



# Validation Report

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Reference Number: PVR-181  
Project Number: 30480  
Loan Number: 1663, 1664, and 1665  
November 2012

## Philippines: Metro Manila Air Quality Improvement Sector Development Program

Independent Evaluation Department  
**Asian Development Bank**

## **ABBREVIATIONS**

ADB	–	Asian Development Bank
AQAP	–	Air Quality Action Plan
DENR	–	Department of Environment and Natural Resources
DOTC	–	Department of Transportation and Communications
IED	–	Independent Evaluation Department
LBP	–	Land Bank of the Philippines
LTO	–	Land Transportation Office
MMDA	–	Metro Manila Development Authority
MVIS	–	Motor Vehicle Inspection System
PCR	–	project completion report
RRP	–	report and recommendation of the President
TA	–	technical assistance

## **NOTE**

In this report, “\$” refers to US dollars.

### **Key Words**

adb, air quality improvement sector development, asian development bank, ied, independent evaluation department, metro manila, philippines, traffic management

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## PROJECT BASIC DATA

<b>Project Number:</b>	30480	<b>PCR Circulation Date:</b>	30 Dec 2008	
<b>Loan Number:</b>	1663, 1664, and 1665	<b>PCR Validation Date:</b>	Nov 2012	
<b>Project Name:</b>	Metro Manila Air Quality Improvement Sector Development Program			
<b>Country:</b>	Philippines		<b>Approved</b> (\$ million)	<b>Actual</b> (\$ million)
<b>Sector:</b>	Transport	<b>Total Project Costs:</b>	347.30	241.87
<b>ADB Financing:</b> (\$ million)	<b>ADF:</b>	<b>Loan</b>	Policy: 200.00 Facility: 25.00 Investment: 71.00	Policy: 200.00 Facility: 5.92 Investment 28.99
	<b>OCR:</b> 296.00	<b>Borrower:</b>	45.60	6.96
<b>Cofinanciers:</b>	OECF (Japan) Sida (Sweden)  USTDA (United States)	<b>Beneficiaries:</b>		
		<b>Others:</b>	Loan: 170.00 Credit: 4.50 TA Grant: 0.60 0.89	170.00 ... ... 0.89
<b>Approval Date:</b>	16 Dec 1998	<b>Total Cofinancing:</b>	175.99	170.89
<b>Signing Date:</b>	21 Dec 1998	<b>Effectiveness Date:</b>	21 Mar 1999	29 Dec 1998
		<b>Closing Date:</b>	31 Dec 2002 (policy loan); 29 Dec 2003 (facility loan); and 31 Dec 2003 (investment loan)	12 Dec 2003 (policy loan); 29 Dec 2003 (facility loan); and 17 Nov 2008 (investment loan)
<b>Project Officers:</b>	<b>Program Loan:</b> C. Melhuish P. Poinsignon K. Jraiw Y. L. Feng <b>Facility Loan:</b> C. Melhuish T. Hayakawa <b>Investment Loan:</b> P. Poinsignon K. Jraiw Y. L. Feng S. Date	<b>Location:</b>	ADB headquarters ADB headquarters ADB headquarters ADB headquarters  ADB headquarters ADB headquarters  ADB headquarters ADB headquarters ADB headquarters ADB headquarters	
<b>Validators:</b>	J. A. League, Consultant F. De Guzman, Evaluation Officer, IED2	<b>Peer Reviewer:</b>	J. Foerster, Evaluation Specialist, IED1	
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... = data not available, ADB = Asian Development Bank, ADF = Asian Development Fund, IED1/2= Independent Evaluation Department (Division 1/2), OCR = ordinary capital resources, OECF = Overseas Economic Cooperation Fund, PCR = project completion report, SDR = special drawing right, Sida = Swedish International Development Cooperation Agency, TA = technical assistance, USTDA = United States Trade and Development Agency.

