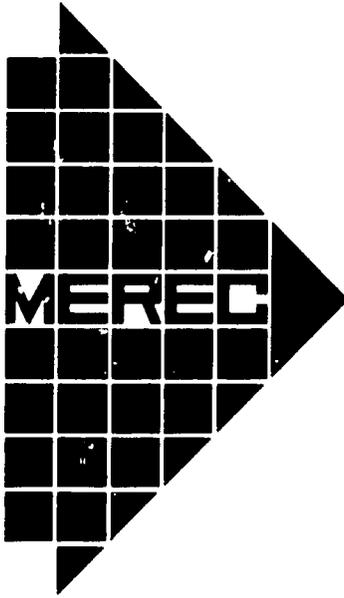


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1983 56159



1983 ANNUAL REPORT

MANAGING ENERGY AND RESOURCE EFFICIENT CITIES

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

BUREAU FOR SCIENCE AND TECHNOLOGY

OFFICE OF MULTISECTORAL DEVELOPMENT

REGIONAL AND RURAL DEVELOPMENT DIVISION

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INTRODUCTION

This is the first summary report for the activities of the Managing Energy and Resource Efficient Cities (MEREC) program. It focuses on activities during the fifteen months ending in December 1983.

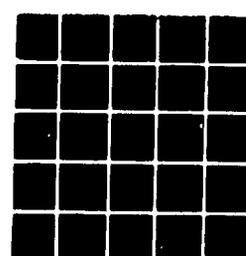
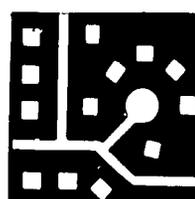
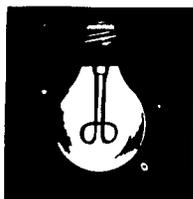
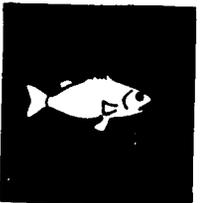
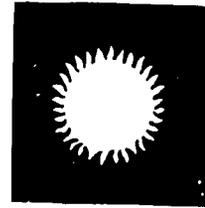
An energy resource management initiative of the U.S. Agency for International Development (AID), MEREC began as an experiment in Tacloban, Philippines. That was over two years ago. Now, based on the success of the Tacloban demonstration, MEREC has broadened the scope of its efforts to include Guarda, Portugal, and Phuket, Thailand.

In retrospect, many positive things have happened since MEREC began in 1981. Yet this report is not just a look back at what has been accomplished, but also a look ahead to the challenges that MEREC can help cities in developing countries face in the 1980s. These challenges are many. They require dealing with the problems and opportunities of resources of many types: land, water, transportation, wastes, power sources, fuels, housing. The ultimate challenge is to help people find better ways to manage what they have.

1983 marked the first full year of the Tennessee Valley Authority's (TVA) involvement in MEREC as contractor for the program. As such TVA staff in the Developmental Planning Section—in conjunction with AID staff and private consultants—provides a broad range of technical assistance to MEREC cities. In addition, the TVA staff manages the project for AID, and maintains the MEREC Information System (MIS).

Briefly, in 1983 MEREC staff: continued activities in Tacloban, moving the project from the planning to the implementation phase; developed a monitoring program for Tacloban and published a monitoring handbook; introduced MEREC to Portugal and Thailand; wrote and published an introductory brochure and a brochure explaining how to launch a MEREC effort, and provided Portuguese and Thai translations of the MEREC brochures. Samples of the various brochures have been included in the annual report folder.

In years ahead, AID and TVA will concentrate on broadening the implementation of MEREC in Tacloban, evaluating the impact of MEREC there, and completing the planning phase in Guarda and Phuket. MEREC initiatives have already captured the imagination of government representatives in Sri Lanka, Indonesia, Rwanda, and Peru. That suggests the opportunity exists to extend the MEREC program to other countries and regions should additional funds become available.



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OVERVIEW

Managing Energy and Resource Efficient Cities (MEREC) is a project of the U.S. Agency for International Development. 1983 was the first full year of operation for MEREC, which was pretested in Tacloban, Philippine Islands, in 1981-82. Also, 1983 was the first full year of MEREC involvement for the Tennessee Valley Authority (TVA), the contractor for the project. This report summarizes the activities and progress of both the AID and TVA technical specialists and consultants, and those of the MEREC communities. MEREC milestones for the first 15 months of the project are noted in the chart on page 3.

PURPOSE

The primary purpose of MEREC is to identify, demonstrate, refine, and promote means for increasing energy and resource efficiency in secondary (medium size) cities in developing countries. By focusing on secondary cities, MEREC concentrates on cities in which basic growth patterns are emerging. In these cities transportation, waste disposal, water systems, and electric power systems are in the early stages of development and it is not too late to influence the design, layout, and material content of houses, buildings, and other structures.

