ASIAN DEVELOPMENT BANK **TPA:PHI 23239**

TECHNICAL ASSISTANCE PERFORMANCE AUDIT REPORT

ON THE

STUDY ON VEHICULAR EMISSION CONTROL PLANNING IN METRO MANILA (TA No. 1414-PHI)

IN THE

PHILIPPINES

October 1995

CURRENCY EQUIVALENTS

Currency Unit - Peso (P)

		At TA Approval	At TA Completion	At TA Evaluation
P 1 .00	=	$0.036	$0.0388	$0.0385
$1.00	=	P28.00	P25.75	P25.97

The foreign exchange rate of the peso is determined on the basis of a floating rate system related to daily foreign currency transactions in the banking sector.

ABBREVIATIONS

EA	-	Executing Agency
NCR	-	National Capital Region
RRTPL	-	Road and Road Transport Program Loan
TA	-	Technical Assistance
TOR	-	Terms of Reference

NOTES

(i) The fiscal year of the Government ends on 31 December.
(ii) In this Report, "$" refers to US dollars.

I. BACKGROUND

A. Rationale

1. The technical assistance (TA) was provided in response to the recognized need for improving air quality in Metro Manila as documented in a qualitative assessment carried out by an expert of the World Health Organization. Major problems arise from the fact that suspended particulate matter concentrations exceed the Philippine air quality standard by well over 200 percent. Besides industrial emissions, one of the main sources of pollution is motor vehicle exhausts. These are not controlled and show high levels of toxic components because operated engines are beyond their normal lifetime and run on low-quality fuel with high lead contents. As a consequence of the extraordinarily high emission levels, the incidence of respiratory diseases, including the risk of lung cancer, has increased while lung pulmonary functions are decreasing.

2. The TA was part of the Road and Road Transport Program Loan[1] (RRTPL), the Executing Agency (EA) for which was the Department of Transport and Communication. The EA for the

[1] Loan Nos. 1046/1047(SF)-PHI: *Road and Road Transport Sector Program,* for $100 million, approved in November 1990.

TA was the Environment Management Bureau of the Department of Environment and Natural Resources.

B. Objectives and Scope of the Technical Assistance

3. The objective of the TA was to assist the Government to quantity and evaluate problems arising from vehicular emissions, and to prescribe immediate and long-term measures which, if implemented, would lead to improved ambient air quality. The Report and Recommendation of the President on the RRTPL emphasized that the objective of the TA was to carry out a policy and strategy study. The TA comprised the collection and analysis of air quality and emission data, including an assessment of resultant effects and future projections, an evaluation of current measures to control vehicular emissions, as well as a presentation of short-term and long-term measures for improving air quality.

II. ASSESSMENT OF IMPL EMENTATION PERFORMANCE

A. Design of the Technical Assistance

1. Appropriateness of Concepts and Approaches

4. The TA met the objective of the national development plans and the Bank's development strategy,[2] both of which set some broad environmental targets for pollution control in Manila. Several indications available at the outset of the TA showed evidence of both high pollution levels and institutional weaknesses in regular monitoring activities. This could have led to a different approach, namely the preparation of a full environmental program (loan) as well as some actual capacity-building activities. Instead, after completion of the TA, a Fact-finding Mission took place, a project preparatory technical assistance (PPTA)[3] was approved, and a staff consultant was engaged to assist in the preparation of a possible loan proposal.

5. Being part of the RRTPL,[4] the implementation of the TA started after loan approval in November 1990. The loan policy matrix required that "Phase I recommendations" of the TA be implemented; however, this approach was not reflected in the Agreement or implementation of the TA, which did not have a Phase I or corresponding recommendations to implement.

---

2 Country Strategy Paper, *Strategy Study in the Philippines,* June 1988.

3 PPTA 1723-PHI: *Vehicular Emissions Control in Metro Manila,* for $100,000 approved on 1 July 1992.

4 The postevaluation of the RRTPL (PPA:PHI-21176, L-1046-PHI[SF]/1047-PHI: *Road and Road Transport Sector Program Loan,* February 1995*)* found that the report prepared under TA No. 1414-PHI resulted in the draft Clear Air Act, which meanwhile has been shelved, and an agreement with local oil companies to market unleaded gasoline which has been implemented.

