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**MANAGING ENERGY- AND
RESOURCE-EFFICIENT CITIES**

A study of an Agency for International Development
project in the Philippines and Thailand

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CHRONOLOGY OF THE MEREC PROJECT

1981

- April-May Feasibility of MEREC was questioned by the Africa and Latin America Bureaus in A.I.D.
- May The city of Tacloban was recommended to Eric Chetwynd at A.I.D. as a demonstration site for the MEREC project
- May 18 USAID Manila decides to participate. ProAg is drafted.
- May 21 A.I.D. in Washington (Human Resource Sector Committee) questions the MEREC project. Is MEREC possible in places where no skilled manpower is available?
- May 28 USAID Manila commits to identifying a collaborative agency.
- June 29 Coopers and Lybrand are selected as consultants because PADCO's John Herbert cannot participate.
- July 25 USAID Manila requests \$200,000 from Small Activities Fund for field activities to hire Peace Corps volunteer Doug Haliday to monitor Tacloban project.
- July 31 USAID Manila obligates \$94,000 to the Philippine government to cover the local costs of MEREC. A Scope of Work agreement is developed with USAID and the Philippine government (GOP) during Chetwynd's TDY. The A.I.D./Washington contract is based on Cooper and Lybrand draft.
- August 4 ProAg agreement is cleared by USAID and sent to the NEDA (National Economic and Development Authority).

- August 5 American embassy in the Philippines requests the Lawrence Berkeley Lab report "Conserving Urbanism in the Third World."
- August 7 A.I.D./Washington says ProAg must be signed so A.I.D.'s Section 106 category applies. It is behind schedule.
- August 10 ProAg is presented to the NEDA for assistance.
- August 7 USAID Manila confirms that twenty-five mayors from the Philippines will attend conference in the United States.
- August 28 Plans are made for Mayor Obdulia Cinco to visit Davis, California.
- September 1 Delay in travel of mayors. Changes must be made.
- September 2 A.I.D./ Washington requires that Coopers & Lybrand IQC Workorder be signed. Larry Rezvin contacts the Tacloban officials and he and Andrew Goddard help Tacloban officials draft their situation report.
- September 7 MEREC project proposal for DAP, Inc. is sent to A.I.D. in Washington.
- September 10 Cooper and Lybrand's Luis Dias arrives in Manila
- September 11 ProAg is signed. A.I.D./Washington agrees to contribute \$94,000.
- November 16 Conchita Silva of USAID Manila is contacted by Cooper & Lybrand.
- October 22-23 Tacloban MEREC subproject workshops.
- October 26 Cable says Tacloban workshop is effective.
- November 14 Avrom Bendavidval and DAP, Inc. wins contract for the MEREC Project proposal and design.
- November 26 Cooper and Lybrand contacts Lilia Casanova for travel to

Washington workshop.

December 3 A.I.D./Washington officials are invited to the workshop given by Eric Chetwynd in the Science & Technology Bureau at A.I.D. in Washington. Pre-test in Tacloban is reviewed (participation is requested in the PID Review) December 10-11. D.C. workshop for Tacloban officials takes place.

December 2 D.C. workshop was productive. Decision made to hold a final workshop in Tacloban on January 20-21, 1982.

1982

September 3 Letter about Tacloban Pre-test Audit.

November 22-23 Visit to the Tennessee Valley Authority (TVA) to explore their resources and facilities.

1983

January 28 Letter from Avrom Bendavidval to Jim Gober, MEREC Project Manager at TVA.

February 8 Review of SES proposal for monitoring and evaluation activities.

February 18 Letter to Avrom Bendavidval to Alan Carroll. MEREC Core Design Discussion Paper. ProAg Agreement between GOP and USA. Selection of Phuket.

February 22 Letter from the NESDB (in Thailand) to A.I.D./Washington. Interest in the MEREC project.

July 5 USAID Bangkok approved \$250,000.00 for the MEREC project. ProAg already drafted and under discussion. USAID Bangkok requires use of Fiscal Year 83 category #106 funds. Carroll says feasibility depends on USAID

Bangkok bypassing the Thai Dept of Technical and Economic Cooperation (DTEC) which is the implementing agency and who is notorious for long delays.

Cooperation agreements for technical assistance in MEREC is made between MEREC Prince of Songkla University (PSU) and the municipality of Phuket.

1984

- January 18-20 Technical Assistance in Phuket.
- February 1-3
- January 27-29 Technical Assistance at Prince of Songlka University (PSU)
- February 7-9
- February 5 Exploration of funding possibilities. Gober to Bendavidval
- February 14 Bendavidval writes memorandum to John O'Donnell of A.I.D./Washington regarding A.I.D.'s postponement of one-third of scheduled FY 1984 MEREC obligation for TVA.
- May 21 - June 1 List of MEREC conference attendees
- August 9 Bendavidval to A.I.D. and TVA Re: Conclusions of MEREC Management Review meeting 8/8/84
- September 18 Letter from Gober to A.I.D./Washington Re: Elimination of future Washington workshops

1985

- July 5 Information and management review session. Critical issues about the MEREC project

1987

- February 2 Letter from John Cartwright of TVA to Eric Chetwynd at

A.I.D./Washington. PASA contract extended to 3/3/88 to allow follow-up on 9/87 Manila conference (for technical transfer).

Spring 1987 MEREC Request for Approval: Communications Produced to be funded through the Small Activities Fund.

1989

September MEREC videotape produced by TVA is released and distributed.

STATEMENT OF PURPOSE

The purpose of this thesis is to explore a method of project design and implementation that was used in the Agency for International Development in the Science and Technology Bureau. The ultimate goal of this project, called, "Managing Energy and Resource Efficient Cities", was to show intermediate-sized and small cities in the Third World how to use dynamic participatory strategic planning. In the case of Tacloban, Philippines and Phuket, Thailand, participatory planning was for the purpose of managing resources and surviving energy crunches that were capable of affecting smaller cities and towns rather than primate cities. The ultimate value and success of this relatively small project depended on decisions that were made in A.I.D./Washington, although further progress of the MEREK model occurred in Thailand because of the local institution-building activities. The fact that the MEREK project was more sustainable in Thailand points to the fact that building the capacity of the local institutions was an important factor in project success in terms of sustainability.

I am investigating the Agency for International Development's decision-making process in response to the field activities where local institutional needs were assessed. Even though the decision-making process in Washington was basically a "top-down" approach to finding out where development was needed,

the MEREC project was unconventional in that a "bottom-up" approach was designed into the implementation phase and it was based on experimentation in Tacloban, Philippines. As such, the broad-based economic goals intended by A.I.D./Washington were not the ultimate goals of the project. The ultimate goals of the MEREC project were never really spelled out, in fact. The process of integrating the "top-down goals" with the "bottom-up goals" was the essence of the MEREC project, and for that reason this study is important.

In exploring reasons why replication did not occur in the Philippines, but did occur in Thailand, I will look at the records that have been kept by the Agency for International Development and the Tennessee Valley Authority.

Aim and Objectives:

The lessons that could be learned from this project are numerous. And because the concept of integrating "top-down" with "bottom-up" decisions is so important in the field of development, a study of what worked and what did not work in the MEREC project will lead to better methods of design and implementation of A.I.D. projects that intend to capitalize on capacity building of local institutions.

In an effort to pull together valuable lessons learned from the MEREC project specific to "institution-building" the following objectives were established.

1. To define institution-building and explain the importance of institution-building in the process of development.
2. To explain the need for decentralizing the decision-making process so that local institutions can be capable of assuming responsibility in working towards the sustainability of projects like MEREC.
3. To describe the design and implementation methods that allow replication of projects or subprojects.
4. To examine reasons why replication of subprojects did or did not occur, in the MEREC project.
5. To develop solutions based on lessons, as to why replication of MEREC did or did not occur.

REEXAMINATION OF GOALS

In reviewing the original goals of this thesis, I believe I have adequately covered the idea of institutionalization to the extent that it exists in the MEREC project - which is partly a community-development project and partly an energy project (on the subproject level). I have also addressed the question of replication, which would depend on what an observer would prefer to consider the MEREC project. The MEREC project in Tacloban began and ended at different times than did MEREC in Phuket. Hence, on one level, the MEREC project can be compared and analyzed and on another level, it cannot be compared. As a community development project, replication is not an issue. But as an energy project, MEREC would be expected to have quantifiable outcomes or results.

As was stated in the thesis, the criteria for the success or failure of a MEREC project, began to shift as the original project proposal changed and as the funding levels changed.

The process of integrating the top-down goals with the bottom-up goals was the essence of the MEREC project because A.I.D. as a government bureaucracy is inherently hierarchical with few individuals making decisions at the top levels, yet in order for this system to work effectively, the municipality's goals had to be taken into account. In the field, local goals were taken into account in the beginning stages of setting-up and planning but funding problems caused delays. As limitations of the top-down and bottom-up decision-making processes became apparent, lessons that were learned in earlier implemented subprojects or earlier MEREC locations could be applied to future subprojects or future MEREC cities at earlier stages in the development process.

The MEREC project attempted to integrate "top-down goals with "bottom-up goals", but that fact can not be seen without viewing the entire process - from the idealistic beginnings to the actual funding limitations. The changes which took place in the project paper and the goals of the project were very idealistic and broad-based in the beginning. As differing opinions about the progress of MEREC became more apparent in A.I.D./Washington, it was clear that funding levels influenced the outcome. Also, it became clear that the participation of municipal officials was necessary from the start and that their goals had to be taken into account in order to work towards the original top-down goals.

MEREC was a study of what worked and did not work and it could lead to better methods of design and implementation of A.I.D. project that intend to capitalize on capacity building of local institutions". Lessons from the MEREC experiences can be learned by studying MEREC in parts or as a whole, and I believe the MEREC project contributes to the field of development in terms of knowledge gained about the role of participants and knowledge gained about their contribution to viable planning methods which can be used as a resource in the present as well as in the future.

The thesis could lead to better methods of evaluation because it was experimental on many levels, yet replicable. Learning from project failures and successes brought out values and opinions of the municipal government and the national government. Once values and opinions are known, the development process can become more relevant to the needs of a population.

METHODOLOGY

The methodology used was "resource-based" - whatever materials could be found on or related to MEREC in Tacloban or Pnuket, I attempted to integrate them to get as realistic an overview as possible.