## I. PROJECT DESCRIPTION

### A. Rationale

1. Metro Manila's deteriorating air quality was a major issue in the 1990s as air pollution began to affect the health and welfare of its residents. This issue was not only confined in Metro Manila but included surrounding areas as well. The concentration of several pollutants in air reached alarming levels that were well above those commonly affecting human health.<sup>1</sup>

2. Major sources of air pollution were both mobile (primarily motor vehicles) and stationary (mainly power plants and boilers in various industrial processes). With growth of the economy anticipated to continue in the future, emissions of pollutants from these sources were expected to increase considerably in the absence of mitigating actions. If not properly addressed, the detrimental effects of air pollution were expected to significantly erode any possible gains in economic and social well being of the population.

3. The government has fully recognized the seriousness of air pollution in the country, particularly in Metro Manila. As a result, the government accorded high priority to reducing air pollution through appropriate mitigation measures. The intention of the government to tackle the air pollution problem was expressed in three laws relating to stationary pollution sources, mobile sources, and environmental impact. These laws were supported by a number of other rules and regulations relating to motor vehicle inspection, traffic regulation, and quality control of oil products. Congress was also considering the passage of the Clean Air Act at that time to provide the government with a stronger and more comprehensive legal basis and framework for air quality management.

4. In response to the government's request, the Asian Development Bank (ADB) funded the Metro Manila Air Quality Improvement Sector Development Program. ADB support for the program was justified based on its strategy, which advocated direct interventions to assist the government in promoting an effective environmental management system to address the ever-increasing pollution problem in large urban centers like Metro Manila.

### B. Expected Impact

5. The program's envisaged goal or impact was sustainable improvements in Metro Manila's air shed quality. The impact indicators and/or targets identified in the design and monitoring framework at both appraisal and project completion were the following: (i) 100% elimination of lead from the atmosphere by 2003; (ii) 75% reduction of particulates from mobile and stationary sources by 2003; (iii) 85% reduction of sulfur oxides from mobile and stationary sources by 2003; (iv) reductions in nitrogen oxides, carbon monoxide, and ozone and volatile organic compounds (e.g., toluene, benzene, and total hydrocarbon according to an action plan developed within 6 months after commissioning of air quality monitoring equipment that measures these substances; and (v) 75% reduction in air pollution-related mortality rates (from 6,000 to 1,500) and morbidity rates.

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<sup>1</sup> Parts of this validation report are paraphrased and/or copied from ADB. 1998. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to the Republic of the Philippines for the Metro Manila Air Quality Improvement Sector Development Program*. Manila; ADB. 2008. *Completion Report: Metro Manila Air Quality Improvement Sector Development Program*. Manila.

6. The program was also expected to improve air pollution control and help mitigate the adverse impact of poor air quality on public health, particularly its extremely harmful effect to children, and the elderly. It was also expected, in general, to decrease the incidence of a wide range of chest and respiratory ailments and premature mortality.

### **C. Objectives or Expected Outcomes**

7. The objective of the program was to promote policy reforms to improve air quality through the abatement of the main mobile and stationary sources of air pollution. The focus was on Metro Manila's air shed where the highest concentrations of air pollution are located.

8. The intended outcome (purpose) of the program, as indicated in both the report and recommendation of the President (RRP) and the project completion report (PCR), was substantial improvement of air quality management in Metro Manila's air shed. Four outcome performance indicators were indicated: (i) effective institutional management structure developed and put in place, which allows for appropriate intra- and intersector coordination (e.g., among Metro Manila Air Quality Board, technical working groups, and technical secretariat), 1 year after program commencement; (ii) sustainable funding mechanisms in place that ensure adequate levels of monitoring, awareness raising, and enforcement, 1 year before program conclusion; (iii) relevant legislation and policies for sector and subsectors in place and regularly updated; and (iv) capacity-building plans for all participating organizations implemented as planned.

9. The program's scope consisted of policy reforms and investment requirements integrated within a 3-year policy matrix termed the Air Quality Action Plan (AQAP). The AQAP identified the interventions necessary to achieve cleaner air, the actions required by various agencies, and the time frame for their implementation.

