The World Bank

Report No: ICR00003376

IMPLEMENTATION COMPLETION AND RESULTS REPORT
(IDA-48100)

ON

A CREDIT IN THE AMOUNT OF

SDR 25.7 MILLION (US$ 39.0 MILLION EQUIVALENT)
IN PILOT CRISIS RESPONSE WINDOW RESOURCES

TO THE

REPUBLIC OF MOZAMBIQUE
FOR THE

HEALTH COMMODITY SECURITY PROJECT

DECEMBER 23, 2014

Global Health, Nutrition and Population Practice
Eastern and Southern Africa
Africa Region

CURRENCY EQUIVALENTS
(Exchange Rate Effective)
Currency Unit = Meticals
1US$ = 31.15meticals

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

AAP	Annual Action Plan
ACT	Artemisinin-based Combination Therapy
AIDS	Acquired Immune Deficiency Syndrome
ARV	Anti-retroviral drugs
AT	Administrative Tribunal
CA	Central Equipment Store
CAS	Country Assistance Strategy
CHAI	Clinton Health Access Initiative
CMAM	CMAM (Central Medical Stores)
CPPR	Country Portfolio Performance Review
CPS	Country Partnership Strategy
CRW	Crisis Response Window
CSO	Civil Society Organization
CSR	Country Status Report
DAF	Directorate of Finance and Administration
DCA	Development Credit Agreement
DM	Decision Meeting
DNAM	National Directorate of Medical Assistance
DPC	Directorate of Planning and Cooperation
EA	Environmental Assessment
EMP	Environmental Management Plan
FM	Financial Management
FMR	Financial Monitoring Report
GAVI	Global Alliance for Vaccine Independence
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, Tuberculosis & Malaria
GOM	Government of Mozambique
KPI	Key Performance Indicators
LLIN	Long-Lasting Insecticide Treated Net
LMIS	Logistics Management Information System
MDG	Millennium Development Goals
M&E	Monitoring and Evaluation
MOH	Ministry of Health (MISAU)
MoU	Memorandum of Understanding
MTR	Mid-term Review
NCB	National Competitive Bidding
ORAF	Operational Risk Assessment Framework
PAD	Project Appraisal Document
PARPA	Mozambique's Poverty Reduction Plan
PCN	Project Concept Note
PCR	Project Completion Report
PDO	Project Development Objective
PEPFAR	President's Emergency Fund for AIDS Relief
PER	Public Expenditure Review
PIU	Project Implementation Unit
PLMP	Pharmaceutical Logistics Master Plan
PLWHA	People Living with HIV/AIDS
QER	Quality at Entry Review
RDT	Rapid Diagnostic Test
RF	Results Framework
SCM	Supply Chain Management
SCMS	Supply Chain Management Systems Project
SDP	Service Delivery Point
SDR	Special Drawing Rights
SIL	Specific Investment Loan

GTM	Technical Working Group on Pharmaceuticals	SIMAM	Medical Supply Management Information System
HCSP	Health Commodity Security Project	SSA	Sub-Saharan Africa
HIV	Human Immunodeficiency Virus	STC	Short-Term Consultant
HMIS	Health Management Information System	SWAp	Sector-wide approach
HNP	Health, Nutrition, and Population	TA	Technical Assistance
HSDP	Health Service Delivery Project	TB	Tuberculosis
ICB	International Competitive Bidding	UGEA	Procurement Management and Implementation Unit
ICR	Implementation Completion and Results Report	UNDP	United Nations Development Program
IDA	International Development Association	UNFPA	United Nations Fund for Population Activities
IFR	Interim Financial Report	UNICEF	United Nations Children's Fund
IO	Intermediate outcome indicators	UNITAID	UNITAID
IP	Implementation Progress	USAID	US Agency for International Development
ISR	Implementation Status Report	USD	US Dollar
HIV	Human Immune Deficiency Virus	WHO	World Health Organization

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MOZAMBIQUE
HEALTH COMMODITY SECURITY PROJECT

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A. Basic Information			
Country:	Mozambique	Project Name:	Health Commodity Security Project
Project ID:	P121060	L/C/TF Number(s):	IDA-48100
ICR Date:	12/23/2014	ICR Type:	Core ICR
Lending Instrument:	SIL	Borrower:	Republic of Mozambique
Original Total Commitment:	XDR 25.70M	Disbursed Amount:	XDR 24.55M
Revised Amount:	XDR 25.70M		
Environmental Category: C			
Implementing Agencies: Ministry of Health			
Co-financiers and Other External Partners: None			

B. Key Dates				
Process	**Date**	**Process**	**Original Date**	**Revised / Actual Date(s)**
Concept Review:	05/20/2010	Effectiveness:	02/15/2011	02/15/2011
Appraisal:	06/23/2010	Restructuring(s):		10/31/2012 12/23/2013
Approval:	09/30/2010	Mid-term Review:	11/29/2011	12/11/2011[1]
		Closing:	12/31/2012	06/30/2014

C. Ratings Summary	
C.1 Performance Rating by ICR	
Outcomes:	Moderately Satisfactory
Risk to Development Outcome:	Low or Negligible
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:	Moderately Satisfactory	Government:	Moderately Satisfactory
Quality of Supervision:	Moderately Satisfactory	Implementing Agency/Agencies:	Moderately Satisfactory
Overall Bank Performance:	Moderately Satisfactory	**Overall Borrower Performance:**	Moderately Satisfactory

[1] As a 2 year project, the project was exempted from a mid-term review (MTR); instead an intensive supervision was conducted during the mission which took place on June 2012.

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):	No	Quality of Supervision (QSA):	None
DO rating before Closing/Inactive status:	Satisfactory		

*A Quality at Entry Review was held on June 14, 2010.

D. Sector and Theme Codes		
	Original	**Actual**
Sector Code (as % of total Bank financing)		
Health	100%	100%
Theme Code (as % of total Bank financing)		
Malaria	35%	35%
HIV/AIDS	30%	30%
Population and reproductive health	20%	20%
Health systems	10%	10%
Child health	5%	5%

E. Bank Staff		
Positions	**At ICR**	**At Approval**
Vice President:	Makhtar Diop	Obiageli Katryn Ezekwesili
Country Director:	Mark R. Lundell	Olivier P. Godron
Practice Manager/Manager:	Abdo S. Yazbeck	Eva Jarawan
Project Team Leader:	Sangeeta Raja Jobanputra	Laura L. Rose
ICR Team Leader:	Carolyn J. Shelton	
ICR Primary Author:	Peter D. Bachrach	

F. Results Framework Analysis

Project Development Objectives (from Project Appraisal Document**)**
The development objective of the proposed project is to improve the availability of selected drugs and medical supplies in Key Distribution Points[2] in the Recipient's territory[3].

Revised Project Development Objectives (as approved by original approving authority)
The PDO was not revised.

(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[4] :	ARVs ordered that are delivered to health facilities (N=250 Service Delivery Points)			
Value (Quantitative or Qualitative)	85%	85%		100.7%
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Achieved.** The target was exceeded. ARVs delivered to health facilities as a proportion of orders increased from 94.5% in 2011 to 98.6% in 2012 and have remained at 100% in 2013-14.			
Indicator 2 :	Injectable contraceptives ordered that are delivered to provinces (N=10 provinces)			
Value (Quantitative or Qualitative)	75%	75%		97.2%
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Achieved.** The target was exceeded. Injectable contraceptives delivered to the provinces as a proportion of orders increased from 59.7% in 2011 to 90.4% in 2012, to 100% in 2013, and were 97.2% at project closing.			
Indicator 3 :	Cumulative number of long-lasting insecticide-treated malaria nets purchased and/or distributed			
Value (Quantitative or Qualitative)	0	1 700 000		Purchased: 2,215,300 Received: 2,211,220 Planned distribution: 2,130,048 Actual distribution: 1,937,243
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Achieved.** The number of LLINs purchased and actually distributed exceeded the original target. Overall, 90.9% of the nets received were distributed.			
Indicator 4 :	Cumulative number of adults and children with HIV receiving ARVs			
Value (Quantitative or Qualitative)	0	25,735		129,405
Date achieved	12/31/10			6/30/2014

[2] "Key distribution points" is defined as district warehouses, health facilities, and/or central/provincial warehouse where the Project financed health commodities will be distributed during project implementation.
[3] For ARVs and injectable contraceptives, the baseline and end-target are the same as the project's objective was to maintain the availability during the crisis period. With the extension the end target was not changed as the objective of the project was to assist in maintaining service levels. In the case of LLINs, the government aimed for an increase.
[4] The total number of patients on first-line ARV treatment (adults and children) by June 2014 was 552,940 out of 616,112 who were identified as needing treatment. The Bank financed the support of 129,405 patients, a total of 23% of the patients on treatment.

Comments (incl. % achievement)	**Achieved.** The cumulative number of adults and children with HIV receiving ARVs greatly exceeded the original target, increasing from 0 to 129,405 (or 500% of the target)[5].			
Indicator 5a:	Cumulative number of direct project beneficiaries			
Value (Quantitative or Qualitative)	0	6,000,000		6,662,111
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Achieved.** The cumulative number of project beneficiaries exceeded the target, increasing from 1,637,500 (2011) to 4,093,448 (2012) to 5,919,669 (2013) to 7,425,079 in the first six months of 2014 (or 124% of the target).			
Indicator 5b:	Proportion of cumulative number of direct project beneficiaries who are female			
Value (Quantitative or Qualitative)	0%	58%		56%
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Achieved.** The cumulative proportion of female direct project beneficiaries was 56% (or 97% of the target).			

(b) Intermediate Outcome Indicator(s)

Component 1: Provision of Essential Health Commodities

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 orders received according to the agreed schedule in the contracts			
Value (Quantitative or Qualitative)	0	>12 weeks		49%
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Partially achieved.** The indicator was measured with difficulty as delivery schedules were modified to avoid overstocked or understocked pipelines and to ensure completion of all customs clearance procedures prior to shipment. Based on the contractual obligations, 31 of 63 orders (or 49%) were received according to the schedule.			
Indicator 2 :	Percentage of supplier lead time variability			
Value (Quantitative or Qualitative)	0%	10%		81%
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Not achieved.** Though commonly used in commercial supply chain metrics, this indicator was found to be inappropriate for the public sector; lead time variability was much higher due to the need to continuously adjust orders so as to reduce risks and minimize costs (e.g. demurrage costs) in the supply chain by not shipping the products until all the tax waiver forms had been approved.			

[5] The difference between the original target and the eventual result was due to: (i) the decision to use HCSP to finance only first-line treatment and not the full continuum of care (i.e., the potential need for a patient to receive second and/or third line treatment) which was estimated at US$ 190 per patient; and (ii) UNICEF's highly effective sourcing of ARVs which enabled the agency to obtain a one-month supply for US$9.70 (or US$ 116 per patient per year), compared with the monthly cost of US$28.00 that other bulk purchasers were receiving.

