



**Government of the Republic of Zambia  
MINISTRY OF HEALTH**

**ANNEX II  
Addendum to the MOU 2006  
Between GRZ/MOH and the Cooperating Partners**

**Summary Paper  
Recosting of the NHSP 2006-2010 and  
Gap Analysis for MDGs Scale-Up**

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## **1 Introduction**

A comprehensive report on the recosting of the National Health Strategic Plan 2006-10 (NHSP 2006-10) and Gap analysis for MDGs scale up is available. This report presents an extract from the same report. It presents summaries of the following:

- a) The updated costing of the National Health Strategic Plan 2006-10 (NHSP);
- b) The mapping of resources to the health sector from Ministry of Finance, donors contributions to the SWAp basket fund, earmarked project support fund, and external loans; and
- c) The analysis of the NHSP financing gap, which was based on the following three scenarios: scenario 1 – Needs based; Scenario 2 – Resources based; and Scenario 3 – Results based.

The purpose of this summarised report is to present the financing needs and gaps for the remaining duration of the NHSP 2006-10, for use by the CPs, as the basis for decisions on long-term financing commitments and pledges to the sector. The recosting exercise was conducted by the Ministry of Health (MOH) and benefited from the active participation of all departments of Ministry of Health, development partners in Lusaka, and joint technical support of Unicef, World Bank, WHO, UNFPA, and UNDP.

## **2 Scaling-up High Impact Interventions**

The high impact interventions currently provided to Zambians or being considered for introduction are presented below. These interventions include a wide range of health, nutrition, water and sanitation, malaria, HIV/AIDS, and TB interventions. These interventions are classified by the mode in which they are delivered (family oriented community based, population oriented schedulable, and individual oriented clinical services).

As shown in Tables 1 to 3, Zambia is already implementing most of the high impact interventions identified at the global level. However, many of these interventions exhibit low coverage levels.

To update the cost of the NHSP and estimate impact in terms of mortality reduction, three scenarios are considered. Each scenario calls for a certain level of reinforcement of the key pillars of the health system or the coverage determinants as suggested by the analytical framework of the MBB. The magnitude of the bottleneck reduction exhibited under each scenario relates to the capacity of the health sector to address the causes of bottlenecks or implement the operational strategies. A progressively higher proportion of bottleneck reduction considered to formulate the three Scenarios.

## 2.1 Family oriented community based services

This first package of services consists of what families and communities can practice by themselves, when provided with information and education by health workers. These interventions include mostly preventive and promotive measures as well as some management of neonatal and childhood illnesses. Most of these interventions do not need a skilled provider. The responsibility of the system is to empower the community through information, education and other strategies as well as make accessible commodities and supplies.

**Table 1: Family oriented community based services in Zambia**

Effective interventions	Baseline Coverage	National Coverage Targets by 2010		
		Scenario 1	Scenario 2	Scenario 3
Insecticide Treated Mosquito Nets	41%	52%	55%	60%
Quality of drinking water	42%	52%	55%	60%
Use of sanitary latrine	26%	52%	55%	60%
Hand washing by mother	32%	52%	55%	60%
Indoor Residual Spraying (IRS)	51%	80%	85%	85%
Clean delivery and cord care	8%	22%	22%	22%
Early breastfeeding and temperature management	57%	60%	65%	65%
Breastfeeding for children 0-5 months	40%	62%	66%	71%
Breastfeeding for children 6-11 months	93%	93%	93%	93%
Complementary feeding	93%	93%	93%	93%
Therapeutic Feeding	31%	40%	47%	55%
Oral Rehydration Therapy	25%	39%	46%	56%
Zinc for diarrhea management			46%	56%
Artemisinin-based Combination Therapy for children	5%	25%	50%	50%
Artemisinin-based Combination Therapy for adults	5%	25%	50%	50%
Antibiotics for U5 pneumonia			46%	56%

Table 1, above, presents the interventions that are included in the NHSP, including the baseline coverage and targets by 2010. Major bottleneck at this level is the availability of and access to active community health workers. In setting national targets for the three scenarios 20-30% reduction in availability of CHWs was considered for Scenario 1, 40-50% reduction for Scenario 2 and 60% reduction for Scenario 3. Similar reductions in bottlenecks were assumed for the other coverage determinants informed by the details of the bottleneck analysis in Section 3.

