Document of
The World Bank

Report No: ICR00001298

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-36250 TF-54611)

ON A

CREDIT

IN THE AMOUNT OF SDR 22.2 MILLION
(US$27.53 MILLION EQUIVALENT)

TO THE

REPUBLIC OF YEMEN

FOR A

HEALTH REFORM SUPPORT PROJECT (HRSP)

February 23, 2010

Human Development Sector
MNCO3
Middle East And North Africa Region

CURRENCY EQUIVALENTS

(Exchange Rate Effective February 8, 2010)

Currency Unit = Yemeni Rial (YER)
YER 1.00 = US$0.0049
US$1.00 = YER 203

FISCAL YEAR
January 1 - December 31

ABBREVIATIONS AND ACRONYMS

APL	Adaptable Program Lending
CAS	Country Assistance Strategy
CAU	Credit Administration Unit
CDP	Child Development Project
DCA	Development Credit Agreement
DG	Director General
DHS	District Health System
DHT	District Health Team
DOM	Decentralizing Operational Management
DPPR	Development Plan for Poverty Reduction
EC	European Commission
EMP	Environmental Management Plan
EOC	Essential Obstetric Care
EPI	Expanded Program of Immunization
FHP	Family Health Project
FMR	Financial Monitoring Report
GAVI	The Global Alliance for Vaccines and Immunization
GIS	Geographic Information System
GOY	Government of Yemen
GTZ	German Technical Cooperation
HIS	Health Information System
HMIS	Health Management Information System
HPTSU	Health Policy and Technical Support Unit
HRSP	Health Reform Support Project
HSR	Health Sector Reform
HSReview	Health Sector Review
ICR	Implementation Completion and Results Report
IDA	International Development Association
IMCI	Integrated Management of Childhood Illnesses
IMR	Infant Mortality Rate
ITMs	Insecticide Treated Materials
MCH	Maternal and Child Health

MDSS	Management Decision Support System
MNCH	Maternal, Neonatal and Child Health
MOF	Ministry of Finance
MOPHP	Ministry of Public Health and Population
MOPIC	Ministry of Planning and International Cooperation
NCEDS	National Center for Epidemiology and Disease Surveillance
NCHMT	National Center for Health Management Training
NHA	National Health Accounts
NMCP	National Malaria Control Program
OM	Operational Manual
O&M	Operations and Maintenance
PCC	Project Coordination Committee
PDO	Project Development Objectives
PIMAC	Package of Integrated Maternal and Child Health Services
PIP	Project Implementation Plan
PMU of PWP	Project Management Unit of the Public Works Project
PNHP & BHS	Package of National Health Programs and Basic Health Services
PPA	Project Preparation Advance
RBM	Roll Back Malaria
SC	Steering Committee
SCI	Schistosomiasis Control Initiative
SIL	Specific Investment Loan
STD	Sexually Transmitted Diseases
TFR	Total Fertility Rate
UNFPA	United Nations Fund for Population Activities
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Vice President:	Shamshad Akhtar
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ICR Team Leader:	Afrah Alawi Al-Ahmadi

YEMEN, REPUBLIC OF
Health Reform Support Project (HRSP)

Content

A. Basic Information

Country:	Yemen, Republic of	Project Name:	Health Reform Support Project (HRSP)
Project ID:	P043254	L/C/TF Number(s):	IDA-36250,TF-54611
ICR Date:	02/24/2010	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	GOVT. OF YEMEN
Original Total Commitment:	XDR 22.2M	Disbursed Amount:	XDR 21.7M
Revised Amount:	XDR 22.2M		
Environmental Category: B			
Implementing Agencies: Ministry of Public Health and Population			
Cofinanciers and Other External Partners:			

B. Key Dates

Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	02/07/2001	Effectiveness:	01/22/2003	01/22/2003
Appraisal:	11/13/2001	Restructuring(s):		06/30/2006
Approval:	03/28/2002	Mid-term Review:	05/07/2005	05/16/2005
		Closing:	12/31/2007	08/31/2009

C. Ratings Summary

C.1 Performance Rating by ICR

Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Substantial
Bank Performance:	Moderately Satisfactory
Borrower Performance:	Moderately Satisfactory

C.2 Detailed Ratings of Bank and Borrower Performance (by ICR)

Bank	Ratings	Borrower	Ratings
Quality at Entry:	Unsatisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately 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):	None
Problem Project at any time (Yes/No):	Yes	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	9	10
Health	91	90
Theme Code (as % of total Bank financing)		
Child health	22	25
Decentralization	22	2
Health system performance	23	11
Malaria	11	8
Population and reproductive health	22	54

E. Bank Staff		
Positions	**At ICR**	**At Approval**
Vice President:	Shamshad Akhtar	Jean-Louis Sarbib
Country Director:	A. David Craig	Mahmood A. Ayub
Sector Manager:	Akiko Maeda	George Schieber
Project Team Leader:	Afrah Alawi Al-Ahmadi	Sameh El-Saharty
ICR Team Leader:	Afrah Alawi Al-Ahmadi	
ICR Primary Author:	Paul Geli	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document**)**
The Development Objectives are to:(i) increase access for women and children to a package of integrated maternal and child health services provided in district hospitals and health centers in selected districts; and (ii) improve the effectiveness of national public health programs and the resource allocation within the public health sector in Yemen.

Revised Project Development Objectives (as approved by original approving authority)
The PDOs are revised to read as follows: (i) to improve access to and quality of priority national family health and reproductive health programs; and (ii) to develop the capacity of the Ministry of Public Health and Population (MOPHP) to manage, plan, and deliver basic health services and priority public health programs at the central level and in eight selected districts in the three targeted governorates.

(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 :	90% coverage of fully immunized children under one year of age nation-wide by the end of 2008			
Value quantitative or Qualitative)	66% nation-wide for the year 2003 for DPT3 (diphtheria, pertussis and tetanus)	Nation-wide: 90% coverage of fully immunized children under one year of age by the end of 2008		National coverage for 2008: 87% for Penta 3 (diphtheria, pertussis, tetanus, hepatitis B &haemophilus influenza type b)
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	Source: EPI updated values - In the last ISR, the baseline value was 68% without indication of the type of vaccination.			
Indicator 2 :	Percentage of women currently using modern family planning methods increased by 5% by the end of 2008.			
Value quantitative or Qualitative)	13.4 % for the year 2003	18.4% for the year 2008		19.0% for the year 2006 (an increase of 5.6% in the modern contraceptive prevalence rate)
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	Sources: Yemen Family Health Survey - 2005 and Multiple Indicators Cluster Survey (MICS) - 2006. In the ISR, the baseline value of 23.1% was for all methods, and not for the modern methods only.			
Indicator 3 :	Expenditure on operational costs and maintenance (non salary) as a percentage of total MOPHP expenditure increased by 10% by the end of 2008.			
Value quantitative or Qualitative)	2.5% for maintenance, as a percentage of the total recurrent expenditure for 2004.	2.8% for maintenance, as a percentage of the total recurrent expenditure for 2008.		2.9% for 2007 (an increase of 16% over the baseline).
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. %	Source: PER - 2004 to 2007. In the last ISR, the baseline value of 3.2% was the budgeted amount for 2003, and not expenditure. The PER shows that			

achievement)	expenditures increased by about 65% in real terms.			
Indicator 4 :	Malaria indicator: percentage of households with at least one ITN in intervention areas increased by 5%			
Value quantitative or Qualitative)	0% (2003)	5% of households in targeted districts have at least one ITN.		In the six targeted districts, the unweighted coverage is 44.6%.
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	The coverage with at least one Long Lasting Insecticide Net (LLIN) ranged from 23.4% in Bajil district to 61.3% in Bait Al-Faquey district. Among the households who got LLIN, 14.3% got more than one LLIN.			
Indicator 5 :	Increased availability of priority MCH programs in the intervention areas: (i) number of IMCI visits in the targeted health facilities); and (ii) number of facilities providing EMOC services.			
Value quantitative or Qualitative)	(i) IMCI baseline = 0; (IMCI has not been introduced in the health facilities). (ii) EMOC baseline = 0 (EMOC had not been introduced in targeted districts).	(i) all 22 health facilities in targeted districts provide IMCI service on a daily basis. (ii) EmOC: in the three targeted governorates, 3 district hospitals provide comprehensive EmOC services, and 12 health centers provide basic EmOC services.		i) IMCI: all 22 health facilities in targeted districts provide IMCI service on a daily basis. (ii) EmOC: 3 district hospitals provide comprehensive EmOC services, and 11 health centers provide basic EmOC services.
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	(i) IMCI: Globally, all 22 governorates have districts implementing IMCI, and 60% of all the districts in Yemen are implementing IMCI. (ii) As of October 2009, one health center did not have the required staff to provide basic EmOC services.			

(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 :	Number of district hospitals and health centers rehabilitated under the project			
Value (quantitative or Qualitative)	Baseline = 0 hospitals and health centers.	All 22 facilities (5 district hospitals and 17 health		All 22 facilities (5 district hospitals and 17 health

		centers) have been renovated / upgraded and equipped under the project.		centers) have been renovated / upgraded and equipped under the project.
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	The original target of 13 health facilities (3 district hospitals and 10 health centers) was increased to 22 facilities (5 district hospitals and 17 health centers).			
Indicator 2 :	District health plans prepared and used as a basis for determining local interventions.			
Value (quantitative or Qualitative)	Baseline = 0 (district health plans were not available).	District health plans prepared and applied in all 8 project districts.		District health plans were prepared in all 10 project districts and at least 20% of plans were implemented with Government's budget.
Date achieved	01/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	The geographic area covered by the 8 districts is now covered by 10, due to an administrative change that took place in 2007			
Indicator 3 :	Number of technicians trained on Malaria diagnosis under the project			
Value (quantitative or Qualitative)	Baseline: 0	350 trained under the project on malaria diagnosis.		350 trained under the project on malaria diagnosis
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)	The original target of 40 technicians to be trained was revised to 350.			
Indicator 4 :	Number of participants and training weeks conducted in the National Center for Health Management Training (NCHMT).			
Value (quantitative or Qualitative)	Baseline: 0 (when the project started, NCHMT was not operational).	140 health management personnel trained by NCHMT.		140 health management personnel were trained.
Date achieved	12/31/2003	08/31/2009		08/31/2009
Comments (incl. % achievement)				
Indicator 5 :	No. of project governorates from which information and data have been consolidated into the geographic information system (GIS).			
Value (quantitative or Qualitative)	Baseline: 0	3 project governorates covered by the interactive health GIS.		3 project governorates were covered by the interactive health GIS.
Date achieved	12/31/2003	08/31/2009		08/31/2009

Comments (incl. % achievement)	

G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	06/27/2002	Satisfactory	Satisfactory	0.00
2	12/27/2002	Satisfactory	Satisfactory	0.00
3	04/17/2003	Satisfactory	Unsatisfactory	0.81
4	06/30/2003	Satisfactory	Satisfactory	0.81
5	12/17/2003	Satisfactory	Satisfactory	1.48
6	04/28/2004	Satisfactory	Unsatisfactory	1.48
7	10/26/2004	Unsatisfactory	Unsatisfactory	1.62
8	12/30/2004	Unsatisfactory	Unsatisfactory	1.62
9	04/17/2005	Unsatisfactory	Unsatisfactory	2.05
10	08/07/2005	Unsatisfactory	Unsatisfactory	2.52
11	11/17/2005	Moderately Unsatisfactory	Moderately Unsatisfactory	3.09
12	05/03/2006	Moderately Unsatisfactory	Moderately Unsatisfactory	4.58
13	06/29/2006	Moderately Satisfactory	Moderately Satisfactory	5.28
14	06/30/2006	Moderately Satisfactory	Moderately Satisfactory	5.28
15	12/27/2006	Moderately Satisfactory	Satisfactory	12.76
16	06/27/2007	Satisfactory	Satisfactory	14.68
17	12/28/2007	Moderately Satisfactory	Satisfactory	19.64
18	06/21/2008	Moderately Satisfactory	Satisfactory	25.10
19	12/31/2008	Moderately Satisfactory	Satisfactory	29.15
20	06/13/2009	Moderately Satisfactory	Satisfactory	30.93

H. Restructuring (if any)

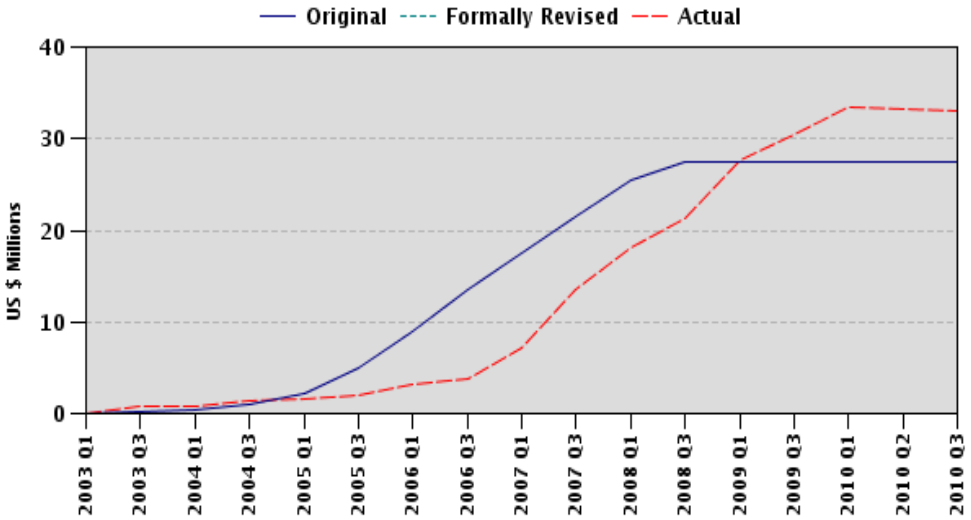
Restructuring Date(s)	Board Approved PDO Change	ISR Ratings at Restructuring		Amount Disbursed at Restructuring in USD millions	Reason for Restructuring & Key Changes Made
		DO	IP		
06/30/2006	Y	MS	MS	5.28	

If PDO and/or Key Outcome Targets were formally revised (approved by the original approving body) enter ratings below:

Outcome Ratings

Against Original PDO/Targets	Unsatisfactory
Against Formally Revised PDO/Targets	Satisfactory
Overall (weighted) rating	Moderately Satisfactory

I. Disbursement Profile



1. Project Context, Development Objectives and Design

(this section is descriptive, taken from other documents, e.g., PAD/ISR, not evaluative)

1.1 Context at Appraisal

(brief summary of country and sector background, rationale for Bank assistance)

1.1.1 At the time of appraisal, Yemen was at an early stage of its health system (epidemiological and demographic) transition, with morbidity and mortality rates from communicable diseases dominating those from non-communicable diseases and a high total fertility rate (TFR). The most prevalent conditions were diarrheal diseases, malnutrition, acute respiratory infections, complications of pregnancy, and malaria. Chronic diseases, such as cancer, heart disease and injuries, were also on the rise. Health outcomes were extremely poor.

1.1.2 Between 1992 and 1997, TFR declined from 7.7 to 6.5 children per woman, the infant mortality rate decreased from 103 to 75 live births, and the under-five mortality rate went from 137 to 105 live births. Adult mortality, total fertility and maternal mortality rates were among the highest in the Middle East and North Africa region. Yemen was also one of the few countries in the region where under-nutrition was a major problem, particularly among children with about 50 percent of them malnourished and stunted. Communicable diseases such as malaria and tuberculosis posed a significant burden of disease. While limited information was available on the epidemiological situation of HIV/AIDS in Yemen, it was of growing concern. Among Sexually Transmitted Diseases (STD) clinic patients, HIV prevalence among patients tested increased from 2 percent in 1993 to 5 percent in 1997. In 1998, 3 percent of STD clinic patients tested were HIV positive. Population growth, at 3.6 percent per year (1998), was among the highest in the world, family planning activities were minimal, and the use of modern contraceptives was particularly low at 10 percent. The situation was compounded by the wide regional disparities and the significant differences between urban and rural conditions.

1.1.3 Yemen faced major challenges in improving the health status of its population, including:

a. *Lack of efficiency in the allocation and use of public funds in the health sector*, with excessive centralization of resource management, allocations not based on needs, excessive infrastructure investments mostly focused on tertiary care in urban areas, very low budgets for operations and maintenance, and very low utilization rates. The basic inputs needed at the facility level for providing proper care were not available.

b. *Lack of accessibility to health services*, with physical access limited by lack of transportation, rough geographic terrain, and a dysfunctional health infrastructure, financial access limited by the level of fees and co-payments, and also limited access for women because of social constraints in traditional communities. Less

than half of the population, particularly those living in the rural areas, had access to basic health services.

c. *Lack of quality of health services*: the quality of services was poor, particularly in the public sector, due to many factors (inadequate inputs, poor maintenance of facilities and equipment, lack of continuity of care, and low morale of service providers).

d. *Lack of institutional capacity and financial viability*: the institutional framework of the health sector was overly centralized, poorly coordinated and weak, and the financial viability was uncertain because of the rising costs of health care, low public spending overall, high out-of-pocket spending (59 percent of total spending and 3 percent of household income), and the lack of risk-pooling arrangements such as formal social insurance coverage.

1.1.4 In response to the above challenges, in 1998, the Ministry of Public Heath and Population (MOPHP) launched a comprehensive sector reform initiative aimed at improving equity, quality, efficiency, effectiveness, accessibility, and long-term sustainability of health services. The MOPHP's health reform program had nine components: (i) decentralization of planning, decision making, and financial management; (ii) redefinition of the role of the public sector with a stronger emphasis on policy, regulation, and public health, and the establishment of limits on its role as service provider; (iii) district health system approach; (iv) community co-management of health systems; (v) cost sharing; (vi) essential drugs policy, and realignment of the logistics system for drugs and medical supplies; (vii) decentralized, outcome-based management system from the central to the community level; (viii) hospital autonomy and eventual basic health facility autonomy; and (ix) encouragement of responsible participation by the private sector and non-governmental organizations (NGO) through appropriate policy design regulation. The MOPHP's health reform program was to take place in two phases: (i) an *initiation* phase in which all key aspects of the reform would be launched, lessons would be learned, key legislation would be passed, district health systems would be put in place in at least 40 percent of districts, revisions of the financial system would be initiated, and major actors would be brought on board; and (ii) a *consolidation* phase in which the lessons learned in the initiation phase could be fashioned into long-term systems, policies and regulations, and the remainder of the districts could be brought into the health district system.

1.1.5 The Health Reform Support Project (HRSP) was initially conceived and the Project Concept Document (PCD) approved as an Adaptable Program Lending (APL) in support of the broad-based MOPHP health reform program. But after further discussions with Government officials, it was decided to adopt a more realistic approach and proceed with a Specific Investment Loan (SIL) which would support the "initiation phase" of the MOPHP health reform program. The project would constitute a transition between the IDA-financed Family Health Project (FHP), building on lessons learned, and a more comprehensive future project.

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

1.2.1 According to the Project Appraisal Document (PAD), the Project Development Objectives (PDOs) were to: (i) increase access for women and children to a package of integrated maternal and child health services provided in district hospitals and health centers in selected districts; and (ii) improve the effectiveness of national public health programs and the resource allocation within the public health sector in Yemen.

