CLASSIFICATION

PROJECT EVALUATION SUMMARY (PES) – PART I

Report Control Symbol U-447

1. PROJECT TITLE: PD-AAN-871
ISN 33177

Wastestreams and Integrated Resource Recovery Systems in Developing Countries

2. PROJECT NUMBER: 936-1406

3. MISSION/AID/W OFFICE: S&T/MD/RRD

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 8310
9-26-83

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

5. KEY PROJECT IMPLEMENTATION DATES

A. First PRO-AG or Equivalent	B. Final Obligation Expected	C. Final Input Delivery
FY 81	FY 83	FY 83

6. ESTIMATED PROJECT FUNDING

A. Total $ 53,000

B. U.S. $

7. PERIOD COVERED BY EVALUATION

From (month/yr.) 7/81

To (month/yr.) 12/82

Date of Evaluation Review 8/83

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
Project completed by S&T/MD/RRD (formerly DS/UD)		

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or ☐ Change Implementation Plan
- C. ☐ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

Eric Chetwynd, Jr., Chief, S&T/MD/RRD
Alan Carroll, S&T/MD/RRD

12. Mission/AID/W Office Director Approval

Signature

Typed Name: Jerome T. French, S&T/MD

Date: 9/26/83

AID 1330-15 (3-78)

PDAAN871

13. Summary

The purpose of the project was to research the potential for improving public health in medium-sized cities by means of financially viable integrated waste recovery systems producing useful commercial products. This purpose has been achieved; the research has been completed and findings published in the form of two reports: a state of the art overview of conventional and non-conventional approaches to integrated resource recovery (IRR) and an analysis of IRR's applicability in a medium-sized LDC city (Tacloban, Philippines).

The goal of the project was to explore the feasibility of using integrated resource recovery to strengthen the capacity of medium-sized cities to dispose of and utilize waste for productive purposes. The completed research reports have enabled AID to draw useful conclusions regarding the feasibility of IRR. First, integrated approaches to waste recovery are technically feasible. Second, adverse market conditions and institutional weakness have severely limited practical application of IRR. Third, LDC medium-sized cities tend to lack the staff to operate and maintain IRR systems; in addition it is very difficult to overcome the strong sectoral orientation at the municipal level. Fourth, sectoral resource recovery projects are feasible in LDC cities, especially if market conditions create adequate demand for recovered products. (See 22. Lessons Learned.)

A joint AID-IBRD workshop was held in May 1983 to review this project's final conclusions. The project and workshop have together contributed to the developmental literature in this field. Tacloban, the LDC city that was the focus of this case study has benefited by utilizing a number of study findings to improve its waste recovery techniques.

14. Evaluation Methodology

The key reason for the evaluation is to extract from the project lessons which may be useful for future program or project development. The evaluation was conducted through interviews with project participants and a joint AID-World Bank workshop.

14. External Factors

The site of the case study was changed from Baruch in Gujarat State, India, to Tacloban City in the Philippines, because of overlap with an IBRD project at the Baruch site. This change had both good and bad effects on the management of the project but did not significantly influence the substance or quality of the final reports. On the negative side, dropping India meant losing direct on-site supervision over the case study by the Contractor's key principal, Peter Rogers, who was spending six months in India at the same time on another project. In addition, because the switch to the Philippines came after a delay of one year, the project lost the original consultant who was to have done the case study, a person highly qualified and familiar with India. Finally, of course, the year's delay cost a significant amount of money in wasted staff time.

On the positive side, the Indian government had insisted that the case study focus on villages as well as cities. If the case study had proceeded in

India, it would have involved dividing the project site between a village and a city, which would have been unweildy and might have confused the focus and diluted the value of the project. Also, the switch to Tacloban offered an opportunity for immediate implementation of some of the case study's recommendations through S&T/MD/RRD's Managing Energy and Resource Efficient Cities (MEREC) project already being carried out there. Some of the sectoral projects recomended in the study have in fact been incorporated into the Tacloban MEREC work program. See Beneficiaries (No. 20 below).

