



Validation Report

Reference Number: PVR-187
Project Number: 30308
Loan Numbers: 1745 and 1746
November 2012

Philippines: Pasig River Environmental Management and Rehabilitation Sector Development Program

Independent Evaluation Department
Asian Development Bank

ABBREVIATIONS

ADB	-	Asian Development Bank
BOD	-	biochemical oxygen demand
DENR	-	Department of Environment and Natural Resources
EPA	-	environmental preservation area
LGU	-	local government unit
MMDA	-	Metropolitan Manila Development Authority
MWSS	-	Metropolitan Waterworks and Sewerage System
PRRC	-	Pasig River Rehabilitation Commission
URA	-	urban renewal area

NOTE

In this report, "\$" refers to US dollars.

Key Words

asian development bank, development, environment, estuary, evaluation, management, pasig, philippines, pollution, rehabilitation, river, sewerage, urban renewal, waterworks

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PROGRAM BASIC DATA

Project Number:	30308	PCR Circulation Date:	Dec 2010	
Loan Numbers:	1745 and 1746	PCR Validation Date:	Nov 2012	
Project Name: Pasig River Environmental Management and Rehabilitation Sector Development Program				
Country:	Philippines		Approved (\$ million)	Actual (\$ million)
Sector:	Environment	Total Project Costs:	150.0	98.0
ADB Financing: (\$ million)	ADF:	Loan:	75.0	63.0
	OCR: 1745: 100.0 1746: 75.0	Borrower:	70.0	35.0
		Beneficiaries:	0.0	0.0
		Others:	5.5	0.0
Cofinancier:		Total Cofinancing:	0.0	0.0
Approval Date:	20 Jul 2000	Effectiveness Date:	20 Oct 2000	17 Aug 2000
Signing Date:	21 Jul 2000	Closing Date: Policy Loan Investment Loan	30 Jun 2002 31 Jan 2006	11 Dec 2003 5 Mar 2009
Project Officer:	P. van Klaveren	Location:	ADB headquarters	
Validator:	C. Dingcong, Consultant	Peer Reviewer:	F. De Guzman, Evaluation Officer, IED2	
Quality Reviewer:	R. Sabirova, Evaluation Specialist, IED1	Director:	W. Kolkma, IED1	

ADB = Asian Development Bank, ADF = Asian Development Fund, IED1/2 = Independent Evaluation Department (Division 1/2), OCR = ordinary capital resources, PCR = project completion report.

I. PROGRAM DESCRIPTION

A. Rationale

1. The Pasig River, passing through the central urban section of Metro Manila, was a major waterway of historic, social, cultural, and commercial significance to the Philippines. Population growth, urbanization, and industrial activities with the concomitant results of indiscriminate discharge of untreated municipal and industrial wastewater and solid waste exceeding the river system's absorptive capacity had made the Pasig River seriously polluted. Its riverbanks had been characterized by low grade, blighted urban development, including extensive informal settlements, deteriorating residential areas, and large tracts of derelict industrial lands. To improve the environment and realize the socioeconomic development potential of the Pasig River and adjacent urban areas, it was necessary to rehabilitate the river system, restore water quality, control wastewater discharges, and promote urban renewal along the riverbanks. Improving the Pasig River's water quality entailed setting up integrated policy reforms covering institutional, regulatory, technical, and financial aspects of environmental management, and

specific physical interventions. A sector development program modality was therefore considered by the Asian Development Bank (ADB), combining a policy loan to support policy reforms, an investment loan to support the investments, and a technical assistance (TA) grant to support capacity building.

B. Expected Impact

2. The Pasig River Environmental Management and Rehabilitation Sector Development Program (the program)'s targeted impacts indicated in the design and monitoring framework at both appraisal and project completion were: (i) improved environmental management of the Pasig River basin within Metro Manila particularly for wastewater management; and (ii) promotion of urban regeneration and renewal in the vicinity of the Pasig River.¹ For the first targeted impact, there were two envisaged performance indicators: (a) Pasig River water quality reaches class C standard by December 2014;² and (b) total biochemical oxygen demand (BOD) loading discharged to the Pasig River should be less than the river's maximum assimilative capacity, which was estimated at 200 tons per day (t/d). For the second targeted impact, the performance indicator was the establishment of environmental preservation areas (EPAs) along the riverbanks by December 2004.