PHASES

Each individual MEREC city effort has three broad phases: startup, planning, and implementation/continuation. Tacloban, Philippines, the first MEREC city, is now in the implementation/continuation phase. The other project cities, Guarda, Portugal, and Phuket, Thailand, have completed the startup phase and are entering the planning phase.

PROJECT MANAGEMENT

In 1983, TVA and several private consultants, along with AID staff, provided technical assistance to the MEREC cities. TVA is responsible for overall project management, including refining the project design, submitting progress reports, and approving budgets and expenditures. In its management role, TVA maintains the MEREC Information System (MIS) which collects, organizes, and disseminates state-of-the-art technical information; collects and analyzes data from the cities; and collects information about technical experts, MEREC city contracts, and MEREC-oriented training opportunities. The material contained in the MIS will be available to any city interested in more efficient use of locally scarce resources.

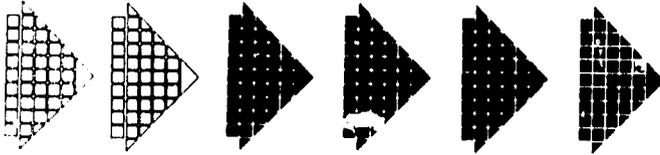
PUBLICATIONS

Included in the annual report folder are three publications which were produced in 1983 to aid in the operation of MEREC and to disseminate MEREC information: an introductory handbook (also produced in the Portuguese and Thai languages), a brochure explaining how to launch a MEREC effort, and a monitoring handbook for MEREC in Tacloban.

Of particular importance is the MEREC monitoring handbook which provides Tacloban with the tools for measuring the energy conserved and the efficient management of critical resources. This handbook not only provides the tools for monitoring MEREC; the monitoring techniques developed for Tacloban can be used in a wide range of other city activities.

1984 OUTLOOK

In 1984 AID and TVA will use their experience to assist Tacloban in additional implementation activities and to evaluate the impact of MEREC, complete planning activities in Thailand and Portugal, and begin implementation activities in the two new MEREC cities.



MEREC MILESTONES

GENERAL	FY 1983												FY 1984		
	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Develop with MD/RRD mechanism for coordination with AID Regional Bureau, Field Missions, & Demonstration Cities			⊙												
Develop Project Monitoring Procedures															⊙
NEAR EAST															
EGYPT															
Prepare Proposal for MEREC -Egypt for Presentation to Mission			⊙												
Present MEREC Proposal to Mission- Egypt				⊙											
PORTUGAL-GUARDA															
Initial Field Visit Select Demonstrations										◻					
Project Grant Agreement Signed											⊙				
MEREC Core Design Revised												⊙			
Launch MEREC Demonstration													◻		
Organization & Data Collection-Workshop															◻
ASIA															
PHILLIPINES-TACLOBAN															
Field Visit to Review & Revise Action Plans & Budgets															◻
Sign Project Grant Agreement															⊙
Developed Project Monitoring Handbook															⊙
THAILAND-PHUKET															
Initial Field Visit-Select Demonstration															◻
MEREC Core Design Revised															⊙
Launch MEREC Demonstration															◻
Project Grant Agreement Signed															⊙
Organization & Data Collection Workshop															◻

◻ Field Activity ⊙ Knoxville Activity

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MEREC MANAGEMENT ACTIVITIES

TVA management and technical support for the MEREC project began in September 1982. TVA's involvement in MEREC is based on a Participating Agency Service Agreement (PASA) between AID and TVA signed in 1983. The PASA provides that a project workplan be prepared based on the scope of work which is outlined in the PASA. Initially, the workplan focused on activities required to implement the MEREC process in three countries (Philippines, Egypt, and Indonesia) which were identified as potential participants. As field work proceeded, AID determined that it was more feasible to introduce MEREC in Thailand and Portugal than in Egypt and Indonesia. The workplan was revised to reflect the participation of these countries. Additional revisions to the workplan occurred as technical assistance requirements and local needs and objectives were refined.

Current workplan activities shown on page 9 include such major action items as project agreements, workshops, case studies, and reports. Various field activities are also illustrated on page 9. As indicated, the first fifteen months of TVA's participation in MEREC were characterized by a range of startup and planning activities in the MEREC cities. In Thailand and Portugal, staff were engaged in selecting MEREC demonstration cities, developing project agreements, and conducting initial workshops. A final planning workshop was held in the pretest city of Tacloban, enabling the MEREC project there to move into the implementation phase. Establishing procedures and initiating the project implementation then became the focus of TVA staff.