## 2.2 Population oriented schedulable services

This delivery mode includes disease preventive services delivered to all individuals, regardless of whether or not they are currently sick. Delivery strategies include both periodic outreaches to communities and/or scheduled services at health facilities. Immunizations, ante-natal care, family planning, vitamin A supplementation, de-worming, and malaria intermittent treatment are some examples of interventions that are delivered in this mode.

Population oriented schedulable services currently delivered to Zambians are presented in **Error! Reference source not found.** Detection and treatment of asymptomatic bacteriuria and Pneumococcal immunization are considered as part of the scenario analysis. Progressive proportion of bottleneck reductions considered in formulating the three scenarios were informed by the bottleneck analysis.

**Table 2: Population oriented schedulable services in Zambia**

Effective interventions	Baseline Coverage	National Coverage Targets by 2010		
		Scenario 1	Scenario 2	Scenario 3
Family planning	33%	38%	40%	44%
Antenatal Care	19%	33%	39%	48%
Tetanus toxoid	81%	81%	81%	81%
Deworming in pregnancy	36%	36%	39%	48%
Detection and treatment of asymptomatic bacteriuria			39%	48%
Treatment of syphilis in pregnancy	50%	50%	50%	50%
Prevention and treatment of iron deficiency anemia in pregnancy	90%	90%	90%	90%
Intermittent preventive treatment (IPTp) for malaria in pregnancy	66%	66%	66%	66%
PMTCT	12%	34%	45%	56%
Condom use	50%	55%	55%	63%
Cotrimoxazole prophylaxis for HIV+ mothers	6%	34%	45%	56%
Cotrimoxazole prophylaxis for HIV+ adults	52%	52%	52%	56%
Cotrimoxazole prophylaxis for children of HIV+ mothers	12%	34%	45%	56%
Measles immunization	97%	97%	97%	97%
BCG immunization	97%	97%	97%	97%
OPV immunization	88%	88%	88%	88%
Pentavalent (DPT-HiB-Hepatitis) immunization	92%	95%	95%	95%
Pneumococcal immunization				85%
Vitamin A - supplementation	90%	90%	90%	90%

## 2.3 Individual oriented clinical services

This delivery mode includes all types of individual curative care and delivery services that need to be offered by trained health care professionals in a health care facility. These interventions are offered in a continuous manner so that they can respond to unpredictable situations as with a sudden illness, child birth, treatment of HIV/AIDS, Sexually Transmitted Diseases (STIs), Acute Respiratory

Infections (ARIs), complicated and resistant malaria, TB, etc. In Zambia, the national policy defines interventions implemented at the health center, first level referral hospital, and general hospital levels.

The interventions currently implemented or that will be included in the next phases are presented by level of care in **Error! Reference source not found.** below.

**Table 3: Individual oriented clinical services in Zambia**

Effective interventions	Baseline Coverage	National Coverage Targets by 2010		
		Scenario 1	Scenario 2	Scenario 3
Normal delivery by skilled attendant	47%	64%	70%	74%
Active management of the third stage of labor	35%	64%	70%	74%
Basic emergency obstetric care (B-EOC)	42%	64%	70%	74%
Comprehensive emergency obstetric care (C-EOC)	40%	52%	54%	56%
Resuscitation of asphyctic newborns at birth	65%	72%	74%	76%
Antenatal steroids for preterm labor	50%	68%	72%	76%
Antibiotics for Preterm/Prelabour Rupture of Membrane (P/PROM)	65%	72%	74%	76%
Detection and management of (pre)ecclampsia (Mg Sulphate)	25%	64%	70%	74%
Management of neonatal infections	61%	69%	73%	77%
Clinical management of neonatal jaundice	36%	43%	46%	50%
Universal emergency neonatal care (asphyxia aftercare, management of serious infections, management of the VLBW infant)	28%	43%	46%	50%
Antibiotics for U5 pneumonia	68%	70%	71%	72%
Antibiotics for dysentery and enteric fevers	60%	66%	68%	69%
Vitamin A - Treatment for measles	66%	68%	69%	70%
Zinc for diarrhea management		64%	66%	69%
Artemisinin-based Combination Therapy for children	8%	64%	66%	69%
Artemisinin-based Combination Therapy for adults	8%	64%	66%	69%
Management of complicated malaria (2nd line drug)	97%	97%	97%	97%
Management of severely sick children (referral IMCI)	20%	22%	24%	26%
Detection and management of STI		64%	66%	69%
Management of opportunistic infections		85%	90%	95%
Male circumcision		64%	66%	69%
First line ART for children with HIV/AIDS	38%	52%	67%	76%
First-line ART for pregnant women with HIV/AIDS	3%	28%	42%	54%
First-line ART for adults with AIDS	53%	69%	80%	88%
Children second-line ART		5%	13%	18%
Adult second-line ART	1%	5%	13%	18%
Detection and treatment of TB with first line drugs (category 1 and 3)	75%	86%	88%	89%
Re-treatment of TB patients with first line drugs (category 2)	75%	86%	88%	89%