1.2.2 Although there were some discrepancies between the main text and Annex 1 of the PAD, the key outcome/impact indicators to be achieved by 2006/2007 can be listed as follows:

a) Improved maternal and child health as reflected by an increase of 10 percent in birth deliveries attended in district hospitals and health centers in intervention areas;
b) Increased accessibility as reflected by an increase in utilization of health services in district hospitals in the selected districts;
c) Increased health knowledge as reflected by an increase in the intention of currently married women to use family planning (increase of 5 percent for modern contraceptive methods according to Annex 1 of the PAD); and
d) Improved resource allocation as reflected by an increase of Operations and Maintenance (O&M) share of total MOPHP expenditures (an increase of 6 percent for non-salary recurrent expenditures according to Annex 1 of the PAD).

1.2.3 The baseline data for the above-mentioned indicators were not available and, therefore, were not included in the PAD.

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

1.3.1 When the Project was restructured in June 2006, the PDOs were revised to read as follows: (i) to improve access to and quality of priority national family health and reproductive health programs; and (ii) to develop the capacity of the Ministry of Public Health and Population (MOPHP) to manage, plan, and deliver basic health services and priority public health programs at the central level and in eight selected districts in the three targeted governorates.

1.3.2 The project had to be restructured because the original project design was too ambitious and unrealistic, overestimating the capacity of the MOPHP at the time. There was also a lack of ownership and commitment on the part of the Ministry. The decentralization of health services and the integration of care at the local level which were included in the reform program could not be carried out. The restructuring emphasized strengthening what was already working, such as the selected vertical programs. The following key indicators were selected: (i) immunization coverage; (ii) percentage of women using modern family planning methods; (iii) percentage of

expenditures spent on operation and maintenance (non salary); (iv) availability of insecticide treated nets (ITN) in malaria intervention areas; and (v) availability of priority maternal and child health programs in the intervention areas.

1.4 Main Beneficiaries,
(original and revised, briefly describe the "primary target group" identified in the PAD and as captured in the PDO, as well as any other individuals and organizations expected to benefit from the project)

1.4 1 The project's target population or "project beneficiaries" included the following three categories:

a. About 1.5 million Yemenis, particularly children (under the age of 5) and women in reproductive age (15 - 45) who will benefit from improved health services in the selected districts;
b. All Yemenis who will benefit from the national malaria and health education programs; and
c. MOPHP staff who will benefit from the capacity building activities.

1.5 Original Components (*as approved***)**

1.5.1 The original project included the following three components:

Project Component 1 - US$20.57 million - Strengthening Health Service Delivery

The objective of this component was to strengthen the operational management at the district level and the delivery of a Package of Integrated Maternal and Child (PIMAC) Health Services in about 8 district hospitals and approximately 16 health centers in 8 districts within 4 governorates, which will serve approximately 1.5 million Yemenis.

*Sub-component 1.1: Decentralized Operational Management (US$1.03 million). T*he objective of this sub-component was to improve management systems and procedures at the level of the Governorate and District Health Offices in the selected governorates/districts in support of decentralization of resource management in order to have an operational District Health System (DHS) in accordance with the Local Authority Law.

*Sub-component 1.2: Provision of a Package of Integrated Maternal and Child Health Services – PIMAC (US$19.54 million).*The PIMAC health services would be built on the clinical service delivery elements of Integrated Management of Childhood Illnesses (IMCI) and expanded reproductive health services including Family Planning and Essential Obstetric Care (EmOC). This sub-component would support the effective delivery of the PIMAC health services in 8 district hospitals and approximately 16 health centers in 8 districts, including the development of clinical standards and upgrading the skills of health care providers.

Project Component 2 - US$3.74 million - Strengthening Public Health Programs

The objective of this component was to improve the effectiveness of public health programs by strengthening two critical programs, namely, malaria and health education.

Sub-component 2.1: Malaria (US$2.20 million). The objective of this sub-component was to strengthen the activities of the National Malaria Control Program (NMCP), which are consistent with the goals of the global Roll Back Malaria (RBM) initiative. This sub-component would be implemented by the NMCP and the National Center for Epidemiology and Disease Surveillance in close collaboration with WHO.

Sub-component 2.2: Health Education (US$1.54 million). The objective of this sub-component was to strengthen health education in order to improve the effectiveness of public health programs by: (i) increasing the demand for PIMAC health services; (ii) increasing public awareness about priority public health programs; and (iii) changing selected key behaviors that can have a substantial effect on the health of the population, especially mothers and children.

Project Component 3 - US$5.29 million - Improving Health Systems Management

The objective of this component was to improve the MOPHP's capacity in the effective allocation and efficient use of available resources.

Sub-component 3.1: Health Finance and Management (US$1.73 million). The objective of this sub-component was to support human resources development in the areas of financial analysis and health systems management.

Sub-component 3.2: Health Management Information System (US$2.49 million). This sub-component would support the development of three subsystems: (i) a Management Decision Support System (MDSS) to improve resource allocation; (ii) a Health Information System (HIS) to collect and analyze utilization and disease prevalence data; and (iii) a Geographic Information System (GIS) to present the data graphically.

Sub-component 3.3: Credit Administration and Project Coordination (US$1.07 million). This sub-component would finance the Credit Administration Unit (CAU), which would be responsible for project financial and procurement management and for supporting the Steering Committee (SC) and Project Coordination Committee (PCC).

1.6 Revised Components

1.6.1 At restructuring in June 2006, Schedule 2 of the DCA was amended in its entirety, revising the components as follows:

Component 1 - Improvement of National Family Health and Reproductive Health Programs

Sub-component 1.1 - Decentralized Operational Management (DOM). Improving the management systems and procedures of central, Governorate and district health offices in support of the decentralization of resource management required for establishing an operational district health system in accordance with the Local Authorities Law.

Sub-component 1.2 - Delivery of a Package of National Health Programs and Basic Health Services. Supporting the delivery of national health programs and basic health services in district hospitals and health centers, including: (a) upgrading the skills of health care providers; (b) the provision of drugs, medical supplies and medical equipment; (c) the provision of reproductive health/family planning supplies and implementation of the vaccination program; and (d) the rehabilitation of about eight (8) district hospitals and about ten (10) health centers in eight (8) districts within the Ibb, Sanaa and Hodeida Governorates.

Component 2 - Capacity Building

Sub-component 2.1 – Malaria. (a) Strengthening the national malaria control program activities by building the capacity of about seven referral laboratories; (b) Improving malaria integrated vector management in high-risk and epidemic-prone areas, including: (i) promotion of personal protection measures; (ii) residual house spraying; and (iii) use of insecticide treated materials.

Sub-component 2.2 - Health Education: Strengthening the institutional capacity of the national health education and information center (NHEIC) to develop and implement the national health education program.

Sub-component 2.3 - Health Finance and Management. (a) Supporting the development of human resources in the areas of financial analysis by: (i) conducting public expenditures reviews to improve resource allocation; (ii) preparing national health accounts to provide detailed analysis on total health spending in public and private sector; and (iii) the preparation of health insurance studies to assess the feasibility of developing a health insurance program. (b) Developing health management by supporting the national center for health management training.

Sub-component 2.4 - Health Management Information System (HMIS). Developing a health management information system, including: (a) a management decision support system; (b) a health information system; and (c) a GIS.

Component 3 - Credit Administration and Project Coordination

Providing support to the Credit Administration Unit (CAU) of the HRSP and the Project Management Unit (PMU) of the Public Works Project (PWP) to carry out their responsibilities under the Project.

1.7 Other significant changes

(in design, scope and scale, implementation arrangements and schedule, and funding allocations)

1.7.1 When the Project was restructured in June 2006, the following key changes were introduced: (i) the responsibility for implementing the civil works and the procurement of medical equipment and furniture was entrusted to the Project Management Unit (PMU) of the Bank-financed Public Works Project (PWP); (ii) the decision was made to contract UN Agencies to procure drugs, vehicles and medical supplies; and (iii) there was a reallocation of the proceeds of the IDA Credit between categories to reflect the foreign exchange variations and the agreed-upon shifts between the various sub-components.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

(including whether lessons of earlier operations were taken into account, risks and their mitigations identified, and adequacy of participatory processes, as applicable)

2.1.1 At the time the Project was prepared and appraised, the Bank's HNP strategy had evolved to include support for reform programs, which led to the financing of health reform projects in a number of countries. The HRSP was originally designed to support implementation of the 1998 Health Sector Reform Program which emphasized the development of a district health system model. This model implied a strengthening of management at the local level and decentralizing administration. However, there was a lack of clarity about the country-wide decentralization program and its implications for the health services. The project design was too ambitious, and turned out to be unrealistic because it overestimated the capacity of the MOPHP at the time. Apart from the decentralization uncertainties, a centrally-managed integration of services would have required fundamental changes in the way the Ministry operates with respect to staffing, incentives and the relationships between the centre, the governorates and the districts.

2.1.2 The PDOs were clear, but implementation mechanisms were not. The design envisaged an initiation phase (to be supported by the project), to be followed by a consolidation phase. But, even for the first year of implementation of the initiation phase, there was no detailed implementation manual indicating clearly for each sub-component and activity: *what has to be done? How much would it cost? Who should be doing it? And when does it have to be done?*

2.1.3 At the time the Project was submitted to the Bank's Board of Directors, it was not ready for implementation. The quality at entry is rated "Unsatisfactory."

2.2 Implementation

(including any project changes/restructuring, mid-term review, Project at Risk status, and actions taken, as applicable)

2.2 1 With respect to the key factors affecting implementation and outcomes, one has to distinguish between the project period before the May/June 2005 mid-term review (MTR) and the project period after the mid-term review (MTR).

Before the mid-term review (MTR)

2.2.2 As mentioned earlier, there were problems with the Health Sector Reform Program and decentralization, and the project itself was not prepared for implementation. In addition, there were weaknesses in the management of some units of the MOPHP, including the Credit Administration Unit (CAU) which was headed at the beginning by an Administrator with a good academic background but limited experience in project management. Also, it took some time for the financial management and procurement specialists of the CAU to become familiar with Bank guidelines and requirements.

2.2.3 The reform program, which emphasized decentralization of health services and integration of care at the local level, was not launched in earnest due to capacity constraints and lack of commitment, particularly after a change in MOPHP leadership. The district health system model which was to be applied to integrate health services at the district level was never adopted. Instead, programs continued to be managed centrally and implemented vertically. Because the HRSP was not ready for implementation and probably too sophisticated for the capacity of the MOPHP at the time, implementation of the project was difficult and slow from the beginning. In the first three years, only a few of the smaller activities were implemented in a timely manner (e.g., malaria control and health financing activities). However, implementation of the largest component of the project, the provision of a package of integrated maternal and child (PIMAC) health services, was very slow. The districts to be covered under the PIMAC program were only selected in October 2004 – 18 months after the project was launched; this caused delays in the completion of needs assessments and the contracting of consultants to manage the civil works and the medical equipment program.

2.2.4 It should be recognized that during project implementation, the environment was not favorable to integration of care at the local level. In 2004, the General Directorate of Reproductive Health became a sector within the ministry with its own Deputy Minister. Donors became more interested in financing that sector. Also, the very substantial financing provided by the Global Fund for HIV/AIDS, Malaria and Tuberculosis reinforced the importance of vertical programs in health service delivery.

2.2.5 The project's mid-term review (MTR) in May/June 2005 was an impressive exercise carried out jointly by the Government and the Bank. Activities which had not progressed were downsized and detailed action plans were prepared for the activities which remained.

After the mid-term review (MTR)

2.2.6 All the relevant Government Ministries (the MOPPH, but also the Ministry of Finance - MOF and the Ministry of Planning and International Cooperation - MOPIC)

were committed to implement the agreed findings and recommendations of the MTR. Nevertheless, although some targets were met, implementation in general did not proceed as planned. In response, the Government and the Bank agreed in early 2006 to accelerate project implementation through the introduction of a Rapid Results Approach (RRA) with workshops attended by all relevant stakeholders, and to further streamline project activities. The risk that the Bank and donors might reduce their financing to Yemen because of the bad performance of the portfolio (including this project) was taken seriously by the Government. A new Administrator with the right experience and leadership qualities was appointed to head the CAU, and changes were made in the management of some other departments of the Ministry. Decisions were made regarding the contracting of UN Agencies to procure drugs, vehicles, contraceptives, etc. and the outsourcing of civil works and the procurement of equipment to the Project Management Unit (PMU) of the Bank-financed Public Works Project (PWP). In June 2006, the project was formally restructured; the PDOs and the program of activities were revised, performance indicators were refined and funds were reallocated.

2.2.7 Annex 10 presents a detailed assessment of the RRA exercise[1]. RRA is a methodology that empowers teams to achieve results quickly – in 100 days. It is also a way of thinking about making large scale change happen incrementally. The exercise was carried out with the full support and direct involvement of the Minister and senior staff of the MOPHP, helping it to succeed by fostering a commitment to results from stakeholders at all levels. The champions that led the process forward played an important role in the overall capacity building and institutional reform within the Ministry through the application of several rounds of RRA workshops and the activities in between. Also, the support provided by the Bank, both in terms of the involvement of staff with the appropriate expertise and in terms of the availability of funds, was crucial for the success of the RRA as an approach used to foster team work, planning and accountability to results. The RRA approach allowed for the development of clear work plans, and it encouraged competition among the various units of the MOPHP. The RRA put the HRSP back on track, proving that MOPHP could deliver, and building capacity and new confidence for managing change throughout the MOPHP.

2.2.8 Under the revised program, interventions at the national level were focused on support for priority public health interventions that have the most impact on maternal and child health and with a proven track record of effective implementation on the ground, such as the Integrated Management of Childhood Illnesses (IMCI) and the Expanded Program of Immunization (EPI). The remaining civil works and corresponding equipment and furniture activities were delegated to the PMU of the Public Works Project because of their proven track record in implementing civil works programs throughout Yemen. The second area of emphasis, capacity building, was to support some national level programs and the training of staff so that the renovated and equipped facilities could be operated efficiently.

[1] This assessment was included as a case study in the *Emerging Good Practice in Managing for Development Results SourceBook (Third edition - 2008).*

2.2.9 Without minimizing the importance of the role of the overall institutional capacity built under the project, one can state that, after the MTR, the following key factors affected implementation and outcomes: (a) the restructuring; (b) the change in CAU management; (c) the strong leadership of the MOPHP at the time of restructuring and onward; (d) the application of the RRA as an approach to support implementation, management and team building; and (e) the dedication of MOPHP staff encouraged by joint planning and monitoring through the RRA rounds.

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

2.3.1 Apart from its Annex 1 which lists some indicators (but without baseline values and, in some cases, without quantified targets), the PAD does not deal with Monitoring and Evaluation (M&E). This is one of the weakest points of the project design. When the Project started, albeit at a slow pace, the Project Coordination Committee (PCC) was supposed to monitor implementation but it was not very active. Until the introduction of the RRA, the HRSP did not have a systematic approach to M&E.

2.3.2 The three rounds of RRA workshops begun in 2006 provided the opportunity for some coordination at the facility level, and allowed for the exchange of information on the status of each component. RRA workshops were used as mechanisms to review and monitor the implementation plans, in lieu of the PCC meetings. Each component team developed a two-year (2007-2008) target with quarterly benchmarks and corresponding budgets, finalized and approved in March 2007. These targets were used to assess progress and expenditures over the two-year period. The fourth- and fifth-round RRA workshops (December 2007 and May 2008, respectively) were held to review the two-year performance and make necessary programmatic or financial adjustments for the last year of the Project.

2.3.3 In 2007, an M&E system was developed with the assistance of an international consulting firm. The CAU continued to effectively monitor the implementation progress with inputs from the HMIS, which receives its information from health facilities and district offices trained under the HRSP. The project monitoring indicators table was updated regularly and was used as the key tool for assessing project progress and effectiveness.

2.3.4 The main concern at restructuring was to reverse the declining trends experienced in some areas, so some targets were set low. The PDO indicators fell short in measuring the quality aspect, though it is stated in the PDO. Actual utilization could be used as a proxy for quality: if the services provided are of good quality, people will use them. However, given the limited time remaining in the project period to undertake both baseline and end-of-project assessments, it had been agreed with MOPHP to focus on these intermediate output measures as proxy measures for the PDO. It is known that in the beginning of the project, children were receiving some basic health services, but these were being provided in a disorganized and fragmented manner. The introduction of IMCI would minimally ensure the presence of staff trained in the algorithm and with essential drugs being provided for the full IMCI program. While this does not guarantee

the final outcomes in terms of reduced child morbidity and mortality, it does show that MOPHP has made an important first step towards improved quality of care, i.e., by introducing quality standards and integration in the training and provision of inputs on the supply side. In the next project (under preparation), baseline surveys will be carried out on targeted health service facilities and households to include quality of care measures and utilization data, and greater attention will be paid to the demand-side issues.

2.3.5 Due to the importance of the EmOC services and the investment of HRSP in this aspect, a national consultant monitored the completion of EmOC activities and the operation of the facilities providing basic and comprehensive EmOC services. The consultant's findings were discussed at three governorate meetings (two governors attended these meetings) and decisions were taken immediately. The EmOC monitoring initiative is evolving into an initiative supporting the promotion and activation of the role of Governorate Quality Teams in supervising and supporting the delivery of MNCH services with a focus on RH/EmOC.

2.3.6 The Project conducted six rapid assessment studies to review the impact of different programs supported by the Project (District Planning; IMCI; Management Training; Malaria; EmOC; Health Education; and Infrastructure) and a project's independent impact evaluation that summarizes and expands on the results of the rapid assessment studies. The studies were discussed with different stakeholders for follow-up and lessons learned. Their quality is mixed, but they did provide some useful information for the ICR.

2.3.7 Over the project life, assessing the performance of the health sector has been a real challenge. A well functioning M&E system with agreed, relevant indicators is very important and should be established early in the project cycle for a systematic follow up of PDO and component outcome indicators. The Ministry of Health should undertake periodic national family health surveys to measure health indicators in order to inform its programming and donor support.

2.4 Safeguard and Fiduciary Compliance
(focusing on issues and their resolution, as applicable)

Financial Management

2.4.1 The establishment of a financial management system satisfactory to IDA was a condition of effectiveness of the IDA Credit. The condition was met, but it took some time for the system to function properly. There were issues with the quarterly Financial Monitoring Reports (FMRs) and the management of the Special Account (SA)/Designated Account (DA) and sub-accounts, as well as delays in the availability of the government contribution. There were too many accounts which were difficult to properly reconcile and manage, and the Bank provided the CAU with the procedures to follow to manage them better, which helped the CAU improve the disbursement and internal control processes. Quarterly FMRs have been automatically produced by the project's accounting software and submitted to the Bank which identified a few areas for

improvement. The main issues related to missing financial planning sections of the FMRs, discrepancy between the cash balances of the FMRs and of the Trial Balance, and missing narratives summarizing the activities and justifying variances between forecast and actual expenditures. The FMR issues were pending for a long time, but based on the Bank's recommendations and continued reminders, they were eventually resolved and the project submitted satisfactory FMRs. A lesson learned is that the establishment of the accounting software and its capacity to automatically produce financial reports should be ready and tested during project appraisal instead of being a condition for effectiveness in order to avoid undesirable risks and delays in the FM system during project implementation. Additionally, intensive Bank supervision in the early years of the project is vital in order to provide the project with the necessary support.

2.4.2 Unqualified audit reports have been submitted within the due dates in compliance with the Development Credit Agreement (DCA). The Audit Report for FY 2008 has been received by the Bank. Escrow accounts have been opened for the last payment of the external auditor for the review and audit of 2009.

2.4.3 The CAU successfully managed the PHRD Grant (TF054611) of about US$200,000, which was fully disbursed and closed on December 31, 2008.