Concurrent to field activities, TVA staff provided the expertise for documenting and disseminating MEREC activities. A major staff responsibility is the MEREC Information System, which is designed to assure that state of the art technical information is maintained in a way which is accessible to technical support specialists, the participating cities and countries, and interested parties (particularly from other developing countries). Dissemination activities also include preparation of frequent reports and specialized brochures, such as those included in the report folder.

Highlights of MEREC management activities can be summarized as: selection of two additional demonstration cities from a field of four candidate countries, development of monitoring procedures, and documentation and dissemination of MEREC information. Completion of this work involved five major field trips. The scope of management activities in specific areas is outlined below.



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SITE SELECTION

A major activity for the first year of the MEREC project was the selection of MEREC cities. Since the initial MEREC funding provided for three MEREC demonstrations, two cities were selected to join Tacloban, Philippines. TVA and AID staff established the following MEREC city criteria to select MEREC cities:

Local support--

- Key participants give high priority to MEREC.
- Local leaders are very interested in improving planning and management processes.
- Local officials are concerned about the efficient use of energy and resources.

Technical, administrative, and economic feasibility—

- An adequate administrative structure exists.
- Basic information requirements can be met.
- The potential demonstration city is willing and able to commit financial, technical, and administrative resources

Need—

- Clear need for greater energy/resource efficiency is documented.
- Other ongoing development activity will be reinforced by MEREC.
- The potential for replication in other cities of the country is promising.

Using the MEREC city criteria, TVA staff and AID officials investigated opportunities for MEREC in several countries.

PHILIPPINES. As an extension of a trip to Tacloban, in October 1982, the MEREC team was asked by USAID/Manila to visit Capiz Province and Roxas City, the Philippines, to investigate the possibility for a MEREC project in that community. A proposal to the USAID Mission was prepared which offered assistance in organizing a MEREC project for Capiz Province with funding for technical assistance and project implementation to be provided by the Mission. The proposal is under consideration.

EGYPT. With the help of a consultant, faculty of the Massachusetts Institute of Technology, and information furnished by AID/Washington, a discussion paper was prepared for introducing MEREC in Egypt in 1982. After assessing USAID/Cairo priorities, AID/Washington decided to delay introduction of MEREC in Egypt.



PORTUGAL. At the invitation of USAID/Lisbon, the MEREC team visited Portugal and investigated opportunities within the jurisdiction of the Comissao de Coordenagao da Regiao Centro (CCRC). After field visits and interviews with five of the candidate cities, including Viseu, Leiria, Mangualde, Senta, and Guarda, the city of Guarda was selected as the best location for a MEREC demonstration. The project agreement between USAID/Lisbon and the Portuguese government was signed in August with MEREC activities beginning in early October.

THAILAND. At the invitation of USAID/Bangkok, the MEREC team made trips to Thailand in May and June. The first trip involved extensive discussions with USAID, Thai Central Government, and university officials. Based on these meetings, USAID/Bangkok and the MEREC team concluded that a return visit would be necessary to complete discussions with key Thai Government officials and conduct field visits to candidate cities.

Using the MEREC selection criteria, the Ministry of Interior and USAID identified three cities for field visits. These were Udon Thani, Surat Thani, and Phuket City. Following the field visits which included meetings with provincial governors, city officials, and Ministry of Interior staff, the MEREC team recommended the selection of Phuket City as the best candidate for demonstrating MEREC in Thailand. The project agreement between USAID/Bangkok and the Royal Thi Government was signed in December 1983.

INDONESIA. At the invitation of USAID/Jakarta, the MEREC team visited Indonesia in January 1983. A series of discussions was held with USAID staff and Institute of Technology at Bandung faculty. Based on these discussions and other information obtained during this visit, a MEREC proposal for Indonesia was prepared by AID/Washington and submitted to USAID/Jakarta. USAID/Jakarta decided to delay participation in MEREC at this time.



MONITORING AND EVALUATION

MONITORING PROCEDURES. TVA has completed the final draft of the Tacloban monitoring handbook which will be used first in Tacloban. This new handbook outlines procedures for gathering data that can be used to measure (1) the completion of MEREC projects—implementation monitoring, (2) the use of MEREC projects to demonstrate resource management concepts—demonstration monitoring, and (3) the transfer of resource management concepts from the MEREC projects to citywide activities—citywide transfer monitoring. Data gathering activities will be initiated in 1984, and the data obtained will be placed on a microcomputer in Tacloban and a computer in the U.S. at TVA.

