

Document of
The World Bank

Report No: ICR00001426

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-H1750 TF-93506)

ON A

CREDIT

IN THE AMOUNT OF SDR 15.9 MILLION
(US\$ 24 MILLION EQUIVALENT)

TO THE

STATE OF ERITREA

FOR A

HIV/AIDS/STI, TB, MALARIA AND REPRODUCTIVE HEALTH PROJECT
(HAMSET II)

December 21, 2010

Human Development (AFTHE)
AFCE2
Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective 06/30/2010)

Currency Unit = Nakfa
Nakfa 1.00 = US\$ 0.067
US\$ 1.00 = Nakfa 15

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ANC	Antenatal Care	IDA	International Development Association
BCC	Behavior Change Communication		
CMHRP	Community Managed HAMSET Response Program	IEC	Information, Education, and Communication
CSW	Commercial Sex Worker	IFR	Interim Unaudited Financial Reports
DDT	Dichlorodiphenyltrichloroethane		
DGA	Development Grant Agreement	IMR	Infant Mortality Rate
DHS	Demographic and Health Survey	IP	Implementation Progress
DOTS	Directly Observed Treatment – Short Course	ITN	Insecticide-Treated Bednets
		ISR	Implementation Status Report
EA	Environmental Assessment	JAR	Joint Annual Review
EmOC	Emergency Obstetric Care	KPI	Key Performance Indicator
FGM	Female Genital Mutilation	LMIS	Logistics Management Information System
FM	Financial Management		
GDP	Gross Domestic Product	LQAS	Lot Quality Assurance Survey
GFATM	Global Fund for AIDS, Tuberculosis and Malaria	MCH	Maternal and Child Health
		M&E	Monitoring and Evaluation
GNI	Gross National Income	MDR-TB	Multiple Drug Resistant Tuberculosis
GoE	Government of Eritrea		
HAMSET	HIV/AIDS, Malaria, Sexually Transmitted Infections and Tuberculosis Project	MM	Malaria Morbidity
		MMR	Maternal Mortality Ratio
HAMSET II	HIV/AIDS/STI, TB, Malaria and Reproductive Health and Human Resources for Health Project	MOA	Ministry of Agriculture
		MOD	Ministry of Defense
		MOE	Ministry of Education
HCWM	Health Care Waste Management	MOH	Ministry of Health
HCWMP	Health Care Waste Management Plan	MTR	Mid-Term Review
		NATCoD	National HIV/AIDS/STIs and TB Control Division
HMIS	Health Management Information System	NMCP	National Malaria Control Program
		NSP	National Strategic Plan
HRH	Human Resources for Health	NUEW	National Union of Eritrean Women

NUEY	National Union of Eritrean Youth	RH	Reproductive Health
PAD	Project Appraisal Document	SSA	Sub-Saharan Africa
PDO	Project Development Objective	STI	Sexually Transmitted Infection
PLWHA	People Living with HIV/AIDS	TTL	Task Team Leader
PMTCT	Prevention of Mother-to-Child Transmission (of HIV)	TA	Technical Assistance
PMU	Project Management Unit	TB	Tuberculosis
R&HRD	Research and Human Resources Development	UN	United Nations
		UNFPA	United Nations Population Fund
QAG	Quality Assurance Group	UNICEF	United Nations Children's Fund
QEA	Quality-at-Entry Assessment	VCT	Voluntary Counseling and Testing
RBF	Results-Based Financing	WHO	World Health Organization

Vice President: Obiageli Ezekwesili
 Country Director: Johannes Zutt
 Sector Manager: Eva Jarawan
 Project Team Leader: Rianna Mohammed
 ICR Team Leader: Caryn Bredenkamp

ERITREA

Eritrea HIV/AIDS/STI, TB, Malaria and Reproductive Health Project (HAMSET II)

CONTENTS

1. Project Context, Development Objectives and Design.....	1
2. Key Factors Affecting Implementation and Outcomes	7
3. Assessment of Outcomes	19
4. Assessment of Risk to Development Outcome.....	28
5. Assessment of Bank and Borrower Performance	30
6. Lessons Learned	33
7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners	35
Annex 1. Project Costs and Financing.....	36
Annex 2. Outputs by Component	37
Annex 3. Economic and Financial Analysis.....	47
Annex 4. Bank Lending and Implementation Support/Supervision Processes	53
Annex 5. Beneficiary Survey Results.....	55
Annex 6. Stakeholder Workshop Report and Results.....	56
Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR.....	57
Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders.....	64
Annex 9. List of Supporting Documents	65
Annex 10. Data supporting the conclusions about the achievement of PDOs	67
Annex 11. Map of Eritrea	72

A. Basic Information			
Country:	Eritrea	Project Name:	Eritrea HIV/AIDS/STI, TB, Malaria and Reproductive Health Project (HAMSET II)
Project ID:	P094694	L/C/TF Number(s):	IDA-H1750,TF-93506
ICR Date:	12/22/2010	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVERNMENT OF ERITREA
Original Total Commitment:	USD 24.00M	Disbursed Amount:	USD 23.91M
Revised Amount:	USD 23.99M		
Environmental Category: B			
Implementing Agencies: Ministry of Health			
Cofinanciers and Other External Partners:			

B. Key Dates				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	03/16/2005	Effectiveness:	08/19/2005	08/19/2005
Appraisal:	05/02/2005	Restructuring(s):		
Approval:	06/30/2005	Mid-term Review:	12/10/2007	11/27/2007
		Closing:	06/30/2010	06/30/2010

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Substantial
Bank Performance:	Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)			
Bank	Ratings	Borrower	Ratings
Quality at Entry:	Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Satisfactory
Overall Bank Performance:	Satisfactory	Overall Borrower Performance:	Moderately Satisfactory

C.3 Quality at Entry and Implementation Performance Indicators			
Implementation Performance	Indicators	QAG Assessments (if any)	Rating
Potential Problem Project at any time (Yes/No):	Yes	Quality at Entry (QEA):	Highly Satisfactory
Problem Project at any time (Yes/No):	No	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Moderately Satisfactory		

D. Sector and Theme Codes		
	Original	Actual
Sector Code (as % of total Bank financing)		
Central government administration	30	30
General education sector	1	1
Health	50	50
Other social services	13	13
Sub-national government administration	6	6
Theme Code (as % of total Bank financing)		
HIV/AIDS	25	25
Malaria	13	13
Participation and civic engagement	13	13
Population and reproductive health	24	24
Tuberculosis	25	25

E. Bank Staff		
Positions	At ICR	At Approval
Vice President:	Obiageli Katryn Ezekwesili	Gobind T. Nankani
Country Director:	Johannes C.M. Zutt	Colin Bruce
Sector Manager:	Eva Jarawan	Dzingai B. Mutumbuka
Project Team Leader:	Rianna L. Mohammed-Roberts	Son Nam Nguyen
ICR Team Leader:	Caryn Bredenkamp	
ICR Primary Author:	Caryn Bredenkamp	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document)

The project's development objectives are to: (i) contain the spread of HIV/AIDS/STI in vulnerable groups as well as the general population through a focused multi-sectoral approach, with renewed attention to the most vulnerable populations; (ii) expand the coverage of Directly Observed Treatment (DOT), improve case detection and treatment outcomes for TB; (iii) reduce or at least maintain malaria mortality and morbidity at the current low levels; (iv) improve the coverage of effective Reproductive Health (RH) interventions; and (v) strengthen the overall health system, including human resources for health, to enable the country to better address HAMSET diseases.

Revised Project Development Objectives (as approved by original approving authority)

(a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Successfully treat at least 85% of new smear positive cases - Custom Indicator			
Value quantitative or Qualitative)	79.40%	85%		88%
Date achieved	12/31/2004	06/30/2010		06/30/2009
Comments (incl. % achievement)	Fully achieved.			
Indicator 2 :	Further reduce or at least maintain at the 2004 levels, proportional malaria morbidity (MM) (confirmed cases) at 35,215 and mortality (M) at 24 (confirmed cases reported) - Custom Indicator			
Value quantitative or Qualitative)	M: 24; MM: 35,215	M: <=24; MM: <=35,215		M: 3; MM: 6,785
Date achieved	12/31/2004	06/30/2010		12/31/2009
Comments (incl. % achievement)	Fully achieved			
Indicator 3 :	Increase the percentage of women who deliver with skilled birth attendance from 30% to 60%. - Custom Indicator			
Value quantitative or Qualitative)	30.00%	60.00%		34.0%
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	Not achieved. There is a minor discrepancy between the baseline value recorded in the DGA			

achievement)	(30%) and the baseline value included in the PAD (28%). Latest data are from DHS 2010.		
Indicator 4 :	Increase the percentage of women receiving focused antenatal care by 20 percentage points - Custom Indicator		
Value quantitative or Qualitative)	28.00%	50.00%	37.50%
Date achieved	06/30/2005	06/30/2010	12/31/2008
Comments (incl. % achievement)	Not achieved. This indicator is stated differently in DGA, PAD and ISRs. DGA use 20% increase (with no targets). ISRs use target of 50%, which is very close to a 20 percentage point (pp) increase. Since task team says intention was 20 pp, this is used		
Indicator 5 :	Maintain HIV prevalence rate among commercial sex workers under 12% and among pregnant women aged 15-24 under 3% - Custom Indicator		
Value quantitative or Qualitative)	CSW: 11.25%; ANC: 2.38%	CSW: < 12%; ANC: < 3%	CSW: n/a; ANC: 0.88
Date achieved	06/30/2005	06/30/2010	12/31/2007
Comments (incl. % achievement)	Substantially achieved for ANC. Data for CSW are not available.		
Indicator 6 :	Reduce syphilis sero-prevalence rate among pregnant women from 1.6% to below 1% - Custom Indicator		
Value quantitative or Qualitative)	1.60%	1.00%	1.10%
Date achieved	06/30/2005	06/30/2010	12/31/2007
Comments (incl. % achievement)	Substantially achieved.		
Indicator 7 :	Detect at least 70% of infectious tuberculosis cases in the population - Custom Indicator		
Value quantitative or Qualitative)	41.00%	70.00%	49.00%
Date achieved	06/30/2005	06/30/2010	06/30/2008
Comments (incl. % achievement)	Not achieved.		
Indicator 8 :	Increase the percentage of the contraceptive prevalence rate (modern methods) from 4% to 10% - Custom Indicator		
Value quantitative or Qualitative)	4.00%	10.00%	8.40%
Date achieved	06/30/2005	06/30/2010	06/30/2010
Comments (incl. % achievement)	Substantially achieved. DHS data show CPR of 4% in 2002, increasing to 8.4% in 2010.		

achievement)				
Indicator 9 :	Train at least 200 nurses midwives, 200 public health technicians and 200 laboratory technicians by December 2009 - Custom Indicator			
Value quantitative or Qualitative)	0 (for all)	Nurse midwives: 200; Public Health technicians: 200; Laboratory technicians: 200		Nurse midwives: 440; Public Health technicians: 133; Laboratory technicians: 300
Date achieved	06/30/2005	06/30/2010		06/30/2009
Comments (incl. % achievement)	Substantially achieved.			
Indicator 10 :	Increase the percentage of health stations with at least one nurse from 28% to 50% by December 2009 - Custom Indicator			
Value quantitative or Qualitative)	28.00%	50.00%		35.00%
Date achieved	06/30/2005	06/30/2010		06/30/2009
Comments (incl. % achievement)	Not achieved.			
Indicator 11 :	Treat at least 80% of diagnosed tuberculosis cases with DOTS - Custom Indicator			
Value quantitative or Qualitative)	100.00%	80.00%		100.00%
Date achieved	06/30/2005	06/30/2010		12/30/2008
Comments (incl. % achievement)	Fully achieved			
Indicator 12 :	Ensure all public hospitals and health centers offer basic emergency obstetric care by December 2009 - Custom Indicator			
Value quantitative or Qualitative)	PH: 55%; HC: 47%	PH: 75%; HC: 80%		PH: 100%; HC: 80%
Date achieved	06/30/2004	06/30/2010		12/30/2009
Comments (incl. % achievement)	Substantially achieved.			

(b) Intermediate Outcome Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
Indicator 1 :	Direct project beneficiaries (Number) - Core Indicator			
Value	0	n.a.		127,803.00

(quantitative or Qualitative)				
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	This is an IDA core indicator. In line with Bank guidelines, the IDA core indicators were added (only) in 2008. Consequently, they have no baseline or target values.			
Indicator 2 :	Pregnant women receiving antenatal care during a visit to a health provider (Number) - Core Indicator			
Value (quantitative or Qualitative)	83,634.00	n.a.		85,462.00
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	This is an IDA core indicator.			
Indicator 3 :	Health personnel receiving training (Number) - Core Indicator			
Value (quantitative or Qualitative)	0	n.a.		2,423.00
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	This is an IDA core indicator.			
Indicator 4 :	Long-lasting insecticide-treated malaria nets purchased and/or distributed (Number) - Core Indicator			
Value (quantitative or Qualitative)	0	n.a.		748,885.00
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	This is an IDA core indicator.			
Indicator 5 :	Health facilities constructed, renovated, and/or equipped (Number) - Core Indicator			
Value (quantitative or Qualitative)	0	n.a.		4.00
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	This is an IDA core indicator.			
Indicator 6 :	Percentage of high-risk groups (CSWs and truck drivers) reporting condom use in last sex with non-regular partners (Text) - Custom Indicator			
Value (quantitative or Qualitative)	CSW: 47.4%; TD: 7%	CSW:90%; TD:90%		CSW: 87.2%; TD:96.3%
Date achieved	12/31/2006	06/30/2010		12/31/2008
Comments	Substantially achieved.			

(incl. % achievement)				
Indicator 7 :	Percentage of (a) children under 5-years and (b) pregnant women sleeping under ITNs in the previous night (Text) - Custom Indicator			
Value (quantitative or Qualitative)	(a) 48.3%; (b) 50.4%	(a) 75%; (b) 75%		(a) 48.9%; (b) 54%
Date achieved	12/31/2004	06/30/2010		12/31/2008
Comments (incl. % achievement)	Not achieved.			
Indicator 8 :	Percentage of health stations able to take and fix slides(Percentage) - Custom Indicator			
Value (quantitative or Qualitative)	0	100.00%		100.00%
Date achieved	06/30/2000	06/30/2010		06/30/2010
Comments (incl. % achievement)	Fully achieved.			
Indicator 9 :	Instructor: student ratio (Text) - Custom Indicator			
Value (quantitative or Qualitative)	1:25	1:15		1:20
Date achieved	06/30/2005	06/30/2010		06/30/2010
Comments (incl. % achievement)	Not achieved.			

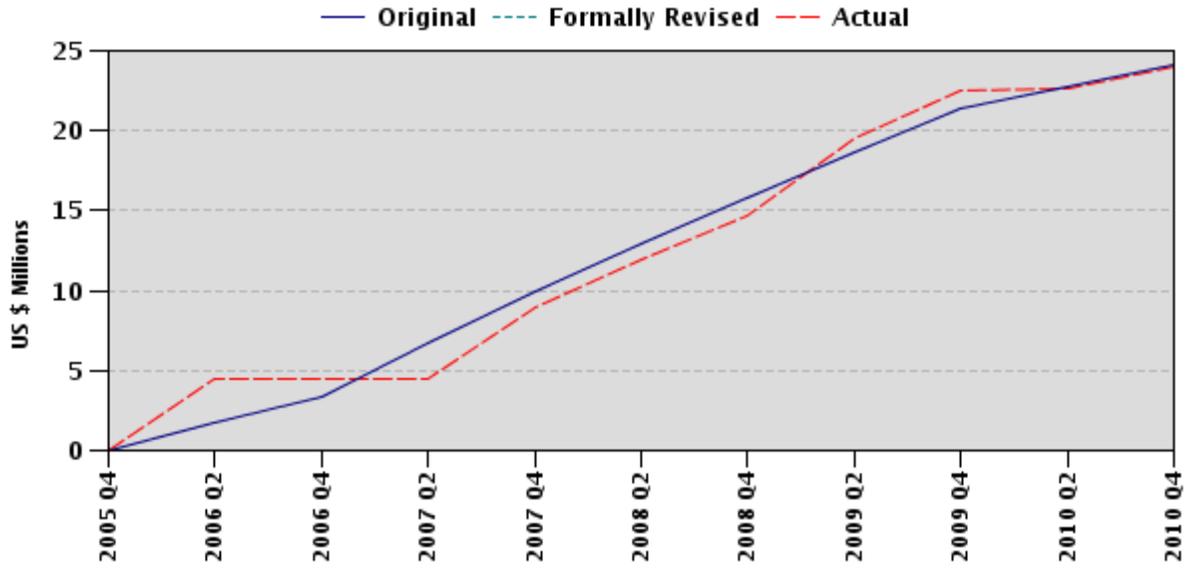
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	07/28/2005	Satisfactory	Satisfactory	0.00
2	03/14/2006	Satisfactory	Moderately Satisfactory	4.46
3	09/01/2006	Satisfactory	Moderately Satisfactory	4.46
4	02/16/2007	Satisfactory	Satisfactory	8.98
5	04/11/2007	Satisfactory	Satisfactory	8.98
6	08/22/2007	Satisfactory	Satisfactory	9.36
7	02/26/2008	Satisfactory	Satisfactory	11.95
8	06/27/2008	Satisfactory	Moderately Satisfactory	14.66
9	09/15/2008	Satisfactory	Moderately Satisfactory	16.58
10	02/24/2009	Satisfactory	Satisfactory	19.49
11	06/22/2009	Satisfactory	Satisfactory	22.49
12	12/07/2009	Satisfactory	Moderately Satisfactory	22.49
13	06/30/2010	Moderately Satisfactory	Moderately Satisfactory	23.91

H. Restructuring (if any)

Not Applicable

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1. The Eritrea HIV/AIDS/STI, tuberculosis, malaria and reproductive health project (HAMSET II) is a repeater project of the IDA-financed Eritrea HIV/AIDS, Malaria, STD and TB project (HAMSET). The first HAMSET (P065713) was implemented using US\$ 40 million IDA credit from 19 December 2000 (approval) to March 31 2006 (closing). HAMSET II was approved shortly after on 30 June 2005 and closed on 30 June 2010.

1.1 Context at Appraisal

2. At the time of appraisal, Eritrea had an annual Gross National Income (GNI) per capita of US\$ 180, was ranked 156 out of 177 countries in the UNDP's 2003 Human Development Index and was still suffering from the effects of three decades of war.

3. Despite these challenges, Eritrea had made large strides in improving the health status of its population in the years preceding the project: the infant mortality rate (IMR) had fallen from 72 (1995) to 48 (2002) and the under-five mortality rate (U5M) had fallen from 136 (1995) to 93 (2002); full immunization coverage had increased by 83% between 1995 and 2003; and, malaria mortality and morbidity had fallen by more than 80% between 2000 and 2004, accompanied by some of the best insecticide-treated net (ITN) coverage in SSA. HIV/AIDS prevalence was relatively low at 2.4% of pregnant women in 2003 and the number of reported sexually transmitted infections was falling. Blood safety was impressive, with 100% of blood units screened for HIV.

4. Notwithstanding these successes, control of HIV/AIDS/STI, tuberculosis and malaria, as well as the improvement of reproductive health interventions, was considered an unfinished agenda. At appraisal, the status of these five HAMSET areas of focus could be summarized as follows:

HIV/AIDS/STI: Compared to other SSA countries, Eritrea's average adult HIV prevalence was relatively low at 2.4% (2003), but much higher in certain geographic areas (up to 7.2%) and sub-populations, pointing to the threat of a more generalized epidemic. Programmatic areas that needed strengthening were scale-up of efforts to prevent infection, such as VCT and PMTCT, especially outside Asmara; management of STIs; and treatment, care and support for people living with HIV/AIDS (PLWHA).

Malaria: The malaria program had enjoyed tremendous success in recent years (as described above), but continuous control efforts were important because of the significant risk of outbreaks. The epidemiology of malaria in Eritrea is very complex with different transmission patterns in different parts of the country.

Tuberculosis: Progress in TB control lagged behind that of malaria and HIV/AIDS/STI and it was agreed that the program suffered from inadequate implementation capacity, weak supervision, lack of quality assurance, as well as a limited information base for decision-making. In 2004, Direct Observed Treatment (short-course) (DOTS) coverage was 80%, the case detection rate was 70% and the treatment success rate was 82%.

Reproductive Health: At appraisal, Eritrea's reproductive health (RH) indicators were among the worst in SSA. The maternal mortality ratio (MMR) was well above the SSA average, at 998 per 100,000 live births, with substantial regional disparities. While 70% of pregnant women had at least one antenatal care (ANC) visit, only 30% had their deliveries with a skilled birth attendant, and the accessibility, availability and quality of emergency obstetric care was limited. Only 8% of women of reproductive age used modern contraceptive methods and female genital mutilation (FGM) was widespread (85%).

Human resources: There was also a severe shortage of skilled human resources for health (HRH) – a legacy of the war – and health staff to population ratios were among the lowest in Sub-Saharan Africa (at 41st out of 48 for doctors and 42nd out of 47 for nurses and midwives).

