

Document of  
The World Bank

Report No. : ICR00001239

IMPLEMENTATION COMPLETION AND RESULTS REPORT  
(IDA-39770 IDA-H1230 IDA-H2760)

ON A

CREDIT

IN THE AMOUNT OF SDR 2.2 MILLION

AND A

GRANT

IN THE AMOUNT OF SDR 3.6 MILLION

TO THE

REPUBLIC OF DJIBOUTI

FOR A

FLOOD EMERGENCY REHABILITATION PROJECT

October 7, 2009

Sustainable Development Department  
Middle East and North Africa Region

## CURRENCY EQUIVALENTS

Currency Unit = Djibouti Franc (DJF)

Exchange Rate at Appraisal (April 26, 1999)                      US\$1.00 = 175 DJF

Exchange Rate at ICR (September 2009)                      US\$1.00 = 176DJF

## FISCAL YEAR

January 1 – December 31

## ABBREVIATIONS AND ACRONYMS

ADDS	National Social Development Agency ( <i>Agence Djiboutienne de Développement Social</i> )
ADETIP	National Executing Agency for Public Works ( <i>Agence Djiboutienne d'Exécution des Travaux d'Intérêt Public</i> )
AFD	French Development Agency ( <i>Agence Française de Développement</i> )
AfDB	African Development Bank
AGETIP	Agency for Public Works ( <i>Agence d'Exécution des Travaux d'Intérêt Public</i> )
DINAS	National Bureau of Statistics (at appraisal)
DISED	National Bureau of Statistics (at ICR)
EU	European Union
GDP	Gross Domestic Product
GFDRR	Global Facility for Disaster Risk Reduction
INDH	National Initiative for Human Development
IsDB	Islamic Development Bank
ISR	Implementation and Status Results Report
MoP	Memorandum of the President
NGOs	Non Governmental Organizations
PAD	Project Appraisal Document
PDO	Project Development Objectives
PDSTP	Social Development and Public Works Project ( <i>Projet de Développement Social et des Travaux d'intérêt Public</i> )
PRSP	Poverty Reduction Strategy Paper
QAG	Quality Assurance Group
RAP	Resettlement Action Plan
SDR	Special Drawing Rights
SEGRC	Executive Secretariat for Risk and Disaster Management
SF	Social Fund
TA	Technical Annex
UN	United Nations

Vice President: Shamshad Akhtar  
Country Director: A. David Craig  
Sector Manager: Anna Bjerde  
Project Team Leader: Alexandra Ortiz  
ICR Team Leader: Alexandra Ortiz

**REPUBLIC OF DJIBOUTI**

**Flood Emergency Rehabilitation Investment Project**

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MAP IBRD 33524

<b>A. Basic Information</b>			
Country:	Djibouti	Project Name:	DJ-FLOOD EMERGENCY REHABILITATION
Project ID:	P089968	L/C/TF Number(s):	IDA-39770,IDA- 39771,IDA- H1230,IDA-H2760
ICR Date:	10/09/2009	ICR Type:	Core ICR
Lending Instrument:	ERL	Borrower:	GOVERNMENT OF DJIBOUTI
Original Total Commitment:	XDR 4.4M	Disbursed Amount:	XDR 5.8M
Revised Amount:	XDR 5.8M		
<b>Environmental Category: B</b>			
<b>Implementing Agencies:</b> ADETIP (Agence Djiboutienne d'Execution des Travaux d'Interet Public) ADDS (Agence Djiboutienne de Developpement Social)			
<b>Cofinanciers and Other External Partners:</b>			

<b>B. Key Dates</b>				
Process	Date	Process	Original Date	Revised / Actual Date(s)
Concept Review:	06/02/2004	Effectiveness:	01/25/2005	01/25/2005
Appraisal:	06/07/2004	Restructuring(s):		
Approval:	09/02/2004	Mid-term Review:	03/31/2006	
		Closing:	09/30/2007	03/31/2009

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

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

<b>Overall Bank Performance:</b>	Satisfactory	<b>Overall Borrower Performance:</b>	Moderately Satisfactory
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### C.3 Quality at Entry and Implementation Performance Indicators

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

### D. Sector and Theme Codes

	Original	Actual
<b>Sector Code (as % of total Bank financing)</b>		
Flood protection	25	25
General education sector	10	10
General water, sanitation and flood protection sector	20	20
Health	5	5
Roads and highways	40	40
<b>Theme Code (as % of total Bank financing)</b>		
Access to urban services and housing	14	14
Natural disaster management	29	29
Other urban development	14	14
Rural services and infrastructure	14	14
Water resource management	29	29

### E. Bank Staff

Positions	At ICR	At Approval
Vice President:	Shamshad Akhtar	Christiaan J. Poortman
Country Director:	A. David Craig	Mahmood A. Ayub
Sector Manager:	Anna M. Bjerde	Emmanuel Forestier
Project Team Leader:	Alexandra Ortiz	Anthony G. Bigio
ICR Team Leader:	Alexandra Ortiz	
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	Salim Rouhana	

## F. Results Framework Analysis

### Project Development Objectives (from Project Appraisal Document)

The main project objective is the rehabilitation and recovery of the economic and social assets damaged by the April 2004 floods. In addition, the project aims to improve the living conditions in the resettlement zone to which Government has relocated the families whose housing was destroyed in the flood-prone area through delivery of basic infrastructure services. Finally, the project plans to build the capacity for long-term disaster prevention and management, and support employment generation for the low-income population, especially from the affected areas through reliance, where feasible, on labor intensive works.

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

#### (a) PDO Indicator(s)

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
<b>Indicator 1 :</b>	Rehabilitation and recovery of economic and social assets damaged by the floods			
Value quantitative or Qualitative)	Damages caused by floods as estimated in Government's and Bank assessment	Rehabilitation and recovery of selected infrastructure and services to be rehabilitated under the project		Rehabilitation and recovery of roads, drainage, schools, health centers and water infrastructure and Dike construction successfully completed
Date achieved	04/15/2004	09/30/2008		03/31/2009
Comments (incl. % achievement)	100% of infrastructure rebuilt			
<b>Indicator 2 :</b>	Improvement in the living conditions in the resettlement area			
Value quantitative or Qualitative)	Resettlement area in PK 12 devoid of any infrastructure or facility	360 families displaced by flood and resettled because of the reconstruction of the dike settled with occupancy permits, access to water standpipes and pit latrines		360 families displaced by flood and resettled because of the dike, settled with occupancy permits, access to water standpipes and pit latrines
Date achieved	04/15/2004	09/30/2008		03/31/2009

Comments (incl. % achievement)	100% of families resettled. This includes approx. 240 families affected by the flood and 120 affected by the dike construction and resettled later on. The housing units surpassed the needs of the resettlement			
<b>Indicator 3 :</b>	Protection of the city from recurrent floods			
Value (quantitative or Qualitative)	Ambouli embankment dike destroyed by the April 2004 floods	Dike reconstructed and provided with erosion-control structures		Dike reconstructed and provided with erosion control
Date achieved	04/15/2004	09/30/2008		03/31/2009
Comments (incl. % achievement)	The dike is expected to protect the city up to a 1500m <sup>3</sup> /s flood intensity provided it is well maintained.			

**(b) Intermediate Outcome Indicator(s)**

Indicator	Baseline Value	Original Target Values (from approval documents)	Formally Revised Target Values	Actual Value Achieved at Completion or Target Years
<b>Indicator 1 :</b>	Rehabilitation of Ambouli Pompge flood protection structures			
Value (quantitative or Qualitative)	Flood protection dike destroyed by floods	Reconstruction of Km. 2.5 of flood protection dike		Successful reconstruction of Km. 2.5 of flood protection dike
Date achieved	04/13/2004	09/30/2008		03/31/2009
Comments (incl. % achievement)	Dike was completed in March 2009			
<b>Indicator 2 :</b>	Rehabilitation of roads, water supply and drainage infrastructure			
Value (quantitative or Qualitative)	14 paved roads, 2 bridges, 5 Km. of stormwater channels, 500 manholes, and water purification and distribution materials damaged by the floods	Rehabilitation of 14 paved roads, 2 bridges, 5 Km. of stormwater channels, 500 manholes, and water purification and distribution materials damaged by the floods		Successful Rehabilitation of 14 paved roads, 2 bridges, 5 Km. of storm-water channels, 500 manholes, and water purification and distribution materials damaged by the floods
Date achieved	04/13/2004	09/30/2008		03/31/2009
Comments (incl. % achievement)	100% completion			
<b>Indicator 3 :</b>	Rehabilitation of schools and health centers			
Value (quantitative or Qualitative)	1 secondary, 7 primary schools and 4 health care centers damaged by the floods	Provision of civil works, furniture and medical equipment for the		Provision of civil works, furniture and medical equipment for the

		health care centers and of equipment, furniture and textbooks for the schools		health care centers and of equipment, furniture and textbooks for the schools
Date achieved	04/12/2004	09/30/2008		03/31/2009
Comments (incl. % achievement)	100% completion			
<b>Indicator 4 :</b>	Delivery of latrines and water supply to the PK12 neighborhood			
Value (quantitative or Qualitative)	About 360 families have been displaced by the floods and dike reconstruction, and were to be relocated in a non-serviced (PK12) area	Construction of 400 pit-latrines, 3 Km. of water distribution network and 4 standpipes operational		Successful completion of 300 latrines and networks.
Date achieved	04/12/2004	09/30/2007		03/31/2009
Comments (incl. % achievement)	Only 300 latrines built. The amount is sufficient for the resettled population			
<b>Indicator 5 :</b>	Improvement of disaster prevention and management capacity			
Value (quantitative or Qualitative)	Disaster Management set-up conceived in June 2004	DM Executive Secretariat operational		DM Executive Secretariat operational
Date achieved	06/30/2004	09/30/2008		03/31/2009
Comments (incl. % achievement)	Activities were fully completed			

## G. Ratings of Project Performance in ISRs

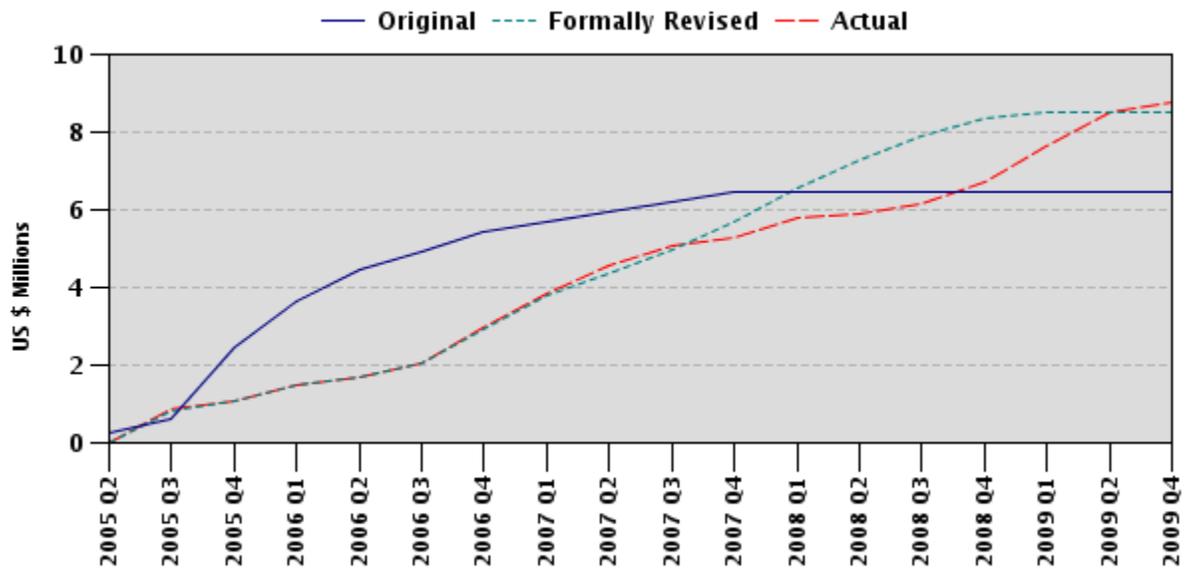
No.	Date ISR Archived	DO	IP	Actual Disbursements (USD millions)
1	10/22/2004	Satisfactory	Satisfactory	0.00
2	12/20/2004	Satisfactory	Satisfactory	0.00
3	04/04/2005	Moderately Satisfactory	Moderately Satisfactory	0.85
4	07/22/2005	Moderately Satisfactory	Moderately Satisfactory	1.09
5	12/27/2005	Moderately Satisfactory	Moderately Satisfactory	1.70
6	05/02/2006	Moderately Satisfactory	Moderately Satisfactory	2.38
7	07/03/2006	Satisfactory	Satisfactory	2.95
8	12/05/2006	Satisfactory	Satisfactory	4.31
9	02/16/2007	Satisfactory	Satisfactory	4.54
10	07/21/2007	Satisfactory	Moderately Satisfactory	5.28
11	02/12/2008	Moderately Satisfactory	Moderately Unsatisfactory	6.09

12	06/28/2008	Moderately Satisfactory	Moderately Satisfactory	6.71
13	12/26/2008	Moderately Satisfactory	Satisfactory	8.53

## H. Restructuring (if any)

Not Applicable

## I. Disbursement Profile



## Section 1: Project context, development objectives and design

### Context at appraisal

**Djibouti is a small and poorly endowed country, with a service-based economy.** Its population was estimated at 660,000 in 2004, two thirds of which living in Djibouti city, the capital. Its economy is based on revenues and rents generated directly and indirectly from the activities of the port (managed by Dubai Ports International since 2001) and related business. It also relies on the rental of military bases to France since independence in 1977, and more recently to the US and Germany, including the services associated with these bases. The service sector in the economy accounts for about 70 percent of GDP. High wage rates in the formal sector, including public administration, are a major constraint to growth and job creation.