### **D. Components and Outputs**

10. Given the complexity of the policy reforms and measures required to improve air quality and their close interrelationship, a sector development program modality was deemed the best approach for implementing the AQAP. The sector development program included the following:

- (i) Policy loan to implement policy reforms under the AQAP, which included: (a) mitigating air pollution from mobile sources; (b) mitigating air pollution from stationary sources; (c) improving fuel quality; (d) reducing emissions from vehicular use; (e) reducing traffic congestion and improving traffic flow; (f) strengthening ambient air quality monitoring, evaluation, and reporting; (g) intensifying public awareness; (h) program coordination and monitoring; and (i) capacity building and institutional strengthening.
- (ii) Facility loan to establish an air pollution control facility that would assist industries, commercial establishments, and public transport companies in making needed investments to monitor and reduce air emissions.
- (iii) Investment loan to finance part of the public sector investments under the AQAP. Under the investment loan, seven major components were targeted: (a) an ambient air quality monitoring network, (b) outsourcing of stack emissions measurement, (c) road rehabilitation, (d) traffic management and engineering, (e) antismoke belching program, (f) procurement of motor vehicle emission testing equipment, and (g) public health monitoring.

- (iv) Technical assistance (TA) grant to develop air emission policies, enhance public awareness to support the abatement of air pollution, review operations of enforcement authorities, and undertake demonstration projects to determine the viability of introducing alternative fuels and devices to reduce emissions from diesel engines.

## **E. Provision of Inputs**

11. At appraisal, a loan of \$200 million was anticipated to support the policy reforms, while another \$170 million was to be met by cofinancing from Japan Overseas Economic Cooperation Fund (OECF).

12. For the investment loan that was to finance public sector investments, ADB provided a loan of \$71.0 million from its ordinary capital resources for the foreign exchange and local currency costs. The actual total investment cost was \$35.9 million or about 71% (\$86.4 million) less than the estimated appraisal cost. This significant change in cost was attributed to the cancellation of various investment subcomponents.

13. Additionally, the Swedish International Development Cooperation Agency (Sida) provided mixed credit for SKr35 million (about \$4.5 million equivalent) and a TA grant of SKr4.75 million (about \$600,000 equivalent) to support training for ambient air quality monitoring and air dispersion modeling. The United States Trade and Development Agency was to provide two TA grants totaling \$890,000: (i) one to assist in the development of point source monitoring programs and marketing of the air pollution control facility; and (ii) the other to assist in developing the Motor Vehicle Inspection System (MVIS). The government provided counterpart funding for the facility loan and the investment loan for \$45.6 million equivalent. ADB was to administer the program on behalf of all cofinancing agencies. However, the PCR did not provide details on how cofinancing from the OECF, Sida, and the United States Trade and Development Agency TA grants actually worked out.<sup>2</sup>

14. The \$200 million for the policy loan was fully disbursed. In the case of the facility loan, only \$5.92 million or 24% was disbursed. Disbursement for investment loan was \$29 million or 41% of the total. The program approved an imprest account and a statement of expenditure to disburse the loan proceeds efficiently. The PCR indicated that the performance of these procedures was generally satisfactory.

15. The program was declared effective on 29 December 1998. The loans' closings were extended to accommodate delays. Closing date was originally 31 December 2002 for the policy loan; 29 December 2002 for the facility loan; 31 December 2003 for the investment loan; and May 2001 for the TA grant. Program implementation was slow during the first 3 years due to frequent changes in the management of the executing agency.

16. Loan closing date for the policy and facility loans was in December 2003 after one extension. The investment loan was extended twice from 31 December 2003 to 31 December 2006 and then until 31 December 2007. It finally closed in 17 November 2008, almost 5 years behind the original schedule. The TA grant was completed in October 2008 after two extensions from the original closing date of May 2001.

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<sup>2</sup> Independent Evaluation Department (IED) staff reviewed back-to-office-reports (BTORs) and did not find information on how the \$170 million Japan International Cooperation Agency (JICA)/OECF cofinancing was eventually disbursed. However, a former project officer indicated in an interview that the funds were disbursed.