Sixty (60) high impact interventions are included in the service package at the family/community, population/schedulable and individual/clinical service delivery modes. These are interventions with direct contribution to the achievement of the health related Millennium Development Goals. The additional cost of scaling up and mortality reductions by 2010 estimated using these packages of interventions and coverage levels in the three scenarios. Total budget requirement for 2009 and 2010 include other interventions. Interventions outside this list are mental health, oral health, epidemics, non-communicable diseases, etc.

In the NHSP these interventions are captured in two program areas: epidemics control and public health surveillance, and other public health priorities. These two program areas are costed in the traditional way. That is, the current spending on these interventions inflated to capture increasing cost of delivery and reaching more people.

### 3 Additional Cost and Impact of Scaling-up

The MBB tool applied to update the cost of the NHSP for the remaining two years. It estimates the additional resources needed to reduce identified bottlenecks (discussed in section 3) and ultimately increase effective coverage of interventions included in the service packages (discussed in section 4). Additional costs presented for three scenarios. These scenarios represent different level of ambition in the reduction of health system bottlenecks in the next two years. Higher proportion of bottlenecks reductions assumed in moving from Scenario 1 to 3. Higher additional costs but also a much higher reduction in maternal, newborn and child mortality for Scenario 3 compared to Scenario 1 or 2.

**Table 5.1 NHSP additional cost and mortality reduction estimates by 2010**

<b>Scenario I</b>				
<b>Service delivery mode</b>	<b>Mortality reduction</b>			<b>Additional cost per capita per year in US\$</b>
	<b>Neonatal</b>	<b>Under five</b>	<b>Maternal</b>	
1. Family oriented community based services	1.7%	8.1%	0.4%	0.85
2. Population oriented schedulable services	0.9%	2.3%	2.0%	1.65
3. Individual oriented clinical services	10.8%	17.5%	14.9%	4.47
Management and technical support				0.84
<b>Total</b>	<b>12.7%</b>	<b>24.6%</b>	<b>17.0%</b>	<b>7.80</b>
<b>Scenario II</b>				
1. Family oriented community based services	2.3%	11.8%	0.3%	1.18
2. Population oriented schedulable services	1.4%	3.2%	2.8%	2.04
3. Individual oriented clinical services	13.2%	20.0%	17.8%	6.10
Management and technical support				0.84
<b>Total</b>	<b>15.9%</b>	<b>30.0%</b>	<b>20.6%</b>	<b>10.16</b>
<b>Scenario III</b>				
1. Family oriented community based services	4.4%	14.6%	0.3%	1.52
2. Population oriented schedulable services	2.0%	13.9%	3.9%	3.98
3. Individual oriented clinical services	16.0%	22.4%	21.1%	9.12
Management and technical support				1.68
<b>Total</b>	<b>20.7%</b>	<b>43.7%</b>	<b>24.8%</b>	<b>16.30</b>

#### 4 Total Budget Required for 2009 and 2010

Table 4 below presents a summary of total financing needs/budgets for the remaining years of the NHSP 2006-10, based on the three scenarios.

