US$ and in Mauritanian Ouguiya (MRO). Over 2008-2015, Table 2 presents yearly estimates of the total cost, budget projections and financing gap for each MDG. Reaching the MDGs would yield a *total cost of 8.95 percent of GPD on average per year* (US$ 1.62 billion in total). According to the official budget projections, over the same period, the Government plans to assign to the MDGs 5.73 percent of GDP on average per year (US$1.03 billion in total). Hence, the *total projected financing gap amounts to 3.22 percent of GDP on average per year* (US$ 579.9 million in total). Despite a rising cost in terms of absolute US$ (Figure 1 – blue line), the acceleration of the economic growth reduces the financing gap expressed in terms of non-oil GDP (Figure 1 – green line).

Education is the most expensive goal in absolute terms, but the financing gaps are widest for poverty, maternal health, and child mortality. Between 2008 and 2015, achieving a 100 percent retention rate in education (MDG_2) has the highest cost, corresponding to 3.8 percent of GDP on average per year (US$ 679.7 million in total). Reducing poverty (MDG_1) is the second most expensive, with a total cost of 1.5 percent of GDP on average per year (US$ 275.6 million in total). However, when the government's budget projections are taken into account, MDG_1 comes first in terms of financing requirements, with a financing gap of 0.9 percent of GDP on average per year (US$ 162.2 million in total). The second and third widest financing gaps are for improving maternal health and reducing child mortality (MDG_5 and MDG_4). For a detailed disaggregated analysis, including yearly data, see Annex 1.

Figure 1. Achieving the MGDs in Mauritania: Financing Gap



Source: Authors' calculations.

[9] Figures expressed in percentage of GDP always refer to non-oil GDP, unless otherwise specified.

Table 2. Achieving the MDGs in Mauritania: Total Cost, Budget and Financing Gap

(US$ and MRO, unless otherwise indicated)

MDGs		COST		BUDGET		FINANCING GAP	
		Total (M)	Per Capita	Total (M)	Per Capita	Total (M)	Per Capita
Goal 1. Eradicate extreme poverty and hunger	US$	275.57	16.04	113.33	6.60	***-162.24***	-9.44
Target 1, Indicator 1	MRO	75,736.05	4,435.21	31,161.84	1,825.61	-44,574.21	-2,609.59
Goal 2. Provide primary education for all	US$	***679.71***	40.45	613.29	36.37	-66.43	-4.08
Target 3, Indicator 7	MRO	187,221.60	11,206.73	168,863.47	10,073.23	-18,358.13	-1,133.50
Goal 3. Promote gender equality and empower women	US$	52.61	3.00	10.79	0.65	-41.83	-2.35
Target 4, Indicator 9	MRO	14,430.03	827.43	2,973.47	178.92	-11,456.55	-648.51
Goal 4. Reduce child mortality	US$	202.50	12.12	91.60	5.56	***-110.90***	-6.56
Target 5, Indicators13 and 14	MRO	55,816.45	3,360.86	25,280.47	1,543.00	-30,535.98	-1,817.85
Goal 5. Improve maternal health	US$	163.26	9.97	38.86	2.41	***-124.40***	-7.56
Target 6, Indicator 16	MRO	45,094.16	2,770.94	10,753.74	671.41	-34,340.42	-2,099.53
Goal 6. Combat HIV/AIDS, malaria and other diseases	US$	26.61	1.49	10.05	0.61	-16.56	-1.00
Target 7,8, Indicators 18, 21, and 23	MRO	7,285.70	410.36	2,772.32	167.89	-4,513.38	-271.72
Subtotal Health	US$	392.37	23.58	140.51	8.58	-250.16	-15.12
	MRO	108,196.30	6,542.16	38,806.53	2,382.30	-68,903.34	-4,189.11
Goal 7. Ensure environmental sustainability	US$	220.83	11.04	161.52	7.93	-59.31	-2.81
Target 10, Indicator 30	MRO	59,919.94	3,008.51	43,783.77	2,159.59	-16,136.17	-771.58
TOTAL ESTIMATIONS	US$	**1,621.10**	**94.12**	**1,039.44**	**60.12**	**-579.96**	**-33.81**
	MRO	**445,503.92**	**26,020.04**	**285,589.08**	**16,619.66**	**-159,428.40**	**-9,352.29**
	% GDP	**8.95**	**n/a**	**5.73**	**n/a**	**3.22**	**n/a**

Source: Authors' calculations.

3.2 Individual Goal Costs and Financing Gaps

This section focuses on the individual goals, presenting the current situation and trends and financing needs, while the proposed policy changes are discussed in Section 4. For each goal, the discussion evolves around two figures: the *first* refers to the MDG target, and highlights the current situation and past and future trends; the *second* quantifies the financing gap to achieve the goal. Box 2 explains how to read the figures presented in this section.[10]

Box 2. For each MDG, two Figures

How to read the symbols? Triangular data markers indicate past performance, while circular markers indicate future projections. Data markers filled with color indicate that data were available and are up-to-date, while unfilled data markers indicate estimated values. The PRSP-2 targets for 2010 and 2015 are indicated with circular markers filled with color. Discontinuous lines indicate that, due to lack of data, the series were generated.

Graph 1: Current situation and trends. For each MDG, the first graph illustrates: (i) the hypothetical trend, indicated with the green line, which is estimated with a linear projection between the 1990 value and the 2015 stated objective. This is the path the indicator should yearly follow to steadily reach the objective by 2015; (ii) the Mauritanian outcome, indicated with the blue line, where the past performance is indicated with a dark blue solid line, and the expected performance – i.e., the Government's plan for each indicator – is represented with a light blue dashed line; and (iii) where possible, the projected status quo, i.e. a forecast of the indicator's expected performance assuming no incremental resources or policy changes, calculated with a regression, and indicated with the orange, dotted line.

Graph 2: Financing gap. For each MDG, the second graph illustrates the financing gap, indicated in terms of millions of US$, and in percentage of non-oil GDP. Depending on the case, the two lines converge, intersect or diverge. Indeed, if the financing gap is small in absolute terms, the US$ curve "moves faster" than the non-oil GDP one, and the lines tend to diverge. On the contrary, if the gap is big, they tend to converge.

MDG 1: Eradicate Extreme Hunger and Poverty

Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.

A. Current Situation: **high rural poverty and rapid urbanization.** In Mauritania, poverty affects around 47 percent of the population and is predominately a rural phenomenon, as 75 percent of poor people live in rural areas (Table 3)[11]. Nevertheless, the country has witnessed a dramatic urbanization in the past four decades, and urban poverty pockets are becoming sizeable. The post-colonial capital, Nouakchott, hosts over 50 percent of the urban population and around a quarter of the national population.

[10] All data presented in this paper were collected by the authors in collaboration with the Mauritanian authorities and consolidated in the database described in Section 2. Specific references are indicated otherwise.

[11] In 2004, the poverty line was fixed at MRO 94,600, which roughly corresponds to the World Bank's poverty line of US $1 per day (GIRM 2006).

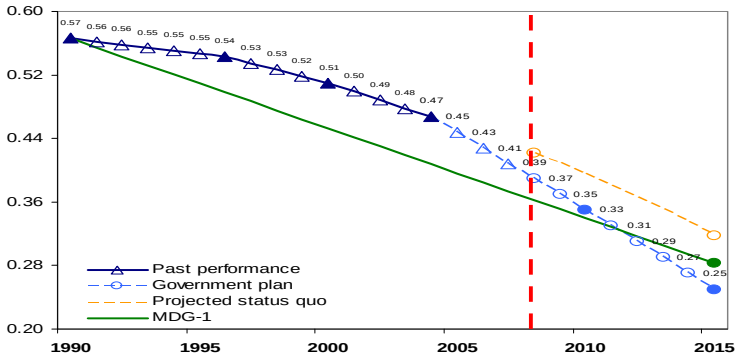
Table 3. Incidence of Poverty by Region and Relative Contributions (2000-2004)

	2000		2004	
	P_0 Incidence	C_0 Rel. Contribution	P_0 Incidence	C_0 Rel. Contribution
National	51	100	47	100
Rural	66	80	59	75
Senegal River Valley	*77*	*35*	*66*	*17*
Other Rural	*60*	*45*	*57*	*58*
Urban	28	20	29	25
Nouakchott	*29*	*12*	*26*	*13*
Other Urban	*27*	*8*	*33*	*12*

Source: GIRM (2006)

***B. Trends and Likelihood:* a low probability of achieving MDG$_1$.** During 2001-2006, non-oil growth did not make a significant dent on poverty.[12] Between 2000 and 2004, the overall poverty incidence declined from 51 to 46.7 percent, the net effect of a decline from 66 to 59 percent in rural areas, and an increase from 28 to 29 percent in urban areas. Over the same period, the Gini coefficient remained at 0.39, indicating that the moderate decrease in poverty was not accompanied by a comparable decline in inequality. If the rhythm of poverty reduction continues to follow the historical trend, the incidence of poverty will stay well above the very ambitious PRSP-2 target and the corresponding MDG (Figure 2).

Figure 2. MDG 1: Current Situation and Trends

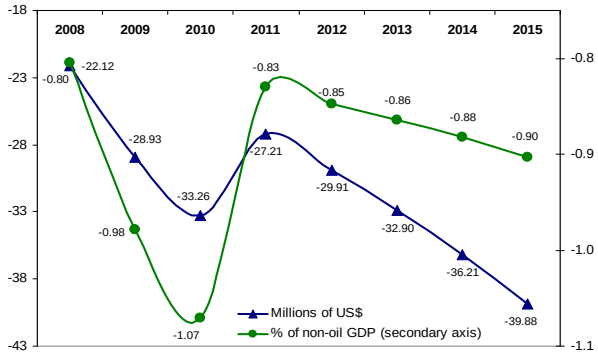


Source: Authors' calculations.

***C. Financial Needs:* 0.9 percent of GDP on average per year.** The financing gap for poverty reduction is the widest of all considered in this paper, but reaching this goal would equally yield the biggest developmental impact. The cost of achieving this target for the period 2008-2015 amounts to 1.5 percent of GDP on average per year, corresponding to US$ 275.6 million in total. Once the allocation of government expenditure is taken into account, the country needs additional total financing of 0.9 percent of GDP on average per year (Figure 3), equivalent to a total of US$ 162.2 million (Table 4). For a detailed, yearly cost breakdown, see Annex 1.

[12] During 2001-2006, non-oil growth averaged around 4 percent per annum, driven mainly by activity in the tertiary sector of the economy (telecommunication, transport). Non-oil growth is forecasted to increase to 4.6 over 2007-2012, in line with historical trends (IMF 2007).

Figure 3. MDG 1: Financing Gap



Source: Authors' calculations.

Table 4. MDG 1: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 275.57 m MRO 75,736 m
Budget Allocation	US$ 113.33 m MRO 31,161.8 m
Financing gap	US$ 162.24 m MRO 44,574 m 0.90 % of non-oil GDP US$ 9.44 p.c.

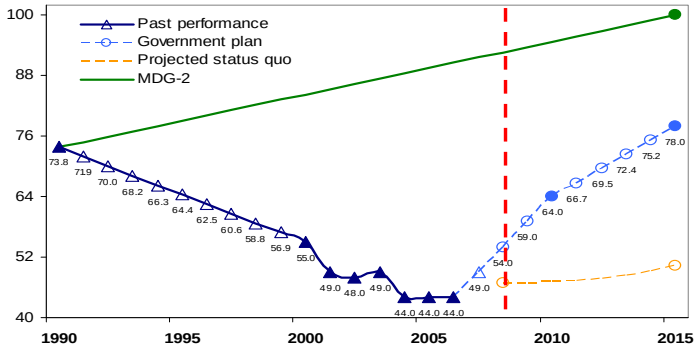
Source: Authors' calculations.