Component 2: Strengthening Supply Chain Management

Indicator 3 :	National fleet management plan completed			
Value (Quantitative or Qualitative)	No	Yes		Partially
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Partially achieved.** Training on understanding the concepts of fleet management was initiated; follow up steps for conducting a fleet management assessment and developing a fleet management plan were not completed due to the Ministry of Health's decision to implement a technology solution (e.g. installing the CARTRAK system to monitor usage and other metrics related to transport) rather than introducing broader changes in transportation policy and management.			
Indicator 4 :	Districts using a computerized Logistics Management Information System (LMIS)			
Value (Quantitative or Qualitative)	5	75		121
Date achieved	12/31/10			6/30/2014
Comments (incl. % achievement)	**Achieved**. The number of districts using a computerized LMIS increased from 5 to 121 (of a total of 150) districts in the country.			

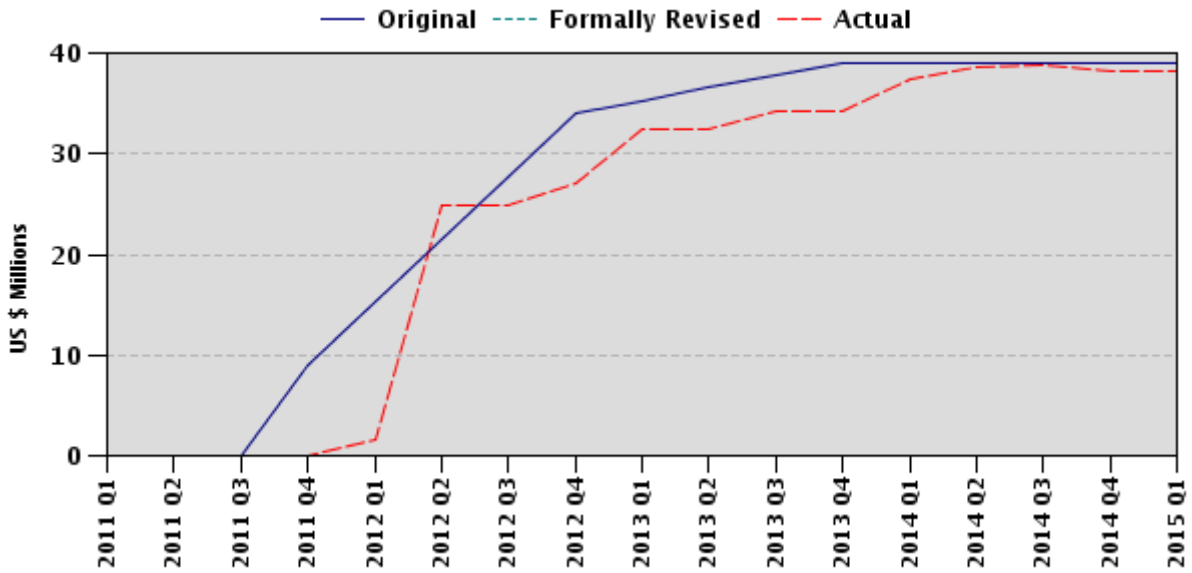
G. Ratings of Project Performance in ISRs

No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	04/03/2011	Satisfactory	Satisfactory	0.00
2	12/17/2011	Moderately Satisfactory	Moderately Satisfactory	24.84
3	06/26/2012	Moderately Satisfactory	Moderately Satisfactory	27.06
4	12/26/2012	Moderately Satisfactory	Moderately Satisfactory	32.36
5	06/24/2013	Moderately Satisfactory	Moderately Satisfactory	34.25
6	12/31/2013	Moderately Satisfactory	Moderately Satisfactory	38.59
7	03/09/2014	Moderately Satisfactory	Moderately Satisfactory	38.72
8	06/25/2014	Satisfactory	Moderately Satisfactory	38.21

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		
10/31/2012		MS	MS	32.36	To extend the closing date of the project from December 31, 2012 to December 31, 2013
12/23/2013		MS	MS	38.59	To extend the closing date of the project from December 31, 2013 to June 30, 2014.

I. Disbursement Profile



1. Project Context, Development Objectives and Design

1.1 Context at Appraisal

1. **Country context.** Following the end of its devastating civil war in 1992, Mozambique's economy improved steadily and grew at an average annual rate of 6-8% between 2006 and 2009, resulting in a decline of 15% in the poverty headcount index. Despite these gains, poverty had stagnated at 55% since 2003 and 75% of the population lived on an income of less than US$2 a day.[6] In addition, Mozambique has been vulnerable to exogenous shocks, including recurrent natural disasters, fluctuating prices for food and fuel, and varying levels of foreign assistance. After the onset of the global economic crisis, projected economic growth rates for 2010-14 were estimated at 4-5%. Such a decline qualified the country for assistance through the Crisis Response Window (CRW) established to provide access to emergency funds to mitigate the crisis, especially for countries dependent on foreign assistance such as Mozambique.

2. **Health sector situation.** Over the period 2003-2011, Mozambique had made significant strides in reducing child mortality. Demographic and Health Survey data showed that between 2003 and 2011: (i) neo-natal mortality had decreased from 37 to 30 (per 1,000 live births); (ii) infant mortality had declined from 101 to 64 (per 1,000 live births); and (iii) under-five mortality had been reduced from 153 to 97 (per 1,000 live births). Other child health indicators, including immunization rates and malnutrition had remained relatively stable. Progress in improving maternal health was more measured: prenatal care and skilled birth attendance increased from 84.5 percent to 90.6 percent, but estimates of maternal mortality rates remained unchanged at 408 per 100,000 live births. Similarly, contraceptive prevalence remained stable at 11.7 percent (2003) and 11.3 percent (in 2011).

3. Over the same period, progress in the fight against HIV/AIDS had been achieved with support from IDA[7] and other development partners: (i) HIV prevalence as a percentage of adults aged 15–49 years remained stable (at 11.0-11.5 percent); and (ii) while the number of persons living with HIV increased from 1.1 to 1.5 million, 36 percent of people with advanced HIV infection and 54 percent of pregnant women were receiving antiretroviral therapy (ART).

4. Government funding for health, as a percentage of the total budget, had declined from 15.0 percent (2003) to 12.8 percent (2007) and reached a low of 7.8 percent in 2011. During this period, the Common Fund (financed by 15 out of 26 development partners in the country and critical for financing needed public health commodities[8]) was suffering from the external shock of the global financial crisis and the internal shock of the misuse of funds.

5. **Country Assistance Strategy / Rationale for Bank Involvement.** The Health Commodity Security Project (HCSP) was consistent with the Ministry of Health's sector wide approach[9] and the National Integrated Plan (2009-2012) to achieve millennium development goals (MDGs) 4 (reduce

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[6] Mozambique ranked 172 of 177 countries on the 2008-09 Human Development Index.

[7] IDA's intervention in the health sector comprised three investment projects: HIV/AIDS Response project (FY03), Health Service Delivery Project (FY09), and Health Commodity Security Project (FY11).

[8] Donor support for pharmaceutical supplies decreased 38% between 2008 and 2009; and future projections (particularly for ARVs) were not optimistic, as The Global Fund to Fight AIDS, TB and Malaria (GFATM) had not disbursed for more than a year while reporting arrangements were being worked out, and the US financed President's Emergency Plan for AIDS Relief (PEPFAR) was expected to reduce its funding for ARVs by 10-15% in 2011/2012.)

[9] Previous Bank projects had participated in the common fund, but the ongoing Health Service Delivery Project did not; HSDP and HCSP implementation were, however, undertaken in close cooperation with other development partners to secure financing for key public health commodities.

child mortality), 5 (reduce maternal mortality), and 6 (combat HIV, malaria and other diseases)[10]. The HCSP's focus on commodities was expected to promote synergies among existing Bank projects, including: (i) the Health Service Delivery Project (HSDP) with the objective of improving access to health services; and (ii) the HIV/AIDS Response project with the objective of reducing the spread of HIV infection among the general population and mitigating its effects through a multisectoral approach.

6. The project was expected to support the Government's *Absolute Poverty Reduction Plan of Action* (PARPA II 2006-2009) and the *Country Partnership Strategy* (CPS 2008-2011) by: (i) contributing to the Government's poverty reduction objectives for the most vulnerable groups (pregnant women and children under five), those living in rural areas, and the poor; (ii) complementing the Bank's health program in Mozambique and leveraging its existing advantages for procurement and distribution of goods; and (iii) helping Mozambique respond to the fall-out from the global economic crisis with the injection (over a relatively short period) of spending on essential commodities (in the areas of HIV/AIDS, malaria, TB, and reproductive and child health) and on the logistical requirements to ensure the availability of these essential commodities.

7. Finally, the project was closely aligned with other strategic Bank priorities (including the Reproductive Health Action Plan 2010-15) and adhered to the selectivity principle by financing core commodities (including those related to malaria prevention, immunizations, and HIV/AIDS treatment), as well as improving availability of drugs and commodities. By protecting spending for select public health sector commodities, the proposed project was consistent with the objectives of the CRW, which allowed the Bank to be one of the few financiers able to respond quickly to fill the financing gap for commodities in Mozambique.

8. Bank involvement was based on the rationale that: (i) public health programs were well-established internationally as cost-effective interventions; and (ii) the proposed commodities would respond to the infectious diseases which disproportionately affect the poor and contribute to their control which has large, positive externalities. Bank support was also seen as an opportunity to raise the profile of Supply Chain Management (SCM) within the Ministry of Health.

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

9. The project development objective (PDO) is to improve the availability of selected drugs and medical supplies in Key Distribution Points in the Recipient's territory.

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

10. Neither the PDO, nor the key indicators were revised.

1.4 Main Beneficiaries and Benefits

11. By providing financial resources towards the estimated 2011-12 funding gap for key health commodities, the project was expected to benefit approximately 6 million people, including the most vulnerable groups, who are most dependent on the public sector for access to health services and most likely to suffer from the effects of epidemics. Specifically, the project targeted women accessing family planning, children aged 6 to 59 months requiring vaccination against measles, People Living with HIV/AIDS (PLWHA), families sleeping under LLINs, and adults and children seeking TB treatment. Of these beneficiaries, 58% were expected to be female.

[10] Most of these interventions are dependent on essential medicines and medical supplies to be in place to achieve the results and many of these supplies are financed by external donors.

12. Benefits included: (i) the increased likelihood that key services (family planning, malaria, immunization and HIV/AIDS) would not suffer from the unavailability of commodities; and (ii) the strengthening of selected distribution and logistics management functions of the supply chain, which would have a spillover effect on the overall delivery of health services.

1.5 Original Components

13. **Component 1: Provision of Essential Health Commodities** (Initial estimate: $34.5 million; Actual cost: $31.9 million or 92.5 percent of original project cost)**.** This component financed the procurement of much-needed selected essential commodities to prevent and treat HIV/AIDS (ARVs and diagnostic test kits), malaria (LLINs), TB (drugs and reagents), and promote reproductive (contraceptives) and child health (vaccines). It also financed the operating costs associated with the distribution of commodities.

14. **Component 2: Strengthening Supply Chain Management** (Initial estimate: $4.5 million; Actual cost: $6.1 million or 136 percent original project cost)**.** This component financed strengthening of several activities identified in the Logistics Master Plan, specifically, the distribution system between the central, provincial, and district warehouses by providing essential inputs: (i) trucks to deliver commodities from the provincial warehouses to the district warehouses; (ii) technical assistance to prepare and implement fleet management plans; and (iii) distribution costs from the port to the district warehouses. The component also financed: (i) computer hardware for expanding the logistics management system nationwide; and (ii) project management costs, including operating costs and audit services.