2. Degree of Recipient Agency Involvement in Technical Assistance Design

6. The EA was apparently involved in designing the TA and endorsed its final form although its comments were not available to the Postevaluation Mission.

3. Quality and Adequacy of Physical Inputs Provided

7. Equipment was ordered and used by the consultants to carry out monitoring activities and analyses as intended. In addition, a display board for public awareness purposes was included in the TA. However, it seems that this was decided without analyzing the effectiveness of this tool compared with other public awareness measures such as mass media campaigns. Moreover, the board went out of operation shortly after installation; thus, it not only fails to serve its purpose but is counterproductive as it creates negative publicity. Apart from a lack of resources to operate and maintain the board, the discontinuation of automatic ambient monitoring for which the board was laid out, defeats its purpose.

4. Terms of Reference of Consultants/Resource Persons

8. The terms of reference (TOR) were sufficiently detailed, although requirements for institutional analysis were rather broad. However, they were translated into an adequate work plan in the Inception Report. The time frame defined in the TOR was rather tight and did not take into account requirements for customs clearance for equipment. The equipment was unrealistically expected to operate during the first four months after the TA's commencement.

B. Engagement of Consultants and/or Resource Persons

9. Consultants were engaged in accordance with the Bank's *Guidelines on the Use of Consultants.* The identification process started within 15 calendar days of the approval of the approval of the TA. Contract negotiations were concluded in April 1991. Services were anticipated to commence in January 1991, which was not realistic. The timing of the Mission was not ideal insofar as emission levels are lower during the rainy season, and monitoring results did not reflect peak levels. However, this situation did not have a significant adverse effect on the overall performance and outcome of the TA.

C. Organization and Management

10. The approach of the study was reasonable and followed the TOR. The Inception Report could have been improved by adopting a structure that delineates strategy/overall targets, detailed work plan, suggested/accepted changes to original TOR, status report on activities (planned versus actual), and initial findings. This would have enhanced the clarity of the approach taken and progress made by the consultants. Appropriate flexibility was exercised in extending the time frame to increase the quality of collected monitoring data. However, advance planning for the importation of the first batch of equipment was inadequate.

D. Implementation Schedule and Financing Arrangements

11. The TA was approved in November 1990 and was expected to start in January 1991 for a duration of eight months. Actual implementation started with a delay of five months in June 1991 and ended in July 1992, i.e., six months after the expected date, thus extending total project duration by six months. The delays were caused by customs clearance procedures for equipment importation as well as the eruption of Mt. Pinatubo, the effects of which required the attention of EA staff.

12. The budget amounted to $830,000, consisting of foreign currency cost of $720,000 and local currency cost of $110,000. The actual cost amounted to $828,671.60[5] with an overrun of local currency cost by around $30,000 equivalent and an approximately equivalent saving on the foreign currency side. As per consultants' contract, cost estimates for remuneration amounted to $333,116, but eventually totaled $405,909 because of an increase in person-months of services provided. In contrast with the expenditure for consultants' services, the projected equipment costs were lower than actual expenditures. Cost estimates, revisions, and actual expenditures are compared in Appendix 1. Contract variations were made on the basis of requisite approvals.

13. The EA's inputs specified in the TA agreement were provided as planned (see Appendix 2). One requirement of the TA, namely continuous operation of monitoring equipment, was not complied with for lack of financial resources for maintenance and operations.

E. Supervision

14. Because the TA is in Manila, contacts between the Bank staff, consultants, and EA were facilitated. 8ank supervision was adequate, including the involvement of the department responsible for implementing the program loan. The first tripartite meeting served, inter alia, as a forum for discussing and agreeing on requisite changes to the staffing table, which were implemented. Subsequent tripartite meetings were expanded to include participants other than those concerned with TA implementation so as to disseminate the findings of the study.

III. EVALUATION OF OUTPUTS AND IMPACT

A. Adequacy and Quality of Reports and/or Services Provided

15. The overall quality of the reports is acceptable as far as level of detail and technical content of monitoring activities are concerned: air pollution levels were quantified, confirming trends observed in earlier studies, and statistics on other, so far unquantified pollutants, were added. The Mission was informed that these data stimulated the debate on pollution standards and contributed to the revision of Implementing Rules and Regulations to Presidential Decree 1181 on Motor Vehicle Pollution Control to reflect national requirements, which are not as stringent as previously applied US standards.