5. Other challenges included poor data and health information systems which hampered decision-making, limited health financing, weak coordination of the activities of the different technical programs of the Ministry of Health (MOH), a shortage of qualified health staff (especially in remote areas), and a highly mobile and dispersed population.

6. *Recipient's policies, strategies, commitment and actions:* Prior to appraisal, the GoE had formulated a draft health sector policy, which emphasized equitable provision of basic health service to its people. Priority was given to the control of infectious diseases, especially HIV/AIDS/STI, TB and malaria, as well as the reduction of maternal mortality. The GoE had developed, and had been implementing, well-defined, comprehensive five-year plans for HIV/AIDS/STI (2003-2007), TB (2004-2008) and malaria (2001-2005 executed, 2006-2010 adopted) that provided the framework for the HAMSET II project's support. There was a new emphasis on the reduction of maternal mortality and a draft National Sexual and Reproductive Health Policy had just been prepared. Overall, the Government had demonstrated strong commitment to improving health, in general, and to the fight against HIV/AIDS/STI, TB and malaria, in particular.

7. *Rationale for Bank involvement:* The rationale for the HAMSET II repeater project was a combination of the success of the HAMSET project, the paucity of domestic resources for investment in HAMSET health areas of focus¹, alignment with the Bank's strategy for engagement in Eritrea and the Bank's comparative advantage in this investment area:

- Implementation of HAMSET had been very successful: it was considered the best performer in IDA's portfolio in Eritrea and compared favorably with other IDA-financed Multi-Country AIDS Program (MAP) projects in the region. With the

¹ Henceforth, the phrase "HAMSET areas of focus" will be used to refer to HIV/AIDS/STI, tuberculosis, malaria, reproductive health and human resources for health. The phrase "HAMSET diseases" will be used to refer to HIV/AIDS, tuberculosis, malaria and reproductive health.

- prospect of the HAMSET project closing, it was considered important to maintain the momentum in addressing HAMSET areas of focus and to scale up successes.
- It was determined that Eritrea had inadequate domestic resources for health. Apart from US\$10.7 million from the Global Fund for AIDS, Tuberculosis and Malaria (GFATM), there was also very limited donor assistance for the health sector. Indeed, IDA was the largest external financier of the health sector.
 - Investing in a follow-on project was also consistent with the Eritrea Interim Strategy Note (ISN) for 2005-2007 and in line with the World Bank's overall goal for health, nutrition and population in the Africa region.
 - Finally, it was determined that the World Bank has clear comparative advantages in (i) macroeconomics and health, (ii) multi-sectoral actions for health and (iii) health system strengthening. In short, according to the Project Appraisal Document (PAD), "For a low-income SSA country like Eritrea, the rationale to combat HIV/AIDS/STI, TB, malaria and RH, all of which are Millennium Development Goals (MDGs)...(was considered)... beyond dispute" (World Bank 2005).

8. *Related projects:* IDA's contribution to health sector development in Eritrea has been significant. In addition to HAMSET, the Eritrea Health Project (\$24.6 million) had recently closed and, at the time of appraisal, the Bank was supporting an Integrated Early Childhood Development Project (\$45 million) in satisfactory status. Technical assistance in the form of a Health Sector Note (Report No. 28267-ER7 2001) informed policy development.

1.2 Original Project Development Objectives (PDO) and Key Indicators (as approved)

9. The project's development objectives, as stated in the Development Grant Agreement (DGA), are to assist the State of Eritrea in:

- (a) containing the spread of HIV/AIDS/ STI in vulnerable groups as well as the general population through a multi-sectoral approach which aims at scaling up prevention, diagnosis, care, and support services for HIV/AIDS/STI, with a renewed focus on the most vulnerable populations;
- (b) expanding DOTS coverage, improving case detection and treatment outcomes for tuberculosis;
- (c) further reducing or at least maintaining malaria mortality and morbidity at the current low levels;
- (d) improving the coverage of reproductive health interventions; and
- (e) strengthening the overall health system's capacity to address the HAMSET diseases.

10. The project's key indicators, as described in the DGA, are:

HIV/AIDS/STIs

- (i) Maintain HIV prevalence rate among commercial sex workers under 12% and among pregnant women (ANC attendees) aged 15-24 under 3%.

(ii) Reduce syphilis sero-prevalence rate among pregnant women (ANC attendees) from 1.6% to below 1%.

Tuberculosis

(iii) Detect at least 70% of infectious tuberculosis cases in the population.

(iv) Treat at least 80% of diagnosed tuberculosis cases with DOTS.

(v) Successfully treat at least 85% of new smear positive cases.

Malaria

(vi) Further reduce or at least maintain at the 2004 levels, the proportional malaria morbidity at 1.9% and mortality at 3.9 %².

Reproductive health

(vii) Increase the percentage of pregnant women receiving focused antenatal care by 20%³.

(viii) Increase the percentage of pregnant women who deliver with skilled birth from 30% to 60%.

(ix) Ensure all public hospitals and health centers offer basic emergency obstetric care by December 2009.

(x) Increase the percentage of the contraceptive prevalence rate (modern methods) from 4% to 10%⁴.

Human Resources for Health

(xi) Train at least 200 nurse midwives, 200 public health technicians and 200 laboratory technicians by December 2009.

(xii) Increase the percentage of health stations with at least 1 nurse from 28% to 50% by December 2009

11. KPIs, intermediate outcome indicators and IDA core indicators are shown in the data sheet.

1.3 Revised PDO (as approved by original approving authority) and Key Indicators, and reasons/justification

12. The PDOs and key indicators were not revised.

1.4 Main Beneficiaries,

13. The beneficiary group includes the entire Eritrean population at risk for HAMSET diseases and that utilizes the health system. The project does not target a specific geographic area, although it does underscore the importance of reaching areas outside the capital and pays attention to regional variations in disease risk. It also emphasizes the importance of reaching vulnerable groups. The particular target group differs depending

² These targets were transformed into absolute numbers for reporting in the ISRs. These were a proportional malaria morbidity (confirmed cases) of 35,215 and malaria mortality (confirmed cases) of 24, respectively

³ As discussed in the data sheet, while the DGA described a 20% increase, the task team's intention was to target a 20 percentage point increase.

⁴ This is the wording used in the DGA.

on the disease/condition that is being addressed. For HIV/AIDS/STI, interventions seek to treat the infected (i.e. PLWHA), reduce transmission among individuals in core transmitter groups (e.g. commercial sex workers, bar, hotel and shop workers, housemaids and servants, military personnel and truck/bus drivers), and prevent transmission from these groups to the general population. Students are an important beneficiary category. Malaria efforts (such as bed net distribution, use and treatment) focus on pregnant women and children under five (who are at most risk of the consequences of malaria), and people living in high-transmission areas. Tuberculosis efforts focus on detection in the general population and treatment of all those who test positive. By definition, reproductive health interventions focus on women of reproductive age, adolescents and, particularly, pregnant women, especially in those zobas (such as the Southern Red Sea) with the highest MMR.

1.5 Original Components (*as approved*)

14. **Component 1: Multi-Sectoral Response** (appraisal estimate: US\$ 3 million; actual: US\$2.34 million; actual as % of appraisal: 78%). First, this component aimed to support participating agencies other than the Ministry of Health including the Ministry of Education, Ministry of Defense, Ministry of Labor and Human Welfare, civil society organizations such as the National Union of Eritrean Women at both national and *zoba* level to scale up prevention, care and support interventions for HIV/AIDS/STIs, malaria, tuberculosis and reproductive health. Second, it aimed to promote healthy behaviors and lifestyles, through various multi-level communication methods including information dissemination, education and communication campaigns, and peer-led behavior change communication programs

15. **Component 2: Health Sector Response** (appraisal estimate: US\$ 14 million; actual: US\$16 million; actual as % of appraisal: 114%), consisting of *HIV/AIDS/STI* (at approval: US\$ 3 million; actual: US\$1.95 million), *TB* (at approval: US\$ 2 million; actual: US\$1.41 million), *Malaria* (at approval: US\$2 million; actual: US\$1.26 million), *Reproductive health* (at approval: US\$4 million; actual: US\$5.58 million), and *Human Resources for HAMSET diseases* (appraisal estimate: US\$3 million; actual: US\$5.81 million). Each of the four disease sub-components comprised three activity categories: (a) improving the information base for decision-making, through supporting disease surveillance and reporting, carrying out of surveys and operational research in program management, epidemiology, entomology, drug resistance and behavior of HAMSET diseases; (b) scaling-up and expanding preventive interventions for HAMSET diseases; and (c) scaling up diagnostic, treatment, care and support services for HAMSET diseases, all through technical advisory services, in-service training, financing of operating costs, acquisition of drugs and medical supplies, equipment, and minor renovation of reproductive health facilities. The human resources component supported the development and implementation of an overall human resource health policy and strategic plan to strengthen human resources for HAMSET diseases, through: (a) consolidating existing health policies and developing a five-year national strategic plan, and (b) developing and implementing annual work plans, the provision of technical advisory services, training, workshops, and development and dissemination of training materials.

16. **Component 3: Community Managed HAMSET Response Program** (appraisal estimate: US\$4 million; actual: US\$3.35 million; actual as % of appraisal: 84%). This component involved scaling-up and consolidating community-managed response initiatives to address HAMSET diseases through: (i) financing of sub-grants for small scale community subprojects aiming at controlling HAMSET diseases, and (ii) developing the capacity of communities to (a) mobilize and identify HAMSET problems and (b) develop, implement, monitor and evaluate subprojects.

17. **Component 4: Project Management and Coordination, Capacity Building, M&E, and Innovation and New Policy Development** (appraisal estimate: US\$ 3 million; actual: US\$3.71 million; actual as % of appraisal: 124%). This component focused on strengthening project management and evaluation capacity, through: (i) provision of support to project management units at the national and zoba levels, and coordination of project activities at the central level; (ii) training in planning, management and implementation of project activities for key staff in non-health sectors and local governments; (iii) developing and carrying out a health sector monitoring and evaluation system; (iv) developing, piloting and evaluating innovative approaches in service delivery; and (v) strengthening health policy related to HAMSET.

1.6 Revised Components

18. No changes were made to project components.

1.7 Other significant changes

19. *Funding allocations:* Two reallocations (see Table 1) were undertaken during project implementation.

- (i) In May 2008 (at 61% disbursement), in response to the availability of substantial resources from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM), there was a reallocation of resources across health sector response subcomponents towards priorities not supported by the GFATM, namely HRH and RH. This reallocation was subsequent to, and on the recommendation of, the Mid-Term Review.
- (ii) In July 2009 (at 94% disbursement), and in light of continued GFATM funding, an additional reallocation was made.

There, nevertheless, remained a substantial share of project resources dedicated to HIV/AIDS, tuberculosis and malaria (see the appraisal and actual estimates in section 1.5).

20. The reallocations (which were cleared by the country director and legal departments) took place within the HAMSET II framework and did not affect the PDOs. In both cases, project implementation had been considered satisfactory and in compliance with the covenants of the Development Grant agreement and there were no outstanding audit reports. Although not a formal reallocation, in 2007, \$200,000 was allocated to the health care waste management safeguard (through a tax on all categories of expenditure and project components). These issues will be discussed further in section 2.2.

Table 1 Reallocations, by disbursement category, in SDR

Category	Original Allocation	Reallocation (May 2008)	Reallocation (July 2009)
Civil works	600,000	1,061,520	1,141,020
Goods	4,900,000	5,683,266	6,723,128
Consultants, training, workshops	5,800,000	6,578,300	5,538,440
Sub-grants	2,250,000	1,887,279	1,887,279
Operating costs	900,000	689,633	610,133
Unallocated	1,450,000	0	0
Total	15,900,000	15,900,000	15,900,000

Note: The change in expenditure across components over the course of the project is shown in Annex 1.

There were no other major changes to the project design, scope, scale, implementation arrangements or schedule during the course of implementation.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

21. The project was prepared over a very short period in order to allow for the continuity of activities undertaken in the predecessor HAMSET project and to take advantage of the remaining IDA allocation. Time taken from concept to appraisal was only two months, with a further two months from project appraisal to Board approval. Effectiveness was declared two months ahead of schedule. The project was also able to move very quickly from preparation to implementation, facilitated by the preparation of the first year's implementation plans in advance of effectiveness. The task team took advantage of the Quality-at-Entry Assessment (QEA) process. This resulted in only minor changes to project design and overall quality-at-entry was rated as "highly satisfactory" by the Quality Assurance Group (QAG). The quality of the GoE's inputs was a critical contributing factor to the quality of project preparation.

22. *Sufficiency of background analysis and lessons taken into account:* As a repeater project, HAMSET II was able to benefit from the experience of the previous project, as well as related projects, and carefully incorporated some of the lessons learnt into the design of the new project. Lessons from HAMSET include (i) the need for further strengthening of the M&E system (reflected in the M&E activities of Component 4); (ii) that while communities can be successfully mobilized for disease control and behavior change, their efforts need to be genuinely community-driven (resulting in efforts to build community capacity in needs identification and project implementation under Component 3); (iii) that implementers (especially at lower levels) should prioritize the most effective interventions (through efforts to strengthen technical leadership, coordination and program implementation under Components 1 and 2), and, (iv) that HAMSET diseases cannot be adequately addressed without also improving RH services (resulting in the

addition of RH as a new health area of focus). The project also drew on lessons from the earlier Eritrea Health Project (1998-2004), especially with respect to developing a more focused PDO and results chain, in favoring “software” activities (e.g. training and policy development) activities over “hardware” activities (e.g. construction), and in choice of malaria control interventions. It also drew on lessons from the Interim Review of MAP projects (2004), especially with respect to moving towards a performance-based disbursement system, involving civil society in the design of the application process for subgrants, and ensuring adequate resources to develop operational M&E systems. Although deemed sufficient at the time, with the benefit of hindsight, the project could have benefited from more background analysis of government capacity for the implementation of the health care waste management safeguard; capacity in this regard was overestimated with implications for project performance (see section 2.4). The project complied with both basic repeater requirements and MAP repeater requirements.

23. *Assessment of design:* This was a complex project that tackled four diseases, as well as human resource strengthening. As noted by QAG, adding reproductive health to an already large (albeit successful) project increased project risk with respect to the attainment of PDOs. However, due to the limited availability of IDA funds (for Eritrea), incorporating reproductive health into HAMSET II was the only way for the Bank team to ensure that there would be IDA support for reproductive health – an area where there was clearly so much unmet need (see section 1.1). One advantage of the broader scope was that because there are both clinical links between the HAMSET diseases, as well as strong technical links between their interventions⁵, bringing these diseases together within one project had a strong synergistic effect. Also, adding a component on human resources for health – something not financed by other donors – was an important contribution to overall health system strengthening, and the performance of all HAMSET II disease programs. An unusual element of the HAMSET II design – and a departure from HAMSET – was that the project components were organized by implementing agency/group (i.e. health sector response, multi-sectoral line ministries/CSOs response and community-managed response), rather than by HAMSET disease. This innovative design element facilitated implementation because it followed the existing organizational structures and allowed the multi-sectoral and community-based actors to more easily implement multi-disease interventions. Finally, focusing on “software” rather than “hardware” components (i.e. devoting only 4% of funds to civil works) was wise, especially in light of macroeconomic constraints that could (and did) make construction increasingly difficult. Overall, the project design was highly consistent with the project development objectives and was tailored to the domestic context, project activities were well-defined and appropriate to the challenges, and there was internal consistency in the design elements (i.e. a clear causal chain between activities, outputs and outcomes).

⁵ For example, since HIV patients are more likely to develop TB, HIV+ patients are routinely screened for TB and vice versa. Similarly, because VCT services are offered during antenatal care visits, improving the utilization of antenatal services also limits the spread of HIV infection and increases the coverage of PMTCT.

24. *Adequacy of risk identification and mitigation:* There was a candid risk assessment and seemingly appropriate mitigation strategies were identified and adopted⁶. In addition, a step-wise approach of developing annual work plans and annual budgets (rather than a five year plan), together with close coordination between implementers and development partners, was followed, providing ample opportunity during implementation to make adjustments and manage risk. There were only a limited number of conditions of effectiveness for the project, because of the solid track record of performance in HAMSET, and many of them were standard. Despite the fact that mitigation strategies were, on the whole, well-implemented, two of the project risks, namely (i) implementation failure due to national cross-cutting challenges and underlying macroeconomic constraints and (ii) relatively weak M&E, went on to pose implementation challenges (see sections 2.2. and 2.3 respectively). It is unlikely that the team could have done more during project preparation to further mitigate these risks.

25. *Participatory processes:* Project preparation was undertaken in a spirit of true partnership between the Bank and the GoE. A consultative approach was also adopted vis-à-vis other partners, both in reviewing the experiences of HAMSET and in using them to improve the design of HAMSET II. Highly participatory meetings were held with all stakeholders (including officials, civil society groups and development partners). Throughout the preparation period, the project enjoyed a very high level of commitment from the GoE.

2.2 Implementation

26. *Progress from effectiveness to Mid-Term Review:* The MTR took place on schedule, halfway through project implementation (December 2007), when about half (US\$12.7 million) of project resources had been disbursed. At that time, although confronted by a worsening operational environment (in terms of the macroeconomic situation, problems with fuel, incentives, communications, non-availability of contractors for civil works, a shortage of raw materials – all of which were beyond the project's or the sector's control), project implementation was on-track. Progress in malaria control was excellent (with continuing reductions in mortality and morbidity despite high levels of rainfall), the HIV/AIDS/STI program was expanding as planned (with rapid scaling-up of BCC, VCT, PMTCT, ART, care and support), and the human resources for health subcomponent was making good progress, and had already met some of its end-of-project

⁶ The risks included intensification of border tensions (to be mitigated by flexibility in project design and implementation), the risk of complacency in disease areas where HAMSET had had major successes (mitigated by continued policy dialogue, strengthening the information base, and communication programs), the severe human resource shortage (to be mitigated by developing a HR subcomponent, working beyond the public sector, and strategic procurement of consultancies while building in-country capacity), the risk of failing to use the most cost-effective interventions at local level (to be mitigated by strengthening the capacity of the zoba committees to appraise proposals and work plans, development of guidelines and menus of eligible interventions, and sharing information on good practices with local implementers), implementation failure (due to cross-cutting challenges and underlying macroeconomic constraints, and the mixed performance of the Eritrea IDA portfolio, to be mitigated by close supervision and dialogue), and inadequate M&E (to be mitigated by hiring M&E staff, ring-fencing the budget, making an M&E plan a condition of effectiveness, applying LQAS, and establishing a computerized MIS in the PMU).

targets for pre-service training. The tuberculosis program had good treatment coverage and outcomes, but case detection rates were low. The poorest performance in the health sector response component was in the reproductive health subcomponent which had shown no significant improvements in outcomes over the first two and a half years of project implementation. The multisectoral approach was working well (but more so for HIV/AIDS than for other HAMSET diseases) and the CMHRP component was becoming increasingly community-driven, lowering subproject costs and reaching more beneficiaries. Project performance as measured by both the DO and IP indicators was satisfactory.

27. *Major decisions of MTR and follow-up actions:* First, in light of the availability of significant GFATM resources for HIV/AIDS, TB and malaria, there was a recommendation for a reallocation of funding from these subcomponents to HRH and RH (see section 1.7). The reallocation (which eventually occurred in May 2008) increased the balance for RH from US\$2.78 million to US\$3 million and for HRH from US\$1.81 million to US\$4 million⁷, creating opportunities for additional investments in these subcomponents. Reallocating funds despite the fact that the project was on-track indicates proactivity on the part of the Bank team. Second, the MTR recommended specific revisions to two key project indicators (KPIs) and to the targets of an additional two KPIs (for the reasons described in Table 2). Ultimately, it was decided not to include these proposed revisions into the results framework and HAMSET II was exempted from the umbrella restructuring (and accompanying KPI revision) of MAP projects that occurred in 2007⁸. Third, the creation of a safe storage facility for DDT (funded through GFATM resources) was agreed as an important follow-up action. This was not achieved timeously (see section 2.4), eventually contributing to potential problem project status. Fourth, it was agreed that additional staff would be recruited for M&E. These vacancies took a long time to fill and, at project close, the M&E Division still lacked capacity (see section 2.3). Fifth, it was agreed to strengthen the staffing of the Environmental Health Unit (EHU). This was an important action for an under-resourced unit charged with ensuring an important safeguard and this decision contributed to improvements in the implementation of the Health Care Waste Management Plan (HCWMP). Recommendations specific to addressing the PDOs for which performance was poorest included: (i) for TB, conducting an assessment of the possible reasons for the low case TB detection rate, monitoring the percentage of PLWHA referred for TB testing, improving microscopy capacity and conducting quarterly TB review meetings for all sub-zone coordinators at zoba level; and (ii) for RH, improving BCC activities, enhancing community mobilization (including development of a community mobilization strategy), filling vacancies for RH focal points at zoba level, increasing the supply of qualified obstetricians, improving referral for obstetric emergencies (including through better communication and transportation), improving the integration of the RH program with other disease activities, and

⁷ These figures are based on the remaining balances reported at MTR.