17. Several unforeseen changes due to frequent changes in top management of the Department of Environment and Natural Resources (DENR) and senior management of the Department of Transportation and Communications (DOTC), such as the person in-charge of Land Transportation Office (LTO)-related operations and the MVIS, slowed down internal processes in these agencies and affected their capacity. Together with the subcomponents' cancellations and contractual dispute, these changes significantly contributed to program delay.

## **F. Implementation Arrangements**

18. Implementation arrangements were generally as envisaged at appraisal. DENR was the lead executing agency for the policy loan while the Land Bank of the Philippines (LBP) was the executing agency for the facility loan. DENR was also the executing agency for the investment loan for air quality monitoring and evaluation, public awareness program, capacity building and institutional strengthening, and overall coordination. There were four implementing agencies for the investment loan. Each implementing agency and executing agency established project management units for the implementation of their respective program activities.

19. The agencies involved generally met the covenants incorporated in the loan agreement. Of the 15 loan covenants for the policy loan, 12 were complied with, although 2 were complied late, 2 were substantially complied with, and 1 was not complied with. The 2 covenants substantially complied with were related to MVIS implementation and the 15-year age rule for buses. The covenant pertaining to the ambient air quality-monitoring network was not complied with. Of the 11 loan covenants for the facility loan, all were complied with. Of the 23 loan covenants for the investment loan, 20 were complied with (but with 2 cases of late compliance), 2 were partly complied with, and 1 was not complied with. The covenant that was not complied with pertained to environmental compliance for civil works, which was not implemented. The covenants relating to benefit monitoring and evaluation and training activities, which were adversely affected by the cancellation of most Metro Manila Development Authority (MMDA) training activities, were partly complied with.

20. The program included TA which focused on seven subprojects on air emission policies and public awareness. The PCR indicated that all these seven subprojects were completed successfully: (i) market-based policy instruments for Metro Manila air quality management, completed in September 1999; (ii) draft Implementing Rules and Regulations for the Clean Air Act, completed in October 2000; (iii) study on public awareness for cleaner air that was approved in June 2000, completed in December 2004; (iv) selection and design options for emission charges for both stationary and mobile sources, completed in August 2002; (v) study on public health monitoring to demonstrate how to monitor public health effects of air quality and to strengthen the capacity of public health monitoring of the Department of Health regional offices, completed in November 2003; (vi) study on strengthening the Pollution Adjudication Board, completed in October 2003; and (vii) the development of a compressed natural gas master plan, completed in December 2003.

21. Consulting services were provided for major program components. However, the PCR did not provide details on the number of contracts awarded during program implementation. The PCR indicated that recruitment of consultants and the procurement processes did not

experience severe delays.<sup>3</sup> However, it was necessary to rebid procurement under the investment loan for the third laboratory equipment package (DENR), geographic information system (MMDA), and emissions testing equipment (DOTC). Rebidding of the geographic information system package was successful but the two others were not successful due to limited institutional capacity of DENR and DOTC.

22. The PCR indicated that, in general, all consultants, contractors, and suppliers performed satisfactorily. However, it cited two cases in the investment component where performance issues occurred. These pertained to the project coordination and monitoring of consultants who terminated their contract due to the dissolution of their company and the protracted contractual dispute between the air quality network contractor and the DENR, which substantially affected the success of the investment loan.

## II. EVALUATION OF PERFORMANCE AND RATINGS

### A. Relevance of Design and Formulation

23. The PCR rated the program *relevant* overall, despite design flaws during implementation. The PCR stated that given the rapid deterioration of air quality in Metro Manila, the program was appropriate with what was required at the time of approval. Specifically, the program identified the need to mitigate the effects of air pollutants, several of which were identified as carcinogenic. The government accorded a high priority in view of this threat to socioeconomic development both through premature mortality and high incidence of morbidity. Strategically, the program was in line with the government's thrust of improving Metro Manila's air quality through a combination of policy reform measures, and key investments in critical areas such as air quality monitoring facilities and management, among others. It was also consistent with ADB's focus on the environment and resource management.