During the late 1980s and most of the 1990s, domestic and regional military strife led to serious macroeconomic imbalances and weakened economic activity in Djibouti. A prolonged civil war disrupted vital economic sectors and imposed a heavy cost on the budget. War in neighboring countries led to a large influx of refugees, putting an extra burden on already stretched public services. GDP growth averaged less than one percent during that period, compared with an average population growth rate of 2.8 percent per annum, further deepening poverty. In 1996, Djibouti initiated a stabilization program, which was not sustained. A second program in 1999 was more successful. Fiscal and structural reforms succeeded in halting the deteriorating macroeconomic situation and reversing the build up of domestic arrears. These reforms included civil service downsizing and pension reform, entrusting the management of the port and airport facilities to a private international investor, and strengthening public expenditure institutions.

**Despite its high per capita income (US\$920 in 2004), Djibouti had an extremely high incidence of poverty** (42 percent absolute and 75 percent relative poverty rates), and a very low level of human development. Unemployment, which was estimated at 52 percent, contributed to about 65 percent to extreme poverty. In 2004, Djibouti ranked 157<sup>th</sup> out of 174 countries on the UNDP Human Development Index. About 50 percent of children did not attend school, and more than 20 percent of those enrolled did not complete the six years of primary education. Life expectancy was estimated at 49 years, one of the shortest in the world, and infant mortality, at 103 per 1,000. The immunization rate was only 45 percent, and malnutrition was a serious problem, with indications that 14 percent of children under the age of five suffered from acute malnutrition, and 31 percent from chronic malnutrition.

**Djibouti is prone to recurrent natural disasters, namely floods and droughts.** Between 1977 and 2004, the country was hit by 6 devastating floods and 5 severe droughts, each of which affected over 90,000 persons. The floods on April 13 2004 killed an estimated 100 persons and affected over 100,000 persons. Flash floods washed away about 700 houses and shacks located in and on the banks of the Ambouli River, which separates Djibouti City in two parts. Overall, the floods' damages have been estimated by government at about DJF 1.76 billion (US\$10.05 million). The Djebel and Ambouli districts were the hardest hit areas, with most casualties occurring among the low-income population who lived in makeshift housing on squatted land on the Ambouli Oued banks, and among the population engaged in agricultural activities and whose houses were located within the river bed. The floods broke a protection dyke and caused the overflowing of many parts of the drainage network (which is also used to dispose of used water) and also septic tanks in these districts, which created a health hazard. They also swept away parts of the railway line between Djibouti and Addis-Ababa, through which a large part of Djibouti's food requirements are imported, and caused the collapse of a key bridge on the road to Ethiopia.

**The Country Assistance Strategy for 2001-04** focused on helping the Government reduce poverty through enhancing capital development, including interventions in the education and health sectors and a public works and community development program, and restoring growth, including support to improving competitiveness in a stable environment and rehabilitation of port-related infrastructure and services. Djibouti adopted its first Poverty Reduction Strategy Paper (G-I) in May 2004. It aimed at: (i) strengthening competitiveness for higher and sustainable growth; (ii) accelerating human development; (iii) promoting regional and local development to reach out to poor urban neighborhoods, nomads, and isolated rural communities; and (iv) improving governance and public sector management.

The rehabilitation of the damaged social and economic infrastructure and restoration of services to pre-flood levels represented a severe strain on Djibouti's finances (roughly 5 percent of total public expenditures in the 2004 budget). Financing these expenditures from local resources would divert funds from core poverty reduction programs. It was highly unlikely that all services would be restored to their pre-flood conditions rapidly. The Government requested the donor community to provide assistance and IDA to take the leadership in the rehabilitation efforts.

### **Original project objectives and key indicators**

The main objective of the proposed project was the rehabilitation and recovery of the economic and social assets damaged by the April 2004 floods. The project aimed also (i) to improve living conditions in the resettlement zone where affected families had been relocated; and (ii) to build the capacity for long-term disaster prevention and management, and support employment generation for the low-income population, especially from the affected areas through reliance, where feasible, on labor intensive works.

**A list of 22 indicators was provided in the technical annex of the Memorandum of the President for the proposed project.** They were mostly focused on project implementation aspects and physical achievements. A few of them were concerned with the number of people who would benefit from rehabilitated facilities.

**Main beneficiaries were the people directly and indirectly affected by the floods.** In addition, the population at large would benefit from improved infrastructure and facilities. The rehabilitation of schools would benefit thousands of students. The rehabilitation of health centers would cater to 80,000 to 100,000 people. The rehabilitation of the water supply facilities would benefit an estimated population of 275,000.

### **Original components**

**The project included four components:** (i) rehabilitation of economic and social infrastructure; (ii) delivery of basic social services in the resettlement zone, known as PK 12; (iii) technical assistance and consultant services for disaster prevention and management; and (iv) project management and implementation assistance. The first component included five sub-components: rehabilitation of flood protection structures (flood protection dike and widening the river bed); rehabilitation of roads and drainage infrastructure (inner city roads, regional highways, storm water drainage channels); rehabilitation of seven primary schools and one secondary school (including equipment, furniture and teaching materials); rehabilitation of four health centers; and rehabilitation of water supply facilities.

### **Revised components**

**Additional financing in an amount of SDR 1.4 million was extended in 2007** to cover the higher cost than initially estimated for the dike and additional road work. The components were not modified.

## **Section 2: Key Factors affecting implementation and outcomes**

### **Project preparation, design and quality at entry**

#### **Soundness of the background analysis**

Immediately after the disaster, the authorities activated their national crisis management plan, known as Plan ORSEC, to coordinate relief and assistance efforts. Government agencies, in partnership with the private sector, civil society organizations, donor agencies and the French and US troops stationed in Djibouti, focused their efforts along three axes: (i) the provision of immediate food and non-food assistance to the displaced families, (ii) the cleanup of the damages in the flooded areas, and (iii) the rehabilitation of critically affected infrastructure. Within a week, water, electricity and telephone services were mostly restored, although some repairs were of a provisional nature. Traffic on the road to Ethiopia resumed rapidly thanks to a bypass around the destroyed bridge. Many families took shelter with relatives. The remaining 605 persons (about 120 families, including 466 Djiboutian citizens) were relocated to a school, and then to the PK 12 site on the periphery of Djibouti city. A few days following the disaster, the crisis committee estimated the damages at DJF 1.8 billion. The Government was swift and efficient in its response to the disaster and the analysis of the situation and its consequences was sound.

**The lessons learned from experience in the response to other natural disasters were incorporated in the project design.** The first one is to keep the project design as simple as possible. The second is to ensure tight coordination among government agencies and with donors. The third one is to entrust project management to an efficient organization, preferably with previous experience with Bank-financed projects. Finally, the last lesson is the need to develop a specific and detailed implementation plan upfront to avoid political pressures influencing the outcome of loosely defined components.

**The Government requested Bank assistance for the reconstruction of damaged infrastructure.** The donor community was keen on the Bank playing a leadership role in the reconstruction effort. A Social Development and Public Works project was being implemented with Bank support. It helped extend economic and social infrastructure to poor communities, including road, drainage and water supply network improvement, rehabilitation of health and social services, and preparation and implementation of participatory community development plans. The project also helped build up the capacity of small construction and service contractors. Providing assistance to Djibouti's reconstruction efforts was important for enhancing trust in country relations.

#### **Assessment of the project design**

**The project was well designed.** It focused on reconstruction of key economic and social facilities, delivering basic social services in the resettlement area, and strengthening flood protection structures in the Ambouli river basin. It also was designed to help Djibouti build up capacity for the prevention and management of natural disasters. Through ongoing projects, the Bank had developed good relations with most agencies concerned. It was working closely with ADETIP, a public agency with solid experience in contract management, which was implementing the Social Development and Public Works projects, in a satisfactory manner. A Steering Committee chaired by the Prime Minister would coordinate and monitor project implementation.

**The project would have minimal negative social and environmental impacts,** as it was designed to rehabilitate existing economic and social infrastructure. At appraisal, it was estimated that the reconstruction of the protection dike could involve the displacement of fewer than 200 residents. The enlargement of the riverbed to restore its flood water drainage ability to an acceptable level could require the elimination of agricultural plots, which had encroached on the public domain. When the project was

designed, it was not clear whether protection works would displace residents or agricultural activities. A Resettlement Action Plan (RAP)<sup>1</sup> would be prepared if needed, before carrying out the design studies for the civil works. With the benefit of hindsight, it would have been advisable to include preparation of a RAP as an initial step in the critical path for the reconstruction of the dike.

**The Government was fully committed to the project.** It had demonstrated its determination and effectiveness in the early response to the disaster. It had been able to mobilize public agencies, the private sector, civil society, donor agencies as well as the French and US troops stationed in Djibouti to provide immediate relief and prepare the rehabilitation effort. The private sector and the Djiboutian society demonstrated a strong sense of solidarity in the aftermath of the disaster. ADETIP had a good experience in the development and strengthening of community-based associations through a project financed by AFD, the French Development Agency.

### **Assessment of risks**

**Five risks were identified.** The first three ones stemmed from lack of coordination among public agencies and donors. Three ministries (the Ministry of Agriculture, the Ministry of Urban Development and the Ministry of Public Works) had overlapping responsibilities in the rehabilitation of the Ambouli river basin, and two other donors were involved in its financing, the European Union (EU) and the African Development Bank (AfDB). The steering committee was expected to ensure close coordination among public agencies and an agreement was reached with the two donors on a *modus operandi*. Delays could occur in the development of infrastructure services to the resettlement area, if the Government did not deliver the building materials on time. Funding for these materials had been mobilized from the private sector, and the risk was considered low. Limited resettlement would be eventually required for the construction of the protection dike. In that case appropriate compensation would be provided. Finally, resettled families to PK 12 might decide to leave the area to squat in their previous location, which was closer to the center of the city. This risk would be mitigated through careful integration of resettled people in the sites and services area, which was under development prior to the floods, with donor assistance, including the Bank and AFD. The return of displaced families to the Ambouli river bed and banks was a major risk. It delayed reconstruction of the dike and is now an obstacle to the sustainability of the project. This risk should have been better analyzed and mitigated.

### **Implementation**

Signature of the financing agreement took place on October 2, 2004, one month after Board approval. Effectiveness of the financing agreement was delayed, however. The special effectiveness condition, the signing of an agreement between the Government of Djibouti and ADETIP, was met in late December 2004. Ratification of the financing agreement by Parliament took longer than expected. Eventually, the financing agreement was declared effective on January 25, 2005. With the delay in effectiveness, the project became a potential problem project, as Djibouti had the two country flags related to macroeconomic management and country riskiness.