Procurement

2.4.4 An assessment of the MOPHP's procurement capacity was carried out during appraisal; it concluded that the MOPHP would need extensive support. The original design was that the PCC (composed of the heads of departments and programs of the Ministry) would manage the project with the support of the CAU for procurement. Initially, the CAU had many challenges to overcome. The project experienced capacity shortfalls in the procurement and contract oversight of the supervision consultants for the works component of HRSP as set out in the PAD and DCA. The CAU's role in carrying out its procurement mandate was negatively impacted by the turnover in the CAU leadership and its inability to productively engage with some department heads in the Ministry for procurement of civil works and goods like bed nets, etc. These department heads felt that their usual full control to contract was being encroached upon by the CAU in its efforts to carry out its fiduciary function compliance mandate under the HRSP.

2.4.5 The MTR and the consequent restructuring of the project and new leadership being put in place under the personal initiative of the Minister were also a turning point for procurement. The transfer of the procurement of civil works and medical equipment to the PMU of the PWP was a first for the Yemen portfolio. The strategy of moving the responsibility for procuring and managing contracts for "bricks and mortars" from line ministries to the PWP has since been repeated in education projects and is contributing to implementing civil works in IDA-financed projects in a timely and effective manner.

2.4.6 In the latter half of the Project, procurement of drugs and vaccines was scaled-up through UN agencies, which had many advantages over carrying out international competitive bidding procurement by the CAU. The use of UN agencies expedited service

delivery and ensured quality standards. There were serious delays, however, in the UN agencies' compliance with Bank requirements. A lesson learned is that it is important to agree early in the process about the Bank's accounting and reporting requirements.

2.4.7 With a decreased workload, the CAU's performance for the procurement of the remaining categories of goods and consultant services showed considerable improvement. Staff changes and procurement training also contributed to this positive turn of events. It is worth noting that over time, the CAU's Procurement Officer succeeded in developing an excellent working relationship with the PWP on matters dealing with procurement of works and medical equipment, as well as with the WHO that was responsible for drug procurement for the Bilharzias program.

2.4.8 An independent procurement review which was facilitated by a rather good filing system[2] was carried out in 2009 by a consultant. The review did not uncover any misprocurement. However, the report dated March 2009 identified a number of cases where procurement procedures that were followed were not in compliance with the provisions of the DCA, including some shortcomings in bidding documents for civil works with respect to bidders' eligibility and qualifications. In the case of some contracts subject to prior review of the Bank, the lack of compliance escaped the attention of the Bank.

Environment

2.4.9 The environmental category for the HRSP was "B". The only project sub-components that had potential environmental impact were the rehabilitation of district hospitals and health centers, with two types of waste management issues: waste water collection and disposal, and solid waste (infectious waste and common household waste) collection and disposal. A Generic Environmental Management Plan (EMP) was carried out during project appraisal, and specific EMPs were to be undertaken for each district hospital and health center to take into account the site specific conditions.

2.4.10 There have been problems with the management of liquid and solid waste. In October 2008, a Health Facility Planner was recruited to carry out an assessment of facilities being built under the project to determine the needs for possible additional small works to ensure their adequate operations and identify any requirements for adequate water and power supply as well as other critical items missing for effective operation of the facilities. He suggested a number of improvements that could be made to existing facilities: (a) improved liquid waste management, including the construction of septic tanks; (b) the survey of all sewer sizes and slopes, with the eventual correction of inadequate installations; and (c) the upgrading of most of the project incinerators, with the enlarging of openings and the modification or reconstruction of garbage disposal. He

[2] Most of the procurement documents were available for review, and were filed separately for each procurement tender/contract. The system of filing papers was reasonably orderly and hard copies of most emails issued and received by the CAU/PMU relevant to the integrity of the procurement decision-making were available on the files.

also made recommendations for the design and construction of waste management systems of future health facilities. These recommendations include: (a) more detailed TORs for the consulting firms in charge of design and supervision; (b) accurate and detailed reviews of documents by environment and technical specialists; (c) better monitoring and control of site supervisors during the construction phase; and (d) sensitization of end users for better management of liquid and solid waste.

2.4.11 The sensitization of end users is definitely a priority. It seems that, despite Bank efforts, the management of liquid and solid waste is still not taken seriously in many health facilities.

2.5 Post-completion Operation/Next Phase
(including transition arrangement to post-completion operation of investments financed by present operation, Operation & Maintenance arrangements, sustaining reforms and institutional capacity, and next phase/follow-up operation, if applicable)

2.5.1 The delivery of health services by the MOPHP is a continuous operation independent of the duration of any project, so that there is not really a need for explicit transition arrangements. The effective capacity building carried out under the project and the modest institutional development gains will facilitate the future operation of health systems. The main issue, however, is whether health facilities remain adequately financed, and particularly whether adequate operation and maintenance (O&M) costs are being met. Recently, the Government has exceeded the target set for O&M as a percentage of total MOPHP expenditure, which augurs well for the future. The financing of some activities (especially vertical programs) should not be a problem with the substantial resources available from many donors, such as the Global Fund for HIV/AIDS, Malaria and Tuberculosis, the Dutch Aid - Maternal and New Born Health, and the Global Alliance for Vaccines and Immunization (GAVI), to name only a few.

2.5.2 Pending the finalization of the Health Sector Review (HSReview) and its development into a national sector strategy and program, the Bank is responding to Yemen's pressing health needs by supporting two projects which are follow-up operations to the HRSP:

a) the Schistosomiasis Control Project (SCP) to decrease the high prevalence and intensity of infection of schistosomiasis, to be implemented from February 1, 2010 to December 31, 2015 in partnership with WHO and the Schistosomiasis Control Initiative (SCI); and

b) the Yemen Health and Population Project (HPP) to contribute to the acceleration of the achievement of MDG 4 & 5 (reduction in childhood mortality and improvement of maternal health) through support for key initiatives targeted to improve access to and utilization of maternal, neonatal and child health (MNCH) in selected governorates with poor MNCH indicators. The HPP is being prepared in partnership with UNICEF, UNFPA, and WHO, and is expected to be

submitted for approval to the World Bank's Board of Executive Directors in December 2010.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

(to current country and global priorities, and Bank assistance strategy)

3.1.1 The restructured HRSP remained relevant to current country and global priorities, and to the Bank assistance strategy, as expressed in the Government's Development Plan for Poverty Reduction (DPPR) and the Bank's most recent Country Assistance Strategy (CAS).

3.1.2 The Third Socio-economic Development Plan for Poverty Reduction (DPPR), currently under implementation (2006 to 2010), is built on eight pillars; one of them is human development, including health and population. The DPPR aims to accelerate progress towards the Millennium Development Goals (MDGs) through a renewed focus on the modalities of health service delivery. Health sector priorities entail improving management and planning capacities, involving local communities and strengthening quality of services. With regard to population, the DPPR calls for a substantial strengthening of reproductive health services in order to reduce the annual population growth rate to 2.75 percent.

3.1.3 The overall objective of the Bank Group's program in the FY10-FY13 IDA/IFC Country Assistance Strategy (CAS report no. 47562-YE, April 29, 2009) is to facilitate Yemen's further progress towards the MDGs. The CAS foresees a broad-based, yet selective engagement across a variety of sectors. The third strategic objective is to help foster human and social development, including health. Specifically for the health sector, the CAS calls for strengthening capacity and efficiency for the delivery of a basic package of health services, for improving the delivery of reproductive health services, and for reducing the prevalence of schistosomiasis (all of which have been addressed in one form or another under the HRSP).

3.2 Achievement of Project Development Objectives

(including brief discussion of causal linkages between outputs and outcomes, with details on outputs in Annex 2)

3.2.1 Annex 2 lists the project's outputs that were financed by the IDA Credit. For many sub-components IDA provided only a percentage of the financing required to carry them out; although there were no formal cofinancing arrangements, other development partners filled the gaps. These partnerships are an interesting feature of the Project, and development partners should be given credit for their important contribution to the project outcomes. As an example, donor efforts (WHO, UNICEF, JICA, GAVI) for polio control (following a polio outbreak in the region) should be recognized for boosting immunization programs with micro planning and a renewed immunization agenda for vaccination. UNFPA, the Netherlands and GTZ played a significant role in parallel financing for reproductive health services. More generally, donor coordination ensured

that the intervention of donors was complementary with, for example, the Bank financing operating costs for outreach activities and another donor providing the vaccines. Other development partners also made important contributions for malaria and schistosomiasis. The MOPHP led the coordination of donor funding and support.

3.2.2 The Data Sheet above presents the end-of-project results for the performance indicators that were selected to monitor the PDOs. The PDO indicators in the Data Sheet are based on the last ISR, with some adjustments that had to be made because of the availability of more up-to-date and/or correct information for some indicators[3]. When reviewing the achievement of the performance indicators, one has to keep in mind the attribution problem and the fact that, as mentioned earlier, the time limitation at restructuring did not allow for considering the implementation of baseline and impact studies. The Data Sheet shows that most of the performance indicators that were selected to monitor the PDOs[4] were achieved, and even exceeded in some cases:

a) At 87 percent for 2008, the national coverage of fully immunized children under one year of age came close to the 90 percent target. Particularly noteworthy is the eradication of polio. On the other hand, at 60 percent the BCG immunization somewhat lags behind.

b) The percentage of women using modern family planning methods continued to increase, with figures for 2006[5] (contraceptive prevalence rate of 19 percent) slightly above the target increase of 5 percent set for 2008.

c) The percentage of the MOPHP recurrent expenditures spent for maintenance also exceeded the target increase of 10 percent. Maybe more important than the increase in the percentage, between 2004 and 2007, the actual amounts spent on maintenance showed a significant increase in real terms (about 65 percent, assuming that the inflation averaged 8 percent per year).

d) The coverage of Long Lasting Insecticide Nets (LLIN) in the targeted districts reached 45 percent of households, compared with the 5 percent target.

[3] Regarding the discrepancies between ISR and ICR baseline data: (i) contraceptives: the ICR figure is for modern methods only, whereas the ISR figure is for all methods; and (ii) operation cost expenditure: the ICR figure is for actual expenditures in 2004, whereas the ISR figure was based on the budget for 2003.

[4] (i) to improve access to and quality of priority national family health and reproductive health programs; and (ii) to develop the capacity of the MOPHP to manage, plan and deliver basic health services and priority public health programs at the central level and in eight selected districts in the three targeted governorates.

[5] The next Yemen Family Health Survey, scheduled for end 2009 / early 2010, with the results available in 2010, will provide more recent information on the contraceptive prevalence.

e) The Integrated Management of Childhood Illnesses (IMCI) Program is now available on a daily basis in the 22 targeted health facilities in the 10 project districts, and in many more health facilities nationwide.

f) In the three targeted Governorates, comprehensive Emergency Obstetric Care (EmOC) services are provided in the 3 project district hospitals, and basic EmOC services are provided in 11 (out of 12) health centers.

g) District Health Plans were prepared in all 10 project districts and 20 percent of plans were implemented with Government's budget.

h) One hundred and forty health management personnel (100 percent of target) were trained by NCHMT in health planning.

i) Three hundred and fifty laboratory technicians (100 percent of target) were trained on malaria diagnosis.

j) Three project governorates were covered by the interactive health GIS.

3.2.3 The HRSP introduced to Yemen a useful instrument, the RRA, to facilitate coordination and accelerate implementation of the project. The RRA approach is now being considered for other projects in Yemen. With respect to the HRSP, the RRA approach also supported team building and some modest institutional change. The RRA champions led the process forward, building institutional ownership and capacity to promote an atmosphere of change and accountability. This point is valid for IMCI, EmOC, and initiating the quality management team, as well as for the use of integrated family health guidelines developed under the project in the Health System Strengthening program funded by GAVI.

3.2.4 The Project focused on implementing vertical programs and promoted specific disease control. It clearly demonstrated that, given the country very poor health outcome indicators, the overall shortage of funds and the rather weak implementation capacity, vertical programs are the only realistic way to improve health outcomes and, at the same time, to build the implementation capacity of the Ministry. A lesson learned is that implementing vertical programs provides an opportunity to address systemic issues by building capacity. The successful implementation of integrated services (PIMAC) requiring a systems approach is a case in point.

Other achievements

3.2.5 The extremely ambitious reform program was not implemented, but the HRSP can claim credit for other important achievements, including:

a) It was the first to finance malaria and schistosomiasis activities, which had been neglected by Government and donors.

b) It was instrumental in scaling up the delivery of IMCI services.

c) It financed the development of protocols and guidelines which are now being used in health facilities and appreciated by medical personnel, and which should make a contribution to the quality of health services.

d) It co-financed a national facility survey for the whole country so that the Ministry now has information on the location and status of health facilities (co-financed with USAID).

e) In the outreach activities, it filled an important gap in financing operating costs and training service providers.

f) It implemented two rounds of health public expenditure reviews (PER) covering the period 1999-2007. The PER has proven instrumental in MOPHP lobbying for increasing public finance for operational costs, including maintenance. As the Government is moving to a Midterm Expenditure Framework for its public budget planning, the health PERs conducted under HRSP are very instrumental in providing guidance to MOPHP while preparing for its 3-year forecast for the budget cycle 2010 – 2012.

3.3 Efficiency

(Net Present Value/Economic Rate of Return, cost effectiveness, e.g., unit rate norms, least cost, and comparisons; and Financial Rate of Return)

3.3.1 The costs involved in achieving the project objectives were reasonable in comparison with the benefits and with recognized norms. After restructuring, project interventions were focused on support for priority public health interventions that have the most impact on maternal and child health, including some vertical programs such as the Expanded Program of Immunization (EPI), the malaria program and the schistosomiasis control activities. Generally, these programs have a proven track record of effective implementation on the ground. As presented in Annex 3, the economic and financial analysis[6] carried out for these three sub-components of the Project shows that these programs were cost effective.

3.3.2 At restructuring, the implementation of civil works and the purchase of medical equipment and furniture were delegated to the PMU of the Public Works Project because of their proven track record in implementing civil works programs throughout Yemen[7]. About half of the IDA Credit was spent on these civil works and purchases that were carried out in a cost-effective way. It is also worth noting that the PMU of the PWP spent

[6] The scope of the analysis had to be narrowed to these three programs, taking into account the limited availability of data and the fact that benefits take time to materialize.

[7] An analysis of school construction 1996-2003 (carried out by a consultant in 2003) showed that, in terms of cost of school construction, unit costs and quality of works, the performance of the PWP compared favorably with that of the Social Fund for Development (SFD) and the Basic Education Expansion Project (BEEP).

only US$126,000, out of the US$500,000 that had been allocated to them for operating costs.

3.4 Justification of Overall Outcome Rating

(combining relevance, achievement of PDOs, and efficiency)
Rating: Moderately Satisfactory

3.4.1 To summarize: (i) the project objectives and implementation remained consistent with Yemen's current development priorities and with the Bank's current CAS; (ii) within the limits of what can be evaluated now, the project implementation has been cost effective; and (iii) most of the performance indicators that were selected to monitor the PDOs were achieved, and even exceeded in some cases.

3.4.2 Since the PDOs were formally revised (approved by the Board) when only US$5.3 million (16 percent of the IDA Credit) were disbursed, the outcome rating must take into account both the original and the formally revised objectives or targets.[8] As shown in the Table below, the weighted value of 4.52 corresponds to a rating between "Moderately Satisfactory" and "Satisfactory"; the overall rating is rounded to "Moderately Satisfactory," which is the same as the PDO rating in the last ISR.

	Against original PDOs	Against revised PDOs	Overall
1. Rating	Unsatisfactory	Satisfactory	-
2. Rating value*	2	5	-
3. Weight**	16%	84%	100%
4. Weighted value	0.32	4.20	4.52
5. Final rating (rounded)			Moderately Satisfactory
*Highly Satisfactory = 6; Satisfactory = 5; Moderately Satisfactory = 4; Moderately Unsatisfactory = 3; Unsatisfactory = 2; and Highly Unsatisfactory = 1. **% disbursed before/after PDO change			

3.4.3 The achievements (fully immunized women, using family planning services, MOPH recurrent expenditures on maintenance, the many LLIN distributed, and the availability of IMCI services) are quite impressive, yet the shortcomings in measuring quality and unsatisfactory rating against the original PDO justify an overall rating of "moderately satisfactory" for the PDOs.

3.5 Overarching Themes, Other Outcomes and Impacts

[8] ICR Guidelines – OPCS – August 2006 (last updated on 2/9/2007) - Page 25 and Appendix B.

(if any, where not previously covered or to amplify discussion above)

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

3.5.1 The HRSP's emphasis was on activities that are important for women and children, who are the main beneficiaries of the project investment.

(b) Institutional Change/Strengthening
(particularly with reference to impacts on longer-term capacity and institutional development)

3.5.2 As detailed in Annex 2 on "Outputs by Component", the Project financed training aimed at improving the managerial and technical skills of MOPHP staff in planning, management, computing, etc. The financing of studies (e.g., PER and National Health Accounts- NHA) was also a form of on-the-job training. In the process, the HRSP strengthened many units of the MOPHP. Particularly noteworthy is the strengthening of the HMIS Center through training and the provision of equipment. Also, the HRSP was instrumental in establishing the National Center for Health Management Training (NCHMT) but, with the closing of the IDA Credit for the HRSP, the future of the NCHMT is uncertain.

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

3.5.3 The Health Sector Review (HSReview) was not part of the Project but was linked to it since it was coordinated by the Health Policy and Technical Support Unit (HPTSU). The objective is to document what has happened since the 1998 Health Sector Reform Strategy and provide analyses that could be used for the preparation of a new health sector strategy. The HSReview can be considered as an unintended positive outcome of the Project, although it will take some time before it is fully developed into a national sector strategy and program.

3.6 Summary of Findings of Beneficiary Survey and/or Stakeholder Workshops
(optional for Core ICR, required for ILI, details in annexes)

Not applicable.

4. Assessment of Risk to Development Outcome

Rating: Significant

4.1 As mentioned in Section 2.5, the issue is whether adequate operation and maintenance (O&M) costs will be met. The substantial resources available from many donors, including the Bank, for a variety of projects and programs should help. Also, recently the government has exceeded the target set for O&M as a percentage of total MOPHP expenditure.

4.2 Nevertheless, the main threat to the development outcome is the risk that the government commitment will weaken in the future and that the necessary budget allocations will not be made. As discussed below, the challenge for the Government is to ensure that the health facilities that have been renovated and equipped are well managed, have adequate operating budgets, are staffed with qualified medical personnel, and have adequate supplies of drugs. For the last three or four years, the government commitment has been quite strong. But in view of the level of poverty of the country and the competing demands on the government budget, the Government may not be able to provide adequate operating budgets in the future. Staff availability, especially female service providers, as well as the dependency on donors for the supply of Maternal and Child Health drugs are issues that the Government needs to address.

4.3 The risk to development outcome is rated "Significant."

5. Assessment of Bank and Borrower Performance

(relating to design, implementation and outcome issues)

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry
(i.e., performance through lending phase)
Rating: Unsatisfactory

5.1.1 As discussed in 2.1 above, the project design was too ambitious and unrealistic. It overestimated the capacity of the MOPHP at the time, and underestimated the difficulties of both implementing the decentralization policy and integrating health services at the local level. According to the PAD: (i) the engineering design documents and the procurement documents for the first year's activities were complete and ready for the start of project implementation; and (ii) the Project Implementation Plan (PIP) had been appraised and found to be realistic and of satisfactory quality. The ICR mission could not find any evidence that these statements were correct. Actually, there was no detailed implementation manual. Among the shortcomings of the project design, the weakest point was the lack of a strategy and system for M&E. When the project was submitted to the Bank's Board of Directors, it was not ready for implementation.