DOCUMENTATION AND DISSEMINATION

MEREC INFORMATION SYSTEM (MIS). The purpose of the MIS is to provide information on resource management and MEREC procedural experience to participants in a MEREC project. It serves as the key information resource for MEREC demonstration cities and for MEREC core staff and technical specialists. The two major thrusts of the MIS are establishing a MEREC library that focuses on resource management and disseminating information gained through experience in MEREC cities.

Dissemination. The MEREC experience is being incorporated into a TVA course on integrated resources management which will be offered to officials from Third World countries. The course is scheduled to be operational by mid-1984.

A member of the MEREC team presented a paper on the MEREC project in Tacloban at the *International Workshop on Technological Change and Urban Form*, University of Waterloo, Waterloo, Canada.

MEREC staff presented the MEREC experience in the Philippines and Thailand to a *Public Seminar on Conservation and Development in Third World Nations* at The University of Tennessee.

During December 1983, an article entitled *Managing Energy and Resource Efficient Cities* prepared by the staff was published in the Transportation Research Board's newsletter on transportation/land use planning in developing countries. This article focused on the MEREC approach to resource management.

MEREC Library. Professional librarians from the TVA Technical Library assisted in the development of a thesaurus for indexing MEREC information. Building on information provided by AID/Washington, a MEREC library has been established with a four-way cross-reference file. All MEREC publications have been examined and descriptions recorded for each. These library materials are available to the MEREC cities as well as to the MEREC staff.

The library references will be computerized so the bibliography can be retrieved by subject, country, author, editor, and title. In December 1983 the staff microcomputer, an IBM XT with 256 Kilobytes and a 10 Megabyte hard disk, was delivered. Developmental work then began on building a data base filing system for faster and easier retrieval of MEREC library files. As MEREC projects are implemented, the technical solutions will be documented and incorporated into the library. The library is serving as a key resource in transferring MEREC information and experiences among MEREC cities and other secondary cities with similar resource and energy concerns.



FIELD TRIPS AND FIELD ACTIVITY.

The field activities for the 15-month period are summarized below:

OCTOBER 1982 FIELD TRIP. Two TVA staff members, AID/Washington representatives, and a consultant traveled to the Philippines in October 1982 to develop budgets and workplans for the Tacloban sectors involved in MEREC. The workplans and budgets were completed and approved by AID/Washington, AID/Manila, and the city of Tacloban. At the invitation of USAID/Manila the team visited Roxas City and Capiz Province and submitted a proposal for a MEREC demonstration at the provincial level.

JANUARY 1983 FIELD TRIP. In a second field trip to the Philippines TVA staff and their consultants focused on the development of a monitoring system for MEREC in Tacloban. As a result of this trip, a monitoring handbook has been completed for Tacloban. In the second segment of the trip, the MEREC team spent one week in Indonesia developing a MEREC proposal for that country.

APRIL/MAY FIELD TRIP. The MEREC team returned to the Philippines in April to finalize the development of monitoring procedures and to review progress and problems with the Tacloban sector chiefs. A field trip to Thailand followed the Philippines activities, and discussions were initiated with the Thai government concerning MEREC in Thailand.

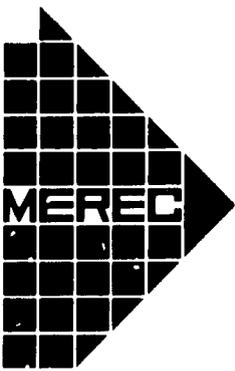
JUNE/JULY FIELD TRIP. The June/July field trip focused on the selection of new MEREC cities. The MEREC team, accompanied by Comissao De Coordenacao Da Regia Centro (CCRC) staff, visited five cities in Portugal and recommended Guarda as a new MEREC city. On a return visit to Thailand the MEREC selection team visited three Thai cities, accompanied by staff from the Ministry of Interior, and recommended Phuket for the MEREC project. Both Guarda and Phuket have been designated MEREC cities by USAID.

OCTOBER FIELD TRIP. During the October field trip, preparations were made in Phuket, Thailand, and Guarda, Portugal for the December organizational workshops, and staff made an onsite inspection of MEREC projects in Tacloban, Philippines. An energy conservation workshop was also conducted in Tacloban by a TVA engineer. Representatives of two local electric cooperatives participated in the four-day workshop.

DECEMBER FIELD TRIP. Workshops dominated the December field trip schedule. A major organizational workshop was held in Phuket, Thailand, involving local leaders, university officials, and representatives of the Central Government in Bangkok. Approximately 50 people attended the three-day workshop. The organizational workshop in Guarda, Portugal, was completed and critical resources were identified for further study. Activities in the Philippines focused on the preparation of a transportation study that is being prepared by a TVA transportation planner. Other activities in Tacloban focused on project monitoring.