3. Under the program, the living conditions of about 10,000 squatter families (about 55,000 individuals) living within the targeted EPAs were to be improved by providing fully serviced accommodations in various resettlement sites at in-city and adjacent locations. In addition, around 80,000 families (about 440,000 individuals) living in urban renewal areas (URAs) were to benefit from urban upgrading, including the provision of basic municipal services, essential infrastructure, and security of tenure. Pasig River water quality was to be improved by reducing the discharge of polluted municipal and industrial wastewater to the river system, and the amount of solid waste being dumped. About 185,000 households (1 million individuals) were expected to directly benefit from the sanitation service. The entire population of Metro Manila (about 10 million inhabitants) was to directly benefit from the improved environmental conditions and a cleaner, greener, and healthier Pasig River basin.

C. Objectives or Expected Outcomes

4. The intended outcomes of the program were: (i) improved water quality of the Pasig River; (ii) establishment of EPAs along the riverbanks and upgrading of adjacent urban regeneration areas; and (iii) strengthening of operational and management capability and capacity of the Pasig River Rehabilitation Commission (PRRC), the Metropolitan Manila Development Authority (MMDA), and the local government units (LGUs). For the first outcome, the performance target was a reduction in the BOD load by 18 tons per day by December 2004. For the second outcome, the targets were the establishment of 23 kilometers of EPAs and upgrading of 500 hectares of urban slums. For the third outcome, the indicators were: (i) coordination of the PRRC's implementation of the program in accordance with the design, implementation schedule, and budget; (ii) EPAs along the riverbanks being established, developed, and maintained by the MMDA; and (iii) LGUs providing assistance with squatter relocation and development of the urban regeneration areas.

¹ ADB. 2000. *Addendum to Document R90-00 Proposed Loans and Technical Assistance Grant Pasig River Environmental Management and Rehabilitation Sector Development Program (Philippines)*. Manila.

² Class C water is suitable for fish propagation and sustaining aquatic life and for secondary contact sports like boating. After treatment, the water may be used for industrial processing. Key criteria for Class C water are: maximum biochemical oxygen demand (BOD), 10 milligrams per liter (mg/l); and minimum dissolved oxygen, 5 mg/l. Total coliforms, 5,000 most probable number (MPN) per 100 mg.

D. Components and Outputs

5. The program was to promote the implementation of an integrated package of policy reforms and investments indicated in the Pasig River Development Plan. The package consisted of (i) policy reforms supported by a \$100 million loan, (ii) investment loan of \$75 million to finance needed public sector investments, and (iii) a TA grant of \$1 million for institutional capacity building of agencies concerned with environmental management. The policy matrix included nine outputs, supported by various actions to be taken. Envisaged outputs were: (i) approval, adoption, and implementation of phase 1 of the program; (ii) provision of additional sanitation services beyond the Metropolitan Waterworks and Sewerage System (MWSS) targets; (iii) establishment of a wastewater discharge permit system for Metro Manila; (iv) improvement in domestic solid waste collection and recycling by riverside communities; (v) establishment of EPAs and URAs; (vi) strengthening of environmental standards and regulations; (vii) strengthening water quality monitoring and enforcement; (viii) enhancement of public awareness of environmental issues; and (ix) institutional strengthening. The completion of these actions was the condition for the release of the payment tranches.³

6. Expected outputs of the investment component were: (i) expansion of sanitation services, (ii) construction of EPAs along riverbanks; and (iii) upgrading of URAs. In addition, the investment component financed the project implementation assistance. The expansion of the sanitation services was aimed at reducing BOD loading into the Pasig River by 16 tons per day through the provision of additional septic cleaning, discharging, and separate treatment facility. There are two subcomponents: (i) purchase of 36 vacuum trucks, and (ii) construction of a sewerage treatment plant. Construction of EPAs was also envisaged with uniform 10-meter wide easement areas to be established along the riverbanks. Adjacent to these EPAs, selected urban areas were to be upgraded through provision of basic infrastructure and vital municipal services. The upgrading was also to include land titling and livelihood schemes.