**Table 4: NHSP estimated total budget requirements**

Scenarios	Baseline	Estimated budget requirement		
	2008	2009	2010	Total
Scenario 1	481,311.15	563,061.96	598,718.31	1,161,780.27
Scenario 2	481,311.15	586,882.92	635,023.81	1,221,906.72
Scenario 3	481,311.15	652,444.58	725,906.88	1,378,351.46

#### 5 NHSP Resource Mapping and Financing Gap Analyses

The total allocations to health from all sources (GRZ, project support and SWAp) increased from less than US\$ 200 million in 2005 to over US\$ 450 million in 2007 (see Table 5). The amount is expected to grow over the next two years. However, with more than 45 percent of the population living outside the radius of 5 kilometers to the nearest health facility, government need to mobilize enough funds to improve physical accessibility to health services especially that this is an area where most donors are reluctant to be involved in.

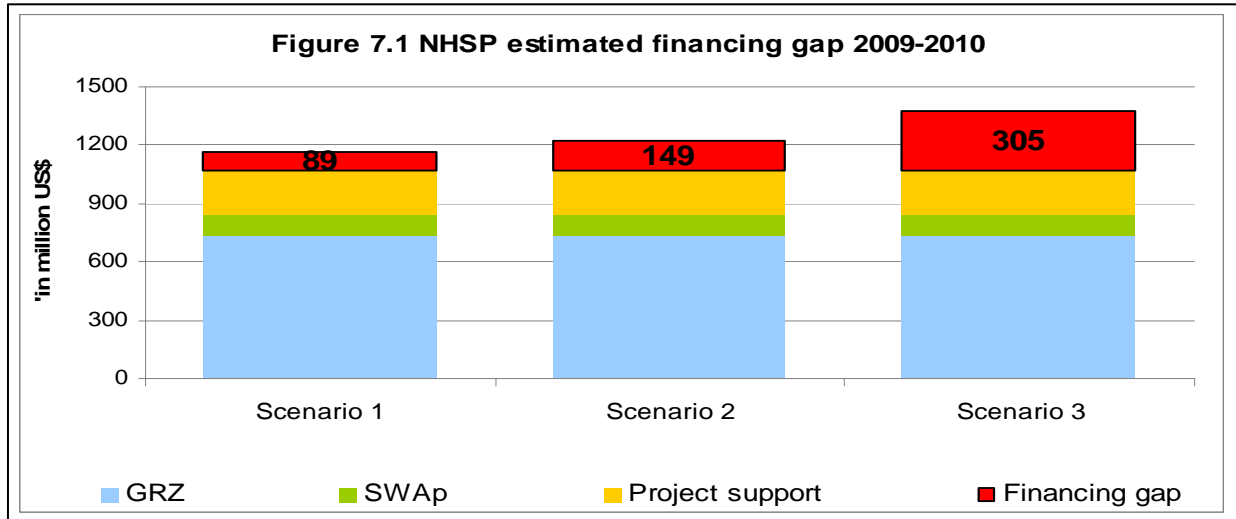
**Table 5: NHSP: Total funds (in millions US\$)**

Programme Area	2005	2006	2007	2008	2009	2010	Total
1. Human Resources	53.97	78.73	114.31	131.67	163.06	186.76	728.51
2. Integrated Child Health & Nutrition	5.27	14.82	20.39	21.46	20.42	16.33	98.69
3. Integrated Reproductive Health	4.32	7.15	9.68	9.86	9.99	9.92	50.92
4. HIV/AIDS/STIS & Blood Safety	26.38	85.30	108.76	98.29	96.11	87.15	502.00
5. TB and Leprosy	11.36	14.68	22.34	24.37	27.53	22.24	122.52
6. Malaria	17.30	29.05	54.22	55.07	49.63	40.22	245.48
7. Epidemics Control & Public Health Surveillance	0.99	1.30	1.62	1.77	1.87	1.99	9.53
8. Environmental Health & Food Safety	3.49	9.06	3.47	4.31	2.90	3.11	26.35
9. Essential Drugs & Medical Supplies	17.94	23.82	28.96	32.81	38.91	43.90	186.34
10. Infrastructure & Equipment	20.67	21.51	29.22	33.74	41.32	47.12	193.58
11. Health Systems Strengthening	6.93	14.38	13.50	10.24	9.57	9.93	64.54
12. Health Systems Governance	23.40	32.51	44.62	50.69	59.62	66.84	277.67
Other Public Health Priorities	3.59	4.84	6.31	7.03	7.85	8.59	38.20
<b>Total</b>	<b>195.61</b>	<b>337.14</b>	<b>457.40</b>	<b>481.31</b>	<b>528.78</b>	<b>544.10</b>	<b>2,544.33</b>