MDG 2: Achieve Universal Primary Education

Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

***A. Current Situation:* high enrollment but low retention rates.** Mauritania has one of the highest gross enrollment rate (GER) in the sub-region. But the retention rate is low. Rural schools that offer an incomplete cycle have been found to be amongst the major reasons for low completion rates, affecting some two-third of dropouts. Also, evidence shows that the mere existence of a school in the areas of residence is no guarantee of better retention rates: the low quality of education and cost associated to sending children to schools are also important factors affecting the high drop-our rate.

Figure 4. MDG 2: Current Situation and Trends

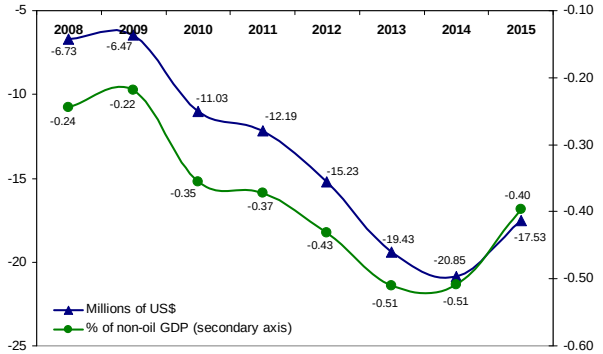


Source: Authors' calculations.

***B. Trends and Likelihood:* a low probability of achieving MDG$_2$.** Between 1990 and 2006, while the GER at the primary level increased significantly, the retention rate deteriorated markedly – from 73.8 to 44 percent. In other words, in 2006 only 44 percent of children enrolled in Grade 1 completed successfully Grade 6. Given the current trend, the retention rate would increase only marginally by 2015, returning to the level it reached in 2000. The likelihood of achieving the ambitious government plan, therefore, is low (Figure 4).

***C. Financial Needs:* 0.4 percent of GDP on average per year.** The financing gap for MDG_2 is the fourth in order of magnitude, after poverty reduction (MDG_1), maternal mortality (MDG_5) and child mortality (MDG_4). The cost of achieving this target for the period 2008-2015 amounts to 3.8 percent of GDP on average per year, corresponding to US$ 679.71 million in total. Once the allocation of government expenditure is taken into account, the country needs an additional total financing of 0.4 percent of GDP on average per year (Figure 5), or US$ 66.4 million in total (Table 5). For a detailed, yearly cost breakdown, see Annex 1.

Figure 5. MDG 2: Financing gap



Source: Authors' calculations.

Table 5. MDG 2: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 679.71 m MRO 187,221.60 m
Budget Allocation	US$ 613.29 m MRO 168,863.47 m
Financing gap	US$ 66.43 m MRO 18,358 m 0.38% of non-oil GDP US 4.08 p.c.

Source: Authors' calculations.

MDG 3: Promote Gender Equality and Empower Women

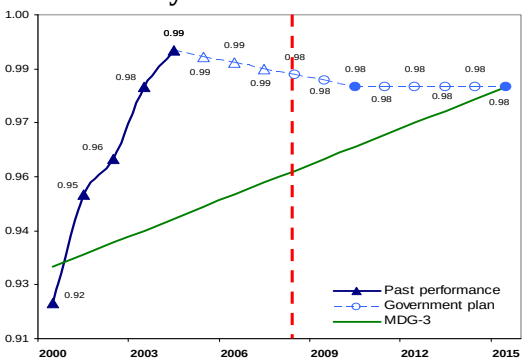
Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015.

***A. Current Situation:* gender parity in enrollment in primary education**. At the primary level, gender parity has already been reached. In 2007, girls' GER exceeded that of boys for the fourth consecutive year. Also, in 2007, 68.1 percent of girls registered in the first grade reached Grade 6, against 58 percent for boys. In secondary school, progress on gender parity has been slower due to, *inter alia*, the household workload that girls are asked to perform, early marriage or pregnancy. Evidence from recent labor market research suggests that nearly half or women in the 15-24 age-group do not participate in the labor market because of domestic duties, while only 20 percent cite being a student as a non-participating reason (Rajadel et al., 2008).

***B. Trends and Likelihood:* a high probability of achieving MDG_3**. At the primary level, between 1990 and 2004, the ratio of girls to boys rose from 0.72 to 0.99. Between 1990 and 2007, girls' participation as a percent of total enrollment increased from 42 to 50 percent. At the secondary level, the ratio of girls to boys rose from 0.79 in 2000 to 0.85 in 2004 (Figure 6). Reaching gender parity at the secondary level is possible but crucially depends on easing girl's ability to avoid the household workload (Figure 6).

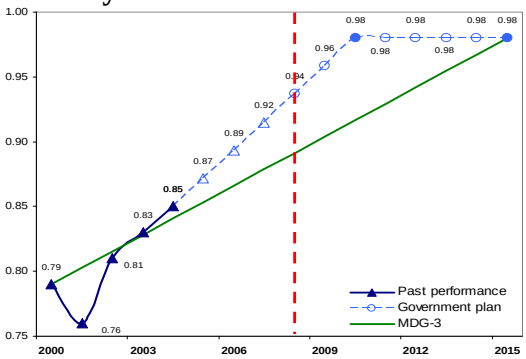
Figure 6. MDG 3: Current Situation and Trends

Primary Education



Source: Authors' calculations.

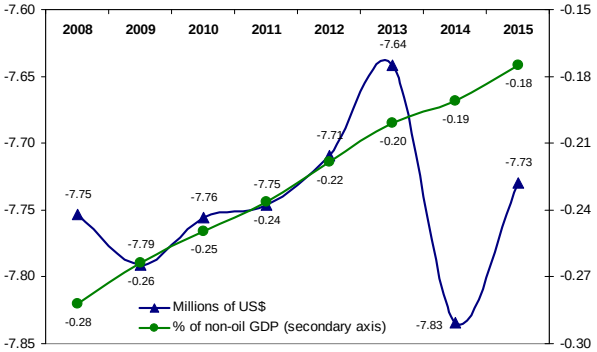
Secondary Education



Source: Authors' calculations.

***C. Financial Needs:* 0.2 percent of GDP on average per year.** A modest increase in resources would allow Mauritania to achieve this goal. The financing gap to reach MDG_3 is the smallest of the MDGs considered in this paper. The cost of achieving this target for the period 2008-2015 amounts to 0.3 percent of GDP on average per year, corresponding to US$ 52.6 million in total. Once the allocation of government expenditure is taken into account, the country needs an additional total financing of 0.23 percent of GDP on average per year (Figure 7), which translates into US$ 41.8 million in total (Table 6). For a detailed, yearly cost breakdown, see Annex 1.

Figure 7. MDG 3: Financing Gap



Source: Authors' calculations.

Table 6. MDG 3: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 52.61 m MRO 14,430 m
Budget Allocation	US$ 10.79 m MRO 2,973.47 m
Financing gap	US$ 41.83 m MRO 11,456.55 m 0.23% of non-oil GDP US$ 2.35 p.c.

Source: Authors' calculations.

MDG 4: Reduce Child Mortality

Target 5: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate.

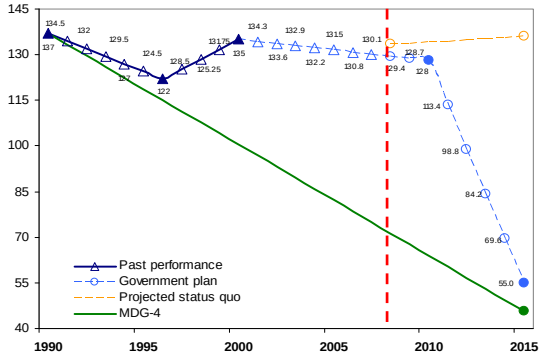
***A. Current Situation:* High infant and child mortality rates.** The latest available data shows a child mortality rate (CMR) of 135 per 1.000 live births in 2000, while the infant mortality rate (IMR) stood at 87 per 1.000 live births during the same year. Chronic malnutrition amongst children (at 32 percent in 2004) continues to be a serious problem notably in rural areas and among the poorest and the very young (0–3 years), contributing significantly to infant and child deaths. Health care delivery suffers from the low quality

of services provided, owing to the inadequacy of human resources in the sector and poor physical and financial access to health facilities, notably in rural areas.

***B. Trends and Likelihood:* a low probability of achieving MDG$_4$.** Despite some progress – especially in child vaccination – during the 1990s, trends are not encouraging. Between 1988 and 2001, chronic malnutrition rates in children stagnated. Between 1990 and 2000, infant mortality diminished from 126 to 87 per 1,000 live births, but under-5 mortality rate remained virtually stagnant. In particular, progress slowed down since 1996 for child mortality and from 2000 for infant mortality. If past trends are maintained, Mauritania will remain very far from reaching the child mortality target in 2015, but closer to reach the infant mortality target (Figure 8).

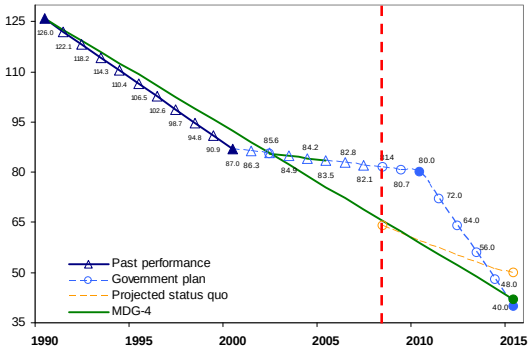
Figure 8. MDG 4: Current Situation and Trends

Child mortality



Source: Authors' calculations.

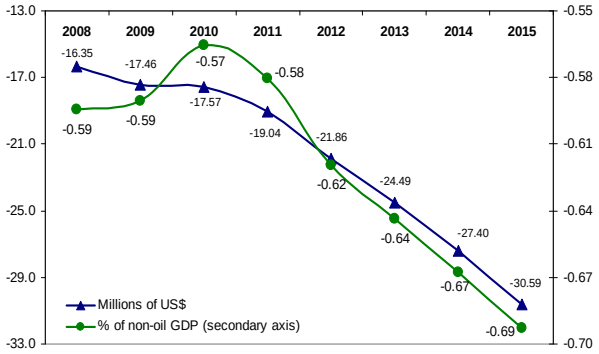
Infant mortality



Source: Authors' calculations.

***C. Financial Needs:* 0.6 percent of GDP on average per year.** The financing gap to reach MDG$_4$ is the third widest gap, after poverty reduction (MDG$_1$) and maternal mortality (MDG$_5$). The cost of achieving this target for the period 2008-2015 amounts to 1.1 percent of GDP on average per year, corresponding to US$ 202.5 million in total. Once the allocation of government expenditure is taken into account, the country needs an additional total financing of 0.6 percent of GDP on average per year (Figure 1), which translates into US$ 110.9 million (Table 7). For a detailed, yearly cost breakdown, see Annex 1.

Figure 9. MDG 4: Financing Gap



Source: Authors' calculations.

Table 7. MDG 4: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 202.5 m MRO 55,816.45 m
Budget Allocation	US$ 91.60 m MRO 25,280.47 m
Financing gap	US$ 110.90 m MRO 30,535.98 m 0.62% of non-oil GDP US$ 6.56 p.c.

Source: Authors' calculations.