16. For the recommendations, TOR required the review of a specified set of immediate and long-term measures. The consultants did not follow this, apparently in verbal agreement with

[5] The Technical Assistance Completion Report (TCR) indicates total actual cost amounting to $821,901.01. The discrepancy of $6,770.59 is due to the invoice for receptor modelling analysis submitted in June 1993.

the responsible Bank staff. Appendix 3 provides a status report on TOR requirements compared with recommendations made in the final report. In most instances, recommendations were rather indicative, without proposing concrete action plans or details on implementation and investment costs. Moreover, the final report failed to include public awareness measures as part of the follow-up action to be taken, thus ignoring their importance for inducing changes in fuel consumption and driving patterns. On the other hand, the report went beyond TOR and covered motorcycles, traffic operations, and road maintenance issues. Recommendations on the reduction of lead content in gasoline were implemented, and the Mission was informed that sulphur reductions are currently under review.

B. Training/Transfer of Technology

17. Staff of EA and of the National Capital Region (NCR) were trained to operate manual monitoring equipment and collect data required by the consultants for their analysis. The training was not based on a training needs assessment and did not aim at developing skills relevant to institutional requirements, but it was adequate for implementing the TA.

C. Institution Building

18. The TA was expected to carry out an analysis of institutional issues, but did not intend to implement institutional changes. Information in the Interim and Final Reports could have been improved by presenting a structured analysis of current status, institutional problems, consequences of these shortcomings, institutional and political constraints to changing the institutional framework, and recommended institutional changes. Instead, the analysis is less clearly structured, and thus does not provide a transparent overview of the institutional framework and its difficulties. Recommendations suggest an institutional setup for so-called program implementation rather than focusing on the permanent institutional framework and its requirements.

19. Some capacity-building requirements were implicit in the TA: equipment was procured and staff trained by the consultants were supposed to continue with ambient monitoring activities. No provisions were made for integrating these activities in the EA's or NCR's work program to ensure their sustainability. Consequently, monitoring stations faced problems of availability of sites (many sites were conceived as temporary stations only) and spare parts, and financing of operation and maintenance costs. Thus, equipment provided under the TA is no longer in place.

D. Performance of Consultants

20. The consultants' performance was rated satisfactory in the Technical Assistance Completion Report (TCR). Some counterpart staff observed, however, that there could have been a greater transfer of knowledge through closer cooperation and joint undertaking of work assignments.

IV. CONCLUSIONS

A. Key Issues

21. One of the key concerns lies with the project approach. At various instances in the consultants' reports, the tripartite meetings, and the TCR, the importance of regular air quality monitoring was emphasized. Nonetheless, the TA opted to aim at providing advisory services by carrying out monitoring activities, while entailing implicit capacity-building targets. Consequences are manifold: the impact of advisory services always assumes and depends on government's readiness to decide and implement recommendations. More importantly, failing to conceptualize and design a capacity-building component entails lack of planning (analysis of institutional weaknesses, needs assessment, commitment and actual inputs to maintain and operate equipment and facilities after project completion) and results in a lack of sustainability where the future of project inputs, hardware and software, is not guaranteed.

B. Overall Assessment

22. The TA provided concerned authorities with quantified air pollution data which stimulated national policy discussions. However, it did not meet the expectations in terms of providing an appropriate strategy including short-term and medium-term measures to improve air quality. The approach of the TA did not recognize capacity building needs but assumed that requisite action would be automatically taken on part of the Government. Overall, the TA is rated partly successful.

C. Lessons Learned

23. The TA has shown the importance of a project's approach on its outcome. A clear differentiation is required between direct advisory services, i.e., where consultants are recruited to carry out a survey and provide recommendations for follow-up action, and capacity-building projects. The earlier approach should be chosen only if the readiness and ability to take requisite decisions and implement them exist. Capacity-building targets should be set on the basis of institutional analysis and capacities anticipated to exist at the end of the project should be explicitly defined.

D. Follow-up Actions and Recommendations

24. The TA was already followed by several other activities (see pare. 4), the last of which, i.e., a staff consultant assisting in the preparation of a possible loan proposal, is still ongoing. Therefore, no follow-up action is indicated.