In the first year of project implementation, good progress was made in the rehabilitation of infrastructure and facilities damaged by the floods. Good progress was also made in the development of 200 lots and construction of 277 dwellings (called Gargaar city) in PK 12, most of which were for the victims of the flood while others were for other families to be settled in that zone. Funds were mobilized from the private sector and donors for that purpose for a total amount of DJF 262.5 million and efficiently managed by the Housing Fund of the Ministry of Urban Development. On the other hand, the Government postponed taking action on two key issues, which contributed to serious delays in project implementation. The Government did not deliver occupancy permits to families displaced by the floods

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<sup>1</sup> The RAP concerned only the families that had to be resettled because of the dike construction.

and relocated on the PK 12 site, and did not provide the precise numbers and names of displaced families. The first action was a condition under the financing agreement for delivering basic services (latrines and water supply) in the resettlement area.

**In late 2004, a number of families (estimated at between 100 and 200) had moved back to the Ambouli river banks.** A resettlement action plan became necessary before the reconstruction of the Ambouli dike could start. Initiation of the census and socio-economic study of families occupying the banks of the Ambouli River was delayed, however. The resettlement action plan was eventually completed and the contract for the reconstruction of the dike was awarded in December 2006.

**In 2005, the Government approved an integrated watershed management scheme for the Ambouli basin,** including (i) the reconstruction and core strengthening of the Ambouli dike, as the main infrastructure to protect the city against future floods; (ii) the construction of a multipurpose dam upstream from the city and of a spill-over canal; (iii) the management of the upstream Ambouli watershed via multiple small rural water retention dikes; and (iv) the installation of a flood alert system. As it became clear, however, that the design and construction of the upstream dams would take several years to be completed, in November 2005, the Government requested that the dike be designed so as to protect the city against flood levels that had historically occurred every eighty years. This would entail a higher construction cost, however.

In December 2006, the Bank gave its non-objection to the proposed contract with the lowest bidder for the reconstruction of the Ambouli dike. It was expected at that time that the works would be completed in November 2007. In February 2007, the Board approved a Management proposal for a SDR 1.4 million additional financing to cover the higher cost than initially estimated for the reconstruction of the dike and the inclusion of additional road work. In April 2007, the agreement for this additional financing was signed. The closing date was extended by one year to September 30, 2008. The agreement became effective in February 2008, however, due to delays in parliament ratification.

**In February 2007, the contract with the contractor was cancelled because the contractor went bankrupt.** The second lowest bidder was selected. Eventually, the Bank gave its non objection to the new contract in May 2007. Works would not actually start before September 2007, however. The amount of the new contract was much higher than the previous one, by about US\$1 million, which led to the cancellation of the additional roadwork included in the additional financing agreement.

**In November 2007, Parliament approved a law creating a new agency, ADDS (the Social Development Agency),** with the broad mandate of implementing all poverty reduction programs within the framework of the newly approved National Initiative for Human Development (INDH). As a consequence, ADETIP would be folded into the new agency. During the transition period, project implementation slowed down, as ADETIP's management was mostly concerned with reorganization issues. It became clear in 2008 that the construction of the dike would not be completed before September 30, 2008. The closing date was extended to March 31, 2009.

**Supervision missions visited Djibouti twice a year.** The mid-term review was initially planned for March 2006. It did not take place, however, as there was an in depth mission to put together the additional financing, which was eventually approved to cover expected cost overruns.

**In November 2006, the Quality Assurance Group (QAG) rated supervision of the project as moderately satisfactory,** essentially because QAG was of the opinion that the technical studies and procurement steps for the dike reconstruction should have started earlier and proceeded in parallel with the preparation of the resettlement action plan. By insisting that compensation issues associated with the resettlement of some 120 families living on the reconstruction site, as well as another 240 families who were victims of the flood, be resolved before embarking on technical studies and initiating bidding for the dike reconstruction, QAG felt that the team unnecessarily delayed completion of the dike, which was

essential for the protection of Djibouti city. The team justified its decision on the basis of the high risk that the resettlement plan would not be implemented. The Government of Djibouti did not have experience with this type of activity and had shown reluctance to implementing it.

QAG rated as moderately satisfactory three quality dimensions of supervision (focus on development effectiveness, adequacy of supervision inputs and processes, and candor and quality of ISRs). One dimension, supervision of safeguard/fiduciary aspects, was rated satisfactory.

## **Monitoring and evaluation (M&E) design, implementation and utilization**

### **M&E design**

Although the main text of the Memorandum of the President (MoP) and of the Technical Annex (TA) did not mention arrangements for monitoring and evaluation, the TA provided a table on key implementation activities and monitoring indicators. Most indicators in the list were output indicators. A few of them focused on the number of people who would benefit from the rehabilitation of infrastructure and facilities.

### **M&E implementation and utilization**

The first two Implementation Status Reports (ISRs), which were both issued before effectiveness, did not provide an indicator table. This was done starting with the third ISR, dated April 2005. The table included two outcome indicators: rehabilitation and recovery of economic and social assets damaged by the floods and improvement in the living conditions in the resettlement area. For the latter indicator, information on the number of families displaced by flood and resettled with occupancy permits, access to water standpipes and pit latrines was to be provided. Five intermediate outcome indicators were mentioned, namely: rehabilitation of flood protection structures, rehabilitation of roads, water supply and drainage infrastructure, rehabilitation of schools and health centers, delivery of latrines (400) and water supply to the PK12 neighborhood, and improvement of disaster prevention and management capacity. Supervision missions filled out the indicator table regularly and consistently. These indicators were drawn from the Technical Annex.

### **Safeguard and fiduciary compliance**

Both the MoP and the TA provided a detailed assessment of financial management and procurement issues and an extensive discussion of fiduciary arrangements. In the ISRs, procurement was rated satisfactory until early 2007, when it was downgraded to moderately satisfactory, without further explanation. The corresponding aide memoire clearly states the reason for the downgrading: the filing system was not kept properly and there had been non-compliance with the recommendations of the latest procurement ex-post review report, all of this being related to one key person of the procurement unit leaving ADETIP and not being replaced. On the other hand, financial management was rated as moderately satisfactory from the outset. It was upgraded to satisfactory in August 2007 to revert to moderately satisfactory in early 2008. The downgrading was due to delays in the submission of financial reports and responding to comments made in the audit report for the 2007 accounts. The aide-memoires discussed procurement and financial management issues extensively.

Considerable attention was devoted to ensure that environment issues would be adequately addressed. The resettlement action plan was prepared and implemented in a satisfactory manner.

### **Post completion operation/next phase**

The last supervision mission in May 2009 found that all infrastructure and facilities rehabilitated under the project were in good condition and operating satisfactorily. In addition the Government was

successful in obtaining financing for the construction of an upstream dam (Boulle), which, when built, would relieve flood pressure on the Ambouli dike.

On the other hand, the Bank team had been concerned about the sustainability of the flood protection measures undertaken with the project, taking into consideration that many crucial actions that were part of the integrated watershed management program were still incomplete. The latest project supervision missions reiterated the need for the Government to ensure that (i) the dike is appropriately maintained, (ii) people do not settle in the flood-prone areas of the river and (iii) the flood surveillance system operates satisfactorily and be upgraded to a full alert system as it was originally conceived. Experience showed, however, that the Government had not taken appropriate action to clear trash accumulating along the dike and in the river bed, nor to prevent families from settling in flood-prone areas. The mission found out that about 30 families were squatting in these areas. Also, serious doubts were raised as to the effectiveness of the surveillance system, in the absence of alert protocols, shelter policies, and communication strategies.

In 2008, funds were mobilized from the Global Facility for Disaster Reduction and Recovery (GFDRR) to develop preparatory activities related to the design and construction of a vulnerability information system. This technical assistance allowed the team to continue its engagement with the agencies working on disaster prevention. Furthermore, a request for additional funds is being prepared and will include the completion and effective operation of the alert system. The Bank also financed the preparation of an action plan for the periodic maintenance of the dike, which includes technical, institutional, and financing aspects. Finally it was agreed that the Safeguards team would advise the Government on the possible actions regarding the present occupation of the river's left bank. All of these actions have been part of the team's efforts to ensure that the Government takes effective action to ensure the sustainability of the dike works.

During project implementation, data was collected to monitor physical progress, but no M&E system was established.

### **Section 3: Assessment of outcomes**

#### **Relevance of objectives, design and implementation**

**The objectives of the project are highly relevant now, as they were at the time of approval.** Following devastating floods, like those which occurred in April 2004, it is essential to rehabilitate the infrastructure and facilities which are damaged and to resettle the families, which are affected by the disaster. It is also important to put in place an improved mechanism for natural disaster prevention and management. The operation was consistent with the first Poverty Reduction Strategy adopted by the Government in 2004 and the CAS's broad objective of enhancing human capital and improving the living conditions of the population.

#### **Achievement of project development objectives**

The main objective of the project, the rehabilitation and recovery of the economic and social assets damaged by the April 2004 floods, has been achieved. All infrastructure and facilities destroyed by the floods have been rebuilt. The living conditions in the resettlement zone where affected families have been relocated have been improved through the construction of latrines and the provision of water. Houses provided to relocated families in the resettlement zone by the Housing Fund much better than those which were destroyed by the floods. The capacity for disaster prevention and management has been reinforced, but not to the extent expected.

Rehabilitation of infrastructure and facilities damaged by the April 2004 floods, with the exception of the Ambouli dike, has been completed expeditiously. Reconstruction of the protective dike has taken much longer than expected, with potential disastrous consequences for Djibouti city, which has been highly

vulnerable to flooding for an extended period of time. The dike was completed in March 2009. Some works to ease the flow of water in the river have not yet been completed, however, due in part to encroachment of people in the area.

Basic infrastructure in the resettlement zone at PK 12 has been completed. The construction of new dwellings by the Housing Fund at PK 12 was completed in October 2006. Out of 127 families eligible for resettlement at PK 12, 94 opted for a new house, 2 for a plot, and others decided to move to different places.

**An Executive Secretariat for Risks and Disaster Management (SEGRC) has been established** and the project provided equipment and supported capacity building activities as defined in the project documents. With support from the UN and the project, the Government has enacted a law creating the framework for disaster prevention, acquired relevant equipment and established a simulation room. Staff working in related agencies reported that some progress has been made to increase consciousness of the importance of disaster prevention, and that some mechanisms are in place to improve preparedness. The Secretariat requires further institutional build up, however. It has yet to carry out two key tasks, bringing the surveillance and early warning system in the Ambouli basin up to acceptable standards and implementing a sensitization program for the populations living and working upstream of the dike.

### **Efficiency**

**The project was designed to restore basic economic and social infrastructure, which had been damaged by the 2004 floods.** As such, an economic analysis was not necessary. The final cost of the project was 25 percent higher than anticipated. This was due to a 25 percent overrun in the civil works category, essentially the result of the higher than expected cost of the flood protection system. When the first contractor selected for the construction of the dike went bankrupt, the second bidder was selected, but at a much higher cost. The cost of consultants was 2.4 times the amount initially estimated. The cost of management, basically the fee for ADETIPs services, was 46 percent higher than envisaged, essentially because it was a fixed percentage of works implemented. On the other hand, the cost of goods financed by the project was about the same as estimated. . With the exception of the Ambouli dike, the reconstruction of infrastructure and facilities has been implemented efficiently and in a timely fashion.

### **Justification of overall outcome rating**

The outcome of the project is rated as moderately satisfactory.

**The objectives of the project were highly relevant.** Most rehabilitation was carried out rapidly and efficiently. Roads were back to normal traffic swiftly. Schools and health centers were fully functional as planned. Infrastructure and equipment for the resettlement zone was built and delivered expeditiously. On the other hand, the reconstruction of the Ambouli dike took much longer and its cost was much higher than expected. Moreover, the flood protection works may not provide the benefits expected, unless the authorities take action to clear up the trash, including car carcasses, dumped into the river, and prevent people from settling down in the river bed and banks. The effort made to build up capacity for disaster prevention and management is not commensurate with results obtained. The agency in charge has not yet demonstrated its ability to provide the services expected.