5.1.2 The Bank performance in ensuring quality at entry is rated "Unsatisfactory".

(b) Quality of Supervision
(including of fiduciary and safeguards policies)
Rating: Satisfactory

5.1.3 As discussed in 2.2 above, the project had a very slow start. It took some time for the Bank to acknowledge that there were fundamental flaws in the project design and implementation arrangements but, starting in 2004, both the project development objectives (PDOs) and the implementation progress (IP) were rated "Unsatisfactory" by the Bank. At about the same time (in 2005), the Government became very concerned about the poor performance of the projects in its portfolio (including the HRSP) and the

prospects of funding cuts from donors. This opened the way for a fruitful collaboration between the Government and the Bank in order to put the project back on track. The turning points for the project were the 2005 mid-term review (MTR) and the subsequent formal restructuring of June 2006, and the introduction of the Rapid Results Approach (RRA).

5.1.4 The MTR of May/June 2005 was very well prepared and carried out by the Government and the Bank. It was informed by a number of working papers (one for each sub-component) that summarized the achievements of the sub-component to date and presented a plan of action for the activities that could be completed during the time remaining under the project. The plans of action included time-bound implementation plans for the agreed-upon remaining activities, monitoring indicators and, in some cases, revised cost estimates and draft terms of reference for studies that might be required. All the MTR recommendations could not be implemented in a timely manner, and there was a need for further adjustments. Nevertheless, the MTR provided a solid basis for the successful project restructuring of June 2006.

5.1.5 The Bank suggestion to carry out the rapid results approach (RRA) exercise was well received by the MOPHP. The exercise was a success because of the strong support of the Minister himself and the commitment of staff of the Ministry and the CAU, but also because of the active involvement of Bank staff, including staff of the World Bank Institute (WBI) in Washington. This "implementation support" provided by the Bank for the RRA was "Bank supervision" at its best.

5.1.6 The Bank provided valuable support for the establishment and strengthening of the M&E system. In response to the CAU's initial difficulties with financial management and procurement, Bank supervision helped the CAU to deal with pending issues and improve the project financial management and procurement. The Bank also provided recommendations and many reminders to properly manage liquid and solid wastes.

5.1.7 In view of the pro-active role of the Bank to put the project back on track in collaboration with the MOPHP management, the quality of supervision by the Bank is rated "Satisfactory".

(c) Justification of Rating for Overall Bank Performance
Rating: Moderately Satisfactory

5.1.8 The rating for the Bank performance in ensuring quality at entry is in the unsatisfactory range and the rating for quality of supervision is in the satisfactory range. Therefore, in accordance with the ICR Guidelines, the overall Bank performance is rated "Moderately Satisfactory" because the overall project outcome is rated in the satisfactory range.

5.2 Borrower Performance

(a) Government Performance

Rating: Moderately Satisfactory

5.2 1 The Government shares some responsibility with the Bank for the unsatisfactory quality at entry of the Project. The fact that the Project was not ready for implementation, combined with some management weaknesses in many units of the MOPHP, explain why the Project had such a slow start. In the early years of the Project, the Government's performance was rather poor. In 2005, the HRSP and another large Bank-financed projects became serious liabilities for the Government, raising the prospect of substantial cuts in funding from the Bank and other development partners. In response, the Government formulated the National Agenda for Reform and adopted a six-month action plan. In February 2006, there was a major reshuffling of the Cabinet, replacing 15 of the existing 35 Ministers, including the MOPHP, and creating a sense of urgency to turn things around.

5.2.2 With respect to the HRSP, all relevant Government Ministries (the MOPHP, but also the MOF and the MOPIC) worked closely with the Bank to carry out the MTR and, thereafter, to implement the agreed findings and recommendations of the MTR. After restructuring, and with strong leadership of the Minister of Health and the dedication of the Ministry staff, including the hard work of the CAU staff, as well as the support and commitment provided by the MOPIC and the MOF, the Project was implemented successfully in about three and a half years, and the IDA Credit was fully disbursed. With all the funds disbursed or committed, the total project cost is US$33.5 million[9]; the IDA credit financed US$33.1 million and the Government's contribution was US$0.4 million. This is quite an achievement for all the departments of the MOPHP and the CAU, as well as for the PMU of the PWP.

5.2.3 *Project steering and coordination*. To ensure adequate coordination, the implementation arrangements in the PAD included both a Steering Committee (SC) and a Project Coordination Committee (PCC). Neither of the two committees met frequently at the beginning of the project. The PCC composed of the program directors of the Ministry was supposed to manage the Project with the support of the CAU for financial and procurement functions; for all practical purposes, the PCC was replaced by the RRA meetings. In later years, the SC formed by the Minister and Deputy Ministers of MOPHP and representatives from MOF and MOPIC became very active and provided good guidance to the CAU for project implementation. The SC has supported the project in various ways including quick approval of activities, resolving financial/payment issues, etc. It is worth noting that the Minister of MOPHP has been attending most of the meetings, and has been fully informed of project activities. The MOF and MOPIC have been also very active and supportive to facilitate project implementation.

5.2.4 *Credit administration*. The Credit Administration Unit (CAU) was responsible for procurement activities, keeping project accounts, and monitoring the implementation

[9] Including US$11,000 for the repayment of the Project Preparation Advance. The above project cost does not include the PHRD Grant of US$199,840 provided by Japan to finance technical assistance to the MOPHP to facilitate project implementation.

progress. The recruitment of the CAU staff was slow. At the beginning of the project, the CAU was not very effective. However, the situation improved considerably in the last three and a half years. The CAU played a critical role in expediting project implementation and providing acceptable procurement and financial management support.

5.2.5 *Project management unit (PMU) of the PWP*. At project restructuring, the implementation of civil works and the procurement of equipment were delegated to the PWP. CAU and the PMU of PWP worked well together to ensure that deliverables under all contracts in the procurement plan were realized prior to the revised IDA Credit closing date of August 31, 2009. Foreign exchange fluctuations created uncertainties regarding the funds available to complete some badly needed additional works, which complicated the tasks of the CAU and the PMU of PWP.

The challenges ahead

5.2.6 The improvement of the health infrastructure in the selected districts is impressive, but there are a number of shortcomings that need to be rectified. An example is the absence of elevators in two two-story hospitals with operating rooms in the upper level. Also, more needs to be done to sensitize end-users to the importance of better management of liquid and solid waste in health facilities.

5.2.7 In order to operate the improved facilities to their maximum potential, the Government needs to ensure that these facilities are well managed, have adequate operating budgets, are staffed with properly trained and qualified medical personnel, and have adequate supplies of drugs (particularly for IMCI and EmOC) since there is a strong correlation between drug availability and utilization of health services. All these are prerequisites for improving utilization and quality of priority national family health and reproductive health programs, which is the essence of the project development objectives (PDOs). There are positive signs that the Government is committed to ensuring that the improved facilities are well operated and maintained. Managers have been replaced in a number of facilities, and in early 2009, the Minister of Health formed a committee to work towards filling the gaps of medical staff in each HRSP targeted facility. Following a review of existing staff and staff needs, the committee was able to provide additional medical staff and/or redistribute staff within a governorate. Also, the MOPHP pursued its efforts to support the facilities with adequate budgets; for example, in October 2009 it succeeded in including a running budget for Yareem Hospital – one of the biggest HRSP-financed health facilities in Ibb Governorate.

(b) Implementing Agency or Agencies Performance
Rating: not applicable

5.2.8 The implementing agency was the Ministry of Public Health and Population (MOPHP). Since the MOPHP is part of the Government, the assessment of its performance is included in 5.2 (a) above.

(c) Justification of Rating for Overall Borrower Performance
Rating: Satisfactory

5.2.9 The Government was partly responsible for the unsatisfactory quality at entry and it performed poorly in the early years of the project. However, in view of the rather remarkable work done by the MOPHP in the last three and a half years to transform a problem project into a performing and fully disbursed project, the overall Borrower performance is rated "Moderately Satisfactory".

6. Lessons Learned

(both project-specific and of wide general application)

6.1 Many lessons can be drawn from the history of this project and the way it was transformed from a problem project to a performing and fully disbursed project:

a) In health projects where usually the public sector operates under many constraints (particularly the lack of incentives for civil servants), strong leadership at the highest level of the ministry is essential to ensure satisfactory implementation and operation of the projects.

b) In an environment of weak institutional capacity, the design of a project must be simple, realistic and consistent with the government's capacity to implement it.

c) The design of a health project must include the preparation of an implementation manual with sufficient details on implementation modalities including, at a minimum, for the first year of the project and for each activity, information on what has to be done, who is going to do what, when, and at which cost?

d) A well functioning M&E system with agreed upon indicators is very important and should be established early in the project cycle for a systematic follow up of PDO and component outcome indicators. Key performance indicators must be consistent with the PDOs, focusing on outcomes rather than outputs, with realistic targets. Project design must include surveys/studies to evaluate outcomes and resources to implement them. The Ministry of Health should undertake periodic national family health surveys to measure health indicators in order to inform its programming and donor support.

e) Even when a project is well prepared with sufficient details, and *a fortiori* when a project is not properly prepared, the use of the rapid results approach (RRA) can be very useful to motivate staff and ensure that the momentum is not lost. The RRA methodology provides a solid foundation for expediting implementation because of its emphasis on clear and realistic targets, assignment of responsibility and provision of support (e.g., a 'team of champions' to provide overall guidance), and senior level buy-in to program activities.

f) Technical ministries like the Ministry of Health should concentrate their energy and activities on purely sectoral matters and issues and delegate the carrying out of civil works to agencies specialized in those activities, such as PWP. At the same time, agencies like PWP need to expand their capacity to respond to the demand for their service to ensure further quality and timeliness of their delivery.

g) In a weak implementation capacity environment, working with UN agencies for the procurement of drugs and medical supplies is usually a better alternative to international competitive bidding by the implementing agency; it expedites service delivery and ensures quality standards. In order to avoid delays in UN agencies' compliance with Bank requirements, it is important to agree on the Bank's accounting and reporting requirements early on in the process.

h) Vertical programs versus a system approach is a complex issue. In a context of burning need for quick health outcomes, working through vertical programs could achieve quick health outcomes while building implementation capacity and should be designed to ensure gradual building of a change management platform.

i) Renovating and equipping health facilities and training medical staff could turn out to be a total loss of resources if adequate budgets are not made available for operation and maintenance. Ensuring a satisfactory utilization of the available capacity of health facilities may also require improvements in the management of these facilities so that the population is encouraged to use them.

j) Special efforts must be made to ensure satisfactory design and drawings of utilities and waste management systems and to sensitize end-users for better management of liquid and solid waste, including medical waste.

k) Building the capacity of an implementation unit takes time. At the beginning, the Credit Administration Unit (CAU) did not perform satisfactorily. In the last three and a half years, the CAU has performed well and accumulated good experience in project implementation. The experience and knowledge of its staff are assets that should be made use of to facilitate other development activities.

l) The establishment of the accounting software and its capacity to automatically produce financial reports should be ready and tested during project appraisal instead of being a condition for effectiveness in order to avoid undesirable risks and delays in the FM system during project implementation. Additionally, intensive Bank supervision in the early years of the project is vital in order to provide the project with the necessary support.

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

(a) Borrower/implementing agencies

None

(b) Cofinanciers

Not applicable

(c) Other partners and stakeholders
(e.g. NGOs/private sector/civil society)

None

Annex 1. Project Costs and Financing

(a) Project Cost by Component and Sub-component (in US$ Million equivalent)

Components	Appraisal Estimate (US$ millions)	Actual/Latest Estimate (US$ millions)	Percentage of Appraisal
Component 1 – Improvement of National Family Health and Reproductive Health Programs			
1.1 Decentralized Operational Management (DOM)	1.030	0.444	43%
1.2 Delivery of a Package of National Health Programs and Basic Health Services (PNHP & BHS)	19.540	25.894	133%
Sub-total Component 1	20.570	26.338	128%
Component 2 – Capacity Building			
2.1 Malaria	2.200	2.410	110%
2.2 Health Education	1.540	1.139	74%
2.3 Health Finance and Management	1.730	0.869	50%
2.4 Health Management Information System (HMIS)	2.490	1.186	48%
Sub-total Component 2	7.960	5.604	70%
Component 3 - Credit Administration and Project Coordination (CAU and PMU)	1.070	1.547	145%
Total Project Costs	29.600 *	33.489	113%
Project Preparation Advance (PPA)	**	0.011	n.a.
Total Financing Required	29.600	33.500	113%
Source: CAU – MOPHP			

Notes:

* Physical contingencies of US$1.82 million and price contingencies of US$2.40 million are included in the costs of the components.
** In the column "Appraisal Estimate", the amount due to repay the Project Preparation Advance (pursuant to Section 2.02(c) of the DCA) is included in the costs of the components.

The column "component" lists the components as revised at restructuring (amendment of the DCA dated June 30, 2006 – Schedule 2).

(b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (US$ millions)	Actual / Latest Estimate (US$ millions)	Percentage of Appraisal
Borrower	Counterpart contribution	2.070	0.409	20%
International Development Association (IDA)		27.530	33.091	120%
Total		29.600	33.500	113%

Source: CAU - MOPHP

c) Disbursements by categories for each Sub-component (in US$ thousands equivalent)

Components / Categories	Civil Works	Goods	Consultants	Training	Operating Costs	Total
Component 1 – Family Health and Reproductive Health						
1. 1 Decentralizing Operational Management (DOM)		201	5	224	14	444
1.2 Package of National Health Programs and Basic Health Services (PNHP&BHS)	5,553	12,450	1,000	1,723	5,168	25,894
Sub-total Component 1	5,553	12,651	1,005	1,947	5,182	26,338
Component 2 – Capacity Building						
2.1 Malaria	-	2,234	15	159	2	2,410
2.2 Health Education	-	751	8	306	74	1,139
2.3 Health Finance and Management	-	169	195	466	37	869
2.4 HMIS	18	748	208	191	21	1,186
Sub-total component 2	18	3,902	426	1,123	134	5,604
Component 3 – Credit Administration and Project Coordination (CAU & PMU)	-	125	641	123	659	1,548
Project Preparation Advance	-	-	-	-	-	11
TOTAL	**5,571**	**16,677**	**2,072**	**3,194**	**5,976**	**33,500**

Source: CAU - MOPHP

d) Disbursements by Categories for the Activities Included in the Package of National Health Programs and Basic Health Services – Sub-component 1.2 (in US$ thousands equivalent)

Components / Categories	Civil Works	Goods	Consultants	Training	Operating Costs	Total
Reproductive health	5,535	9,916	600	22	72	16,145
EPI	-	685	105	131	4,226	5,147
Bilharzias	-	962	-	261	691	1,914
EMOC	-	400	-	419	51	870
IMCI	-	-	4	462	53	519
Surveillance	-	132	-	196	17	345
Family Health	-	-	3	29	46	78
Other	18	355	288	203	12	876
TOTAL PNHP&BHS	**5,553**	**12,450**	**1,000**	**1,723**	**5,168**	**25,894**

Source: CAU - MOPHP

Annex 2. Outputs by Component [10]

With all the funds disbursed or committed, the total project cost is US$33.5 million[11]; the IDA credit financed US$33.1 million and the Government's contribution was US$0.4 million.

Component 1: Improvement of National Family Health and Reproductive Health Programs (Cost: US$26.338 million)

Sub-Component 1.1: Decentralized Operational Management (DOM)
(Cost: US$0.444 million)

1.1.1 Revised description at restructuring (amendment to DCA of June 2006) - *Improving the management systems and procedures of central, Governorate and district health offices in support of the decentralization of resource management required for establishing an operational district health system in accordance with the Local Authorities Law.*

1.1.2 The HRSP financed training and some office equipment. The HRSP support to the Decentralized Operational Management (DOM) included international training of 21 managers from MOPHP at central and governorate levels, in-country training of 692 managerial personnel from the targeted 10 District Management Teams (DMTs) and 3 Governorate health offices. The training aimed at improving the managerial and technical skills in planning, management, English and computers. One of the main achievements of DOM was formation and training of DMTs and overseeing the development of ten annual district plans for 2 consecutive years (2007 and 2008). These plans reflected adequate planning skills; they were clear, comprehensive but ambitious, sometimes unrealistic. District plans were successful in obtaining 20 percent of their implementation budget from Governorates, including activities at Governorate level that benefited the districts. Health district plans were also presented to local councils that funded some of the communications activities related to EPI outreach and campaigns. Planned activities were implemented if they were part of programs supported by development partners. Supervision of health facilities by district and governorate teams was constrained by the lack of resources allocated for supervision.

1.1.3 District plans were utilized by the targeted districts. However, a pre-requisite was missing. The districts management plans were to be prepared within the framework of administrative as well as fiscal decentralization to the districts. The sub-component fell

[10] This annex lists the components as revised at restructuring and shows (in italic) the revised description of these components at restructuring – amendment of the DCA dated June 30, 2006 – Schedule 2.
[11] Including US$11,000 for the repayment of the Project Preparation Advance. The above project cost does not include the PHRD Grant of US$199,840 provided by Japan to finance technical assistance to the MOPHP to facilitate project implementation.

short of establishing an operational district health system (DHS) in accordance with the Local Authorities Law, as was envisaged at the restructuring (see amendment to the Development Credit Agreement – DCA – dated June 30, 2006 – page 7).

Sub-Component 1.2: Delivery of a Package of National Health Programs and Basic Health Services (Cost: US$25.894 million)

1.2.1 Revised description at restructuring (amendment to DCA of June 2006) - *Supporting the delivery of national health programs and basic health services in district hospitals and health centers, including: (a) upgrading the skills of health care providers; (b) the provision of drugs, medical supplies and medical equipment; (c) the provision of reproductive health/family planning supplies and implementation of the vaccination program; and (d) the rehabilitation of about eight (8) district hospitals and about ten (10) health centers in eight (8) districts within Ibb, Sanaa and Hodeida*.

1.2.2 **Reproductive Health - Maternal and Neonatal Health – Emergency Obstetrical Care (EmOC)** (Cost: US$17.015 million, including the renovation and equipment of health facilities, the training of medics and paramedics, and the provision of comprehensive and basic emergency obstetric care - EmOC – in the selected health facilities).

Civil works and equipment

1.2.3 The PMU of the Public Works Project (PWP) implemented the rehabilitation and extension of five district hospitals and 17 health centers (total: US$5.535 million) and procured and delivered the equipment (total: US$9.915 million) for these facilities. Since some facilities received similar equipment and furniture through other sources of funding, some items of equipment and furniture could be redistributed to facilities (other than the project targeted 22 facilities) which deliver RH services including EmOC. Staff was trained on the use of equipment for most, but not all items of equipment.

1.2.4 The project was not able to provide elevators to two 2-story hospitals with operating rooms on the upper level (Manakah and Yareem) due to budget constraints. The elevators are essential to operate these hospitals, and the MOPHP is exploring other sources of finance to install the elevators as soon as possible.