E. Provision of Inputs

7. ADB provided \$100 million from its ordinary capital resources to support the policy reforms. The first tranche of \$40 million was released on 17 August 2000 upon signing of the loan. The second tranche of \$60 million was released on 11 December 2003 upon compliance with the policy loan conditions.

8. For the investment loan, ADB provided \$75 million from its ordinary capital resources, or 50% of the projected investment costs. At appraisal, project cost was estimated at \$150 million. In February 2006, ADB approved the government's request to revise the cost, loan allocation, and financing ratios due to the government's fiscal constraints (i.e., inability to provide counterpart funds). The total project cost was therefore decreased to \$128 million. The actual project cost at completion was \$98 million, of which ADB financed \$63 million (64%) of the total project cost. The unused loan amount of \$12 million was canceled.

F. Implementation Arrangements

9. The Department of Finance was the executing agency for the policy loan, supported by 12 different national government agencies, five LGUs, and the private sector. The PRRC provided support and extensively coordinated with all concerned agencies. It was also the

³ Appendix 5 of the RRP indicates these activities.

executing agency for the investment component and was established specifically to manage the investment loan. Originally, the PRRC was placed under the Office of the President but in 2006, it was transferred to the Department of Environment and Natural Resources (DENR). For each of the expected outputs, the PRRC was supported by six national government agencies and five LGUs. A notable development during implementation was the withdrawal of the MMDA from the program following the change in administration in 2001. The responsibility therefore for the maintenance of the EPAs was handed over to the LGUs.

10. Project management consultants were selected following ADB's *Guidelines on the Use of Consultants 2010*. Contractors were chosen through unified bids and a selection process jointly crafted by ADB and the PRRC Project Management Office, which followed the local competitive bidding process in line with ADB's Procurement Guidelines 2010. The contractor for the sewerage treatment plant was selected through an international competitive bidding process. The program completion report (PCR) indicated that consulting firms for capacity building and for project implementation performed satisfactorily. Inputs provided were timely and relevant. As regards the contractors, none of them performed exceptionally well or exceptionally bad.⁴ In general, the PCR rated their performance *satisfactory*.

11. Most of the loan covenants were complied with, although difficulties were encountered in complying with the timeliness of budgetary allocations and with the government's responsibility in building amenities for the resettlement sites (e.g., primary and secondary schools, health centers, daycare centers, among others).⁵

12. ADB approved a TA project to strengthen the planning and implementing capacities of the PRRC, the MMDA, and LGUs. The TA completion report reported the TA as *successful*. This validation concurs with this rating since the TA made significant contribution to building capacities of institutions involved in the project. TA outputs were appropriate and generally of high quality and provided in a timely manner.

II. EVALUATION OF PERFORMANCE AND RATINGS

A. Relevance of Design and Formulation

13. The PCR rated the program *partly relevant*. During the appraisal stage, it was considered relevant since it supported the government's Medium-Term Development Plan which emphasized greater focus on environmental concerns. Furthermore, the program was formulated based on the Pasig River Development Plan, which was prepared with ADB assistance. However, the envisaged program design became difficult to implement in view of the complicated institutional structure, wide array of activities, and changing political environment. Potential risks to implementation were identified during program preparation such as lack of political support, weak enforcement of environment regulations, and reluctance of squatters to relocate. The risk assessment and the mitigation plan were not thoroughly formulated. Also, the PRRC was given the responsibility to implement the program but it did not have a well-established mandate and political clout. The program required coordination and cooperation of a large number of government agencies, and without high-level political support, it was difficult to realize the envisioned outputs and outcomes.