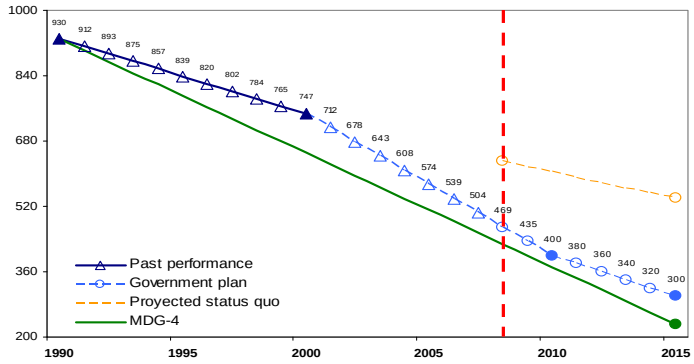
MDG 5: Improve Maternal Health

Target 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio.

A. Current Situation: **maternal mortality remains high.** Maternal mortality stood at 747 per 100,000 live births in 2000. It is high notably in the rural and amongst the poorest segments of the population, where access to childbirth and attendance to obstetrical urgencies is low. In 2007, only 61 percent of births were attended by qualified health personnel, while the remaining 39 percent were assisted by a relative, an unqualified person, or without any type of assistance (GIRM 2007b). High-risk pregnancies, hemorrhages during delivery, anemia, as well as cesarean intervention are the principal causes of prenatal and maternal deaths.

B. Trends and Likelihood: **a low to medium probability of achieving MDG_5.** Between 1990 and 2000, maternal mortality decreased from 930 to 747 deaths for 100,000 live births. Recent data – not available at the time of the analysis – show in 2007 maternal mortality stood at 684 per 100.000 live births (GIRM 2007b). Also, the proportion of births attended by skilled personnel increased from 57 percent in 2001 to 61 percent in 2007. If these trends are sustained and accelerated, the country's low probability of attaining the MDG target could increase (Figure 10).

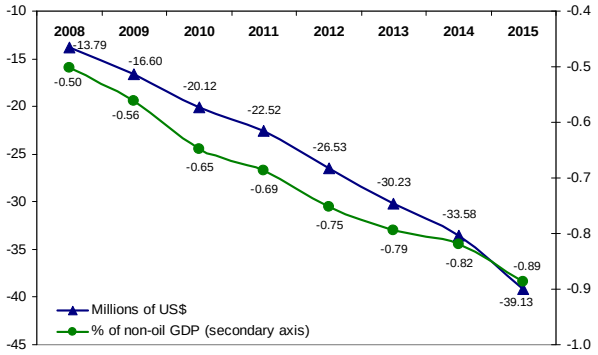
Figure 10. MDG 5: Current Situation and Trends



Source: Authors' calculations.

C. Financial Needs**: 0.7 percent of GDP on average per year.** The financing gap to reach this goal is the second widest after poverty reduction (MDG_1). The cost of achieving this target for the period 2008-2015 amounts to 0.9 percent of GDP on average per annum, corresponding to US$ 163.2 million in total. Once the allocation of government expenditure is taken into account, the country needs an additional total financing of 0.7 percent of GDP on average per year (Figure 11), which translates into US$ 124.4 million in total (Table 8). For a detailed, yearly cost breakdown, see Annex 1.

Figure 11. MDG 5: Financing Gap



Source: Authors' calculations.

Table 8. MDG 5: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 163.26 m MRO 45,094.16 m
Budget Allocation	US$ 38.86 m MRO 10,753.74 m
Financing gap	US$ 124.4 m MRO 34,340.4 m 0.71% of non-oil GDP US$ 7.56 p.c.

Source: Authors' calculations.

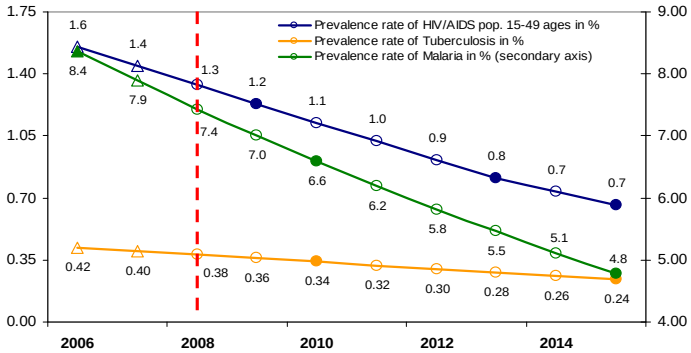
MDG 6: Combat HIV/AIDS, Malaria and Other Diseases

Target 7 and 8: Have halted by 2015 - and begin to reverse - the spread of HIV/AIDS, tuberculosis, malaria and other diseases.

***A. Current Situation:* low levels of HIV/AIDS and tuberculosis, but high malaria prevalence.** Mauritania is characterized by a low prevalence of HIV/AIDS, estimated at 1.9 percent in 2003. Around 80 percent of the population in Mauritania is exposed to malaria. The prevalence rate for malaria was in the order of 10 percent on 2000, with 250.000 new cases per year. In the seven southern *wilayas*, Malaria accounts for a significant proportion of deaths and is responsible for 60 percent of hospitalization. In 2005, the prevalence of tuberculosis was estimated at 0.44 percent of the population, but it detection is feeble (less than 58 percent of cases are reported).

***B. Trends and Likelihood:* a medium probability of achieving MDG$_6$.** The HIV/AIDS goal is attainable. However, between 1990 and 2003 HIV prevalence increased from 0.5 to 1.9 percent (World Bank 2005), hence it needs to be monitored closely. Since 2006, the treatment of malaria has improved, but between 1990 and 2000, the prevalence rate has only marginally decreased from 12.7 to 10 percent. There are little data on tuberculosis trends. On the basis of current information, Mauritania has a medium probability of reversing the spread of these diseases by 2015.

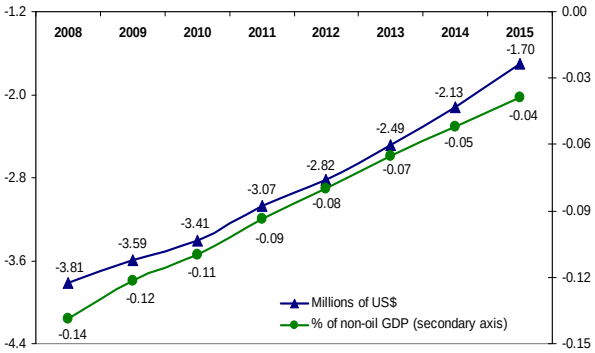
Figure 12. MDG 6: Current Situation and Trends



Source: Authors' calculations.

C. Financial Needs: **0.12 percent of GDP on average per year.** The financing gap to reach this goal is the smallest of all MDGs, although this might be due to the lack of available data. The cost of achieving this target for the period 2008-2015 amounts to 0.14 percent of GDP on average per year, corresponding to US$ 26.6 million in total. Once the allocation of government expenditure is taken into account, the country needs an additional total financing amount of 0.12 percent of GDP on average per year (Figure 13), which translates into US$ 16.6, million in total (Table 9). For a detailed, yearly cost breakdown, see Annex 1.

Figure 13. MDG 6: Financing Gap



Source: Authors' calculations.

Table 9. MDG 6: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 26.61 m MRO 7,285.70 m
Budget Allocation	US$ 10.05 m MRO 2,772.32 m
Financing gap	US$ 16.56 m MRO 4,513.4 m 0.12% of non-oil GDP US$ 1.00 p.c.

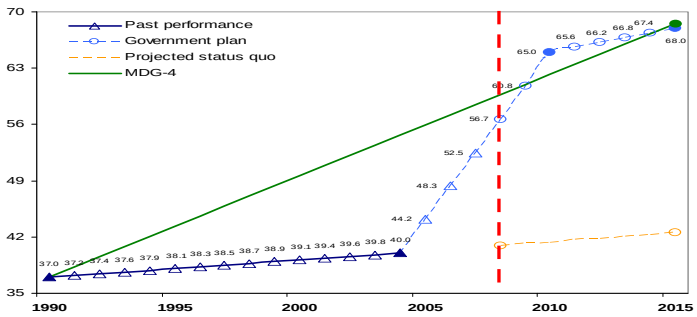
Source: Authors' calculations.

MDG 7: Ensure Environmental Sustainability

Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

A. Current Situation: **access to safe water is still a major problem.** In Mauritania, the data concerning access to safe drinking water depend on the definition of the indicators. In 2004, only 32 percent of urban households and 17 percent of rural household were connected through a tap to a safe drinking water source. Conversely, these proportions rise to 64 and 42 percent respectively when the access to improved water sources is via a protected well, a public fountain, or an external tap. Still, more than half of the rural population still struggle to find safe drinking water, with clear adverse effects on physical well-being, notably amongst children (WHO/UNICEF 2006).

Figure 14. MDG 7: Current Situation and Trends

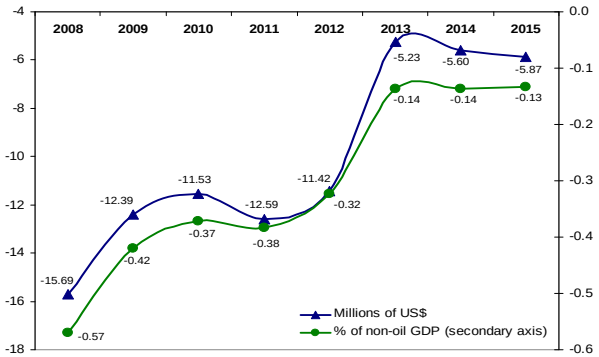


Source: Authors' calculations.

***B. Trends and Likelihood:* a low probability of achieving MDG$_7$.** Between 1990 and 2004, the proportion of households with access to an improved drinking water source increased from 37 to 40 percent (GIRM 2007b), a modest improvement (note that official data slightly differ from the estimates presented above). If the historic trend is maintained Mauritania will be unable to reach this MDG target in 2015 (Figure 14).

***C. Financial Needs:* 0.27 percent of GDP on average per year.** The financing gap to reach this goal is the third smallest of those considered in this paper, despite the scale of the problem.[13] The cost of achieving this target for the period 2008-2015 amounts to 1.1 percent of GDP on average per year, corresponding to US$220.8 million in total. Once the government allocation of expenditure is taken into account, the country needs an additional total financing of 0.27 percent of GDP on average per year (Figure 15), which translates into US$ 59.3 million in total (Table 10). For a detailed, yearly cost breakdown, see Annex 1.

Figure 15. MDG 7: Financing Gap



Source: Authors' calculations.

Table 10. MDG 7: Cost, Budget and Financing Gap (2008-2015)

Total Cost	US$ 220.83 m MRO 59,919.94 m
Budget Allocation	US$ 161.52 m MRO 43,783.77 m
Financing gap	US$ 59.31 m MRO 16,136.2 m 0.27% of non-oil GDP US$ 2.81 p.c.

Source: Authors' calculations.

[13] Funds have already been secured for the "*Aftout Essaheli*" project, which will start in 2010 and provide drinking water from the Senegal River to the capital city Nouakchott.

4. Accelerating Progress: Policy Changes and Instruments

To reach the MDGs, Mauritania needs to allocate adequate resources and improve sector policies. *First,* to achieve its development vision the government needs to focus on the MDGs and allocate sufficient resources to the delivery of social services. *Second,* to maximize effectiveness, the government needs to significantly change its sector strategies and policy instruments, notably those linked to the budget. This section highlights the policy changes needed at the sector level (Section 4.1), and proposes ways in which the link between policies, available resources, and outcomes can be strengthened via the budget process (Section 4.2).

4.1 Policy Changes Needed at the Sector Level

MDG 1: Eradicate Extreme Hunger and Poverty

Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.