### **Overarching themes, other outcomes and impacts**

#### **Poverty impacts, gender aspects and social development**

**The people who were displaced by the floods were among the poorest segments of Djibouti's population,** including the people who were squatting in the Ambouli river bed and banks. They have been resettled and benefit from water and sanitation facilities, and much improved dwellings. As already

indicated, however, they have difficulty finding jobs, as the resettlement site is far from downtown Djibouti. Several families, who were resettled, made a living out of vegetable gardening in the Ambouli river bed. It is not clear whether the objective of creating employment opportunities through high intensive labor methods for the rehabilitation of infrastructure and facilities has been achieved. In spite of its mandate, which was to carry out public works using labor intensive methods, ADETIP, the project implementation agency, did not report the jobs created. There were no specific gender-related activities in the project.

### **Institutional changes/strengthening**

When the project was appraised, ADETIP, as a contract management agency, had a solid experience in implementing Bank-financed projects. It had a good capacity for procurement and financial management. In recognition of its capacity to deliver results, in 2007, the Government decided to broaden the mandate of ADETIP, and make it the agency in charge of implementing the National Initiative for Human Development, (INDH). Its name was changed to ADDS.

The project was expected to build capacity for disaster prevention and management. Limited results were achieved in that area, but additional resources are being mobilized to enhance the effectiveness of the Secretariat.

### **Summary of findings of beneficiary survey and/or stakeholder workshops**

**The project included a study, by ADETIP, to assess the situation of families who had been resettled.** This study was not carried out, however, but a report of the situation was prepared by the Housing Fund. The last supervision mission had a meeting with beneficiaries to discuss their problems. During that meeting, beneficiaries indicated that they were happy with the houses built with support from the Housing Fund, but mentioned that water supply had been a problem in the previous two months. They emphasized also problems related to long distances to schools and employment opportunities. Some of them stressed that they had difficulties in their relations with people established in the resettlement area earlier than them. All these complaints were to be expected. The long distance to the city center is real, but there was no land available for resettlement closer to the city. Water availability remains a problem in many sections of Djibouti. Djibouti city is expanding rapidly and it is expected that the resettlement area will become better integrated within the urban network over time.

### **Section 4: Assessment of risk to development outcome**

**The risk to development outcome is rated as significant.** The Ambouli dike provides protection to Djibouti city against floods. Additional works are required upstream to slow down the flow of water in case of severe flooding. Financing for the construction of the Boule dam upstream has been secured. This dam is expected to reduce the intensity of a centennial flood from 2,000 m<sup>3</sup> to 1,700 m<sup>3</sup>/sec. The Ambouli dike has been designed to contain a 1,500 m<sup>3</sup>/sec. flood.

**Little is being done to maintain the dike and surrounding areas.** Trash, including car carcasses, is being dumped in the Ambouli river bed, but nothing is being done to remove it. People are squatting in the river bed and on the banks, but nothing is done to move them away from the area, nor to prevent more people from encroaching on public domain. The budget for the maintenance of the dike is inadequate and should be doubled, according to the consultant hired by the Bank to assess the sustainability of the dike. The Municipality of Djibouti is concerned about the lack of preparedness in case of a catastrophic event, but has not taken any action to address the problem. The early warning system is not operational. The Secretariat in charge of prevention and management of natural disasters needs substantial capacity building to provide the leadership required.

## **Section 5: Assessment of Bank and Borrower performance**

### **Bank performance**

#### **Quality at entry**

**The Regional Vice President visited Djibouti in May 2004**, a couple of weeks after the April flooding. A multi-sectoral Bank team visited Djibouti in June 2004. It worked closely with the Government and the donor community. Negotiations took place one month later. The project was approved by the Board on October 2, 2006. The Bank moved rapidly to respond to the emergency situation.

**The project design was moderately satisfactory.** The project was an appropriate response to the disaster caused by the floods. All project components were highly relevant. The fiduciary aspects of the projects were adequately assessed. The social and environment impacts of the project were well analyzed. The lessons from experience were taken into account and the risk analysis was adequate. The Board documents did not include outcome indicators and did not discuss monitoring and evaluation arrangements. This was a shortcoming, but was accepted as such in the context of the need to respond quickly to the emergency. This shortcoming should have been corrected during project implementation. The project implementation schedule lacked realism. Expecting that the project would be completed within 32 months was optimistic, in view of weak government capacity and complex social issues to be addressed. The sustainability risk was not correctly assessed.

**The quality at entry is rated as moderately satisfactory.**

#### **Quality of Bank supervision**

**As already indicated, QAG rated the quality of supervision as moderately satisfactory in November 2006.** According to QAG, the Bank team should not have delayed initiation of the technical studies and bidding process for the Ambouli dike until the compensation issues for the people to be resettled were satisfactorily resolved. The focus of supervision missions was on resettlement issues and possible cost overrun in the reconstruction of the dike, not sufficiently on the potential consequences of a delay in the reconstruction of the flood control dike, which was a major objective of the emergency project. The focus of supervision missions on development effectiveness was insufficient.

**In QAG's opinion, supervision inputs and processes were inadequate**, because a key mission in February/March 2005 was led by an inexperienced task manager, who had not been closely involved in the preparation and appraisal of the project. Also, management did not give sufficient attention to the urgency of moving ahead with the reconstruction of the dike. QAG found that ratings were a bit overoptimistic.

**QAG's criticism of the quality of Bank supervision is unduly harsh, however.** Faced with the inability of the Government to prevent people from encroaching on the dike embankments and its reluctance to implement the resettlement policy, which it considered as too generous towards illegal squatters, the Bank team had no other choice but to insist that commitments made be implemented before disbursing funds related to the reconstruction of the dike. This insistence paid off eventually, as the Government took required action. The Bank gave its non objection to the contract with the consultant selected for the technical studies only when the resettlement action plan was formally approved by the Government. QAG's assessment that supervision inputs and processes were inadequate on grounds that a key mission was led by an inexperienced task manager was not well justified either. In reality, the mission was organized to follow-up on technical details, and there was no need for that mission to be led by the team leader.

**Supervision missions visited Djibouti twice a year.** There was a remarkable continuity in Bank supervision. The task manager, who was responsible for the preparation and appraisal of the project, was in charge of project supervision until end 2007. He did not take part in the second supervision mission in February/March 2005, but led all missions until the end of 2007. The task manager; who took over in 2008, participated in the December 2007 mission led by the initial task manager. Fiduciary and safeguards aspects were adequately addressed during supervision. Bank missions developed good working relations with the government and the donor community. They provided assistance to ADETIP, the implementing agency.

**The quality of supervision is rated as satisfactory.**

**Overall, Bank performance is rated as satisfactory.**

### **Borrower performance**

#### **Government performance**

**The authorities responded swiftly to the damages caused by the floods.** They mobilized government agencies, the private sector, the civil society and the donor community to provide immediate assistance to flood victims, clean up damages in affected areas and initiate the rehabilitation of infrastructure. They were highly committed during the preparation and appraisal phase.

**The strong commitment of the early months weakened after Board approval of the project.** Meeting the general conditions of effectiveness took longer than expected and the Government delayed taking action in delivering occupancy permits to families relocated on the PK 12 site, providing a nominative list of displaced people, and addressing compensation issues. It did not take action to prevent people from moving back to the Ambouli river bed and banks. As a consequence, a Resettlement Action Plan became necessary, which considerably delayed reconstruction of the Ambouli dike. On the other hand, it provided leadership for early rehabilitation of all other infrastructure damaged by the floods and mobilized the resources required for the resettlement in the PK 12 site. These resources were much higher than those provided by IDA for the water supply and latrines component. The additional financing became effective one year after it was approved by the Board.

Following reconstruction of the dike, the Government has not taken action to ensure adequate maintenance of the facility and surrounding areas. It did not put in place an effective system for preventing people from encroaching in the river bed and banks and from dumping trash. It appointed a team to lead the disaster prevention and management unit, which has kept a low profile despite technical assistance provided under the project.

**The performance of the Government is rated as moderately unsatisfactory.**

#### **Performance of the implementing agency**

**ADETIP has done a commendable job in managing project implementation.** Its performance has been consistently rated satisfactory, except in the ISR following the December 2007 supervision mission. At that time ADETIP was distracted by the organizational changes in the wake of ADDS's creation. Its performance was rated moderately unsatisfactory. Financial management was most of the time less than fully satisfactory. Procurement was rated satisfactory early on and moderately satisfactory in December 2006. On the other hand, M&E was rated moderately satisfactory early on and was upgraded after December 2006. ADETIP's supervision of the dike construction became less intense as time went on. As it became ADDS, it had other assignments to take care of.

**Overall, ADETIP's performance is rated as satisfactory.**

## **Section 6: Lessons learned**

Following natural disasters, the Bank has demonstrated its ability to move fast to put together an emergency rehabilitation operation. On the other hand, after the mobilization of energies in the immediate aftermath of a disaster, governments may take time to take the steps required for implementation of a reconstruction program. In the case of Djibouti, it took a long time for the Government to ensure that basic requirements for initiating implementation of crucial components were addressed.

It is important to entrust implementation of a post-disaster operation to a well established agency, with good knowledge of Bank procedures and adequate procurement and financial management capacity. ADETIP did a good job in coordinating implementation of a large number of components.

The lack of government reaction to the encroachment on public domain in a sensitive area is puzzling and needs to be discussed within the country dialogue context. Sooner or later, the Government will have to address the problem, hopefully before a severe flood.

A Resettlement Action Plan (RAP) was not deemed necessary when the project was formulated, as it was not clear whether protection works would displace residents or agricultural activities. Experience shows that it would have been advisable to include preparation of a RAP in the project and start preparing it as a first step for the reconstruction of the dike.

The Bank policy on involuntary resettlement is difficult to accept by governments in countries where squatters include illegal immigrants from neighboring countries. They consider it as too generous and are afraid of creating precedents. This is a sensitive issue which should be discussed openly with the recipient countries.

Sustainability of the dike and of the surveillance system is a major issue. The Bank hired a consultant to review this issue and make appropriate recommendations. This was most useful. It is important now to sensitize key stakeholders to the findings and recommendations of the report. Resources should be made available for that purpose.

Capacity building is difficult when there is little government interest in addressing the issues for which a new agency (SEGRC) has been created under weak leadership. It is important nevertheless for the Bank to constantly emphasize the need for a disaster-prone country to improve its preparedness and mitigation capacity.

Building capacity for disaster prevention and management takes time. There is less of a sense of urgency when the previous disaster is no longer on the radar screen. The role of the Bank is to maintain the issue alive through dialogue and other means. In the case of Djibouti, involvement of the GFDRR for the financing of specific capacity building activities may yield positive results.