1.2.5 *Training of medics and paramedics for EmOC services (total: US$0.403 million)*

1.2.6 The project provided support to upgrade 117 health staff to improve the skills of EmOC services providers. The training included 4 staff categories, namely: 45 Community Midwives (CMWs) with 2 years training; 45 Supervisors Community Midwives (SCMWs) with 1 year training; 13 Anesthetists Assistants with 2 years training; and 14 Obstetric Doctors with 1 year training. Doctors were awarded diplomas in gynecology and obstetrics. Most of the graduates are deployed in the facilities that nominated them. The 45 SCMWs are playing a very positive role in the delivery of

EmOC and MCH/FP services; most of them are volunteering in health facilities, and MOPHP, governorates and local councils are working to enroll them starting in 2010.

1.2.7 EmOC protocols and guidelines were developed and endorsed by the Population Sector/MOPHP in December 2007, with the technical assistance from an international consultant in coordination with WHO Consultants.

1.2.8 Training of 14 EmOC high caliber doctors and midwives as trainers (TOT) took place in June 2009, and training of 24 EmOC staff /midwives in August 2009. This training, with developed protocols and guidelines, will furnish the way towards a unified and systematic approach to EmOC service provision which can be duplicated in other Yemen governorates.

1.2.9 HRSP provided support to train 35 middle RH Managers at governorate and district levels at the National Centre for Health Management Training.

1.2.10 *EmOC drugs*. The HRSP has funded EmOC drugs that were distributed nationwide.

Operation of the facilities

1.2.11 Out of the 15 health facilities targeted for EmOC, 3 districts hospitals provide comprehensive EmOC with 24/7 availability of service and 11 health centers provide basic EmOC services (as of October 2009, one health center did not have the required staff to provide basic EmOC).

1.2.12 There are several constraints to the provision of Health services: (i) insufficient operating budget; (ii) lack of critical cadres such as obstetricians, anesthesiologists and female doctors and nurses; (iii) insufficient training of staff to use the equipment and to make facilities operational; (iv) and shortages of drugs. These are areas of concern that the MOPHP is trying to address. Another issue is the apparent lack of understanding and concern about environmental matters since the disposal of medical and other waste is not taken seriously by many health facilities.

Expanded Program of Immunization – EPI (Cost: US$5.147 million)

1.2.13 The HRSP has funded mainly operating costs (US$4.221 million) of EPI campaigns and outreach activities over the past three years, plus some vehicles and training. The Government is financing vaccines and related supplies. The procurement and delivery up to the central warehouse are outsourced to UNICEF.

1.2. 14 The EPI program has steadily maintained its yearly outcomes. For the year 2008, the national coverage was 87 percent for Penta 3 (diphtheria, pertussis, tetanus, hepatitis B & Haemophilus Influenza type b). The polio campaigns have been particularly successful (87 percent coverage in 2008). On May 15, 2009, WHO declared Yemen a polio free country (although the official certificate has not been issued yet). The next

objective is to eradicate measles (73 percent coverage in 2008). On the other hand, the yearly vaccination for BCG remained around 60 percent, pointing to deficiencies either in demand or in supply of services.

1.2.15 The HRSP also financed an Immunization Tracking Study.

Schistosomiasis (Cost: US$1.914 million)

1.2.16 Before the HRSP, no one focused on schistosomiasis, which was neglected by donors and government for lack of funds. The HRSP financed drugs, operating costs and training.

1.2.17 Funded by HRSP, three campaigns of mass treatment of school age children (6 – 18 years old, including those who did not attend schools) were completed in 92 districts in 16 governorates from 2005 to 2008; they treated over 1.7 million school age children. The last and fourth campaign was partially funded (20 percent) by HRSP for 17 districts and treated 352,000 children. After the training of health workers, teachers and volunteers, information campaigns on Schistosomiasis origins, transmission, symptoms, treatment and possible side effects and their treatment were shortly followed by mass treatment with Praziquantel and Mebendazole. The vector control activities were conducted in collaboration with another World Bank funded project: Sana'a Basin Project. Prevention sessions conducted by volunteers were found to be weaker than the ones implemented by health workers. The Schistosomiasis Control Campaigns are ongoing operations, and a new IDA funded project has been approved recently.

IMCI (Cost: US$0.519 million)

1.2.18 The baseline was zero availability in 2004. Since the 2006 restructuring, HRSP has substantially contributed to the national roll-out of the IMCI strategy in the targeted districts, achieving remarkable outputs: (i) the adaptation of curriculums and their production; (ii) training of trainers at central level; (iii) IMCI training courses conducted for 86 doctors and 689 other medical providers; (iv) 400 health facilities (74 percent of 541 facilities) in 41 districts are implementing IMCI; and (v) the provision of quarterly outreach services by integrated multidisciplinary mobile teams. The HRSP has funded the procurement of two batches of IMCI drugs with assistance from UNICEF using the essential drug lists per level of facility developed in collaboration with WHO.

1.2 19 Nationwide, all 22 Governorates now have districts implementing IMCI, and 199 districts (60 percent of all districts in the country) have PHC facilities implementing IMCI. In the whole country, 1,790 PHC facilities (50 percent coverage) are implementing IMCI. IMCI training courses were conducted for 3,716 medical staff (578 physicians and 3,138 paramedical staff). One and a half million children under age five have access to IMCI services.

1.2 20 An independent rapid assessment of IMCI services showed that the utilization rate of IMCI services increased after the project interventions, but is also function of the

availability of drugs. Both providers and clients are generally satisfied with the provision of IMCI services. However, systematic follow–up after training is needed, and it is important that the MOPHP ensures regular and sustainable drug supply.

Disease Surveillance (Cost: US$0.345 million)

1.2.21 The HRSP investments in equipment, clinical and laboratory supplies were critical to the improvements of permanent communication with districts and governorates for the purpose of disease surveillance. HRSP funding provided inputs and improved processes to the increase of completeness (70 percent) and timeliness of reporting of the seven diseases from the 21 Governorate coordinators and 609 focal persons. However, 244 districts are yet to be equipped and covered, and there is a need for more long-term training (epidemiologist).

Family Health (Cost: US$0.078 million)

1.2.22 Since the 2006 restructuring, HRSP has funded the pilot implementation of the integrated primary health care-reproductive health (IPHC-RH) curriculum in targeted governorates, including curriculum development and pre-testing. With joint funding from HRSP and GAVI–HSS, the training of trainers on IPHC–RH in 26 districts and training of providers in 17 districts were completed in early 2009. However, as HRSP funding has ended, the supervision of trained providers in 250 facilities and training of the same in integrated outreach services were completed only in some of the HSS funded districts. Since the training and first supervision took place only few months ago, outputs and outcomes remain to be seen.

Others (Costs: US$0.877 million)

1.2.23 The HRSP financed equipment and consultancy services for the Engineering Affairs and the Medical equipment and Maintenance Departments.

Component 2: Capacity Building (Cost: US$5.604 million)

Sub-Component 2.1: Malaria (Cost: US$2.410 million)

2.1.1 Revised description at restructuring (amendment to DCA of June 2006) - *(a) Strengthening the national malaria control program activities by building the capacity of about seven referral laboratories; (b) Improving malaria integrated vector management in high-risk and epidemic-prone areas, including: (i) promotion of personal protection measures; (ii) residual house spraying; and (iii) use of insecticide treated materials.*

2.1.2 Before the HRSP, no one focused on malaria: the Global Fund became involved at a later date. By supporting the malaria program, the HRSP aimed to improve malaria integrated vector management in high risk and epidemic prone areas, including: (i) promotion of personal protection measure; (ii) residual spraying; and (iii) use of insecticide treated materials. The project financed 14 four-wheel drive vehicles to

strengthen the governorate supervision system, and 50 motorcycles for malaria control field workers. In 2006/2007, it procured and delivered 175,000 Long Lasting Insecticide Nets (LLINs) for pregnant women and under-5 children and 350 hand sprayers. The Project also trained 530 doctors, technicians, and community volunteers (women who distribute LLINs in the villages) as part of integral actions to synergize protective, preventive and diagnostic malaria rollback strategies.

2.1.3 The malaria baseline was zero, and the end-of-project target was that 5 percent of households in targeted districts have at least one insecticide treated net (ITN). A rapid assessment conducted on a small sample of the targeted districts and households showed that the coverage of the targeted group varied between 23 percent and 61 percent (an unweighted coverage of 45 percent) and that, among the households who received LLIN, 14 percent received more than one.

2.1.4 Other findings are: (i) not all endemic areas were covered; (ii) children constitute 90 percent of the users; (iii) while communities are aware that LLINs are used for protection from Malaria, 68 percent of the interviewed households misuse the nets, indicating further need to educate households on the adequate use of LLINs; (iv) nearly 28 percent of the visited households paid between 100 and 2,000 Rials for LLINs; and (v) inefficiency in delivering LLINs was dominant where non-health workers were involved in the distribution activities.

Sub-Component 2.2: Health Education (Cost: US$1.139 million)

2.2.1 Revised description at restructuring (amendment to DCA of June 2006) - *Strengthening the institutional capacity of the national health education and information center (NHEIC) to develop and implement the national health education program.*

2.2.2 The HRSP was the main funding source for the Health Education Department. The Project funded the construction and equipping the National Center for Health Education; development of awareness raising messages on newspapers and radio for several health themes, including: RH, EPI, Malaria and Schistosomiasis; installing TV/Video sets in 60 health facilities for HE activities; external training in media production for key staff; production of TV spots and sketches with participation of TV celebrities; TOT on communication techniques; training of health providers, community volunteers; and implementation of HE campaigns using mobile cinema. All 333 districts were helped by the project which trained 333 district health education coordinators and about 500 health educators at the facility level. The Project helped establish a nationwide health education network which emphasized the inter personnel health education channel, and assisted in running campaigns through the district coordinators.

Sub-Component 2.3: Health Finance and Management (Cost: US$0.869 million)

2.3.1 Revised description at restructuring (amendment to DCA of June 2006) - *(a) Supporting the development of human resources in the areas of financial analysis by: (i) conducting public expenditures reviews to improve resource allocation; (ii) preparing national health accounts to provide detailed analysis on total health spending in public and private sector; and (iii) the preparation of health insurance studies to assess the feasibility of developing a health insurance program. (b) Developing health management by supporting the national center for health management training.*

Health Finance

2.3.2 Activities implemented by the Health Policy and Technical Support Unit (HPTSU) under the health finance theme included: (i) a study on Health Insurance, co financed by local funds and WHO, completed in 2004 ; (ii) development of the 2007 National Health Accounts (NHAs), and a PER covering the years 2004-2007 and analyzing the trend in health finance over 2003-2007; (iii) a comparative analysis on operational costs and maintenance; (iv) development of a training manual on governorate accounts; (v) a study on cost sharing in public health services; (vi) mapping health sector donors' support to inform donors' coordination efforts; and (vii) supporting the health sector review process and national conference to launch the updated sector strategy. Some activities under this theme were delayed so that the results and findings of these studies have been available only recently. The MOPHP must see to it that the findings of these studies are disseminated to properly influence health finance policies.

Health Management

2.3.3 The National Center for Health Management Training (NCHMT) was established under the HRSP. The Project funded the construction of a third floor in the building increasing the center's capacity and funded the development of management training modules and the training of participants. The complete theoretical and practical 36-week health management training consists of the following 10 modules: (i) health sector reform policy: (ii) management of health services; (iii) medical supplies; (iv) health planning; (v) health information systems; (vi) manpower development; (vii) quality management of health services; (viii) budgeting; (ix) monitoring and evaluation; and (x) research. The Project funded: (a) the training of 225 participants from all governorates in management, planning, leadership, etc; (b) a diploma course for 20 managers; (c) a 5-month course for 20 hospital directors; (d) the development of 20 management training modules; and (e) advance training (abroad) to five of the center's main trainers. Upon completion of training, district plans were developed with expert assistance from the Decentralized Operational Management (DOM), Planning Sector of the MOPHP and the Governorates.

2.3.4 An evaluation study was conducted on a sample of 24 graduates. Participants expressed satisfaction with their training which contributed to improving their management skills. However, they faced institutional challenges to apply the knowledge

and skills gained. The centralization of the resource allocation process and the centralized decision making prevented them from making full use of their planning skills. Planned activities that were implemented were those supported by donors (RH services, malaria, bilharzias and immunization). Improvements in health services in targeted districts were due more to the support of donors than to improvement in planning or in following the implementation of plans.

2.3.5 The HRSP support to the National Center for Health Management Training (NCHMT) provided a substantial lift to the role of the center in supporting the health system. The NCHMT continues to provide some training with the financing of other donors but, with the closing of the IDA Credit for the HRSP, the future of the NCHMT is uncertain.

Health Sector Review (HSReview)

2.3.6 The MOPHP started a Health Sector Review with the aim of developing a set of realistic and comprehensive objectives, which are shared by the many different actors at all levels of the health system including the users (be it in the private or in the public sector), all national organizations whose activities impact on health (mainly the Ministries of Finance, Local Authorities, and Planning and International Cooperation) and development partners. The Health Sector Review documents what has happened since the 1998 Health Sector Reform Strategy and provides analyses that could be used for the preparation of a new strategy. The review was coordinated by the HPTSU.

2.3.7 The impulse to do so was given by a larger group of Yemeni health officials from the MOPHP, many of them holding key leadership positions today. The idea was to develop a strategy, as concrete as possible, in order to agree on medium term guidelines for MOPHP actions. Of course, these guidelines should also serve as a basis for negotiation with development partners on Yemen's priorities in health.

2.3.8 Conceptually two key elements were given high importance:

a) The *improvement of health services* should be the main concern, the "leitmotiv" of the health sector review. Health services are provided in Yemen through the public sector (in health posts and centers owned by local authorities, as well as in autonomous, general and specialized hospitals) as well as through a growing private sector, with all levels of complexity. However, all the specialized institutions supporting this service provision, such as the Central Laboratory, Blood Bank, Higher Institute of Health Science, the MOPHP administration should also be taken into account.

b) To dare a broader *participatory process,* which by gathering the views and worries of all stakeholders and transforming them into meaningful action, would create more than a simple planning document, but also a movement towards improving the sector. Instead of a plan based merely on a technical logic, with pre- designed strategies, often driven by the inertia of already existing national or

international programs, the challenge was to dare to listen, understand and negotiate with all stakeholders for solid Yemeni solutions.

2.3.9 The work was designed in two phases: a "status quo" analysis phase, planned as a very participatory process in which all stakeholders were allowed to express their ideas about the existing situation in the sector and a "benchmarking" phase, in which national experts, in key positions in the Government of Yemen, negotiated among them realistic "marks" or objectives to reach by the year 2015.

2.3.10 As a continuation of all previous efforts and as a practical issue towards transferring all technical work into implementation, the MOPHP is working on a new national strategy for the health sector with clear vision and mission. This strategy will provide a realistic, solid base for formulating future strategic plans, in particular for the preparation of the 4th 5-year health development plan. However, it will take some time before the HSReview is fully developed into a national sector strategy and program.

Sub-Component 2.4: Health Management Information System – HMIS (Cost: US$1.186 million)

2.4.1 Revised description at restructuring (amendment to DCA of June 2006) - *Developing a health management information system, including: (a) a management decision support system; (b) a health information system; and (c) a geographic information system (GIS).*

2.4.2 The Project financed mostly equipment but also some consultancies, training and very minor civil works. The central level HMIS is now adequately equipped. The HMIS Center is functional and producing data and maps of health facilities.

2.4.3 The Project funded: (i) a well equipped GIS Unit; (ii) construction and equipping of a computer training lab (10 workstations and a server) which up to June 30, 2009 had conducted 11 courses for 183 governorate staff on different IT related aspects such as GIS, Health Analyzer, information system, and research through the internet; (iii) equipping a videoconference room; (iv) printing and delivery of 20,000 health registers and 2,000 copies of medical journal; and (v) equipping targeted Governorate's health offices with computers and software.

Component 3: Credit Administration and Project Coordination (Cost: US$1.548 million)

3.1 Revised description at restructuring (amendment to DCA of June 2006) - *Providing support to the CAU and the PMU for carrying out their responsibilities under the Project.*

3.2 The project was administered through the Credit Administration Unit (CAU) which was composed of seven core staff: Administrator, Procurement Specialist, Technical Coordinator, Financial Manager, Accountant, Monitoring Officer and Executive

Secretary. In addition, a Procurement Advisor was financed by the PHRD Grant (TF054611). One year prior to the close of the Project, the Technical Coordinator and the Monitoring Officer resigned for personal reasons and the CAU administered the project with only five core staff; also, the contract of the Procurement Advisor was terminated when the PHRD Grant closed at the end of December 2008.

3.3 The CAU was responsible for procurement activities, keeping the project accounts and monitoring the project implementation progress. It took some time to recruit the CAU staff, and at the beginning of the project the CAU was not very effective. The situation improved considerably in the last three and a half years. The IDA Credit was fully disbursed; there has been no misprocurement; audit reports have been unqualified; and audit reports and FMR/IFR have been submitted on time. After an M&E system was developed in 2007 with the assistance of an international consulting firm, the project monitoring indicators table was updated regularly and was used as the key tool for assessing project progress and effectiveness.

3.4 The CAU also managed the PHRD Grant (TF054611) of about US$200,000 which was fully disbursed and closed on December 31, 2008.

3.5 At project restructuring, the implementation of civil works and the procurement of furniture and medical equipment were delegated to the PMU of the PWP. The CAU and the PMU worked well together to ensure that deliverables under all contracts in the procurement plan be realized prior to the revised IDA Credit closing date of August 31, 2009. Foreign exchange fluctuations created uncertainties regarding the funds available to complete some badly needed additional works, which complicated the tasks of the CAU and PMU.

3.6 To ensure adequate coordination, the implementation arrangements in the Project Appraisal Document (PAD) included both a Steering Committee (SC) and a Project Coordination Committee (PCC). It seems that there was no need for two committees which, in any event, did not meet very frequently at the beginning of the project. After the MTR, the PCC was in effect replaced by the RRA meetings. In recent years, the Steering Committee (SC) has been very active and provided good guidance to the CAU for project implementation. The SC has supported the project in various ways, including quick approval of project activities, resolving financial/payment issues, etc. It is worth noting that the Minister of MOPHP has been attending most of the meetings, and has been fully informed of project activities. The MOF and MOPIC have been also very supportive of and facilitated project implementation.

Annex 3. Economic and Financial Analysis

(including assumptions in the analysis)

I. Introduction

1.1 In an effort of improving health care service delivery in Yemen, the MOPHP has initiated the Health Sector Reform Strategy in 1998 which attempted to address improvement of the management system through decentralization. Although the strategy tried to improve critical issues in health sector such as improvement of efficiency, equity, and access to health care, it has faced political and administrative challenges in its implementation process in the last ten years. In order to support this reform strategy, the Health Reform Support Project (HRSP) financed by an IDA credit was implemented and became effective in 2003. However, due to the limitation of capacity and lack of political commitment, there was a delay in project implementation in the first three years (malaria control and health financing were the only activities implemented in a timely manner). In 2005, during the mid-term review, some components were down sized, and in the following year, the Government and the World Bank Team agreed to utilize the RRA to accelerate implementation.

1.2 In 2006, the project was restructured, program activities were revised, and funds were reallocated. The revised project development objectives are: (i) to improve access to and quality of priority national family health and reproductive health programs; and (ii) to develop the capacity of the Ministry of Public Health and Population (MOPHP) to manage, plan and deliver basic health services and priority public health programs at the central level and in eight selected districts in the three targeted governorates. Under the revised program activities, interventions at the national level were focused on supporting maternal and child health such as the Integrated Management of Childhood Illness (IMCI), the Expanded Program of Immunization (EPI), renovating and improving hospital facilities with new equipment in rural areas, and training programs for medical practitioners and health workers for their capacity building. Although in the initial stage there was a delay in fully implementing this project, the project made tremendous achievements. Table 3.1 presents a summary of selected project performance indicators and how successful each of them was at the completion stage.