1.6 Revised Components

15. The project components were not revised.

1.7 Other significant changes

16. The project was restructured and the Financing Agreement was amended twice: (i) on October 3, 2012 (Level 2) to extend the project's closing date by twelve months from December 31, 2012 to December 31, 2013; and (ii) on December 23, 2013 (Level 2) to extend the project's closing date by an additional six months from December 31, 2013 to June 30, 2014.

2. Key Factors Affecting Implementation and Outcomes

2.1 Project Preparation, Design and Quality at Entry

17. **Project preparation.** The HCSP was among the first to: (i) be processed under the IDA CRW as a stand-alone project (as distinct from an additional financing operation); and (ii) adopt the Risk-based Investment Lending procedures focusing on results and risks. This project qualified for express-processing under these new procedures and was prepared quickly with the concept review in May 2010 and appraisal in June 2010. A post-appraisal/pre-negotiations review was organized[11] in August 2010, where the team was requested to clarify the wording of the PDO as well as implementation arrangements from central to district and facility levels. Negotiations were conducted in August 2010, and the project was approved in September 2010.

18. Soundness of the background analysis. Project preparation analyzed the reasons for the

[11] Under the procedures for the fast tracked CRW, an appraisal review is organized instead of a Decision Meeting. The complete arrangements for the Pilot Crisis Response Window were adopted by the Board on December 10, 2009.

projected commodity gaps[12] and estimated the immediate needs and financial gaps for: anti retro-viral drugs (ARV) and rapid HIV test kits, tuberculosis (TB) drugs and laboratory reagents, contraceptives, vaccines and vaccination material, and long-lasting insecticide treated bed nets (LLIN). In addition, the MOH, with other key development partners (USAID, WHO, UNICEF, UNFPA, and CHAI) carried out a medium-term expenditure plan for TB, estimated the required quantities of reproductive health supplies, and calculated the need for vaccines and bednets.

19. In addition, project preparation also assessed MOH's weaknesses in procuring and distributing commodities and in financial management.[13] In 2008, prior to project preparation, a review of pharmacy sector management practices had identified systemic weaknesses in warehouse operations including weak inventory management, poor warehouse infrastructure, and lack of materials and handling equipment to move and store the commodities. Throughout 2009-10, MOH, with assistance from the PEPFAR-financed Supply Chain Management Systems Project (SCMS), UNICEF, UNFPA, and the Global Fund, addressed these shortcomings by: (i) assessing warehouse operations and security risks; and (ii) developing a Pharmaceutical Logistics Master Plan (PLMP).

20. The PLMP described the fragmented supply chain management system, with several entities involved in forecasting, procurement, warehousing and distribution. The distribution system was identified as the main challenge for improved SCM with the major constraints comprising poor roads, limited availability of transport, and a lack of funding for fuel at provincial and district levels. Implementation of the PLMP was expected to reform the procurement and distribution of drugs and other medical supplies with interventions covering all aspects of SCM, including forecasting and procurement, warehousing, training, monitoring and evaluation, and distribution.

21. Finally, implementation arrangements were based on the Health Service Delivery Project (HSDP), which had conducted a thorough institutional assessment in 2007. An independent and updated analysis of the proposed institutional arrangements within Government and among the implementing agencies was not conducted during preparation.

22. Government commitment. Government commitment for Component 1 was demonstrated by close cooperation with the development partners through the technical working group on pharmaceuticals (GTM) comprised of both government and donors. The GTM cooperates in determining financing gaps in the selected commodities and plays a key role in quantifying procurement requirements and supporting distribution through the Central Medical Stores (CMAM). Government commitment for Component 2 was shown by the development of the PLMP, which proposed the adoption of a single integrated supply chain as well as other reforms for the procurement and distribution of drugs and other medical supplies by MOH.

23. Assessment of project design. Based on the linkage between the availability of health commodities and health outcomes [14] and on the lessons from previous financial crises,[15] the project was intended to secure the supply of key, high-impact public health inputs by: (i) procuring selected drugs and medical supplies in response to the anticipated reduction in donor financing of commodities; and (ii) strengthening the supply chain needed to deliver the commodities. Because of the emergency nature of the project, its design was focused on four related considerations.

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[12] HIV/AIDS funding had been delayed; tuberculosis and reproductive health funding had been reduced; malaria funding was inadequate for scaling up of bed net coverage; and Government funding of vaccines had not been sufficient to control recent epidemics. See Annex 2, Table 2.1 of the Project Appraisal Document.

[13] Although the Bank had financed several previous projects, fiduciary capacity suffered from constant staff turnover.

[14] Modeling exercises have linked the availability of health commodities with improved outcomes.

[15] See World Bank, "Protecting Pro-Poor Health Services During Financial Crises" (March 2009).

24. First, the design was very specific about: (i) which drugs and medical supplies would be made available; and (ii) where (as indicated in the PDO) they would be made available. Key health commodities were carefully selected based on projected needs for HIV/AIDS and TB drugs, malaria prevention, measles vaccination, and injectable contraceptives. ARVs were to be delivered to 250 service delivery points; contraceptives to the ten provincial drug warehouses; bed nets to be distributed to the four provinces with the highest incidence of malaria; and vaccination materials to be integrated into the national vaccination campaigns.

25. Second, the design comprised only two components and a limited number of procurements. Component 1 (88 percent of the project's proceeds) financed the purchase and shipment to Maputo. Component 2 (12 percent) financed the delivery of the commodities from Maputo to the key distribution points (including warehouse material, transport, and distribution costs) and limited measures to improve the planning, inventory management, and distribution of future pipeline supplies (including dedicated computers to expand the logistics information management system and fleet management methods to improve transportation of the commodities until a more permanent transport management policy option was adopted). [16]

26. In addition, the number, scope, and responsibility for the planned procurements were limited: (i) Component 1 comprised three procurement contracts, with the three agencies (UNICEF, UNFPA, and WHO/GDF); and (ii) Component 2 comprised only two International Competitive Bidding (ICB) processes (for vehicles and computer hardware and one consultant contract to develop a transportation plan for the medicines supply chain). Finally, distribution costs from central to provincial levels were to be financed under the project.

27. Third, the design attempted to combine stop gap financing for selected drugs and medical supplies with initial support for strengthening SCM systems. The immediate response relied on arrangements with UN agencies (UNICEF, UNFPA and WHO/GDF) as suppliers while the longer-term response involved building the capacity of CMAM to assure effective procurement and distribution. Discussion during the QER review focused on whether the two-year CRW time frame was sufficient to achieve the longer-term objectives.

28. Fourth, project implementation arrangements were to be integrated into existing institutions and procedures as designed in the HSDP. Rather than create a freestanding project implementation unit, the Directorate of Finance and Administration (DAF), with support from its procurement unit (UGEA) and an external procurement consultant (already contracted by MOH under HSDP to provide assistance in World Bank procurement procedures and general capacity building) would be responsible for project implementation.

29. Risks and risk mitigation. The QER panel noted the challenges of an emergency operation which involved: (i) contracts with UN agencies to supply key health commodities; and (ii) Government systems to distribute them. With respect to the UN agencies, Annex 2 of the PAD presented a detailed analysis of the risks and benefits of the different procurement options based on: (i) the length of the procurement process (lead time); (ii) the quality of the commodities procured, (iii) cost of the commodities; and (iv) contract leverage. Based on these criteria, the UN agencies were considered to be the most cost-effective option due to: (i) their recognized expertise of the commodities being procured as well as long-term contract agreements with the major suppliers (providing extra leverage for lower costs); (ii) their capacity to deliver within the needed timeframe;

[16] The Bank's decision to procure transport (trucks) and computers was based especially on discussions with USAID and the Global Fund concerning the feasibility of each institution to procure these goods.

and (iii) their established mechanisms for assuring adequate quality. Perhaps most importantly, the UN agencies could ensure quality, while the GOM had very limited capabilities. Pre-shipment testing by an independent quality assurance laboratory (a standard for assuring minimizing quality risks) was rarely applied and post-shipment testing was conducted at a very basic level.[17]

30. With respect to the Government systems-related risks, the project design reduced them by: (i) integrating its support within the policy and program improvements identified by the PLMP; (ii) financing only very specific inputs; and (iii) strengthening two essential elements of supply chain performance: transport and inventory management.

31. **Quality at Entry.** A QER was conducted in June 2010.

2.2 Implementation

32. The project was approved by the World Bank's Board of Executive Directors on September 30, 2010 and signed on November 17, 2010. A single condition of effectiveness was included in the Financing Agreement, that "the Operational Manual has been issued and adopted by the Recipient, and approved by the Association." A draft Operational Manual was submitted to the Association prior to negotiations on August 26, 2010. However, as defined in the Financing Agreement, this condition comprised a number of detailed provisions which were met at effectiveness.[18] The project became effective on February 15, 2011 and was originally expected to close on December 31, 2012.

33. **Implementation overview.** As shown in Section G of the Data Sheet, between February and December of 2011, more than 60 percent of the project's proceeds were disbursed, essentially for the large, initial UN contracts. Subsequently, disbursements became more strategic, based on the current commodity needs and the remaining funds. By the project's closing, 97.4 percent of the funds had been disbursed. Section G also shows that both the PDO and the Implementation Progress were consistently rated Moderately Satisfactory. The component ratings were also Moderately Satisfactory through December 2012; over the last 18 months, Component 1 was rated Satisfactory while Component 2 was rated Moderately Satisfactory.

34. Project implementation confronted four major challenges: (i) execution of the contracts with the UN agencies; (ii) the timeframe for project implementation; (iii) the use of country mechanisms for contract management; and (iv) the arrangements for project implementation. A fourth challenge, the collection and analysis of information on project performance, is discussed in Section 2.3 below.

35. Execution of the UN contracts. Project preparation with the UN agencies had included: (i) detailed planning for the quantities of the specific commodities; (ii) Bank approval for each of the UN contracts specified at design stage; and (iii) preparation of draft agreements for the delivery of the goods. Subsequently, procurement was delayed by: (i) the signature of the Memorandum of Understanding (MoU) with each of the institutions involved (Ministry of Health, UNICEF, WHO, and UNFPA)[19]; and (ii) the unanticipated requirement to re-submit each of the procurement packages to the Bank for review.[20] Despite these initial delays, the project-financed commodities

[17] The Bank's reputational risk with regard to sub-standard or counterfeit products was an important concern given the fact that preliminary studies from WHO showed as high as 45% sub-standard or counterfeit products in some African countries.

[18] See Financing Agreement, Schedule 2, Section I.4.

[19] For example, approval of the UNICEF arrangements took four months.

[20] Despite the agreement on procurement arrangements prior to effectiveness, Bank procedures at the time required that all procurements be subsequently justified. This requirement was eventually dropped for CRW projects.

(including first line ARVs, HIV test kits, long-lasting insecticide nets, and childhood vaccines[21]) began entering the pipeline in 2012. Further, though delayed, the assurance of guaranteed and predictable financing for these commodities by HCSP enabled other partners (such as USAID) to bring forward some of their projected shipments to 2011.

36. Timeframe for project implementation. Throughout 2011-2012, Bank management was informed of the Task Team's concern that the two-year timeframe was insufficient to achieve the project's objectives; in September 2012, the project closing date was extended by one year to December 31, 2013.[22] The extension allowed for the savings realized on the initial purchase of the commodities to be used flexibly by the HCSP (in collaboration with its partners) for additional smaller procurements throughout 2012 and 2013 to respond to specific needs and to provide the necessary time for the delivery in-country of these additional health commodities.