## Annex 1. Project Costs and Financing

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

Components	Appraisal Estimate (USD millions) (USD1 = AD 80)	Actual/Latest Estimate (USD millions) (USD1 = AD 74)	Percentage of Appraisal
1. Rehabilitation of Economic & Social Infrastructure	4.98	6.02	120.81%
2. Delivery of Infrastructure services to Resettlement Zone	0.43	1.41	327.9%
3. TA & Consultancy services to Disaster Prevention & MGT	0.32	0.81	253%
4. ADETIP project MGT & implementation assistance fee	0.34	0.49	144.1%
Resettlement Expenses	0.72	0.72	100%
<b>Total Baseline Cost</b>	<b>6.79</b>	<b>8.30</b>	122.24%
Physical and Price Contingencies	0.37		
<b>Total Project Costs</b>	<b>7.17</b>	<b>8.73</b>	121.75%
<b>Total Financing Required</b>		<b>8.73</b>	

### (b) Financing

Source of Funds	Type of Cofinancing	Appraisal Estimate (USD millions)	Actual/Latest Estimate (USD millions)	Percentage of Appraisal
Government Contributions		0.72	0.72	0
World Bank (IDA)		6.46	8.76	135.6%

## Annex 2. Outputs by Component

WORKS	Cost	
	USD	DJF
<b>1. Reconstruction of dike and breakwaters</b>	<b>3 237 026</b>	<b>574 572 132</b>
<b>2. Rehabilitation of urban roads</b>	<b>2 028 310</b>	<b>360 024 974</b>
Type E road	1 245 063	220 998 649
SOGIK ZIS street	197 911	35 129 175
EDD ZIS street	585 336	103 897 150
<b>3. Clearing and rehabilitation of drainage canals</b>	<b>97 112</b>	<b>17 237 379</b>
Clearing of 5 km of storm water drains	42 015	7 457 600
Installation of 500 sewer covers	55 097	9 779 779
<b>4. RN1 and RN9 interurban highways</b>	<b>250 881</b>	<b>44 531 324</b>
<b>5. Rehabilitation of health centers</b>	<b>60 496</b>	<b>10 738 100</b>
Ambouli/Farah Had	28 736	5 100 700
Ibrahim Balala	16 907	3 001 000
Arhiba	14 853	2 636 400
<b>6. Services for Km 12</b>	<b>342 838</b>	<b>60 853 678</b>
Water supply	145 240	25 780 028
Construction of 400 latrines	197 598	35 073 650
<b>Total</b>	<b>6 016 662</b>	<b>1 067 957 587</b>

SUPPLIES		
<b>7. Sanitation equipment</b>	<b>205 265</b>	<b>36 331 831</b>
Electromechanical pumping equipment	0	0
<i>Hydro-cureuse</i> (High-pressure flusher)	205 265	36 331 831
<b>8. Equipment for Ambouli CES</b>	<b>99 839</b>	<b>17 671 416</b>
<b>9. Manuals for primary schools and Supplies for Ambouli CES</b>	<b>323 225</b>	<b>57 210 864</b>
Supplies for primary schools	208 288	36 866 933
Supplies for Ambouli CES	114 937	20 343 931
<b>10. Medical equipment for CSC</b>	<b>60 826</b>	<b>10 766 267</b>
<b>11. Equipment and supplies for ONED</b>	<b>718 279</b>	<b>127 135 358</b>
System equipment	322 006	56 995 000
Motor pumps	181 128	32 059 676
Truck-mounted crane	174 808	30 941 075
Water-purification chemicals	40 337	7 139 607
<b>Total</b>	<b>1 407 434</b>	<b>249 115 735</b>

CONSULTATION SERVICES		
<b>12. Consultancy services</b>	<b>809 774</b>	143 734 972
<b>13. Project overhead (6%)</b>	<b>494 032</b>	87 690 718
<b>Total</b>	<b>1 303 807</b>	<b>231 425 690</b>

<b>GRAND TOTAL</b>	<b>8 727 903</b>	<b>1 548 499 012</b>
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Source: ADDS

**Annex 3. Economic and Financial Analysis**  
*(including assumptions in the analysis)*

N/A

#### Annex 4. Bank Lending and Implementation Support/Supervision Processes

##### (a) Task Team members

Names	Title	Unit	Responsibility/ Specialty
<b>Lending</b>			
Anthony Bigio	Sr. Urban Specialist, TTL	MNSIF	
Robert Hindle	Yemen Resident Mission Representative	MNCYE	
Sameh Wahba	Sr. Urban Specialist	MNSIF	
Richard James	Operations Officer	MNCA3	
Abduljabbar Al Qattar	Procurement Specialist	MNAPR	
<b>Supervision/ICR</b>			
Anas Abou El Mikias	Sr. Financial Management Spec.	MNAFM	
Abduljabbar Al Qathab	Sr. Procurement Spec.	SARPS	
Yvette Laure Djachechi	Sr. Social Development Spec.	AFTCS	
Karim Kamil Fahim	Auditor	IADDR	
Abdoulaye Keita	Procurement Specialist	MNAPR	
Mohamed Mehdi	Consultant	MNAFM	
Edouard Henri Motte	Consultant	EASCS	
M. Yaa Pokua Afriyie Oppong	Sr. Social Development Spec.	SDV	
Alexandra Ortiz	Sr. Urban Economist, TTL	MNSUR	
Thomas Kwasi Siaw Anang	Procurement Specialist	AFTPC	
Georges Houry-Haddad	Procurement Specialist	MNAPR	
Randa Akeel	Social Development Specialist	MNSPR	

##### (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)
<b>Lending</b>		
FY04	2	14.51
FY05	6	23.10
<b>Total:</b>	8	37.61
<b>Supervision/ICR</b>		
FY04		0.00
FY05	19	77.01
FY06	12	79.92
FY07	12	100.12
FY08	12	105.41
FY09	8	0.00
<b>Total:</b>	63	362.46

## **Annex 5. Beneficiary Survey Results**

NA

## **Annex 6. Stakeholder Workshop Report and Results**

NA

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

### **1. Context and factors justifying the project**

#### **1.1 General context**

- 1) The Republic of Djibouti is a small country of 23,000 km<sup>2</sup> and a population of 700,000, located at the eastern end of the Horn of Africa. The capital city is home to three-quarters of the nation's population, and all economic and administrative infrastructure, whether official or private, is centralized in it.
- 2) Because the country's harsh natural environment is unsuited for agriculture, the economy is structured around the tertiary sector, which accounts for 75 percent of GDP.
- 3) During the 1990s Djibouti went through a serious political crisis, which was followed by an unprecedented economic crisis. For about ten years now the country has enjoyed a time of real economic and social prosperity as a result of a policy of modernizing and dynamizing its economic and social infrastructure initiated by the current President of the Republic.
- 4) With an arid climate and a wide coastal strip along the Red Sea, Djibouti normally receives little in the way of precipitation. With annual rainfall of 150 to 200 mm on average<sup>1</sup>, precipitation is infrequent but when rains do come they plunge the country and in particular the capital, where all economic and social activity is concentrated, into an extremely stressful situation.
- 5) The capital, which was originally built around the colonial administration, was limited to the north by the sea and extended to the general area of the Ambouli wadi in the south. Its growth in recent years has taken place mostly in a southward direction, beyond the wadi, with the result that there is now a part of the city over on the other side of the wadi. At present, the city's two main components are separated by the bed of the wadi and they must at all costs be kept connected by appropriate works in the everyday life of the capital. The capital's intrinsic vulnerability in times of heavy rainfall was dramatically underscored by the floods of April 2004. The amount of rain that fell in that period and the flooding caused by the run-off was such that the wadi overflowed and the water devastated the Ambouli area, causing considerable human and property losses.
- 6) The Ambouli wadi is an integral part of the city and every effort must be made to ensure that there will be no danger of repetition of such floods and that the people living alongside or near the wadi will be able to dwell safely in their homes. This is why the Republic of Djibouti has carried out the "Post-Flooding Emergency Rehabilitation Project" designed to rehabilitate the infrastructure damaged by the floods, to render the area safe and to resettle the victims of the disaster, with financial assistance from the International Development Association (IDA).
- 7) With total funding of SDR 5.8 million, made up of a credit of SDR 2.2 million and a grant of SDR 3.6 million, obtained in July 2004, the project was completed in March 2009.

#### **1.2 Position as regards infrastructure and preparation of the country for natural disasters**

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<sup>1</sup> CCA – February 2002, p. 15.

8) Djibouti is very vulnerable to natural disasters. Rains are infrequent but also constitute the chief threat. The country's recent history shows that since independence in 1977 it has experienced six major floods classified as natural disasters and occurring at regular intervals of roughly once every ten years. In March 1981, floods claimed 25 lives and affected over 100,000 persons. The April 1989 floods killed 10 people and impacted more than 150,000. The rains of November 1994 caused 145 deaths and left 120,000 victims. Ten years later in April 2004, the rains caused the disappearance of 100 persons and affected 100,000. The impact of these disasters is considerable taking into account the small size of the country; by way of illustration, the April 2004 floods, the subject of this study, affected 15 percent of its population.

9) The National Crisis Management Plan (ORSEC), created by the Government by decree of March 23, 1985, spelled out the first-aid measures to be mobilized in the event of natural disasters under the responsibility of the Ministry of the Interior. These comprised an emergency unit and a general staff that the appropriate ministry was to set up on an ad hoc basis when crises occur. However, since the effectiveness of this plan has been deemed inadequate in practice, the Government has undertaken a reform of disaster management, justified primarily by the nonpermanent nature of the Contingency Plan and its limited provisions for preventive actions for swift and efficient response in the event of floods.

10) By Presidential Order issued in August 2004,<sup>2</sup> the Government, as a first step, established an intersectoral technical committee charged with preparing and developing a national risk and disaster management strategy, this committee being placed under the authority of the Ministry of the Interior and Decentralization. Then secondly, and on the basis of this committee's work, combined with the findings of a study made by an international consultant, a new institutional framework for Risk and Disaster Management was created by decree in July 2006.<sup>3</sup>

11) From that point onward the Government's action in this sphere has been channeled through new and expanded bodies of an interministerial and intersectoral nature, namely:

- The Interministerial Risk and Disaster Management Committee: chaired by the Prime Minister with the Minister of the Interior and Decentralization serving as deputy chairman, this committee also includes eleven other ministries having roles to play in the event of national disasters.
- The Intersectoral Technical Risk and Disaster Management Committee: chaired by the Secretary General of the Ministry of the Interior and Decentralization with a representative of the Prime Minister's Office as deputy chairman, this has now been expanded to include twenty members from directorates general and technical departments of the State and civil society.
- And the Executive Secretariat, which imparts a permanence that was lacking with the previous arrangements.

12) The adoption of these measures represents a significant step forward and brings with it a judicious allocation of responsibilities. The supervision exercised by the Office of the Prime Minister means there is a high-level decision-making authority which in turn ensures a greater involvement of the national authorities in disaster management than has been the case in the past. The permanence and the precise specification of the tasks assigned to the Executive Secretariat are consistent with the

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<sup>2</sup> Presidential Order No. 2004-0579/PR/MID establishing the Technical Committee for Preparation and Development of the National Risk and Disaster Management Strategy of August 17, 2004.

<sup>3</sup> Decree No. 2006-0912/PR/MID setting up an institutional framework for Risk and Disaster Management of July 23, 2006.

challenges posed by disaster management, provided the Secretariat is appropriately strengthened to carry out its new responsibilities.

13) Djibouti is moreover a member of the Regional Disaster Management Center of the eleven Golden Spear countries. To this end it ratified the instrument of accession to the Regional Center by Law No. 157/AN/06 of December 18, 2006.

## **2. Special conditions spurring development of the project**

14) In the night of April 13, 2004, heavy rains fell on the capital and swiftly made the Ambouli wadi overflow. The suddenness and violence of the downpours devastated the neighborhood and caused extensive property damage and loss of life, with most of the victims being caught unawares while they slept.

15) The waters very quickly flowed into the other districts and brought the city to a standstill. The intensity of the rainfall and the widespread damage caused prevented any form of effective response and the means mobilized were far below what was needed to bring the situation under control. The infrastructure was put out of commission and economic activities were hampered if not shut down. The people who lived in the area of the wadi, who were low-income persons, found themselves homeless and totally dependent on the emergency assistance program set up by the national authorities.

16) Faced with the confusion created by recurrent disasters on the one hand and the absolute necessity of restoring the public infrastructure on the other, the Government set itself a twofold objective: develop a disaster management program, covering all aspects and viable over the long term, and assume responsibility for rehabilitation of the flood-damaged infrastructure and assistance to the victims.

17) With this aim in mind, the national authorities approached potential donors for assistance. World Bank financing was then obtained for implementing an emergency program for rehabilitating and redynamizing the essential economic and social assets and rehousing the people left homeless by the floods.

18) The program prepared had to concentrate on rehabilitation of the economic infrastructure and assistance to the civil victims, in particular by resettling them on another site at PK 12, provided with the minimum basic services.

19) Prepared as a response to emergency circumstances, the project is an ambitious one and covers several objectives: (i) it must first of all meet the need to restore the capital's essential infrastructure services and organize assistance for the disaster victims; (ii) then secondly, the project must also strengthen the capacity and capability of the unit with responsibility for disaster response, the Executive Secretariat for Risk and Disaster Management (SEGRC), since this capacity and capability constitute the necessary bases for management of the works and facilities constructed over the long term.