Research on the MEREC project began with a review of all of A.I.D.'s literature on the project, from 1982-1987. Next, key informant interviews were conducted on the MEREC project on senior A.I.D. officials and on key actors and designers of the project.

Since available information that existed on the MEREC project was not sufficient to understand it in terms of a case study, background reading and informational interviews were necessary. Background reading on energy and community development projects in the Philippines and Thailand, served the purpose of providing a context. Likewise, a review of the Country Development Strategy Statements (CDSSs) for the Philippines and Thailand served to guide the research in terms of what the "types" of projects that were approved in the Philippines and Thailand during MEREC's years of implementation.

Eventually, a broad framework emerged through the review of T.V.A. and A.I.D. MEREC documentation and key informant interviews since the beginning of the research (September 1988). Findings were summarized and assumptions were made from this information before the first research proposal was written with a preliminary questionnaire. Since travel was not possible because funds were not available, all resources were compiled and eventually made sense in terms of a "process".

Since my knowledge of A.I.D. project procedures was very limited, the learning curve had to be taken into account in terms of timing - I was working full-time in work unrelated to the MEREC project.

Methods of data-gathering changed as the project proposal changed. The questionnaires helped to frame the research process. The preliminary questionnaire evolved during the same time that information was being gathered, interviews were taking place, and the project proposal was being formulated. The timing for each of these varied, but each of these activities were integrated into the fact finding process. Response times for the questionnaire varied with individuals but fortunately, all questionnaires that were sent out were returned.

The sequence of events was not crucial to discovering the lessons that were learned. Basically, there was a beginning (a proposal); a process (implementation); and an end (impact). In the process of learning about A.I.D. through this case analysis, I learned of possible problems that could exist in the design and evaluation stages of other A.I.D. projects.

The biggest problem was in discerning "facts" vs. "assumptions" about participants values or opinions. After the completion of the second and more focused questionnaire, some assumptions were confirmed as facts. However, further field research is desirable. The process of writing about MEREC has been a difficult fact-finding exercise, but was a useful exercise in that involved pulling together data from limited documentation and using abstract concepts, in order to view events that occurred in the field -- this type of fact-finding is very often used in Washington, DC where much of the world's international development policies are shaped.

NEED FOR FURTHER RESEARCH

The MEREC project was chosen because I have a personal interest in secondary-city development and urban planning, project design, implementation and evaluation. MEREC was sold as a guaranteed success by urban planners but was considered a failure by energy technicians who have a different perception. MEREC theory is a broad conceptual and theoretical framework that had advantages and disadvantages. Further research of MEREC costs and benefits is suggested.

Secondary-city development planning proposes that intermediate-sized cities can be shaped and influenced during early stages of growth and development. It is theoretically reactive to population growth yet urban planners can be proactive in their planning approaches, as implied by urbanization theorists such as: Richard Meier, Eric Chetwynd, Avrom Bendavid-val and Dennis Rondinelli.

MEREC can be implemented as a proactive plan or a reactive study of the existing conditions and trends in a municipality. MEREC case studies resulted from an evolutionary process that occurred in a planning process (top-down) with the participatory development process (bottom-up). Further research is suggested.

Since the MEREC project ended, there was no question that all of the things MEREC promised were not accomplished. Project funding delays lead to project procurement and or project implementation delays. Fortunately, the project manager for the Tennessee Valley Authority, John Cartwright, took that into account when monitoring MEREC. He attempted to adapt evaluation and monitoring procedures to the environment and local conditions because institutionalization was more likely to happen if the participants thought subprojects were useful, popular and visible.

Some elements of the subprojects were institutionalized, as described in Avrom Bendavidval's evaluation. Also, the following areas of research were suggested in Chapter 7:

in urban farming, economic crops, in the demonstration houses, in water distribution system projects, in the ceramic urns projects, in the solid waste management and sanitation projects.

Due to funding delays, the MEREC Information System (MIS) activity was halted. This system would have ultimately helped to institutionalize the MEREC project years after the project ended. But besides the computer equipment that needed to be maintained, manpower would have also been needed to continue the system. In MEREC literature, no effort seems to have been made regarding ways to make the MEREC system more financially sustainable. That may have been a major flaw in the MEREC design. The extent of development of the MIS system could be explored further.

Several years after MEREC, interest in it endures because the idea of saving energy is tied to a continual interest of the world's socio-political conditions and international relations. It is also tied to the realization that a country's energy resource demand and supplies determine its material wealth and development potential. The MEREC project is a realistic approach to much of the Third World's resource problems and can be simplified or adapted to solicit the interest of a broad spectrum of professionals across cultural boundaries and towards a common goal -- energy conservation through more creative uses of indigenous resources. More research could be done in the Philippines and Thailand to study the opinions and values of the population towards energy conservation.

With regards to taking advantage of indigenous resources - I mean the currently existing organizational structure and professionals in cities like Tacloban and Phuket. Since MEREC was not implemented to create autonomous organizations, some reorganization of the current system was done. Ideas on how to save energy were adapted by various private or public organizations through conferences, through the media, through training and collaborative efforts by local and national organizations. All of these subproject activities were under the guidance and auspices of the municipal organization. Hence the structure of the local municipal organizations had some impact on the overall municipal management of the MEREC projects as well as on the management of each of the subprojects. Further research in the area of how organizational structure and behavior in Tacloban and Phuket municipalities changed as a result of the project, would be quite useful.

The documentation on MEREC for desk-top research has been exhausted. Much more in the way of field interviews, data collection and analysis needs to be done in both Tacloban and Phuket, Thailand. Field research is an essential part of the evaluation of any development project because it would not be realistic to assume that all bases have been covered or all significant questions asked with regards to success versus failure of one or some of the components. For an accountability system to serve the needs of an evaluator, a beneficiary also needs to be clearly defined. Baseline data need to be established and if documentation does not reflect a standardized set of parameters from which to measure success or failure, then additional collection of data is needed to compare old baseline data with the present development indicators and conditions.

CHAPTER 1

THE MEREC CONCEPT

"Managing Energy- and Resource-Efficient Cities" -- MEREC -- is both a project and an ideal. It is both a means to an end and an end in itself to enable Third World cities to become capable of successfully managing their own energy and resource problems while maintaining a self-sufficient existence. MEREC is the name of the project that was designed and implemented as a pilot in Tacloban City, Philippines to demonstrate how collaboration of several institutions could lead to local participation. Whether "participatory planning" was intended is not clear from a review of the original project paper and design, but the fact that it was a requirement for successful implementation is of great significance.

WHAT WAS THE MEREC PROJECT?

Literature found about the MEREC project, including the original project paper, emphasizes that the value of MEREC lies in its potential to serve as a catalyst by which cities in the Third World could exchange information and experiences by using the collaborative MEREC approach in order to conserve energy resources and use those that are locally available. This ideal exchange of information, experiences and technical assistance would occur first at the local level, spreading nationally to other cities and simultaneously

existing in various forms in other countries. The spread effect or spin-off benefits would in fact guarantee that the \$250,000 allocated to each participating city would result in self-sufficient and better managed medium-sized and smaller Third World cities.

Intermediate-sized urban areas were targeted because, as cities in their formative stage of development, they would be capable of influencing the type of urban sprawl which will eventually exist within their boundaries as well as absorbing the flow of migrants moving from rural to urban areas. Mid-sized cities by virtue of their location and access to basic human, economic and financial resources are potential settlement areas for migrants in search of education or a better quality of life. Local institutions in these cities, by planning together with organizations that provide water, electricity, transportation or garbage services to its residents, could demonstrate that a collaborative effort to planning could be cost-effective because of the spread effects. In the Agency for International Development's project paper, the goal of the MEREC project was stated as follows:

The project will help to strengthen local institution-making capacity for urban planning and management by providing local governments and private sector representatives with experience in resource identification, conservation, and use, and in establishing mechanisms for planning and implementing coordinated development activities. Such decentralization is based on the assumption that increased local responsibility for development activity will result in a more responsive, self-sustaining, and efficient development process that will strengthen the effectiveness of secondary cities in performing urban functions in the context of a hierarchy of settlements.¹

¹United States Agency for International Development, "Managing Energy and Resource Efficient Cities," Project Paper #936-5402, Document #PD-AAR-035, May 1985 (Washington, D.C.).