⁴ ADB. 2010. *Completion Report: Pasig River Environmental Management and Rehabilitation Sector Development Program in the Philippines*. Manila. para. 48.

⁵ Footnote 3, Appendix 10.

14. During implementation, the program had to undergo various changes: two changes in scope, two changes in implementation arrangements, and three in financing arrangements. The PCR indicated that resettlement activities did not comply with the resettlement action plan since the social infrastructure and amenities were not completed. Consequently, resettlement activities were discontinued. A major change in scope was made, which involved ADB agreeing to finance 80% of the cost for these infrastructure and amenities. Also, ADB agreed to increase its financing of the housing costs from 60% to 100%. During appraisal, the potential for a land-sharing approach was explored for two pilot areas, but no agreement was reached. These implementation and funding arrangements remained unclear during project implementation, resulting in a change in scope and financing arrangements to accommodate the construction of medium-rise buildings, which were financed wholly by ADB.

15. One of the changes concerned the sanitation component, which entailed revising the institutional and implementation arrangements, taking into account the existing framework of agreements with the MWSS' private concessionaries. Implementation responsibility was further delegated to the MWSS and an LGU (Mandaluyong City), through subsidiary loan agreements concerning provision of additional septic tank cleaning, disposal equipment, and facilities. Most of the changes improved the relevance of the program. However, the PCR correctly noted that these were initiated because of perceived problems with program implementation. The program would have been more effective if the problems were anticipated during the program design stage. Mixed success was achieved when program design was adjusted by delegating implementation and maintenance responsibilities directly to the respective government agencies. This validation concurs with the PCR's rating of *less than relevant*.

B. Effectiveness in Achieving Program Outcomes

16. This validation concurs with the PCR's *ineffective* rating of the program. It did not achieve the expected outcomes of improving the Pasig River's water quality to class C and upgrading adjacent urban regeneration areas to the EPAs. During 2002–2003, two of the upstream sampling stations passed the minimum dissolved oxygen level of 5 mg per liter to qualify for class C classification. From 2004 to 2008, no testing station was able to pass the minimum requirement. The water condition was found no better than 2003 and 2004 and is unlikely to improve and pass class C standard by 2014.

17. The program was able to relocate 6,917 households, or 69% of targeted households. Medium-rise buildings for onsite resettlement were built to accommodate people relocated from EPAs. However, the target for urban renewal of 500 hectares (ha) of urban area benefitting 80,000 people was not achieved. The final upgraded area was about 17.6 ha, or 3.5% of the original target, benefitting only about 8,500 people, or 10.6% of target. The goal of promoting urban renewal and redevelopment along the riverbanks was not achieved. Also, the envisaged outcome of strengthening the operational and management capacity of agencies involved was not achieved. Changes in implementation arrangements only partially improved implementation. The PCR reported that both Mandaluyong City and the MWSS took full responsibility for the design, construction, and maintenance of the activities. Mandaluyong City was able to complete the works in time, but the MWSS failed to do so. The MMDA was supposed to assume responsibility for maintenance of the EPAs, but with its withdrawal from the program, responsibility was handed over to the LGUs instead.

C. Efficiency of Resource Use in Achieving Outputs and Outcomes

18. The PCR rated the program *inefficient* in achieving envisaged outputs and outcomes and this validation concurs. The policy loan led to a number of action plans, which were not implemented or only partially implemented, mainly because of the concerned agencies' lack of funds. The PCR indicated that financing was supposed to be provided through general budget allocations. However, this was not clear to many agencies, and hence, many actions were not implemented.