⁸ HAMSET II was not part of the umbrella restructuring of MAP projects in 2007 (Report No. 39906-AFR) which dropped the term “prevalence of HIV” from PDO indicators. This is because the GoE was able to make a case about the link between project activities and prevalence that was deemed acceptable to the Bank.

conducting research to better understand the barriers to seeking care, and evaluate program efforts.

Table 2 Proposed revisions to KPIs, identified at MTR

Original KPI	Proposed Revision to KPI	Rationale
Maintain HIV prevalence rate among commercial sex workers under 12% and among pregnant women (ANC attendees) aged 15-24 under 3%.	Percentage of CSWs reporting condom use in last sex with non-regular partners	HIV prevalence not only captures change in incidence, but also changes in survival and mortality and is, therefore, not a good yardstick to monitor progress, especially in prevention. This is in line with MAP project recommendations.
Ensure all public hospitals and health centers offer basic emergency obstetric care by December 2009	Ensure all public hospitals offer comprehensive and health centers offer basic emergency obstetric care by December 2009	It was agreed that this would be changed in order to better align with MOH policy
Increase the percentage of pregnant women who deliver with skilled birth attendance from 30% to 60%.	Increase the percentage of pregnant women who deliver with skilled birth attendance from 30% to 40%.	It was agreed that the 60% target was too ambitious
Increase the percentage of pregnant women receiving focused antenatal care by 20%.	Increase the percentage of pregnant women receiving focused antenatal care by 10%.	It was agreed that the 20% target was too ambitious

28. *Major factors affecting implementation:* All components struggled with the completion of renovations and civil works (due to the non-availability of contractors and supplies), but this was (wisely) only a small share of project allocations. Recruitment of staff and expert consultants was difficult, slowing down the filling of positions; there were especially long lags in HRH and M&E recruitment. Conducting supervision visits and holding national-zoba and inter-zoba meetings was difficult because of the limited availability of fuel and vehicles, but most programs nevertheless managed to do so despite these constraints, suggesting a high level of commitment to implementation success. Another strength was good multisectoral coordination that helped to strengthen integration in the management of the HAMSET diseases, avoid duplication of interventions and fill gaps in the coverage of beneficiaries. In general, collaboration and coordination across the technical programs, and between the technical programs and the implementing units (at national and zoba level, including local government), improved over the life of the project. The targeting and coverage of the main project beneficiaries also improved. Factors affecting the implementation of specific HAMSET II components and subcomponents are discussed in more detail in Annex 2, along with a description of the components' major strengths/accomplishments and weaknesses

29. *Preparation for project restructuring, including the introduction of results-based financing (RBF):* Following selection of Eritrea as an RBF pilot country (under the Health Results Innovation Trust Fund), considerable Bank and PMU energy was put into preparing a plan for the restructuring and three-year extension of HAMSET II. This did not proceed (for reasons discussed in section 2.5.) and, instead, the project closed. The restructuring would have involved changes to the PDOS and KPIs in line with the Bank's

new regional requirements regarding the PDO structure of HIV/AIDS operations, as well as the introduction of RBF pilot activities⁹ into the reproductive health subcomponent. An exceptionally detailed project paper on the proposed restructuring and an RBF operational manual were prepared, preceded by various assessments and missions. While this preparation had an opportunity cost in terms of the attention and time of the task team and PMU, it was very helpful in strengthening the dialogue on critical reproductive health issues, both between the Bank and the PMU and Ministry, and within the Ministry, and in improving the orientation towards results.

30. *Project at risk status:* After satisfactory progress on the DO and IP until shortly after MTR, HAMSET II entered potential problem project status in early 2009 when the failure to construct a safe storage facility for DDT and delays in preparing the Health Care Waste Management Plan (HCWMP) triggered the pest management and environmental safeguards (see section 2.4). This raised the number of project flags to three, including also the country environment flag (in place for the duration of the project) and the country record flag (in place for most of the project). The project emerged from potential problem status around January 2010 once significant progress on these safeguards had been made. The main drivers of the country record flag were the cross-cutting constraints linked to the overall economic and political situation (described above) and lay beyond the control of the Ministry of Health (sector) and the PMU (project). These became more challenging as the project progressed. Despite this, the project was able to maintain good overall performance, and consistently outperformed other projects in the Eritrea portfolio. This can be attributed to wise project design, excellent sectoral leadership and commitment and the PMU management's pragmatism and flexibility (see section 5.2).

2.3 Monitoring and Evaluation (M&E) Design, Implementation and Utilization

Design

31. The focus on strengthening M&E (both directly through sub-component 4 and indirectly through the activities of the multisectoral and CMHRP components) was, as noted in section 2.1, a lesson learnt from HAMSET and from other MAP programs. Plans for strengthening M&E (including the implementation of a national M&E framework, a national operational plan, standardized reporting forms, and the development of a Management Information System (MIS) were appropriate and, at the time, seemed realistic. In addition, specific risk mitigation measures were taken to combat M&E weaknesses which were deemed a "substantial" project risk. These included (i) applying LQAS methodology in M&E, (ii) making the operational plan for M&E of HAMSET diseases a project condition, (iii) establishing a computerized MIS in the PMU, (iii) recruiting M&E staff for the PMU, and (iv) ring-fencing the budget for M&E.

⁹ The RBF would have consisted of (i) conditional cash payments for utilization of antenatal care, institutional delivery and growth monitoring, as well as transport vouchers for emergencies, and (ii) supply-side performance-based financing (PBF) incentives for health workers and health authorities.

32. The design of the HAMSET II results framework had some good characteristics, but, overall, was not very strong:

- (i) On the positive side, by adopting, where possible, indicators from the National Strategic Plan (NSP), the HAMSET II results framework showed good harmonization.
- (ii) It also monitored outcomes across a broad spectrum of beneficiaries, including commercial sex workers, truck drivers, pregnant women, children, TB patients, and the general population.
- (iii) However, it lacked specific (intermediate) indicators related to the CMHRP and multisectoral components. Formally tracking and reporting of the results of these components might have improved their implementation.
- (iv) Also, while the indicators in the DGA are considered sound, there were an inconsistency between one of the project indicators listed in the DGA and in the ISRs (see discussion in data sheet), and several inconsistencies between the indicators included in various parts of the PAD (e.g. PAD Annex 3 vs PAD Section B2).
- (v) Unfortunately, baseline data for many indicators were not available until well into project implementation. However, once available, they were well-synchronized with the project start (dating to end-2004 or June 2005).

Implementation

33. The MOH (Department of Research and Human Resources) performed routine data collection for the technical programs well, with a sophisticated electronic HMIS: data are collected on an extensive number of variables, there are internal consistency checks, telephonic data verification, and monitoring of data timeliness, quality and completeness. A subset of the HMIS addresses HAMSET diseases and there are also databases for the multisectoral and CMHRP programs. Individual technical programs gather data additional to that collected through the HMIS.

34. The multisectoral component was fairly weak. Reporting and presentations by partners had an overwhelming focus on inputs, processes and activities, with limited reference to outcomes (e.g. changes in knowledge, attitude and behavior). The PMU could have worked more closely with the M&E division to develop outcome indicators that could be used for reporting early on in the project, to revise the reporting format to include outcomes, and to synthesize data to show the cumulative progress of the component.

35. The CMHRP component successfully established an EPI-info based MIS for CMHRP, in all zones and PMU, which tracks data on planned and actual activities, target groups, expenditure and some results. Disaggregated data exist down to the sub-project level. The CMHRP also developed a standard supervision checklist, trained zoba staff on its use, and used it to supervise as many as 80% of community management teams (CMTs) per month. The MIS was also upgraded during the course of the project to include contributions from communities and supervision data. However, the CMHRP MIS was not successfully integrated with the HMIS, did not include baseline values and

targets for sub-projects, and (despite good intentions) was not modified to include outcome indicators. The PMU CMHRP team can, however, track outcome indicators manually. The CMHRP results framework (finalized with the support of the M&E Division) could not be operationalized because there was no funding for CMHRP after 2009.

36. The use of the results framework improved during project implementation. A proactive step was the identification of possible revisions to the PDO indicators at MTR, simultaneously with an in-depth analysis of M&E, even if (as discussed in section 2.2) these revisions were not implemented. In Sept 2008, the results framework was modified in order to include the core indicators¹⁰ for IDA 15 reporting and a special ISR was prepared to reflect this. However, its effectiveness as a tool for project performance measurement and monitoring was hampered by poor data availability on outcomes. A further disappointment is the fact that some of the endline data in the results framework are dated. The DHS, on which the project was relying for the measurement of some of the endline results, was delayed in its implementation, and at the time of writing, only a limited number of preliminary indicators had been made available by the GoE. Consequently, it is difficult to measure the attainment of all the PDOs. For instance, the most recent HIV and syphilis prevalence data are from 2007 and the most recent TB data are from 2008. Perhaps most critically, for most of the project period, the ISRs did not include all the KPIs, meaning that the results framework did not effectively fulfill its function as a project monitoring tool. Towards the very end of the project (late 2009), this was rectified.

Utilization

37. In general, and in spite of training, the use of data for decision-making was poor, especially at the zoba level. The four disease programs varied somewhat in their performance in this regard, though, and the NMCP was arguably the strongest. One example of where the project did, in fact, excel in data utilization were the Joint Annual Reviews (JAR) during which progress towards objectives and targets was discussed, on the basis of data, and data-driven adjustments to program, workplans and budgets were made. Another example was the annual (and, more recently, quarterly) zoba-level reviews and planning exercises. It also appears that the PMU and ZPMU held periodic discussion with stakeholders about the MIS reports.

38. Evaluation research and its use for policy was another weak spot. There is still no systematic mechanism for identifying and evaluating research priorities and, overall, very little evaluation was undertaken. An evaluation with an experimental research design carried out by the National Malaria Control Program (NMCP) and an evaluation of “Best

¹⁰ The core IDA indicators relevant to HAMSET II include: number of direct project beneficiaries, pregnant women receiving antenatal care during a visit to a health provider, health personnel receiving training, long-lasting insecticide-treated malaria nets purchased and/or distributed, and health facilities constructed, renovated and/or equipped.

Practices” in the sub-projects of the CMHRP were rare exceptions. While some multisectoral partners did conduct surveys, their results were not systematically compiled and analyzed, and there is also not much evidence that experiences in previous years were assessed and used to inform the design of subsequent work plans. Also, while multisectoral partners apparently documented some of their success stories, at the time of writing this had not yet been shared with the PMU or the Bank.

Factors affecting M&E in HAMSET II:

39. The high fragmented institutional structure of M&E (with key units spread across three departments of M&E – M&E Division in Regulatory, HMIS in R&HR, and IDSR and the various technical programs), as well as the CMHRP and the multisectoral programs in the PMU, contributed to difficulties in coordination and harmonization, even though the M&E Division has a clear mandate to lead the coordination. Also, having responsibility for HMIS rest with one department (Research and Human Resources) and responsibility for overall M&E supervision and direction rest with another (the M&E Division of the Regulatory Department) severed the link between information collection, on the one hand, and the analysis and use of that information for decision making, on the other hand – a link that is critical for successful program management. One consequence was that the M&E Division, which was supposed to guide the analysis and use of data for program management, did not have access to an up-to-date repository of health data. This was aggravated by the fact that, although the M&E Division had prepared an integrated work plan for HAMSET II, it was often by-passed by the Bank and the PMU who went directly to the technical program managers for their data needs, undermining the M&E Division’s core function.

40. Lack of human resource capacity was another consistent problem with long delays in the recruitment of some staff to positions already envisaged during project design, including technical staff at the central level and M&E focal points at the zoba level. Significant time passed without a Head of the M&E Division in place. By the end of the project, positions had been filled, but technical competencies remain limited and the division of roles between staff is not always clear.

41. All in all, over the course of the project, significant progress was made in the collection and compilation of data in the health sector, but less progress was made in using them for policy-making, planning and management. The institutional split in competencies between the HMIS and the M&E Division remains an impediment to improving M&E. That said, while health sector M&E may not have optimal institutional arrangements and exhibits weaknesses in information management, the system as a whole is capable of producing a lot of (but certainly not all) information very quickly, and should be applauded for that. Moreover, the project was also able to deliver on most of its planned M&E activities (described in Annex 2, Component 4).

2.4 Safeguard and Fiduciary Compliance

42. The safeguard policies for Environmental Assessment (OP/BP/GP 4.01) and Pest Management (OP 4.09) were triggered. The project was classified as category “B”

(partial assessment) at the time of appraisal because of the risks associated with the handling and disposal of medical wastes, but as a repeater project it was permitted to use the existing safeguards arrangements that had been developed by GoE and approved by the Bank under HAMSET. These include the Health Care Waste Management Plan (HCWMP) of 2004 and the creation of a MOH task force to ensure dissemination and compliance. Overall safeguard compliance was rated moderately satisfactory or lower for most of the project life. This was driven mainly by lack of action on the implementation of Health Care Waste Management Plan (HCWMP) and the triggering of the Pest Management safeguard for storage of DDT.

43. *Health care waste management:*

- (i) A primary explanation of the poor early performance on this safeguard was that no provision for funding of HCWM was made during project preparation (either at national or zoba level) and the GoE did not have the resources to fund it. This was rectified in 2007 through a \$200,000 project tax (shared by all project components) and transferred to the Environmental Health Unit to support the implementation of the plan, enabling the unit to produce the 2007 HCWMP.
- (ii) A second issue was that overall management and organization was largely inadequate: the HCWM Task Force only managed to meet on an *ad hoc* basis about once per year and there was poor participation from other ministries and units.
- (iii) Third, there was only a small number of staff assigned to HCWM. At the national level, the entire program was initially being implemented by only one environmental health manager who managed not only HCWM but a wide array of environmental health issues and, although a HCWM coordinator was later appointed, it was also not a full-time position. There were (eventually) HCWM focal points in each zoba, but they did not have clear terms of reference.

It is not surprising, then, that overall progress in HCWM was weak. By June 2009, only moderate progress had been made in following the recommendations set out in the 2005-2009 Health Care Waste Management Plan. Also, the development, distribution and implementation of HCWM policy, planned for 2007, was only developed and disseminated within the last six months of 2009, and was not yet fully implemented at project close. Nevertheless, it is important not to be too critical: health care waste management is an emergent area in Eritrea around which interest and commitment and technical capacity needed to be built, and to which new resources needed to be dedicated

44. *Pest management:* HAMSET II used the existing arrangements of HAMSET and, at appraisal, had complied with the recommendations of the Environmental Assessment for insecticides approved under HAMSET. In general, the MOH did well to ensure safety in the use of WHO-approved insecticides for malaria control and compliance with the pest management safeguard was rated satisfactory for the first few years of the project. Achievements (which gained pace as the progress progressed) include training and refresher training, provision of protective equipment, and good collaboration between

MOH and Ministry of Agriculture (MOA). The major safeguard issue was the failure to complete construction of a safe storage facility for DDT (not funded by the project) – the cause of the downgrading of the safeguard rating in the ISR from a consistent S to MS in June 2008, and later to MU. While all parties (including MOH, MOA and NMCP) agreed on the importance of a new facility, it could not be constructed during the project period owing to the lack of availability of contractors, fuel and materials (due, in turn, to poor physical transport and limited foreign currency). It is now expected to be completed in 2011.

45. *Financial Management:* Overall, the financial management of this project is considered satisfactory. At the country level, the inherent risk to financial management is considered high because of the limited information available on Eritrea's public financial management system, the limited number of professionally qualified accountants and the government's unwillingness to take ownership of the Feb 2008 CPIA. Yet, the continuity (and longevity) of institutional, control and staffing arrangements – which are the same as those used in the previous HAMSET project – coupled with the relative degree of autonomy of the PMU (which is responsible for FM), its managerial strength, and the experience and competency of its staff (some in place since HAMSET) have largely insulated the project from this risk. Indeed, financial management was sound throughout project implementation and, bar two exceptions, was rated as “satisfactory” in all ISRs. All financial management reports prepared by the PMU have been submitted on-time and judged to be of good quality, there were no unqualified audits, no accountability issues were identified and, at project close, there were no outstanding FM issues. The only difficulty was in the area of funds flow where, on occasions, there were difficulties in obtaining financial information from remote zobas (specifically bank statements), resulting in delays in accounting for advances, the transfer of funds from the PMU to the zobas and the replenishment of the Designated Account, explaining the U rating in the ISR of Mar 2006 and the MS rating in the ISR of Aug 2007. This was outside the control of the central and local PMUs, however, and the Bank was able to proactively find a solution that still ensured fiduciary compliance. The 2005 QEA and a 2009 Financial Management Assessment Report of the PMU, conducted by Bank staff, both rated financial management as satisfactory. This ICR concurs.

46. *Procurement:* The project used the same institutional and control arrangements that were used for HAMSET, with overall responsibility assigned to the PMU. The procurement systems of the first project were judged to be appropriate for use in the repeater project. In addition, the same person was responsible for procurement for the duration of both projects. As in the case of financial management, this continuity contributed to sound performance, and procurement was rated “satisfactory” in each ISR. Towards the beginning of the project, there was a small delay in procurement, mainly for consultant services, but this is attributed largely to the PMU's focus on closing the previous HAMSET project. There were no procurement delays for drugs. A number of delays occurred for civil works, but this was outside the control of the PMU. Rather, it was the consequence of the fact that only a small number of private contractors were permitted to operate in Eritrea, a situation that worsened over the course of the project. However, as previously mentioned, since civil works accounted for only 4% of the project funds, and were mainly used for renovation, its impact on overall disbursement

and, indeed, development outcomes is deemed to be low. Moreover, by the end of the project, all procurements that had been envisaged under the annual procurement plans had been executed. Overall, procurement under HAMSET II is considered satisfactory.

47. *Disbursement:* The estimated project cost at appraisal was US\$ 26.5 million, with US\$ 24 million from IDA, US\$ 2 million from the Government of Eritrea and US\$0.5 million in in-kind (i.e. labor) contribution from local communities. The project used a report-based (IFR) disbursement method which the borrower considered a favorable change because it allowed more predictability of cash flow, greater flexibility and, in general, smoothed project implementation. In general, actual IDA disbursement, despite a somewhat slow start in the very early years of the project (for example, with no disbursement between 2006 Q2 and 2007 Q2), closely tracked planned disbursements for most of the project. At project mid-term review (which occurred on schedule), the disbursed amount from the IDA grant was \$12.7 million or about 50%, and the total disbursement for the project at closing on 30 June 2010 was 98.9% of the credit (\$23.9 million), with the remainder of the grant committed. Counterpart (GoE) funds were made available in a timely fashion and, at project close, US\$2.4 million had been received, which was US\$ 0.4 million more than planned. An additional US\$ 0.4 million should be forthcoming, earmarked specifically for the retention of works and customs and taxes. In total, the Government contributed approximately 12% of the grant, rather than 10% as originally planned. Overall, there were exchange rate gains of approximately US\$1.5 million, but these were used to compensate for price fluctuations.

48. *Covenants:* All six legal covenants¹¹ were complied with on-time, with the exception of the development of the National Strategic Plan for reproductive health which was complied with after a delay of 3 months (and adopted even later).

2.5 Post-completion Operation/Next Phase

49. GoE and the Bank had intended to restructure, provide additional financing to, and extend the project for an additional 36 months beyond its initial closing date. However, because Eritrea ultimately decided not to sign the supplemental Letters on Financial and Economic Data, which are a condition for IDA financing and intended to keep the World Bank informed of the Borrower's debt status, there could be no additional IDA financing or new Trust Funds made available to continue operations beyond the initial closing date. Consequently, the restructuring and extension could not take place. This also meant that the Health Results Innovation Trust Fund resources earmarked for the implementation of a results-based financing pilot (RBF) (see section 2.2) could not be used. The Bank is open to the possibility of future engagement.

¹¹ These include that the National Strategic Plan for reproductive health is developed and adopted; the operational plan for M&E of HAMSET diseases is in place; the project is implemented in accordance with the operational manual and any substantial change in the operations manual would require prior IDA approval; the project activities are implemented in accordance with annual work programs agreed with IDA; annual joint reviews are conducted for each HAMSET disease and major project components; and a mid-term review is implemented no later than June 30, 2008.

50. Because it was uncertain that there would be a follow-on IDA-funded project in the form of a restructured HAMSET II until a few months of closing (pending the decision of the GoE on the supplemental letter), there was no time for the Bank team to work with the MOH and PMU to put in place measures that would help to smooth the transition to a post-operation environment.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

Rating: Substantial

Relevance of Project Development Objectives

51. In the absence of a Country Assistance Strategy for Eritrea, the Bank's strategy for engagement at closing is the draft Interim Strategy Note (June 2008-2010). HAMSET II's PDOs remain highly relevant to the ISN objective of supporting the government to deliver improved human development. The anticipated health sector results outlined in the ISN include a reduced incidence of communicable disease, improved reproductive health care, improved child health and education outcomes, and building an improved knowledge base through analytic work with the government and development partners.