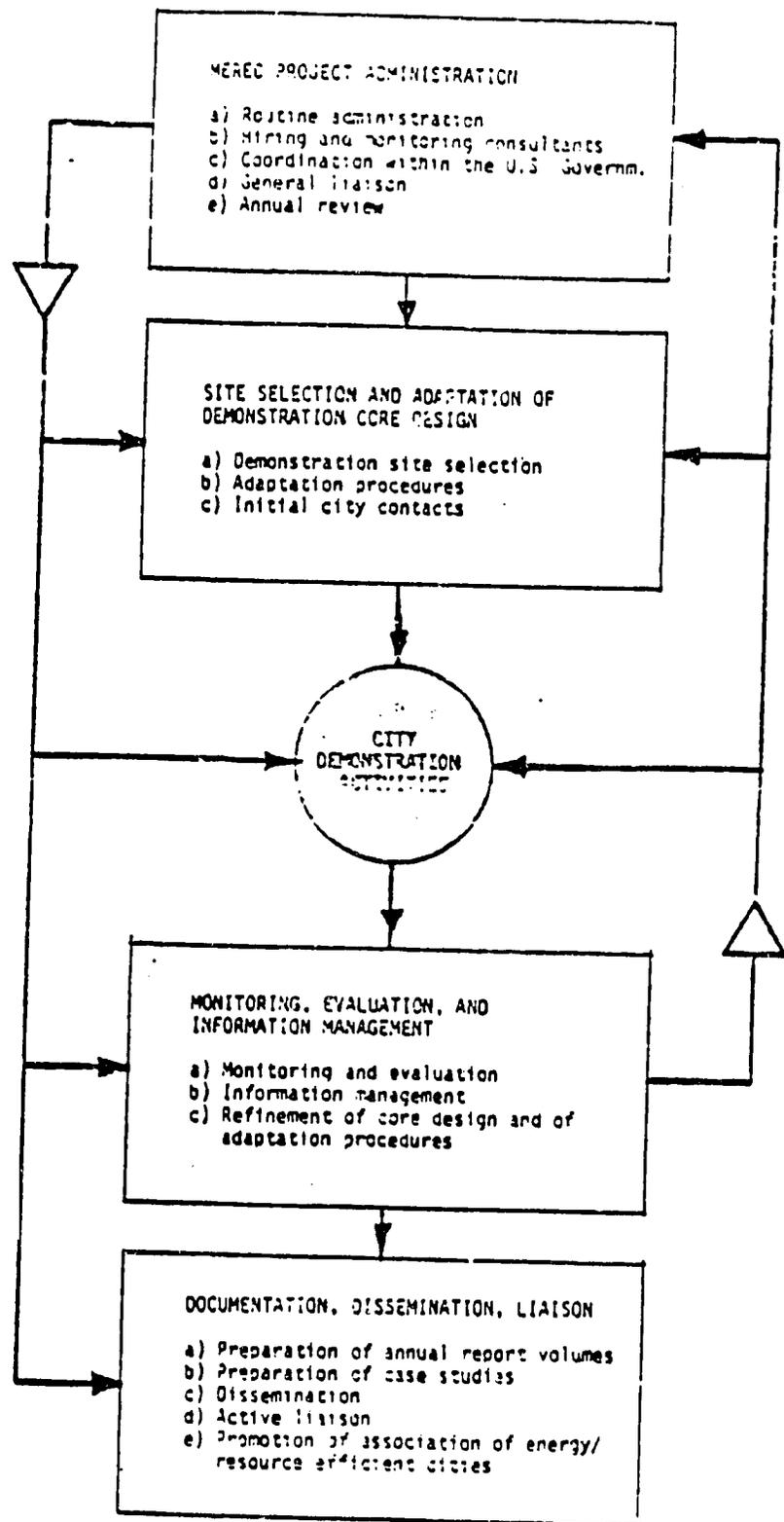


FIGURE 3: SUMMARY OF NEREC PROJECT MANAGEMENT ACTIVITIES

The specific purpose of MEREC was given as:

To assist secondary cities in the establishment of energy/resource efficient strategies and coordinated sectoral action plans for strategy implementation. The project is designed to address, in a cost-effective manner, the needs of a number of demonstration cities in diverse locations and with diverse problems and potentials. Reusable information and replicable procedures compiled in this context will provide the basis for similar efforts in secondary cities not part of the MEREC project. The city demonstrations are expected to be catalytic with respect to other A.I.D. activities (e.g. infrastructure projects, energy programs, decentralization projects, etc.), and to enhance secondary city capabilities to attract and effectively utilize capital improvement funds.²

Along the lines of these goal statements, participatory planning and institution-building are evident. And given the backgrounds of the project designers, it is almost self-evident that participation would be important. The originating organization, known as Development Analysis and Programming (DAP), consisted of professional urban planners and urban specialists and an economist (most active of whom were Jochen Eigen and Avrom Bendavid-Val) who had spent several years working in developing countries. They were well qualified to transfer their technical expertise to professionals in Asia. The director of the Office of Urban Development, Eric Chetwynd, from which the MEREC project originated, was also an urban planner by profession and he shared the values and ideals of the DAP associates who created the original design.³

The MEREC project, an A.I.D. centrally funded project, was comparatively cheap. As a pilot project it seems to have been

²Ibid

³Interview by telephone with Avrom Bendavid-Val, Washington, D.C., May 23, 1989.

exempted from certain feasibility requirements instituted by A.I.D. Feasibility requirements have resulted from congressional pressure on A.I.D. to make projects more accountable and to show results that would justify the costs. Hence, most projects in the agency, in order to prove feasibility, must have beneficial results that outweigh the monetary costs. The most practical method of comparing the intended benefits to the intended costs is to translate the benefits into dollar values. Pilot projects by definition are not intended to be long-term; therefore the goal of a pilot, to be credible, should show short-term results.⁴ Any long-term goals of short-term projects would be difficult to plan because of the complexity of other factors that could change the outcome of a project. One A.I.D. official who acted as the MEREC project manager for the agency shortly before it ended, said the project did not become what it was intended to become. Instead, MEREC became a catalyst for change on the municipal level of government and a promoter of local institutions in the Philippines.⁵

The time factor, "when funding ends," determines the lifetime of a project (LOP) for the Agency for International Development. When a project officially ends, it should have a record of a mid-term or final evaluation. The final evaluation of a project is the document that will show whether or not the project has achieved

⁴Maynard M. Hufschmidt, Environment, Natural Systems, and Development: An Economic Valuation Guide, East-West Environment and Policy Institute, East-West Center (Baltimore: Johns Hopkins University Press, 1983).

⁵Interview with Dan Dworkin, Agency for International Development, Washington, D.C., January 31, 1989.

its goal and objectives. Evidence of successful achievement will usually show that benefits have outweighed the costs by the time the project has ended, which is clearly described in a cash-flow analysis or a cost-benefit analysis. A.I.D. projects, being largely for economic development, should show progress that has been made to increase economic development or to create an environment that would enable development. Pilot projects, like MEREC, funded out of Science and Technology Bureau funds within A.I.D., are for experimentation. Results of experiments that intend to have broad economic or national impact and long-term results are difficult to define unless assumptions are made in the beginning during the design process.

However, the project paper of MEREC did not say whether or not the goal or some of the objectives were assumptions. In theory, the goal of MEREC was an assumption because it was based on theoretical implications of urban growth and secondary-city development. Measurement of long-term benefits in a short-term time frame (i.e., the three- to four-year life of the MEREC project) is purely speculation. The outcome will therefore have a tendency to be different from what was originally perceived. Similarly, the measurement of long-term benefits of an urban planning project (e.g., MEREC) is difficult to foresee because planning methodologies and the impact of planning activities in cities takes a long time -- longer than the lifetime of a project in A.I.D. is likely to be. The original design of the MEREC project given these considerations (i.e., time, pressure from A.I.D. to be accountable to results, the unpredictability of urban growth patterns, and A.I.D.'s requirement to evaluate projects for feasibility) point to possible flaws in the

original design.

For most projects, especially those that are pilots, institutionalization has become an important process which guarantees that projects will be sustained. With limited resources given to A.I.D. for economic development and development assistance in the Third World, development professionals are realizing that "more can be done with less."⁶ If local institutions are made to become responsible managers of their own development problems, on the whole, their likelihood of sustaining development in their own cities is higher because they have a stake in the process. They are indeed the "stakeholders." In the MEREC project program summary sheet, the beneficiaries were defined as being short-term to the local government and private industry. However, during actual implementation, the beneficiaries, who were not necessarily the poor or disadvantaged or the end-users, were not defined. The end-users of strategies and action plans to help municipal government officials save energy and use resources more efficiently would be the public at large -- the residence and business consumers of the services which the municipality has to offer. The gap between what the MEREC project proposed to do and the method by which this plan was carried out was different from what it was realistically capable of achieving. The goal of MEREC was to improve efficiency and equity in the use of energy and natural resources for urban development in Tacloban and Phuket. But far from that ideal, since the end-users were not the same

⁶Avrom Bendavid-Val, More With Less: Managing Energy and Resource Efficient Cities (Washington: Metrotec, 1987).

as the beneficiaries, it is possible that the goals of both groups may not have been the same. There was no method in the design of the MEREC project to measure the activity of the end-users of energy and resources in any of the subprojects during funding and after funding. In order to measure the institutionalization of MEREC, an impact evaluation would have had to be conducted concerning the beneficiaries (the Tacloban and Phuket governments), and one separately for the end-users (residents or consumers of energy and renewable resources). Since the end-users were not mentioned in the project paper, then institutionalization referred to purely the municipal government and public and private entities that participated in MEREC activities (i.e, the workshops and the conferences).

Local Action on Subprojects Essential

The MEREC subprojects were designed to be based on local resource needs, local capability and locally prepared action plans. In order for success to occur within the lifetime of a project in a demonstration city, the accumulated benefits of the subprojects would have to outweigh the accumulated costs⁷ During implementation of the MEREC project, consistent records were kept of the costs that would be involved in implementing each of the subprojects. But the problem with measuring the success of the project is that no distinction was made between impact on the beneficiaries or impact on the end-users.

⁷J. Price Gittinger, Economic Analysis of Agricultural Projects, Economic Development Institute, International Bank for Reconstruction and Development (Baltimore and London: Johns Hopkins University Press, 1977).

From the project paper, it is not clear how institutionalization would be defined, who the stakeholders were going to be (the government or the city residents), and ultimately, how replication would be both defined and conducted. The difficulty in defining the expected outcomes in various cities lies in defining exactly what type of project MEREC was. It was neither an energy project nor a community-development project in the classic sense of those terms, but it had elements of both. If the MEREC project were defined as a community-development project, the beneficiaries would be the municipality. If the project had been defined as an energy project, then end-users would be the people who reside in or work in the demonstration cities. In both the Tacloban and the Phuket cases, within the limited time frame (LOP), impact was impossible to measure even though lessons have certainly been learned from the design and implementation of the MEREC project.⁸

The goal of the MEREC project implied that replication of the subprojects would occur. Even though the implementation processes and action plans for each demonstration were different, some replication was ensured and assumed to exceed the cost of the project in dollar terms. Energy projects such as the garbage-collection subproject and electricity monitoring subproject were replicable but showed no results that were be quantified in a cost-benefit analysis because there was not enough time to collect the data before the project ended.

⁸Jeffrey L. Pressman and Aaron Widalvsky, Implementation: The Oakland Project (Berkeley and Los Angeles: University of California Press, 1984,) pp. 1-29.

The replication of pilot projects occurs when a model is accepted in a particular context and it stands the test of time. Replication is also dependent on the definition that the implementers, monitors or evaluators give a project.⁹ In the case of the MEREC project overall, action and strategy planning were replicated from Tacloban City to Phuket City. A similar method of executing collaborative activities was tried in two very different environments. Even after the original project paper was written, the experiments with MEREC in Tacloban were documented along with lessons learned in the field so that the design (which was done in the United States) could be altered and made more adaptable to diverse national and local conditions.