24. This validation downgrades the rating to less than relevant. While the objective was right, the program had an overly complex design. The program design was particularly ambitious and did not take into account the institutional and staff capacity of the executing agency and implementing agencies involved and the weak interagency coordination. Moreover, the program did not provide adequate funds and capacity to law enforcement agencies in a sustainable manner. The appraisal efforts in program designing should have been much more rigorous. Thus, its relevance decreased due to observed deficiencies in design and the cancellations of various investment subcomponents.

25. As the PCR indicated, the program's complexity demonstrated design inadequacies, especially in the investment component. Due to the program's intention to meet the diverse concerns and interests of various agencies and stakeholders in environmental management in Metro Manila, and its eagerness to address the multifarious issues related to improving air quality all at once, the design of the program became too complex, involving multiple institutions and requiring greater coordination efforts than normally required. Getting all the executing agencies and implementing agencies engaged and committed to the same program schedule and adhering to agreed components proved a difficult, albeit daunting task. The RRP acknowledged that the main obstacles to improved air quality in Metro Manila included limited institutional capacity of all concerned agencies, and weak enforcement of standards and

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<sup>3</sup> An aide memoire of a loan review mission dated 30 June 2000 indicated otherwise. The mission expressed ADB's disappointment that during the elapsed 16 months since loan effectivity, relatively little implementation occurred. Delay was attributed to the general lack of knowledge of ADB procurement guidelines.



regulations. However, the program design ignored these limitations by assuming that the executing agencies and implementing agencies can implement such a complex program. As a result, the investment loan suffered implementation delays because of contractual disputes, slow internal processes of the lead executing agency, coordination failures between implementing agencies, and shifting priorities, among others.

26. Moreover, the design of the facility loan appeared to be overoptimistic and was dependent on the implementation of the Clean Air Act. Under this facility, a credit line was provided through the LBP, which was the executing agency for the facility loan, to set up an air pollution control facility. Although the LBP performed extensive work to market the air pollution control facility, the number of subborrowers remained limited over the 5 years of implementation, as only five subloans (one of which was canceled) were approved by LBP and ADB. The low utilization of the fund was attributed to the initially slow implementation of the Clean Air Act and enforcement of the implementing rules and regulations.

27. The policy loan supported much needed policy reforms, and overall design appeared to be realistic with most of the loan covenants that were complied with, except for the air quality-monitoring network, which did not push through because of a contractual dispute.

## **B. Effectiveness in Achieving Project Outcomes**

28. The PCR indicated that the program achieved one major outcome, which was the elimination of lead from the atmosphere over Metro Manila. However, the PCR also acknowledged that the program could not fully achieve other outcomes to improve air quality in the Metro Manila air shed, which was supposed to be the main objective of the program. Thus, the PCR rated it *less effective*. This validation agrees with the *less than effective* PCR rating since the program did not achieve much of the expected outputs and outcomes due to weak implementation. Some of the key outcome targets (e.g., 100% elimination of lead, 85% reduction of sulfur oxides) are considered overambitious.

29. Major cancellations in the investment component led to concomitant reduction in both outputs and loan size. The contractor did not turn over the ten ambient air quality stations to the DENR while the DENR did not provide assurance that independent audit to validate air quality monitoring data would be conducted. Even though most of the institutional strengthening subcomponents were implemented, the DENR failed to create permanent staff positions to continue the work started by the program. Road rehabilitation, traffic management and engineering, and antismoke belching components were not implemented as planned. A plan to implement monitoring programs for a joint DOTC–DENR–Cities antismoke belching and countrywide private emission testing centers was prepared in 2007. However, none of these agencies pursued these efforts. The procurement of motor vehicle emission testing equipment was not completed. The geographic information system though completed in 2006 is currently not being used. Without enforcement of required lower emission levels, the intended outcomes cannot be achieved.

30. The facility loan was envisaged to purchase and install air emission control and monitoring equipment, including the rehabilitation of existing transport fleet. The full disbursement of the four subloans in 5 years was only P308 million equivalent (approximately \$6 million). With such a low achievement rate, the loan was closed in December 2003, canceling 76% of the loan amount.