52. The PDOs also remain very well-aligned with Eritrea's Development Strategy, 2005-2007, which includes focusing on, *inter alia*, "reproductive health care (equivalent to PDO 4), treatment and control of common infectious diseases (equivalent to PDO 2), control of malaria (equivalent to PDO 3)", "acquiring manpower and equipment necessary to make (these) facilities operational (equivalent to PDO 5), and "containing and controlling HIV/AIDs" (equivalent to PDO 1). This is the most recent Development Strategy available.

Relevance of project design and implementation modalities

53. Based as it is on well-tested technologies and interventions, and appropriate to country conditions which are largely unchanged, the project's design remains as technically relevant today as five years ago. The beneficiaries targeted, and especially the high risk groups on which many of the interventions focus, continue to be appropriate. Combining all HAMSET II diseases into one program continues to make sense because of the small population and land area, the costs to the government of handling more than one project, and the synergies between disease interventions. It also facilitates the integration of vertical programs and health system strengthening activities. In terms of technical assistance, it enables the Bank, which is the major technical partner, to provide technical support across all programs. The final allocation across health subcomponents/diseases (after reallocation), with larger amounts allocated to reproductive health and human resources than at preparation, better exploit the Bank's *comparative* advantage in light of the availability of financial (but not technical) resources from GFATM. HAMSET II's implementation modalities also remain relevant: tackling HAMSET diseases through the health ministry, other ministries (i.e.

multisectoral response) and communities (i.e. CMHRP response) is appropriate and the PMU has proven itself to be a consistently strong implementing partner, able to adequately handle IFR-based disbursement. The project's balance between "hardware" and "software" (with limited financing of civil works, for example) is more appropriate than ever in the hardened macroeconomic environment.

3.2 Achievement of Project Development Objectives / Efficacy

Rating: Modest

54. In assessing efficacy, the aim is not merely to measure performance on PDO *indicators*, but rather to assess achievement of the five project development *objectives* (of which the indicators are simply the measure). Consequently, the analysis of the achievement of PDOs in this section is supplemented by additional output and outcome indicators, including from non-governmental sources. It also employs a results chain analysis to link outputs to outcomes and, where PDO indicator data are somewhat dated (as discussed in section 2.3), infer what the effect on outcomes (including in later periods) is likely to have been. Detailed tables of data on outputs and outcomes in support of the conclusions in this section can be found in Annex 10.

55. *HIV/AIDS*: According to the latest available data, HIV prevalence among pregnant women (aged 15-24) was maintained below 3%, as planned. The target of reducing the syphilis prevalence rate among pregnant women from 2.1% to below 1% was also achieved. Unfortunately, prevalence data are from 2007 and it is not known what happened to prevalence rates (of both HIV¹² and syphilis¹³) over the last half of the project. Data are also not available to assess whether the objective of *maintaining* HIV prevalence among CSWs below 12% was met, but the near-doubling of condom use among CSWs to 87% over the project period, as well as the increase in condom usage among truck drivers (who are important clients) from 7% to 96.3%, suggests that prevalence is unlikely to have increased.

56. Achievements in project outcomes are likely linked to achievements in project outputs, specifically the increase in the availability of services (such as VCT, PMTCT, condom distribution and antiretrovirals) that reduce the likelihood of infection. Data from NATCoD show that:

- The availability of VCT services and their utilization increased substantially over the project period, exceeding initial targets. The number of VCT sites almost

¹² In the case of HIV, since it is prevalence rather than "incidence" that is being monitored, drastic change over two to three years is not too likely. Also, the slight decline in the percentage of positive cases identified during VCT over the project period (from 3.38% in 2005 to 2.06% in early 2010), as well as the fact that HIV positivity observed through testing women at PMTCT sites fell from 1.95% in 2005 to 0.66% by project close, is reassuring. The 2010 Eritrean DHS provides the first prevalence figures based on a household survey: 1.13% among all women and 0.5% among men.

¹³ Routine data showing that the number of STI cases treated fell from around 5,900 in 2007 to 5,300 in 2009 are compatible with continued improvements in STI prevalence.

- doubled, growing from 74 (2005) to 135 (Q2, 2010), the annual number of VCT attendees grew from 69,121 (2005) to 96,285 (2009), and the percentage of adults who were both tested and received their HIV results increased from 17% (2007) to 37.4% (2009).
- The provision of PMTCT services increased markedly from 39 sites in 2005 to 93 sites across all 6 geographic zones by 2009 and the number of pregnant women tested for HIV increased from 8,144 to 50,000. By the second last quarter of the project, the uptake of PMTCT services among those on their first visit for antenatal care was almost total (96.5%), and double the rate at mid-term (2007). By 2009, 95% of infants born to HIV+ mothers were HIV negative (up from 87% in 2007).
 - Overall treatment coverage of ART is good (estimated at 77% under the old guidelines of less than 250 CD4 count), despite only 17 sites and the fact that services were available in only 4 out of 6 zobas. As of April 2010, the cumulative number of patients enrolled in ART was at 5,557, up from 709 in 2005.

Thus, there was a marked improvement in the provision of HIV prevention and treatment services which would be consistent with improvements in HIV/AIDS-related outcomes.

57. *Tuberculosis:* In 2008, the project exceeded its end-of-project target of successfully treating (i.e. curing) at least 85% of new smear positive cases, but because data beyond 2008 are not available, it is now known if those gains were sustained. DOTS treatment of diagnosed TB cases (another PDO) was impressive, reported at 100% in 2008 (latest data). These accomplishments can be attributed to large number of workers being trained on DOTS – more than double the target; no stock-outs of medication; the fact that all health facilities had staff trained in detection and treatment; and that all facilities were equipped with AFB microscopes (up from 79% at baseline). Case detection was not strong, however, and, at last measurement, the project was not yet detecting 70% of infectious cases,¹⁴ improving from 41% at baseline to only 49% in June 2008. Poor case detection rates can be attributed to poor information systems, relatively weak supervision and gaps in the availability of testing equipment. That said, case detection rates may well have improved since 2008 due to the expansion of microscopy and training, but later data are not available.

58. *Malaria:* In light of the impressive gains during HAMSET, HAMSET II sought to further reduce, or at least maintain at 2004 levels, malaria morbidity and mortality. Impressively, over the project period, both confirmed mortality and morbidity fell further from 24 (2004) to 3 (2009) in the case of the former and from 35,215 to 6,785 in the case of the latter. This is a remarkable achievement. Somewhat surprisingly, given this achievement, is that there was virtually no increase in the percentage of children under-5 and pregnant women sleeping under ITNs the previous night, with coverage of both at only 49% and 54% respectively (in 2008), despite a PDO target of 75%¹⁵. The successful

¹⁴ A 70% case detection rate is not only a HAMSET II target, but also a global target.

¹⁵ As argued by O'Meara et al. (2010), the fall in malaria morbidity and mortality may instead be due to other program interventions that were implemented on massive scale in Eritrea, such as larviciding, indoor residual spraying and community-based management of fevers. However, there was only a modest

roll-out of testing and anti-malarial drugs was an important contributing factor to DOTS coverage: by 2009, the MOH had procured double the number of rapid diagnostic tests that it planned to obtain and drug availability at health facilities was very good.

59. *Reproductive health:* HAMSET II was not particularly successful in improving coverage of reproductive health interventions. Recent DHS data show that skilled birth attendance increased slightly from 28.3% in 2002 to 34.1% in 2010. However, this figure is still substantially below the project target of 60%¹⁶. On the other hand, the utilization of focused antenatal care showed improvements over the project period, increasing from 28% in 2005 to 37.5% in 2008, but still remained below the 50% target. This is supported by DHS data showing that ANC utilization increased from 70.4% in 2002 to 88.5% in 2010¹⁷. The contraceptive prevalence rate (CPR) rose only slightly from 8% in 2002 to 8.4% in 2010 (according to the DHS), but still falls below the project target of 10%¹⁸. The provision of inputs was successful, though. Specifically, the project was able to ensure that 100% of public hospitals and 80% of health centers (up from 55% and 47% in 2004) were able to provide emergency obstetric care. There were also minor achievements in other areas, but all of these fell short of the MOH's targets, e.g. the prevalence of female genital mutilation (FGM) among girls under 10 fell from 89% in 2002 to 83% in 2010 (not quite reaching the MOH's target of 80%)

60. *Health system strengthening, including human resources for health:* HAMSET II reached its training targets for nurse midwives and laboratory technicians, but fell substantially short for public health technicians (133 actual out of 220 planned). It also did not achieve the target of increasing the proportion of health stations with at least once nurse from 28% to 50% (reaching only 35%) and, in fact, the percentage of health stations with a nurse was lower at project close than at MTR. That said, while the project fell a little short in terms of PDO *indicators*, in terms of the overall PDO of strengthening human resources for health, there were some important accomplishments, including the graduation of the first batch of medical doctors from Eritrea's Orotta School, as well as the graduation of anesthetists, many nurses, and the development of training curricula (see Annex 2).

61. *Discussion of overall rating on achievement of PDOs:* Of the five project development objectives, the two relating to HIV/AIDS and malaria were fully, and unequivocally, achieved. Where data on a few KPIs are somewhat dated, the results chain analysis builds a sufficiently strong case for a continued positive trajectory. Performance on the PDO for tuberculosis was mixed: there is evidence of strong performance in the

improvement in the proportion of households aware of environmental management prevention methods (from 68% in 2004 to 75% in 2008, and short of the 85% target).

¹⁶ At MTR, the MOH requested that this target be lowered to 40% because 60% was too ambitious. The Bank agreed, but then this change was postponed until the (anticipated, but not realized) restructuring.

¹⁷ The DHS information was recently provided by the GoE in summary form and makes no mention of the number of antenatal care visits. It is assumed to refer to one antenatal care visit. By contrast, "focused" antenatal care (measured by the PDOs) includes four visits, explaining the lower overall estimates.

¹⁸ The project baseline value for this indicator was given as 4% in 2005, despite a 2002 DHS showing a CPR of 8%.

area of treatment, but weaker performance in the area of case detection. That said, case detection data are from 2008, had been trending upwards, and may have improved as investments in detection (equipment and training) have risen. A fourth PDO, namely strengthening the overall health system's capacity to address the HAMSET diseases (including human resources) showed mixed performance and, despite some impressive training completion rates, did not succeed in reaching a critical target for the percentage of nurses in health stations. Finally, although one can point to some areas of achievement (such as the performance on the KPI on the provision of EmOC) and there is some evidence of improvements over the life of the project, overall the final PDO related to reproductive health was far from achieved. Thus, with full achievement on two PDOs, substantial achievement on a third and a fourth, and poor performance on a fifth, the overall rating of achievement of PDOs is considered modest.

3.3 Efficiency

Rating: Substantial

Cost-effectiveness of HAMSET interventions

62. Studies from different parts of the world, analyzed as part of the Disease Control Priorities Project 2 (DCPP 2), show that the interventions related to HAMSET II diseases are highly cost-effective (see Table 3). Most cost less than US\$100 per DALY averted (which is a commonly-used threshold for cost-effectiveness).

Table 3 Cost-effectiveness of interventions similar to those used in HAMSET II

	US\$ per DALY averted
Reproductive health	
Improved primary-level coverage of maternal and neonatal package (South Asia and Sub-Saharan Africa)	92-148
Improvements in quality of prenatal and delivery care	82-142
Tuberculosis	
DOTS	5-35
BCG vaccination	40-170
Treatment of latent TB in non-HIV+ patients	4,000-25,000
Treatment of MDR-TB	70-450
Malaria	
Insecticide-treated bednets	5-17
Indoor residual spraying	9-24
Intermittent preventive treatment (IPT) of malaria during pregnancy	13-24
Artemisin-based combination therapy (ACT)	<150
HIV/AIDS	
VCT	14-261
Peer education among high-risk groups	1-74
Social marketing promotion, and distribution of condoms	19-205
Programs to improve blood and needle safety	4-51
Treatment of most opportunistic infections	10-500
Anti-retroviral treatment with high adherence (80-90%)	350-500
Treatment of STIs	16-105
PMTCT (single dose Nevirapine)	6-12

Source: Table created from data discussed in Laxminarayan et al. (2006)

63. When combined with project information on the interventions prioritized by HAMSET II, the following conclusions can be drawn:

- Overall, HAMSET II was a highly efficient project that appropriately selected highly cost-effective interventions. This is not surprising considering the careful analysis and project preparation that was undertaken with precisely this goal in mind.
- The fact that some of the highest cost-effectiveness ratios are observed for activities that require the integrated management of multiple diseases suggests that HAMSET II's emphasis on integrated disease management was a highly efficient strategy.
- The expansion of the HAMSET diseases to include reproductive health interventions (in HAMSET II) was also cost-effective.
- Unfortunately, the cost-effectiveness ratios of community mobilization for HIV/AIDS in low-prevalence settings (see Annex 7) can be very poor, raising a concern about the efficiency of CMHRP resources. Indeed, early HAMSET II missions remarked on the low efficiency of CMHRP implementation. However, this did improve over time: community sub-projects were chosen more selectively,

- the percentage of activities that were integrated rose, the duration of sub-projects increased, and the number of beneficiaries per sub-project was increased in order to drive down average sub-project costs
- For tuberculosis, DOTS is highly cost-effective, but MDR-TB treatment is considerably less so. This is something for Eritrea to consider as the tuberculosis program makes decisions about how to respond to emerging MDR-TB.
 - Eritrea has had an extraordinarily successful multi-pronged malaria program, with exceptional performance at the community level in surveillance, spraying and bednet usage. Yet, a recent study by Morel et al. (2005), which looked at combinations of malaria interventions, found that high coverage with artemisinin-based combination treatment (ACT) is the most cost-effective strategy for malarial control in most countries of Sub-Saharan Africa (at both 85% and 90% coverage levels), at around US\$9, and that adding other interventions in combination with ACT, such as indoor residual spraying, nets and intermittent presumptive treatment during pregnancy, substantially lowered average and incremental cost effectiveness. In an environment of exceptionally limited health resources, the implications of this finding for Eritrea's malaria control strategy need to be considered. On the other hand, even the least cost-effectiveness of those packages of interventions was, on average, still very high (below US\$50).
 - Finally, HAMSET focused on interventions for high risk groups (such as sex workers, truck drivers, and pregnant women) to concentrate resources where they are most needed and can have the most impact. By and large, it also succeeded in reaching those groups. Table 3 shows that peer education among high-risk groups is highly cost-effective.

64. *Efficiency of project execution:* The efficiency of project execution, as measured by the speed of disbursement, was good. As described in section 3.2, despite a somewhat slow start in the very early years of the project, actual disbursement closely tracked planned disbursements for most of the project. At MTR, the disbursed amount from the IDA grant was \$12.7 million or about 50% of the credit, and the total disbursement for the project at closing on 30 June 2010 was 98.9% of the credit (\$23.9 million), with the remainder of the grant committed. Counterpart (GoE) funds were made available in a timely fashion. At the community-level, project subgrant execution was marked by increases in efficiency as the project progressed: subgrant size and duration increased, disease integration improved and per capita (beneficiary) costs fell by 90% (See Annex 2, Component 3).

65. *Sectoral and allocative efficiency:* The low overall levels of government health spending in Eritrea, the fact that the HAMSET diseases are responsible for a large share of the burden of morbidity and mortality, and the fact that HAMSET II covers some health areas that are barely supported by other donors suggests that expenditure on HAMSET II is unlikely to have displaced or (inefficiently) distorted health program allocations. Over the five years of implementation, the average annual cost of the project (in terms of IDA) was US\$4.8 million or US\$ 0.96 per capita per annum. The latter is equivalent to almost a tenth of annual health spending per capita (estimated at around US\$10 per capita) and almost a quarter of total public health spending (US\$4 per capita) (WHO 2010)

66. Details of the DCP2 estimates, as well as a number of other illustrative estimates of the cost-effectiveness of HAMSET II-type interventions, are discussed in Annex 3.

3.4 Justification of Overall Outcome Rating

Rating: Moderately satisfactory

67. Based on the preceding discussion, project relevance to current development priorities is considered substantial, efficiency is considered substantial and achievement of outcomes is considered moderate, resulting in an overall rating (as per guidelines) of moderately satisfactory on overall outcomes.

3.5 Overarching Themes, Other Outcomes and Impacts

(a) Poverty Impacts, Gender Aspects, and Social Development

68. Through including diseases that manifest themselves more among the poor than among the better-off (or have greater financial consequences for the poor than the better-off), and because of the established linkages between improved health outcomes and productivity, the project is likely to have had a substantial poverty impact. Indeed, facility-based data from Eritrea have shown that the top causes of adult mortality were the consequences of HIV/AIDS, tuberculosis and malaria, with obvious effects on productivity and lost income. Moreover, the community-based component implemented interventions (that were considered local priorities) in even the most remote and impoverished parts of the country.

69. In terms of social development, the project succeeded in involving local leaders and civil society in the identification of problems and the implementation of interventions, it gave consideration to issues related to demobilization, and it improved the empowerment of communities and building of local capacity through a community-based component. Importantly, the project explicitly targeted vulnerable groups, articulated the emphasis on these groups in the PDOs and PDO indicators and, according to available data, actually managed to reach this population.

70. The gender-based approach was strong and gave particular attention to empowerment issues. The RH subcomponent, by definition, targeted the needs of women. In the HIV/AIDS subcomponent, CSWs, in particular, were empowered to form groups, mobilize funding, implement programs and take action to protect themselves against HIV and violence. In addition to reaching female beneficiaries, the project also empowered women to become project implementers. For example, organizations like the National Union of Eritrean Women (NUEW) were strengthened under the multisectoral component and women were very much involved in the management of community-led initiatives under the CMHRP component.

(b) Institutional Change/Strengthening

71. One of the greatest contributions of the Bank was its role in putting in place structures and processes for program management and implementation. Many of these have already been discussed in detail in the relevant sections of the ICR, and include:

- Creation of the Joint Annual Review (JAR) process that brings together all stakeholders, regardless of funding source, to jointly review progress and develop work plans for the next year. The GoE intends to continue this practice even though the Bank will no longer be involved in the health sector.
- Strengthening of the project management, financial management and procurement capacity in the PMU during HAMSET II (and HAMSET) that contributed, over time, to a very strong unit that is more than capable of directing multiple flows of external donor assistance (and not only of Bank projects) and managing implementation. These same systems are now also been used by other donors, such as the GFATM.
- Creation of institutional arrangements for CMHRP to facilitate planning, implementation, management, monitoring, and reporting.
- Putting in place and strengthening mechanisms of coordination between the multisectoral partners, as well as between the different technical programs of the MOH. This includes establishing steering committees, technical committees and task forces (at both national and zoba level).

(c) Other Unintended Outcomes and Impacts (positive or negative)

This project had at least two unintended (positive) impacts:

72. First, the project and financial management capacity built up within the PMU during HAMSET II (and HAMSET) no doubt contributed to GoE's successful application for GFATM resources and will, in future, contribute to the successful fiduciary management of these (and other donor) resources. Indeed, the current GFATM resources for Eritrea flow through the PMU and use the same reporting and financial processes as were used for Bank funds, as well as the same procurement methods. This is also of longer-term benefit for Eritrea because it sets the PMU up as a potential channel for future pooled donor funding. This can in large part be attributed to the institutional strengthening that occurred under the two HAMSET projects.

73. Second, the opportunity to implement an RBF pilot within HAMSET II sparked an interest in the effect of supply- and demand-side incentives on performance, especially in the area of reproductive health. This involved the development of a detailed operations manual and the implementation of a "pre-pilot". While the implementation of the pilot could not proceed for reasons already discussed (see section 2.2), the interest in RBF appears likely to endure. Consequently, should resources become available to implement such a pilot in the future, some groundwork has already been laid. This could have potential long-term effects on health financing arrangements and access to RH services in Eritrea.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops

n/a

4. Assessment of Risk to Development Outcome

Rating: Substantial

74. The sustainability of development outcomes will depend on the availability of financial resources, technical design, the strength of health program management, sectoral leadership, the durability and strength of institutional structures as well as any changes to the external environment that may have an impact on health threats/risks and behaviors. External changes may prove to be as diverse as economic growth, food insecurity, international conflict, and non-health ministry policies.

75. *Financial sustainability:* Maintaining health outcomes requires ongoing financial investment and Eritrea's current macroeconomic position means that domestic resources available for the health sector are likely to be limited. GDP growth grew at an average of 2% over the project period (World Development Indicators 2010). However, external debt grew from US\$725 million in 2005 to US\$962 million in 2008 and in November 2009 the World Bank and IMF declared Eritrea to be "in debt distress"¹⁹. The external debt situation is further complicated by an extremely high level of domestic debt. The currency remained constant at 15 nakfa to the dollar throughout the period of project implementation and is believed to be about six times overvalued. The country has also ranked as a poor performer under the World Bank's Country Policy and Institutional Assessment (CPIA) with an average score of 2.41 during 2006-2008. Current public health sector spending is only US\$4 per capita per annum (WHO 2010). At project preparation, it was estimated that US\$1.4 million in recurrent annual costs would be needed after the project purely for maintenance, supervision, and continuance of training activities – a non-trivial amount.