37. Country mechanisms for contract management. The project's timeframe was more problematic for improving supply chain management. The systemic issues related to SCM had been clearly identified during project preparation: (i) a fragmented supply chain management; (ii) inadequate financial resources for transport; and (iii) insufficient information on the distribution of commodities. However, the project's response within the two-year timeframe was necessarily limited to selected activities in the PLMP which were important for HCSP's success but which other partners, for various reasons, could not finance. These included: (i) procurement of vehicles for the distribution of commodities; (ii) operational costs associated with distribution; and (iii) computers to improve the visibility and transparency of inventory. In each case, however, the interventions involved a combination of lengthy and complicated Bank and Government (Administrative Tribunal) procurement procedures, which affected the overall Bank portfolio in Mozambique.[23]

38. Arrangements for project implementation. In addition to the issues related to the national context for procurement, project implementation was also negatively affected by the decision to integrate responsibilities within MOH. Changes at the most senior levels of the ministry as well as constant staff turnover in those departments responsible for project implementation contributed to insufficient familiarity with World Bank procurement and financial management procedures. Once a project management unit was established in 2013, these problems were reduced.

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

39. **M&E design.** Given the planned two-year duration of the HCSP, the availability of suitable indicators in MOH's (and especially CMAM's) routine data collection and the undesirability of establishing parallel M&E systems, the project proposed to rely on the existing M&E systems. In addition, the M&E annex included two features not seen in many PADs. First, because the indicators for the project were deemed to be fairly technical and not easily understood by those not familiar with the terminology, the PAD contained a clear description of the proposed indicators. [24]

[21] There were delays for two commodities: (i) contraceptives due to the inability of two manufacturers to deliver contraceptives on time as a result of high global demand and a backlog of orders; and (ii) anti-TB drugs as a result of issues related to WHO internal arrangements. Subsequently, anti-TB drugs were procured by the Global Fund, and Bank funds were reallocated to the other commodities.

[22] The Task Team had requested eighteen months to extend the project's closing date to June 30, 2014. Neither MOH nor the Bank seriously considered project restructuring because: (i) project funds had been substantially disbursed; and (ii) Component 2's two major procurements were already at the bidding stage and deemed to still be relevant.

[23] A Country Portfolio Performance Review in 2013 determined that the average length of these combined procedures for a procurement was 574 days.

[24] Both the decision on design and the annex on M&E were endorsed by the QER panel.

Second, as part of the preparation's estimate of needs, costs, and required financing, the PAD analyzed the number of expected beneficiaries and particularly the proportion of female beneficiaries. The link between these calculations and the annual target values in the results framework is evident and useful.

40. The Results Framework (RF) comprised all of the Key Performance Indicators (KPI) as well as the beneficiary targets, and presented the method for calculating results. Sources of data and institutional responsibilities for collecting and analyzing the data were clearly defined in the RF.

41. **Implementation.** The capacity of CMAM's staff to analyze the existing data proved to be weaker than originally assessed during project preparation. In addition, certain indicators (e.g., lead time and lead-time variability[25]) were made virtually meaningless by the constant amendments to the supply plans, the procurement schedules, and the resulting delivery of commodities outside the contractual terms specified in the MOUs.

42. Beginning in November 2012, the Bank noted the need for better information to monitor project performance as defined in the RF and provided additional support to the Ministry to analyze the data which had been collected. The roll-out of the medical supply management information system (SIMAM),[26] which benefited from project support, was a critical step in establishing an operational M&E system. Subsequently, the GTM has endorsed the results of these indicators on a quarterly basis as a monitoring tool for determining the state of the supply chain performance.

43. **Utilization.** Procurement delays and the constant adjustment of orders required: (i) close communication between the Bank and the other development partners in the country (USAID, Global Fund, UNFPA, UNICEF, UNITAID and CHAI); and (ii) flexibility in organizing the arrival of procurement orders to reduce the risk of stock-outs. Such constant adjustment of orders relied on careful monitoring of the supply pipeline, which was aided by the availability of information provided by CMAM. Analysis of this information was strengthened by technical assistance provided by a USAID-funded contractor SCMS and a Logistics Committee, co-chaired by CMAM and UNICEF. As noted previously, the coordinated response among stakeholders contributed significantly to achievement of the project's target of an 85% fill rate.

44. M&E is rated **Substantial**, based on the view that there were only minor shortcomings in the design, implementation, and utilization of the monitoring and evaluation system.

2.4 Safeguard and Fiduciary Compliance

45. **Environment**. The project was initially rated "B" in the Integrated Safeguards Data Sheet but was re-categorized as "C" at appraisal, as the project did not involve either construction or service delivery. In addition, a satisfactory healthcare waste management plan had been developed for HSDP. However, due to previous warehousing issues[27] and the project's emphasis on timely procurement and distribution of commodities, expiration was an issue. Building on supply chain

[25] The data required (e.g., fill rates and lead-time variability) are industry standards, and the project appraisal confirmed their availability. However, implementation support missions showed that (CMAM) was not able (without TA from the USAID project) to extract data from their Enterprise Resource Planning (ERP) system.

[26] SIMAM is an electronic logistics management information system that is rolled at all the districts and major hospitals, provincial and central warehouses. It captures three critical data on inventory management and forecasting: consumption, stock-on-hand and losses and adjustments such as transfers of stocks.

[27] In April 2011, large quantities of drugs in the CMAM central warehouse were found to be expired or very close to expiration (all of it purchased with USAID and GF funding).

strengthening measures instituted by MOH in 2011 (prior to the project),[28] project implementation: (i) staggered the delivery of goods to manage the volume entering the supply chain at any given time; and (ii) improved stock monitoring with the rollout of the LMIS to increase the visibility of the inventory.

46. Project supervision missions closely monitored the state of drug stocks and the proportion of expired drugs to ensure that no medical waste management issues would arise during project implementation. At the end of 2013, expired products amounted to 1% of the total estimated pharmaceutical budget for 2012 and 5% for 2013.[29] None of the expired products had been financed by the project and all were subject to strict guidelines for disposal.

47. **Procurement, Disbursement, and Financial Management.** Ratings for procurement and financial management were mixed MS and MU ratings throughout implementation.

48. Procurement. Packages were split between large-scale procurements included in the Bank-approved procurement plan and the smaller-scale procurements included in MOH's Treasury Plan.

49. Given the limited large-scale procurements, a plan for the 24 month period was prepared and procurement arrangements were deemed satisfactory at negotiations. It was agreed that the consultant hired to provide procurement services to HSDP would assist HCSP whenever required. Nevertheless, delays ensued, due primarily to the Bank's requirement that each order receive a non-objection. That is, even after the decision to use the UN agencies, HCSP was required to justify using them for each of the ten total orders to ensure that the price was reasonable and the quality assurance processes were still in place. Communications issues followed with the UN agencies and MOH, who were unclear why each order had to go through a review and non-objection process.[30] Despite these difficulties, the major procurements were completed by early 2012.

The Treasury-financed procurement plan also encountered delays, due to insufficient procurement capacity in UGEA which execution has been historically hampered by lack of ownership, poor and fragmented coordination/management, too many internal/MoH approvals, weak technical capacity and the approval requirements demanded by the Administrative Tribunal. However, the Ministry of Health has addressed some of these issues hiring in 2012 a professional consultant to support the procurement function and enable the project to accelerate some of the key activities that were procurement dependent. These sources of delay were a systemic problem for the entire Bank portfolio. As analyzed in the 2011 and 2012 Country Portfolio Performance Reviews, the average time for implementing the tender process was 574 days (far surpassing the target of 235 days), and the Country Director raised the issue on several occasions in letters to the Minister of Planning and Development. Based on the post procurement review carried out in November 2013, the overall procurement risk of the project was Moderate and performance Moderately Satisfactory (MS).

50. An important procurement issue arose during the last year of project implementation. With approximately US$3million remaining, MOH requested the purchase of 80 vehicles to strengthen distribution between the District and the health facilities. Though not a core activity of the project, it

[28] Inventories were quantified at all levels, stock management procedures were established, and strict guidelines were introduced for the disposal of expired goods, including shipment to South Africa for incineration.
[29] The main expired products were pediatric aids drugs and laboratory supplies, for which projections are very difficult due to the volatility in demand.
[30] Communication was also affected by disruptions in internet service.

fit well within its mandate.[31] Consequently, the procurement was approved as a National Competitive Bid (NCB) with post procurement review. Problems ensued: (i) The MOH launched a tender for procurement of 80 vehicles under NCB, bids were received and opened on due time, evaluation conducted and potential winning bidder identified (ii) after all this process, the client requested that the NCB be cancelled and permission granted to procure through UNOPS; (ii) the case was submitted to the Bank in January 2014; (iii) in May 2014, the Bank rejected the request taking into account the weak rationale for cancellation of this procurement process which may trigger a complaint from the lowest evaluated bid; (iv) MOH went ahead with the NCB, signing the contract on June 12, 2014, but did not receive clearance from the Administrative Tribunal until October 10, 2014; and (v) the Bank procurement services determined that the vehicles were received after project closing. Since a number of the vehicles had already been paid for and delivered, this payment was deemed to be an ineligible expenditure.

51. Financial Management. A Financial Management (FM) assessment was carried out at appraisal and found that: (i) financial management arrangements within MOH were acceptable; and (ii) the implementing entities were compliant with the Bank's financial management requirements. Overall, risk was rated as "Moderate". In December 2011, a FM supervision mission recommended that the project engage a FM advisor to train and coach DAF personnel handling project FM matters. By June 2012 FM supervision concluded that: (i) FM arrangements were not satisfactory; (ii) the FM advisor had not been recruited; and (iii) the audit report for the fiscal year ended 31 December 2011 was overdue. The 31 December 2012 audit report identified ineligible expenditures which were refunded to the project designated account. Additional problems were identified in the June 2013 implementation support mission, including weaknesses in the system of internal control and non-compliance with key internal control procedures. Subsequently, MOH recruited adequate staff and implemented the FM action plan and the 2013 audit report had an unqualified opinion; the overall FM performance of the project was Moderately Satisfactory.

52. There was, however, a problem of outstanding ineligible expenditures at project closing as explained above. This situation is currently being rectified.

2.5 Post-completion Operation/Next Phase

53. Programmatically, the logistics master plan, initiated in 2010 but never officially adopted, was superseded by the Pharmaceutical Logistic Strategic Plan (2013-17) and the Supply Chain Logistics Plan of Action (2013), which aim to (i) improve the quality and timeliness of information flow between health units, districts, provinces, and the Central Medical Store (CMAM); (ii) move to routine, scheduled delivery of commodities to the different levels of the supply chain; and (iii) strengthen supervision and technical audit of the supply chain by CMAM. Under the Logistics Plan approved by the Ministry, CMAM has been elevated from a unit under the DNAM (Direcção Nacional de Assistência Médica) to a National Directorate, which receives and executes its budget directly through the Government's on-line administrative and financing system.

54. Financially, the high-dependence on external financing[32] and its unpredictability would normally be problematic for the next phase. However, as the development partners have identified

[31] The request was justified by: (i) the newly adopted supply chain strategic plan; (ii) a USAID report indicating that the biggest distribution bottleneck was between the district and the facility; and (iii) the possibility (with HCSP support) of covering all of the districts in the country.

