

1. Project Data:		Date Posted : 04/18/2007	
PROJ ID : P006052		Appraisal	Actual
<b>Project Name :</b> Ar Flood Protection	<b>Project Costs (US\$M):</b>	420	243.5
<b>Country:</b> Argentina	<b>Loan/Credit (US\$M):</b>	200	196.5
<b>Sector Board :</b> WS	<b>Cofinancing (US\$M):</b>	216	84.9
<b>Sector(s):</b> Flood protection (85%) Housing construction (9%) Other social services (4%) Sub-national government administration (1%) Central government administration (1%)			
<b>Theme(s):</b> Natural disaster management (29% - P) Water resource management (29% - P) Law reform (28% - P) Participation and civic engagement (14% - S)			
<b>L/C Number:</b> L4117			
	<b>Board Approval Date :</b>		12/11/1996
<b>Partners involved :</b> Japan Eximbank	<b>Closing Date :</b>	06/30/2002	06/30/2006
<b>Evaluator :</b>	<b>Panel Reviewer :</b>	<b>Group Manager :</b>	<b>Group :</b>
Anna Amato	Ronald S. Parker	Alain A. Barbu	IEGSG

## 2. Project Objectives and Components:

### a. Objectives:

Original: The project aimed to improve the security of economic assets and persons living in flood -prone areas by: (1) constructing defense facilities to reduce future losses due to floods, and (2) strengthening national and provincial institutions and systems for dealing with future floods . The specific objectives were to enhance provincial capacity to deal with periodic flooding by upgrading flood preparedness and mitigation systems, as well as strengthening coordination within the Basin. The aim was to provide technically sound and cost -effective flood protection coverage of the most important economic areas, and to develop satisfactory institutional mechanisms to sustain them .The project also aimed to create the legal and institutional framework for each province to develop a well -defined strategy to cope with recurrent floods, including preparation and implementation of master plans for flood defense systems in areas where flood protection works are not economically or environmentally justified .

Following the December 2001 macroeconomic crisis that deeply affected Argentina, the Loan Agreement was amended. The project objectives were changed to include the reduction of the acute disease risks by improving maternal and child health through the delivery of services; and strengthening disease surveillance and control activities. The amendments did not affect the Flood Protection project objectives in other ways other than reducing funding. This ICR concentrates on the Flood Protection project and does not address the outcome of the components on health care, which are covered by another ICR (on the Higher Education project) issued in 2005.

**b. Were the project objectives/key associated outcome targets revised during implementation?**

Yes

If yes, did the Board approve the revised objectives /key associated outcome targets?

No

**c. Components (or Key Conditions in the case of DPLs, as appropriate):**

Original Components: (A) Construction of works to protect important areas of the flood plain, concentrating on raising bridges; improving existing and constructing new drainage channels, embankments and small flood control works. (Appraisal: US\$277.5 million; Actual: US\$108.58 million)

(B1) New Institutional Framework: Technical assistance to help create and implement a framework in each province to deal with recurrent floods. (Appraisal US\$2.5 million; Actual: Unknown)

(B2) Upgrading of flood preparedness: (i) Construction of shelters, (ii) design of civil defense arrangements; and (iii) provision of construction materials to affected residents for flood -resistant housing. (Appraisal US\$31 million; Actual: US\$26.25 million)

(B3) Early flood warning system: A new warning system to be installed and linked to provincial systems with new equipment and training. This Component was dropped in September 2004, after some research money had been spent. (Appraisal US\$3.8 million; Actual: US\$0.13 million).

(B4) Project Implementation and Administration: Project supervision, including auditing as well as technical assistance; staff training in civil defense, emergency procedures and environmental programs; and support for social assistance and community mobilization activities. (Appraisal: US\$34.7 million; Actual: US\$25.25 million.)

Revisions in 2002: Component B3 was dropped and amounts for other components were reduced. Total actual amounts presented above total US\$ 160 million; the remaining US\$35 million were reallocated to the new health objectives.

**d. Comments on Project Cost, Financing, Borrower Contribution, and Dates:**

Following the December 2001 macroeconomic crisis the Loan Agreement was amended formally by Bank communication dated October 16, 2002 to the Minister of the Economy. US\$35 million was taken from the undisbursed portion of this loan and reallocated to two new components for health and disease control. Due to Argentina's failure to service its debt, the balance of the Japanese funding was canceled and the project therefore lost US\$91.3 million of Japanese cofinancing. The financial crisis also affected the ability of the provincial governments to contribute their counterpart funds. The project closing was extended 3 times, also due to complications stemming from the macroeconomic crisis.

**3. Relevance of Objectives & Design:**

The project supported important CAS objectives that highlighted the economic significance of flooding and the sizeable populations in the flood-affected areas. These objectives remain relevant. Further, the experience gained in implementation of the previous Flood Rehabilitation Project made the Bank uniquely qualified, in the Government's view, to guide a more comprehensive flood protection effort. This experience, which was reflected in the project design, was especially relevant due to the limited administrative capacity of the Government in this field. In addition, the investments required were unlikely to be mobilized from private sector sources. The original design was well suited to the needs at the provincial level for a comprehensive plan and additional infrastructure in this flood-prone country, and it continues to be relevant.

**4. Achievement of Objectives (Efficacy):**

(1. **Substantially Achieved**) The estimated population whose lives and assets were protected by the flood works is about four million, over an area of about 236,000 sq. km. No flooding has occurred in the project cities since finalization of the works. However, of the 81 originally identified subprojects for Component A, which is directly related to the achievement of this objective, only 59 were completed by loan closing. This was attributed in the ICR to the reduced amount of money available through the cofinancial and provincial counterpart funding.