76. Consequently, Eritrea will continue to need external financial support to fund health sector policies. In 2008, 37.1% of total health care expenditure was derived from external sources (WHO 2010). In the short-term, there will be considerable funds available through the GFATM for the health sector (see Table 4) (albeit for a limited set of health priorities) but the future availability of funds from this source is less certain, especially in the current global economic climate. GFATM monies also tend to be less flexible than IDA in that it is more difficult to reallocate them to different spending categories during the course of implementation (unlike the adjustable annual work program planning and budgeting used under HAMSET II), delays have been experienced in GFATM disbursement, and there is typically some uncertainty as to what share of the total amount allocated to each five year tranche will eventually be available. For example, Malaria VI was reduced by \$1.1 million, HIV/AIDS V by \$5.2 million and TB VI by

¹⁹ Source: International Development Association and International Monetary Fund. 2009. Joint World Bank/IMF Debt Sustainability Analysis. Washington, DC.

\$3.5 million. Also, while GFATM resources will allow GoE to undertake many of the activities under HAMSET (especially since it has allowed funding of “health systems strengthening activities”), it cannot tackle all: one notable gap is reproductive health. The financial contributions of other donors are insignificant.

Table 4 Remaining GFATM balances, as of June 2010, USD

	Round V	Round VI		Round VIII	Round IX
	HIV/AIDS	Malaria	TB	HIV/AIDS	Malaria
Balance	4.75 mn	4.85 mn	4.62 mn	27.92 mn	43.04 mn
Closing date	08/2011	10/2012	10/2010	09/2014	2015

Source: Project Management Unit

77. *Technical sustainability:* A major accomplishment of HAMSET II was the improvement of human resources for health, but while capacity and skills have increased dramatically (including the graduation of the first batch of medical doctors), national human resources for health remain very limited (e.g. there is not one epidemiologist in the country) and Eritrea’s increasing isolation limits opportunities for external learning. Also, although MOH are competent, overall staffing levels are thin. Consequently, the technical assistance provided by the Bank during project supervision was highly-valued, but in the absence of a new Bank-supported project, this will cease and there does not appear to be an alternative development partner who is able to provide a similar level of TA.

78. *Operational sustainability:* The very strong project management and implementation skills within the PMU (which will continue to manage the GFATM resources) will contribute favorably to the sustainability of development outcomes beyond the project period, as will the success of the institutional strengthening measures undertaken as part of HAMSET II (see section 3.5). There is also strong management within particular MOH programs and, on the whole, the HAMSET II implementing agencies have proven that they can deliver results in spite of difficult circumstances. In the short-term, operational sustainability could have been further enhanced if the Bank had provided (in the final months of implementation) more technical assistance to facilitate planning for any activities that the PMU and MOH might want to implement in the immediate post-completion period.

79. *Other internal and external risks to health outcomes:* The persistence of fuel shortages and suspension of private contractors which contributed to procurement, construction and supervision difficulties during project implementation show no signs of being resolved and are likely to continue to be a risk to the sustainability of development objectives. Importantly, the major gains under the previous HAMSET project and in the early years of HAMSET II were realized under different political leadership in the health sector and current leadership appears less able to mobilize resources for the health sector and assist the MOH in overcoming operational barriers. In terms of external risks, the achievements in malaria are subject to variations in rainfall patterns and population complacency, there is the risk that border disputes may escalate to full-scale conflict, and food insecurity is an ever-present threat.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: Satisfactory

80. A QAG Quality-at-Entry Assessment (2005) awarded this project the rare rating of “highly satisfactory” for overall quality at entry. In addition, four of the assessment dimensions were rated highly satisfactory (namely strategic relevance and approach, poverty gender and social aspects, policy and institutional aspects, and risk assessment), while the remaining four (namely technical financial and economic aspects, environmental aspects, fiduciary aspects and implementation arrangements) were rated satisfactory. The team carefully analyzed, and systematically applied the lessons learnt from, HAMSET and other related projects, and project preparation documentation was comprehensive, detailed and thoughtful. All of this was achieved in a preparation period of less than four months. With the benefit of hindsight, the project could have benefitted from more careful work on the environmental safeguards, as well as in M&E (in particular, the preparation of the results framework and monitoring arrangements).

81. Appropriate Bank technical expertise and experience with the Eritrean health sector and the previous HAMSET project were important ingredients of successful project preparation. There was also continuity between the staffing of HAMSET and HAMSET II, with both TTLs (and some team members) of HAMSET II preparation having led or worked on HAMSET.

82. The Bank team points out that the quality of their preparation was only possible because of the high level of commitment of the MOH, as well as the president and the vice president of the country and the other line ministries involved. Design was the result of a highly consultative process, emerging as a product of true partnership between the MOH and the Bank team, as well as the engagement of civil society groups.

(b) Quality of Supervision

Rating: Satisfactory

83. This is a project that required intensive supervision given its fast-track preparation, innovation, multisectoral and multi-agency nature, and the wide range of activities. Supervision was also made more challenging due to the absence of any technical staff (with the exception of procurement) in Asmara. For the first three years of implementation, the team undertook a mission (on average) every six months (as planned), including Joint Annual Reviews (initiated by the Bank under HAMSET II). By mobilizing additional staff resources (e.g. through the Roll Back Malaria Initiative and MAP program), the Bank was able to put together large teams to provide technical assistance (with missions typically including a malaria expert, TB specialist, RH expert, HIV/AIDS expert, community response specialist, FM specialist, procurement specialist,

HR specialist and M&E specialist). In addition, non-core technical experts or consultants joined the supervision missions or undertook separate trips, as needed.

84. Supervision missions were used as effective monitoring and planning tools. Aide-memoires were very candid and designed to guide government action after the mission. Consequently, they elaborated in detail on project progress, highlighted major issues, made recommendations and provided deadlines for follow-up. The team also undertook extensive field visits, typically visiting five out of six zobas per mission. Several missions were also undertaken using videoconferencing, e.g. in order to save budget for mid-term review. In addition, there were a number of ad hoc videoconferences to resolved critical issues, indicative of Bank responsiveness and availability to the borrower. The Bank team also organized videoconference-based training for PMU and MOH staff which was well-received. The mid-term review occurred exactly on time, halfway through project implementation in Dec 2007 and when US\$ 8 million of project funds had been disbursed.

85. The PMU and MOH has praised the Bank team for their “supportive supervision” and the rigor with which the Bank team and its processes helped to keep them “on track” in project implementation. Indeed, the PMU intends to continue with similar planning approaches even in the absence of a Bank project. They also very much appreciated the joint work on aide-mémoire documents and how they could be used to follow-up effectively in time for the next mission, plan and keep to deadlines. They also thought Bank staff brought excellent examples of the experience of other countries, but struck the appropriate balance between sharing foreign experience while still allowing Eritrea to develop its own way of doing things.

86. Fiduciary issues were sound and while health care waste management was a persistent safeguards issue for the project, the team took many proactive steps to help in its resolution, including reallocation of funding across categories and providing expert consultant advice (see section 2.4). M&E in the project had a number of weaknesses, but attention to M&E increased as project implementation progressed. This was driven by the combination of the Bank’s institutional shift towards increased scrutiny of M&E in its project portfolio and the particular interest in M&E shown by the HAMSET II TTL.

87. Something that stands out in this project is the effort to which the Bank team went to establish relationships of trust and mutual respect with the borrower, and how responsive the team was in providing technical assistance and trying to help resolve problems. With this relationship in mind, and since the Bank’s technical assistance was so highly valued by the borrower, it is unfortunate that there were no missions for the last 18 months of the project (owing to uncertainty as to whether the Government of Eritrea would sign the supplemental letter). The Bank team, nevertheless, continued to hold semi-annual “supervision missions” via videoconference.

(c) Justification of Rating for Overall Bank Performance

Rating: Satisfactory

88. As per ICR ratings guidelines, because Bank performance in ensuring quality at entry is rated “satisfactory” and Bank performance in quality of supervision is rated as “satisfactory”, the rating for overall Bank performance is “satisfactory”.

5.2 Borrower Performance

(a) Government Performance

Rating: Moderately satisfactory

89. A high degree of government ownership of, and commitment to, the project prevailed during project preparation. This was at the level of the Ministry of Health, but also at the levels of the president and vice-president’s office, as well as in other line ministries. The former Minister of Health, in particular, was a champion of HAMSET and HAMSET II. The government exercised leadership in convening multisectoral partners and various stakeholders, and in strengthening the institutions needed for HAMSET II implementation.

90. To the extent that “government performance” includes the broader macro-economic environment, it could be argued that the government’s own policies – and their consequences for the availability of foreign exchange, the availability of private contractors, fuel shortages and restrictions on travel – were obstacles to project implementation, including civil works and project supervision, especially in the more remote areas. Yet, despite this environment, implementation did not fall below “moderately satisfactory” and HAMSET II continued to be a stand-out performer in the Bank’s Eritrea portfolio – something that would not have been possible in the absence of strong government commitment to HAMSET II.

(b) Implementing Agency or Agencies Performance

Rating: Satisfactory

91. The project was implemented by the MOH, selected non-health line ministries, national and local civil society organizations, and community groups. Responsibility for project management and coordination was given to the PMU. In spite of the external challenges to project implementation, implementing agencies were generally able to adhere to the agreed implementation schedule, follow up on actions agreed during previous missions and showed resilience in the face of a difficult operating environment. It was only towards the end of the project that the broader country constraints started to have an effect on implementation, specifically through delays in civil works and pending consultancies. One area of relative weakness was M&E which, across implementing agencies, was mainly focused on inputs and process indicators, with only limited monitoring of outcomes indicators. Also, in the early years of the project, collaboration between the technical departments of the MOH and other implementing agencies at the national level (either formally through the national technical committees and steering committees or on an *ad hoc* basis) was not as strong as it could have been, but this improved over the project period.

92. Overall, all ministries and implementing agencies were very engaged, but different agencies had different capacities and, as a result, performance varied. In general, the multisectoral component (consisting of 13 government and CSO partners) performed well, something that can be attributed to a high degree of ownership and commitment, strong focal points, and good coordination at the zoba level. Among multisectoral partners, the Ministry of Defense, the Ministry of Education and NUEW were particularly strong (see Annex 2). The CSOs and community groups (working under the CHMRP component) appear to have achieved much better results (see Annex 2) than often seen in community-based projects. By the end of the project, there was a high degree of integration of HAMSET diseases in their subprojects, female beneficiaries were successfully reached (73% of beneficiaries), and there was a fair amount of collaboration between CMHRP partners and other HAMSET partners. There was also substantial learning-by-doing and the subprojects became increasingly selective, increasingly integrated and lowered their unit costs as the project progressed. Within the Ministry of Health, performance varied across technical programs. The malaria program had strong leadership and a history of success, and was able to achieve further gains. NATCoD (implementing agency for HIV/AIDS and TB activities) was fairly strong in HIV/AIDS, but less so in TB where TB expertise was lacking in the early years of the project and program supervision and quality assurance remained weak. The Department of Research and Human Resources had strong leadership, but the Department of Reproductive Health, while admittedly facing tremendous public health challenges, struggled somewhat, suffering from a shortage of managerial and implementation capacity. Overall, though, despite capacity constraints, and in the face of very challenging circumstances, the technical programs managed to achieve a lot.

93. The performance of the PMU was very strong. Contributing factors include: staff continuity – most staff had worked together since the HAMSET; cohesiveness – the PMU works as a team with strong sense of unity; energetic leadership; a high degree of familiarity with Bank procedures and processes (from HAMSET); and, a self-critical disposition, an interest in identifying own weakness, and a hungriness to learn. Overall, and as confirmed by the Bank task team (in person and in project documentation), credit should be given to the PMU for the quality of project preparation and a solid record in implementation.

(c) Justification of Rating for Overall Borrower Performance

Rating: Moderately satisfactory

94. As per ICR ratings guidelines, because government performance is rated as “moderately satisfactory” and implementing agency performance is rated as “satisfactory”, overall borrower performance is rated as “moderately satisfactory”.

6. Lessons Learned

95. The new HAMSET II approach holds great promise as a way to better integrate multiple vertical programs with each other and with health system strengthening efforts, and reach vulnerable groups: The evolution from HAMSET (which was itself innovative

in that it integrated three vertical programs) to HAMSET II was a real innovation. First, the HAMSET II approach integrated three vertical programs with health system strengthening (reproductive health and human resources) with obvious synergistic effects. Second, it also facilitated implementation by adopting an implementor-based approach. In other words, project components were defined by their implementers (i.e. CMHRP - community, health sector - MOH, and multisectoral – line ministries and CSOs) rather than by the diseases with which they are concerned. This improved coordination and allowed targeted to better be reached by multiple integrated interventions.

96. Value of repeater projects: Because the first HAMSET project “invested” substantially in establishing guidelines and processes and policies (and, to some extent, operationalizing them), HAMSET II could use existing systems (and improve them), putting the project on a fast-track to realizing gains. Also, because the repeater followed so quickly on the previous project, the government and Bank team were also able to build on the momentum and cumulative experience of the first project’s implementation.

97. Bank and client working together as partners during project preparation improves the quality of implementation: This helped to ensure that the project was appropriately designed, feasible, understood by all stakeholders, and owned. In the words of the client: “Implementation is easy when you understand it from the beginning”.

98. Continuity of staff and systems in the PMU makes a difference: By HAMSET II close, most staff in the PMU had worked together on HAMSET projects for 10 years. They were very familiar with Bank processes, had honed their own operational skills and procedures, and had become a closely-knit and effective team.

99. Continuity of staff in the Bank team makes a difference: There was continuity between the staffing of HAMSET and HAMSET II, with both TTLs (and some staff members) of HAMSET II preparation having led or worked on HAMSET. This contributed to a high degree of trust and ease between Bank and client.

100. Missions should balance supervision equally with technical support: Clients value “supportive supervision” where missions go beyond monitoring implementation to provide high quality technical assistance and assist implementing agencies in setting up institutions and processes that help the borrower to improve planning, strengthen project management, resolve problems and evaluate progress. Moreover, this learning and these processes endure, and can have positive spillover effects (for example, on the management of other donors’ funds). In this way, HAMSET II was a good example of the World Bank acting as a “Knowledge Bank”. Indeed, with the closing of HAMSET II, the loss of Bank technical assistance is one of the major concerns of the MOH and PMU.

101. Effective use of information technology: The Bank team successfully used information technology solutions in its supervision and capacity-building activities. For example, some supervision missions were conducted via videoconference (VC) and VC-based training opportunities were made available to PMU staff. This brought about significant cost-savings.

102. Flexible step-wise approach to project planning and budgeting: The project was implemented using a step-wise approach where annual work plans and budgets were set based on a review of the previous year's activities and performance. This gave the borrower more flexibility to respond to changing conditions and resolve problems as they arose, thus also mitigating risk. The project set long-term objectives to guide implementation, but planned activities over the short-term.

103. Reliance on external surveys to evaluate endline performance may be technically appropriate, but carries its own risks: From a technical standpoint, it is appropriate to use household survey data to measure many of the health outcomes in a Results Framework. However, because the implementation of these surveys is not under the control of the project, there is a risk that the eventual timing of the survey will not coincide with the endline of the project (even if originally planned to do so). This project relied on the DHS 2010 for a share of endline data, but this was not available for the ISR with the consequence that some "endline" ISR data were from two years prior to closing²⁰. One approach that could be pursued in future could be to have a greater share of the DHS (or other externally-managed survey) managed by the project to give the project more control over its timing.

104. Social values matter: This project took advantage of the Eritrean nation's strong community orientation, team work, patriotism and independence to facilitate success. Examples include the thousands of small community-driven projects (paid for partly by community labor) implemented under the CMHRP, the campaign-style interventions in malaria control, the perseverance of village-level committees in communicating behavior change messages, and the social consensus that HIV/AIDS should be a priority, enabling a broad multi-sectoral attack on the epidemic. The lesson is that if implementation modalities are well-aligned with social values, implementing agencies will be able to marshal broad-based project support and capitalize on their investments in the health sector.

7. Comments on Issues Raised by Borrower/Implementing Agencies/Partners

(a) Borrower/implementing agencies

(b) Cofinanciers

(c) Other partners and stakeholders

(e.g. NGOs/private sector/civil society)

²⁰Some preliminary data were available in time for ICR, but only in summary form and for a limited number of indicators, and the results cannot be verified.

Annex 1. Project Costs and Financing

(a) Project Cost by Component (in USD Million equivalent)

Components	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Multi-Sector Response	3.00	2.36	78%
Health Sector Response	14.00	16.00	114%
Community Managed HAMSET Response Program	4.00	3.35	84%
Project Management and Coordination, Capacity Building, M&E, and Innovation and New Policy Development	3.16	3.71	124%
Total Baseline Cost	24.16	24.00	99%
Physical Contingencies	0.93	0.00	0.00
Price Contingencies	1.41	0.00	0.00
Total Project Costs	26.5	24.00	
Total Financing Required	26.5	24.00	

Source: Project Management Unit

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Borrower		2.00	4.80	.00
Local Communities		0.50	0.50	.00
IDA GRANT FOR POST-CONFLICT		24.00	24.00	.00

Annex 2. Outputs by Component

Component 1: Multi-sectoral response (at approval: US\$ 3 million approved; actual: US\$2.43 million)

105. *Implementation:* Consisting of 13 multi-sectoral partners, this was a complex component, but on the whole, implementation was satisfactory. The program was quick to implement and disburse and, each year, most of the line ministries achieved their annual project targets and disbursed close to their planned amounts. An implementation delay occurred in early 2008, due to some delays in accounting for funds, submitting work plans and subsequent disbursements, but this was short-lived and the following year's approval of work plans even occurred early.

106. *Strengths:* The successful implementation of this component can be attributed to: (i) a great degree of ownership and commitment among the Ministries and CSOs, (ii) energetic focal points who, generally, remained in position for a long time, (iii) streamlining of the process and learning from HAMSET, (iv) increased collaboration over the project period between the partners and the technical departments of the MOH and with each other in developing interventions and supervision visits (e.g. between RH and MOD, between NATCoD and MOE for BCC, and between NUEY and MoE for reaching vocational students), (v) good coordination between partners at the zoba level, helping to integrate activities and exploit comparative advantages, (vi) restricting this component to “software” components (i.e. no construction), thus avoiding difficult procurements and delays, and (vii) better targeting of vulnerable groups.

107. *Weaknesses:*

- Opportunities for inter-zoba learning within the same line ministry or CSO were not sufficiently exploited.
- At the national level, in contrast with the zoba level, coordination between ministries and CSOs was not very strong. Increased coordination at the national level could have helped to ensure that there was no duplication of interventions (given commonality of target groups), enhancing cost-effectiveness of resources.
- Monitoring was not very strong. Multisectoral partners placed an overwhelming emphasis on tracking activities, with limited monitoring of outcomes. Lists of numbers of beneficiaries were compiled, but there was typically no information on results, (i.e. changes in knowledge, attitude and behavior). The partners apparently documented some of their success stories, but at time of writing this had yet to be shared with the PMU or the Bank. The PMU could have worked more closely with the M&E division to develop outcome indicators that could be used for reporting early on in the project and to revise the reporting format accordingly. More effort could also have been made to synthesize data to show the cumulative progress of the component.

- Similarly, evaluation was not very strong. While some partners did conduct surveys, their results were not systematically compiled and analyzed. There is also not much evidence that experiences in previous years were assessed and used to inform the design of subsequent work plans.
- Activities appear to have been weighted towards HIV/AIDS prevention and treatment. Yet, integration of HAMSET II diseases did improve somewhat over the project period, though, especially in the activities of the Ministry of Defense, National Union of Eritrean Women, Catholic Church and Ministry of Education.

108. *High-performing partners:* The performance of the following partners stand out:

- Ministry of Defense: Already lauded for its performance in HAMSET (see ICR of first HAMSET), the Ministry of Defense documents a long list of achievements under HAMSET II. It also integrates a number of HAMSET diseases into its activities, including HIV/AIDS, malaria, TB, RH. The Ministry was also very effective in collaborating with a number of other partners, including NUEWS, NUEYS, RH and malaria. Like other multi-sectoral partners, the Ministry stresses mainly activities rather than results in its reports. Unfortunately, verification of the Ministry's accomplishments is difficult: while the Ministry keeps good health records on services delivered and health outcomes, it does not make them available, either to the public or to the Ministry of Health.
- Ministry of Education: Schools had a lot of ownership of their programs and BCC activities have become integrated into the school curriculum. The MOE was also the only partner which evaluated its own performance, namely through assessments of the effectiveness of high school BCC programs²¹. Also, by the end of the project, it was starting to institutionalize the use of survey tools in its HIV/AIDS prevention work.

109. *Sustainability:* Beyond the project period, some of the multi-sectoral partners will continue to receive funding from the Global Fund which will help to sustain activities.