31. On the other hand, the extent to which policy measures contributed to the attainment of envisaged outcomes and outputs could not be readily ascertained in view of the paucity of

information provided in the PCR. As such, this validation cannot comment on the effectiveness of the policy legislations that were enacted.

### **C. Efficiency of Resource Use in Achieving Outputs and Outcomes**

32. The program's efficiency was affected by implementation delays due to the general lack of knowledge on ADB procurement guidelines despite a special 2-day workshop attended by 30 staff from all implementing agencies. Delays in funding availability, frequent management changes in the executing agency, contractual dispute, and slow internal processes at the executing agency affected miscellaneous civil works and procurement. Moreover, bureaucratic gridlock and interagency dispute on road rehabilitation led to subsequent delay and cancellation of the road rehabilitation subcomponent. The nonavailability of counterpart funding in the case of the traffic management and engineering subcomponent also led to its eventual cancellation.

33. The PCR indicated that while the program did not have cost overruns, it was significantly delayed. It rated the program *less efficient* even though it achieved certain outputs efficiently. This validation agrees with the PCR rating and rates the program *less than efficient* in achieving outputs and outcomes.

34. The facility loan suffered from low disbursement and limited number of subborrowers in view of the slow implementation of the Clean Air Act and the enforcement of its implementing rules and regulations.

35. The implementation delays and the non-completion of portions of the investment component such as the road rehabilitation along Epifanio de los Santos Avenue (EDSA) hindered the envisaged policy reform of reducing traffic congestion and improving traffic flow.

### **D. Preliminary Assessment of Sustainability**

36. The PCR pointed out that the DENR does not have adequate permanent staff to sustain the program efficiently and that the air quality-monitoring network is not yet operational.

37. The PCR also correctly noted that the MVIS' fee structure and financial sustainability is still not clear since the DOTC has never given this matter appropriate attention. It concluded that it is unlikely that MVIS operations will be successfully sustainable in the long term.

38. In view of these, the PCR rated the program's sustainability *less likely*. Institutional sustainability is also questionable in view of the non-completion of some capacity building training such as those pertaining to ambient air quality auditing and traffic management, and engineering-related trainings. Also, while the DENR conducted the policy studies and capacity building activities under the program, it has not demonstrated its resolve and institutional capacity to enforce the Clean Air Act. Without this, long-term sustainability may not be attained. This validation concurs with the *less than likely* sustainable rating.

### **E. Impact**

39. The PCR indicated that there were no economic, social, and other impacts due to the program since the primary aim was only environmental impact, i.e., reducing ambient air pollution in a sustainable manner. This validation believes that the statement is incorrect as the air pollution has clear economic and social impacts. Although lead from gasoline was eliminated, the remaining objective to achieve cleaner ambient air in the Metro Manila air shed

was not achieved. Many of the targets cited in the design and monitoring framework are overambitious. The PCR did not provide a rating on the program's impact.

40. Many of the key capacity building activities and policy studies were undertaken and completed such as the training of DENR laboratory staff on the United States Environmental Protection Agency's methods of assessment, the implementing rules and regulations of the Clean Air Act, institutionalization of the air quality compliance monitoring system, implementation of the management information system of the Environmental Management Bureau, health risk assessment and risk perception survey, and technical studies on alternative fuels and improvement of tricycle emissions. However, the impact of these on reducing ambient air pollution was modest because of limitations in institutional capacity to enforce the Clean Air Act and the unsuccessful implementation of major program components. The lack of effective government enforcement of pollution control measures may also negate the intended long-term impact on environmental improvement and human health.

41. There is no evidence that would justify a high program impact rating. Also, the targeted impact of sustainable improvements in Metro Manila's air shed quality was not attained. This validation rates the program's impact as *moderate*.