Policy objective. **Reduce the incidence of poverty via faster and more inclusive non-oil growth.** In Mauritania, a number of significant binding constraints hamper the inclusiveness of economic growth (World Bank 2007a). *First*, the country displays a distorted economy, characterized by rent-seeking, which tend to prioritize rent distribution over wealth creation (Auty and Pontara, 2008).[14] *Second*, poor governance and corruption are central concerns. Evidence on bribe propensity and intensity suggests that medium-size firms are the productive actors that suffer most (Francisco and Pontara, 2007). As a result, the Government has been unable to: (i) diversify the sources of growth besides natural resources and the tertiary sector; and (ii) attract investment by creating an enabling environment for private sector development.

What to do? **Target the poorest segments of the population, boost rural incomes, and stimulate private sector investment.** While faster growth is a necessary driver of poverty reduction, it is not sufficient, notably if inequality is not reduced (Bourguignon, 2004). A consensus is beginning to emerge of how to tackle poverty and boost inclusive growth in Mauritania. Key elements of this consensus include:

1) *Targeting the poorest segments of the population.* Tackling widespread rural poverty and pockets of indigence in urban areas requires expanding access to basic services for the poorest, providing basic rural (e.g.: irrigation pumps) and urban (e.g.: clean water wells) infrastructure, creating the conditions for the development of income generating activities, and extending support to local communities. The implementation of specific poverty alleviation programs – such as *Twize* in urban areas and *Toumza* and *Lemniha* in rural areas – need to be improved by extending the beneficiary base and reducing targeting errors.

[14] Rural neglect of successive governments – in terms of both policy focus and investment – as well as repeated droughts have encouraged Mauritanians to migrate to cities, where they have drawn upon rent subsidies.

2) *Boosting rural growth.* While the contribution of the primary sector to GDP is low, and below the sub-regional average, agriculture continues to furnish the principal livelihood for at least half the population, through precarious and inadequately remunerated (under-)employment in herding and farming. There is scope to accelerate rural growth by investing in irrigated agriculture in the Senegal River valley, and developing agro-processing and the livestock sector.

3) *Attracting investment by establishing early-reform economic zones.* Large private monopolies and inefficient public utilities skim rent from the urban economy and hamper economic dynamism and competition. The port of Nouakchott suffers from capacity constraints and high operating costs, and cannot compete with Dakar as an outlet for exports from Mali and other enclave countries. Establishing economic zones (EZ)[15] – starting, for example, from the port of Nouakchott – can spur growth and postpone confrontation with established rent-seekers. Success in economic zones can – in the longer term – forge a pro-growth political coalition eventually able to take on the rent-seekers.

Link with the budget. **Increase poverty spending and upgrade economic infrastructure.** Over 2008-15, the budget allocated to poverty alleviation programs should increase by around 1 percent of GDP on average per year (Annex 1), and finance basic services and infrastructure for the poorest, in both rural and urban areas, i.e.: irrigation pumps, clean water wells, and both the construction and rehabilitation of rural roads (World Bank, 2005). Spending allocated to agriculture should also target the development of agro-processing, to tap the opportunities that exist in canning, food-drying, and juice production. In the livestock sector spending should target improving cattle quality through scientific breeding, developing transportation and refrigeration, and increasing market access for hides, milk and meat sub-sectors (Auty and Pontara 2008). Resources should be allocated to the establishment of economic zones, the rehabilitation of the Nouakchott port and the provision of reliable and affordable electricity by the national energy company SOMELEC.

MDG 2: Achieve Universal Primary Education

Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

Policy objective. **Give students the opportunity to access the primary cycle and remain enrolled throughout.** In Mauritania, students drop out prematurely from primary school because their families are not satisfied with the services offered, especially in rural areas. Teachers are often absent, the quality of teaching is low, and often parents prefer female teachers to educate their daughter while the majority of teachers continue to be males. Moreover, the household direct (e.g.: uniforms, didactic material) and opportunity (i.e.: contribution to family labor) costs are too high for parents to keep their children in school. In the priority action plan for education (2007-2010), the Government plans to guarantee universal access to primary education and attain a retention rate of 64 percent by 2010 (see Figure 4).

[15] These are geographically defined areas within which post-reform conditions apply, comprising world class infrastructure, unsubsidised incentives for efficient investment, and enabling institutions.

What to do? **Match the supply of education services to the existing demand of parents.** This involves: (i) continuing the programs geared at constructing and rehabilitating school classes; (ii) recruiting additional teachers (especially females); (iii) identifying schools that do not offer the full primary cycle, and upgrade their quality and efficiency (e.g. regroup schools, establish multi-grade classrooms); (iv) reducing the parents' direct and opportunity cost of sending their children to school by abolishing school fees, providing free meals, and relaxing uniforms requirements (or providing them for free); (v) improving the quality of primary education; and (vi) expanding the private sector supply of primary education (10 percent of the total by 2010).

Link with the budget. **Invest in upgrading schools, provide teachers' incentives and subsidize school meals, especially in rural areas.** By 2010, key priorities are to: (i) construct, rehabilitate and equip 3200 classrooms; (ii) recruit 3800 (mainly female) teachers, ensure their geographical distribution (the ration pupil-teacher should be 40 by 2010); (iii) ensure that 80 percent of schools offer a full primary cycle by upgrading them; (iv) organize awareness-rising campaigns to stimulate parents' demand for education and increase the percentage of school canteens that offer free meals by 32 percent, in the most disadvantaged zones; and (v) allocate resources to make sure that teachers' incentives and training schemes are fully funded and guarantee enough didactic material (e.g. a school manual for every 4 pupils by 2010).

MDG 3: Promote Gender Equality and Empower Women

Target 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

Policy objective. **Prevent poor teenage girls from dropping out of school in secondary and higher education.** Gender gaps are now very small at the primary school level but continue to exist in secondary and higher education. Hence, the Government should maintain the pace on gender parity at the primary level, and increase efforts on the secondary level, where teenage girls are negatively affected by household and family duties. At the secondary level, the Government plans to reduce gender disparities in the most disadvantages wilayas by implementing specific programs focusing on girls.

What to do? **Inform the families, reduce the parents' opportunity cost, and strengthen ad-hoc institutions.** Throughout the country, efforts are needed to promote information campaigns about the benefit of remaining enrolled in school (e.g.: stressing the future income stream, etc.), especially at the secondary level. Moreover, it is necessary to identify and target families living in extreme poverty, where the opportunity cost of schooling for young girls is highest. In addition, programs need to be put in place to assist the young females affected by early marriage or pregnancy. At the institutional level, the authorities should continue to implement the *National Strategy for the Promotion of Women*.

Link with the budget. **Finance awareness campaigns, subsidize disadvantaged girls, and invest in inter-ministry coordination.** By 2015, the Government should: (i) finance awareness-rising campaigns to encourage demand for girls' schooling; (ii) budget adequate subsidies for children, notably girls in secondary school, coming from the disadvantaged environments; and (iii) establish an inter-ministry arrangement for

coordinating the *National Strategy for the Promotion of Women*, to support women entrepreneurs and women's access to markets and decision-making centers.

MDG 4: Reduce Child Mortality

Target 5: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate

Policy objective. **Provide access to health and nutrition services to children and their mothers, in particular in rural areas.** Despite the complexity of this goal and the challenges it faces,[16] it is key to take advantage of the synergies and complementarities between policy instruments. To do so, it is necessary to implement the *National Health, Nutrition and Sanitation Policy* (NHNSP) in a comprehensive way. As indicated in the NHNSP's first pillar, it is important to focus on the mother-infant population – especially in remote areas – and facilitate their access to health and nutritional services, such as prenatal and postpartum care, vaccination, food, vitamins, and fight against the most common diseases.

What to do? **Provide preventive care in remote areas, improve efficiency and quality of spending, and strengthen institutional coordination.** To do so, it is necessary to address the key weaknesses of the health sector: (i) in rural areas, there is little awareness about disease prevention, human resources are scarce and unskilled, and the utilization of primary and secondary care units remain very low; and (ii) the level, efficiency and quality of the overall spending are low (World Bank 2006b). Hence, special attention is needed to: (i) set up communication campaigns at the local level aimed at disease prevention stressing the importance, *inter alia*, of access to clean water, and training programs for health staff; (ii) increase access to health services within a 5 km range (or establish mobile clinics) and improve the quality of services offered; (iii) establish a coordination program for the key players involved in food security, community and school nutrition, and food quality control; and (iv) improve the links between spending and outcomes.

Link with the budget. **Increase health spending and link resources to outcome indicators.** By 2015, the Government should: (i) increase budget allocations to finance effectively the implementation of the *National Health, Nutrition and Sanitation Policy*, with a focus on prevention at the local level; strengthen community participation to health services; (ii) construct, furnish, stock up and staff 90 new health unit; establish 5 inter-regional medical centers, and ensure adequate stock of medicines; and (iii) make the planned *Relief and Nutrition Centers* operational, to coordinate food delivery in remote areas.

MDG 5: Improve Maternal Health

Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio.

[16] Recent analytical work on developing countries worldwide shows that there is little progress when children's mortality rates (CMR) are above 220 per 1000 and diminishing returns once they reach about 120 (Easterly, 2007). Mauritania's CMR stood at 126 percent in 1990.

Policy objective. **Improve the geographical coverage and the quality of medical assistance.** In Mauritania, the high maternal mortality rate is essentially caused by the high proportion of pregancies at risk (premature and frequent pregnancies) and the low access of pregnant women to emergency obstetric services. Emorragies, complication , arterial hypetension and anemy are the principal causes of prenatal deaths. Policies aimed at reducing maternal mortality should be geared towards: (i) increasing the population's awareness of maternal mortality risks; (ii) making sure that medicines and emergency obstetrical services are available, notably in rural and remote areas; and (iii) invest in training train health workers in pre- and post-natal areas.

What to do? **Organize information campaigns and increase access to assisted-child-births in rural areas.** It is important to put in place an integrated system that includes supply of medicines and equipment, as well as attendance before and during child-birth, though inter alia the creation of mobile clinics. Additional important tasks consists of increasing the knowledge of the population about the risks associated to pregnancy – and and what to do if problems arise – and the benefits of contraceptive methods.

Link with the budget. **Increase spending on communication, medicine supply and mobile clinics.** It is important: (i) to finance awareness campaigns, with the goal of preventing pregnancy under unfavorable condition. It is also necessary to allocate resources to: (i) a treatment system for obstetric urgencies and neonatal infections, by making operational 17 mobile medical teams at the regional level; and (iii) putting in place an institutional framework to ensure that obstetrical urgencies and post-natal infection are adequately addressed, especially in rural areas.

MDG 6: Combat HIV/AIDS, Malaria and Other Diseases

Target 7 and 8: Have halted by 2015 - and begin to reverse - the spread of HIV/AIDS, tuberculosis, malaria and other diseases

Policy objective. **Reduce the incidence of the HIV/AIDS, tuberculosis and malaria epidemics.** In the most vulnerable geographical areas, for all epidemics there is a need to improve the monitoring of trends through data collection; the availability of medical and laboratory equipment and distribution of (free, in some cases) medicines); and the training of doctors and health workers engaged in the prevention and cure of these diseases. Efforts should be aimed at increasing the awareness of the population about the transmission mechanisms of the HIV virus, and the use of contraceptive methods.