Selection of a Demonstration

The selection process of demonstration cities had important implications for institution-building and participation that would occur in both Tacloban and Phuket. The Philippine government as well as USAID/Philippines seemed to have not had any problems with choosing a particular city in the Visayas region as a demonstration site. Tacloban City was favored over other cities because it had a growing urban population of just under one hundred thousand and because it fit other requirements typical of secondary cities that could eventually provide more services to a growing population. MEREC especially had

⁹John A. Dixon and Maynard M. Hufschmidt, Economic Valuation Techniques for the Environment: A Case Study Workbook, East-West Environment and Policy Institute, East-West Center (Baltimore: Johns Hopkins University Press, 1986).

the strong support of its mayor, Obdulia Cinco, who was a close friend of First Lady Imelda Marcos. Central government support was practically guaranteed. Phuket City in Thailand also had the strong support of an influential political figure, who was raised in the Phuket regional area and was appointed to an office in the Thai central government.¹⁰ However, the strong pull of central government decisions on municipal government created a different environment in which the MEREC project had to operate. Different central government requirements as well as cultural and political factors had more to do with the selection and outcome of the MEREC project in Tacloban and Phuket than did the actual performance of the subprojects.

Institutionalization of the MEREC project is a prerequisite to replication as was demonstrated in the Thai experience, yet the benefits of replication were prematurely assumed in the project paper¹¹. The subprojects funded through MEREC are in a sense entities separate from the project according to the project paper.

¹⁰Interview by telephone with Doug Haladay in New York. Haladay was a Peace Corps volunteer in the Philippines prior to 1982 and MEREC/Tacloban Project Coordinator, 1982-83.

¹¹Norman Uphoff, Local Institutional Development: An Analytical Sourcebook with Cases (Hartford, Conn.: Kumerian Press, 1986).

CHAPTER 2

HOW THE MEREC PROCESS WORKS

The project cycle in the Agency for International Development in Washington consists of administrative activities to "move money." The planning of a project, selection of demonstration cities, contractors, consultants and a major part of the decision-making about methodology occur in Washington. The advantage to this is that A.I.D. is able to pull together both human and financial resources. From Congress, A.I.D. gets its financial support and from Washington it is able to draw on a network of highly skilled and experienced professionals. The original idea for an urban-energy project came from Eric Chetwynd when he presented a paper called "Development with Resource Conserving Urbanism" to the First International Conference on Energy and Community Development at Athens in 1978. Then in June of the following year the energy conservation idea developed further after Chetwynd submitted another paper entitled "Energy Efficient Cities for Developing Countries: Towards an Agenda for Action" to the Energy in the Cities Symposium of the American Planning Association.

Chetwynd's paper states that cities in developed countries are energy-intensive organisms that have evolved in this way because of an abundance of relatively cheap energy that has fostered development of technologies, land-use patterns, and personal and societal consumption habits, highly dependent upon a massive and

steady supply of hydrocarbon fuel and by-products. Similarly, another publication which in fact influenced Chetwynd's thinking was a book written by urban planner Richard Meier entitled Planning for an Urban World. In it, Meier describes physical, chemical and biological relationships between resources that co-exist in an urban environment based on uniquely different environmental conditions. These publications agree that human consumption patterns are connected and interrelated in urban environments. This link between social entities and the production and consumption of energy resources should therefore be part of the design of a project from an urban-planning point of view.¹² It would be useful in fact to design a project that would help Third World governments identify potential resources as well as manage them.

The MEREC core design was developed through the expertise of Jochen Eigen and Avrom Bendavid-Val of Developing and Programming Associates (DAP). Urban planners by profession, they shared with Chetwynd an appreciation of the field's value and the potentially positive impacts planning could have in resource-rich but otherwise poor countries like the Philippines or Thailand. The MEREC project was originally designed as a social experiment whereby A.I.D. would assist the municipal government officials and private institutions of Tacloban in a pilot test so that a refined version of the MEREC plan could be adapted to Phuket. MEREC participants had to agree to collaborate, create strategies and action plans and engage in a

¹²Richard L. Meier, Planning for an Urban World: The Design of Resource-Conserving Cities (Boston: Massachusetts Institute of Technology Press, 1974), p. 62.

process that would make their local decision-making process more effective. After the MEREC project was approved for funding, the following activities were to occur: a start-up phase, a planning phase and an implementation phase. These phases established the "Core MEREC Process."¹³

What happens in a MEREC Project? The MEREC Core Design

In the start-up phase, local experts are brought together with professionals and academic specialists to meet with national and regional representatives to begin a MEREC strategy based on local (economic or resource) sectors that exist and local resources that have been identified by participants. The start-up phase requires from one to three months and involves a MEREC steering committee throughout the process, responsible for holding workshops at least every two to three months to review progress, guide the process and agree on next steps. According to Avrom Bendavid-Val, one of the key designers, most steering committee workshops would begin with reports by working-group representatives. They would then develop or revise major guidance documents, i.e., the MEREC Strategy, and finally detail MEREC tasks and responsibilities for the next two to three months. This phase would lay the conceptual, organizational, and procedural base for the MEREC effort. In this phase, participants and institutions would come together to familiarize themselves with the process, structure the steering committee and sectoral working groups,

¹³Interview with Eric Chetwynd at the U.S. Agency for International Development, Washington, D.C., March 1989

assign responsibilities, find technical expertise, examine potential funding sources, and exchange ideas about resource problems and potentials. Most importantly, the MEREC process is examined carefully and then modified to suit the national administrative context and local circumstances.¹⁴

At the end of the phase, the local steering committee and sectoral working groups are firmly in place and functioning, and interorganizational arrangements for coordination will have been discussed and a work plan for the planning phase will have already been developed.¹⁵

The planning phase consists of the following tasks:

- 1) Identification of up to six local "resources of major concern" -- which are facing major problems or which have potential to be developed. Major resource problems are those that restrict local development and improvements in human welfare; and significant potentials are those that could promote local development or improvements in human welfare.
- 2) Preparation of situation reports, one for each resource of major concern, to bring together available data and knowledge about the resources. They describe the general status of the resources in the city, significant problems and opportunities associated with the resource, current projects and plans related to use of the resource and key urban sectors. Key urban sectors

¹⁴Avrom Bendavid-Val, More With Less: Managing Energy and Resource Efficient Cities (Washington, D.C.: U.S. Agency for International Development, 1987), pp. 30-41.

¹⁵Avrom Bendavid-Val, "Resource-Efficient Cities," National Development (Washington, D.C., January/February 1986).

number up to six and have a major influence on the use of the local resources. They are the sectors for which the working groups are established.

- 3) Development of a MEREC strategy based on information in the resource situation reports: It is a collection of resource strategies for each individual resource. These strategies may call for more efficiency needed, more generation of a particular resource, or designation of a new resource. Strategies specify objectives for each sector and have a major influence on the way the resource is used.
- 4) Formation of a MEREC action plan: The MEREC strategy is translated into an action plan by identifying specific local projects to achieve the resource-efficiency objectives contained in the strategy. Following the same pattern as the strategy, the MEREC action plan can be taken as a set of individual resource action plans, or as a set of individual sector action plans.

In the implementation phase, detailed project planning is completed and specific projects are undertaken. Some subprojects involve construction, long-term studies or planning activities, experimentation with the local government operations or new organizational forms, private sector experiments, or educational activities. As implementation continues, efficiency achievements are monitored, evaluated and publicized and information is fed back into

the beginning of the process again.¹⁶

During the implementation phase in Tacloban, it was found that the Tennessee Valley Authority only had to provide limited technical support. One TVA adviser would visit each MEREC city for a few days once every three months during the life of the project. TVA advisers provided advice on start-up, planning, implementation and monitoring. They also assisted with administrative arrangements between the MEREC city and A.I.D. and from time to time arranged for a visit from a TVA specialist with critical technical expertise not available locally. Emphasis was on learning from experience. In fact, while MEREC was originally conceived with the aim of improving efficiency and resource use in rapidly growing smaller cities, this turned out to be more of an organizational and procedural challenge than a technological one.¹⁷

Although the original project paper states otherwise, MEREC was structured as a capacity-building and therefore learning-based project according to Avrom Bendavid-Val. Learning that builds capacity requires the opportunity for discovery, application, and a perceived increase in capability resulting from what had been discovered and applied. These things were built into the MEREC approach in the following ways, says Bendavid-Val:

¹⁶U.S. Agency for International Development, Center for Development Information and Evaluation (CDIE) Document #PD-AAR-035, Washington, D.C. 1985.

¹⁷Telephone interview with John Cartwright of the Tennessee Valley Authority, Knoxville, Tennessee, May 5, 1989

MEREC cities were provided with only a core MEREC planning process, which they had to adapt and elaborate to suit local circumstances;

- the cities were assured from the outset that some implementation funds would be available from A.I.D., so they knew that planning would definitely lead to results;
- the implementation funds provided by A.I.D. were relatively limited, however, requiring that the cities give thought to additional sources of implementation support early in the planning process;
- financial arrangements between A.I.D. and the cities encouraged experimentation and flexibility;
- demonstration city selection procedures required candidate cities to organize to promote their involvement in MEREC;
- responsibility for the MEREC effort remained entirely with the local officials and the local MEREC steering committee;
- means for publicizing the MEREC effort and involving citizens with it had to be a part of the MEREC process.¹⁸

Identifying Resources and Planning with Sectors

In MEREC, a resource of major concern has to be identified and then designated as "needed, being depleted or degraded" because it is in short supply or is very expensive, or because it represents an unexploited opportunity for local economic development. Local economic development, as defined by the municipal government would vary from one location to the next, as would planning method, but since Tacloban used key urban sectors in their planning system, that is what was used in the MEREC process. Key urban sectors played a role in the way local resources were used. But most importantly, each

¹⁸Bendavid-Val, More With Less, p. 33.

MEREC city needed to define resources and sectors in terms that were meaningful and useful in their own situations¹⁹.

Since municipal decision-making is not traditionally approached in terms of resources and sectors and the relationships among them, the demonstration cities solved their problems by considering four even broader categories of resources critical to the life of the city: energy resources, food resources, building resources, and economic development resources.