### **III. OTHER PERFORMANCE ASSESSMENTS**

#### **A. Performance of the Borrower and Executing Agency**

42. The program was saddled with serious institutional issues related to the continuity of program agreements and activities. The lead executing agency displayed significant weaknesses in capacity to both implement and oversee the program. Changes in the management of the DENR occurred five times from the time of loan effectiveness to loan closing. Another obstacle to effective coordination and efficient implementation was the fact that the senior staff of DENR and/or Environmental Management Bureau spent considerable periods of time outside Metro Manila and the country, hindering quick decision making. The PCR rated the performance of the borrower, executing agency, and implementing agencies as *unsatisfactory*. This validation concurs with this rating.

43. The PCR noted that the program started slowly in the first 3 years but made substantial progress in 2003. Thereafter, contractual dispute and further changes in the DENR top management hindered the program's progress. Changes in DOTC-LTO management likewise adversely affected the implementation of the MVIS under the policy loan. It is currently not operational and no assurance for its sustainability has been provided. The intervention of the Metro Manila Regional Development Council derailed the road rehabilitation component under the Department of Public Works and Highways and led to the failure to implement the component. Government agencies involved in the program, either as executing agency, implementing agencies, or oversight agencies, did not exert any effort to pursue the implementation of this component. The MMDA showed no keen interest in pursuing the implementation of the two components it was responsible for. The DENR, DOTC, and the Metro Manila cities launched several antismoke belching campaigns after the MMDA abruptly gave up responsibility over its operations. But none of these programs contributed significantly to reducing smoke belching violations despite sustained ADB support and encouragement.

## **B. Performance of the Asian Development Bank**

44. A notable implementation aspect was the frequency of supervision missions. ADB undertook 14 loan review missions utilizing 731 person-days during the program period. The PCR stressed that ADB attended to program issues to resolve them especially in 2004–2007 when the contractual dispute between DENR and the contractor for air quality monitoring occurred. ADB further intensified its efforts in 2007 through monthly progress meetings, attempting to achieve progress during the extended loan period. These efforts went for naught as the program did not achieve its major outputs and outcomes and most of the investment subcomponents were canceled. The PCR rated ADB performance partly satisfactory. This validation agrees with the PCR that ADB's performance is less than satisfactory.

45. The program design was too complex and did not accurately assess the capacity of the executing agencies and implementing agencies to implement their respective components. Moreover, there was no strong ownership of the program by the executing and implementing agencies and this should have been accurately determined during appraisal stage.

46. Although most of these institutional arrangements and political-economic factors, such as the change in administration and personnel, were outside ADB's control, the program design assumed that a complex program with numerous components and a number of executing agencies and implementing agencies will be implemented smoothly. This was a major flaw, which practically doomed the program's success from the start. ADB has had several loan projects in the Philippines with similar complex designs, which did not fare very well. Lessons from these operations should have been learned and considered during the program design stage. Institutional capacity for complex, multi-agency projects and/or programs in the Philippines is inadequate and this should have been considered seriously.

47. ADB's subsequent efforts to improve implementation performance were hampered by the complexity of the program, its components and subcomponents, and the flawed institutional arrangements for implementation. ADB staff made several media appearances in support of clean air policies and encouraged various stakeholders to support the government's legislative agenda, specifically on the Clean Air Act, which Congress passed in May 1999. Also, ADB staff supported various conferences and workshops by presenting the program to participants.

48.

## **C. Others**

49. No specific issues were noted in the PCR. Governance, anticorruption, and fiduciary aspects were not within the scope of work for the loans. However, the program was subjected to standard ADB provisions on these matters, including monitoring through ADB review missions. No problems were identified during the course of the program on these matters.

# **IV. OVERALL ASSESSMENT, LESSONS, AND RECOMMENDATIONS**

## **A. Overall Assessment and Ratings**

50. Overall, this validation rates the program *less than successful* based on the ratings of *less than relevant*, *less than effective*, *less than efficient*, and *less than likely sustainable* (see table). This is consistent with the PCR's overall *partly successful* rating, but the relevance criterion rating is downgraded from *relevant* to *less than relevant* due to program design issues.