Component 2: Health Sector Response (at approval: US\$ 14 million; actual: US\$16 million)

HIV/AIDS/STIs (at approval: US\$ 3 million; actual: US\$1.95 million), *TB* (at approval: US\$ 2 million; actual: US\$1.41 million), *Malaria* (at approval: US\$2 million; actual: US\$1.26 million), *Reproductive health* (at approval: US\$4 million; actual: US\$5.58 million) and *Human Resources for HAMSET diseases* (at approval: US\$3 million; actual: US\$5.81 million)

²¹ In 2008, scores on awareness (of transmission modalities) of HIV/AIDS were above 80% and on attitude towards testing around 90%, but knowledge and attitude scores were substantially higher among girls than boys. In 2007, 70% of high school students reported using a condom during their last "high risk" sexual encounter and only 2.5% reported having had sex with non-regular partners in the previous 12 months, but 8% had had sex before the age of 15 years.

See Annex 10 for a list of health sector outputs, organized by HAMSET health area of focus. The outputs shown in those tables are discussed below.

110. *HIV/AIDS/STIs*: HIV-related outputs improved under HAMSET II:

- The availability of VCT services and their utilization increased substantially over the project period, exceeding initial targets. The number of VCT sites almost doubled, growing from 74 (2005) to 135 (Q2, 2010), the annual number of VCT attendees grew from 69,121 (2005) to 96,285 (2009), and the percentage of adults who were both tested and received their HIV results increased from 17% (2007) to 37.4% (2009). There is a relatively high ratio of free-standing vs integrated VCT facilities, though, which poses a challenge to the integration of VCT and TB screening. Disaggregated data of VCT by urban or rural area or proximity to high risk groups (e.g. sex workers or truck drivers) are not available. Testing rates by gender are available from an LQAS conducted in 2007 when rates were much higher for adult men (23%) than adult women (14%). Data from 2009 show that the ratio of male to female testing is 1.7:1 for repeat testers and, among all who went for a test, 56% were men
- The provision of PMTCT services increased markedly from 39 sites in 2005 to 93 sites across all 6 geographic zones by 2009 and the number of pregnant women tested for HIV increased from 8,144 to 50,000. By the second last quarter of the project, the uptake of PMTCT services among those on their first visit for antenatal care was almost total (96.5%), and double the rate at mid-term (2007). By 2009, 95% of infants born to HIV+ mothers were HIV negative (up from 87% in 2007) and in the first quarter of 2010, 96% (74 of 77) of babies born to HIV positive mothers still tested HIV negative after 18 months, suggesting that the current prophylaxis and breastfeeding counseling protocols are effective in preventing infection.
- Overall treatment coverage of ART was good (estimated at 77% under the old guidelines of less than 250 CD4 count), despite only 17 sites and service available in only 4 out of 6 zobas. Part of the explanation of the low coverage may be because NATCoD policy only permits ARVs to be administered in hospitals by physicians (of which there are few). As of April 2010, the cumulative number of patients enrolled in ART was at 5,557, up from 709 in 2005 when ART was first initiated on a pilot basis in Asmara. Despite being a recommendation of every mission, the project was never able to expand paediatric HIV outside Asmara.
- The distribution of male condoms to the zones dipped sharply (by almost a quarter) in 2007, but by project close had almost returned to the levels seen at the start of the project.
- Practices among high risk groups show good improvement: according to surveys, the percentage of truck drivers who used condoms properly during their last sexual encounter increased from 78% to 96% between 2006 and 2008, and the percentage of commercial sex workers who did so increased from 76% to 87% over the same period.

- The knowledge, attitudes and practice of high school students is also reassuring: In surveys carried out in 2008, more than 80% were aware of HIV transmission modalities and around 90% considered HIV testing (of self and partner) to be desirable (although knowledge and attitude scores were substantially higher among girls than boys). 70% of high school students reported using a condom during their last “high risk” sexual encounter and only 2.5% reporting having had sex with non-regular partners in the previous 12 months, but 8% had had sex before the age of 15 years.
- The development of policies and guidelines was rather slow and typically behind schedule. For instance, the development of the NSP 2008-2012 guidelines eventually occurred in 2009), the completion of the STI guideline and training manual was outstanding (eventually completed 2010), the condom availability study was carried out slowly and at the close of the project only a draft version had been completed.

111. *Tuberculosis:* The project succeeded in reaching the target of successfully treating at least 85% of new smear positive cases. DOTS treatment of diagnosed TB cases (another PDO) was impressive, reported at 100% throughout project duration. These accomplishments can be attributed to the large number of workers being trained on DOTS – more than double the target; no stock-outs of appropriate medication; the fact that all health facilities had staff trained in detection and treatment; and that all facilities were equipped with AFB microscopes (up from 79% at baseline). Case detection was not strong, however, and the project failed to achieve the PDO of detecting at least 70% of infectious cases, improving from 41% at baseline to only 49% in June 2008. Poor case detection rates can be attributed to poor information systems, relatively weak supervision and gaps in the availability of testing equipment. That said, case detection rates may well have improved since 2008 due to the expansion of microscopy and training, but later data are not available.

112. *Malaria:* Over the course of the project, around three-quarters of a million bednets were distributed (in a country with a population of around 5 million). There was virtually no increase in the percentage of children under-5 and pregnant women sleeping under ITNS the previous note, with coverage of both only at 49% and 54% respectively (in 2008), despite a PDO target of 90%. Also, there was only a slight improvement in the proportion of households aware of environmental management prevention methods (from 68% in 2004 to 75% in 2008, and short of the 85% target). The successful roll-out of testing and anti-malarial drugs was an important contributing factor to DOTS coverage: by 2009, the MOH had procured double the number of rapid diagnostic tests that it planned to obtain and drug availability at health facilities was very good.

113. *Reproductive health:* The project was not particularly successful in improving coverage of reproductive health interventions. According to DHS data, skilled birth attendance increased slightly from 28.3% in 2002 to 34.1% in 2010. However, this figure is still substantially below the project target of 60%. On the other hand, there was some improvement in the utilization of antenatal care: according to the HMIS, receipt of focused antenatal care increased from around 28% in 2005 to 37.5% in 2008. This is supported by DHS data showing that ANC utilization increased from 70.4% in 2002 to

88.5% in 2010²². The contraceptive prevalence rate (CPR) rose only slightly from 8% in 2002 to 8.4% in 2010 (according to the DHS), but still falls below the project target of 10%. The provision of inputs was successful, though. Specifically, the project was able to ensure that 100% of public hospitals and 80% of health centers (up from 55% and 47% in 2004) provide emergency obstetric care. Studies carried out include a study of the quality of reproductive health, a study of vulnerability and service utilization, and a kebab capacity assessment.

114. *Human Resources for Health*: There was a large expansion of preservice training (for female nurses and other paramedical staff), the graduation of the first batch of medical students from the Eritrea School of Medicine, 10 students with a Masters in Anesthesiology from Moi University, Kenya (by end 2010), and distance learning for Bachelors nursing training and Bachelors in Health Services. There were also changes to the institutional arrangements of health training institutions such that they all fall under the Board of Higher Education. Renovations to existing training facilities were completed, despite some delays due to the non-availability of contractors and supplies. Computers, text-books and supplies were also procured and distributed. A database of all MOH staff was created, there is a functioning staff appraisal system and a health worker productivity study was conducted. The major shortcoming was the failure to produce a final HRH strategy and costed plan – something that had been on the agenda from the beginning of the project. This is under development. This subcomponent, like many others, struggled to find and recruit appropriate consultancies, resulting in delays in the implementation of activities.

Component 3: Community Managed HAMSET Response Program (at approval: US\$4 million; actual: US\$3.35 million)

115. *Implementation*: Implementation was a little slow in the first year because some of the planned proposals were not submitted by the zobas, mainly because of transportation problems and fuel shortages. There were also only two persons (namely the CMHRP coordinator and assistant project coordinator) staffing the national PMU office (but with additional staff at the zoba level), and it was difficult to recruit CMHRP consultants to provide technical assistance. Consequently, most of the expenditure (69%) was incurred in the second two years of the four-year implementation period. Overall community contributions to the community sub-grant subcomponent was 25% (and 75% from IDA) which, although 8 percentage points less than originally planned, is still testimony to the high degree of buy-in by communities in the CMHRP subprojects.

116. *Outputs*: Sub-projects reached 20% of the 2,016 kebabies/villages. 57% of completed subprojects were in Window A (<\$300), 37% were in Window B (\$300-<\$3,000), and 6% were in Window C (\$3,000-<\$5,000). By far, the largest number of rejected proposals was in Window B (10%). Taking into account the cost of projects, the

²² The DHS information makes no mention of the number of antenatal care visits. It is assumed to refer to one antenatal care visit. By contrast, “focused” antenatal care (measured by the PDOs) includes four visits.

largest expenditure was on Window B (71%), versus 10% in Window A and 16% in Window C. Of the 2,422 completed projects, only 8 of the projects that were approved were not completed. In total, the PMU estimates that the project reached 693,502 unique beneficiaries. Table 5 shows the number of beneficiaries reached with different types of interventions. The emphasis was on training and information-sharing activities: 84% of completed subprojects carried out IE/BCC activities (rather than C&S).

Table 5 CMHRP outputs and outcomes, by number of beneficiaries

HIV/AIDS	N
Persons who went for HIV test	96,394
Orphans/vulnerable children given care/support	10,815
Infected/affected given home care/support	16,332
Beneficiaries given information on HIV/AIDS	175,342
Youth that adopted safe sexual practices	73,458
Number people accessed male/female condoms	58,891
Mobile population reached with prevention activities	27,361
Pregnant women who received PMTCT service	42,809
HIV-infected people screened for TB	37,787
HIV-infected people referred for specialized care /income generation	2,665
Malaria	
Members trained/informed on malaria control/cleared mosquito breeding	269,243
People participated in malaria environmental management	151,559
Malaria cases referred	84,275
Tuberculosis	
Suspected TB cases referred	122,747
Beneficiaries accessed information on tuberculosis	32,039
TB cases given care/support	86,700
Suspected TB cases screened/tested	240,998
Reproductive Health	
People covered with advocacy on gender violence/rights, etc	11,709
People reached with integrated & quality sexual and RH service	198,811
Youth/adolescents that accessed sexual and RH information/services	69,427
Population accessed information on variety of sexual and RH issues	121,528

Source: Project Management Unit

Note: Indicators are stated as formulated by the PMU

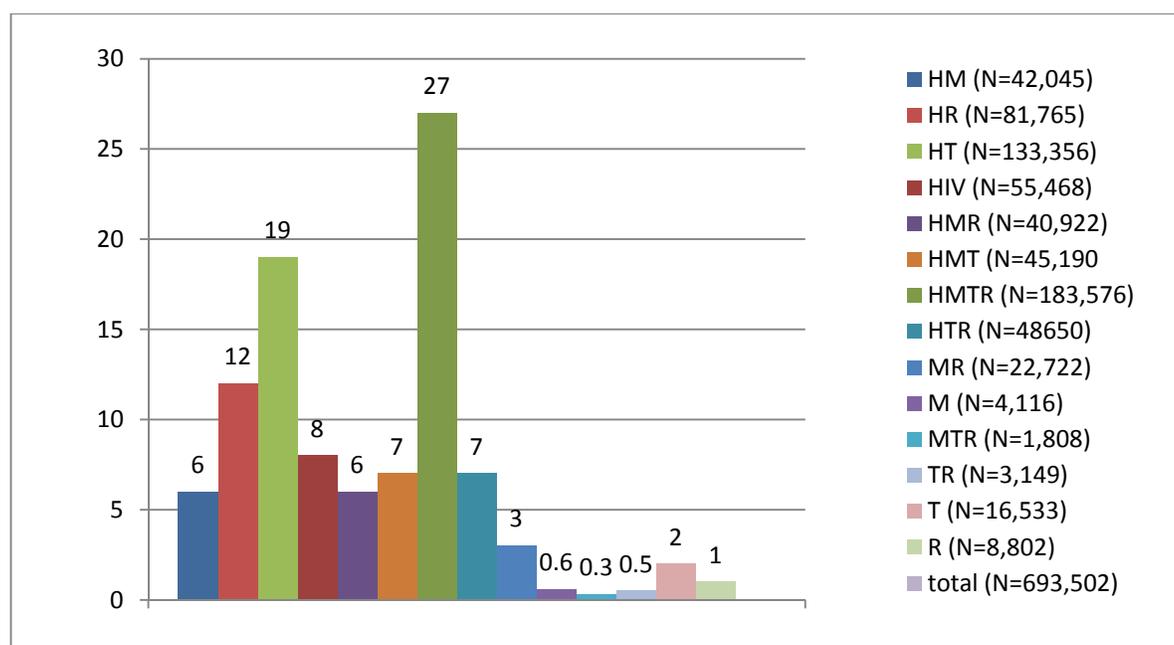
117. *Achievements and strengths:*

- The subprojects effectively involved women, both as beneficiaries and in the management and implementation of sub-projects. According to the 2009 Best Practices study, 73% of beneficiaries were female.
- In general, this component was a good model of a “learning-by-doing” approach to design and implementation, and included conducting rigorous stock-taking of past implementation lessons, and incorporating them into revised processes and procedures. Examples include increasing project size (in terms of beneficiary numbers) over time, improving the integration of diseases within projects, increasing the focus on high-risk groups, increasing project length and repeating sub-projects that had been successfully implemented in the past. Learning-by-doing was facilitated by the built-in project flexibility that allowed the CMHRP to adapt the rules according to experiences and difficulties identified during implementation.
- In many cases, the CMHRP worked very closely with the HAMSET II multi-sectoral partners and line ministries in order to improve technical inputs and improve the quality of community work. For example, it worked together with the Ministry of Labour and Human Welfare and NUEYS on issues affecting youth; it collaborated with MoE on issues related to in-school (and out of school) youth. Technical MOH program directors and coordinators at the national level and zoba level provided technical inputs and, in the latter years of the project, jointly undertook supervision visits with CMHRP staff. The Ministry of Local Government made significant contributions at the community level by providing logistical and material support to project monitoring and supervision.
- Using a combination of an open menu along with a negative list (e.g. excluded vehicles, larger civil works, overheads above 10%, food supplies and income generation to non-vulnerable groups, salaries to civil service employees and drugs/medical fees outside home care and DOTS) for the selection of sub-projects appeared to have provided enough flexibility and room for innovation, while still helping to ensure fiduciary responsibility and promote cost-effectiveness.
- Importantly, the CMHRP succeeded in the integration of HAMSET diseases. 77.3% (n=2,166) of completed sub-projects addressed multiple diseases (see Table 6). More than 90% of beneficiaries were beneficiaries of sub-projects that integrated at least two HAMSET diseases (see Figure 1), 27% of beneficiaries participated in sub-projects that integrated all four HAMSET diseases, a further 19% received services that integrated HIV and TB services, and a further 12% of beneficiaries received services that integrated HIV and reproductive health services. This was a vast improvement over the start of the CMHRP component when the share of subprojects targeting more than one HAMSET disease was very modest indeed.

Table 6 Number of subprojects, approved and completed, by project type

Disease	Approved			Completed		
	Behavior Change and Communication	Care and Support	Other	Other	Behavior Change and Communication	Care and Support
Malaria	33	4			33	4
HIV/AIDS	88	64	1	1	88	64
TB	11	4			11	4
RH	27	24	1	1	26	24
Integrated	1,876	297			1,872	294
Total	2,035	393	2	2	2,030	390

Figure 1 Share of beneficiaries, by project type



Source: Project Management Unit

Note: H or HIV= HIV/AIDS, M=Malaria, T=Tuberculosis, R=Reproductive Health; Combined letters indicate integrated sub-projects; the number of beneficiaries is measured over the entire project period and are not necessarily unique individuals.

Weaknesses:

- There was too much emphasis on HIV/AIDS: 152 of the single disease projects were HIV/AIDS-specific (compared to 37 for malaria, 15 for TB and 50 for RH) (see Table 6) and, where projects were integrated, most were integrated with HIV/AIDS services. Of all beneficiaries reached by the project, 93% were reached by subprojects that included HIV interventions (see Figure 1). There could have been more coverage of other HAMSET diseases, especially considering that

- HIV/AIDS is a relatively low level epidemic in Eritrea and there is a great need in terms of reproductive health that there is in other areas, especially in reproductive health.
- Performance on monitoring and evaluation was mixed. On the one hand, the component succeeded in establishing an MIS and modifying it to include community contributions, but it did not succeed in integrating it with the HMIS, modifying it to track outcomes or including baseline indicators or end-line targets. That said, much effort was made to track outcomes manually, supervision tools were developed and project were regularly monitored by technical and management teams, including from national level. A results framework was developed, but could not be operationalized. Conducting the Best Practices study was a highlight.

Sustainability:

- Average subproject costs declined sharply over the period of implementation. During the 2006 pilot phase, the average cost was US\$31 per beneficiary for 2.5 months. But, the CMHRP and the Bank team took proactive steps to reduce average costs, including increasing the threshold for the minimum number of beneficiaries in each window. By end of Sept 2006, average costs were down to \$8.6 over an average of 2.5 months. Average subproject length later increased to 6 months. By 2009, the Best Practice study (Nov 2009) showed that the average per capita (beneficiary) cost was \$3 per beneficiary for IEC/BCC subprojects and \$15 for care and support subprojects. Still, in a country where total expenditure on health is around \$10 per capita per year (WHO 2010), even 2009 costs are high, bringing cost-effectiveness and financial sustainability into question. There is funding available for CMHRP through GFATM.
- Another aspect of sustainability relates to the sustainability of the results achieved. This is of concern because the average project length of 6 months may not be long enough to effect behavior change.

Component 4: Project Management and Coordination, Capacity Building, M&E, and Innovation and New Policy Development (at approval: US\$ 3 million; actual: US\$3.71 million)

118. *Project management and coordination* was the responsibility of the PMU and it performed very well in this regard. As already discussed in section 5.2, contributing factors include: staff continuity – most staff had worked together since the HAMSET; cohesiveness – the PMU works as a team with strong sense of unity; energetic leadership; a high degree of familiarity with Bank procedures and processes (from HAMSET); and, a self-critical disposition, an interest in identifying own weakness, and a hunger to learn.

119. It has already been noted that the contribution of HAMSET II to *capacity-building* and institutional development is one of its most significant contributions. Many of these have already been discussed in detail in the relevant sections of the ICR, and include:

- The creation of the Joint Annual Review (JAR) process that brings together all stakeholders, regardless of funding source, to jointly review progress and develop work plans for the next year. The GoE intends to continue this practice even though the Bank will no longer be involved in the health sector.
- Strengthening of the project management, financial management and procurement capacity in the PMU during HAMSET II (and HAMSET) that contributed, over time, to a very strong unit that is more than capable of directing multiple flows of external donor assistance (and not only of Bank projects) and managing implementation. These same systems are now also been used by other donors, such as the GFATM.
- The creation of strong institutional arrangements for CMHRP to facilitate planning, implementation, management, monitoring, and reporting.
- Putting in place and strengthening mechanisms of coordination between the multisectoral partners, as well as between the different technical programs of the MOH. This includes establishing steering committees, technical committees and task forces (at both national and zoba level).

120. The project was able to deliver on most of its planned M&E activities. These include updating an M&E training manual, tailoring it and using it in training sessions at the zoba-level; data collection for the Eritrea DHS 2010 (albeit late); zoba-level M&E action plans, reporting formats and draft results frameworks that are actively being used (although not yet fully aligned with indicators national-level); a national M&E Advisory Committee and an M&E Technical Working Group; a five-year integrated and costed M&E workplan/roadmap; and, guidelines for HMIS auditing and supervision. Specific databases and information systems, including HMIS, LMIS, multisectoral and CMHRP have been automated, but need further strengthening. However, as discussed in section 2.3, the project failed to achieve the vision of developing an integrated M&E system which unifies reporting across different technical programs and also links data from the different clinical programs (and HMIS) to data from the CMHRP and multisectoral programs. The PMU could have worked more closely with the M&E division to develop outcome indicators that could be used for reporting early on in the project, to revise the reporting format to include outcomes, and to synthesize data to show the cumulative progress of the component. The CMHRP MIS was not successfully integrated with the HMIS, did not include baseline values and targets for sub-projects, and (despite intentions) was not modified to include outcome indicators. The PMU CMHRP team can, however, track outcome indicators manually. The Joint Annual Reviews were one example of good performance in M&E; in these reviews progress towards objectives and targets was discussed on the basis of data and data-driven adjustments to the program, work plans and budgets were made. It also appears that the PMU and ZPMU held periodic discussion with stakeholders about the MIS reports.

Annex 3. Economic and Financial Analysis

121. This section provides additional information on the cost-effectiveness of interventions related to HAMSET diseases (discussed in section 3.3)

122. In general, the interventions supported by this project are widely considered to be very cost-effective. In 1993, the World Bank's Development Report included prevention and treatment of HIV/AIDS/STIs, malaria and TB, as well as maternal health and family planning as some of the key elements that should be included in an "essential health package" that would make the most efficient use of scarce health resources. Unfortunately, rigorous cost-effectiveness studies are not sufficiently common, local costs differ, and context (local disease burden, epidemiology, behavioral norms, variations in the health system's implementation of interventions) matter tremendously. What might be considered a cost-effective disease intervention in one country may not be in another, depending on the prevalence, modes of transmission, behaviors and health system response.