What to do? **Strengthen the epidemiologic monitoring systems, ensure greater availability of treatments and inform on prevention.** For all epidemics, it is important to set up effective and performing programs of epidemiological surveillance. To fight HIV/AIDS it will be important to: (i) ensure greater availability of the use of cheap anti-retroviral drugs (ART), transfusions, and free HIV testing and contraceptive methods; and (ii) train health workers on HIV/AIDS and set up centers for the social and psychological treatment for HIV positive pregnant women. It is also necessary to strengthen the management of multi-drug resistant tuberculosis. In the fight against malaria, preventative actions include the use of mosquito nets or other insecticide-treated materials, as well as campaigns to improve hygiene and sanitation.

Link with the budget. **Increase epidemics-related spending and subsidize essential treatment and services.** On HIV/AIDS, the budget should guarantee: (i) the free provision of certain tests and medicines such as HIV/AIDS tests, condoms, ART, micro-nutrients; (ii) the setting up of centers for anonymous and free HIV testing, as well as services of psychological and social support. On TB, enough resources need to be allocated to: (i) the implementation of the PNLT; (ii) the availability of anti-tuberculosis vaccines and drugs; and (iii) the expansion of coverage of the TB short, directly supervised treatments (DOTS). For malaria prevention, it is necessary to subsidize free supply of insecticide-treated mosquito nets in the endemic zones.

MDG 7: Ensure Environmental Sustainability

Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

Policy objective. **Promote greater access to water at an affordable price, notably for the poorest segments of the population**. Given the wide disparities in access to potable water, there is the need to improve access to water for the urban and rural poor, as water has a key impact on the health status of poor households (World Bank, 2006b). It is also important to find solutions to deal with the cost of the maintenance of hydraulic works and the problems of micro-pollution. To do so, it is necessary to strengthen the capacity in the sector.

What to do? **Increase access to potable water and sanitation services, research new water sources and improve governance in the sector.** Water access needs to be expanded in both urban and rural areas. In urban areas, particular attention needs to be paid to the rehabilitation of infrastructure and provision of electricity in secondary centers. In Nouakchott, the priority is to expand access to water in poor peripheral neighborhoods. In rural areas, new planned constructions of water networks in centers between 500-5000 people and simpler interventions planned in localities with 150-500 people need to be carried out. In addition, an inventory of water sources in Mauritania needs to be set up. Support needs to be delivered to strengthen capacity in the water sector, and promote public-private partnerships, by define the role and responsibility of the different actors, including public enterprises, regulation agencies and the private sector.

Link with the budget. **Finance the expansion of water networks in both rural and urban areas.** Massive amounts of resources will be invested in the near future to improve access to safe drinking water in Mauritania, notably by bringing water from the Senegal River to Nouakchott. In urban areas, the budget needs to support: (i) the upgrade of infrastructure in Nouakchott, Nouadhibou, Selibaby and Kaedi; (ii) the pursuit of the Aftout Essaheli works, and (iii) the funding of water distribution in Nouakchott. In rural areas, funds should be geared at: (i) building 136 water networks in centers between 500-5000 people, and 166 basic water infrastructures in centers between 150-500 people; (ii) constructing 145 water points; (iii) rehabilitating 8000 family toilets; and (iv) installing 1000 toilet mobile blocks.

4.2 Integrating the MDGs into the Budget Process

The MDG costing exercise needs to be integrated into the process of strategic planning and budget elaboration. This needs to happen sequentially, starting from the strategic phase, and moving on to policy making, budget execution and MDG monitoring at the sectoral level, through the MTEF process. Four steps are identified: (1) embed the MDGs in the national strategy (PRSP-2), and its periodical revisions; (2) incorporate the MDGs financial needs during the elaboration of sectoral and global MTEFs; (3) use the global MTEF as a guide for the preparation of the national budget; and (4) revise the budget preparation calendar accordingly. These steps are briefly discussed below.

1) **Embed the MDGs in the PRSP.** The PRSP-2 acknowledges the MDGs as national priorities, but does not adopt them as the objectives on which the country is expected to deliver. As noted, the PRSP-2 objectives for the 2015 horizon are more ambitious than the corresponding MDG targets. In other cases, the reverse is true. Looking forward, as the PRSP is reviewed on a periodical basis, the Government needs to: (i) monitor the MDG status, specifying which targets and indicators are priorities and why (i.e. because of data problems, non-relevance); (ii) specify how key sectoral (or sub-sectoral) policies can accelerate progress on the attainment of selected MDGs; and (iii) update the costing exercise, on the basis of the revised macro-budgetary framework and sectoral costing.

2) **Incorporate the MDG financial needs into the MTEF**. The second step consists in fitting the MDG envelope into the sectoral and overall spending envelopes (MTEFs), which, over a rolling three-year period, serve as a guide to budget formulation. *First,* policy actions geared to the attainment of the MDGs need to be specified and "costed" at the sectoral level. So far, only a few sectors (i.e. education, water and sanitation) have been able to develop quality strategies and MTEFs, due to the weak capacity of sectoral ministries. *Second*, sectoral MTEFs should feed into the elaboration of the global MTEF, i.e.: an inter-sectoral allocation of resources obtained through a process of arbitrage. *Third,* it is important that all sectors share: (i) the same macro-budgetary framework; and (ii) the same hypotheses, notably on the estimation of unit costs.

3) **Assimilate the MTEF within the national budget.** The MDGs costing exercise should be linked to the budget through the global MTEF (Figure 16). The new functional classification, available since 2006 (Box 3), can be used to establish more coherent links between budget allocations and the actions conducive to the attainment of the MDGs (Table 11). In the transition towards performance-based program budgeting, it would important to gradually move away from a MTEF (and budget) formulation based on the extrapolation of previous exercises (e.g. standard augmentation of X percent of resources each year on the basis of previous years' levels) towards a more transparent evaluation of the resources deemed necessary to reach well-specified objectives. This process, however, will take time and considerable strengthening of the existing capacity.

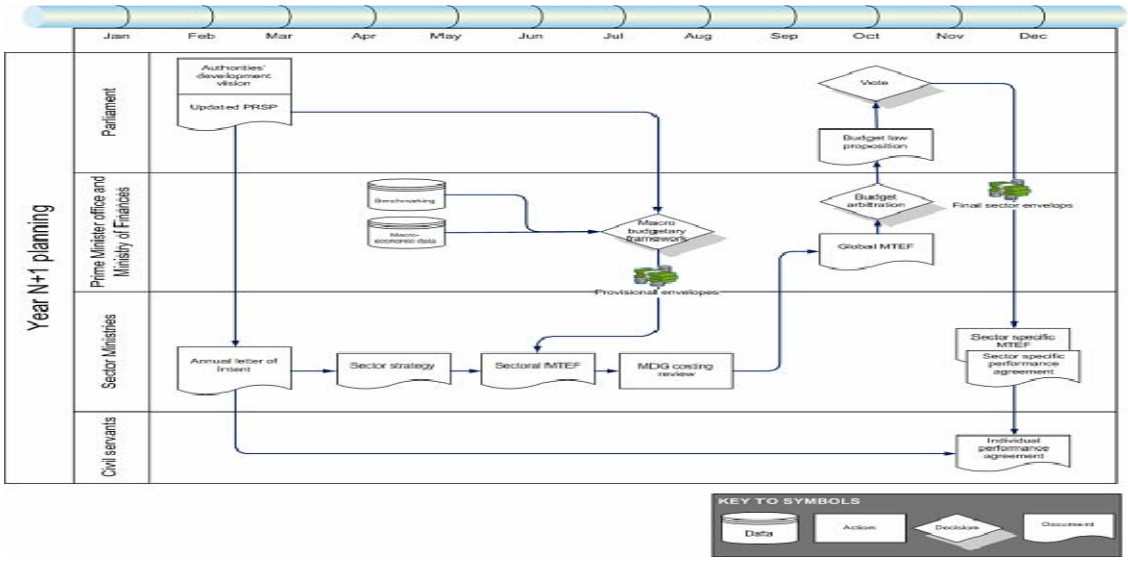
Box 3. The State Budget functional classification: an opportunity not to be missed

One budget, two documents. The budget in Mauritania is composed of two documents: (i) the National Budget (NB) and (ii) the Consolidated Investment Budget (CIB). Financed by own resources, the NB is the budget for the central government, and presents a breakdown of both recurrent and investment (the general investment budget – GIB) expenditures. The CIB, by contrast, covers all investments included in the Public Investment Program (PIP), including those financed through the budget (via the GIB), as well as by external resources.

Since 2006, the NB follows a functional classification. Until 2006, establishing a link between sectoral policy actions and MDGs was possible in the CIB, but *not* in the NB, given its administrative (e.g. specific ministry, ministerial department) and economic (e.g. wages and salaries, goods and services) classifications. In 2006, the Government adopted the functional classification for the NB, in order to monitor budget execution and provide feedback to policy makers and the public alike on the use of public resources and their impact on poverty reduction.

4) **Fine-tune the budget cycle**. Figure 16 below illustrates an ideal budget cycle, ranging from the elaboration of sectoral strategies to budget implementation. Sectoral policies and strategies should be "costed" in sectoral MTEFs. At this stage, the MDG costing exercise should be revised – on the basis of: (i) progress achieved during the previous year; (ii) updated unit costs; and (iii) overall availability of resources in the budget (which affects the financing gaps, this is currently not done). To ensure coherence and consistency, this task needs to be carried out by a team composed of representatives from the Ministry of the Economy and Finance and sectoral ministries. Then, the sectoral MTEFs should be used for the elaboration of the global MTEF – which is currently only informally prepared – and the allocation of budget resources. A feedback system needs to be put in place to ensure that the following PRSP is updated accordingly.

Figure 16. Strategy and Budget Elaboration Framework



Source: Authors

Table 11. MDGs: Policy Changes and Links with the Budget

MDG	Policy Objectives	What to do?	Link with the Budget
Goal 1. Eradicate extreme poverty and hunger			
Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day			
Indicator 1. Proportion of population below the national poverty line – poverty incidence (%)	• Reduce the incidence of poverty via faster and more inclusive non-oil growth	• Target the poorest segments of the population, boost rural incomes, and stimulate private sector investment	• Increase poverty spending and upgrade economic infrastructure, e.g. Irrigation pumps, clean water wells, construct and rehabilitate rural roads • Target spending in agriculture to develop agro-processing (e.g. canning, food-drying, and juice production) • Target spending in livestock to improve cattle quality through scientific breeding, develop transportation and refrigeration, and increase market access for hides, milk and meat sub-sectors • Establish economic zones (e.g. port of Nouakchott)
Goal 2. Provide primary education for all			
Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling			
Indicator 7. Proportion of pupils starting grade 1 who reach grade 5	• Give students the opportunity to access the primary cycle and remain enrolled throughout	• Match the supply of education services to the existing demand of parents	• Construct, rehabilitate and equip 3200 classrooms • Recruit 3800 (mainly female) teachers, ensure their geographical distribution and set up incentives and training schemes • Ensure that 80 percent of schools offer a full primary cycle by upgrading them • Increase the percentage of school canteens that offer free meals by 32 percent, in the most disadvantaged zones • Fund teachers' incentives and training schemes and guarantee a school manual for every 4 pupils by 2010