16. Inputs

The case study lost the services of the original consultant, and his replacement was not as familiar with the Philippines as the first one had been with India. However, the second consultant was technically competent, and he produced a good report.

The City of Tacloban failed to deliver to the consultant the amount of logistical support and orientation that it was supposed to. The consultant was handicapped initially by difficulties in contacting the appropriate local agencies and later on by lack of office space, secretarial support, transportation and other services. The source of the problem was lack of cooperation from the City Administrator. Despite these difficulties, the consultant did establish a good relationship with the City's General Services' and Engineer's Offices and was able to carry out a satisfactory amount of research.

17. Outputs

The Contractor produced final products of good quality. These were a state of the art report on integrated resource recovery (IRR) and a case study report on IRR feasibility in Tacloban City, Philippines. Also, as required, the Contractor held a workshop in Tacloban to share the results of the study with local officials and participated in a workshop in Washington to review the findings with AID and IBRD staff.

18. Purpose

This was essentially a research project whose purpose was to study the potential for improving public health in medium-sized cities by means of financially viable, integrated waste recovery systems which produce useful commercial products. This purpose has been achieved through 1) an overview of available approaches, their technical soundness, and their financial and institutional requirements, and 2) a case study of integrated resource recovery's applicability to a fairly typical, fast-growing medium-sized LDC city. See Lessons Learned (No. 22 below).

19. Goal

The goal of the project was to explore the feasibility of using integrated resource recovery to strengthen the capacity of medium-sized cities to dispose and make productive uses of increasing amounts of waste generated by rapid population and economic growth. The reports prepared by the Contractor provided enough information to enable AID to draw useful conclusions about the feasibility of IRR. See Lessons Learned (No. 22 below).

20. Beneficiaries

1. AID: AID's principal benefit from this project was information enabling it to judge whether additional investments in integrated resource recovery for medium-sized LDC cities are worthwhile (see Lessons Learned, No. 22 below). The two technical reports produced by the Contractor will receive selective distribution.

2. Tacloban: The City of Tacloban has incorporated several of the sectoral resource recovery projects recommended by the Contractor into its Managing Energy and Resource Efficient Cities (MEREC) work program. MEREC, another S&T/MD/RRD project being carried out in Tacloban, includes biogas digesters, oxidation ponds, a landfill, and pushcarts for waste collection. A substantial amount of technical information in the IRR reports is being used by the City to carry out these projects. The studies may also serve as a basis for future resource recovery activities in Tacloban.

3. Philippines and Global: The reports are being distributed to national government agencies in the Philippines, including the National Environmental Protection Council and the Ministries of Energy and Human Settlements. The reports will also become part of the development literature on resource recovery through AID's Development Utilization and Information Service (DIU).

21. Unplanned Effects

Not pertinent at this time.

22. Lessons Learned

A joint AID-IBRD workshop was held at AID in May 1983 to review this project's final conclusions and obtain an interim report on IBRD's Global Pilot Integrated Resource Recovery Project. The key conclusions of the AID project and the workshop are:

1. Integrated approaches to waste recovery are technically feasible.

2. Practical application of truly integrated (as opposed to sectoral) approaches has been severely limited by adverse financial conditions (market prices of resource recovery products too low) and by institutional difficulties.

3. LDC medium-sized cities tend to lack the institutional capacity to establish and maintain integrated resource recovery systems. Municipal staffs do not have the manpower or skills to operate the often complex integrated systems; in addition, it is extremely difficult to overcome the strong tradition of sectoral operation at the municipal level.

4. None of the integrated resource recovery approaches reviewed in the state-of-the-art paper were feasible in Tacloban, but several sectoral projects have been included in the city's MEREC project. Further, sectoral resource recovery activities such as composting or recycling may be feasible in Tacloban if demand for the products increases.

5. The IBRD is proceeding with its resource recovery program but has settled for more traditional single sector waste disposal and recovery methods.

23. Special Comments

This is an example of an exploratory project which, for a relatively modest cost ($53,000), has given AID a solid basis for avoiding further investments in what appeared to be a fruitful field, pending improvements in its financial and institutional feasibility.