MEREC WORKPLAN

ACTION ITEM	1983									1984									1985																
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
GENERAL																																			
DESIGN AND TEST LINE	[Timeline grid with symbols]																																		
- DEVELOP WITH WORLD MECHANISM FOR COORDINATION WITH ASU REGIONAL BUREAU, FIELD MISSIONS & DEMONSTRATION CITIES	[Timeline grid with symbols]																																		
- EVALUATION - CONDUCT MANAGEMENT REVIEW WITH AID WASHINGTON	[Timeline grid with symbols]																																		
- DEVELOP PROJECT MONITORING PROCEDURE	[Timeline grid with symbols]																																		
SUBMIT ANNUAL REPORTS	[Timeline grid with symbols]																																		
NEAR EAST																																			
EGYPT																																			
REVIEW MIT STUDIES & URBAN POLICY PAPER	[Timeline grid with symbols]																																		
PREPARE PROPOSAL FOR MEREC EGYPT FOR PRESENTATION TO MISSION	[Timeline grid with symbols]																																		
CONTRACT WITH CONSULTANT ON EGYPT	[Timeline grid with symbols]																																		
PRESENT MEREC PROPOSAL TO MRBAH EGYPT	[Timeline grid with symbols]																																		
PORTUGAL - GUARDA																																			
INITIAL FIELD VISIT - SELECT DEMONSTRATING PROJECT (GRANT AGREEMENT SIGNED)	[Timeline grid with symbols]																																		
MEREC CONCEPT DESIGN REVIEWED	[Timeline grid with symbols]																																		
LAUNCH MEREC DEMONSTRATION	[Timeline grid with symbols]																																		
ORGANIZATION AND DATA COLLECTION WORKSHOP	[Timeline grid with symbols]																																		
MIDTERM WORKSHOP	[Timeline grid with symbols]																																		
FINAL WORKSHOP	[Timeline grid with symbols]																																		
IMPLEMENTATION & MONITORING IMPACT	[Timeline grid with symbols]																																		
TECHNICAL ASSISTANCE AS REQUIRED FOR ACTION PLAN IMPLEMENTATION	[Timeline grid with symbols]																																		
CASE STUDY	[Timeline grid with symbols]																																		
ASIA																																			
PHILIPPINES - TAGLORAN																																			
FIELD VISIT TO REVIEW & REVISE ACTION PLAN & BUDGET	[Timeline grid with symbols]																																		
COMPLETE REVISIONS TO ACTION PLAN & BUDGET	[Timeline grid with symbols]																																		
SIGN PROJECT GRANT AGREEMENT	[Timeline grid with symbols]																																		
PROVIDE TECHNICAL ASSISTANCE AS REQUIRED FOR ACTION PLAN IMPLEMENTATION	[Timeline grid with symbols]																																		
CASE STUDY	[Timeline grid with symbols]																																		
THAILAND - PHUMET																																			
INITIAL FIELD VISIT - SELECT DEMONSTRATION PROJECT (GRANT AGREEMENT SIGNED)	[Timeline grid with symbols]																																		
MEREC CONCEPT DESIGN REVIEWED	[Timeline grid with symbols]																																		
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IMPLEMENTATION & MONITORING IMPACT	[Timeline grid with symbols]																																		
TECHNICAL ASSISTANCE AS REQUIRED FOR ACTION PLAN IMPLEMENTATION	[Timeline grid with symbols]																																		
CASE STUDY	[Timeline grid with symbols]																																		



KEY

- ACTIVITY △
- ACTIVITY ACCOMPLISHED ▲
- FIELD ACTIVITY ○
- WORKSHOP ⊠
- ANNUAL REPORT ⚠
- CASE STUDY ⚠
- EXTENDED EFFORT —

MANAGING ENERGY AND RESOURCE EFFICIENT CITIES

SEPTEMBER, 1983

TVA BUDGET

TVA expenditures for MEREC activities through September 30, 1983, are summarized below. Expenditures are generally consistent with the revised budget submitted as part of the March 1983 progress report. Travel expenses exceeded budget as a result of the second trip to Thailand to complete the MEREC city selection process and to gain project approval from USAID/Thailand and the Royal Thai Government.

The net underrun for the year of \$17,900 will be applied to FY 1984 project expenses.

TVA MEREC BUDGET (FY 1983)

	YTD SEPTEMBER 30	PASA BUDGET	REVISED BUDGET
Salaries	\$ 74,433	\$ 79,000	\$ 78,100
Benefits (30%) ¹	17,761	23,700	25,000
TVA Technical Specialists	6,364	10,500	4,600
Travel	50,008	30,220	43,400
Contracts	40,471	68,745	52,000
Other ²	6,209	5,200	7,000
TVA Overhead (15%) ³	36,884	32,605	39,900
	\$232,130	\$250,000 ⁴	\$250,000

¹Budgeted 30% but running approximately 24%.