MDG	Policy Objectives	What to do?	Link with the Budget
Goal 3. Promote gender equality and empower women			
Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005 (and in all levels of education no later than 2015)			
Indicator 9. Ratio of girls to boys in primary, secondary (and tertiary) education	• Prevent poor teenage girls from dropping out of school in secondary and higher education	• Inform the families, reduce the parents' opportunity cost, and strengthen ad-hoc institutions	• Finance awareness-rising campaigns to encourage demand for girls' schooling • Budget adequate subsidies for children, notably girls in secondary school, coming from the disadvantaged environments • Establish an inter-ministry arrangement for coordinating the *National Strategy for the Promotion of Women*
Goal 4. Reduce child mortality			
Target 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate			
Indicator 13. Under-five mortality rate (per 1,000) *Indicator 14.* Infant mortality rate (per 1,000)	• Provide access to health and nutrition services to infants in the poorest quintile of the population	• Provide access to health and nutrition services to children and their mothers, in particular in rural areas	• Increase budget allocations to finance effectively the implementation of the *National Health, Nutrition and Sanitation Policy* • Construct, furnish, stock up and staff 90 new health unit; make operational 17 mobile medical teams at the regional level; establish 5 inter-regional medical centers, and ensure adequate stock of medicines • Make the planned *Relief and Nutrition Centers* operational, to coordinate food delivery in remote areas
Goal 5. Improve maternal health			
Target 6. Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio			
Indicators 16. Maternal mortality ratio (per 100,000 live births)	• Improve the geographical coverage and the quality of medical assistance	• Organize information campaigns and increase access to assisted-child-births in rural areas	• Finance awareness campaigns to prevent pregnancy under unfavorable condition • Set up a treatment system for obstetric urgencies and neonatal infections, by making operational 17 mobile medical teams at the regional level • Put in place an institutional framework to ensure that obstetrical urgencies and post-natal infection are adequately addressed, especially in rural areas

MDG	Policy Objectives	What to do?	Link with the Budget
Goal 6. Combat HIV/AIDS, malaria and other diseases			
	• Reduce the incidence of the HIV/ADIS, tuberculosis and malaria epidemics	• Strengthen the epidemiologic monitoring systems, ensure greater availability of treatments and inform on prevention	
Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS			
Indicator 18. HIV prevalence (%)			• Provide for free certain tests and medicines such as HIV/AIDS tests, condoms, ART, micro-nutrients • Set up centers for anonymous and free HIV testing, as well as services of psychological and social support
Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases			
Indicator 21. Prevalence and death rates associated with malaria			• Allocate enough resources to the implementation of the PNLT • Ensure the availability of anti-tuberculosis vaccines and drugs • Expand the coverage of the TB short, directly supervised treatments (DOTS)
Indicator 23. Prevalence and death rates associated with tuberculosis (WHO)			• Subsidize free supply of insecticide-treated mosquito nets in the endemic zones.
Goal 7. Ensure environmental sustainability			
Target 10. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation			
Indicator 30. Proportion of population with sustainable access to an improved water source, urban and rural (%)	• Promote greater access to water at an affordable price, notably for the poorest segments of the population	• Increase access to potable water and sanitation services, research new water sources and improve governance in the sector	• In urban areas, upgrade water infrastructure in Nouakchott, Nouadhibou, Selibaby and Kaedi • Pursuit the works of the A. Essaheli • Fund water distribution in Nouakchott • In rural areas, build 136 water networks in centers between 500-5000 people, and 166 basic water infrastructure in centers between 150-500 people • Construct 145 water points • Rehabilitate 8000 family toilets • Install 1000 toilet mobile blocks

Source: Authors' elaboration from Government's sectoral priority action plans (GIRM 2007b).

5. Conclusions

With current policies and financial resources, Mauritania is unlikely to reach most of the MDGs. Poverty reduction (MDG_1) is an improbable candidate, as it crucially depends on a successful interaction of sustained economic growth and the effective delivery of pro-poor programs. In primary education, reaching 100 percent retention rate (MDG_2), in the light of the poor performance in recent years, seem also unlikely. Only gender equality (MDG_3) is at hand. With respect to the health-related goals (MDG_{4-6}), barring HIV/AIDS, Mauritania is also off-track. Finally, ensuring environmental sustainability (MDG_7) has a low probability of being reached.

The country, however, is not a special case. On current trends, only Asia is on track to halve extreme poverty by 2015. Sub-Saharan Africa could miss all the MDGs, notwithstanding the remarkable growth performance of recent years. Worldwide, serious shortfalls are expected in education, health – especially for the goals of reducing child and maternal mortality – nutrition, and sanitation (World Bank 2008).[17] This is because the MDGs were conceived as political targets intended to mobilize international support, and were established on the basis of global, and not country–specific, trends (UNDP, 2007b).

Still, the MDGs should become the overarching framework on which policy makers are expected to deliver. If Mauritania wants to achieve its bold development vision, it needs to deliver on the MDGs. This paper aimed at aiding policy makers in this task. As *the delivery of additional financial resources is as essential as improvements in the overall policy and institutional framework*, the following three key recommendations emerge:

1) *Mobilize additional financial resources, and spend them at the local level and in rural areas.* To bridge the existing financing gap (on aggregate and for each goal), additional resources need to be allocated to the MDGs. For the period 2008-2015, this paper estimates the total cost of reaching the MDGs at around 9 percent of non-oil GDP on average per year – and the financing gap at around 3.2 percent. These resources need to be allocated more than proportionally to the disadvantaged groups, mainly at the local level and in rural areas.[18]

2) *Introduce policy changes at the sectoral level.* Money is not the (only) answer, however: sectoral strategies need to be better aligned with the MDGs and the Government needs to improve the delivery of social services. In order to accelerate progress on the goals that are off-track, this paper recommends specific changes in domestic sectoral policies, concisely presented in Table 11.

[17] In particular, malnutrition has been labeled the "forgotten MDG", while being the MDG with the greatest multiplier effect: it is the largest risk factor for kids under five and the underlying cause of an estimated 3.5 million of their deaths each year. More than 20 percent of maternal deaths are traced to malnutrition (World Bank 2008).

[18] Financial resources could be made available. The *Fifth Mauritania Consultative Group* met on December 4-5, 2007 in Paris. Partners committed to finance Mauritania's 2008-2010 development plan by granting US$2.104 billion in external assistance.

3) *Strengthen the links between strategic objectives and budget.* To achieve 2) above, the Government needs to strengthen the links between public resources and MDG outcomes, by improving both the PRSP process and the existing public financial management instruments, and moving towards a result-based MTEF. This paper proposes ways to integrate the MDGs into the process of strategic planning and budget elaboration (Figure 16 and Table 11). The in-country review of the MDGs costing exercise should also lead to a redesign of the indicators themselves.

The focus on the MDGs can also temper the "natural resource curse", and increase the likelihood that reforms will be kept on track. Mauritania is a resource-rich developing country. The country's economy has been dependent on natural resources since the 1950s: iron ore, fisheries, and more recently oil, gold and copper. In 2006, the main exported goods were natural resources: oil (48 percent of the exports), iron ore (34 percent), fish (14 percent) and other minerals (gold, copper, 4 percent). The risk of a "natural resource curse" is substantial. Establishing a credible roadmap to achieve the MDGs (i.e.: invest resources to reduce poverty and promote human development) can mitigate the risk of reduced commitment to reform on the part of the authorities due to the easing of resource constraints.

References

A. Bibliography

Auty, R. M., ed., 2001. *Resource Abundance and Economic Development*, World Institute for Economic Research of the United Nations University, New York: Oxford University Press.

Auty, R. M., and N. Pontara, 2008. A Dual Track Strategy for Managing Mauritania's Projected Oil Rent, *Development Policy Review*, UK (Vol. 26, No. 1, 2008).

Baird, M., and S. Shetty, 2003. How to Accelerate Progress toward the Millennium Development Goals, *Finance & Development*, Washington DC: The World Bank.

Bourguignon, F. 2004. "*The Poverty Growth Inequality Triangle*." Paper presented at the Indian Council for Research on International Economic Relations, New Delhi, February 4.

Collier, P. and A. Hoffler, 2002. *Greed and Grievance in Civil Wars*, Centre for the Study of African Economies (CSAE), Working Paper 2002-01, (2002), University of Oxford: UK.

Devarajan, S., Miller, M., and D. Swanson, 2002. *Goals for Development: History, Prospects and Costs*, Policy Research Working Paper No. 2819, Washington DC: The World Bank.

Easterly, W., 2007. "*How the Millennium Development Goals are Unfair to Africa*", Brookings Working Paper No. 14, November 2007. Washington DC: The Brookings Institution.

Francisco, M., and N. Pontara, 2007. *Does Corruption Impact on Firms' Ability to Conduct Business in Mauritania? Evidence from Investment Climate Survey Data.* Policy Research Working Paper No. 4439, Washington DC: The World Bank.

Government of the Islamic Republic of Mauritania (GIRM), 2006. *Poverty Profile, Mauritania*: Nouakchott.

GIRM, 2007a. *Poverty Reduction Strategy Paper 2, Mauritania*: Nouakchott.

GIRM, 2007b. *Sectoral Action Plans in Health, Education and Water and Sanitation, Mauritania*: Nouakchott.

GIRM and ORC Macro, 2001. *Demographic and Health Survey (DHS) 2000–200l, Mauritania*: Nouakchott.

GIRM and ORC Macro, 2007. *Demographic and Health Survey (DHS) 2007–2007, Mauritania*: Nouakchott.

Hakura, D., and S. Nsouli, 2003. *The Millennium Development Goals: the Emerging Framework for Capacity Building, and the Role of the IMF*, IMF Working Paper 03/119, Washington DC: The IMF.

Overseas Development Institute (ODI), 2003. *Can We Attain the Millennium Development Goals in Education and Health through Public Expenditure and Aid?* ODI Briefing Paper, ODI: London.

Rajadel, T., Puerta-Sanchez, M. L., and N. Pontara, 2008. *Mauritania: Labor Market Study*, mimeo, Washington DC: The World Bank.

Sachs, D. J. and A. M. Warner, 2001. The Curse of Natural Resources, *European Economic Review*, 45 (5), 827-38.

Sala-i-Martin, X., and A.Subramanian, 2003. *Addressing the Natural Resource Curse: An Illustration from Nigeria*, IMF Working Paper 03/130, Washington DC: The IMF.

UNDP, 2003. *Rapport sur les Progrès dans la Mise en Oeuvre des Objectifs du Millénaire pour le Développement en Mauritanie*, Mauritanie: Nouakchott.

UNDP, 2005a. *Evaluation du Coût de Réalisation des Objectifs du Millénaire, Mauritanie*: Nouakchott.

UNDP, 2005b. *Rapport sur les Progrès dans la Mise en Oeuvre des Objectifs du Millénaire pour le Développement en Mauritanie*, Mauritanie: Nouakchott.

UNDP, 2007a. *Human Development Report*, New York: USA.

UNDP, 2007b. *"MDGs: Misunderstood Targets?"*, One Pager No. 28, International Poverty Center. New York: USA.

United Nations, 2000. *United Nations Millennium Declaration*. A/RES/55/2, New York: USA.

United Nations, 2001. *Road Map towards the Implementation of the United Nations Millennium Declaration*, A/56/326, New York: USA.

United Nations, 2005. *Investing in Development, a Practical Plan to Achieve the Millennium Development Goals*, UN Millennium Project, New York: USA.

WHO/UNICEF, 2006. Joint Monitoring Program for Water Supply and Sanitation, *Coverage Estimates: Improved Drinking Water*, June 2006 Update, wssinfo.org.

World Bank, 2002. *Health, Nutrition, and Population Development Goals: Measuring Progress using the Poverty Reduction Strategy framework*, Washington DC: The World Bank.

World Bank, 2004a. *Accelerating Progress Towards the MDGs: The Monterrey Consensus at the Country Level*, Washington DC: The World Bank.

World Bank, 2004b. *Public Expenditure Review: Mauritania*, Washington DC: The World Bank.

World Bank, 2005. *HIV/AIDS-Specific Country Profiles: Mauritania*, 2005, Washington DC: The World Bank.