20) For its part, the Government must organize the involvement of several actors while reviewing the existing arrangements and filling the gaps in them. This is a complex process where the pressure of urgency must yield to a carefully thought-through approach. This objective of the national authorities must be pursued by steady sustainable action and not one-off measures. To achieve this, all the parties involved must know precisely what their respective roles and responsibilities are and possess the necessary means on a permanent basis. It is a matter of setting up a permanent national mechanism for dealing with disasters which by their nature are chance occurrences.

- 21) Accomplishment of the Government's general objective of providing the country with a complete mechanism for preventing and managing disasters requires implementation of the PRUSI as its first stage.
- 22) The infrastructure component of the program consists in securing the Ambouli wadi district and making its essential infrastructure operational, including in particular rehabilitation of the Ambouli dike and of the urban and national roads. The social component is intended to take care of the flood victims and restarting of the activities of the schools and health centers.
- 23) The cutback dike construction and the multipurpose dam have been retained for the rehabilitation of the basin, with installation of a provisional flood-watch system to secure the worksite. The empirical study of past floods produced justification for constructing the dike to handle a thousand-year flow of 1,500 m<sup>3</sup>/second.
- 24) The environmental impact of the reconstruction of the dike was studied by the *Bureau Central d'Etudes d'Outre-Mer* (BCEOM).
- 25) The assistance to flood victims is defined by the Involuntary Rehousing Plan (PRI) and involves 127 households, of whom 55 are victims of the flooding and 72 have been displaced by the dike reconstruction work. The resettlement of these families will also include funding to provide the PK 12 receiving site with basic services, with assistance from the Housing Fund which is charged with providing them with homes in the Cité Gargar.

### **3. Description of the project**

#### 3.1 Set-up

- 26) With financial assistance from the International Development Association (IDA), the Djibouti Government has implemented the Emergency Post-Flooding Rehabilitation Project (PRUSI).
- 27) The project comprises two main components, each made up of a number of subcomponents: the "Infrastructure" component, designed to reconstruct the damaged economic and social infrastructure works and facilities, and the "Social" component, for resettlement of the households impacted by the flooding and rehabilitation and improvement works in the Ambouli wadi. To be able to properly carry out the project it proved to be necessary to complement it with two supporting activities: (i) technical assistance for strengthening the Disaster Management Unit (SEGRC); and (ii) for the implementation of the project.
- a) The "Infrastructure" component: the emergency rehabilitation of the economic and social infrastructure. This covers five fields in which the country's public infrastructure and facilities have been devastated by the floodwaters:
- (i) Rehabilitation and strengthening of the protective structures designed to prevent flooding: the primary component of the project, this rehabilitation work focuses on reconstructing the dike along the wadi that protects the Ambouli-Djebel district, involving consolidation and widening of certain segments of the wadi bed, especially near the Italy Bridge;
  - (ii) Rehabilitation of the roads and drainage canals: the aim here is to restore the segments of urban regional roads destroyed by the floods, and also the storm water drainage canals;
  - (iii) Rehabilitation of schools, in particular those located in the Ambouli zone, where the water destroyed furniture and teaching equipment;

- (iv) Rehabilitation of health centers, by restoring the buildings and replacing furniture and medical equipment damaged by the floods;
  - (v) Rehabilitation of water-supply infrastructure: the rehabilitation of the potable water production and distribution facilities of ONED, the national operator, entails procurement of parts and maintenance products for use in producing water for human consumption.
- b) The “Social” component: resettlement of households and provision of basic services in the PK 12 zone, comprising:
- (i) Access to potable water (IEP) by means of installation of public standpipes in strategic locations in mutual agreement with the people involved to enable their settlement in the new site;
  - (ii) Installation of latrines in the planned locations on the lots intended for the resettled households.
- c) The “Technical Assistance” component in the following two spheres:
- (i) Technical assistance for disaster prevention and management, with a dedicated budget for the technical design studies and studies for supervision of the rehabilitation works and training and strengthening of the capacity of the Disaster Management Unit (DMU);
  - (ii) Technical assistance for the implementation of the project.

### 3.2 Planning

28) Right after the occurrence of the disaster, the national authorities moved swiftly to obtain agreement in principle for World Bank financing, which served as the basis for the first emergency actions undertaken.

29) The Disaster Contingency Plan crisis unit, mobilized on an immediate-response basis, was requested to make an urgent assessment of the needs in the different spheres. The project was then planned in light of this assessment as follows:

- The assessment of the priority actions for the water-supply section was provided by ONED,
- The technical directorates of the Ministry of Housing, Development, the Environment and Regional Development played a role in determining the needs in terms of economic and social infrastructure,
- The Chief of the DMU determined the needs of the health centers,
- The needs of the educational establishments were determined by the Chief of the DMU and of the Education Council,
- The Technical Directorate of ADETIP, for the coordination and centralization of data needed for planning the project.

30) In parallel, the findings of a disaster-prevention study entrusted to Coline Bélière under the supervision of the Ministry of Agriculture made it possible to determine four priority thrusts for integrated development of the basin: (i) reforestation of the basin; (ii) construction of a multipurpose dam upstream; (iii) construction of a dike capable of withstanding a flow of 1,500 m<sup>3</sup>/s; and (iv) installation of an alert system starting from Weah.

31) Construction of the dike was entrusted to ADETIP on the basis of the BCEOM study. Prior to the commencement of the project, a study ordered by ADETIP from BCEOM made it possible to demarcate the perimeter actually required for the dike worksite, which was 50 meters wide and 2,500 meters long. This study also provided detailed information regarding the physical environment and biodiversity of the project area, which in turn made it possible to assess the possible environmental impacts that the project might generate. The same approach was employed for the social impacts.

32) The data derived from this study were integrated into the implementation of the project with the solutions and possible attenuations for each type of impact thus identified and revealed by the BCEOM study. As a result of the steps taken for the protection of nature and the recommendations formulated by the study it proved possible to limit the harmful environmental impacts. The social study provided an opportunity to get to know the people affected by the project and the conditions governing their resettlement on the PK 12 site with pertinent compensatory provisions.

### 3.3 Implementation

33) The SOTEC construction company was initially awarded the contract, but subsequently proved unable to perform its obligations and was replaced by COSMEZZ. The works were not actually started until September, instead of January 2007, in other words nine months behind schedule. Once started, the works took 14 months instead of 9 months.

34) The second difficulty which held up implementation of the project was the case of two individuals for whom the expropriation program could not be applied. Because the properties of Messrs. Moussa Ahmed and Mohamoud Hassan were located on land earmarked for expropriation for construction of the dike, ADETIP had to take special steps to leave these properties untouched while continuing the works.

35) A wall belonging to ONEAD located upstream of the wadi made it necessary to shift the centerline of the dike 3 meters toward the bed of the wadi. The shift was of 0 to 3 m between M 90 and M 280 and of 3 m between M 280 and M 490, with installation of breakwater No. 2 at M 280. This old wall would not have been able to withstand the vibrations caused by the compacting work. Instead of demolishing the wall and rebuilding it, the decision was made to work further out from it for financial reasons.

36) A culvert found at M 2.183 was replaced by concrete pipes of 1 m diameter installed in cofferdams.

37) At Km 1300 an access for vehicles at a gradient of 12 percent was constructed to prevent damaging of the dike.

38) A provisional flood-warning system was found to be necessary for securing the work zone. Two sirens, the triggers for which were placed in the Arrondissement 3 Police Station, were set up so as to provide warning of any flooding during the works in the wadi basin. The perimeters of the worksite were protected by a barbed-wire fence and a site laboratory was also added.

39) The construction materials used to make the gabions and protective facings for the dike were essentially recovered from the old dike, with the assistance of the local people, and after checking and testing by the site laboratory.

40) Changes with respect to the original designs included:

- Omission of the service road in the case of the properties whose owners resisted expropriation: among the modifications decided on owing to the presence of the properties of Moussa Ahmed, Mohamoud Hassan, and the Garage Ibrahim, the 3-meter-wide top of the dike was to be covered with a 15-cm-thick reinforced-concrete surface

layer to carry vehicular traffic. The service road was to be connected with the town by means of an embankment made of compacted fill with a 15-cm reinforced-concrete surface. This road was never built due to lack of funds.

- Omission of steps: the area includes four crossing points for pedestrians, where it was originally intended to put in four sets of steps to facilitate movement for the people. These steps were never built.

41) Among the improvements to the existing situation, mention should be made of the widening of the dike at the level of the Italy Bridge and the clearing of the bridge's openings, so that there are now five openings usable instead of just two as before.

42) The urban road rehabilitation work focused on the Type E road, the Cité Progrès road and the installation of 500 sewer covers over 10 km of the system. Taken overall this component was maintained, although budget constraints meant that the State had to assume responsibility for the provision of 500 covers while the project simply handled their installation.

43) The implementation of the components was effected by means of agreements concluded by ADETIP with the different institutions involved in their respective fields. These agreements, based on the needs defined by the beneficiary departments as contracting authorities, specify the relationships between them and ADETIP, as delegated project manager. For instance, implementation and the actual performance of the works were the subject of regular consultation between the contracting authority and the delegated project manager. In most cases the contracting authority would designate one of its staff members to serve as "focal point" to represent it and to approve the progress of the work. For its part, the contracting authority cooperated fully by responding to all of ADETIP's requests.

44) Each agreement accordingly specified the following:

- The Ministry of Health provided a list of the facilities to be rehabilitated and of medical equipment needed;
- The Ministry of Infrastructure and Transport concluded three agreements covering respectively the urban roads, RN1 (Km 33 and Km 51) and the Ambouli dike;
- The Ministry of Housing, Urban Development, Environment and Regional Development's needs were the subject of two agreements: one relating to the Sanitation Directorate's list of requirements, comprising the electromechanical equipment, one special purpose truck carrying machinery for forcing water under pressure through pipes (*camion hydro-cureur*) and the replacement of 500 sewer covers and the other covering the Directorate of Housing and Urban Development's needs for the latrines;
- The Ministry of the Interior, acting as representative of the Government, concluded a framework agreement with ADETIP under which ADETIP is authorized to implement the emergency post-flooding rehabilitation project. In the Ministry's field, it was SEGRC which, as disaster-management focal point, concluded the agreement with ADETIP;
- The Ministry of Education specified in the pertinent agreement the needs in terms of equipment and textbooks for seven of Djibouti's primary schools and the Ambouli CES;
- In its capacity as project manager for the water-supply part of the project, ONED concluded an agreement for water supply and provision of materials and equipment for PK 12.

45) On the basis of the needs thus assessed by each department and their respective costs, ADETIP then proceeded to award contracts in accordance with the Bank's procurement manual for materials and equipment intended for the rehabilitation of damaged infrastructure.

#### 4. Accomplishment of project objectives

##### 4.1 Part A of project: “Emergency Rehabilitation of Economic and Social Infrastructure”

###### 4.1.1 Rehabilitation of flood-protection infrastructure

46) The reconstruction of the dike took place as programmed: using fill compacted to 98 percent of Proctor Optimum with a 50-cm-thick riprap cover. This reconstruction was done in the following stages:

- Clearing of the top layer and of material underneath it, done in September to November 2008 using bulldozers and excavator shovels
- The fill was taken from an area located 10 km from the dike, in accordance with the Municipality’s current regulations and under testing and control by the site laboratory. A trial section 40 m long and 5 m wide was used for testing purposes and it was determined that ten passes were needed to achieve the required degree of compaction; this number was raised to 12 to provide an additional safety margin.
- The 50-cm riprap used for the dike was made from the riprap recovered from the old dike, supplemented by fresh material from the quarry.
- The five culverts intended for draining off rainwater from the Ambouli district were installed. The fifth was set in a cofferdam while the other four were connected to Nelson Mandela Avenue.
- The six breakwaters for stabilizing the dike and the course of the wadi were all built. Based on foundations put in 6 m below the bed of the wadi, these breakwaters were made of gabions. There was already a breakwater at Km 700, which was strengthened in the course of the project, thus raising the number of breakwaters to seven.
- A vehicle crossing originally intended for Km 1994 was not built because of lack of funding.

47) The plans called for putting in two sets of steps to make it easier for people to walk from one part of the wadi bed to another. For financial reasons on the one hand, but also because it was determined that one set of steps would be sufficient, it was decided by mutual agreement between ADDS and BCEOM to put in just one set of steps.