This led to a list of more specific resources in each category. Sources of energy resources included: solar energy, oil, coal, geothermal energy, gas, and wood. Food resources included: agricultural land, fishing areas, water, vacant land, compost, and cooking fuel. Building resources included: local building materials, buildable land, heating or cooling fuel, waste treatment capacity and water. Economic development resources that were suggested included: mineral deposits, recreation and heritage areas, waterways, electric power, transportation fuel, urban waste, industrial land, commercial crops, and local materials for production.²⁰

Afterwards the MEREC steering committee reviewed the resource lists they developed, and selected from them the few resources with which were associated the greatest problems and opportunities. For example:

¹⁹Agency for International Development, "Managing Energy and Resource Efficient Cities: A Demonstration Project" (A.I.D. Bureau for Science and Technology publication, Washington, D.C., 1982)

²⁰Bendavid-Val, More With Less, p. 34.

Resource

with energy

with water

with agricultural land

with urban waste

with transport fuel

with fishing areas

Resource Opportunities:

with energy

with water

with agricultural land

with urban waste

with transport fuel .

with fishing areas

local building materials

Problem:

-- there was a scarcity of wood fuel
 -- there was an unreliable supply of electricity

-- there was an inadequate supply
 -- there was considerable loss in distribution

-- prime agricultural land was overtaken by urban sprawl

-- the existing location was unsanitary and dangerous

-- it was in short supply and costly

-- they were becoming polluted

Problem:

-- more of it can be produced through local resources

-- there are untapped water resources
 -- distribution leaks can be detected and repaired and this will also improve the revenue collection

-- vacant urban land can be used for food and fuel production

-- it can be converted to fuel, compost, and recycled materials

-- it could be used much more efficiently with small changes in traffic patterns, which would also reduce air pollution

-- increased fish population would create jobs and lower food costs

-- they could be used much more instead of imported materials, and they could also create employment and

income opportunities

As the community discusses the problems and potentials with their resources in the beginning of the MEREC process, it helps them to clarify the concept of "resource" and how they relate to immediate concerns in the city. What is most important in the MEREC approach is to begin thinking about local resources rather than resource problems. Behind many resource problems, there are development opportunities and efficient use of a resource is a way to promote economic development.²¹

It was found that MEREC participants have been more at ease using the concept of resources, but it has also been found useful to think of sectors in broader categories, such as production (primary) sectors, trade and support (secondary) sectors and public service (tertiary) sectors.

MEREC demonstration cities have listed these sectors accordingly:

1. Primary or production sectors:
agriculture, agroprocessing, manufacturing, mining, construction
2. Secondary or trade and support sectors:
food supply, crafts, commerce, energy supply, transportation
etc...
3. Tertiary or public service sectors:
human services, public institutions, transportation, water
supply, recreation, sanitation, waste management, public works,
land-use planning etc...

The process of identifying key urban sectors was for the

²¹Telephone interview with John Cartwright of TVA.

purpose of relating resources to them and to determine who should be represented in the MERECE steering committee and sectoral working groups.²² For example:

<u>Resource or Sector</u>	<u>Representative</u>
Energy Supply	Local electric company National energy agency
Land use planning	Local industrial energy users Municipal land planning and enforcement depts. Local developers Citizen Groups
Transportation	Local transport companies, cooperatives, and trade organizations Police Municipal Traffic Department
Agriculture	Municipal land use planning department Neighborhood groups Agricultural extension office Local farmer groups
Waste management	Municipal waste management department Local farmer groups Commercial and industrial groups

The advantage of this step is that local groups including private industry and community groups can have an opportunity to get involved. At this stage they will also be able to examine the status of each of the resources and their relationship to the sectors. This is done in the course of preparing the Resource Situation Reports whereby reports are written about each resource of major concern, documenting linkages between resources and key urban sectors, and identifying development opportunities and constraints associated with resources.²³

²²Bendavid-Val, Ibid.

²³Bendavid-Val, More With Less, pp. 33-39.

Resource Situation Reports help representatives of individual sectors understand how their interests are connected to those of other sectors through use of shared resources. This understanding should lead to an appreciation of intersectoral coordination.

With urban sectors traditionally in conflict over goals regarding resource use, the MEREC approach tries to strengthen necessary links through coordinated and cooperative participation in planning. Intersectoral rivalry was replaced by a resource management approach to maximize local benefits to account for immediate as well as long term needs.

Adapation and Process

The strength of MEREC is in stressing a resource problem in a local context and in their resource context. Each step refines the context for the next step to follow. The Resource Situation Reports provide context for the MEREC Strategy; the MEREC Strategy is the context for the MEREC Action Plan; the MEREC Action Plan, in turn, is the context for detailed project planning.

The MEREC Strategy sets policy regarding resources of major concern in the city, translated into resource-efficiency objectives for each key urban sector. The objectives are basically statements of resource management intended for each resource ie: increase availability, reduce consumption per capita, replace imported resource with local resources etc... The Strategy is summarized in a matrix format and it stands as the expression of agreed upon aims and priorities for the local MEREC effort and thus constitutes a firm

foundation for agreeing on an Action Plan.

The MEREC Action Plan is summarized in the same matrix format as the Strategy. The package of resource-efficiency projects for any resource is summarized in the column for that resource. The package of projects for each sector is summarized in the row for that sector. Each individual project can be seen in its resource context on the one hand, and in its sectoral context on the other.

The Agency for International Development suggested that local projects be required to do the following:

1. have a direct relationship with the MEREC strategy;
2. be demonstrably cost-effective;
3. be technologically sound and of appropriate scale;
4. be manageable by families, firms, community groups, or local agencies;
5. be capable of being developed further by the private sector or encouraging private sector growth
6. be capable of becoming self-sustaining;
7. be capable of contributing to the local knowledge base.

Each MEREC city will adopt its own guidelines formally or informally but in most cases project guidelines will have been "a learning process" and experimental.

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CHAPTER 3

ROLES AND IMPACTS OF PARTICIPANT ORGANIZATIONS

The MEREC system is based on the idea that an integrated effort by private, public, international, national and local institutions can solve a municipality's resource problems through an awareness of how functional divisions of responsibility can exacerbate those problems. When several institutions and organizations are involved in a project, the likelihood of similar goals and objectives being created is very high. The Agency for International Development in A.I.D./Washington is sometimes at odds with the goals of the USAID missions with regard to how a project outcome will succeed or fail. AID/Washington's goals are dependent on the guidance it gets from Congress or other government watchdogs, and are most concerned with accountability or the approval of strong lobby groups on Capitol Hill. The USAID mission's roles can vary depending on the importance of the country to the U.S. government and the relationship that A.I.D. and often, the State Department, has with the host government. Within A.I.D./Washington there are often differences of opinion between the bureaus and the professional staff about whether or not a project like MEREC should be perceived as an energy or a community-development

project.²⁴

The role of the host government is important to A.I.D. projects and is reflected in the Grant Project Agreement. As in the case with MEREC, the project designers carefully chose cities as demonstration sites that had a good working relationship with the United States because, ultimately, Americans would be working with both national and local host country officials.

The role of contractors in most A.I.D. projects is increasingly to provide technical or management expertise in the host country. The Tennessee Valley Authority was chosen as contractor to implement the MEREC project because of the institution's longstanding commitment to a combination of energy production and economic development in the Tennessee Valley.²⁵

The role of local public and private institutions can be solicited in a variety of ways. In the case of MEREC, the mayor of the city was given the role of project manager, and her staff worked with her to achieve goals and objectives for particular sectors. The most active participation by local public and private industry professionals was visible at conferences and workshops and set-up or planning sessions. The organizations which have the most impact seem to be those whose members who share some institutional values -- goals and objectives with the implementing agency, group or persons.

²⁴Interview with Bob Ichord at the Technical Resources Office in the Asia/Near-East Bureau and at the Energy Office in the Science & Technology Bureau, Washington, November 1988.

²⁵Interview with Eric Chetwynd, director of the Research and Development Division in the Science and Technology Bureau at the Agency for International Development, Rosslyn, Virginia, March 1989.

Institutional Strength

Institutions in general, whether they are organizations or not, are complexes of norms and behaviors that persist over time by serving collectively valued purposes such as goals and objectives.²⁶ Institutions are recurrent and routinized patterns of behavior and social interaction that endure because they are valued both by those engaged in these behaviors and by those affected by them. "An institution" is an organization (or a role, a rule, a procedure, a practice, a system of relations) that is valued by people over and above the direct and immediate benefits they derive from it. The MEREC project was not in itself an institution, but a system of rules and practices based on the integrated goals and objectives of participant organizations. The institutionalization of MEREC was the process through which recurrent patterns of behavior would be established, become valued and endure beyond the lifespan of their original practices. It was a matter of degree by which the collective values of participating organizations created goals and objectives that would be acceptable to the demonstrating municipality. In MEREC, the municipality was the local institution which needed to be developed through an institutionalization process.

According to David Korten (1980), Johnston and Clark (1982), and Rondinelli (1983), some planning is needed for "local institutional development" (LID), but it is advisable to proceed

²⁶Norman Uphoff, Local Institutional Development (Hartford, Connecticut: Kumerian Press, 1986).

inductively, experimentally and flexibly rather than following a blueprint. A learning process approach is more likely to contribute to the capacities for mobilizing and managing resources (see below, Chapter 4).

MEREC attempted to demonstrate to the municipalities of Phuket and Tacloban that the ability of a country's institutions to manage scarce resources and design and implement projects depends on how much the development strategy pays attention to a country's institutional resources. Waste is implicit in the effective use of resources, and is at the core of underdevelopment. Development practitioners have given up on paying attention to institutionalization for two reasons:

1. Development theory and practice have been for a long time in the hands of economists, who have a long tradition of focusing on the allocation of resources, not on the most effective ways of using the allocated resources.
2. Disciplines such as management science and development administration have not been particularly successful in tackling the problems of developing countries. The main thrust of management science has been toward private sector issues in developed countries and or mixed activities in poorer and more politicized environments.²⁷

Competition plays an interestingly important role in determining how successful an institutional development project is going to be. If an institution has to compete with other groups

²⁷Arturo Israel, "Institutional Development: Incentives to Performance" (Washington: Agency for International Development, 1987).

providing the same kinds of services, it is more likely to streamline its operations, as with what was done in the MEREC project.

According to Mr. Israel, the most successful institutional development projects have been in the industrial, financial, utility and telecommunications sectors.