### Overall Ratings

Criteria	PCR	IED Review	Reason for Disagreement and/or Comments
Relevance	Relevant	Less than relevant	Weaknesses identified in program design (paras. 24–27).
Effectiveness in achieving outcome	Less effective	Less than effective	
Efficiency in achieving outcome and outputs	Less efficient	Less than efficient	
Preliminary assessment of sustainability	Less likely	Less than likely	
Overall assessment	Partly successful	Less than successful	
Borrower and executing agency	Unsatisfactory	Unsatisfactory	
Performance of ADB	Partly satisfactory	Less than satisfactory	
Impact	Not rated	Moderate	Improvement of air quality did not materialize, which could have led to better program impact (para. 41).
Quality of PCR		Satisfactory	

ADB = Asian Development Bank, IED = Independent Evaluation Department, PCR = program 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

51. This validation generally agrees with the lessons identified in the PCR, which are summarized as follows:

- (i) A complex and overambitious program should not have been designed. A simpler program designed in phases or steps might have been more realistic and would have stood a greater chance of achieving better results.
- (ii) There was a mismatch between the program's expectations from those of the executing agency and the implementing agencies, and their capacity to deliver such expectations.

52. In future similar interventions, it would be better to design complex projects in tranches or sequentially, starting with simple components and sequencing them in such a way that more complex components are implemented in later tranches. This would allow the executing agencies and/or implementing agencies to build capacity and experience in the simpler components; learn technical and project management issues that could be addressed; and revisit project concept, approaches, methodologies, implementing and financing arrangements as necessary before proceeding to subsequent tranches or phases. Because of the difficulty in interagency coordination and multiagency project implementation in the Philippines, more careful focus and in-depth assessment of the implementation capacity of executing agencies and/or implementing agencies, their governance and management structure, institutional framework and design of implementation arrangements would need to be undertaken prior to appraisal.

53. If the government seriously intended to achieve the development objectives, the issues, especially those pertaining to interagency coordination should have been addressed at the Cabinet or NEDA Board level. Designing such a very complex sector development program was not practical and realistic.

### **C. Recommendations for Follow-Up**

54. This validation endorses the recommendations made by the PCR.

## **V. OTHER CONSIDERATIONS AND FOLLOW UP**

### **A. Monitoring and Evaluation Design, Implementation, and Utilization**

55. The PCR did not have a section on monitoring and evaluation since this was only partly complied with in the loan covenant although the loan agreement required the DENR to monitor and evaluate benefits by compiling and analyzing necessary air quality data. The guidelines for the assessment of benefits and impact of the program were only prepared in 2006. This was not implemented because the air quality-monitoring network was not yet operational. Also, the DENR was also behind schedule in providing and discussing with ADB the nature of data to be collected, the analytical methodology, and the timing of monitoring the benefits.

### **B. Comments on Project Completion Report Quality**

56. The PCR is generally written and presented well, in a concise and clear manner, and gives an easily understood picture of the complex program. It is candid enough, especially in its evaluation of ADB performance. The PCR also provided substantial information regarding comparison of planned and actual program framework; chronology of program implementation, detailing significant events during the entire program duration; comparative implementation schedule (appraisal and actual); and status of compliance with loan covenants. The few minor shortcomings include the following:

- (i) Discussion on details of program costs was not clear in the PCR, especially on cofinancing. There were also minor inconsistencies noted. The text cited that the closing date of the investment loan was 31 December 2007 but the basic data sheet indicated that the loan closing date was 17 November 2008. Moreover, the total program cost does not match the cost breakdown.
- (ii) The PCR did not expound or provide more specific basis for rating some activities reflected in the individual evaluation criteria. Details on how specific legislative actions indicated in the policy loan were achieved and how these affected outcomes and outputs were not thoroughly discussed.

57. Apart from these shortcomings, the PCR adhered to the Project Administration Instructions and the PCR guidelines.

### **C. Data Sources for Validation**

58. Data sources for validation included the RRP, PCR, and project files such as back-to-office-reports and aide memoires.

**D. Recommendation for Independent Evaluation Department Follow-Up**

59. There are no specific matters requiring IED follow-up.