48) A provisional flood-warning system was installed. There was going to be another project designed to provide the basin with a permanent warning system, but this latter project never materialized and the provisional system is still operational.

###### 4.1.2 Rehabilitation of roads and drainage infrastructure

49) The floodwaters caused major damage to the road and drainage infrastructure in the neighborhoods adjoining Ambouli. The main roads connecting the south and the north of the city were cut by the floods.

50) First of all there was the *Circulaire d’Ambouli* which extends from the Ambouli traffic circle to the Boulevard De Gaulle, where a 859-meter stretch required rehabilitation.

51) The Type E Road connects the *Circulaire d’Ambouli* located in the eastern part of the city of Djibouti and the Arta Highway located in the west. This road is 1,793 meters long and serves the industrial zone where the warehouses of the chief businesses established in the city are to be found. The adjacent roads also serve several low-income neighborhoods such as Quartier 7, Quartier 7 Bis, and the Cité du Stade.

52) The works on the Cité Progrès road were carried out as planned. These comprised a 450-meter section which connects Nelson Mandela Avenue to a road heavily used by public transit vehicles.

53) The EDD road, on an 842-meter stretch on the RN2, underwent rehabilitation starting in December 2005 and the work was completed as scheduled at the end of 2006.

54) The rehabilitation of Sogik ZIS Street involved the section connecting RN2 by the Public Works building starting from the service station.

55) In total, more than 5 km of urban roads were rehabilitated and delivered by the project. The Djibouti city drainage system had 500 sewer covers rehabilitated in satisfactory shape.

#### 4.1.3 Rehabilitation of schools

56) The second batch of school textbooks, ordered from the EDICEF company, was delivered in mid-February. This activity has now been entirely completed.

#### 4.1.4 Rehabilitation of health centers

57) The rehabilitation work done on the four health centers has been approved. The medical materials and equipment ordered have been delivered and have received final approval, notwithstanding the reserves expressed by the Ministry of Health.

#### 4.1.5 Rehabilitation of water-supply infrastructure

58) The last items of technical equipment for ONED were delivered in December and have been approved by the contracting authority. The truck-mounted crane was delivered at the end of March and approved by the contracting authority.

#### 4.1.6 Installation of flood-warning system

59) The project called for installation of a flood-warning system. In the end, the system put in was made up of two sets of equipment.

- The flood-warning system financed by USAID, managed by SEGCR and CERD and consisting of equipment for measuring the flows in the wadi and rainfall together with a radio system for transmitting the data;
- The flood-warning system financed by the World Bank and consisting of two sirens placed in one of the banks of the wadi during the construction of the dike.

### 4.2 Part B of project: “Provision of Basic Infrastructure Services in the PK 12 Resettlement Zone”

60) Despite the fact that building is formally prohibited in the zone, the entire length of the Ambouli wadi has always had dwellings of some sort on it. The study of the social impact of the project revealed that the people living in this zone are of a modest income level and have been severely impacted by the floods of April 2004.

61) The integrated development of the Ambouli wadi, the overriding aim of which is protection of the people living there, accordingly had to seek to meet the challenge of settling them in an environment suitable for permanent housing, i.e. resettling them at PK 12.

62) The census carried out for the purpose found that there were 127 households affected either by the floods or by the rehabilitation works who needed shelter. The Housing Fund, with the

construction of the Cité Gargar, has made one- or two-room houses available for these people. The houses in question have been bought by means of hire-purchase contracts requiring monthly payments of DF 5,000 for the one-room models and DF 8,000 for the two-room versions, over a period of 10 years and 10 months.

#### 4.2.1 Provision of standpipes on the new site

63) Water will be brought into the PK 12 area by means of standpipes to be installed in locations that are strategic in terms of accessibility and benefit for users.

#### 4.2.2 Latrine construction

64) The program called for construction of 400 latrines at the PK 12 site to serve the flood victims. The actual number built was 300; the other 100 could not be put in because of the higher prices wanted for materials. The breakdown of the 300 built is as follows:

- 100 latrines in homes built;
- 200 latrines on plots already connected to services for future construction.

### 4.3 Part C: “Technical Advice Services for Disaster Prevention and Management”

#### 4.3.1 Provision for technical design studies and supervision of rehabilitation activities

65) Funding is programmed under this head for covering the cost of the various studies commissioned by ADETIP.

#### 4.3.2 Provision for training and strengthening of DMU

66) The need for strengthening the Disaster Management Unit (SEGRC) was identified by the different studies as one of the country’s chief vulnerabilities. The first stage in the work involved was to reorganize and dynamize the existing institutions. With the adoption of a new institutional framework instituted by Law No. 140/N/06 plus Implementing Decree No. 2006-0192/PR/MID, the Government established the bodies recommended by the pertinent studies.

67) The national risk and disaster management strategy, prepared with the assistance of an international consultant, has been made available to the authorities responsible for formulating governmental policy. The relevant responsibilities are now well allocated among the decision-making, technical and implementation levels together with a permanent administrative body, namely the Executive Secretariat (SEGRC).

68) In December 2006 the official installation of the Executive Secretariat was made effective with the allocation to the MID of two rooms and the nomination of the Executive Secretary by Decree No. 2006-0251/PR/MESN and the hiring of an assistant-accountant.

69) On January 27, 2007, the Executive Secretariat officially commenced its work with the meeting of the Intersectoral Risk and Disaster Management Committee. Throughout 2007, the SEGRC continued to organize its different structures and participate in international events pertaining to its sphere of activity.

70) However, the SEGRC’s performance falls short of what was programmed. The expected administrative staffing has not been achieved, due primarily to the delay in recruiting the staff

required to head its four units,<sup>4</sup> as recommended by the strategy and confirmed by the decree establishing the ES. All things considered, the disbursement of the funds allocated has been limited and relates mainly to the activities of the Executive Secretary and the assistant-accountant.

#### 4.4 Part D: “Assistance for Management and Implementation of the Project”

71) Included in the financing agreement between the donor and ADETIP, now ADDS, this part of the project was designed to assist the contracting authority in the financial management of the project in accordance with the World Bank’s procedures. This work was done by ADETIP in accordance with the recommendations formulated by the Bank mission sent for the purpose in November 2005.

72) A second mission in March 2006 emphasized the need to follow the rules specified in November 2005, and stressed the following for better performance in this context:

- Quarterly closing of the project accounts;
- Periodic reconciliation of the project accounts and the successive disbursements sent by the Bank in U.S. dollars and SDRs;
- Better tracking of project commitments, so that there will not be differences between actual commitments made by the agency’s various units and the commitments entered in the accounts and recorded by the agency’s financial directorate;
- The maintaining of an estimated plan of disbursements on an annual basis;
- The need to reflect the expenditures of the project and subprojects in full detail and in accordance with Bank practices in all financial statements relating to the project;
- The need for DAF approval for all payments of invoices prior to issuance of the relevant checks.

73) ADETIP’s progress in this field, achieved in light of these recommendations, has been fully satisfactory. The disbursements, despite a justified slowdown due to the change in the dike-building contractor, have also proceeded at the level planned.

## 5. Evaluation of Results

### 5.1 Evaluation indicators

74) Beyond the actual figures, the assessment of the accomplishment of objectives is guided by two essential considerations:

- The safety of the population as achieved by the minimizing and control of risks and the impact of the project in changing their welfare for the better: the before-and-after of the project must have created a process of social and economic transformation for the people;
- The works must have been satisfactorily completed and be of acknowledged value.

75) The criteria set for each component of the project compare the particular objective of the component with what was accomplished: the development of the basin is considered in terms of risk reduction, the rehabilitation of infrastructure by the number of tasks completed and the number of beneficiaries. The detailed indicators are presented in Annex 5.

### 5.2 Restitution of Rehabilitated Infrastructure

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<sup>4</sup> Article 12, Decree No. 2006-0192/PR/MID: unit responsible for resource mobilization and administrative management, unit responsible for disaster preparation, unit responsible for coordination of assistance operations, unit responsible for information and database management.

### 5.2.1 Component 1: Emergency Rehabilitation of Economic and Social Infrastructure

76) The infrastructure items devastated by the floods have been rehabilitated and returned to use. The items in question are:

- The protective dike for the Ambouli wadi basin: this dike, which was demolished by the 1994 floods, has been completely rebuilt. Two stairways were planned to make it easier for people to cross from one side of the wadi to the other, but one was deemed sufficient and was duly built. The reconstruction provided an opportunity to widen the dike in places and to make five openings usable for letting water through at the Italy Bridge as compared with two previously. The dike protects the Ambouli district and the Cité Progrès. The illegal dwellings in the areas subject to flooding were removed and the people concerned have been moved to Km 12 and the rules governing building and residence in urban areas have been reviewed.
- Roads and drainage systems: the EDD roads, those of Cité Progrès and the Type E roads have been rehabilitated and returned to service (these roads decompose in various segments). A protective culvert was built at Km 68 on the RN1. Urban and interurban road traffic on the RN1 is back at its normal level. The sewer covers in the Arhiba and Einguela districts have been renovated and proper drainage of any water is once again assured. The Balbala 1, Arhiba, Farah Had, and Ambouli health centers have been rehabilitated.
- Water-supply infrastructure: parts needed to reactivate ONED's technical equipment, a truck-mounted crane, and maintenance products for the water produced have been supplied by the project. By the end of the project ONED's production and distribution system was up and running again. PK 12 has been connected to the ONED system by means of public standpipes.

### 5.2.2 Component 2: Basic Infrastructure for Km 12.

77) The PK 12 area having been used to rehouse the displaced people, standpipes were installed where they would be most helpful and 300 latrines were put in to facilitate the resettlement operation. As a result of a reassessment of the budget concerned due to the price increases for materials, 200 latrines were constructed in the dwellings in the Cité Gargar made available for the homeless and a further 100 were built on plots connected to services, making a total of 300 against the 400 initially planned.

78) The standpipes put in were four in number, and are managed by operators selected by the people living in the area. They were installed at strategic points as requested by the beneficiaries; the operators resell the water bought from ONED at a price plus a margin fixed by agreement with ADETIP.

### 5.2.3 Component 3: Technical Assistance for Disaster Management

79) Disaster management is now a complete mechanism with the formulation of a national strategy, new rules governing how it is to be carried out, and new structures created. A new law and an implementing decree have been adopted, translating the authorities' intention to respond effectively to the challenges posed by disaster management and a permanent administrative body has been created in the form of the Executive Secretariat for Risk and Disaster Management (SEGRC), which has been assigned its own office accommodation.

80) After moving into its new offices in February 2008, SEGRC drew up a database listing the human and material resources to be mobilized in relief work.

81) The main result of SEGRC's activities has been the holding of a series of workshops throughout 2008. These workshops were aimed at local elected officials, the prefects of the regions, the officers of the different army corps and of the National Police, and the NGOs. In addition, radio spots were also used to make the general public aware of what was being done.

82) The protocol of agreement on the flood-warning system is in place. From now on, under the direction of SEGRC, the mechanism and the distribution of roles together with the tasks of each party are clearly defined and well understood by those concerned.

83) A final series of workshops was organized by SEGRC at the beginning of the year through which the three neighborhood committees formed in Ambouli received training sessions. These committees, established by Presidential Decree in August 2008,<sup>5</sup> each include, under the chairmanship of the Neighborhood Chief, one of the directors of the neighborhood schools, two leading citizens, three representatives of the neighborhood associations, one local elected official residing in the neighborhood and the oldest of the neighborhood imams.

84) SEGRC, at the request of the Government within the framework of INDS, also participated in the action plan and the implementation of this initiative in its particular field.