The least successful ones have been in agriculture, education and in services -- areas that have little specificity and frequently operate in a non-competitive environment. These areas are crucial to poverty alleviation and progress in rural areas. Countries therefore need to concentrate on finding new ways of building the institutions engaged in these activities, according to Israel.

Performance of individual institutions is very much linked to specific policies and measures at the national level aimed at providing incentives to improve performance. The performance of local institutions such as the municipal governments of Tacloban or Phuket more often than not depends on individual participant motivation level, perceptions and expectations.

The Organizational Structure of the Local Institutions or Municipalities

Institutionalization of MEREC ideas and a MEREC-like structure are likely if local participation is enhanced throughout the life of the project or subprojects. Similarly, environmental conditions, e.g., political, social, and cultural conditions on the national level or on the organizational level, can provide a conducive setting for both adoption and dissemination of MEREC ideas. Interestingly, the differences between Tacloban's and Phuket's municipal structures prove

that the MEREC project could be designed so that it would be implementatble in vastly different environments.

The MEREC project offered the Tacloban and Phuket municipalities affordable solutions to local and energy resource problems through activities which brought the following organizations together: AID/Washington, USAID/Manila and Bangkok, various public agencies and local private organizations and institutions. In bringing these organizations together during the setting up and planning stages, decisions had to be made about whether or not to centralize or decentralize the MEREC information system (MIS -- Meref Information System). By and large, the tendency of each municipality was predictable because in highly centralized environments, there tended to be more support for an MIS system either in the form of funding or contributions or in terms of information exchanges. In a more decentralized environment, there tended to be less outside support and more independent and individual innovation of MEREC ideas on the subproject level.

The MIS system, which was proposed to be a part of the management of worldwide activities at T.V.A. MEREC headquarters, did not become fully implemented because the dissemination of the MEREC project took different forms in each of the countries²⁸ This can be attributed to the environmental conditions of the Philippines and Thailand as well as to the organizational structures of the municipalities of Tacloban and of Phuket.

²⁸Telephone interview with John Cartwright, Knoxville, Tennessee, May 5, 1989.

With respect to overall organizational characteristics of Tacloban, social and cultural conditions tend to impact changes in the municipal or local institutional developments. For example, in the Philippines, there tends to be a high tolerance for ambiguity imbued in the culture. Socially, this means that subprojects that were pilot projects were highly valued because innovation and adaptation were highly valued. In Thailand, where there tends to be a lower tolerance of ambiguity, the culture is more rigid, rule-oriented and controlled -- and with good cause -- because the national government tends to be very centralized. Hence, the management of information on MEREC depended on the priorities of the municipalities and the national governments -- ultimately exemplified in the planning and budgets of the cities of Tacloban, Phuket and the governments of the Philippines and Thailand.²⁹

The roles of participant organizations were outlined in the Program Agreements between the government of the Philippines and USAID/Manila, as well as between the government of Thailand and USAID/Bangkok. These were agreements to attempt to change the municipal government structures of Tacloban and Phuket. These interventions sought to impact local energy resource use through demonstrating resourcefulness in energy usage. The implementation of these interventions is described in Chapter 5 -- Progress in the Philippines -- and Chapter 6 -- Progress in Thailand. Through demonstration and a process of implementing a series of subprojects,

²⁹Organizational Structure and Behavior (OSB) course handouts, School for International Training, Brattleboro, Vermont, 1987-88;

the municipal and local institutional officials who participated contributed to institutionalization of MEREC through organizational change of the municipal structure during the set-up, planning or implementation stages of MEREC subprojects.

Using Feedback: The Participant Perspective (June, 1989)

In general, each of the actors in MEREC had different roles, perceptions and perspectives. For the purpose of this study, the actors of the MEREC project can be divided into two types: those who participated in the planning and set-up stages, namely, the expatriates and technical specialists who got the MEREC project concept started; and then those who participated in the implementation stage, namely the nationals and residents of Tacloban or Phuket. Since the MEREC project was eventually redefined as a "participatory project," the national participants contributed to an overall perception of MEREC's outcome in their country in the end. The participants of the MEREC project, according to institutionalization theorists, were the municipal governments and private industry officials (who were residents of Phuket or Tacloban) and their contribution is of value because they were not formally involved in the writing of evaluation reports. Their perceptions of the MEREC project were gathered through the use of a questionnaire after implementation had taken place and several years after project funding ended.³⁰

Similarly, the perceptions of the MEREC project as perceived by

³⁰OSB course, Brattleboro, 1987

those who participated in the design, planning and set-up states are of value because they were formally involved in the conceptual formulation and in the writing of all monitoring and evaluation reports which exist on the MEREC project in the Agency for International Development and at the Tennessee Valley Authority. Methodology used for the purpose of collecting more in-depth perceptions from that group were personal and phone interviews of A.I.D. officials in Washington and T.V.A. project management staff in Knoxville. (See Appendices for interview notes.)

MEREC questionnaires were distributed to key informant nationals who were resident in Tacloban in 1981-83 and in Phuket in 1982-86 and who contributed to the progress of the MEREC project.

Participant Biases

The questionnaire was developed for the purpose of measuring the level of local participation from the perspectives of the local participants themselves. The perception of local institution representatives is important because it gives balance to the literature written about MEREC (which represented the TVA or the AID/Washington perspective). In addition, the respondents of the questionnaire were undeniably one of the following types: those who valued the MEREC project; the ultimate stakeholders; or the ultimate beneficiaries.³¹

³¹Interview with Jeanne North at the Research and Development Division in the Science and Technology Bureau at the Agency for International Development, Rosslyn, Virginia, 1989.

The Participant Questionnaire

While the questionnaire in no way assumes that the opinions of the respondents were the absolute truth, it assumes that an inclusion of their opinions is significant from a cultural and socially accurate point of view. Respondents who answered took the time and effort to fill out the questionnaires either because they felt there was some long-term benefit to their own society or because they saw no reason to keep their opinions to themselves.

Participation of respondents several years after a project ended reflects some of the lessons the individuals had learned. Assumptions can be made about the reasons why respondents answered the way they did and how typical their answers were among residents of Phuket or Tacloban who were able to witness the MEREC project activities.

Individual answers are important because there was not enough time or resources in this study to do an otherwise more thorough research of beneficiary participation (ultimately the residents) of projects in Tacloban or Phuket. The next best step was to accept the views of the key informant participants as valid perceptions although government official perspectives might be culturally or socially influenced. For example, questions numbers 6 through 9 were answered in similar ways among some of the Philippine respondents. Being of Filipino ethnicity myself, I assume that those answers were given by individuals who had consulted with each other because they had no real opinions of their own or might possibly not have understood the questions clearly.

The results of the questionnaire are products of participant

biases which will exist in the views of each role-player. These views present an interesting set of views about the nature of participatory planning projects that were initiated under the auspices of the Agency for International Development. MEREC was a pilot project as opposed to a typical energy or community development project (as was described in its early phases).

The MEREC project participants and project evaluators both inside and outside of A.I.D., did not fall into any type-cast very neatly. In fact, the project type was irrelevant to the local participants and institutions in the Philippines and Tacloban, but very important in determining a predictable outcome for development workers and professionals concerned with "sustainable" development through institutionalization.

The questionnaire was distributed by both facsimile and mail to key persons in the USAID/Manila and USAID/Bangkok offices who generously took the initiative to forward questionnaires to the list of the most knowledgeable MEREC participants in the participating municipalities and participating local and national agencies and institutions. Approximately sixteen to twenty questionnaires were sent out and twelve were returned by mail over a period of two months.

In order to clarify some of the ambiguity that was apparent in the responses to the questionnaires, it is necessary to explain certain points:

Question 1 assumes that respondents in general have a similar definition of "local institution." Local institutions are defined in detail in some case studies as in those written by Norman Uphoff. In the case of MEREC, what is meant by local institution is

either "public" or "private" entities or organizations who participated.

Question 2 was fairly self-explanatory. However, 100 percent could also mean the most influential; 75-99 percent -- very influential; 50-74 percent -- somewhat influential; and below 50 percent -- not too influential.

The significant point behind questions 3, 4 and 5 is to determine how participants, designers and administrators felt about MEREC and who they felt valued the process, who was responsible for the process and who benefited from the process since the basic idea was to get the beneficiaries to participate.

Questions 6, 7, 8 and 9 seemed necessary after discussions with energy specialists and evaluators who typically study the use of quantifiable, relevant and credible data on energy projects. It was apparent from the MEREC literature that the project's purpose was not fully carried out. Although the project paper proposed to impact the political, economic and social conditions, it was not possible to gather sufficient data that would ultimately determine the growth patterns of the cities. More often than not we can assume that, as is always the case, political, economic and social conditions would influence the outcomes of the project. Some of the responses to these questions indicate that there was some misunderstanding in whether x influenced y or vice versa.

Questions 10 and 11 were generally self-explanatory and well understood by respondents.

Results of the Questionnaire

The questionnaire sought answers to key questions that were not available in the data collected through research, such as the level of participation by the major actors: the Agency for International Development, the USAID Missions in the Philippines and Thailand, the local government officials in Phuket and Tacloban, the Tennessee Valley Authority, and local private concerns in Tacloban and Phuket.

The results are as follows:

The second question asked how influential the major actors had been. In Project Design, five out of twelve respondents said A.I.D. was 100 percent or the most influential organization while one-third said A.I.D. was 75-99 percent or very influential and one-sixth said A.I.D. was 50-74 percent or somewhat influential. Most respondents said that A.I.D. was most influential not only in project design but also in implementation and in the amount of participation in the conferences and workshops. The only exception is that A.I.D. was not considered an influence in the budget allocation process.

Answers of respondents about the influence of the USAID missions (in Manila and Bangkok) tended to cluster in the 75-99 percent (very influential) category for project planning, project implementation and level of participation in the national workshops and conferences. One-sixth of the respondents said that the missions were below 50-70 percent or somewhat influential in project planning, implementation and in participation in the conferences.

Most of the twelve respondents rated the Tennessee Valley

Authority as 75-99 percent or very influential in project implementation, in level of participation in the workshops and the conferences, and in level of participation in reporting and writing of the evaluation reports. About one-sixth of the respondents said that the TVA was less than 50-74 percent or somewhat influential in implementation, conferencing and evaluations.