[32] Domestic funds account for approximately 25% of public health expenditures, 25% are financed through the on-budget pooled sector fund (PROSAÚDE) comprising fourteen donors, and 50% of public funds are provided outside of PROSAÚDE, with the majority provided off-budget through vertical disease programs (such as HIV, TB and Malaria).

commodity availability as a priority, and progress is likely to be made in strengthening procurement, storage, and distribution of medical supplies and goods in line with the approved PLMP. In addition, a new Bank financed project on Public Financial Management for Results Program (P4R) will also support strengthening the efficiency and transparency of supply chain management.

55. Institutionally, the results focus and flexibility of the P4R Program responds to MOH's recognition that improved supply chain performance will require better incentives at the different levels of the supply chain and better coordination among the national programs focusing on individual diseases (HIV, malaria, amongst others.). Although the HCSP is closed, the Bank will continue to support reforms to the supply chain as a member of the joint Government /Donor Working Group on Pharmaceuticals and through the new financing.

3. Assessment of Outcomes

3.1 Relevance of Objectives, Design and Implementation

56. The overall relevance of the project is rated **Substantial**. The project's supply objectives were highly relevant for the crisis period, and the supply chain management objectives remain highly relevant for the post-crisis period. The project's design was, however, only modestly relevant; the design responded adequately to the urgency for maintaining supplies of key commodities, but there were shortcomings related to the measures for procuring the inputs to support the strengthening the supply chain.

57. Relevance of the project objectives. Based on the development of policies and strategies orienting HCSP, project relevance is rated High. From the Bank's perspective, the project contributed to the objectives of the Crisis Response Window, the Reproductive Health Action Plan (2010-15), and the Country Partnership Strategy. From the Government's perspective, the project supported the PARPA's overall health objectives and more specifically the PLMP and the Supply Chain Plan of Action (2013). These documents comprise: (i) a performance indicator framework to monitor progress and continuity across annual and longer-term strategic plans; and (ii) a coherent platform to coordinate (through the joint Government of Mozambique/Donor Working Group on Pharmaceuticals) the contributions of development partners on supply chain strengthening.

58. Relevance of the project design. The CRW provided an instrument for the Bank to respond quickly to the global financial crisis[33] by: (i) relying on previous sectoral work to quickly identify the most efficient channels to mitigate the crisis impact on the poor; (ii) using long-standing country portfolios to intervene quickly in scaling-up satisfactory programs; and (iii) facilitating cooperation with other partner agencies to ensure consistency between short-term crisis mitigation and long-term development objectives.

59. The project design comprised two components and expedited implementation measures, but there were shortcomings. First, the project design underestimated the difficulties of combining an emergency response component and a systems strengthening component. While logically related, the components involved different actors, timeframes, and procedures which were not adequately reconciled during implementation. Second, due to the lack of an updated institutional assessment, the project design underestimated the complexity of the implementation arrangements in several respects: (i) the duration of negotiations with the UN agencies to carry out the major project

[33] IDA Resource Mobilization Department (CFPIR), Proposal for a Permanent Crisis Response Window (May 2010), p. 11.

procurements; (ii) the requirement by the Bank's Regional Procurement Management Team to subsequently justify the agreed-on procurements; (iii) the delays related to the review of Component 2 procurements by the Administrative Tribunal; and (iv) the effects of integrating project management within MOH, which hampered project implementation over the initial 18 months (until a Project Implementation Unit was created).

3.2 Achievement of Project Development Objectives

60. The project development objective was to improve the availability of selected drugs and medical supplies in Key Distribution Points in the Recipient's territory. Project efficacy is rated as **Substantial** on the basis of **High** results for Component 1 and **Modest** results for Component 2.

61. Assessment of outcomes is based on: (i) the Outcome and Intermediate Outcome Indicator results in Section F of the Data Sheet; and (ii) the annexes summarizing the outputs and results. The data are presented below by PDO and component.

Outcome Objective 1: Ensure the availability of Essential Health Commodities

62. Bank financing enabled the project to procure and distribute inputs to reduce anticipated shortfalls and improve the availability of commodities essential for: (i) preventing and/or treating HIV/AIDS, malaria, and TB; and (ii) promoting reproductive and child vaccination.

63. **HIV/AIDS.** As described in Annex 2, the project financed diagnostic test kits for 3.3 million tests (in 2011) and ARV packs for 87.5 million treatment doses (over the period 2011-13). Fill rates[34]) were not calculated for the diagnostic kits, but data from UNAIDS shows that the annual number of persons tested, after slowing in 2011, has increased considerably over the last two years.

Table 1: Number of persons tested for HIV

	2010	2011	2012	2013
Total	2 558 876	2 691 065	3 780 000	4 670 000

Source: Global AIDS Response Progress Reporting (2012, p. 41 and 2014, pp. 36-37)

64. Fill rates for the treatment of AIDS cases exceeded the project's targets and are shown in the following table:

Table 2: Fill rate results / ARVs

Indicator	Target	2011	2012	2013	2014 Q2	Total
OI 1: ARVs ordered/delivered to provinces						
Annual objective	85%	85%	85%	85%	85%	**85%**
Annual result		94.5%	98.6%	100.1%	100.7%	**98.3%**

Source: CMAM data.

65. The project's contribution to the availability of ARVs was essential in meeting the increased need for drugs and maintaining the maximum number of patients treated. As the following table shows, HCSP-financed products accounted for almost a third of treatments provided in 2012 and for 129,405 (or 23 percent) patients receiving treatment in 2012-13. Moreover, the table shows that: (i) the proportion of patients needing and receiving treatment had declined between 2010 and 2012 and only rebounded in 2013; and (ii) without the project's support, there could have been a significant shortfall in the treatment of cases.

[34] Fill rate is the proportion of commodities ordered by the provinces and filled by CMAM. Although it was intended to measure ARVs at 250 distribution points, changes in the reporting to CMAM precluded this measure, and the fill rate for the provinces was used.

Table 3: Project contribution to ARV treatment

	2010	2011	2012	2013	2014
Treatments					
Needed	2 326 098	2 892 937	3 510 343	4 308 814	5 441 816
Provided by HCSP			1 081 000	289 400	85 000
% of HCSP contribution			31%	7%	2%
Patients					
Estimate number needing treatment	417,621	601,384	752,629	843,144	902 164
Total receiving ARVs	218 991	273 561	308 578	419 261	552 940
% receiving treatment	52.4%	45.5%	41.0%	49.7%	61.3%
Financed by HCSP (annual)			95 026	28 160	6 220
IO 4: Financed by HCSP (cumulative)			95 026	123 185	129 405

Source: Pipeline data

66. **Reproductive health commodities.** As described in Annex 2, the project financed the procurement of three types of commodities: (i) 4.5 million cycles of contraceptive pills; (ii) 570,000 units of injectable contraception (Depo Provera); and (iii) 82,600 packs of long-term contraceptives (Jadelle). Fill rates for injectable contraceptives are shown below:

Table 4: Fill rate results / Contraceptives

Indicator	Target	2011	2012	2013	2014 Q2	Total
OI 2: Contraceptives ordered/delivered to provinces						
Annual objective	75.0%	75.0%	75.0%	75.0%	75.0%	**75.0%**
Annual result		59.7%	90.4%	100.1%	100.0%	**90.5%**

Source: CMAM data.

67. As shown in the table below, the project contributed to the availability of reproductive health supplies by maintaining stocks of strategically important types of contraceptive commodities.

Table 5: HCSP Contribution to Contraceptive Availability

	2010	2011	2012	2013
Contraceptive pills	**5 493 555**		**8 296 563**	
IPPF	7 200		12 240	
UNFPA	1 644 435		2 724 480	
USAID	3 841 920		1 031 760	
HCSP	0		4 528 083	
Injectables	**1 057 000**	**570 000**	**1 538 200**	
IPPF	4 200		2 200	
UNFPA			768 000	
USAID	1 052 800		768 000	
HCSP		570 000		
Implants		**0**	**78 600**	**19 000**
UNFPA			15 000	
HCSP			63 600	19 000

Sources:
UNFPA, Contraceptives and Condoms for Family Planning and STI/HIV Prevention (2010 and 2012).

Overall, the project provided 485,360 couple years of protection during the three year time period.

68. **Malaria.** As described in Annex 2, the project financed the acquisition and distribution of Long Lasting Insecticide Treated Nets (LLINs) over the period 2011-13. As shown below, the project procured 2,215,300 LLINs and distributed more than 90% of them. The remaining 273,977

nets are planned to be distributed in Gaza province in 2015.

Table 6: Acquisition and Distribution of LLINs

	2011	2012	2013	2014	Total
Acquisition					
Ordered	1 408 440	0	806 860	0	2 215 300
OI3: Received	0	1 404 360	806 860	0	2 211 220
Distribution					
Planned Distribution	0	459 720	846 013	824 315	2 130 048
OI3: Actual Distributed	0	319 781	864 757	752 705	1 937 243
% Distributed		69.6%	102.2%	91.3%	90.9%

Source: Project data.

69. Based on the estimated need and the amounts planned/procured, the project's acquisition reduced the eventual shortfall in 2012 and contributed to the recovery in 2013-14.

Table 7: Gap analysis for LLINs

	2011	2012	2013	2014	Total
Needed	5 536 177	5 692 561	5 852 379	6 014 699	17 559 639
Procured/Source					
PMI	1 500 000	1 200 000	1 300 000	1 300 000	3 800 000
Global Fund	2 450 000	1 500 000	2 650 000	5 200 000	9 350 000
Other	0	70 000			70 000
World Bank	190 000	1 408 440	806 860		2 215 300
Total	4 140 000	4 178 440	4 756 860	6 500 000	15 435 300
% World Bank	4.6%	33.7%	17.0%	0.0%	14.4%
% of needed	74.8%	73.4%	81.3%	108.1%	87.9%

Source: PMI Multi-year Operational Plans 2013 and 2014.

70. As shown in the following table, HCSP-financed LLIN distribution was concentrated in the four provinces with the highest malaria prevalence rates.

Table 8: Malaria prevalence and LLIN coverage

		LLINs	
Provinces	**Prevalence**	Number	Coverage
Zambezia	55%	225 383	87%
Nampula	42%	1 429 956	97%
Cabo Delgado	44%	132 004	83%
Niassa	36%	149 900	99%
Total		1 937 243	

Source: Project data

Assuming that two persons sleep under each bed net distributed by the project, the procurement and distribution of bed nets contributed to the protection of 1,405,846 children and pregnant women persons in 2012-13 and an additional 1,284,484 children and pregnant women in 2013.

71. **Vaccines.** As described in Annex 2, the project financed 2.4 million doses of measles vaccine (in 2011) and 8.1 million syringes (in 2011-12). As shown in the table below, the project financing filled significant gaps in the procurement of measles vaccines and syringes in 2011:

Table 9: HCSP Contribution to Funding Measles Vaccination

	2010	2011	2012
Traditional vaccines			
MOH	1 500 000	1 670 265	2 050 360
UNICEF	0	0	543 600
HCSP	0	580 800	0
Total	1 500 000	2 251 065	2 593 960
% HCSP	0%	26%	0%
Injection supplies			
MOH	426 000	0	128 683
GAVI	0	0	188 392
HCSP	0	308 057	73 837
Total	426 000	308 057	390 912
% HCSP	0%	100%	19%

GAVI Annual Reports for 2010, 2011, and 2012

72. As a result of the acquisition of these vaccines and supplies, Mozambique was able to maintain the vaccination coverage for measles as shown in the following table:

Table 10: Annual number and proportion of children 12-23 mos. vaccinated against measles

	2010	2011	2012
No. of children vaccinated	792 946	800 691	837 884
% of children vaccinated	90.7%	89.1%	90.6%

Sources: GAVI Annual Reports for 2010, 2011, and 2012.