### 5.3 Present Utility of the Rehabilitated Infrastructure

85) The present utility of the rehabilitated infrastructure can be assessed on the basis of whether or not it is operational, and secondly by the estimated number of users. The first point to be made here is that infrastructure facilities damaged by the floods and subsequently included in the project are now functioning. These are:

- a) The dike: the reconstruction of the dike made it possible, as intended, to resecure the surrounding area which prior to the project constituted a manifest danger to the people in and around it and to the public infrastructure. It can therefore fully be considered that after the execution of the project the dike now forms a bulwark for the local population against any overflowing of the Ambouli wadi during periods of high water and that channeling of the water out into the sea is assured;
- b) The roads: up to 5 km of urban roads have been rehabilitated and made available to users in the capital. RN1 is the main artery of the international corridor and carries, on the basis of a low estimate, between 500 and 600 vehicles per day in both directions. This is a major contribution within the transportation system serving the national economy. RN9 has also been rehabilitated, its availability is particularly important with the resumption of activities in the Goubet area, where salt production is taking off again in response to the interest displayed by new investors. This road is the country's main link with the northern regions for both economic operators and private individuals now that virtually no boat services are available any more. Each day RN9 carries about 20 minibuses and "bush taxis" covering the Tadjourah and Obock regions and from 10 to 20 cars and utility vehicles of the enterprises operating in the Goubet area, which raise the estimated traffic to around 40 vehicles per day;
- c) Drainage infrastructure: 500 sewer covers, duly cleaned and rehabilitated, have been installed. These covers, provided by the State and installed by the project, have considerably reduced the risk of accidents, especially for children who in the past have fallen in when the holes were left open. The Arhiba waste-water pumping station also benefited from the same works under the same terms;

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<sup>5</sup> Decree No. 2008-0202-PR/MID of August 10, 2008, establishing a committee responsible for assistance operations in each neighborhood of the capital.

- d) Electromechanical equipment: the water and drainage sector needed 38 pieces of electromechanical equipment, all procured and installed by the project and without which the national operator would not have been able to perform its function;
- e) One *hydro-cureuse* (machine for clearing pipes etc. by means of high-pressure water jets): the procurement of this machine was particularly helpful since not only is it operational but it is the only one in working order among those currently on hand;
- f) Schools: the rehabilitated public schools are once again in service and receiving children in acceptable conditions. The equipment item and textbooks requested by the national education authorities were just what was needed and are being used every day by the children. A total of four neighborhood schools have been rehabilitated. Each primary school consists of six classes operating in two shifts of 50 students, making 600 students. All together the project's impact is being felt by nearly 1,200 children who once again have a school in their customary place of residence;
- g) Health centers: rehabilitation of the public health centers was also a fundamental goal, because one is dealing with urban areas with a high concentration of low-income households who are hard-pressed to come up with cash for health-related expenses. The project accordingly rehabilitated four health centers, namely those of Ambouli, Farah-Had, Ibrahim Balala and Arhiba, which together have been 10,000 and 12,000 inhabitants, on the basis of which the project impact can be estimated at around 50,000 beneficiaries;
- h) Water-supply infrastructure: to better understand the harm done by the floods, it should be borne in mind that the Ambouli pumping station accounts for more than 90 percent of the water production intended for the capital. After the disaster, the demolition of the station reduced ONED's ability to serve the capital to zero. Therefore almost the entire population of the metropolitan area, or nearly 300,000 people, was without drinking water after the floods. The project made it possible to reconstitute ONED's capacity and the items procured through the project are still in service;
- i) Standpipes: the receiving site for the rehoused households has been equipped with four standpipes installed in strategic locations determined in consultation with the beneficiaries. The number of beneficiaries among the 127 families involved is estimated at 700 persons;
- j) standpipe management committees: the original intention was that the standpipes should be managed by committees formed for the purpose, but in the end standpipe management was entrusted to operators selected from among the beneficiaries, so the water obtained at the four locations is now sold by four retailers on terms set by ADETIP;
- k) Dry latrines: the project has constructed 200 latrines in the dwellings in Cité Gargar and put in 100 more on lots connected to services. Thanks to this pragmatic solution, the flood victims from the Ambouli wadi have been able to move into relatively satisfactory new homes;
- l) Strengthening of SEGCR: this component was completed within the framework of the project and is now operational. The establishment of the protocol of agreement covering the different parties has confirmed the roles of all concerned;
- m) Assistance in managing implementation of the project for ADETIP: this made it possible to remedy the shortcomings found in the presentation of accounts in order to meet the World Bank's requirements.

## **6. The country's present Natural Disaster Response Plan**

86) The Natural Disaster Response Plan is a complex mechanism comprising physical infrastructure, institutional reforms and social measures.

87) The essential components include:

- The Ambouli dike, completely rebuilt to secure the city;
- A disaster early-warning system;
- With SEGRC, the creation of a permanent administrative body with wide-ranging prerogatives that will centralize and coordinate emergency actions;
- The existence of a rehabilitated storm water drainage system;
- The improvement of the drainage systems in the low-income neighborhoods.

88) To complement these physical components, the Government is associating civil society in surveillance of the wadi bed. With the support of the municipality, neighborhood committees have been formed which are charged with discussing the preservation of public infrastructure and facilities with the help of the beneficiary populations. Awareness-building spots have also been broadcast on the popular national media. Thanks to this participatory approach, the Government is making the population aware of the risk of disasters, together with their rights and also their duty to prevent unauthorized building on sites exposed to disasters.

89) For the longer term, the national plan consists in strengthening the works already in existence by the building of a multipurpose dam at Nagad. This project, programmed for 2012, will make it possible to slow the upstream water flow in such a way as to considerably reduce the pressure of floods on the Ambouli wadi watershed. The aim is also to improve the flood-alert system by putting in a permanent alarm. In order to lessen the pressure of the waters during flooding there are also plans to reforest the slopes down which rainwater flows.

## **7. Lessons learned**

90) The main lesson learned from experience with the project concerns the complexity and duality of an approach that consists in reconciling the actions to be implemented following a natural disaster, and which are dictated necessarily by the urgency of the situation, and the integrated development of an area or sector which, for its part, is necessarily the product of careful, thorough and detailed study.

91) The protection of the population, which is the responsibility of the public authorities, derives from an approach based on a strategy and mobilization of adequate resources, whatever the field concerned. This is all the more important with management of natural and non-natural disasters, which by their suddenness and impact are irreducible and devastating. The reduction of vulnerabilities to risks is a complex undertaking in which the PRUSI constitutes one stage—definitely an important one, but insufficient. Being a partial response, because prepared primarily to reactivate the functioning of the country's vital infrastructure by easing and lessening the social and environmental impacts, it offers a partial protection against natural disasters.

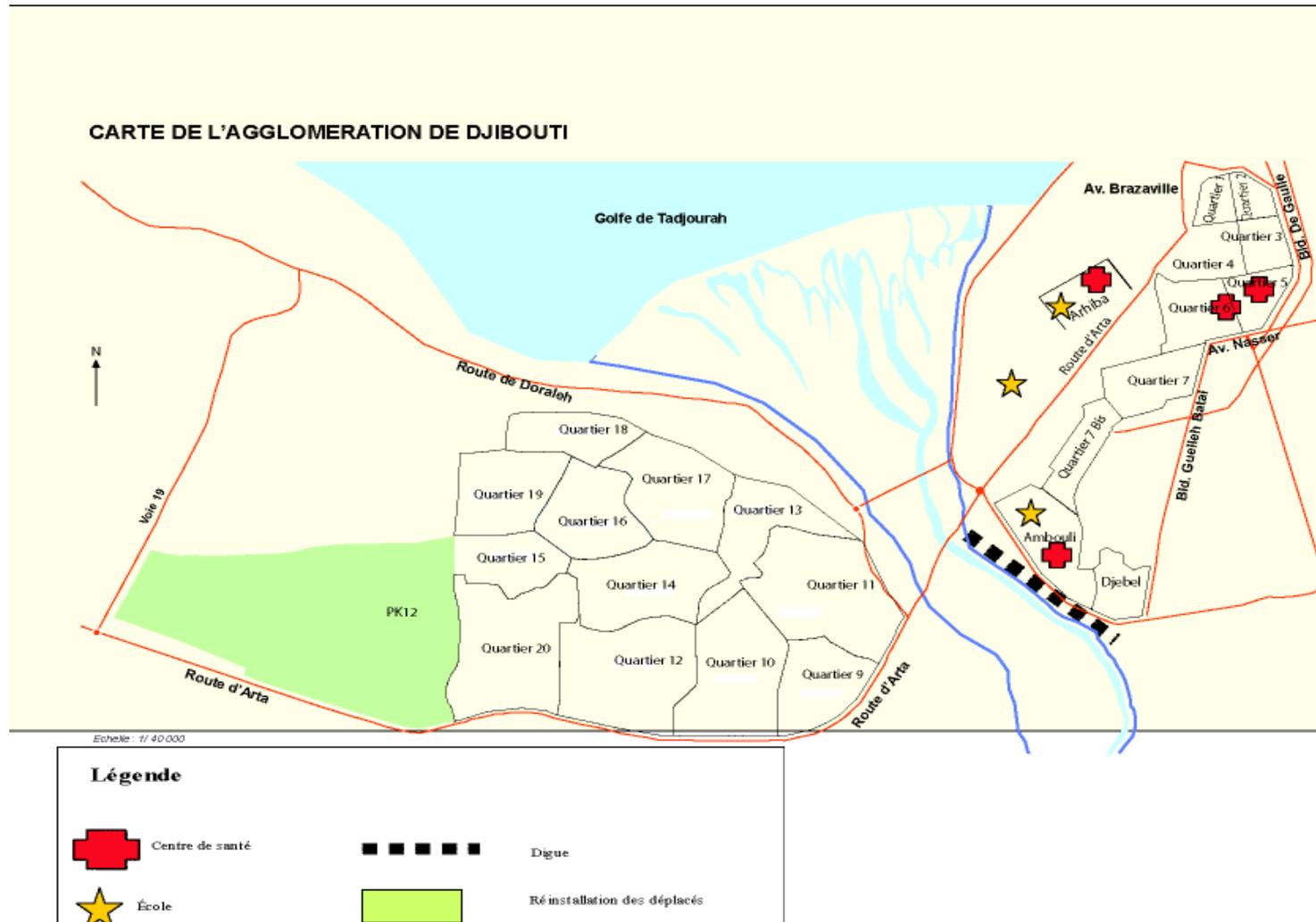
92) The long-term management of the Ambouli wadi (especially its financial management) increases the difficulty to overcome its rehabilitation and development. This involves a number of actors (civil engineering, SEGRC) whose functioning and coordination will have to be refined in order to ensure the lasting value of what has been achieved, both for its maintenance and for disaster-prevention purposes.

93) Regarding the dike, it is designed to withstand a maximum flow of 1500 m<sup>3</sup>/second. As long as the Nagad dam is not built, the dike is the sole protection against floods. On a risk scale running

from 0 to 100, if the disaster risk with what is presently in place is estimated at 40, this risk could be significantly reduced to 10 if the Nagad dam is built and performing its function.

Annex 3: Map showing location of works  
 CARTE DE L'AGGLOMERATION DE DJIBOUTI = MAP OF DJIBOUTI CITY AREA  
 Digue = Dike Centre de santé = Health Center  
 École = School Réinstallation des déplacés = Resettlement area

Légende = Key



## **Annex 8. Comments of Co-financiers and Other Partners/Stakeholders**

NA

## **Annex 9. List of Supporting Documents**

### **Project Description**

1. Memorandum of the President
2. Project Paper
3. Technical Annex

### **Legal Documents**

4. Agreement Amending Agreement
5. Developing Financing Agreement
6. Project Agreement

### **QAG**

7. Quality of Supervision Assessment (QSA7)

### **Aides Memoires (AM)**

8. AM mission October 2004
9. AM mission March 2005
10. AM mission June 2005
11. AM mission November 2005
12. AM mission May 2006
13. AM mission December 2006
14. AM mission May 2007
15. AM mission December 2007
16. AM mission May 2008
17. AM mission November 2008
18. AM mission May 2009

### **Implementation Status Report (ISR)**

19. ISR 1 – October 2004
20. ISR 2 – December 2004
21. ISR 3 – April 2005
22. ISR 4 – July 2005
23. ISR 5 – December 2005
24. ISR 6 – May 2006
25. ISR 7 – July 2006
26. ISR 8 – December 2006
27. ISR 9 – February 2007
28. ISR 10 – July 2007
29. ISR 11 – February 2008
30. ISR 12 – June 2008
31. ISR 13 – December 2008

Implementation Completion Report

Rapport d'achèvement de l'emprunteur, July 2009

Rapport Bceom Supervision, September 2007 – June 2009

Rapport Martial Gayrand, September 2009