²Includes materials, supplies, and reproduction.

³Budgeted at 15% but running approximately 16%.

⁴Rounded.

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The MEREC Cities

The three current MEREC cities provide an interesting contrast in culture and geography. The MEREC process has shown its adaptability to varying conditions and requirements as indicated in the following descriptions.

Tacloban, Philippines

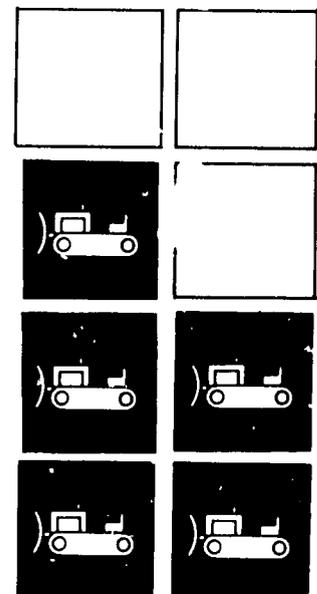
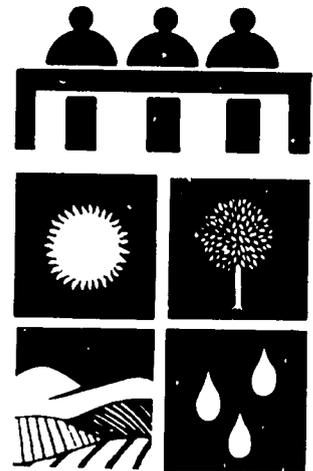
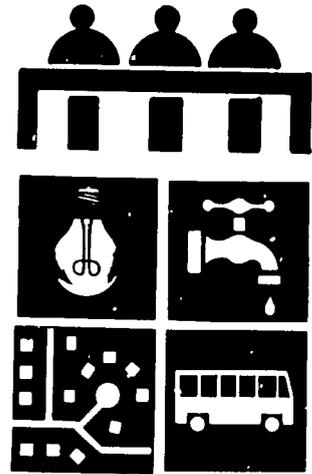
Tacloban, with a population of 103,433 in 1980, is the capital of Leyte Province. It is located in the northeast sector of the Island of Leyte and covers 1,770 hectares. Tacloban is the trade center of the province. Population, personal income, trade and commerce, education, and transportation are all experiencing growth. Major deterrents to growth, particularly industrial growth, are an expensive and unreliable supply of electricity, and a water system with a high level of unaccounted losses.

Tacloban is a part of the Eastern Visayas administrative and planning region, and is one of the three cities in the region. Only 20 percent of the region's population lives in urban areas, and agriculture, which employs 66 percent of the labor force, is very important to the region. The unemployment rate in 1980 was 10.5 percent. Tacloban has an effective and energetic city administration interested in improving the city. Much of the success of MEREC in Tacloban is due to the local leaders.

Tacloban has successfully completed the first two phases of the MEREC project—the startup phase and the planning phase. As a result of the work completed in these phases, Tacloban has an overall MEREC strategy, individual resource strategies for each sector, and action plans for each resource including projects identified for each city sector. Key projects in this first MEREC city are an energy/resource-efficient housing demonstration and an energy-efficient land use plan. In addition to completing the first two phases of the project, Tacloban has been involved in implementation for nine months. Accomplishments for the first year included:

- Implementation of a centralized waste collection system.
- Completion of an aerial photography project that provides data for future MEREC activities.
- Harvesting the first vegetables from the MEREC-sponsored urban gardens.
- Fielding of the initial energy-efficient waste collection teams.
- Completion of monitoring handbook and the beginning of project impact documentation.

The details concerning Tacloban's progress can be found in the *1983 Annual Report: Tacloban, Philippines* included in the reports folder. With the full commitment of Tacloban's mayor and city government, this Philippine city is moving toward the successful completion of the Tacloban MEREC project by the end of FY 1985.



01/

Guarda, Portugal

Guarda is located in central Portugal on the northeastern slopes of the Serra de Estrela approximately 120 kilometers from the western Atlantic coast. Located near the Mondego River, Guarda is in the Beira Alta province in the central region which encompasses almost one-third of Portugal.

The Council of Guarda has a population of 40,000, and socioeconomic conditions are somewhat poorer in the interior of Portugal, where Guarda is located, than other areas of the country. Guarda, which lost population in the years just prior to 1970, gained population between 1970 and 1976.