73. **Tuberculosis.** As described in Annex 2, the project financed 631,000 diagnostic test kits and reagents (in 2013) and drugs for 600,000 treatments (in 2013).

74. **Project beneficiaries.** The annual and cumulative numbers of project beneficiaries are summarized in the following table with the proportion of female beneficiaries.

Table 11: Cumulative number of project beneficiaries and proportion of women beneficiaries

Beneficiaries	2011	2012	2013	2014	Total
Annual					
HIV/AIDS	1,187,500	95,026	34,379	0	1,316,905
Malaria/LLINs	0	639,562	1,729,514	1,505,410	3,874,486
Contraceptives	0	371,360	62,328		433,688
Measles vaccination	450,000	1,350,000			1,800,000
Cumulative					
No. of beneficiaries **(OI 5a)**	1,637,500	4,093,448	5,919,669	7,425,079	
No. of women	1,056,250	2,487,008	3,437,471	4,190,176	
% women **(OI 5b)**	65%	61%	58%	56%	

Source: Project data

Outcome Objective 2: Strengthen Supply Chain Management

75. Bank financing supported the Ministry's efforts to procure, store, transport/distribute, and monitor the commodities acquired by the project. There were no outcome indicators for this objective, but there were four intermediate outcomes.

76. **Procurement.** To ensure timely and cost-effective acquisition of the required commodities,

procurement arrangements were agreed on with UNICEF (testing and treatment of HIV/AIDS, bednets, TB drugs and reagents, vaccines, and syringes) and UNFPA (contraceptive materials). Supplier performance varied over the life of the project, as shown in the table below:

Table 12: Orders received according to the agreed upon schedule

	2011	2012	2013	Total
IOI 1: % of orders received according to the agreed upon schedule	25.0%	61.5%	31.3%	49.2%

Source: Pipeline data

Overall, about half of the orders were received within the time limits prescribed by the agreements with the two UN agencies. The percentage of supplier lead time variability **(IOI 2)**[35] was 107%. These results were far better than those of the government, as demonstrated by the experience of the Bank-financed Health Service Development Project.

77. **Storage.** The project financed warehouse renovations (Beira), forklifts, installation of fire extinguishers (CMAM), recruitment of temporary workers (including uniforms, helmets, etc.), and operational costs (including maintenance, cleaning, etc.).

78. **Transport/Distribution.** The project purchased a fleet of assorted vehicles and financed the operating costs for the distribution of the commodities. Preparation of a fleet management plan **(IOI 3)** was not achieved, but a workshop on fleet management was conducted.

79. **Monitoring.** The project contributed to the expansion of the logistics management information system (SIMAM) with the purchase of computers, office equipment, registers and finance operational costs associated with. Over the period 2011-2014, SIMAM was expanded from 5 information points (provinces/hospitals/districts) to 121. Of a total of 150 districts, 44 (29 percent) were equipped solely as a result of HCSP. CMAM's capabilities were also strengthened, and as a result, the project was able to monitor the stock situation, the consumption patterns, and the rate and disposition of expired commodities in the districts.

80. **Overall achievement result**. The results for Component 1 (representing 88.5 percent of project funds) generally exceeded the initial targets though with some delay and are rated **High**. Both the stock status reports, demonstrating the availability of key commodities over the last three years, and the data on the number of beneficiaries served over the critical 2011-2013 period show the importance of the project. The results for Component 2 (representing 11.5% of project funds) were more limited in scope and achievement, but promoted improvements which have subsequently been strengthened by other partners. The results for Component 2 are rated **Modest**. Given the importance of Component 1, the project's overall efficacy is rated **Substantial**.

3.3 Efficiency

81. The project's allocative efficiency was based on: (i) emphasizing control of infectious diseases with their disproportionate effects on the poor (and large, positive externalities); and (ii) selecting public health commodities (HIV test kits, first-line ART, contraceptive materials, TB treatment, bed nets, and vaccines and vaccination supplies) most at a risk of stock-outs in the short-term and shown to be cost-effective, well-established internationally, and necessary for the achievement of the three health-related MDGs

[35] Measured by the average of the absolute percentage differences (APD) between the supplier's forecasted lead time and the actual lead time.

82. The project's technical efficiency was demonstrated by the decision to use the UN agencies, which demonstrated the impact of their competitive processes, knowledge of the market, and long term agreements with suppliers[36] on the costs of the commodities. As shown in the following table, the costs of the commodities procured through the UN agencies were almost uniformly less than those estimated in the PAD and those paid by USAID.

Table 13: Comparison of Estimated and Actual Commodity Costs (US$)

Commodity	No. per package	PAD Estimate*	UN agency	USAID
HIV/AIDS				
Determine	100	130.00	80.00	80.00
UNIGOLD	20	38.00	33.48	32.96
ARVs (monthly treatment)**	60	190.41	116.40	336.00
Family Planning				
Oral contraceptives (per cycle)	28	0.19	0.29	0.32
Depo-Provera	1	0.80	0.54	0.75
Malaria LLIN	1	5.83	4.59	5.50
Measles vaccination***	10	1.00	2.29	

*PAD estimates were based on data available through PEPFAR catalogue, the Global Fund Price Monitoring, and analysis of WB financed contracts for the last 3 years
**HCSP financed only first-line treatment ($116.40 per year per patient), not a continuum of care, including second line treatment ($190.41 per year per patient)
**Vaccination cost includes syringe

83. In addition, careful estimates of required quantities and planned deliveries of commodities were employed to decrease the likelihood of stock-outs or leakages. As the following table shows, the number of months of stock (MOS) was kept within the minimum/maximum levels prescribed for the various commodities. This ensured that the supply pipeline was adequately full to meet the projected demand.

Table 14: Average Months of Stock Reported in the Maputo/Beira Warehouses

Product	2010	2011	2012	2013	2014
HIV/AIDS					
Min/Max	4/9 mos.	4/9 mos.	4/9 mos.	4/9 mos.	4/9 mos.
ARVs	3.72	5	4.2	3.4	
Family Planning					
Min/Max	6/14 mos.	6/14 mos.	6/14 mos.	6/14 mos.	6/14 mos.
Depo-Provera	4.2	5.7	6.8	9.2	12.5
Jadelle	n/a	n/a	n/a	3.3	7.3
Microgynon	2.5	8.6	13.7	13.8	31.2
Microlut	4.5	5.2	9.3	11.1	22.9

NB: 2014 stocks of microgynon/microlut were not procured with project funds.
Source: Mozambique MOH reports monthly, via the USAID | DELIVER PROJECT.

84. Technical efficiency was further enhanced by: (i) using existing (strengthened) mechanisms to distribute the commodities; and (ii) enhancing the logistics management information systems to

[36] The UN agencies were deemed to have: (i) quality assurance mechanisms in place; (ii) proven experience in customs clearance; and (iii) track records of facilitating the in-country distribution. The procurement agency fees (UNICEF: 3-4%; UNFPA 5%; and WHO/GDF 10%) were deemed reasonable, given their offsetting advantages.

measure results. Technical efficiency was diminished by: (i) delays in procuring goods (though cooperation among the partners enabled the project to ensure supplies); and (ii) slow progress in strengthening supply chain management.

85. Managerial efficiency was enhanced by: (i) existing programmatic and coordination arrangements within MOH and between MOH and its partners[37]; (ii) simplified procurement arrangements; and (iii) technical support and expertise, provided by several complementary projects, to facilitate the timely and effective completion of the Project. There were managerial shortcomings due to high staff turnover within MOH and the short timeframe for project implementation; these were particularly evident at project closing.

86. The project's overall rating for efficiency is **Modest**.

3.4 Justification of Overall Outcome Rating

87. Based on considerations of the previous indicators and ratings criteria, the following table presents the overall outcome rating for the project as **Moderately Satisfactory**.

Table 15: Summary ratings by Component Objective

	Relevance			
Criteria / Indicators	Objectives	Design	**Efficacy**	**Efficiency**
Provision of Essential Health Commodities	High	Substantial	High	Substantial
Strengthening Supply Chain Management	High	Modest	Modest	Modest
Overall Project Outcome Rating	High	Substantial	Substantial	Modest
OVERALL RATING	**MODERATELY SATISFACTORY**			

3.5 Overarching Themes, Other Outcomes and Impacts

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

88. By addressing the issue of key public health commodities, the project impacted the poor in two ways by responding to: (i) the common infectious diseases which disproportionately affect the poor; and (ii) the limited assets and risk coping mechanisms of poor households which are particularly vulnerable to the availability and cost of medicines and supplies at reasonable costs. Among the various categories of beneficiaries, 55% were estimated to be women.

(b) Institutional Change/Strengthening

89. The guaranteed availability of stocks for the 2013-2014 pipeline allowed the Government to focus on: (i) finalizing the Pharmaceutical Logistic Strategic Plan (2013-17) and the Supply Chain Logistics Plan of Action (2013); and (ii) planning for 2015 rather than responding to repeated crises such as delays in donor funding. Further, improvements made in the commodities management system have enabled Mozambique to respond to the Government's commitment UN General Assembly in 2012 to accelerate treatment for HIV/AIDS.

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

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

90. A stakeholder workshop was not conducted, but the ICR mission interviewed the principal actors: (i) MOH (DPC, DAF/UGEA, DNAM/CMAM, and the PIU); (ii) partners (UNICEF, UNFPA, and USAID); and TA (SCMS). The feedback received indicated that the project was

[37] The planned drugs and activities were already well-integrated into the existing MOH structure and its programs and projects.

relevant. It provided the predictable financing for the supply pipeline. The project pushed for measuring supply chain performance which has been incorporated as a routine measure of performance. However, the interviewees also complained that the Bank procedures made it difficult to be agile during the emergency.

4. Assessment of Risk to Development Outcome

Rating: **Low**

91. As a crisis response project, the project was expected to maintain stock levels during a period of uncertain and unpredictable financing. However, the project was implemented during a period of significant activity in supply chain management as policies and strategic plans were developed, investments made in strengthening the different supply chain functions, and technical assistance contributed to major advances in information use. As a result, the project contributed to several development outcomes, related especially to planning, transportation and distribution, and monitoring and evaluation.

92. In each of these areas, the risk to development outcomes should be rated as low: (i) politically, the sector's priorities and its role within the overall national development strategy are clearly understood; (ii) programmatically, the essential structures, tools, and processes for policy formulation, strategy development implementation, and monitoring and evaluation have been agreed on and are being used; and (iii) organizationally, CMAM's status as a National Directorate, MOH's capabilities, and other ministries' awareness of the importance of SCM have been improved significantly. Financially, several important partners (e.g., the Global Fund, USAID, UNFPA) and the World Bank are providing commodities and working on supply chain management issues with a special focus on results and performance.