## 6 NHSP Financing Gaps 2009-2010

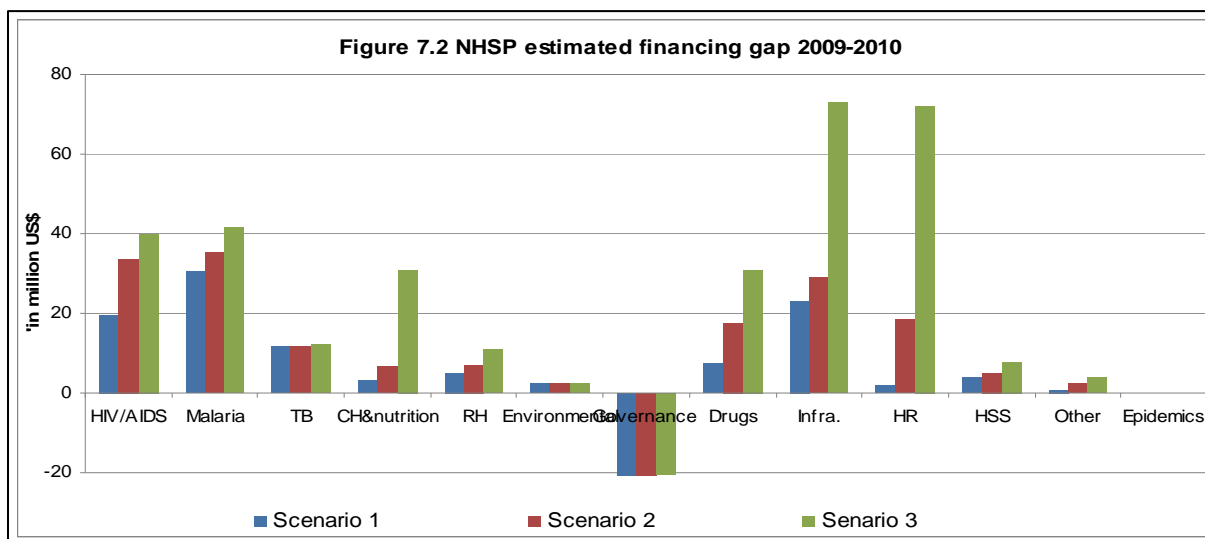
Comparison of the total budget estimate of NHSP for 2009 and 2010, against resources available from government, SWAp and project funds provides the financing gap. On this basis, the total financing gap for the remaining two years is estimated at US\$ 89 million under Scenario 1; US\$ 149 million under Scenario 2; and US\$ 305 million under Scenario 3 (see Figure 1 below).

**Figure 1: NHSP Estimated Financing Gap 2009-2010**



A disaggregated analysis by programmatic areas reveals a financing gap spread across the various program areas (see Figure 2 below). However, these figure needs to be interpreted with some caution since there are no clear delineation in the allocation of inputs into the various program areas. It is particularly so because of the mix in the NHSP structure between vertical disease specific programs and more integrated programs. The NHSP has integrated program priorities such as reproductive health, child health and nutrition as well as specific disease program priorities including HIV/AIDS, Malaria, TB. For example, child health programme may count anti-malarial drugs and ITNs for children as fully belonging to the child health programme, the national malaria control programme may consider these costs as fully malaria specific.

**Figure 2: NHSP Estimated Financing Gap 2009-2010**



## 7 Conclusions

Overall, this analysis shows that in recent years NHSP funding has increased substantially. Zambia has also registered a remarkable achievement in reducing under five and maternal mortality. In spite of these progresses, current mortality remains high, under five mortality 119 per 1,000 live births and maternal mortality 448 per 100,000 live births.

To scale up coverage of high impact interventions to reach health related MDGs, Zambia needs to address system-wide bottlenecks such as human resources, physical accessibility, supplies and logistics; and demand for services. GRZ and donors have to increase their efforts to mobilize adequate funding to fill the financing gap of NHSP.