World Bank, 2006a. *Education Sector Strategic Study (RESEN)*, Washington DC: The World Bank.

World Bank, 2006b. *Mauritania: PETS in the Health Sector*, Washington DC: The World Bank.

World Bank, 2007a. *Country Assistance Strategy for Islamic Republic of Mauritania (FY08-FY11)*, Washington DC: The World Bank.

World Bank, 2007b. *Sources of Growth: Concept Note*, mimeo, Washington DC: The World Bank.

World Bank, 2008. *Global Monitoring Report 2008, MDGs and the Environment: Agenda for Inclusive and Sustainable Development*. Washington DC: The World Bank.

B. Web Resources

- The *Millennium Development Goals* on the world-wide-web:

    1. World Bank: http://www.developmentgoals.org/
    2. UN: http://www.un.org/millenniumgoals/
    3. UNDP: http://www.undp.org/mdg/
    4. IMF: http://www.imf.org/external/np/sec/nb/2001/nb0190.htm

Annex 1. Detailed Cost and Financing Gaps for Achieving the MDGs

A. Exogenous variables

Indicators	2008	2009	2010	2011	2012	2013	2014	2015
Population	3,032,182	3,104,954	3,179,473	3,255,780	3,333,919	3,413,933	3,495,868	3,579,768
Nominal non-oil GDP	738,624	793,807	834,653	892,961	974,576	1,065,858	1,165,530	1,272,155
Exchange rate	268.60	268.60	268.60	272.37	276.20	280.08	284.02	288.01
Deflator	12.87	13.11	13.04	12.86	13.01	13.16	13.33	13.52

B. Total Cost

Target	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
MDG-1. Eradicate extreme poverty and hunger										
Millions US$	42.25	49.78	48.89	45.07	50.3	56.19	62.8	70.25	**275.57**	**34.45**
Per Capita (US$)	13.93	16.03	15.38	13.84	15.09	16.46	17.97	19.62		**16.04**
Millions UM	11,349.06	13,370.37	13,133.07	12,275.48	13,894.07	15,737.30	17,837.78	20,232.63	**75,736.05**	**9,467.01**
Per Capita (UM)	3,742.87	4,306.14	4,130.58	3,770.37	4,167.49	4,609.73	5,102.53	5,651.94		**4,435.21**
GDP (%)	1.54%	1.68%	1.57%	1.37%	1.43%	1.48%	1.53%	1.59%		**1.52%**
MDG-2. Achieve universal primary education										
Millions US$	89.10	98.99	115.74	125.77	138.44	155.51	171.15	183.53	**679.71**	**84.96**
Per Capita (US$)	29.38	31.88	36.4	38.63	41.52	45.55	48.96	51.27		**40.45**
Millions UM	23,932.31	26,589.01	31,086.90	34,257.31	38,236.38	43,556.12	48,609.67	52,859.41	**187,221.60**	**23,402.70**
Per Capita (UM)	7,892.77	8,563.42	9,777.38	10,522.00	11,468.90	12,758.34	13,904.90	14,766.15		**11,206.73**
GDP (%)	3.24%	3.35%	3.72%	3.84%	3.92%	4.09%	4.17%	4.16%		**3.81%**
MDG-3. Promote gender equality and empower women										
Millions US$	9.1	9.31	9.54	9.77	10	10.24	10.49	10.74	**52.61**	**6.58**
Per Capita (US$)	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		**3.00**
Millions UM	2,443.33	2,501.97	2,562.02	2,660.38	2,762.51	2,868.56	2,978.68	3,093.04	**14,430.03**	**1,803.75**
Per Capita (UM)	805.8	805.8	805.8	817.12	828.61	840.25	852.06	864.03		**827.43**
GDP (%)	0.33%	0.32%	0.31%	0.30%	0.28%	0.27%	0.26%	0.24%		**0.29%**

Target	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
MDG-4. Reduce child mortality										
Millions US$	26.54	29.37	32.53	36.6	41.2	46.37	52.19	58.75	**202.5**	**25.31**
Per Capita (US$)	8.75	9.46	10.23	11.24	12.36	13.58	14.93	16.41		**12.12**
Millions UM	7,129.14	7,889.83	8,737.41	9,969.52	11,379.05	12,986.53	14,823.62	16,921.82	**55,816.45**	**6,977.06**
Per Capita (UM)	2,351.16	2,541.04	2,748.07	3,062.10	3,413.12	3,803.98	4,240.33	4,727.07		**3,360.86**
GDP (%)	0.97%	0.99%	1.05%	1.12%	1.17%	1.22%	1.27%	1.33%		**1.14%**
MDG-5. Improve maternal health										
Millions US$	17.87	21.36	25.46	29.54	34.27	39.71	45.98	53.21	**163.26**	**20.41**
Per Capita (US$)	5.89	6.88	8.01	9.07	10.28	11.63	13.15	14.87		**9.97**
Millions UM	4,800.25	5,738.15	6,839.34	8,047.09	9,464.92	11,120.99	13,059.81	15,326.30	**45,094.16**	**5,636.77**
Per Capita (UM)	1,583.10	1,848.06	2,151.09	2,471.63	2,838.98	3,257.53	3,735.79	4,281.37		**2,770.94**
GDP (%)	0.65%	0.72%	0.82%	0.90%	0.97%	1.04%	1.12%	1.20%		**0.93%**
MDG-6. Combat HIV / Aids Malaria & other diseases										
Millions US$	5.04	5.02	5.01	4.94	4.88	4.82	4.77	4.7	**26.61**	**3.33**
Per Capita (US$)	1.66	1.62	1.58	1.52	1.46	1.41	1.36	1.31		**1.49**
Millions UM	1,352.65	1,348.80	1,345.38	1,346.35	1,347.92	1,349.84	1,354.82	1,354.69	**7,285.70**	**910.71**
Per Capita (UM)	446.1	434.4	423.15	413.53	404.3	395.39	387.55	378.43		**410.36**
GDP (%)	0.18%	0.17%	0.16%	0.15%	0.14%	0.13%	0.12%	0.11%		**0.14%**
Subtotal Health System (MDG-4, MDG-5, MDG-6)										
Millions US$	*49.45*	*55.76*	*63*	*71.09*	*80.35*	*90.89*	*102.94*	*116.67*	***392.37***	***49.05***
Per Capita (US$)	*16.31*	*17.96*	*19.81*	*21.83*	*24.1*	*26.62*	*29.45*	*32.59*		***23.58***
Millions UM	*13,282.05*	*14,976.79*	*16,922.14*	*19,362.96*	*22,191.89*	*25,457.36*	*29,238.25*	*33,602.81*	***108,196.30***	***13,524.54***
Per Capita (UM)	*4,380.36*	*4,823.51*	*5,322.31*	*5,947.26*	*6,656.40*	*7,456.90*	*8,363.66*	*9,386.87*		***6,542.16***
GDP (%)	*1.80%*	*1.89%*	*2.03%*	*2.17%*	*2.28%*	*2.39%*	*2.51%*	*2.64%*		***2.21%***
MDG-7. Ensure environmental sustainability										
Millions US$	90.88	45.68	33.65	29.77	25.67	18.06	18.89	19.77	**220.83**	**27.6**
Per Capita (US$)	29.97	14.71	10.58	9.14	7.7	5.29	5.4	5.52		**11.04**
Millions UM	24,410.45	12,270.03	9,037.54	8,108.84	7,088.99	5,057.06	5,364.91	5,693.72	**59,919.94**	**7,489.99**
Per Capita (UM)	8,050.46	3,951.76	2,842.46	2,490.60	2,126.32	1,481.30	1,534.64	1,590.53		**3,008.51**
GDP (%)	3.30%	1.55%	1.08%	0.91%	0.73%	0.47%	0.46%	0.45%		**1.12%**

TOTAL COST	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
Millions US$	280.78	259.52	270.82	281.47	304.75	330.89	366.28	400.96	**1,621.10**	**202.64**
Per Capita (US$)	92.6	83.58	85.18	86.45	91.41	96.92	104.77	112.01		**94.12**
Millions UM	75,417.19	69,708.17	72,741.67	76,664.97	84,173.85	92,676.41	104,029.30	115,481.61	**445,503.92**	**55,687.99**
Per Capita (UM)	24,872.25	22,450.63	22,878.53	23,547.34	25,247.72	27,146.52	29,757.79	32,259.52		**26,020.04**
GDP (%)	10.21%	8.78%	8.72%	8.59%	8.64%	8.70%	8.93%	9.08%		**8.95%**

C. Budget Allocation

Target	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
MDG-1. Eradicate extreme poverty and hunger										
Millions US$	20.13	20.85	15.64	17.86	20.39	23.29	26.59	30.37	**113.33**	**14.17**
Per Capita (US$)	6.64	6.71	4.92	5.48	6.12	6.82	7.61	8.48		**6.60**
Millions UM	5,407.50	5,600.00	4,200.00	4,863.60	5,632.05	6,521.91	7,552.37	8,745.65	**31,161.84**	**3,895.23**
Per Capita (UM)	1,783.37	1,803.57	1,320.97	1,493.84	1,689.32	1,910.38	2,160.37	2,443.08		**1,825.61**
GDP (%)	0.73%	0.71%	0.50%	0.54%	0.58%	0.61%	0.65%	0.69%		**0.63%**
MDG-2. Achieve universal primary education										
Millions US$	82.37	92.52	104.71	113.58	123.21	136.08	150.30	166.00	**613.29**	**76.66**
Per Capita (US$)	27.17	29.80	32.93	34.89	36.96	39.86	42.99	46.37		**36.37**
Millions UM	22,125.49	24,852.19	28,123.90	30,936.29	34,029.92	38,113.51	42,687.13	47,809.59	**168,863.47**	**21,107.93**
Per Capita (UM)	7,296.89	8,004.04	8,845.46	9,501.96	10,207.18	11,164.11	12,210.74	13,355.50		**10,073.23**
GDP (%)	3.00%	3.13%	3.37%	3.46%	3.49%	3.58%	3.66%	3.76%		**3.43%**
MDG-3. Promote gender equality and empower women										
Millions US$	1.34	1.52	1.78	2.02	2.29	2.60	2.65	3.01	**10.79**	**1.35**
Per Capita (US$)	0.44	0.49	0.56	0.62	0.69	0.76	0.76	0.84		**0.65**
Millions UM	360.69	409.32	478.78	550.60	633.19	728.17	753.65	866.70	**2,973.47**	**371.68**
Per Capita (UM)	118.95	131.83	150.59	169.11	189.92	213.29	215.58	242.11		**178.92**
GDP (%)	0.05%	0.05%	0.06%	0.06%	0.06%	0.07%	0.06%	0.07%		**0.06%**