5. Assessment of Bank and Borrower Performance

5.1 Bank Performance

(a) Bank Performance in Ensuring Quality at Entry

Rating: **Moderately Satisfactory**

93. The project was prepared in a context of global economic uncertainty with a new financing instrument (CRW) and in a relatively unfamiliar technical area within the Bank (SCM). Given these constraints and the need to prepare the project rapidly, the project description in the PAD succeeded in clearly presenting the justification and arrangements for the operation.

94. The quality of the PAD results from: (i) the description of the number of potential beneficiaries; (ii) estimations of needs of quantities and financing for key commodities; (iii) a succinct set of indicators; and (iv) a comprehensive Operational Risk Assessment Framework (ORAF). The team also efficiently guided the process in Washington (managing the comments from the PCN, QER, and DM reviews to clarify certain sections and preparing several good annexes) and in-country (with MOH and staff from other Ministries and aid agencies) to ensure that project implementation conditions were in place.

95. Quality at entry was diminished by: (i) insufficient assessment of the institutional arrangements for project implementation; and (ii) overly optimistic expectations for short-term SCM strengthening.

(b) Quality of Supervision

Rating: **Moderately Satisfactory**

96. Bank supervision was characterized by: (i) continuity of the Task Team (with shared

responsibilities between Washington and the field); (ii) a permanent in-country presence; and (iii) frank communication with the Government in assessing project performance and measures for improvement. With an extensive HNP portfolio and close links between HSDP and HCSP, the Bank employed several complementary supervision styles, including: (i) supervision missions; (ii) joint missions (for the two projects; (iii) periodic audio conferences; and (iii) day-to-day discussions and problem solving with the ministry. The aides-memoires and the ISRs were thorough and candid.

97. Bank supervision and support missions played a key role in: (i) resolving procurement-related issues with RPM; (ii) promoting coordination among the three institutions (UN, Bank, and the Ministry of Health) and between the various Ministry of Health departments; and (iii) strengthening the information systems required to monitor project performance.

98. While team efforts resolved a number of procurement and delivery issues related to Component 1, progress was more problematic on Component 2 and resulted in serious problems at and after project closing, when ineligible expenditures were discovered.

(c) Justification of Rating for Overall Bank Performance

Rating: **Moderately Satisfactory**

5.2 Borrower Performance

(a) Government Performance

Rating: **Moderately Satisfactory**

99. Government performance was Moderately Satisfactory based on its: (i) commitment to making essential commodities available during the global economic crisis; (ii) willingness and agreement to use UN agencies to procure these commodities; and (iii) support for the development of supply chain management improvements (which are often neglected by governments).

100. Specifically, the Government used the project to: (i) resolve a short-term commodity shortfall; (ii) advance longer-term policies, strategies, and actions (including the Supply Chain Plan of Action and the strategic logistics plan); and (iii) further develop a platform to coordinate (through the joint Mozambique/Donor Working Group of Pharmaceuticals) the contributions of development partners on supply chain strengthening.

101. While the project benefited from high-level support within the Ministry of Health (with the Minister and the Permanent Secretary personally involved in monitoring of the project performance and assisting with the procurement delays), the project was implemented in the context of continual high staff turnover and systemic public sector procurement issues that impacted the entire Bank portfolio in Mozambique.

(b) Implementing Agency or Agencies Performance

Rating: **Moderately Satisfactory**

102. Project implementation involved the UN agencies and the joint Mozambique/Donor Working Group of Pharmaceuticals (for Component 1) and the MOH (for Component 2).

103. For Component 1, the implementation risks identified in the ORAF resulted in procurement being contracted to UNICEF and UNFPA. Based on an analysis of orders placed and commodities received, approximately half of the orders were received within the contracted time frame. The overall satisfactory project results are due both to project financing and to the strong leadership and coordinated effort of CMAM and all the partners involved in managing the supply chain. Project financing provided a buffer, and agency coordination permitted orders to be moved forward or backward to control stocks in the pipeline. The results of this project can be considered best practice

for other public sector supply chains facing similar challenges of fragmented acquisitions.

104. For Component 2, the absence of an approved Pharmaceutical Logistics Management Strategy and Implementation Plan, the institutional arrangements within MOH,[38] and the turnover of staff within the DAF/UGEA contributed to inadequate performance. With the establishment in early 2013 of a cohesive, well-staffed and proactive implementation team (with specific skills in procurement and financial management), project coordination improved and implemented accelerated appreciably.

105. After earlier difficulties, procurement plans were regularly prepared for approval by the Bank, and bi-annual FMR and annual audits were submitted in a timely manner. Both qualified audits were quickly rectified. However, there was an outstanding issue of ineligible expenditures at project closing,[39] and a project completion report was not prepared.

106. Performance by the UN agencies for Component 1 is rated Moderately Satisfactory; performance by the MOH for Component 2 is rated Moderately Unsatisfactory. Given the weight of expenditures for Component 1, overall performance for the implementing agencies is rated Moderately Satisfactory.

(c) Justification of Rating for Overall Borrower Performance

Rating: **Moderately Satisfactory**

6. Lessons Learned

107. **HCSP has shown that an emergency project does not necessarily benefit from the existence of an ongoing operation.** HCSP's reliance on HSDP's institutional assessment and implementation experience accelerated preparation but introduced elements which later affected implementation. These constraints might have been avoided with a more detailed consideration of the special characteristics of an emergency project.

108. **Experience with the CRW showed that Bank policies and procedures are not always aligned with the need to respond rapidly to emergencies.** While the pros and cons of using UN agencies was analyzed and debated during preparation, consideration of the potential difficulties of the Bank's own procurement procedures was not sufficient. Subsequently, the arrangements which had been agreed to by the Bank and the UN agencies prior to effectiveness were subjected to further review by the Bank's procurement services during implementation. As a result, the planned emergency procurements were executed more slowly than anticipated. The Bank has since learned this lesson and resolved the issue for future emergency projects.

109. Resolution of two other emergency response project issues has been more difficult. First, though a two-year time frame was established for the project, the development of the SCM measures (e.g., logistics management and fleet management) was certain to take more than two years. While combining an emergency response with a systems development approach can be reasonably justified, combining the two within a short time frame proved to be problematical.

110. Second, though Bank policy promotes the integration of project implementation responsibilities within existing Ministry structures, the project offers a caveat for emergency projects. When HCSP sought to integrate the project responsibilities within the Ministry, there were

[38] For the first two years, implementation was the responsibility of separate departments within MOH: (i) the DPC for planning and coordination; (ii) the DAF (and UGEA) for fiduciary responsibilities; and (iii) DNAM for the technical inputs for procuring and distributing commodities.

[39] This issue is currently being resolved.

significant delays and a lack of clear responsibility; once an independent PIU was established, implementation proceeded much more smoothly.

111. **Commercial sector supply chain indicators are not necessarily appropriate for the public sector.** Though the project attempted to introduce the increased rigor of private sector supply chain management indicators, the effort was not entirely successful because of the way in which the public sector assesses risk.

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

112. **Borrower/implementing agencies:** The Bank supervision team organized a workshop to explain the objectives and procedures of the Borrower ICR and helped the PIU prepare terms of reference for conducting the ICR. Despite this assistance and reminders about the Borrower's obligations, an ICR was not prepared.

113. The Bank's ICR was submitted to the Government on November 20, 2014. No comments were received.

114. **(b) Co-financing:** Not applicable

115. **(c) Other partners and stakeholders:**

Annex 1: Project Costs and Financing

(a) Project Cost by Component

Components	Appraisal Estimate Original credit (USD millions)	Additional financing (USD millions)	Actual/Latest Estimate (USD millions) *	Percentage of Appraisal
1. Provision of essential health commodities	34.50	0	31.9	92.5
3. Strengthening supply chain management	4.5	0	6.1	135.6
Estimated Total Baseline Cost				
Physical Contingencies				
Price Contingencies				
Total Project Cost	**39.0**	**0**	**38.0**	**97.7**

(b) Financing

Source of Funds	Type of Co-financing	Appraisal Estimate (USD millions)	Actual/Latest Estimate * (USD millions)	Percentage of Appraisal
International Development Association (IDA)		39.0	38.0	97.7
Total Project Financing		**39.0**	**38.0**	**97.4**

Annex 2: Summary of the main physical results of the HCSP

Component 1: Provision of Essential Health Commodities

Prevention and treatment of HIV/AIDS

Testing

2011

- Procurement of 25,000 Determine HIV test kits (100 tests per kit) (UNICEF)
- Procurement of 40,000 Uni-Gold HIV test kits (20 tests per kit) (UNICEF)

ARVs

2011

- Procurement of 707,000 packs of ARVs (60 doses per pack) (UNICEF)

2012

- Procurement of 492,500 packs of ARVs (60 doses per pack) (UNICEF)

2013

- Procurement of 171,400 packs of ARVs (60 doses per pack) (UNICEF)
- Procurement of 86,400 packs of ARVs (60 doses per pack) (UNICEF)

Prevention of Malaria

2011

- Procurement of 1,408,440 LLIN (UNICEF)

2012

- Procurement of 808,860 LLIN (UNICEF)

Tuberculosis

2013

- Procurement of 631,308 test kits/reagents (UNICEF)
- Procurement of 600,000 treatments (UNICEF)

Vaccination

Vaccines

2011

- Procurement of 240,000 vials of measles vaccine (10 doses per vial) (UNICEF)

Syringes

2011

- Procurement of 65,544 boxes of syringes (100 syringes per box) (UNICEF)

2012

- Procurement of 15,710 boxes of syringes (100 syringes per box) (UNICEF)

Contraceptives

2011

- Procurement of 570,000 units (Depo Provera) (UNFPA)

2012

- Procurement of 4,528,083 units (Microgynon 30; Microlut 35) (UNFPA)
- Procurement of 63,600 packs (Jadelle) (UNFPA)

2013

- Procurement of 19,000 packs (Jadelle) (UNFPA)

Component 2: Strengthening Supply Chain Management

Strengthening of supply distribution

Warehouse management

2012

- Provision of temporary workers, uniforms, and helmets
- Installation of fire extinguishers at CMAM

2013

- Repair of Beira Warehouse (transferred to HSDP)

2014

- Procurement of 2 fork lifts, maintenance of cold-chain equipment, and maintenance and cleaning of the Zimpeto warehouse (ongoing)

Distribution

2014

- Procurement of 11 pick-ups, simple cabin; 07 Pickups, 4x4, double cabin with canopy; 3 trucks (14 tons); and 4 double cabins (ongoing)
- Fuel for central and provincial levels to transport goods

Fleet management

2014

- TA and workshop for fleet management

Logistics Management Information Systems

2011

- Financing of operating costs associated with the distribution of commodities

2012

- Financing of operating costs associated with the distribution of commodities

2014

- Procurement of 220 computers (ongoing)

Annex 3: Economic and Financial Analysis

Under the Crisis Response Window, streamlined procedures for preparing the PAD did not require a detailed annex analyzing the economic and financial implications of the project. However, the justification for the effectiveness and the benefits of the costs financed by the project are as follows:

- Investments to control infectious diseases (with their disproportionate effects on the poor) are positive and have large significant externalities.
- All of the programs supported by the project (HIV/AIDS, malaria, TB, family planning, and vaccination) have been well-established internationally to be cost-effective, with positive contributions to the achievement of the three health-related MDGs.
- In periods of economic crisis, protecting health outcomes while reducing financial risk requires ensuring supplies of essential health commodities in the face of worsening exchange rates.[40]
- The commodities selected by the project were critical for maintaining the priority programs: ARVs and test kits for HIV/AIDS; LLINs for malaria; drugs and reagents for TB; pills and injectable contraceptives for family planning; and vaccines and syringes for measles.
- The quantities of the specific commodities to fill the projected gaps resulting from the financial crisis were carefully estimated during preparation.
- The procurement of these commodities through the UN agencies was considered to be the most cost-effective option due to: (i) their recognized expertise of the commodities being procured as well as long-term contract agreements with the major suppliers (providing extra leverage for lower costs); (ii) their capacity to deliver within the needed timeframe; and (iii) their established mechanisms for assuring adequate quality.
- The costs of the commodities procured through the UN agencies were almost uniformly less than those estimated in the PAD and those paid by USAID.