123. Nevertheless, studies from different parts of the world reviewed as part of the Disease Control Priorities Project 2 provide some indication of the cost-effectiveness of the different interventions supported under HAMSET II (see Table 3 in section 3.3). The World Bank has described interventions that cost less than US\$100 per year of life saved as highly cost-effective for poor countries. By this benchmark, most of the interventions supported by HAMSET appear to be highly cost-effective (with the arguable exception of anti-retroviral therapy and treatment of latent TB in non-HIV+ people), but this benchmark is arbitrary. Rather, these measures of cost-effectiveness could be used for priority-setting by comparing the relative cost-effectiveness of the different interventions.

124. In addition to the DCP2 figures, a number of other illustrative estimates of cost-effectiveness for interventions under each of the HAMSET diseases were obtained from the literature. Only one study with estimates for Eritrea could be found. Yukich et al. (2009) found that the cost-effectiveness of ITN delivery at the community level and through antenatal care facilities in Eritrea was US\$ 13 – 44 per DALY averted and the cost per death averted was US\$ 438–1449. This is notably higher than the range reported by the DCP2 project (US\$5-17).

HIV/AIDS/STIs

125. Although remarkably little rigorous evaluation has been conducted, population-based programs to prevent HIV/AIDS appear to be highly cost-effective approaches in countries with high HIV/AIDS prevalence where the epidemic is generalized. This would be less so in a country like Eritrea where the epidemic remains largely concentrated among high risk groups. The DCP2 estimated that treatment of most infectious opportunistic infections among PLWHA is cost-effective (US\$10 to US\$500 per DALY averted), with treatment becoming significantly more cost-effective for patients who also have access to antiretroviral treatment. In low-cost settings with high adherence rates, anti-retroviral treatment is moderately cost-effective (US\$350 to US\$500 per DALY

averted). However, cost-effectiveness is likely to be significantly poorer if adherence is low and drug resistance is allowed to emerge. In terms of prevention, voluntary counseling and testing (US\$14 to US\$261 per DALY averted), peer-based programs to educate high-risk groups (including sex workers and injecting drug users) (US\$1 to US\$74 per DALY averted), and social marketing, promotion, and distribution of condoms (US\$19 to US\$205 per DALY averted) are highly cost-effective. Programs to improve blood and needle safety, while highly cost-effective (US\$4 to US\$51 per DALY averted), are limited in terms of the burden of disease they can avert. Prevention of mother-to-child transmission using a single dose of nevirapine in generalized epidemic settings (US\$6 to US\$12 per DALY averted) stands out for its combination of well-documented high cost-effectiveness and significant avertable infections and deaths (but its cost-effectiveness in low prevalence setting like Eritrea is not known). Treatment of sexually transmitted infections to lower the risk of HIV transmission, although less well proven, also appears to be highly cost-effective (US\$16 to US\$105 per DALY averted).

126. The DCP2 draws on global studies, but many of them are from high prevalence generalized epidemics, very different from Eritrea. In order to capture this, one can compare the results of models of the cost-effectiveness of different interventions in different prevalence situations, assuming various levels of effectiveness in terms of proportion of infections averted (see Table 7). In a lower prevalence situation, the models indicate that prevention among sex workers (SW) and men who have sex with men (MSM) are the most cost-effective, while blood safety, condom distribution, prevention of mother-to-child transmission (PMTCT), and workplace programs have a medium level of cost effectiveness. The models suggest that community mobilization, mass media, STI treatment, and education interventions (which were very important parts of the CMHRP) are least cost-effective in a low prevalence situation. By contrast, working with high-risk groups is highly cost-effective. One of HAMSET II's successes was its activities with sex workers (which is also highly cost-effective), although it paid less attention to MSM (even though this is highly cost-effective). It is of concern that community mobilization on which the project put so much emphasis is found to have relatively high cost per infection averted and have relatively low impact in terms of the percentage of infections averted.

Table 7 Classification of interventions by modeled cost-effectiveness and impact

East and Southern Africa (higher prevalence)			
Cost per infection averted	Impact (% of Infections Averted)		
	Low (0-10%)	Medium (10-20%)	High (> 20%)
Low (< US\$ 1,000)	SW MSM	PMTCT	Blood safety
Medium (US\$ 1,000-3,000)	Community mobilization VCT Education	Condom distribution	
High (> US\$ 3,000)	Mass media STI treatment		

Central and West Africa (lower prevalence)			
Cost per infection averted	Impact (% of Infections Averted)		
	Low (0-10%)	Medium (10-20%)	High (> 20%)
Low (< US\$ 1,000)	MSM	SW	
Medium (US\$ 1,000-3,000)	Blood safety Condom distribution	PMTCT Workplace programs	
High (> US\$ 3,000)	Community mobilization Mass media STI treatment Education		

Source: World Bank (2008) *The World Bank's Commitment to HIV/AIDS in Africa: Our Agenda for Action, 2007-2011*

Note: Two scenarios are presented: East and Southern Africa and Central and West Africa. Eritrea, with its low prevalence, is considered more analogous to the Central and West Africa scenario.

Malaria

127. In countries where malaria is prevalent, both prevention and effective treatment of this disease are highly cost-effective and can result in large health gains. The DCP2 showed that insecticide-treated bednets (US\$5 to US\$17 per DALY averted) and indoor residual spraying where DDT, malathion, deltamethrin, or lambda-cyhalothrin is applied to surfaces inside homes as a spray or deposit for prolonged action (US\$9 to US\$24 per DALY averted for Sub-Saharan Africa) are highly cost-effective. Intermittent preventive treatment of malaria during pregnancy using sulfadoxine-pyrimethamine is a highly cost-effective intervention (US\$13 to US\$24 per DALY averted) to decrease neonatal mortality and reduce severe maternal anemia. Changing first-line treatment for malaria from chloroquine to artemisinin-based combinations offers the advantage of faster cures and potential reductions in transmission, with cost-effectiveness ratios of less than US\$150 per DALY averted. According to the DCP2, changing to sulfadoxine-

pyrimethamine may be slightly more cost-effective initially because of the lower cost of this drug relative to artemisinin-based combinations; however, this advantage is likely to be eroded quickly because of the rapid expected growth of parasite resistance. One challenge with most cost-effectiveness studies, as noted by Goodman et al. (2008), is that most of these estimates were based on data collected during trials or use models to synthesize data from many different sources, and evaluations from routine service delivery are very rare.

128. A very recent study (Yukich et al. 2009) of the cost-effectiveness of ITN delivery at the community level and through antenatal care facilities in Eritrea found that the cost per DALY averted was USD 13 – 44 and the cost per death averted was USD 438–1449.

129. A useful supplement to this work is the study of Morel et al. (2005) who study combinations of interventions (rather than assuming that costs and effects sum up when interventions are used concurrently) and used data on efficacy and resource costs from Sub-Saharan Africa. They found that high coverage with artemisinin-based combination treatment (ACT) was the most cost-effective strategy for malarial control in most countries of Sub-Saharan Africa (at both 85% and 90% coverage levels), both in terms of average cost and incremental cost (see Table 8). Adding other interventions in combination with ACT, such as indoor residual spraying, nets and intermittent presumptive treatment during pregnancy, substantially lowered average and incremental cost effectiveness. However, on balance, even the least cost-effectiveness of those packages of interventions was, on average still very high, below US\$50.

Table 8 Cost-effectiveness of malaria control interventions (Morel study)

Region and intervention	Average cost effectiveness (\$int/DALY averted)	Incremental cost effectiveness (\$int/DALY averted)
Southern and Eastern Africa		
Case management with ACT (80% coverage)	9	9
Case management with ACT (95% coverage)	10	10
Insecticide treated bed nets plus case management with ACT plus IPT in pregnancy (95% coverage)	24	59
Indoor residual spraying plus insecticide treated bed nets plus ACT plus IPT in pregnancy (95% coverage)	32	96

Source: Morel et al. (2005)

130. Once again, context is relevant. For example, while the relative effectiveness of indoor spraying and nets has been debated, and assumed as being equally effective in Morel et al.'s (2005) study, their respective advantages in a given setting, such as

whether mosquitoes are endophilic, the length of time they rest indoors, the time children go to bed, and people's willingness to use bed nets consistently.

Tuberculosis

131. The DCP 2 found that the treatment of all forms of active tuberculosis (TB) using the directly observed treatment strategy based on short-course chemotherapy is among the most cost-effective of all interventions available to improve health in LMICs (US\$5 to US\$35 per DALY averted). The bacillus Calmette-Guerin (BCG) vaccination for children is also cost-effective (US\$40 to US\$170 per DALY averted), but its main effect is to reduce the burden of severe TB in children (TB meningitis and miliary TB) with little effect on the huge burden of pulmonary TB in adults. The treatment of latent TB in adults uninfected with HIV is relatively cost-ineffective (US\$4,000 to US\$25,000 per DALY averted), but it is more cost-effective for groups of patients who are coinfecting with TB and HIV. In the context of TB control, antiretroviral therapy for HIV/AIDS is likely to be useful in extending the lives of patients successfully treated for TB.

132. Multidrug-resistant TB is much more expensive to treat than drug-susceptible TB – 2 to 10 times the cost of standard first-line regimens for drug-susceptible TB – one reason why priority should be given to preventing its emergence and spread. The management of drug resistance through the use of a standardized regimen that includes second-line drugs costs roughly US\$70 to US\$450 per DALY averted. Individualized treatment regimens for multidrug-resistant TB – that is, with drug combinations adjusted to the resistance pattern of each patient – are more costly but usually yield higher cure rates. Individualized treatment is harder to implement on a large scale but may not be less cost-effective than standardized treatment with regimens that include second-line drugs. The set of interventions needed to manage drug-resistant TB and TB associated with HIV requires higher levels of investment than the basic directly observed treatment strategy, but its cost is still typically less than US\$1 for each day of healthy life gained. Thus, a strong economic argument exists for integrating such interventions into an enhanced strategy for TB control.

133. As with other HAMSET diseases, the cost effectiveness of TB control will depend on local characteristics of TB epidemiology (for example, epidemic or endemic, low or high rates of HIV infection and drug resistance), the rate of application of any chosen intervention and local costs.

134. Importantly, for any intervention with the potential to cut transmission (that is, excluding BCG vaccination), control of epidemic disease produces more favorable cost-effectiveness ratios than control of endemic disease, because the benefits gained from reduced transmission are greater during outbreaks (Dye and Floyd 2006).

135. WHO estimates that that every dollar invested in the TB DOTS program will lead to a US\$55 return to the country due to increased productivity.

Reproductive health

136. Given the hugely disproportionate burden of maternal and neonatal deaths in LMICs, identifying affordable, easy-to-implement interventions to prevent these deaths is a priority. Evidence from South Asia and Sub-Saharan Africa suggests that improved primary-level coverage with a package of interventions is extremely cost-effective (US\$3,337 to US\$6,129 per death averted and US\$92 to US\$148 per DALY averted). Improvements in the quality of prenatal and delivery care are of similar cost-effectiveness (US\$2,729 to US\$5,107 per death averted and US\$82 to US\$142 per DALY averted). An important finding is that improving the quality of care and expanding coverage are of comparable cost-effectiveness.

137. In using cost-effectiveness analysis as a tool in the economic analysis of HAMSET II, we need to bear in mind the limitations, including that the desirable “returns” are measured only in terms of health outcomes, and more specifically in terms of DALYs, rather than the many other benefits that can accrue as a result of these health interventions both to the index person and to their household member and communities. A proper cost-benefit analysis would be needed to assess the full impact of the investment in HAMSET II. That analysis would also need to make assumptions about the future benefits because expenditures incurred on HAMSET II today will have a stream of (discounted) benefits into the future.

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit
Lending		
Surendra K. Agarwal	Consultant	AFTHD
Marylou R. Bradley	Senior Operations Officer	AFTSP
Efrem Fitwi	Procurement Analyst	AFTPC
Brighton Musungwa	Senior Finance Officer	CTRLP
Son Nam Nguyen	Sr Health Spec.	ECSH1
Peter Okwero	Sr Health Spec.	AFTHE
Khama Odera Rogo	Lead Health Specialist	CICHE
Nightingale Rukuba-Ngaiza	Senior Counsel	LEGAF
Albertus Voetberg	Lead Health Specialist	SASHN
Christopher D. Walker	Lead Specialist	AFTHE
Feng Zhao	Senior Health Specialist	AFTHE
Supervision/ICR		
Henry Amena Amuguni	Financial Management Specialist	AFTFM
Pia Axemo	Consultant	HDNHE
Carla Bertoncino	Economist	AFTED
Marylou R. Bradley	Senior Operations Officer	AFTSP
Caryn Bredenkamp	Health Specialist	HDNHE
Emanuele Capobianco	Senior Health Specialist	SASHN
Marcelo H. Castrillo	Consultant	HDNGA
Frode Davanger	Operations Officer	AFCRI
Sheila Dutta	Senior Health Specialist	AFTHE
Efrem Fitwi	Procurement Analyst	AFTPC
Jed Friedman	Senior Economist	DECRG
Steve J. Gaginis	Senior Finance Officer	CTRDM
Lori A. Geurts	Senior Program Assistant	AFTED
Rogati Anael Kayani	Consultant	AFTWR
Andrew Gichora Kimura	Finance Analyst	CTRDM
Simon Ochieng Lang'o	Finance Officer	CTRDM
Brighton Musungwa	Senior Finance Officer	CTRLP
Rianna Mohammed	Health Specialist	AFTHE
Ronald Upenyu Mutasa	E T Consultant	AFCMZ
Son Nam Nguyen	Senior Health Specialist	ECSH1
Elizabeth Ninan	Human Development Specialist	AFTED
John Nyaga	Senior Financial Management Specialist	AFTFM

Khama Odera Rogo	Lead Health Specialist	CICHE
Nightingale Rukuba-Ngaiza	Senior Counsel	LEGAf
Jamie Nina Schuler	Junior Professional Associate	TUDUR - HIS
Joel C. Spicer	Senior Health Spec.	AFTHE
Helen Giorghis Taddese	Temporary	AFTFP
Katherine Anne Tulenko	Public Health Spec.	AFTHE
Joseph J. Valadez	Senior Monitoring & Evaluation Specialist	AFTHD
Albertus Voetberg	Lead Health Specialist	SASHN
Christopher D. Walker	Lead Specialist	AFTHE
Moses Sabuni Wasike	Senior Financial Management Specialist	OPCFM
Feng Zhao	Senior Health Specialist	AFTHE

(b) Staff Time and Cost

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Lending		
FY05		317.95
Total:		317.95
Supervision/ICR		
FY05		0.00
FY06		208.92
FY07		198.40
FY08		157.25
FY09	33.64	144.80
FY10	23.05	74.90
Total:		564.57

Note: Staff weeks for FY05-FY08 are not available in SAP

Annex 5. Beneficiary Survey Results
(if any)

n.a.

Annex 6. Stakeholder Workshop Report and Results
(if any)

n.a.

Annex 7. Summary of Borrower's ICR and/or Comments on Draft ICR

Below is the “Borrower Evaluation Report on HAMSET II Project”, received from the Borrower on 14 December 2010, and included *verbatim* with minor typographical editing.

1. Back ground Information

The HAMSET II Project development objectives are to (i) contain the spread of HIV/AIDS, STI in vulnerable Groups as well as general population through a focused multisectoral approach, with renewed attention to the most vulnerable populations (ii) Expand the coverage of DOTS, and improve the case deflection and treatment outcomes for TB (iii) reduce or at least maintain Malaria mortality and morbidity at the current low levels (iv) improve the coverage of effective Reproductive Health (RH) interventions and (v) Strengthen the overall health system including human resources for Health to enable the country to better address HAMSET diseases.

The project’s total cost being USD 26.5 million, while the proportion of funding were USD 24 million from IDA, USD 2 million from Government of Eritrea and USD 0.5 million from community contribution and the duration of the project period was 5 years covering June 30, 2005 – June 30, 2010.

1.1 Project Components and Budget Allocations

- ◆ Component No. 1 Multisectoral Response USD 3 million
- ◆ Component No. 2 Health Sector Response USD 14 million
- ◆ Component No. 3 CMHRP USD 4 million
- ◆ Component No. 4 Project Management coordination, Capacity Building M/E and Innovative on New policy development (USD 3 million) including evaluation of innovative approaches

1.2 Component No. 1 Multisectoral Response

- This component supports key non health line ministries, local governments and CSO at both national and Zonal levels to respond to HAMSET II diseases.
- All multisectoral were required to work under comparative advantage basis owing to the limitation of funds in this component.

1.3 Component No. 2 Health Sector Response

- Under this component there were five sub-components with their respective allocated Budget being as follows:
 - HIV/AIDS (3 million USD)
 - TB (2 million USD)
 - Malaria (2 million USD)
 - RH (4 million USD)
 - HRH (3 million USD)

Except for HRH each component had these groups of activities:

1. Improve the information base for decision making, i.e disease surveillance reporting surveys and operational research
2. Scale up prevention interventions

3. Scale up diagnostic, treatment care support
4. Mitigating Social and economic impact

1.4 Component No. 3 CMHRP

- Supports genuine community managed initiatives
- Development of community capacity to implement sub projects, conduct M/E of sub projects.

1.5 Component No. 4 Project Management

- Covers operating costs of project
- Supports cross cutting operational aspects of M/E
- Supports the development, piloting and evaluation of innovative approaches

2. As HAMSET II supports the priorities and activities of the National Strategic Plans (NSP) for HAMSET II diseases, the project adopted selected indicators from the NSP as its key performance indicators.

HIV/AIDS Status at Start (June 2005)	Committed Target At the end of project June 2010
HIV prevalence among CSW and pregnant women aged 15 – 24 years	Maintained below 10% and 0.66% respectively
Syphilis sero prevalence among pregnant women	Declined from 2.1% to 1.1%
<u>Tuberculosis (TB)</u>	
- Case detection Rate % of Detected TB	Increased from 28% to 47% respectively
- Cases under DOT	Increased from 77% to 88%
- Cure rate	
<u>Malaria</u>	
Reduction of malaria morbidity and mortality at current law levels	Decreased by 90% since start of HAMSET project
<u>RH</u>	
% of pregnant women receiving focused ANC	Increased from 70% to 90%
% of pregnant women who deliver with skilled birth attendance	Increased from 28% to 35%
Usage of modern contraceptive	Increased from 4% to 9%
Human Resources for Health Training output by cadre categories	Trained 314 technicians excess 114 to planed trained 500 midwives i.e. excess by 300 than targeted trained 200 lab technicians as targeted

3. Borrower's Evaluation of Preparations

HAMSET II project had been prepared within two months making the preparation schedule highly compressed leaving much less time for most processes.

This had been made possible owing to accumulated experience from previous projects, namely the Health and HAMSET I projects. The momentum and success of HAMSET I was the basis and foundation for HAMSET II project preparation and implementation.

The lessons learnt in HAMSET I contributed a lot in giving priority to the most effective evidence based interventions, the need for reviewed focus on high risk groups and harmonization of interventions and integration of program implementation.

As hard ware had been built under HAMSET I, software was the focus area of HAMSET II and the initiative of working on comparative advantage basis for multisectoral and using RRI as implementation tool were strategies piloted and scaled up.

The management structure of HAMSET II though different from other MAP projects was appropriate for the Eritrean context and has served the project well at all levels. The borrower also had been prepared well for its contribution to the project. The Government had continued to honor its commitments despite hard economic times.

3.1 Government Implementation Performance

Implementation by the Government of Eritrea was highly satisfactorily for the following reasons:

- (i) High level support and commitment for HAMSET II.
- (ii) Successful oversight and coordination by the steering committee made up of several ministries chaired by the Minister of Health.
- (iii) Effective leadership, at the decentralized levels
- (iv) Effective mobilization of communities and their positive response.
- (v) Good governance and transparency in the context of the project implementation.

3.2 Implementing Agencies

The HAMSET II as indicated in the PAD would be implemented by various agencies including MOH, MOLG, MOE, MOTC, MOLHW, MOI, NUEYS, NUEWA, NCEW etc.

The PMU staff as usual demonstrated extraordinary commitment throughout the project life and were responsive to their stakeholders however it should not be passed without citing that PMU was constrained by lack of adequate focus and technical expertise in several program areas.

3.3 Planning and Budgeting

The budgeting process was not reviewed in the course of the project period to reflect any changes and address the reality on the ground and respond to the principle of performance-based interventions and implementation in the context of comparative advantage basis.