Guarda is one of 275 municipios in Portugal. The government of Portugal is centralized, and local governments control a relatively small share of public expenditures. Changes have recently occurred at the regional making technical assistance more available to local communities. GAT's (Offices of Technical Support), for example, are providing professionals to assist in the preparation of small construction and infrastructure projects in local communities.

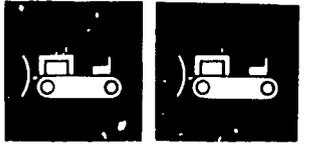
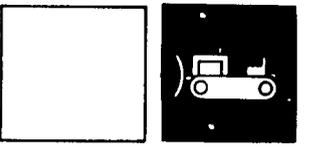
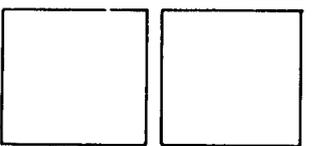
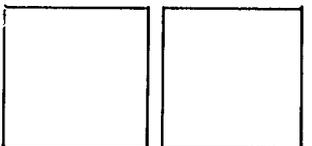
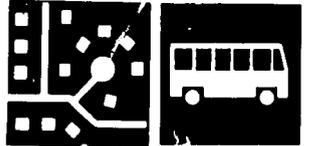
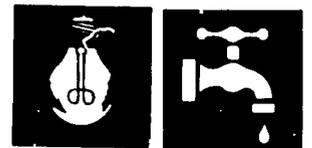
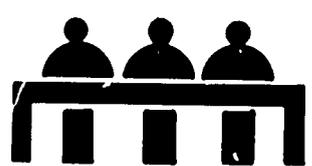
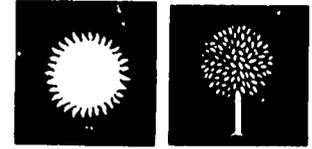
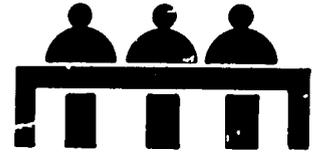
In August 1983 a MEREC project agreement was signed which obligates \$150,000 of AID funds for a project in Guarda with a completion date of September 30, 1985. The project agreement provides for TVA field visits to Guarda at three-month intervals to assist the city with all phases of the MEREC project.

The Comissao de Coordenagao da Regiao Centro (CCRC) is administering the grant funds and the project is being managed by the city of Guarda.

As a result of the organizational workshop held in December, local officials noted certain key problem areas and resources of concern. Problems included the high cost and shortage of water, the lack of an official land use plan, underutilization of local wood resources in new construction, an inadequate road network, and the need for energy conservation standards for new construction. Following the Guarda December workshop, central government representatives were briefed on the project and expressed interest in providing financial support for implementing selected energy and resource projects. In addition to the interest expressed in MEREC by Portugal's central government, other highlights of the MEREC project in Portugal include:

- Selection of Guarda as a MEREC city by the Government of Portugal and USAID.
- Signing of the Project Agreement for MEREC in Guarda on July 26, 1983.
- Completion of a MEREC startup workshop in Guarda during September.
- Translation of two MEREC publications, *MEREC: A Demonstration Project* and *Launching a MEREC Effort*, into Portuguese.
- Completion of the organizational workshop in Guarda in December during which local leaders identified resources of concern.

Guarda will proceed with MEREC planning and implementation activities in 1984. The key points in the 1984 work program will be to complete the planning phase, with project implementation scheduled to begin in July. Local, regional, and central government support for Guarda's MEREC project suggests a highly successful demonstration.



Phuket, Thailand

Phuket is Thailand's largest island and forms a province with a population of over 130,000. The island is linked to the mainland by a bridge and is served by air from Bangkok, Songkhla, and Singapore. There is also a developing tourist industry with a beach resort area about 15 kilometers from Phuket.

Phuket City located on the island is approximately 900 kilometers from Bangkok and equidistant (250 kilometers) from the southern tip of Burma, the northern tip of Malaysia, and the Thai city of Songkhla. Located on the Strait of Malacca, this MEREC city is in a region dominated by rain forests. Rubber and coconuts are important agricultural products of this area, which has a tropical monsoon climate.

On December 1, 1983, Ambassador John Gunther Dean traveled to Phuket to sign a MEREC project agreement which obligates \$250,000 of AID funds for planning and implementation of a project in Phuket with a project completion date of December 1, 1986. The agreement provides for TVA field visits to Phuket at approximately three-month intervals to assist the municipality with project management and technical support.