Table 13: Comparison of Estimated and Actual Commodity Costs (US$)

Commodity	No. per package	PAD Estimate*	UN agency	USAID
HIV/AIDS				
Determine	100	130.00	80.00	80.00
UNIGOLD	20	38.00	33.48	32.96
ARVs (monthly treatment)**	60	190.41	116.40	336.00
Family Planning				
Oral contraceptives (per cycle)	28	0.19	0.29	0.32
Depo-Provera	1	0.80	0.54	0.75
Malaria LLIN	1	5.83	4.59	5.50
Measles vaccination***	10	1.00	2.29	

*PAD estimates were based on data available through PEPFAR catalogue, the Global Fund Price Monitoring, and analysis of WB financed contracts for the last 3 years

**HCSP financed only first-line treatment ($116.40 per year per patient), not a continuum of care, including second line treatment ($190.41 per year per patient)

**Vaccination cost includes syringe

[40] World Bank, "Protecting Pro-Poor Health Services during Financial Crises" (March 2009), p. iii. The analysis also argues that "broad-brush strategies to maintain overall levels of government health spending (have) failed to protect access and quality of services for the poor.

- Deliveries of commodities were planned to maintain the months of stock (MOS) within the minimum/maximum levels prescribed for the various commodities so as to decrease the likelihood of stock-outs, expiration, or leakages.

Table 14: Average Months of Stock Reported in the Maputo/Beira Warehouses

Product	2010	2011	2012	2013	2014
HIV/AIDS					
Min/Max	4/9 mos.	4/9 mos.	4/9 mos.	4/9 mos.	4/9 mos.
ARVs	3.72	5	4.2	3.4	
Family Planning					
Min/Max	6/14 mos.	6/14 mos.	6/14 mos.	6/14 mos.	6/14 mos.
Depo-Provera	4.2	5.7	6.8	9.2	12.5
Jadelle	n/a	n/a	n/a	3.3	7.3
Microgynon	2.5	8.6	13.7	13.8	31.2
Microlut	4.5	5.2	9.3	11.1	22.9

NB: 2014 stocks of microgynon/microlut were not procured with project funds.

- Levels of commodities and programmatic activity were maintained, as demonstrated in Section 3.2 of the ICR.
- The cumulative number of project beneficiaries exceeded the targeted number.

Targeted and cumulative number of project beneficiaries and proportion of women beneficiaries

Beneficiaries	2011	2012	2013	2014	Total	Targeted
Annual						
HIV/AIDS	1,187,500	95,026	34,379	0	1,316,905	1,045,703
Malaria/LLINs	0	639,562	1,729,514	1,505,410	3,874,486	3,086,949
Contraceptives	0	371,360	62,328		433,688	502,695
Measles vaccination	450,000	1,350,000			1,800,000	1,125,000
Cumulative						
No. of beneficiaries **(OI 5a)**	1,637,500	4,093,448	5,919,669	7,425,079		5,760,347
No. of women	1,056,250	2,487,008	3,437,471	4,190,176		
% women **(OI 5b)**	65%	61%	58%	56%		

Overall, during a period of economic crisis, the project focused on the most cost-effective interventions, procured and delivered the essential commodities for these interventions in the most efficient manner, and maintained services for a significantly greater number of beneficiaries than originally planned.

Annex 4: Bank Lending and Implementation Support/Supervision Processes

(a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
Lending			
Laura Rose	Sr. Economist (Health)	GHNDR	Task team leader
Humberto Cossa	Sr. Health Specialist	GHNDR	Health specialist
Rianna Mohammed	Health Specialist	GHNDR	Health specialist
Christopher D. Walker	Lead Health Specialist	GHNDR	Operations advisor
Amos Malate	Procurement Specialist	GGODR	Procurement
Dirk Bronselaer	Sr. Procurement Specialist	AFTPC	Procurement
Kari Hurt	Sr. Operations Officer	GHNDR	Operations
Noel Chisaka	Sr. Public Health Specialist	GHNDR	Malaria specialist
Jutta Ursula Kern	Monitoring & Evaluation Specialist	AFTRL	Monitoring and evaluation specialist
João Tinga	Financial Management Analyst	GGODR	Financial management
Sangeeta Raja Jobanputra	Sr. Health Specialist	GHNDR	Supply chain management
Carolyn Shelton	Knowledge Management Officer	GHNDR	Operations
Anne Marie Bodo	E T Consultant, Pharmacy	HSO	Pharmaceuticals
João Blasques de Oliveira	Consultant, Public Health Specialist		Operations
Lungiswa Thandiwe Gxaba	Environmental Specialist	AFTEN	Environment
Eduardo Brito	Sr. Counsel	LEGAF	Legal
Clarisse Nhabangue	Team Assistant	AFCS2	Administrative
Supervision/ICR			
Sangeeta Raja Jobanputra	Sr. Public Health Specialist	GHNDR	Task Team leader
Laura Rose	Sr. Economist (Health)	GHNDR	Health economist
Humberto Cossa	Sr. Health Specialist	GHNDR	Health specialist
Elvis Langa	Financial Management Analyst	GGODR	Financial specialist
Amos Malate	Procurement Specialist	GGODR	Procurement
Dirk Bronselaer	Sr. Procurement Specialist	AFTPC	Procurement
Aya Ishuzika	Health Specialist	GHNDR	Operations support
Ryan Purcell	Consultant	GHNDR	Supply chain
Peter Bachrach	Consultant	GHNDR	Evaluation
Maria Micaela	Administrative Assistant	AFTMZ	Operations support
Nicole Hamon	Language Program Assistant	GHNDR	Operations support

(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		
FY 10	6.87	23,590.83
Total:	6.87	23,590.83

Stage of Project Cycle	Staff Time and Cost (Bank Budget Only)	
	No. of staff weeks	USD Thousands (including travel and consultant costs)
Supervision/ICR		
FY11	6.08	38,741.60
FY12	19.12	127,187.14
FY13	33.80	202,768.41
FY14	36.39	193,025.79
FY15	5.49	27,724.28
Total:	100.88	**589,447.22**

Annex 5: Beneficiary Survey Results
Not applicable

Annex 6: Stakeholder Workshop Report and Results
Not applicable

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

The Bank supervision team organized a workshop to explain the objectives and procedures of the Borrower ICR and helped the PIU prepare terms of reference for conducting the ICR. Despite this assistance and reminders about the Borrower's obligations, the Borrower did not prepare an ICR. The Bank's ICR was submitted to the Government on November 20, 2014. No comments were received.

Annex 8: Comments of Co-financing partners and Other Partners/Stakeholders

Not Available

Annex 9: List of Supporting Documents

Mozambique

Legislation, Policies, Strategies, and Plans

Council of Ministers

- Third National Strategic HIV and AIDS Response Plan 2010-2014 (2009).

Ministry of Health

- Plano Estratégico do Sector Saúde (PESS) (2007-2012). (2007).
- Tuberculosis Control in Mozambique. MTEF 2010-2012 (2009).
- Development of a comprehensive M&E component of the national health plan (2010).
- Estratégia de Planeamento Familiar e Contracepção 2011 – 2015 (2010).

Project Implementation

General

- Project Implementation Manual (draft)(2011).
- Avaliação Conjunta Anual do Desempenho do Sector de Saúde - 2011

Component 1

- HIV/AIDS Related Commodities. Gap Analysis by Products (2009).
- Malaria Related Commodities. Gap Analysis by Products (2010).

Component 2

- SCMS, Assessment of CMAM's Warehouses and Operations (2008).
- CMAM, Mozambique GFATM – HIV/AIDS Procurement and Supply Management Plan For Round Six Phase 2 (2009).
- SCMS, Crime Risk Analysis: CA Medical Warehousing Facilities in Maputo (2009).
- Deloitte, Risk Analysis of the Ministry of Health (2013).

Surveys and Studies

Ministry of Health

- External Evaluation of the Pharmaceutical Sector (2007).
- Análise da Situação do HIV e SIDA & Acesso ao TARV (2008).
- Availability of Modern Contraceptives and Essential Life Saving Maternal/RH Medicines in Health Facilities. UNFPA (2010).
- Budget Analysis Group. Breve análise das tendências nos orçamentos do sector da saúde no period 2006/11 (Versão 7). (2011).
- Relatório da Revisão do Sector de Saúde (2012).
- Relatório da Avaliação Nacional do Programa PTV (2012).

Other

UNGASS

- Relatório da Progressa 2006-07 (2008).
- Global AIDS Response Progress Report 2010-11 (2012).

Miscellaneous

- Health Spending in Mozambique (2011).
- Avaliação de Despesa Pública e Responsabilidade Financeira (PEFA) em Moçambique 2010 (2011).
- Audit of Global Fund grants to the Republic of Mozambique (2012).
- HIV/AIDS policies in Mozambique and the new aid architecture (2012).

World Bank

Sector Documents

Promoting Shared Growth through Empowerment of Citizens and Institutions (Country Partnership Strategy 2008-2011)(2007).

Country Partnership Strategy 2012-115(Report No. 66813-MZ)(2012).

Health Sector MTEF (2009).

Credit Documents

Project Appraisal Document, Health Commodities Security Project (Report No: 56431-MZ) (2010).

Quality Enhancement Review / Mozambique Commodity Security and Supply Chain Management Project (2010).

Project Restructuring Document, Health Commodities Security Project (Report No: 73040-MZ) (2012).

Bank Implementation Status and Results (ISR)

MAP


IBRD 41332
MOZAMBIQUE
TANZANIA
Lake Malawi
MALAWI
ZAMBIA
ZIMBABWE
SOUTH AFRICA
SWAZILAND
NIASSA
CABO DELGADO
NAMPULA
TETE
ZAMBEZIA
SOFALA
MANICA
INHAMBANE
GAZA
MAPUTO
Mozambique Plateau
Lichinga
Cuamba
Nampula
Pemba
Quelimane
Tete
Chimoio
Beira
Inhambane
Xai-Xai
MAPUTO
INDIAN OCEAN
0 50 100 150 200 Kilometers
0 50 100 150 Miles
MOZAMBIQUE
HEALTH COMMODITY
SECURITY PROJECT
CITIES AND TOWNS
PROVINCE CAPITALS
NATIONAL CAPITAL
RIVERS
MAIN ROADS
RAILROADS
PROVINCE BOUNDARIES
INTERNATIONAL BOUNDARIES
DECEMBER 2014