Table 3.1: Achievement of Project Development Objectives

Indicators	Baseline (%)	ICR (%)	Target population
Increasing immunization coverage (%)	66	87	258,291
% of women using modern family planning	13.4	19	..
Expenditure on O&M (as % of MOPHP expenditure)	2.5	2.9	..
% of households with Insecticide Treated Net	0	44.6	350,000 mothers and under 5 children
Number of hospitals/health centers rehabilitated	0	22	22
Number of technicians trained on malaria diagnosis	0	350	350

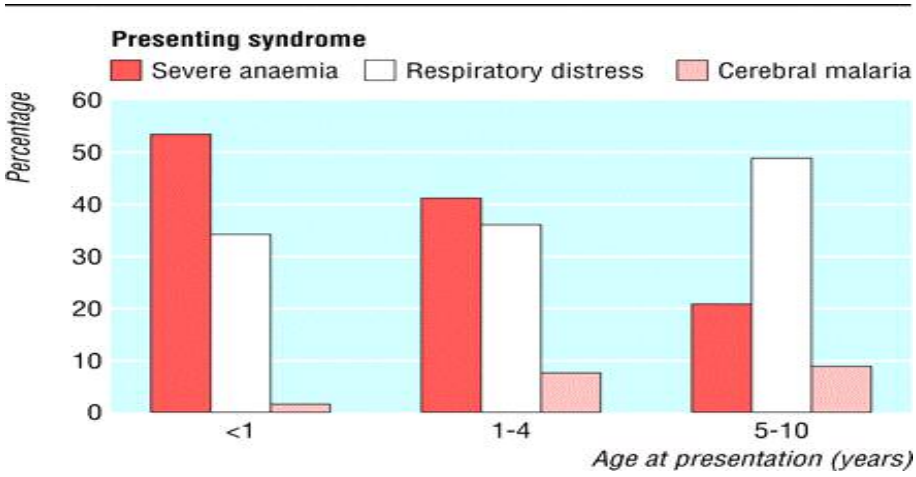
Number of participants at the National Center for Health Management Training	0	140	140

1.3 This Annex presents the summary results of the cost and benefit/effectiveness analysis of the Health Reform Support Project. Due to the implementation delay, it would take more time for beneficiaries to benefit fully from the project. Because of the limited availability of data at this stage, the analysis will focus on three sub-components/activities: malaria prevention, child immunization and chistosomiasis control.

II. Malaria Prevention

2.1 Malaria is considered as one of the most important problems affecting the health of the population in Yemen, especially among small children under ten. In the peak malaria season, around 40 percent of pediatric admissions were for clinically diagnosed malaria, and more than half of the cases satisfied the current WHO criteria for severe falciparum malaria. This proportion of admissions is comparable to many sites in Africa during the peak season; and therefore malaria prevention is one of public health priorities in Yemen. **(Abdullah Al-Taiar, et al, 2006).**

Figure 3.1: Age and Prevalence of Malaria in Yemen



Source: **Abdullah al-Taiar** *et al.* 2009

2.2 It is estimated that 60% of the population live in areas at risk of malaria, with 95 percent of cases due to P. falciparum. The endemicity of the disease varies considerably by the diversity of the topography and the climate of the country, from areas that are believed to be malaria-free to areas where the disease is highly endemic. In some settings, it is estimated that up to 40 percent of severe pediatric admissions can be due to malaria during the malaria transmission season, with appreciable mortality (Abdullah al-Taiar et al. 2009).

2.3 HRSP supported the country's Malaria prevention program to be further expanded and sustainable by financing the purchases of goods and capacity building activities in 6 targeted districts. Initially, it was planned to distribute 15,000 nets to mothers and children under 5; however, it ended up to offer 175,000 nets. The coverage of long lasting insecticides nets (LLIN) currently in these targeted areas has reached 45 percent of the households while initial target was only 5 percent of the households. Since one net was distributed to be utilized by two persons, the coverage extended to 350,000 individuals in the targeted districts.

Costs

2.4 The project cost for this component therefore, included cost for LLIN, sprays, vehicles, training and campaign costs, consultation service fees, and operation and maintenance costs. Table 3.2 below presents the summary of breakdown costs for Malaria component. This Malaria control activity is one of the few items that have been implemented since the initial years of the project. US$2,409,985 was disbursed mainly in the first two years. Since the activity was able to reach a much larger number of mothers and children under 5 years old than expected in the targeted districts, per capita cost for the targeted population is calculated as low as US$7.

Table 3.2: Breakdown Costs for Malaria Component

(In US$)	2003	2004	2005	2006	2007	2008	2009	Total
Goods (LLIN, spray, vehicles and others)	1117217	1117217						2,234,434
Consultancy services	2463	2463	2463	2463	2463	2463		14,776
Training cost	159,037							159,037
Others	869	869						1,738
Total costs	1279585.587	1120548.6	2462.67	2462.67	2462.67	2462.67		2,409,983

Source: Using administrative data from Ministry of Health

Benefits

2.5 The direct benefit comes from reduced cases of morbidity and mortality, and saving of average medical treatment costs including doctors' consultation fee, medication, x-ray, lab-tests and hospitalization. Moreover, there is positive externality in this intervention. This sub-component of HRSP distributed 175,000 LLIN that affects 350,000 mothers and children under 5 directly. With the combination of utilization of LLIN, large scale spraying in the most endemic areas, and campaigns and training for information dissemination, the intervention affects individuals indirectly through community based sustained vector control intervention. There is indirect benefit among those who were not granted LLIN. There is a great chance that the intervention reduce the disease burden, minimize the risk of epidemics, reduce morbidity and mortality of people living in the

intervention areas even though they were not granted LLIN. Thus, it is assumed that the actual benefit is much greater than it was estimated.

Cost Effectiveness

2.6 Using "with" and "without" intervention scenarios, an analysis was conducted. Flows were discounted at 10 percent to estimate the NPV and ERR only for this sub-component. Sub-components were expected to provide benefits for at least 7 years for both malaria and immunization programs. Benefits come from saving of medical treatment cost by reduced morbidity. Average cost for the medical care patients receive for 3 days of a medical attention for treatment of Malaria in Ibb and Taiz Governorates, and the highest morbidity rate among the targeted district provided from the National Malaria Control Program in Yemen were used for the calculation. This sub-component of HRSP is economically viable, with NPV of US$1,048,188 and ERR, 27 percent which is largely exceeding the social discount rate of 10 percent. Supposing 2/3 of the target population is children under 5 and 1/3 is mother, expected number of years of healthy life gained from reductions in mortality and morbidity of children under 5 are 28,215 and 2,823,315 years respectively. Total life years gained was divided by 2/3 of the cost of this component to estimate cost-effectiveness ratio. It was estimated that the cost to gain one year of child healthy life is only US$1.80. The analysis concluded that this sub-component of HRSP is cost effective.

Table 3.3: Economic Rate of Return

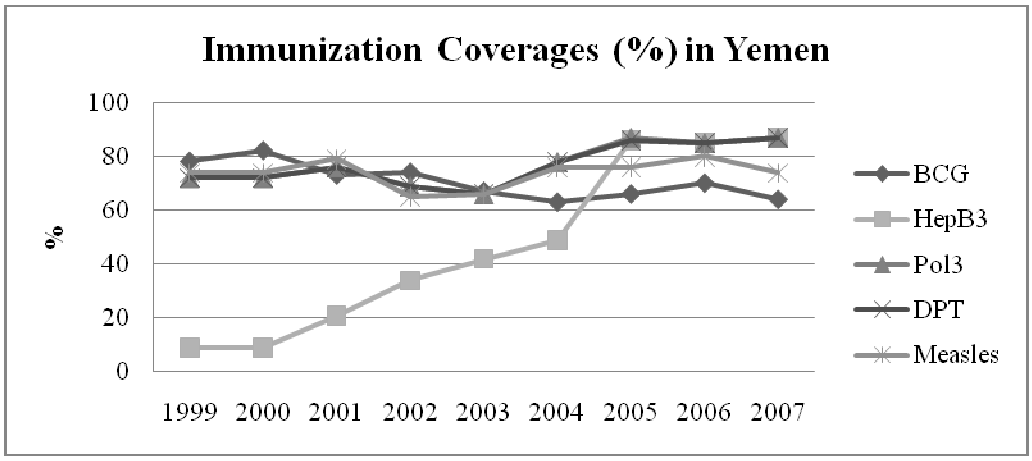
	Benefit : saving of treatment cost by prevented morbidity	Benefit from prevented mortality
ERR (%)	27	32
NPV	US$1,048,188	US$1,339,990

III. Immunization Program

3.1 Yemen's immunization program has achieved significant successes since the mid-1990s; however, an outbreak of polio occurred in 2004, and this outbreak motivated policymakers and international donors to make further progress. Upholding the two strategies for enhance immunization coverage: (i) National campaigns to eradicate polio and measles until reaching international standards; and (ii) Provision of safe and complete immunization coverage for targeted groups through the routine immunization services that include mobile and outreach activities, the government of Yemen with supports from international donors, took plunge to scale up the increase of the coverage.

3.2 The funds from WHO, HRSP, UNICEF and GAVI are concentrated on specific activities. WHO funds are for the polio campaign activities and training, while HRSP funds were focused on measles activities as well as training activities. The HRSP funds were not allocated for specific governorates, but used for national level.

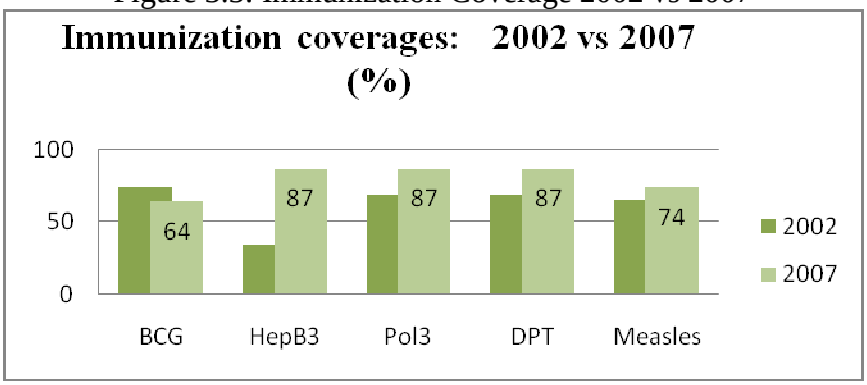
Figure 3.2: Immunization Coverage in Yemen, 1999-2007



Source: using HNP Stats updated 2009

3.3 The figure above presents the national trend of immunization coverage of children under one year old between 1999 and 2007. HepB3 shows dramatic increase since the year 2000, and again there is another jump after the outbreak in 2004. The latest data from EPI program indicate that BCG coverage is 73% in 2008, and that the coverage for measles, polio and HepB3 is 87 percent in 2008. As it is shown in Figure 3.3, the coverage shifted from 2002 (before project implementation) to 2007, the year closer to end of the project. All the coverages have increased except BCG.

Figure 3.3: Immunization Coverage 2002 vs 2007



Source: using HNP Stats updated 2009

Costs/Benefits

3.4 Table 3.4 presents the summary costs for immunization sub-component of project. 82 percent of fund for this sub-component was spent for operational cost, 13 percent was for the purchase of goods (a large portion is for vehicles used for campaign transportation), and the rest was used for consultancy services and training.

Table 3.4: Cost for Immunization Component							
	2003	2004	2005	2006	2007	2008	2009	Total
Goods (medicine, vehicles and others)				342,520	342,520			685,040.00
Consultancy Services				35,089.92	35,089.92	35,089.92		105,269.76
Training cost				130,500.00				130,500.00
Operation cost				1,056,500	1,056,500	1,056,500		4,226,000.00
Total cost				1,564,609.92	1,434,109.92	1,091,589.92	1,056,500.00	5,146,809.76

Source: Using administrative data from MOPHP

Cost Effectiveness

3.5 As a part of the project, survey was conducted for 60 health facilities which served for EPI program to evaluate the outcome and impact of the program. The following table presents the unit expenditure analysis of immunization services: (i) routine and outreach/mobile service delivery; and (ii) types of facilities, based on the expenditure information obtained from the facility survey. In order to conceptualize the unit cost, 2006 demographic data, and input variables such as number of hours, vaccination/routine, and mobile sessions were used. Table 3.5 summarizes the unit cost by service delivery and types of health facilities.

Table 3.5: Unit Cost, by Delivery Strategy & Types of Facility			
	Hospitals	***Centers***	***Units***
Funding Data			
Facility Routine Expenditure (in YR)*	6,000	2,000	3,145
Outreach/Mobile Expenditure (in YR)	18,700	33,733	28,054
Total Funding	***24,700***	***35,733***	***31,199***
Input Data			
Target Population	444	230	157
# of Vacc Sessions	5	5	3.5
# of OR/Mobile	6	7	6
# of hours	25	21	15
Output Data			
Penta 3 Child in Fixed Facilities	273	113	81
Penta3 Child in OR/M	17	39	28
Unit Costs (in YR)			
Cost per Penta3 child (Facility)	22	18	39
Cost per Penta 3 child (OR/M)	1,100	865	1,002
	85	235	286

Source: Yemen Immunization Tracking Study 2009

*Note: * For Hospitals, Ops Costs financed by Facility, is estimated at 5% of Hospital Facility Funding Received*

3.6 Hospitals had the highest target population and generate the highest number of outputs, and the operation costs are lower compared to other types of facilities. Cost per penta 3child in facilities is almost the same for hospital (YR 22, which is equivalent to US$0.11) and health centers (YR18, US$0.09) compared to health units (YR39, US$0.20). On average, cost per Penta3 was YR 235 (US$1.18) at health centers and YR 286 (US$1.43) at health units whereas it was as low as YR 85(US$0.43) in hospitals. With such low unit costs at all types of health facility, the analysis concluded that this sub-component is cost effective.

IV. Fiscal Sustainability

4.1 HRSP was financed mainly by the IDA credit (US$33.1 million), and the Government of Yemen (US$0.4 million). Calculations of the project sustainability are based on an analysis of the recurrent costs of the project, plus the annual maintenance costs, and consultancy services to the extended health care coverage of the reproductive health, maternal and child health care, as well as family health. The results of the analysis are summarized in the following Table. As it is shown in Table 3.6, the cost of the project has been fully absorbed into the national budget and has had no affect on fiscal policy sustainability.

Table 3.6: Summary of Fiscal Impact and Project Sustainability

	2003	2004	2005	2006	2007	2008
GDP (constant 2000 US$)	10,579,025,628	10,999,319,737	11,614,291,703	11,985,948,670	12,381,484,976	12,864,362,892
Public health expenditure (% of GDP)	2.0	2.0	2.0	2.0	n/a	n/a
Public health expenditure (% of Government spending)	6.0	6.0	6.0	6.0	n/a	n/a
Cost of project (% of GDP)	0.02	0.02	0.02	0.02	0.01	0.01
Cost of project (% of spending MoH)	0.88	0.84	0.80	0.77	0.75	0.72
Total cost of project (% of GDP)	0.05	0.05	0.05	0.05	0.04	0.04
Total cost of project (% of spending MoH)	2.63	2.53	2.39	2.32	2.25	2.16

Source: Using data from Ministry of Health; and WDI, the World Bank 2009

V. Schistosomiasis Control

5.1 The Project Appraisal Document (PAD) for the new Schistosomiasis Control Project[12] (SCP) includes a detailed cost effectiveness and cost-benefit analysis of the SCP. The analysis applied the Disability-Adjusted Life Year (DALY) methodology. The analysis is based in part on the average cost per child for the four campaigns conducted under the HRSP. The average total cost per targeted child is US$0.70. The cost of the interventions is estimated at US$38.5 per DALY gained, so that the interventions can be considered as highly cost effective (US$25 to US$100 per DALY is generally accepted as cost effective in poor countries).

5.2 For further details, see paragraph 68 on page 21 and Annex 9 of the PAD for the SCP.

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[12] Project Appraisal Document (PAD) for the Schistosomiasis Control Project – Report No.: 50282-YE – November 20, 2009

Annex 4. Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Sameh El-Saharty	Senior Health Policy Specialist	MNSHD	Task Team Leader
Mario Zelaya	Consultant	MNSHD	Implementation
Hashem Awnallah	Health Operations Specialist	MNSHD	Health
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Karima Saleh	Consultant	MNSHD	Health Economics
Daniel Dupety	Consultant	MNSHD	Implementation
Concepcion del Castillo	Consultant	MNSHD	Social Science
Allan Rotman	Senior Environmental Specialist	MNS-MNA	Environment
Dennis Streveler	Consultant	ECSHD	HMIS
Atter Hannoura	Consultant	MNC03	MIS
Lawrence Barat			Malaria
Mira Hong	Program Assistant	MNSSP	Program
Hind Tawfeek	Program Assistant	MNCYE	Program
Supervision/ICR			
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Jamal Abdulla Abdulaziz	Senior Procurement Specialist	MNCYE	Procurement
Francisca Ayodeji Akala	Senior Public Health Specialist	MNS-MNA	Health
Afrah Alawi Al-Ahmadi	Senior Human Development Specialist	MNSSP	Task Team Leader
Safiah Mohammed Al-Eryani	Consultant	MNCYE	ET

Names	Title	Unit	Responsibility/ Specialty
Nabila Ali Al-Mutawakel	Program Assistant	MNCYE	Program
Safa'a Abdullah Al-Sharif	Program Assistant	MNCYE	Program
Abeer Yahia Aleryani	Program Assistant	MNCYE	Program
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Sameh El-Saharty	Senior Health Specialist	SASHN	Health
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Mira Hong	Operations Analyst	MNSSP	Operations
Hadia A. Karam	Senior Operations Officer	WBIHS	RRA
Maiada Mahmoud Abdel Fatt Kassem	Consultant	MNAFM	Finances
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Josephine Masanque	Senior Financial Management Specialist	MNAFM	Finances
Mikael Sehul Mengesha	Senior Procurement Specialist	MNAPR	Procurement
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Mario Antonio Zelaya	Consultant	MNSSD	Implementation
Kimie Tanabe	Economist	MNSHH	Economics
Paul Geli	Consultant	MNSHD	Implementation
Renata Lukasiewicz	Program Assistant	MNSHD	Program

(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		
FY98		14.24
FY99		2.26
FY00	2	7.97
FY01	10	40.12
FY02	23	231.93
FY03	1	6.48
FY04		0.00
FY05		2.21
Total:	36	305.21
Supervision/ICR		
FY00		2.89
FY01		0.00
FY02	3	11.32
FY03	14	47.81
FY04	47	81.45
FY05	67	184.46
FY06	44	138.87
FY07	47	136.70
FY08	20	91.89
FY09	23	0.00
Total:	265	695.39

Annex 5. Beneficiary Survey Results

(if any)

Not applicable

Annex 6. Stakeholder Workshop Report and Results

(if any)

Not applicable

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

Health Reform Support Project/World Bank Funded Project Yemen /3625
Implementation Completion and Results Report (ICR)

1. INTRODUCTION

The Government of Yemen received a credit of US$27.5 million from the International Development Association (IDA) to finance the implementation of its Health Reform Support Project (HRSP). The project was declared effective in January 2003 and was implemented by the Ministry of Public Health and Population (MOPHP). The implementation of specific subcomponents was conducted by relevant MOPHP departments.