3.4 Project Management, Disbursement and Financial Management

As of end of June 2010, 98% of the HAMSET II Grant funds had been disbursed while the remaining grant is committed. In accordance with the notification of the grant closure forwarded to the Ministry of Finance by the World Bank Eritrea Country Director

disbursements from the credit will be made for withdrawal application received by close of business on October 31, 2010 in respect of eligible expenditures in respect of services that have been provided prior to the closing date, while proceeds of the grant remaining after disbursements have been made in respect of these withdrawal applications will be cancelled. Counterpart funds have been made available by the Government of Eritrea. To date USD 2.4 million has been received representing USD 0.4 million more than planned and an additional USD 0.4 million should be forth coming which is earmarked for the retention works, customs and taxes

In total Government contribution amounts 12% of the Grant rather than 10% as normally planned.

The fiduciary arrangements have been assessed as satisfactory owing to PMU being staffed with qualified finance staff.

Financial reports FMR/IFR and Audit reports and management letters were submitted to the World Bank within the stipulated periods and inform and substance satisfactory to the Bank.

3.5 Procurement

Considering the complexity of HAMSET II due to the design as well as the number of stakeholder's involved overall procurement was successful owing to PMU's staff capacity, proper use of specialized institutions harmonization of stakeholders involved in the service realistic procurement plan and implementation.

In total USD 1,651,463.93, USD 9,756,368.51 and USD 8,110,201.8 were disbursed for works, goods and consultancy procurement respectively.

Despite the complexity of the project and due to the number of agencies involved HAMSET II procurement was conducted successfully

The achievement can be attributed to:

- (i) Adequate capacity of our Procurement Officers
- (ii) Strong commitments by all participating agencies
- (iii) Introduction of medium term procurement planning.

3.6 Internal Audit

The Internal Audit was operated by a single staff member, leaving the unit's day to day activities focusing on an accounting nature. Because HAMSET II was well managed and also audited by External Auditing Firms the arrangement sufficed without no incidence of fraud or loss of project assets.

3.7 External Auditor

The Annual Audit Reports for HAMSET II were all submitted in time and in compliance with the financial covenant on audit. The auditing firms also provided unqualified opinions on the annual financial statements for the project from the outset.

4. Project Design flexible and tailored for Eritrea

The HAMSET II steering committee (equivalent to NAC) was chaired by the Minister of Health and the PMU based in the Ministers Office of the MOH.

This arrangement neither denied the project high level support neither neglects the interest of non health sectors.

The other sectors were satisfied with technical input by the health sector in their interventions.

HAMSET II invested a lot in Behavior Changes Communication (BCC) awareness creation in the most vulnerable groups, HAMSET II also benefited for the investment HAMSET I made in various areas, e.g VCT, entomology laboratories, school clubs, sentinel sites and training of various health workers and enhancement of the health systems focusing the provision of solar powers rehabilitation and equipping of health facilities to accommodate patients affected by HIV/AIDS Malaria and Tuberculosis.

5. Mobilization of Communities

As confirmed by evidence the multisectoral and CMHRP components conferred great benefits to both Malaria and HIV Control.

Most of the key effective interventions e.g. BCC, coverage of ITN, care and support community treatment by Malaria Agents at community levels benefited from active participation of the communities and the other sectors had their comparative advantages in reaching certain populations. There are important lessons learnt not only for malaria and HIV/AIDS but also for the control of other communicable and non communicable diseases.

6. Effective Integration of vertical program and Harmonization of activities.

A well designed integrated project should limit the overlapping of activities seen between different components of HAMSET and will inevitably address key health sector issues as important consideration for sustainability and focus on systemic issues which constrained the project include weak health management information system and inadequate skilled human resources.

7. Policy issues on usage of DDT% and cross border Transmission of Malaria

The environmental aspect of Malaria control has been complicated by the mixed and diversified messages on DDT usage among international organizations and governments.

As the country strives towards Malaria control to avoid epidemics the development partners need to provide clear direction on their policies and how far they are willing to support the government's decision on its decision.

Besides the cross-border transmission of Malaria needs the consideration and action of all organizations involved in the malaria control.

8. Capacity Building and Budgeting

It has been agreed that planning was a major pitfall in HAMSET II Project.

Consolidated work plans lacked clear narratives and linkage with budgets and expenditures explaining the wide gaps between approved budgets and actual expenditures

including strategic planning in the budgeting process need to be included in future HAMSET Projects.

Lack of oversight that otherwise would have helped adjust planning and budgeting is accountable to both the MOH, its stakeholders and the World Bank back up teams.

9. Give M/E Component Higher Priority

As the MOH and PMU lacked technical expertise in M/E, special consideration needs to be given to M/E strengthening at HQ and Zonal levels.

This should be complied with capacity building of the projects staff in M/E at all levels and provision of back up support and training to the staff.

Introduction of simple and participatory M/E entailing feedback at local levels need to be adopted to foster decision making and sub project management, which is consistent with the World Bank strengthening the result based framework

10. Addressing the challenges of sustainability starting with integration and community ownership

Like all other MAP projects, sustainability raises a major challenge unluckily in our context HAMSET II was not privileged to be sustained by HAMSET III project.

However the various Global Fund Grants are complementing the HIV/AIDS, TB, Malaria and multisectoral program funding.

Nevertheless, the other programs like RH, HRH, CMHRP do not have funds from the Global Fund Grant funds and these program will be affected owing to lack of funding and especially like CMHRP which laid the basis for program implementation will cease functioning.

11. The positive effects of the Report Based Disbursement System

The report based disbursement system adapted in HAMSET II project allowed more predictable cash flow, more flexibility and facilitated project implementation.

Building the fiduciary capacity of the PMU to enable them to switch to such a disbursement system was pivotal.

12. Lessons Learned

HAMSET II provided several important lessons as being one of the MAP projects financed by the IDA. The HAMSET II design with its multi disease approach is different than the ordinary MAP projects which focus only on HIV/AIDS and this considered efficient and cost effective. Sustainability need to be ensured from the outset of project implementation than later.

13. The World Bank's Performance Lending.

The World Bank performance can be judged to be satisfactory.

The financial and technical aspects of project preparation were well handled and Technical Assistance (TA) was provided to the government during project preparation by the Bank and other development partners.

The project design was based on local needs and priorities.

However, there were some challenges which include:

- ◆ Overlaps among project components

- ◆ Lack of clarity and roles and responsibilities of share stakeholders of
- ◆ Inadequate focus on M/E especially on quality of data and utilization

13.1 Support Supervision

Technical support by the Bank was made regular and some targeted consultancies occurred.

Missions were generally made six monthly and generally adequate support was provided despite the absence of technical staff at the country office.

12.2 Financial Management:

The World Bank supported installation of enhanced computerized based accounting system through upgrading FINPRO soft ware which has significant effect on the PMU's performance to maintain excellent and reliable data and information. The shift to FMR disbursement benefited the project by increasing flexibility and efficiency in grant funds utilization and liquidity.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

n.a.

Annex 9. List of Supporting Documents

List of major World Bank documents referred to in the ICR

Development Grant Agreement (HAMSET II project), July 29, 2005. IDA Grant Number H175- ER

Eritrea HIV/AIDS/STI, TB, Malaria and Reproductive Health Project (HAMSET II). May 31 2005. Report No: 31853-ER

Project Paper on a proposed restructuring of the HIV/AIDS/STI, TB, Malaria and Reproductive Health Project for the State of Eritrea, December 3 2009. Report No: 50812-ER.

ICR of Eritrea HIV/AIDS/STI, Malaria and Tuberculosis (HAMSET) Control Project. October 6, 2006. Report No: 37558

Project *aide-memoire* documents, 2006-2010

Project ISRs, 2006-2010

Annual procurement plans and updates

QAG Quality-at-Entry Assessment

Eritrea HAMSET II Project Restructuring Financial Management Assessment Report, Sept 17 2009.

World Bank. 2008. The World Bank's Commitment to HIV/AIDS in Africa: Our Agenda for Action, 2007-2011

World Bank. 2008. Eritrea Public Expenditure Review (PER). Washington, D.C.: World Bank.

World Bank. 2010. World Development Indicators 2010. Washington, D.C.: World Bank. International Development Association, International Finance Corporation and

Multilateral Investment Guarantee Agency. 2008. Interim Strategy Note for the State of Eritrea for the Period FY08-FY10, Report No. 42930-ER. Washington, D.C: World Bank. International Development Association and International Monetary Fund. 2009. Joint World Bank/IMF Debt Sustainability Analysis. Washington, DC

Other project-related documents available in Bank information systems

List of Government of Eritrea documents

State of Eritrea. 2005. Eritrea Development Strategy. Asmara: State of Eritrea

Project Management Unit. 2005. HAMSET II Project Operations Manual. Asmara: Ministry of Health, Project Management Unit.

Presentations from June 2010 final review mission.

National Strategic Plans and Strategies for each of the different technical programs

The most recent Annual Reports for each of the different technical programs

Various guidelines for program implementation

Various clinical guidelines

M&E Conceptual Framework and Operational Plan and Annexes. 2006.
HMIS Reporting Forms
RBF Operations Manual
Workshop proceedings

Work commissioned from consultants, such as:

Kiirya, S. K. 2009. Best Practices of the Community Managed HAMSET Response Program in Eritrea. Prepared for the Project Management Unit (CMHRP), Ministry of Health, Eritrea. Unpublished manuscript.

Lambrechts-Van Weezenbeek. A proposal for a rational prioritized mid-term operational plan for strengthening the Eritrean National Tuberculosis Programme.

List of external and/or peer-reviewed documents referred to in the ICR

Dye, C. and K. Floyd. Chapter 16: Tuberculosis: In, Jamison et al. (eds) *Disease Control Priorities in Developing Countries* (2nd ed). Washington, D.C.: World Bank

Economist Intelligence Unit (EIU). 2008. *Eritrea Country Report 2008*. London, UK: PurePrint Group. <http://countryanalysis.eiu.com/>

Economist Intelligence Unit (EIU). 2010. *Eritrea Country Report 2010*. London, UK: PurePrint Group. <http://countryanalysis.eiu.com/>

Goodman, C. K. Hanson, A. Mills, V. Wiseman and E. Worrall. 2008. *The Economics of Malaria and Its Control*. TropIKA.net. www.tropika.net.

Laxminarayan, R., J. Chow and S. Shahid-Salles. Chapter 2: Intervention Cost-Effectiveness. In, Jamison et al. (eds) *Disease Control Priorities in Developing Countries* (2nd ed). Washington, D.C.: World Bank.

Morel, C., L. Lauer and D. Evans. 2005. Cost effectiveness analysis of strategies to combat malaria in developing countries. *British Medical Journal* 331: 1299.

O'Meara, W. P., J. Mangeni, R. Steketee and B. Greenwood. 2010. Changes in the Burden of Malaria in Sub-Saharan Africa. *Lancet Infectious Diseases* 10(8): 545-555.

Yukich, J., M. Zerom, T. Ghebremeskel, F. Tediosi and C. Lengeler. 2009. Costs and cost-effectiveness of vector control in Eritrea using insecticide-treated bed nets. *Malaria Journal* 8: 51.

WHO. 2010. *National Health Accounts Eritrea*. Geneva: World Health Organization.

Annex 10. Data supporting the conclusions about the achievement of PDOs

HIV/AIDS/STIs

The following table provides data supporting the conclusions about the achievement of development objectives for HIV/AIDS/STIs, discussed in section 3.2

Table 9 HIV/AIDS/STI indicators

PREVALENCE	2005	2006	2007	2008	2009	2010	Target 2009	HAMSET indicator?
Prevalence of HIV/AIDS in the general population.	2.38%		1.33%				1.20%	
HIV “prevalence” among 15-24 years old ANC attendees	1.80%		0.88%				0.70%	HAMSET PDO indicator
HIV “prevalence” among CSW	11.25%						<12%	HAMSET PDO indicator
TESTING	2005	2006	2007	2008	2009	2010	Target 2009	
Number of VCT sites (cumulative)	74	96	110	130	135	135	117	
- Total	64	86	100	119	124	124		
- Free-standing (only VCT)	10	10	10	11	11	11		
- Integrated (VCT and PMTCT)								
Number of VCT attendees (annual)	69121	76796	84893	91032	96285		n.a.	
Percentage of all adults 15-49 years old who were tested and received their HIV results			17%	25.3%	37.4%		20.8%	
- “adult men”			23%					
- “adult women”			14%					
Positivity rate among those undergoing VCT	3.38%	3.53%	3.17%	2.55%	2.25%	2.06%	n.a.	
- Male					1.88	1.52		
- Female					2.66	2.73		
PMTCT	2005	2006	2007	2008	2009	2010	Target 2009	
Number of PMTCT sites (cumulative)	39	53	73	89	93		78	
Number of PMTCT attendees	8144	23200	40219	46743	48737			
Proportion of first ANC attendees tested for PMTCT		84%	51%			96.5%		
Positivity rate among PMTCT attendees	1.95	1.2	0.88	0.81	0.66	0.66		

Proportion of HIV free infants who are born to HIV positive mothers			87%	94%			85%	
					94.9%			
Percentage children born from HIV+ mothers who are negative after 18 mths						96%		
					93%			
STI PREVENTION AND CONTROL	2005	2006	2007	2008	2009	2010	Target 2009	
Syphilis sero-prevalence rate among ANC attendees aged 15-24 years	2.1%		1.1%				1%	HAMSET PDO indicator
STI cases treated according to national guidelines (annual) (numbers approximate)	5500	5200	5900	6600	5300			
Male condom distribution to the zones by ESMG and MOH	6,012, 220	6,399, 760	4,777, 654	5,061, 672	5,766, 936			
Female condom distribution to the zones by ESMG and MOH	27000	10000	5102	137300	35180			
Blood transfusions tested for HIV, Hep-B, Hep-C and syphilis (numbers approximate)	4800	6000	7700	8700	9300			
TREATMENT	2005	2006	2007	2008	2009	2010	Target 2009	
Percentage of adults and children with advanced HIV infection (CD4 less than 250) receiving anti-retroviral therapy	9%	15%	24%	58%	69.3%	77%	40%	
Percentage of adults and children with HIV still alive 12 months after initiation of ART		93.3%		95.9%	85.5%			
Number of health facilities providing ART			14	14	17		14	
Number of inpatients enrolled in ART (cumulative)	709	1884	4299	5266	5557 April			
CARE AND SUPPORT	2005	2006	2007	2008	2009	2010	Target 2009	
Number of home-based care clients	119	173	371	310	349			
Number of home-based care volunteers	604	801	1884	1867	2186			
KNOWLEDGE, ATTITUDES AND PRACTICE	2005	2006	2007	2008	2009	2010	Target 2009	
% of high risk groups (CSW & Truck drivers) who used condom properly during their last sex practice in the last 12 months.								
Commercial Sex Workers*		76%		87.20%			90%	HAMSET PDO Indicator
Truck drivers*		78%		96.3%			90%	HAMSET PDO Indicator

Sources: NATCoD Annual Reports and presentation; *Special studies on high risk groups

Tuberculosis

The following table provides data supporting the conclusions about the achievement of development objectives for tuberculosis, discussed in section 3.2.

Table 10 Tuberculosis indicators

Indicator	2005	2006	2007	2008	2009	Target 2009	HAMSET indicator?
Prevalence rate of TB per 100,000	50			NA			
Percent detection rate of infectious cases in population	41%	37%	35%	47%	49%	70%	HAMSET PDO indicator
Percentage of detected cases under Direct Observed Treatment	100%	100%	100%	100%	100%	80%	HAMSET PDO indicator
Percentage cure rate of new smear positive cases	79.4%	80.3%	79.90%	82%	86%	85%	HAMSET PDO indicator
Percentage success rate			88%	88%	89%	90%	
Proportion of sub-zones implementing the DOTs strategy				88%	90%	95%	
Percentage of health facilities with skilled staff trained in detection and treatment.	100%	100%	88%	100%	100%	95%	
Percentage of health facilities with AFB microscopy	79%	90%	91%	80%	100%	98%	
Percentage of health facilities with adequate stock of TB medicines in the last 3 months	100%	100%	100%	100%	100%	100%	
Number of trained health workers on DOTS strategy			600	710	1431	700	
Number of microscopes procured and distributed to DOTS sites			6	12		-	
Anti-TB medicines procured				5000	5000	4000	

Data sources: TB annual reports (NATCoD), except for the prevalence indicator which is from the TB prevalence survey

Malaria

The following table provides data supporting the conclusions about the achievement of development of objectives for malaria, discussed in section 3.2.

Table 11 Malaria indicators

Indicator	2005	2006	2007	2008	2009	Target 2009	HAMSET indicator?
Morbidity rate per 100, attributed to clinical and confirmed malaria (all ages)*	1.20%			0.71 %	.69%	1.08%	

Malaria morbidity (confirmed cases)*	35,215 (2005)	10,148	14,489	10,857	6,785	35,215	HAMSET PDO indicator
Mortality case attributed to confirmed malaria (all ages)*	24 (2005)	26	35	6	3	24	HAMSET PDO indicator
Malaria case fatality rate per 100 (under five)			1%	0.27%	.4%	0.99%	
Percentage of pregnant women sleeping under ITN last night#	50.4% (2004)	54% LQAS				75%	HAMSET intermediate indicator
Percentage of children under 5 years of age sleeping under ITN the previous night#	48.3% (2004)	44% LQAS		48.9%		75%	HAMSET PDO indicator
Proportion of children under 5 years of age with fever/malaria who received anti malarial treatment according to national policy within 24 hours of onset of fever.	7.5% (2004)	28.2% within 2 days, LQAS		4.5%		50%	
Proportion of households having at least ONE long-lasting net or ITN retreated within the last 12 months with insecticide#	73% (2004)	68.5% LQAS	n/a	71%		80%	
Proportion of households having at least TWO long-lasting nets or ITN retreated within the last 12 months with insecticide#	47.7% (2004)			40%		80%	
Proportion of households aware of at least one environmental management preventive method#	68.4% (2004)			75.3%		85%	
Percentage of health facilities reporting no stock out of 1 st line anti-malarial drugs in the last 3 months#	82% (2004)	100 LMIS	100% LMIS	90% %		100%	
Procurement of Bed net			197,609	447,612	175,000	150,000	
Procurement of Rapid Diagnostic Tests			75,300	482,880	540,000	212,520	

Source: ^ Eritrea Demographic and Health Survey; *HMIS; #Mid-term Evaluation Report (based on facility and population surveys in 4 malarious zones)

Reproductive Health

The following table provides data supporting the conclusions about the achievement of development objectives for reproductive health, discussed in section 3.2.

Table 12 Reproductive health indicators

Indicator	2005	2006	2007	2008	2009	Target 2009	HAMSET indicator?
Prevalence of Obstetric Fistula^							
Perinatal Mortality Rate^	48.80 %	44.70 %	44.20%	44.30 %		39.9%	

Prevalence of Female Genital Mutilation (FGM) among girls child under 10 Years [^]	89% (2002)				83% (2010)	80.0%	
Percentage of mothers receiving focused antenatal care *	28.0%	37.5%			34%	50.0%	HAMSET PDO Indicator
Percentage of mothers receiving antenatal care [^]	70.4 (2002)				88.5 (2010)		
Percentage of skilled birth attendance [^]	28.3 (2002)				34.1 (2010)		HAMSET PDO Indicator
Percentage of institutional deliveries (in rural target areas)*	26.3%	25.6%	27.1%	27.2%		29.9%	
Contraceptive prevalence rate (modern method) [^]	8% (2002)				8.4 (2010)	10%	HAMSET PDO Indicator
Percentage of women receiving post partum care within 6 hrs and 6 days		19.0%				50%	
Percentage of facilities providing basic EmOC*	47%		19%	80%	100%	75%	HAMSET PDO Indicator
Percentage of facilities providing comprehensive EmOC*	55%		66%	62%	80%	80%	HAMSET PDO Indicator

Source: [^]Eritrea DHS; * HMIS

Human Resources for Health

The following table provides data supporting the conclusions about the achievement of development objectives for human resources for health, discussed in section 3.2.

Table 13 Human resources for health indicators

Indicator	2005	2006	2007	2008	2009	Target 2009	HAMSET indicator?
Train at least							
200 nurse midwives	90		146	200	440	427	HAMSET PDO indicator
220 Public Health technicians	69	40	80	133	133	220	HAMSET PDO indicator
200 laboratory technicians	202				300	300	HAMSET PDO indicator
Increase the proportion of health stations with at least one nurse from 28% to 50%.	40%		45%	39%	35%	50%	HAMSET PDO indicator
Proportion of MOH employees working in referral hospitals and at the headquarters*	32.8%	26.8%	24%	30%	27%	≤ 35%	
Proportion of facilities (hospitals and health stations) conducting staff appraisal on an annual basis							
Hospitals		100%	100%	100%	100%	100%	
Health Centers		100%	100%	100%	100%	100%	
Instructor to student ratio	25	20	20	20	20	15	

Source: HRH database



ERITREA

- SELECTED CITIES AND TOWNS
- ⊙ REGION CAPITALS
- ⊛ NATIONAL CAPITAL
- RIVERS
- MAIN ROADS
- RAILROADS
- REGION BOUNDARIES
- INTERNATIONAL BOUNDARIES

This map was produced by the Map Design Unit of The World Bank. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