How influential were public entities overall? Respondent answers tended to gather in both the 75-99 percent or very influential category, and 50-75 percent or somewhat influential category. One of twelve respondents answered that the public entities were 100 percent influential and another that they were below 50 percent or not influential at all in project design, project planning, project implementation, workshop and conference participation and writing of reports and evaluations.

No respondents said that private entities were 100 percent or highly influential in project design, project planning, project implementation, participation in the workshops or conferences or in the writing of reports or evaluations. Most respondents put them below 50 percent or not very influential in any of those areas. The second most frequent answer, given by one-third of the respondents, was that private entities were 75-99 percent or very influential in project design, project planning, implementation, participation in workshops and conferences and in the writing of reports and evaluations. One out of twelve answered that private entities tend to be less than 50-74 percent or not very influential in design, planning, implementation, conferencing of the MEREK project, and in the writing of reports and evaluations.

The responses to questions 3, 4 and 5 are best depicted in graphic form. For question number 3, which asked which organization valued the MEREC project, it appears that AID/Washington and Local Public Entities were named the most often by respondents. On question 4, which asked which group was the stakeholder or invested the most, respondents answered most often that AID/Washington was the greatest stakeholder which felt the most responsible for the outcome. On question 5, which asked which group was the beneficiary or which benefited the most, respondents answered most often that the local public entities benefited the most, with municipalities coming in second.

Questions 6, 7, 8, and 9 asked respondents what external conditions influenced the success or failure of the project. This question derived from the reasoning that the MEREC project was such a small effort financially that rather than it influencing the economic or political, social or cultural conditions of the municipalities, it was easier analytically to determine if the external conditions impacted the outcomes. Determining whether or not those external factors impacted the outcomes could, however, become a separate but very complicated economic or political study which would have to involve some direct observation or direct personal interviews in the cities of Phuket, Thailand or Tacloban, Philippines. To question 6 which asked whether political conditions influenced MEREC's outcome most respondents answered no while a few said yes. To question 7 which asked if economic conditions influenced outcome, half of the respondents said yes and half said no. To question 8 which asked if social conditions in Phuket and Tacloban influenced MEREC's outcome,

most respondents said yes but two said no. To question 9 which asked if cultural conditions influenced outcome, all respondents answered no.

Questions 10 and 11 were open-ended and were difficult to graph or categorize but were nevertheless important. To question 10 which asked what personal lessons were learned, all respondents described characteristics of some aspect of the MEREC project that were either planned or which resulted. Answers included the following: That lack of experience and biases of the TVA resulted in no replication; that personal commitment and sincerity of people was important for project success; that more time needed to be used to explain more to the local officials at the beginning of the process; that MEREC works and that it is an effective use of indigenous resources; that the motivation and direction of participants is a result of community self-reliance and the use of local materials, well-ventilated building designs and energy savings; and that there was not enough funding, but that there was strong leadership under the mayor of the municipality. To question 11 which asked how the MEREC project could be sustained, the answers included the following:

That the MEREC project must be designed with checks and balances on the city and national governments; that there must be more direct NGO involvement in the MEREC process; that there must be more resources to monitor and document the MEREC experience; that the education and monitoring aspects of MEREC should have continued for two years after the demonstration; that the national government should have implemented it instead of the Tennessee Valley Authority; that planning, monitoring and evaluation must be built into the local

participation and that a longer commitment by the city, USAID and the governments of the Philippines and Thailand was needed to maintain the MEREC project. One respondent, who was one of the key designers of MEREC, answered that the MEREC project was a "demonstration," therefore sustainability was not an issue.

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CHAPTER 4

EVALUATION

Evaluating implementation of the MEREC project and its after-effects

Evaluation involves making decisions prior to any activity and accepting certain ideas over others before making a judgment -- in essence, evaluation means accepting certain biases. Evaluating the MEREC project involved learning what the project was in the eyes of the reporters on the project and reserving judgment until some opinion was formed through research and interviews. Once an opinion has been formed about what the project was, then some judgment had to be formed about what happened. Again, this partly depends on the literature which is available. "What actually happened in the MEREC project" is an ideal finding. Funding of the MEREC project did not go beyond the implementation stage, hence not all of the usual yardsticks are available.

An evaluation of the implementation of MEREC is different from evaluating the MEREC project as a whole.³² This is so because project managers, according to literature and interviews, had to decide to narrow their focus to an evaluation of progress based on the finances available in order to carry out the work. Progress made in

³²Jeffrey L. Pressman and Aaron Widalvsky, Implementation: The Oakland Project (Berkeley and Los Angeles: University of California Press, 1984).

the organizational development of the municipalities (set-up and planning stages) were used as a way to measure the extent of participation by local municipal and national leaders. By organizational development, I mean that MEREC was a catalyst to help the municipalities develop into more energy-saving entities. The goals and nature of the MEREC project had to be redefined during the implementation stage to reflect what finances were available to pay for the studies. The purpose of the MEREC project, in the beginning, was to assist a network of secondary cities to become more energy self-reliant so that they would not have to rely on resources outside of the country. Progress measured in the short term in A.I.D. projects is generally easier and less costly than projects measured in the long term. Nonetheless, the decision, as literature reflects, is that MEREC would have long-term goals but progress towards those goals would be short-term. This process, whether short or long-term, required participation by both the local government and all energy-users -- the local residents.

An evaluation of the MEREC project overall involved looking at the extent to which the project diverged from its original goals or "expected outcome."³³ The original design assumed that MEREC subproject activities would be simplified enough to spread to other cities or regions or to encourage other energy-conserving activities in a smaller city in its early stages of development. MEREC designers anticipated a spread effect to other cities in the country or replication of some aspects of the project. The hope was that

³³Pressman and Widalvsky, pp. 87-123).

methods of setting up and planning proven successful in Tacloban (the pre-test location) would be applied to a second and third demonstration city. MEREC designers foresaw the replication of a MEREC blueprint.

Replication and the blueprint approach

Replication of a project design or "blueprint" has traditionally been considered an indicator for successful development. Replication in the purest sense of the word means expansion or the spread effect of a blueprint model and this would ultimately lead to the betterment of the community where a project has been replicated. It is an essential part of the design of a pilot project such as MEREC.

In reality, however, replication is never a pure process. For example, in community-development projects problem-solving must always be location-specific, and some aspects of a project apply only to a specific place. Replication in the MEREC project was theoretically supposed to occur within the city of Tacloban and on the national level in the Philippines. However, since the project did not mature to the stage of development originally envisioned, other methods of evaluation had to be found. Prior to Tacloban's implementation stage, project designers began to realize what the limitations of the MEREC project were, and decided instead to focus on evaluating the subprojects only. Subproject data were much easier to obtain for technical assistants than were overall project data or spread-effect data. Hence, results from short-term projects were documented to show how the MEREC project overall had progressed in the

MEREC literature.

As Norman Uphoff states, "The previously dominant idea, the 'blueprint approach,' assumed that all problems and goals could be identified and agreed upon clearly enough for precise interventions to be specified and carried out according to a comprehensive and detailed plan." Experts would be called upon to design a program and then project managers would implement the project.³⁴

Today, there are a number of development theorists who disregard the theory that blueprinting will assure success. In fact, Norman Uphoff argues that the approach has failed, on several grounds:

1. First, it requires knowledge and consensus on both ends and means that is unattainable. Even if the objective is clear and agreed upon, what needs to be done to reach it can hardly be known in much detail in advance, if only because situations are themselves always changing.
2. Even if a design is well informed and well-conceived, it is not likely to be applicable to the wide variety of circumstances found in the real world. Heterogeneity is usually glossed over in the design process. However, standard organizational models often end up fitting no situation very well. Modification and adaptation are invariably needed.
3. Because improvisation and innovation as well as innumerable other skills are required during the implementation phase, it is a misconception to assume that implementers do not need to be capable and imaginative as designers, and that there can be a dichotomy between the "thinkers" and the "doers." Implementers of projects probably need to be even more creative than designers for achieving the institutional development that is needed.³⁵

³⁴Norman Uphoff, Local Institutional Development: An Analytical Sourcebook With Cases (West Hartford, Connecticut: Kumerian Press, 1986).

³⁵Uphoff, Local Institutional Development.

As an alternative to the blueprint approach, the "learning process" or "process" approach has been used.

The learning process approach

According to Uphoff and Esman, the learning process approach is characterized by "inductive planning" to emphasize the value of formulating hypotheses about what will probably work with cultural assessment and revision of strategy. In a learning process, activities are not organized into strictly sequential stages, e.g., a planning, implementation and an evaluation stage. Rather all those stages are seen as overlapping and beneficiaries are expected to contribute to the planning, implementation and evaluation stages along with professionals.

Even though development professionals acknowledge that projects seldom follow the original plans closely, introducing mid-project evaluations is better than not having any at all. Unfortunately, government efforts to improve project performance have resulted in the adoption of more complex and rigid requirements and procedures for identifying, preparing, approving and implementing projects. These procedures have come at the expense of flexibility. More frequent and extensive evaluations of a project contributes to more rigidity in adherence to project designs. Deviation from design may require possibly protracted bureaucratic hassles and personal risk on the part of implementers.³⁶

According to Norman Uphoff, flexibility is important not

³⁶Pressman and Widalvsky, pp. 125-146.

only because it is a way to arrive at institutional arrangements suited to aid sustainability in specific circumstances, but if local actors are involved, they are more likely to regard a project as their own for which they will take responsibility. "Local institutional development" (LID) tasks tend to be easier, where local institutional capacities already exist and need to be strengthened.

The MEREC project tended to lean towards local institutional development when it was found that the longer-term goal of replicating the model was not going to happen before funding of the project would end. In this case, "catalysts" were used along with an institutional development approach, but not to the extent as described by Norman Uphoff or David Korten in their case studies about the institutionalization of projects. Uphoff's term, "catalytic," refers to working with local governments to strengthen their responsibilities so that they along with corporations and private businesses will make better use of their resources. Catalytic roles are facilitative and tend to promote rather than set rigid rules. Where the mode of support is facilitation or promotion, the role for specialists in catalytic roles is more evident.