For a number of reasons, implementation of HRSP activities was initially extremely slow when the project became effective. In order to accelerate project implementation, the project underwent a restructuring process in June 2006. Through the restructuring, the Project Development Objectives (PDOs) were changed to ones that could be more realistically achieved before the end of the revised closing date of the credit (31 August 2009).

The implementation experience of the HRSP was evaluated from 27 July – 31 August 2009. In the evaluation, a mix of techniques were used (evaluation of outcome studies and financial progress reports, semi-structured interviews with representatives of the MOPHP and of bi- and multilateral organizations, Focus Group Discussions, use of Likert questionnaires and field visits) Please see Annex. Impact Study.

1.1 PROJECT PURPOSE AND OBJECTIVES

The HRSP was designed to provide a basic package of cost-effective integrated health services to address the high infant and maternal mortality rates in Yemen.

The project started in 2003, had its mid-term review in 2005, was restructured in 2006 and was completed in August 2009.
The PDOs of the project (2003 – 2005) were to:

1) Increase accessibility of women and children to a package of integrated maternal and child health services provided in district hospitals and health centers in selected districts, and
2) Improve the effectiveness of national public health programs and the resource allocation within the public health sector in Yemen.

The PDOs of the restructured HRSP (2005 to 2009) were to:

1) Improve access to and quality of priority national family health and reproductive health programs, and
2) Develop the capacity of the MOPHP to manage, plan, and deliver basic health services and priority public health programs at the central level and in ten selected districts in the three targeted governorates.

1.2 PROJECT COMPONENTS

The revised project comprised the following (sub-) components:

Component 1 Improvement of National Health Programs and Basic Health Services
Sub-Component 1.1 Decentralized Operational Management
Sub-Component 1.2 A Package of National Programs and Basic Health Services supporting the following programs:
a) Expanded Program on Immunization (EPI)
b) Integrated Management of Childhood Illnesses (IMCI)
c) Emergency Obstetrical Care (EmOC)
d) Family Health
e) Disease Surveillance (equipment and supplies)
f) Civil Works and Equipment for selected health facilities

Component 2 Capacity Building in the following areas:
Sub-Component 2.1 Malaria
Sub-Component 2.2 Health Education
Sub-Component 2.3 Health Finance and Health Management Training
Sub-Component 2.4 Health Management Information System (HMIS)

Component 3 Credit Administration and Project Coordination

1.3 FINANCING

The project was financed by a credit of SDR 22.2 million (US$27.53 million equivalent) from the IDA (CR 3625 – YEM), and a contribution of US$2.07 million from the Government of Yemen. Due to fluctuations in the value of the US dollar, the credit value reached around US$36 million at the end of 2007/early 2008, and then dropped down to around US$33 million in late 2008 and reached US$34.7 million in August 2009.

2. QUALITY AT ENTRY

The overall quality at entry was satisfactory.
The development objective was relevant and appropriate to Yemen's needs at that time and the specific objectives were consistent with the identified needs of Yemen's Health Sector and the sectoral development strategy being pursued by the Government and development partners.

The project components were also generally consistent with the identified priorities and needs of the health sector. However, the project was originally designed to support implementation of the 1998 Health Sector Reform Program which emphasized the development of a district health system model which relied in large part on strengthening management at the local level and decentralizing administration. While the principles remained valid, full implantation of the reform program was hampered by the slow pace of implementation of the government–wide decentralization program that is still in transition as the decentralization concept has yet to be supported by different regulations, infrastructure training and bylaws to ensure proper practices of resource management. There was an overall lack of clarity about decentralization and its implications for the health services or the essential components of strengthening district health systems.

Furthermore, the project's major component was designed to provide a package of Integrated Maternal and Child Health services, against a context of largely vertical donor-supported programs.

While the project was designed and prepared with full collaboration between the government and World Bank missions, and involved different MOPHP departments, there was dependency on one sector in particular, which lead to weakening the ownership among other departments of other sectors during implementation; Furthermore implementation was weakened and slowed as a result of the high turnover of the MOPHP officials/staff. Finally, the initial Project Administrator of the Credit Administration Unit was a new manager and therefore less acquainted with the policies and procedures for management of IDA-financed credits.

Given the project's overall poor performance and slow pace of project implementation during the first three years of project implementation, the Mid Term Review (MTR) (concluded in October 2005) maintained the rating of the project as unsatisfactory and several fundamental and strategic approach changes were proposed to the government, the most important of which applied to the PIMAC component (shifting to focus on strengthening what was working (outreach and selected vertical programs) and minimizing what was not (facility-based care)), proposing the application of the Rapid Result Approach (RRA); and out-sourcing civil works to the Public Works Project and procurement to UN agencies where applicable.

3. IMPLEMENTATION EXPERIENCE

After applying RRA and restructuring the project, the judgment of the implementation was more positive and the implementation status rating was increased from unsatisfactory to moderately satisfactory and then to satisfactory. The rating for achievement of the PDOs changed from unsatisfactory to moderately satisfactory to satisfactory in mid 2007. The rating was subsequently downgraded to moderately satisfactory in December 2007 as "The project has not progressed in assessing the achievement of outputs and outcomes. The mission advised the CAU to follow up with the component managers the implementation of follow up visits to assess and collect data on service provision and

utilization, as well as to consider the preparation for an independent end-of-project evaluation study" (Mission Aide Memoire December 2007).

The commitment of the government to apply RRA was remarkably successful. Applying several rounds of RRA helped provide clear work plans, and encouraged competition among the various program stakeholders (see attached Sourcebook – Yemen RRA Case Study). The improved management and stability of HRSP since 2006 can also be attributed to the support of the leadership of the MOPHP, MOF and MOPIC, and the World Bank continued to provide active support from headquarters and even more so from the Country Office.

Most of the activities targeted through the different project components were started and completed, and most of measurable indicators were met (some were exceeded) - please see the attached HRSP Monitoring Table. The HRSP supported the implementation of six outcome studies which covered key project interventions (Integrated Management of Child Illness (IMCI), Emergency Obstetric Care (EmOC), Malaria, Health Education, District Planning and National Centre for Health Management Training). The outcome studies concluded achievement of certain outcomes, including the availability of trained staff in IMCI in all targeted districts (and other districts beyond the targeted districts). This training and the availability of IMCI drugs procured through HRSP helped to increase public health services credibility and utilization of IMCI services. HRSP helped to establish and support a favorable environment for providing EmOC services by renovating, expanding, equipping and training available staff from 15 health facilities targeted to provide EmOC (basic and comprehensive) services and helped to establish a Training of Trainers (TOT) program for EmOC.

During the last two years of project implementation, the MOPHP issued several decrees, some of which were as a result of World Bank mission field visit findings related to the poor performance of management of targeted health facilities which were jeopardizing achievement of the HRSP PDOs. These decrees were targeted to health offices and local councils in coordination with their related Governors to ensure good management of the upgraded health facilities. This effort resulted in changing management in the health office in Ibb governorate, Bajel Hospital, Biet Alfaqieh Hospital and Alqutie health center in Hodieda governorate, and changing the manger of Alghres health centre in Sana'a Governorate.

In early 2009, H.E the Minister of Health formed a committee composed of members of MOPHP Planning Sector and Medical Sector, and headed by the head of the MOPHP Personnel Department to work towards filling the gaps of health staff in each HRSP targeted facility. Efforts were done through this committee to explore existing technical and administrative staff available in the three targeted governorates from available ministry statistical data and field visit reports. The committee achieved remarkable work by assessing existing staff and needs and recommended redistribution of existing staff and identified additional required staff. The committee managed to support some of the health facilities with some new required staff such as in Yareem hospital/Ibb, and redistributed staff in Sana'a governorate that enabled Almnar hospital to have some

midwives to provide RH/FP services. Work is ongoing to enroll some of the qualified staff working in a volunteering capacity in Alhodiedah and Ibb.

The Government, represented by the MOPHP, is pursuing its efforts to support the facilities with more staff to fill the gaps in service provision and make use of the new equipment procured through the HRSP. The government succeeded this month (October 2009) to include a running budget for Yareem Hospital - one of the biggest financed projects of HRSP in Ibb governorate - including 50 new health staff posts which are to commence in 2010; the hospital started to work in August 2009 - immediately after hand over from the Public Works.

Project investment by year and component provides an indication of project success and/or failure during the project's life time. As previously noted, until 2005 the project demonstrated slow progress (12 percent disbursement of total credit in the first three years). The project's second "start" was in 2006 with a 32 percent disbursement rate, explained by a number of positive factors, notably administrative changes, human resource inputs, prioritizing of activities, RRA approach, etc. Over the 2006-2009 period, the remainder of the Credit amount was disbursed (100% of the total credit).

3.1 Project Implementation by Component

Component 1: Improvement of National Health Programs and Basic Health Services

Sub-Component 1.1: Decentralized Operational Management (DOM)

1.1. The HRSP support to DOM activities included international training of 21 managers from MOPHP at central and governorate levels, and in-country training of 692 managerial personnel from the targeted 10 District Management Teams (DMTs) and 3 Governorate health offices. The training aimed at improving the managerial and technical skills in planning, management, English and computers. One of the main achievements of DOM was formation and training of District Management Teams (DMTs) and overseeing the development of annual district plans for two consecutive years (2007 and 2008). These plans reflected adequate planning skills. The implementation of the district plans was supported by the Local Councils at district and governorate levels. However, supervision of health facilities by district and governorate teams was constrained by the lack of resources allocated for supervision.

Sub-Component 1.2: Delivery of a Package of National Programs and Basic Health Services

1.2 **EPI**. With the HRSP funding for the implementation of the vaccination program, the EPI program steadily maintained its yearly outcomes with national coverage per antigen above 85% and thereby was successful in preventing every year any outbreak. Funding for EPI implementation is secured until the end of 2010 with 50–60% of

Government funds and support from the GAVI ISS and HSS as well as from UNICEF and WHO.

1.3 **IMCI.** Since the 2006 restructuring, HRSP has substantially contributed to the national roll-out of the IMCI strategy achieving remarkable outputs: (i) the adaptation of curriculums and their production, (ii) training of trainers at central level, (iii) for 180 districts, more than 2000 facility-based providers trained in 11-day course, 458 community-based promoters trained in IMCI family practices, and three semi-annual supervisions carried out which started in July 2007, and (iv) the provision of quarterly outreach services by integrated multidisciplinary mobile teams. Over the previous six months, the program succeeded in maintaining its current outcome of 54% national coverage and related beneficiaries of 1.5 million under five year old children that have access to IMCI services.

1.4 **Reproductive Health: Maternal and Neonatal Health – Emergency Obstetrical Care (EmOC).** The EmOC 15 targeted health facilities and some related accommodations supported by HRSP funding were all completed by April 2009. All equipment was delivered and the training of staff in their use was completed in August 2009.The project provided support to upgrade 117 health cadres to improve the skills of EmOC services providers. The training included 4 staff categories (Community Midwives (CMWs); Supervisors Community Midwives (SCMWs); Anesthetists Assistants; and Obstetric Doctors). The latter category were awarded diploma in gynecology and obstetrics. Most of the graduates are deployed to the original facilities they were nominated from; the 45 SCMWs are playing an active and positive role in the delivery of EmOC and MCH/FP services; and most of the 45 CMWs are volunteering in health facilities, MOPHP, governorates and local councils are working to enroll them as of the year 2010.

1.5 EmOC protocols and guidelines were developed and endorsed by the Population Sector/MOPHP in December 2007 with the technical assistance from an international consultant from Colombia University and in coordination with WHO Consultants.

Training of 14 EmOC high caliber doctors and midwives as trainers (TOT) in June 2009 and training of 24 EmOC staff /midwives took place in August 2009. This training, with developed protocols and guidelines, will furnish the way towards a unified and systematic approach to EmOC service provision which can be duplicated in other Yemen governorates.

HRSP provided support to train 35 middle RH Managers at governorate and district levels at the National Centre for Health Management Training.

1.6 **Family Health** since the 2006 restructuring, HRSP has funded the pilot implementation of the integrated primary health care-reproductive health (IPHC-RH) curriculum in targeted governorates, including curriculum development and pre-testing. With joint funding from HRSP and GAVI–HSS, the training of trainers on IPHC–RH in 26 districts and training of providers in 17 districts were completed in early 2009. However, as HRSP funding has ended, the supervision of trained providers in 250 facilities and training of the same in integrated outreach services were completed only in some of the HSS funded districts. Since the training and first supervision took place only few months ago, outputs and outcomes remain to be seen.

1.7 **Disease Surveillance.** The HRSP investments in equipment, clinical and laboratory supplies were critical to the improvement of permanent communication with districts and governorates for the purpose of disease surveillance. HRSP funding provided inputs and improved processes to increase of completeness (70%) and timeliness of reporting of the seven diseases from the 21 Governorate coordinators and 609 focal persons.

1.8 **Schistosomiasis**. Over the life of the restructured HRSP, three campaigns of mass treatment of school-age children were completed in 92 districts in 16 governorates, and treated over 1.7 million school-age children. The last and fourth campaign was partially funded by HRSP for 17 districts. The Schistosomiasis Control Campaign is ongoing, and has been taken up under a new IDA funded project, the Yemen Schistosomiasis Control Project, with technical assistance from WHO.

1.9 **Civil Works and Equipment.** HRSP out-sourced the completion of the civil work program to the Public Works Project (PWP) to do the rehabilitation and extension of five district hospitals and 17 health centers, and equipping the facilities rehabilitated. It is also financed minor rehabilitation of the MOPHP offices. Civil works at all 22 facilities (total US$5,192,430) as well as rehabilitation works at the MOPHP offices (US$289,560) have been completed and handed over. Medical equipment and furniture have been delivered to all facilities.

Component 2: Capacity Building

Sub-Component 2.1: Malaria

The program received various support from the HRSP including 14 four-wheel drive vehicles to strengthen the governorate supervision system, and 50 motorcycles for malaria control field workers. The project procured and delivered 175000 LLINs for pregnant women and under 5 children and 350 hand sprayers. The Project also trained 530 doctors, technicians, and community volunteers as part of integral actions to synergize protective, preventive and diagnostic malaria rollback strategies.

Sub-Component 2.2: Health Education

The HRSP was the main funding source for the Health Education Department. The Project funded the construction and equipping the National Centre for Health Education; development of awareness raising messages on newspapers and radio for several health themes, including: RH, EPI, Malaria and Schistosomiasis; installed TV/Video sets in 60 health facilities for HE activities; trained 333 health education coordinators at district level; helped to establish a Health education Nationwide Network which emphasized the inter personnel health education channel; and assisted in running campaigns through these districts coordinators.

The project also supported external training in media production for key staff; production of TV spots and sketches with participation of TV celebrities; TOT on communication techniques; training of health providers, community volunteers; and implementation of HE campaigns using mobile cinema.

Sub-Component 2.3: Health Finance and Management

Health Finance. HRSP support to health finance themes included financing for a Study on Health Insurance (co-financed by local funds and WHO; completed in 2004); two PERs covering the years 1999–2000 and 2004-2007; Comparative Analysis on Operational Cost and Maintenance; Development Training Manual on Governorates Accounts; Development of National Health Accounts 2007; Study on Cost Sharing in Public Health Services; and Survey on Development Partners Contribution to Health Sector. All these contributions provide valuable references for the government to better plan and work with the donors to finalize the National Health program.

Health Management. The HRSP support to the Health Management Training Center (NCHMT) provided a substantial lift to the role of the center in supporting the health system. The project funded the construction of a second floor in the building which increased the center's capacity; funded the training of 225 trainees from all governorates in management, planning, leadership, etc; funded a diploma course for 20 managers, a 5-month course for 20 hospital directors; the development of 20 management training modules; and provided advance training (abroad) for five of the center's main trainers. During the World Banks last mission in May 2009, the mission reported in the Aide Memoire that managers expressed satisfaction with the training received and confirmed that the training has contributed to improving their management skills. However, they faced institutional challenges to apply the knowledge and skills gained. The NCHMT is continuing to conduct training for different levels of health personnel on different health aspects - mainly supported by health partners.

Sub-Component 2.4: Health Management Information System (HMIS)

The project supported the HIMS Department to procure different office technical tools which the HMIS Department is to use to produce data and maps of health facilities. HRSP also supported the HMIS Department by investing in the computer training lab (constructed and equipped by the project) which provides training to different levels of health staff. The computer lab has conducted 11 courses (up to June 30, 2009) trained

183 staff from different governorates on different IT related aspects such as GIS, Health Analyzer, Information System, and research through the internet .

The project funded: a well equipped GIS Unit; construction and equipping of a computer training lab (10 workstations and a server); equipped a videoconference room; printing and delivery of health registers; training for staff at the centre and targeted Governorates on information tools, information monitoring system, and GIS; equipped targeted Governorate health offices with computers and software; and provided hardware and software for the Personnel Department to automate some of their national personnel management systems, especially between the centre and governorate levels.

Project Management

The Credit Administration Unit (CAU). The Project was administered through the CAU which was composed of seven core staff (Administrator, Procurement Specialist, Technical Coordinator, Financial Manger, and Accountant. Monitoring Officer and Executive Secretary). A Procurement Advisor was supported from the PHRD grant.

One year prior to the close of the project, the CAU administered the project with only five core staff (the technical coordinator and the monitoring officer resigned for personal reasons) and the Procurement Advisor contract was completed with the end of the PHRD grant in 2008.

Steering Committee (SC). The SC has been very active and provided good support to the CAU for project implementation. The committee has supported the project in various ways including quick approval of project activities, resolving financial/payment issues, etc. It is worthwhile to note that H.E. the Minister of MOPHP has been attending most of the meetings, and has been fully informed of project activities. The MOF and MOPIC has been also very supportive of and facilitated project implementation.

Monitoring and Evaluation. The CAU continued to effectively monitor the implementation progress with inputs from the General Department of Research and Statistics (HMIS), which receives its information from health facilities and district offices trained under the HRSP. The project monitoring indicators table used to be updated regularly and is used as the key tool for assessing project progress and effectiveness. The CAU, with the support and commitment of different MOPHP sector leaders, managed to keep proper utilization of the Project Monitoring and Evaluation system designed and supported by an international consultancy firm in 2007. Due to the importance of the EmOC services and the investment of HRSP in this aspect, the Project has assigned a national consultant to monitor the completion of EmOC activities and the operationalization of the facilities providing basic and comprehensive EmOC services. Based on consultant findings, the CAU organized three governorate meetings to report on issues and shortcomings observed during the monitoring visits to Governorate health offices. Governors of two governorates were keen to attend these meetings and provided support and decisions were taken immediately. The EmOC monitoring initiative, lead by a well experienced and respected national consultant contracted by the Project, is

evolving to an initiative supporting the promotion and activation of the role of Governorate Quality Teams in supervising and supporting the delivery of MNCH services with a focus on RH/EmOC.

The project conducted six rapid assessment studies to review the impact of different programs supported by the Project, including: District Planning; IMCI; Management Training; Malaria; EmOC; Health Education; and Infrastructure. All studies were completed and their findings were presented and discussed with different stakeholders for follow-up and lessons learned. These studies provided valuable inputs to the project evaluation and the ICR.

The project's Independent Impact Evaluation was finalized and report was submitted and discussed on August 26, 2009. This report is also a key source of information for the ICR.