Target	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
MDG-4. Reduce child mortality										
Millions US$	10.19	11.92	14.96	17.57	19.33	21.87	24.80	28.16	**91.60**	**11.45**
Per Capita (US$)	3.36	3.84	4.71	5.40	5.80	6.41	7.09	7.87		**5.56**
Millions UM	2,737.32	3,201.39	4,019.12	4,784.76	5,339.90	6,126.61	7,042.53	8,110.70	**25,280.47**	**3,160.06**
Per Capita (UM)	902.76	1,031.06	1,264.08	1,469.62	1,601.69	1,794.59	2,014.53	2,265.71		**1,543.00**
GDP (%)	0.37%	0.40%	0.48%	0.54%	0.55%	0.57%	0.60%	0.64%		**0.52%**
MDG-5. Improve maternal health										
Millions US$	4.08	4.77	5.34	7.03	7.73	9.48	12.40	14.08	**38.86**	**4.86**
Per Capita (US$)	1.34	1.54	1.68	2.16	2.32	2.78	3.55	3.93		**2.41**
Millions UM	1,094.93	1,280.56	1,435.40	1,913.90	2,135.96	2,654.86	3,521.27	4,055.35	**10,753.74**	**1,344.22**
Per Capita (UM)	361.10	412.42	451.46	587.85	640.68	777.66	1,007.27	1,132.85		**671.41**
GDP (%)	0.15%	0.16%	0.17%	0.21%	0.22%	0.25%	0.30%	0.32%		**0.22%**
MDG-6. Combat HIV / Aids Malaria & other diseases										
Millions US$	1.22	1.43	1.60	1.87	2.06	2.33	2.64	3.00	**10.05**	**1.26**
Per Capita (US$)	0.40	0.46	0.50	0.58	0.62	0.68	0.76	0.84		**0.61**
Millions UM	328.48	384.17	430.62	510.37	569.59	653.50	751.20	865.14	**2,772.32**	**346.54**
Per Capita (UM)	108.33	123.73	135.44	156.76	170.85	191.42	214.88	241.68		**167.89**
GDP (%)	0.04%	0.05%	0.05%	0.06%	0.06%	0.06%	0.06%	0.07%		**0.06%**
Subtotal Health System (MDG-4, MDG-5, MDG-6)										
Millions US$	15.49	18.12	21.91	26.47	29.13	33.69	39.84	45.25	***140.51***	***17.56***
Per Capita (US$)	5.11	5.83	6.89	8.13	8.74	9.87	11.40	12.64		***8.58***
Millions UM	4,160.73	4,866.11	5,885.14	7,209.04	8,045.45	9,434.98	11,315.00	13,031.20	***38,806.53***	***4,850.82***
Per Capita (UM)	1,372.19	1,567.21	1,850.98	2,214.23	2,413.21	2,763.67	3,236.68	3,640.23		***2,382.30***
GDP (%)	0.56%	0.61%	0.71%	0.81%	0.83%	0.89%	0.97%	1.02%		***0.80%***
MDG-7. Ensure environmental sustainability										
Millions US$	75.19	33.29	22.12	17.18	14.25	12.83	13.29	13.90	**161.52**	**20.19**
Per Capita (US$)	24.80	10.72	6.96	5.28	4.27	3.76	3.80	3.88		**7.93**
Millions UM	20,195.00	8,941.00	5,941.00	4,680.19	3,936.00	3,592.31	3,774.93	4,002.99	**43,783.77**	**5,472.97**
Per Capita (UM)	6,660.22	2,879.59	1,868.55	1,437.50	1,180.59	1,052.25	1,079.83	1,118.23		**2,159.59**
GDP (%)	2.73%	1.13%	0.71%	0.52%	0.40%	0.34%	0.32%	0.31%		**0.81%**

TOTAL BUDGET	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
Millions US$	194.52	166.30	166.15	177.11	189.27	208.48	232.67	258.52	**1,039.44**	**129.93**
Per Capita (US$)	64.15	53.56	52.26	54.40	56.77	61.07	66.56	72.22		**60.12**
Millions UM	52,249.41	44,668.62	44,628.82	48,239.72	52,276.60	58,390.87	66,083.10	74,456.12	**285,589.08**	**35,698.64**
Per Capita (UM)	17,231.62	14,386.24	14,036.55	14,816.64	15,680.23	17,103.70	18,903.20	20,799.15		**16,619.66**
GDP (%)	7.07%	5.63%	5.35%	5.40%	5.36%	5.48%	5.67%	5.85%		**5.73%**

D. Financing Gap

Target	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
MDG-1. Eradicate extreme poverty and hunger										
Millions US$	-22.12	-28.93	-33.26	-27.21	-29.91	-32.90	-36.21	-39.88	**-162.24**	**-20.28**
Per Capita (US$)	-7.30	-9.32	-10.46	-8.36	-8.97	-9.64	-10.36	-11.14		**-9.44**
Millions UM	-5,941.56	-7,770.37	-8,933.07	-7,411.88	-8,262.02	-9,215.39	-10,285.40	-11,486.98	**-44,574.21**	**-5,571.78**
Per Capita (UM)	-1,959.50	-2,502.57	-2,809.61	-2,276.53	-2,478.17	-2,699.35	-2,942.16	-3,208.86		**-2,609.59**
GDP (%)	-0.80%	-0.98%	-1.07%	-0.83%	-0.85%	-0.86%	-0.88%	-0.90%		**-0.90%**
MDG-2. Achieve universal primary education										
Millions US$	-6.73	-6.47	-11.03	-12.19	-15.23	-19.43	-20.85	-17.53	**-66.43**	**-8.30**
Per Capita (US$)	-2.22	-2.08	-3.47	-3.74	-4.57	-5.69	-5.96	-4.90		**-4.08**
Millions UM	-1,806.82	-1,736.82	-2,963.00	-3,321.02	-4,206.46	-5,442.61	-5,922.54	-5,049.83	**-18,358.13**	**-2,294.77**
Per Capita (UM)	-595.88	-559.37	-931.92	-1,020.04	-1,261.72	-1,594.23	-1,694.16	-1,410.66		**-1,133.50**
GDP (%)	-0.24%	-0.22%	-0.35%	-0.37%	-0.43%	-0.51%	-0.51%	-0.40%		**-0.38%**
MDG-3. Promote gender equality and empower women										
Millions US$	-7.75	-7.79	-7.76	-7.75	-7.71	-7.64	-7.83	-7.73	**-41.83**	**-5.23**
Per Capita (US$)	-2.56	-2.51	-2.44	-2.38	-2.31	-2.24	-2.24	-2.16		**-2.35**
Millions UM	-2,082.64	-2,092.66	-2,083.24	-2,109.78	-2,129.32	-2,140.39	-2,225.03	-2,226.33	**-11,456.55**	**-1,432.07**
Per Capita (UM)	-686.85	-673.97	-655.21	-648.01	-638.68	-626.96	-636.47	-621.92		**-648.51**
GDP (%)	-0.28%	-0.26%	-0.25%	-0.24%	-0.22%	-0.20%	-0.19%	-0.18%		**-0.23%**

Target	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
MDG-4. Reduce child mortality										
Millions US$	-16.35	-17.46	-17.57	-19.04	-21.86	-24.49	-27.40	-30.59	**-110.90**	**-13.86**
Per Capita (US$)	-5.39	-5.62	-5.52	-5.85	-6.56	-7.17	-7.84	-8.55		**-6.56**
Millions UM	-4,391.82	-4,688.44	-4,718.29	-5,184.76	-6,039.16	-6,859.92	-7,781.08	-8,811.12	**-30,535.98**	**-3,817.00**
Per Capita (UM)	-1,448.40	-1,509.99	-1,483.99	-1,592.48	-1,811.43	-2,009.39	-2,225.79	-2,461.36		**-1,817.85**
GDP (%)	-0.59%	-0.59%	-0.57%	-0.58%	-0.62%	-0.64%	-0.67%	-0.69%		**-0.62%**
MDG-5. Improve maternal health										
Millions US$	-13.79	-16.60	-20.12	-22.52	-26.53	-30.23	-33.58	-39.13	**-124.40**	**-15.55**
Per Capita (US$)	-4.55	-5.34	-6.33	-6.92	-7.96	-8.85	-9.61	-10.93		**-7.56**
Millions UM	-3,705.32	-4,457.60	-5,403.94	-6,133.19	-7,328.96	-8,466.13	-9,538.54	-11,270.95	**-34,340.42**	**-4,292.55**
Per Capita (UM)	-1,222.00	-1,435.64	-1,699.63	-1,883.78	-2,198.30	-2,479.88	-2,728.52	-3,148.51		**-2,099.53**
GDP (%)	-0.50%	-0.56%	-0.65%	-0.69%	-0.75%	-0.79%	-0.82%	-0.89%		**-0.71%**
MDG-6. Combat HIV / Aids Malaria & other diseases										
Millions US$	-3.81	-3.59	-3.41	-3.07	-2.82	-2.49	-2.13	-1.70	**-16.56**	**-2.76**
Per Capita (US$)	-1.26	-1.16	-1.07	-0.94	-0.85	-0.73	-0.61	-0.47		**-1.00**
Millions UM	-1,024.17	-964.64	-914.76	-835.98	-778.33	-696.34	-603.62	-489.55	**-4,513.38**	**-752.23**
Per Capita (UM)	-337.77	-310.68	-287.71	-256.77	-233.46	-203.97	-172.67	-136.76		**-271.72**
GDP (%)	-0.14%	-0.12%	-0.11%	-0.09%	-0.08%	-0.07%	-0.05%	-0.04%		**-0.12%**
Subtotal Health System (MDG-4, MDG-5, MDG-6)										
Millions US$	*-33.96*	*-37.64*	*-41.09*	*-44.62*	*-51.22*	*-57.21*	*-60.98*	*-69.73*	***-250.16***	***-31.27***
Per Capita (US$)	*-11.20*	*-12.12*	*-12.92*	*-13.71*	*-15.36*	*-16.76*	*-17.44*	*-19.48*		***-15.12***
Millions UM	*-9,121.32*	*-10,110.67*	*-11,037.00*	*-12,153.92*	*-14,146.45*	*-16,022.39*	*-17,319.63*	*-20,082.06*	***-68,903.34***	***-8,612.92***
Per Capita (UM)	*-3,008.17*	*-3,256.30*	*-3,471.33*	*-3,733.03*	*-4,243.19*	*-4,693.23*	*-4,954.31*	*-5,609.88*		***-4,189.11***
GDP (%)	*-1.23%*	*-1.27%*	*-1.32%*	*-1.36%*	*-1.45%*	*-1.50%*	*-1.49%*	*-1.58%*		***-1.40%***
MDG-7. Ensure environmental sustainability										
Millions US$	-15.69	-12.39	-11.53	-12.59	-11.42	-5.23	-5.60	-5.87	**-59.31**	**-8.47**
Per Capita (US$)	-5.18	-3.99	-3.63	-3.87	-3.42	-1.53	-1.60	-1.64		**-2.81**
Millions UM	-4,215.45	-3,329.03	-3,096.54	-3,428.66	-3,152.99	-1,464.76	-1,589.98	-1,690.73	**-16,136.17**	**-2,305.17**
Per Capita (UM)	-1,390.23	-1,072.17	-973.92	-1,053.10	-945.73	-429.05	-454.82	-472.30		**-771.58**
GDP (%)	-0.57%	-0.42%	-0.37%	-0.38%	-0.32%	-0.14%	-0.14%	-0.13%		**-0.27%**

TOTAL FINANCING GAP	2008	2009	2010	2011	2012	2013	2014	2015	Total	Average
Millions US$	-86.25	-93.22	-104.66	-104.36	-115.49	-122.41	-131.48	-140.74	**-579.96**	**-72.49**
Per Capita (US$)	-28.45	-30.02	-32.92	-32.05	-34.64	-35.86	-37.61	-39.32		**-33.81**
Millions UM	-23,167.77	-25,039.55	-28,112.85	-28,425.26	-31,897.24	-34,285.53	-37,342.58	-40,535.94	**-159,428.40**	**-19,928.55**
Per Capita (UM)	-7,640.63	-8,064.39	-8,841.98	-8,730.70	-9,567.49	-10,042.82	-10,681.92	-11,323.62		**-9,352.29**
GDP (%)	-3.14%	-3.15%	-3.37%	-3.18%	-3.27%	-3.22%	-3.20%	-3.19%		**-3.22%**