19. The ADB-financed activities of the program were partially completed but none of the remaining first-phase activities were completed. The expansion of sanitation services financed by the investment component fell short of the target (PCR, paras. 23–25). The EPAs were completed with delays but with only 69% of targeted households relocated. The PCR indicated that the condition to establish a wastewater discharge system was set in place but the fees were not retained by the DENR. Thus, the effect of the industrial pollution loading as a result of the permit system could not be readily ascertained. An action plan for solid waste collection was developed by the MMDA for mobilizing communities along the Pasig River. This plan was not fully implemented because in 2002, MMDA changed its focus from community-based solid waste management to cleaning up floating garbage. The action plan to strengthen environmental standards and regulation was only partly implemented mainly due to insufficient funds of PRRC. Water quality sampling for monitoring was carried out but was not fed into the water quality model.

20. Implementation of the program was considerably delayed due to, among others, noncompliance with the resettlement action plan, lack of government counterpart funds and complicated institutional and political setting. The policy loan was extended twice to fulfill all policy requirements, doubling the implementation period from 22 months to 44 months. The investment loan was extended twice resulting in an increase in the implementation period from 64 months to 97 months.

D. Preliminary Assessment of Sustainability

21. The PCR indicated that the program is *less likely sustainable* since many of the expected outputs and outcomes were not realized. This validation concurs with the PCR rating. The PCR considered outputs that were already completed to be likely sustainable since LGUs, which are responsible for the maintenance of EPA infrastructure, have internal revenue allocations for operation and maintenance. The ferry stations constructed in the EPAs are maintained through payments from the private operator of ferry services on the Pasig River. The capacity strengthening provided to the PRRC, DENR, and Laguna Lake Development Authority was appropriate and generally of high quality. It made a significant contribution to institutional strengthening.

E. Impact

22. The envisaged impacts of the program were not realized. The PCR correctly observed that environmental conditions of the Pasig River basin were not significantly improved even though the institutional capacity of the main coordinating agency was strengthened. Water quality remained below the threshold for passing class C category. The urban renewal within the vicinity of the Pasig River resulted only in the construction of EPAs. The upgrading of 500 ha of urban areas intended to benefit 80,000 inhabitants was not achieved. The Pasig River ferry

system provided an alternate transport route to some parts of Metro Manila, which was a positive impact of the program. This validation rates impact *negligible*.

III. OTHER PERFORMANCE ASSESSMENTS

A. Performance of the Borrower and Executing Agency

23. In terms of the policy component, the performance of the Department of Finance and the PRRC was considered *satisfactory*. Program performance report ratings of ADB for the policy loan were *satisfactory* during implementation period. There were delays in the implementation of the policy framework but these were mainly attributed by the PCR to the institutional complexity of the program.

24. On the investment component, the PCR considered the performance of the PRRC *partly satisfactory*. The PRRC was the executing agency responsible for overall program coordination, monitoring, implementation, and capacity building. Most of the expected outputs were not delivered on time and were only partly achieved. A program such as the program needs an executing agency with sufficient management capacity and high-level political support. These were direly lacking in the PRRC. The changes in implementation arrangements only partially improved implementation. The responsibility for implementing the sanitation component was given to the MWSS and the construction of medium-rise buildings to Mandaluyong City. Mandaluyong City was able to complete the works on time, while the MWSS failed to do so. This validation agrees with the PCR ratings.

B. Performance of the Asian Development Bank

25. The program's design in terms of scope and implementation structure was just too ambitious, resulting in delays and difficulties in achieving expected outputs. ADB fielded seven review missions, one project completion review mission, and one special loan administration mission. Six project officers were also assigned during the course of program implementation; ADB promptly processed the changes in scope, implementation and financing arrangements and loan extensions, which were relevant and appropriate. This validation agrees with the PCR that, overall, ADB's performance is rated *satisfactory*.

C. Others

26. Relocation of informal-settler families from the Pasig River banks was undertaken strictly in accordance with the Resettlement Action Plan and with due process of law. No involuntary resettlement, relocation, or movement was done along the riverbanks. The PCR reported that almost half of the resettlement occurred before loan approval, which complicated implementation. ADB funds identified for resettlement were not used to provide housing as originally planned. Community facilities were provided instead. The government purchased houses in subdivisions available to the general public, which resulted in both the resettled and the host communities benefiting from the facilities. However, there was an extended period between resettlement and installation of electricity, water, and sewerage, the absence of which led some people to move out of the resettlement sites. Also, the change in government in 2001 placed a moratorium on the relocation of informal city dwellers out of the city, which had a substantial impact on the implementation of the resettlement action plan.

IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS

A. Overall Assessment and Ratings

27. The program is rated *unsuccessful*. It is *less than relevant, ineffective, inefficient, and less than likely to be sustainable* (see table). The development goals of improving environmental management of the Pasig River basin wastewater management and promoting urban regeneration and renewal in the vicinity of the Pasig River were not achieved. The program was too ambitious and the implementation arrangements were too complicated to be led by the PCCR, a newly established agency. The program needed high-level political support but the change in administration in 2001 reduced such support. There were substantial changes in scope, implementation, and financing arrangements that caused delays and little progress during the initial years of program implementation.

Overall Ratings

Criteria	PCR	IED Review	Reason for Disagreement/Comments
Relevance	Partly relevant	Less than relevant	
Effectiveness in achieving outcome	Ineffective	Ineffective	
Efficiency in achieving outcome and outputs	Inefficient	Inefficient	
Preliminary assessment of sustainability	Less likely	Less than likely	
Overall assessment	Unsuccessful	Unsuccessful	
Borrower and executing agency	Satisfactory (policy loan) Partly satisfactory (investment loan)	Satisfactory (policy loan) Less than satisfactory (investment loan)	
Performance of ADB	Satisfactory	Satisfactory	
Impact	Not rated	Negligible	
Quality of PCR		Satisfactory	

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = project completion report.

Note: From May 2012, IED views the PCR's rating terminology of "partly" or "less" as equivalent to "less than" and uses this terminology for its own rating categories to improve clarity.

Source: ADB Independent Evaluation Department.

B. Lessons

28. This validation agrees with the lessons drawn by the PCR from the program implementation. Investments in the program had limited results. The difficulties and problems encountered in implementation could have been reduced if a thorough risk assessment and mitigation plan were done during program formulation. The responsibility of implementing the program was given to the PRRC, a newly established agency with insufficient management capacity and without established political influence. The program could have been improved if responsibility for implementation was delegated to concerned agencies with expertise and proven track record.

C. Recommendations for Follow-Up

29. This validation agrees with the recommendations of the PCR. At the program level, continuous monitoring of the EPAs and resettlement facilities is needed. Future ADB assistance should be more focused and specific, such as supporting the MWSS in its sanitation program. Basic services, utilities, and facilities should be made available in resettlement sites before resettlement activities are undertaken. Absorptive capacities of relevant agencies need to be also properly assessed.

V. OTHER CONSIDERATIONS AND FOLLOW-UP

A. Monitoring and Evaluation Design, Implementation, and Utilization

30. A project performance monitoring system was established with the PRRC. Quarterly water quality testing was carried out by the PRRC following the Water Quality Monitoring Action Plan. Permit holders of waste water discharges submitted quarterly self-monitoring reports to the DENR, which also carried out random sampling. Regular monitoring and reporting was done on the Pasig–Marikina system but data were not fed into the defunct water quality model of the Pasig River.⁶

B. Comments on Program Completion Report Quality

31. The PCR is consistent with the PCR Guidelines (Project Administration Instructions 6.07). The lessons and recommendations are sound and drawn from the findings of the report. The report has a clear presentation and analysis of the policy and investment components. Appendix 3 and 4 provide very helpful information on the policy and program achievements. Thus, this validation rates the PCR quality *satisfactory*.

C. Data Sources for Validation

32. Data references include back-to-office mission reports, the ADB PCR, report and recommendation to the President, TA completion report, and project processing documents.

D. Recommendation for Independent Evaluation Department Follow-up

33. This validation concurs with the ratings of the PCR. There would be no need for a separate program performance evaluation.

⁶ The model was made under Danish International Development Assistance-financed assistance and handed over to the DENR, but was not operational because the license has not been renewed.