4. BORROWER'S PERFORMANCE

The Government of Yemen fulfilled most of its responsibilities as required by the project in a satisfactory manner, including the provision of the local commitments of US$410,000 to offset some of the cost overruns.

The government of Yemen fulfilled its responsibilities throughout the project period, and showed full concern and cooperation with the World Bank missions to assess and evaluate the slow pace of the project's implementation at the first three years. The Government of Yemen, represented by the MOPIC, MOF and MOPHP studied respectfully the project MTR review findings and recommendations and worked firmly and steadily towards the implementation of those recommendations and the opportunities provided (such as the adoption of RRA) to give a new and strong take off to the project in 2006.

The MOPHP in early 2006 took the challenge to elevate the project status and committed to all the recommendations, included contracting with UN Agencies working in the health sector to procure drugs, vehicles, Contraceptives Disease Surveillance related items, out-sourcing the civil work to the Public Works Project, and changing the management of the CAU - with close follow up to project different component and implementation by the CAU and other different health departments directors general including those of the HMIS, Malaria, and Health Finance at the ministry level.

The Project Coordination Committee (PCC) was one of the original implementation tools of the project, but due to lack of ownership and dependency on one sector with the initial design of the project at its early stages, irregular meetings were held but with no follow up and with only ad hoc commitments. In early 2006, the project replaced the PCC with the RRA meetings and the Steering Committee continued to convene every 4-6 months. SC meetings were given high priority at the ministry leadership level and by other government's partners. The SC was always headed by H.E the Minister of Health and

was always effective and provided decisions on time to facilitate project implementation, approving plans and problem solving.

5. FINANCIER'S PERFORMANCE

The Financier fulfilled most of its responsibilities in a timely manner and was very flexible in its approach to project implementation as evidenced by decisions to recommend the RRA, providing technical assistance from the World Bank Institute to facilitate the implementation of this tool/technique and continued technical assistance for five rounds of the RRA. Each RRA round assisted in the development and finalizing of the procurement plan for the project and for the first time in the project life, these plans were included in the financial system that produced reports based on actuals. Since early 2007 and based on the RRA developed plans, the CAU began to produce FMRs which included both planed and actual disbursements.

More evidence of the Financier's flexibility was the approval of out-sourcing the civil work to the Public Work Project, which contributed to effectively completing the rehabilitation of the 22 health facility and some of MOPHP offices in a timely and cost effective manner. Procurement through UN agencies helped to speed up procurement procedures with keeping the quality required.

The Financier was diligent in the monitoring of project implementation with all half–yearly visits being done on schedule. This proved to be a very important component of project implementation and is probably one of the major factors that influenced the ability of the project to achieve as much as it has. In each supervision activity, the mission worked closely with the CAU and the project component managers to update the project indicators/monitoring table and to provide recommendations and tasks to assist the government to implement the project and achieve the project PDOs. The Aide Memoires prepared at the end of each visit were very useful in identifying tasks to be accomplished to facilitate smooth project implementation. They proved very useful in assisting the Borrower to plan priority activities for the upcoming periods.

The impact of this monitoring activity has in different stages of project implantation proved very effective. During the initial stage of the project, a decision was made to do the MTR six months earlier than originally planned which provided findings and recommendations to help the government to implement the project effectively and in a timely manner. The impact of the monitoring activities during the second stage and after restructuring, with the commitment of the government, lead to full utilization of the credit with different good outcomes by the end of the project in August 2009.

The Financier Country Office was always good at providing timely help, open communication and on-the- spot consultations. This provided continuous support to expedite CAU procedures. The availability of the Task Team leader in the country office was also an added value for timely technical advice and implementation support and provided on time clarification for letters of no objections.

Finally, it worth mentioning that the CCPP Committee and the role of the Financier in this committee with government members proved to be of good support for CAU management institutionalization, solving problems for CAU staff and clarifying different roles and responsibilities of different administration problems.

6. FACTORS AFFECTING IMPLEMENTATION AND OUTCOMES

Factor within the control of the Borrower and Implementation Agencies

A number of factors affected project implementation and outcome. Those within the control of Borrower included:

- Ambitious project design. The original project design was too ambitious. In retrospect, it was unrealistic to expect that centrally–managed integration of services could be developed without a corresponding fundamental shift in the way in which the MOPHP operates the rules which govern staffing of the MOPHP and its incentive structures, and the relationship with the centre, governorate and district management systems. Moreover, several key national strategies were missing, such as an overall human resource development plan, national surveillance system and disease monitoring and reporting, and a national quality improvement strategy.

- There was insufficient involvement of Governorates Health Offices in project preparation and implementation.
- There were considerable delays in selecting the targeted districts (the selection was only completed in September 2004). This caused corresponding delays in the completion of the baseline surveys and needs assessment, as well as contracting consultants to manage the civil works and medical equipment program, which was reflected in the delayed project implementation and lack of progress towards achievement of the PDOs before restructuring.
- High turnover among managers of components and sector leaders, inactive coordination across departments and lack of ownership (decentralization & verticality).

Factors within the Control of the CAU

Project implementation plan (PIP) prepared during project preparation were never transferred to the Planning departments when implementation began. There was therefore no strategic guide for use by the component mangers. In August 2003, there was another effort to to prepare a PIP but it was unadequate.

Lack of experience and skills in managing World Bank projects was evidenced in the selection of the first two CAU managers.
Low effort of CAU at early stages of project implementation to improve communication and coordination between project components and the CAU.

7. LESSONS LEARNED

- New projects should focus on a sector-oriented approach with a clear development agenda by all partners.
- The involvement of the Ministry in designing the project should be based on all sectors collaboration and ownership, including infrastructure.
- Structures supporting better coordination between the MOPHP sectors are to be strengthened.
- The design of the project should be simple, clear and consistent with organizational needs and capacities.
- District Health System development could be piloted based on the National Model of District in 1-2 Governorates.
- Selection of targeted project governorates and districts should be selected during the design of the project period.
- M&E system should be in place during the preparation phase of the new projects.
- Financial and human resources management should be included in any new program.
- It is important to strengthen supervision of individual health workers and health facilities alike in order to enhance the quality of care for the population.
- Involve targeted governorates and districts in project planning and implementation.
- New projects should be planned within the context of the Health National Program.
- The cost of implementation and sustainability should be carefully considered.

Annex 8. Comments of Cofinanciers and Other Partners/Stakeholders

Donors who supported some of the same sub-components/activities financed under the HRSP have been asked to comment on the project. Their response is awaited.

Annex 9. List of Supporting Documents

1) Japanese grant for Delivery of Health Care – Grant Number TF029657 – November 19, 1996
2) Republic of Yemen – Health Sector Strategy Note, by Sameh El-Saharty, Gail Richardson and Karima Saleh – World Bank No. 44495 – February 2001
3) Integrated Safeguards Data Sheet – ISDS – Report No.: 23320 - November 28, 2001
4) Draft – Operations Manual – Health Reform Support Project – MOPHP – January 22, 2002 – *Incomplete*
5) Project information Document (PID) – Report No. PID10299 – January 30, 2002
6) Project Appraisal Document (PAD) for a Health Reform Support Project (HRSP) – February 27, 2002
7) Development Credit Agreement for Health Reform Support Project – Credit Number 3625-YEM – dated April 23, 2002
8) Bank Aide Memoires, particularly for the Mid-Term Review and the Restructuring Missions
9) Bank PSR/ISR
10) Project Implementation Plan – HRSP – August 2003
11) Project Financial Management Manual – 2003 – prepared by Deloitte Touche & Partner
12) Yemen – Analysis of the School Construction – 1996-2003, by Daniel Dupety
13) PHRD Grant for the Health Reform Support Project – Grant Number TF 054611
14) Yemen Family Health Survey – 2005 – Yemen MOPHP and League of Arab States
15) HRSP Mid-Term Review: Subcomponents Reports, attached to CAU's letter of April 16, 2005
16) Report to the MOPHP – Consultancy services for the health facility and needs assessment survey – Coral Management Consulting – October 2005
17) Public Expenditure Review, Health Sector – Yemen – 1999-2003 – USAID – Partners for Health reform plus – prepared by Alan Fairbank – April 2006
18) Multiple Indicator Cluster Survey (MICS) – Monitoring the situation of women and children - Yemen 2006 – Key Findings – MOPHP, Pan-Arab project for Family Health and UNICEF
19) Memorandum from the President – Proposed Project Restructuring – June 16, 2006
20) Credit No.: 3625-YEM – HRSP – Amendment to the Development Credit Agreement – June 30, 2006
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Annex 10. Yemen – Achieving Results in the Ministry of Health and Population

By Stephan Pahls and Dr. Fowzia Jaffer

Source: Emerging Good Practice in Managing for Development Results Source Book – (Third Edition - 2008)

- As Yemen's new Minister of Health, Dr. Rasea gave strong support to the implementation of the Rapid Results Approach (RRA) methodology, helping it to succeed by fostering a commitment to results from stakeholders at all levels.
- The development of results and benchmarking for each project through the RRA methodology paved the road for good implementation and valid monitoring.
- The success of the RRA in Yemen has led to the suggestion of scaling up and institutionalizing the RRA in other projects and in the planning and execution of other donor programs, many of which suffer from similar implementation problems.

1. Introduction

1.1 Yemen's Health Reform Support Project (HRSP) was launched in 2002 to (a) increase access for women and children to a package of integrated maternal and child health services, provided in district hospitals and health centers in selected districts; and (b) improve the effectiveness of national public health programs and resource allocation within the public health sector in Yemen. Project development objectives were clear, but the project indicators, inputs, and implementation mechanisms were vague, with few key performance indicators.

1.2 During the early stages of implementation, this lack of detail, combined with low capacity in the Ministry of Health and Population (MOPHP), created major obstacles to implementation.

1.3 The project's Midterm Review in May/June 2005 concluded that little progress had been achieved on the objectives because of the slow pace of implementation, which led to discussions about canceling the project. During 2005, the slow implementation of the HRSP and another large Bank project became serious liabilities for the government of Yemen, culminating in an announcement by the World Bank in December 2005 that it would cut funding to the government by 34 percent because of unsatisfactory progress in the national reform agenda, governance issues, and lack of progress in a few "problem projects." Other donors also expressed their dissatisfaction. In addition, the United States

dropped Yemen as a candidate for its highly publicized Millennium Challenge Account for similar reasons.

1.4 In response to the situation, the Government of Yemen formulated the National Agenda for Reform, a six-month action plan adopted by the Cabinet in January 2006; and on February 11, 2006, the Government announced a major reshuffling of the Cabinet, replacing 15 of the existing 35 ministers, including the MOPHP. A sense of urgency ran high as the President sought to turn things around. New leadership within the MOPHP introduced the Rapid Results Approach (RRA), putting the HRSP back on track, proving that MOPHP could deliver, and building capacity and new confidence for managing change throughout the MOPHP.

2. Leadership and Efforts to Strengthen Results-Based Management

2.1 The RRA was introduced at a five-day workshop in February 2006 attended by all relevant stakeholders—minister, deputy ministers, component managers, and representatives of the Ministries of Planning and International Cooperation (MOPIC) and Finance (MOF). The RRA takes the approach of setting short-term goals as a step toward achieving the overall objectives, and the workshop prioritized nine targets to be achieved within the next 100 days. The new Minister of MOPHP, Dr. Abdoul Kareem Yehia Rasea, took up his post on the first day of the workshop. Conscious that adopting the RRA was vital to save HRSP project funds and ensure the success of the project, Dr. Rasea not only immediately supported the process, but also led it. He attended the entire workshop, which was an unprecedented assertion of leadership and high-level support, sending a message to the deputy ministerial level and throughout the MOPHP that the success of the HRSP was a priority. Four RRA workshops took place between February 2006 and May 2007. The RRA improved access to information, enabling the Ministry and donors to better see the problems and their underlying causes, instead of simply reacting to and then treating the symptoms. By opening a dialogue with MOPIC and MOF, Dr. Rasea promoted practical problem solving and the removal of bureaucratic hurdles. A few weeks after taking office, he also changed the head of the Credit Administration Unit (CAU), bringing in someone with a track record as an effective manager and communicator. The Minister also offered the necessary support to CAU to keep the project moving in the right direction.

2.2 During the Midterm Review the project had been restructured, and subsequent RRA workshops were used to operationalize the changes. While the restructuring faced considerable resistance at the beginning (with managers of underperforming subcomponents refusing to scale back their activities), the introduction of targets and participatory processes with the RRA made the whole process more transparent and logical, winning over the opposition. The application of the RRA had an effect on the roles and expectation of leadership, and on the emergence of teamwork, leading to changes in the way traditional hierarchies engaged in the decision-making process with other stakeholders in project implementation. A growing sense of ownership and accountability for results was described by Dr. Majad Alijunaid, Deputy Minister of the Health Care Sector, as follows:

> "In implementation, leaders find themselves accountable to implementers at higher and lower levels, and they are accountable at the community level. The leader becomes more results-oriented, as the process is taken on by the team, holding the leader accountable in terms that are defined by indicators at the outcome level. Teams, not leaders, decide what the targets will be, so the leaders have to delegate some of the decisions about how the work gets done. RRA team members report to the team, and they are all on a first-name basis. The RRA has brought an approach to teamwork that is less hierarchical, with improved working relationships."

3. Results Achieved

3.1 After the first two RRA workshops, results were already emerging. The project implementation rating improved from unsatisfactory to moderately satisfactory. This improvement gave the project new life and brought about an agreement to restructure it by modifying goals to be more consistent with the timeframe. A one-year extension of the program was also granted. By May 2008, disbursements of the project credit had increased by nearly 87 percent. After four rounds of applying the RRA, the teams achieved almost all planned activities and developed a two-year results framework to cover the remaining life of the project. From June 2006 onward, project implementation improved and significant progress was made on achieving project objectives.

3.2 A New Results Culture. In addition to increased disbursements and improved implementation, there were learning gains from capacity building. By helping MOPHP staff meet and exceed their targets, the RRA strengthened their confidence, motivation, and leadership skills. After some initial success increasing disbursements, the RRA teams shifted their focus to contributing to the emergence of a results-based culture in the MOPHP. During the December 2006 workshop, when the action plan (and monitoring plan) for the remainder of the project were developed, the development objectives were put at the center of the planning exercise and the component targets were aligned with the project indicators. This exercise helped the RRA teams develop new skills and capacities in results management. The fact that RRA activities were assessed and monitored by Minister Rasea and other stakeholders at the end of each 100 days in a workshop also fostered a healthy sense of competition and responsibility to achieve targets at the project component level.

3.3 Increased Accountability. Another positive achievement was improved cooperation between the MOPHP and outside stakeholders, especially MOPIC and MOF. Long-standing tensions with the MOF were set aside in favor of a better working relationship. For example, the MOF used to take weeks to release funds for implementation because activities were unclear and there were no implementation plans. Once the RRA initiative was put in place the MOF became actively involved, processing CAU requests in a matter of hours instead of weeks. Mentioning "100-day goals" when submitting a request to the MOF is said to open doors and ensure prompt staff attention to the project! There is a very similar relationship with MOPIC, whose staff are responsible for approving

activities and targets and ensuring that credit funds are used properly, and who now feel personally committed to the success of the project.

3.4 Improvements in M&E. At the time the RRA was introduced, the HRSP did not have a systematic approach to monitoring and evaluation (M&E). In the absence of an active project coordination committee, the three rounds of RRA workshops begun in 2006 provided the opportunity for some coordination at the facility level, and allowed for the exchange of information on the status of each component. It was proposed that RRA workshops continue to be used as mechanisms to review and monitor the implementation plans, in lieu of the coordination committee meetings. Each component team developed a two-year (2007-2008) target with quarterly benchmarks and draft corresponding budgets, finalized and approved in March 2007, which was used to assess progress and expenditures over the two-year period. The fourth- and fifth-round RRA workshops (December 2007 and May 2008, respectively) were held to review the two-year performance and make necessary programmatic or financial adjustments for the last year of the program.

4. Lessons Learned and Challenges Overcome

- **Strong senior-level leadership is vital to the success of results-oriented reforms.** Dr. Rasea's leadership as the new Minister of Health was instrumental to the success of the RRA. His dedication to improving the impact and accountability of health projects fostered a new results culture across ministries.

- **The RRA is a way of making large-scale change happen incrementally.** The approach was introduced gradually, with gradual expansion of number of targets; only during the third round was full emphasis put on the fact that all activities must directly support the project's development objectives. The approach was simple, with clear guidelines, and introduced by competent facilitators.

- **Linking leadership with results clarifies roles, fosters transparency, and builds ownership.** Because clear responsibilities were assigned to component managers, accountability was greater, progress was measurable, and the sense of ownership was increased. The methodology helped component managers to know what was expected, partners to know where the issues/bottlenecks were, and the ministry leadership to monitor effectively and follow up/intervene where necessary.

- **RRA led to a reorientation away from inputs towards results**. Competition increased pressure on component teams to perform, but also allowed for recognition of people who were doing well.

- **With crisis comes opportunity**. The crisis played an important role in mobilizing support for the RRA within the MOPHP leadership and among the deputy ministers. This resulted in strong ownership of the RRA from the top and from the beginning. Since donor dissatisfaction and threats of funding cuts put the

performance of the HRSP high on the agenda for the whole government, all three new ministers (MOPHP, MOF, and MOPIC) had strong incentives to turn it around.

- **The RRA contributed to the successful restructuring of the project** by moving it from a narrow focus on an overambitious package of integrated services at the district level to more tangible and realistic evidence-based interventions supporting the development objectives.

- **There is no one-size-fits-all approach.** What matters most is that the results achieved are in line with the country's objectives and mechanisms that make sense in the country context. Leadership, ownership, and partnership, the application of the RRA as an appropriate methodology, and the enabling environment (timing) were all important factors for achieving rapid results.

5. Conclusion

5.1 The success of the RRA in Yemen has led to the suggestion of scaling up and institutionalizing the RRA in other projects and in the planning and execution of other donor programs, many of which suffer from similar implementation problems. There are two entry points for scaling up: (a) MOPIC, with its mandate for donor harmonization and alignment, is the natural entry point for broadening the approach into other sectors; and (b) the ongoing Health Sector Review (HSRev) could be an entry point for scaling up in the MOPHP and among the MOPHP's partners. The HSRev could evaluate the potential for scaling up the RRA while at the same time applying it to some of the HSRev components, particularly where there are multiple stakeholders. However, there are challenges to scalability; at present there is no sector wide approach under which Yemen can pool donor resources, and government funds constitute the majority of resources in the public health sector.

5.2 Beyond bringing a single project back on track, it seems that the RRA has strengthened leadership and confidence in the MOPHP on different levels, including (a) the position of the Minister of Health and Population in the Cabinet, (b) the implementation capacity and confidence of component managers, and (c) the confidence of deputy ministers to manage change more successfully. The Minister of Health would like to expand this approach to other projects and programs throughout the ministry, and has also said that there is a need to eventually expand it to encompass the entire institution. MOPIC is another promising entry point for moving forward. There is still a need for training and raising awareness, and for support and planning for institutionalizing the RRA.

5.3 The availability of coaches is critically important for scaling up. A team of senior ministry staff was selected for RRA training. The training should be delivered soon, should be intensive, and should be followed by immediate application of the methodology—for example, in the context of the HSRev. Delays in the process would

likely result in a loss of momentum. Building the capacity of a team of MOPHP staff (potentially to be complemented by local consultants) is very important for reducing dependence on the staff of international donor organizations. This will increase sustainability and lower the threshold for other partners to buy in and make use of the process.

Map No. 33513