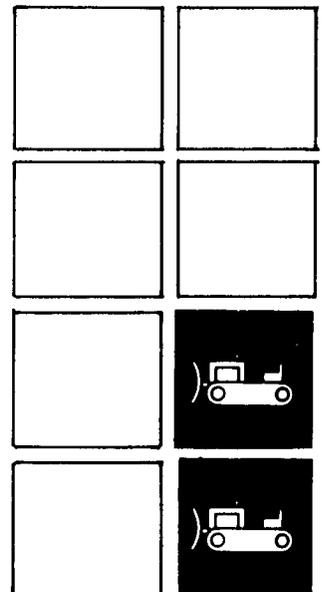
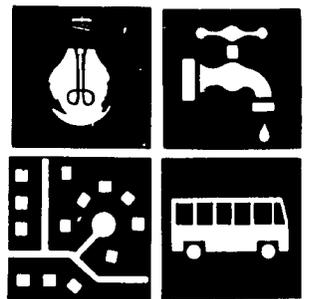
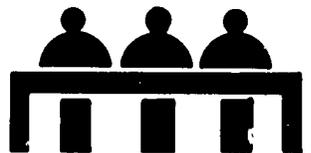
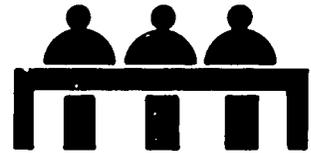
An organizational workshop was conducted in Phuket in early December with a mid-term workshop scheduled for March which will focus on development of resource strategy/action plans and tentative project plans. Project implementation activities are scheduled to begin in July 1984.

During the organizational workshop participants from municipal, provincial, and central government agencies and representatives from Prince of Songkla University identified specific resource problems and related opportunities. Some key problems/opportunities included tin mine lands that need reclaiming, water shortages, inadequate disposal of liquid and solid waste, and the opportunity for food and wood production.

Highlights of the MEREC project in Thailand for FY 1983 include:

- The selection of Phuket as a MEREC city by a USAID/Royal Thai Government selection team
- Signing of the Project Agreement which sets forth the roles and responsibilities of the participating organizations.
- Completion of the startup workshop in Phuket in October.
- Establishment of a formal agreement between Phuket City and Prince of Songkla University providing for university technical support of the MEREC project.
- Translation of two MEREC publications, *MEREC: A Demonstration Project* and *Launching a MEREC Effort*, into Thai.
- Completion of the organizational workshop in Phuket in December during which local leaders identified resources of concern and organized work groups to proceed with MEREC planning activities.

Phuket appears to be an excellent demonstration city having the commitment and support of municipal, provincial, and the central government, as well as the Prince of Songkla University.



SUMMARY AND CONCLUSIONS

The MEREC project is proceeding according to the project workplan and moving toward successful completion. Tacloban, Philippines, is the only MEREC city in the implementation phase while the two other MEREC cities, Phuket, Thailand, and Guarda, Portugal, are in the planning phase. All three cities have the critical elements needed for success in MEREC: (1) strong local support, (2) adequate technical and administrative skills at the local level, and (3) a clear need for MEREC.

In 1984, a MEREC monitoring system will be further developed. That system will provide detailed data for each city concerning the local MEREC projects. The Tacloban monitoring handbook is ready for use; the monitoring handbooks in the other cities will be prepared during 1984.

Reviewing the first year of MEREC, key highlights in this energy resource management project were implementation activities in Tacloban, and the selection of Phuket, Thailand, and Guarda, Portugal as MEREC cities.

For the next 12 months of the project TVA will focus attention on certain key activities:

- Implementation of MEREC projects in Tacloban, Philippines.
- Completion of the planning workshops in Phuket, Thailand, and Guarda, Portugal.
- Initiation of project implementation in Phuket, Thailand, and Guarda, Portugal.
- Continued monitoring of MEREC activities in all three demonstration communities.
- Dissemination of MEREC information to cities pursuing energy and resource management projects.

During the first 15 months of MEREC, interest in this project has been expressed by government representatives from Sri Lanka, Indonesia, Rwanda, and Peru. This suggests the opportunity for extending the project to other regions should additional funds become available.

After completing the first year and three months of this project, it is important to identify the key lessons learned thus far in the MEREC project.

- Secondary cities in developing countries *can develop and implement resource management plans*.
- The MEREC concept is *flexible enough* to work in a country with a centralized government or a country with dispersed governmental power.
- A high level of *integration* will occur in resource management projects which utilized the MEREC interactive group process.
- MEREC acts as a *catalyst* in developing links between regional universities and secondary cities.
- Project *institutionalization* takes place in participating cities and regional organizations.

In each of the MEREC cities certain resources were identified as critical. The resources of concern in each city are water, solid waste, urban land, and energy. From this we believe the MEREC experience will be highly relevant to most secondary cities experiencing rapid growth.