(2. **Substantially achieved**) Each participating province did adopt flood protection legislation, although enforcement has varied across provinces. Each province established or enhanced a Provincial Subunit for Emergency Coordination (SUPCE) Of the 155 shelters planned, 99 were built. Of these, however, an evaluation of this effort found a third that were poorly maintained or abandoned, while others were used quite effectively. The housing component was highly successful, completing 643 more homes than the 5,000 planned at appraisal. The comprehensive early warning system was not established as this component was cancelled after numerous postponements, although hardware and software which was initially purchased is in use. The component to design and implement civil defense and emergency procedures was limited to environmental plans and land use legislation.

**5. Efficiency (not applicable to DPLs):**

Economic benefits were estimated using the avoided costs of direct flood damage related to each subproject . The analysis assumes that the life of the constructed facilities is 50 years. The ERRs came in close to those estimated at appraisal, which is a good result.

**a. If available, enter the Economic Rate of Return (ERR)/Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation :**

	Rate Available?	Point Value	Coverage/Scope*
Appraisal	Yes	23.21%	70%
ICR estimate	Yes	21.81%	46%

\* Refers to percent of total project cost for which ERR/FRR was calculated.

**6. Outcome:**

Given the unprecedented constraint following the economic crisis, the project did as well as could be expected .

**a. Outcome Rating :** Satisfactory

**7. Rationale for Risk to Development Outcome Rating:**

Technical sustainability seems to be assured but institutional capacity may be limited, since most of the staff were paid through Bank project funds when provincial counterpart funding dried up .

**a. Risk to Development Outcome Rating :** Moderate

**8. Assessment of Bank Performance:**

The Bank supervision team was able to adapt to the changing country circumstances by restructuring the project, and devising a variety of options to allow the project to continue its implementation during the difficult circumstances, while trying to maintain a reasonable pace of works .The Bank contributed to the achievement of the development objectives despite a significant loss of funding assigned to the project works and the exogenous circumstances that affected project implementation at various times .

**a. Ensuring Quality -at-Entry:**Satisfactory

**b. Quality of Supervision :**Satisfactory

**c. Overall Bank Performance :**Satisfactory

**9. Assessment of Borrower Performance:**

The federal government frequently reassigned the central agency, SUCCE (Central Subunit for Emergency Coordination) which harmed project implementation without offering any benefit to the project . It reported to 4 different ministries in the course of the project . Despite this and many other changes and setbacks from the financial crisis, this central implementing unit as well as the provincial SUPCEs did well .

**a. Government Performance :**Satisfactory

**b. Implementing Agency Performance :**Satisfactory

**c. Overall Borrower Performance :**Satisfactory

**10. M&E Design, Implementation, & Utilization:**

This project was prepared over 10 years ago, when no major emphasis was placed on the M&E System in the project documents. Input indicators such as disbursements and timelines were reported and followed in both Aide Memoires and update reports. Output indicators such as contract costs, completions, and numbers of housing units were less carefully monitored. Outcome indicators were ill defined. Poor M&E implementation and utilization was noted by the Quality and Supervision Assessment (undertaken by the Quality Assurance Group in September 2002), which said that the tracking done so far did not permit the M&E system envisaged in the SAR to be carried out .

**a. M&E Quality Rating :** Modest

**11. Other Issues (Safeguards, Fiduciary, Unintended Positive and Negative Impacts):**

The project effectively targeted the poorest and neediest . For example, in the city of Sao Tome the flood protection structures prevented the inundation of the town during the terrible 2003 floods, in contrast with similar poor neighborhoods in Santa Fe across the river which had not had flood protection financed under the program . Additionally, a formal evaluation by a NGO on the Housing Subcomponent, emphasized that the participants were 100% under the poverty line and about 85% under the indigence line, attesting to the good poverty targeting of the methodology used. The same evaluation highlights that the project demonstrated that women can build their own houses with the same speed and effectiveness as men, through their participation in the self -construction program.

<b>12. Ratings :</b>	<b>ICR</b>	<b>IEG Review</b>	<b>Reason for Disagreement /Comments</b>
<b>Outcome:</b>	Satisfactory	Satisfactory	
<b>Risk to Development Outcome:</b>	Moderate	Moderate	
<b>Bank Performance :</b>	Satisfactory	Satisfactory	
<b>Borrower Performance :</b>	Satisfactory	Satisfactory	
<b>Quality of ICR :</b>		Satisfactory	

**NOTES:**

- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate .

**13. Lessons:**

1. Sharing costs and obligations at all levels of government -- federal, provincial and municipal -- promotes efficiency and sustainability . The debt service relied on the participating provinces and the lack of municipal contributions may have reduced the motivation of the municipalities to contribute to the operations and maintenance of the works built, and there was no obligation from the central government to step up to the plate when provincial counterpart funding dried up .
2. Complex works such as flood protection infrastructure construction require flexible systems for timely implementation.
3. A program supporting self-built houses promotes ownership, efficiency and sustainability .
4. Effective flood protection requires basin-wide action. The failure to create and operate an early warning system casts doubt on how the participating provinces have evolved from considering only local interests while neglecting more strategic cost-effective regional measures .

**14. Assessment Recommended?**     Yes    No

**Why?** Future disaster projects in the Region would benefit from knowing the longer -term results of the participatory approach taken, and, especially, if the flood control structures are standing up to hard use better than they have in the past. It also would be valuable to know if householder groups and provincial agencies are still functioning, and what, if any, problems came up.

**15. Comments on Quality of ICR:**

Satisfactory overall. However, the ICR's presentation makes it difficult to reconcile the actual amounts spent by component (the components are described and reported on differently in the ICR text than they were at appraisal, in

the loan agreement, and in the MoP; and the project cost chart presents this data in yet another way ).

**a. Quality of ICR Rating** : Satisfactory