According to Aaron Widalvsky in Implementation: The Oakland Project, "Organizations that deal with collective efforts of men are devoted to the processing of information and the generation of knowledge. Their ability to test the environment, so as to correct error and reinforce truth, makes them more effective. Inability to learn is fatal. Yet learning is more difficult because so many men

must do it together."³⁷ The Oakland project, as documented by Wildavsky and Pressman, closed off possibilities of learning. Besides being a model from which the Economic Development Agency (EDA) could learn from success in the Oakland project, it was not even an experiment from which the organization could learn from failure.

The EDA, a federal government agency in the United States, made special efforts to overcome obstacles that were known to have hampered other programs. The EDA's innovation, from its own point of view, consisted of trying to avoid institutional fragmentation, multiple and confusing goals and inadequate funding that had characterized previous federal city programs. Two of the projects in this program -- the marine terminal and the airline hangar -- deliberately included only one federal agency in the city, and only one major recipient was chosen to be responsible for the employment plan. Since the goal of this EDA project was to increase employment among minorities in the area, there was an immediate commitment of \$23 million and straightforward construction of job-producing public works was the heart of the EDA program. In spite of EDA's plan to design a simple and straightforward project, the effort became complex and convoluted. The EDA project involved numerous participants, different perspectives and a long and tortuous path of decision points that had to be cleared. Given these characteristics, the chances of completing the program as expeditiously as its designers had hoped -- or the chances of it being completed at all -- were sharply reduced.

³⁷Ibid.

Wildavsky points out that when perspectives differ, so also do measures for success. For the original EDA leadership, the major criterion of success was the number of jobs created for minority hard-core unemployed in Oakland. But other participants had competing success criteria; the Port of Oakland was mainly interested in expansion of its facilities while the Department of Health, Education and Welfare was pressing for funding for the East Bay skills training center.

The important lesson that was learned from the EDA experience in Oakland was that implementation should not be divorced from policy. There is no sense in having good ideas if they cannot be carried out. From the outset the emphasis was in designing the program, obtaining initial agreement at the local level, and committing the funds. The later steps of implementation were felt to be "technical questions" that would resolve themselves after the initial agreements were negotiated and commitments made. But over the years these seemingly routine questions of implementation became serious obstacles to the success of the program.

As Wildavsky says, "The conceptual distinction between evaluation and implementation is important to maintain, but the two overlap very much in practice, because they protect against the absorption of analysis into action to the detriment of both. Implementation is hypothesis-testing: it is exploration, yet it should be based on evaluation".³⁸

Basing himself on his years of research on participation,

³⁸Ibid.

David Korten says that the movement to support popular participation came about because planning procedures meant blueprinting project designs in which key decisions regarding services, inputs, schedules and outcomes were all centrally determined by planning experts. Once such plans were completed and accepted, the only avenue left for beneficiary participation was in providing free labor and materials to implement decisions in which they had no part.³⁹ And as was explained in Norman Uphoff's study on local institutional development, blueprint planning has largely failed.

In Korten's documentation of a "learning process" approach and one of the more successful community management initiatives, he mentions the National Irrigation Administration (NIA) in the Philippines as one which has sought to control difficult issues: it defines the government's role in terms of enabling the self-help efforts of the people and attention was given to reorienting the structures and procedures of public development agencies in ways consistent with this new role. As a result, community-level interventions sought broadly based empowerment in resource control and management.⁴⁰

In the late 1970s the NIA realized that the major remaining opportunity for further expansion of irrigation coverage in the Philippines lay in improving the thousands of small-farmer-owned and -operated "communal" irrigation systems which already provided

³⁹"Finding the Balance Between Blueprint and Process" in David C. Korten, ed., Community Management: Asian Experience and Perspectives (Hartford, Connecticut: Kumerian Press, 1986).

⁴⁰Korten, "Finding the Balance."

approximately half of the Philippines' irrigation. The NIA set about to develop its ability to provide effective assistance to these farmers in increasing the coverage and reliability of their systems. The key elements of the NIA's approach were based on the "lessons learned" from the failures of community development, popular participation and decentralization efforts.

Major attention in the NIA was devoted to building independent, member-controlled irrigation associations. Every aspect of NIA assistance in the development and empowerment system facilities was designed to provide the association with experience in problem-solving, resource mobilization and asserting itself in negotiations with NIA engineers. These associations were legally chartered by the government as autonomous, self-managing corporate bodies with the right to assess loans, and hire staff. They granted legally enforceable rights to the water which their system is authorized to use.

Before work would begin, a socio-technical profile was prepared which would illuminate existing power structures and how the structure relates to irrigation interests. These profiles were reviewed by the NIA in workshops at the provincial and regional levels to identify potential problems, including conflicts of interests within the community, and to plan strategies for use by NIA personnel in addressing them during implementation.

In organizing activities, committees were formed to perform tasks such as obtaining water rights, registering the association, obtaining rights of way, monitoring NIA's procurement process, and assisting NIA engineers with the system layout. When the base of

participation was broadened, leadership skills were built up and members were provided with the opportunity to see firsthand which individuals would best represent association interests if elected to formal positions. Community organizers fielded by the NIA would then begin to work with actual or prospective association members well before the initiation of design work on a specific system to prepare the prospective users to make effective inputs to the design. After the design was prepared, the engineering staff reviewed the actual system with association members to insure agreement on the location and nature of every facility. Construction did not begin until the association had formally approved the plans and agreed to the terms of loan repayment. The procedure was not considered complete until the association had accepted its specifications in a public ceremony. At this point the facilities became the formal property of the association, which assumed full responsibility for their operation and maintenance.⁴¹

Future budgets of the provincial engineering office depended on loan repayments by the assisted associations, providing a strong incentive to the provincial engineer to insure continued satisfaction with NIA services by the association members and creating a considerable measure of local accountability.

In a process begun in 1977 and still continuing today, NIA's top management has worked to reorient the agency's internal structures, planning and procedures, staffing patterns, and training and evaluation systems to reflect the requirements of the

⁴¹Ibid.

participating office. As a consequence, the NIA has developed an essentially non-bureaucratic mode of operation based on well-disciplined problem-solving teams at regional and provincial levels. These teams have considerable discretion in adapting assistance interventions to the specific needs and circumstances of individual communities.

In another case study documented by Terrant and Poerb in Community Management, an organization was able to institute participatory planning as well as replicate aspects of its program to other local organizations at the same level.

In 1980, the Center for Environmental Studies at the Institute of Technology in Bandung (CES-TB) undertook a participatory action research program in the uplands of the Citanduy River Basin in Ciamis District (Kabupaten) in West Java, Indonesia. Through an action learning process, this program sought to develop an approach so that the people would mobilize their own resources to address their problem, with government assuming the role of enabler and service provider⁴²

The condition of the depleted lands around the Citanduy Basin was considered to be reversible through proper soil and water management practices. Of the total of 446,000 hectares that comprised the area, 27 percent was classified as uplands devoted to small-farmer cultivation. Thirteen percent of the land area in the basin was classified as "critical land," which meant that it was too degraded to sustain on a permanent staple agricultural crop, although some were

⁴²Community Management.

still cultivated, providing at best only a marginal return.⁴³

The Indonesian government has been aware of the need for improvised watershed management for a long time, leading in 1980 to the USAID-funded Citanduy II Project, which sought to develop the capacity of the local and regional governments working collaboratively with the Ministry of Agriculture to implement a program. This watershed improvement program provided substantial subsidies to groups of farmers to motivate them to establish ten-hectare terraced demonstration plots on which an approved uplands farming system technology package was applied. Working out of the demonstration plots, extension agents encouraged farmers in an expansion area around the site to adopt the same practices, offering them somewhat smaller subsidies as an incentive.

The CES-TB program was experimental and was initiated in two sites -- Sagalaherang village, with a population of four thousand, and Cigaru hamlet, with a population of about seven hundred. Both sites were characterized by substantial independence of individual households in decision-making and income-generating activities. Participation in joint decision-making and cooperation activities was limited at both hamlet and village levels.

o Cigaru was socially homogeneous and poorer than the other village. A sizable portion of its male labor force spent substantial time away from the community in search of income-earning opportunities. This gave them less time for activities such as terracing and irrigation development to

⁴³Ibid.

improve the productivity of their lands. Crop yields declined in the late 1970s and early 1980s.

- o Sagalaherang was more socially stratified. A relatively smaller number of large landowners were heavily involved in cash crops, especially tree-crop agriculture. A large number of mid-level farmers marketed some surpluses from their production and the largest groups of households consisted of small subsistence farmers. The first two groups dominated decision-making, especially in economic matters and the third group had little access to the process.

The first program was devoted to collection of baseline data and the formation of a program strategy, followed by the initial field motivation and organizing efforts. A variety of techniques were used to engage villages in a critical assessment of their reality and of measures they might take to improve their situation. These included brainstorming, directed discussion of specific community problems, simple simulations, and the reading and discussion of passages from the Koran.⁴⁴

Considerable attention was given to "critical introspection" aimed at identifying major attitudinal and organizational barriers confronting community-wide development. Villages were helped to look at problems logically and to examine their systematic causes. This was intended to be a process of self-evaluation and attitudinal change as well as a stimulus to organizational action.

The reactions in Sagalaherang and Cigaruru were different. In

⁴⁴Ibid, p. 174.

Sagalaherang, the point of entry was through the village head and his assistants. It was a new village, recently created through the division of another village that had grown too large in population for efficient administration. Here the village head insisted that the CES-TB work with and through the formal village government rather than calling mass meetings for discussion and informal education as was done in Cigaru. Yet the village head and the official governing council of the village made little effort to inform or involve other village residents in the initial motivating planning and organizing efforts. This seriously weakened the program from the start, a problem that was never overcome and was reflected in the limited results achieved.

By contrast the hamlet chief in Cigaru was open-minded and himself a small farmer. He was also the village dresser, informal veterinarian and birth attendant who was genuinely respected and regularly consulted for guidance by the villagers. He facilitated the broad participation of the hamlet residents in the program and was active in the formation of the subsequent work groups. Consequently it was possible in Cigaru to develop a broad organizational base from which a strong, community-base development project emerged. (See diagram.)

As illustrated from the preceding cases, the learning approach has taken different forms, from the policy and design level in Widalvsky's assessment of the Oakland Project, to the national government level as in the case of Uphoff's assessment of the National Irrigation Administration, and finally in David Korten's assessment in the case of the Citanduy Environmental Assessment project.

CHAPTER 5

HOW MEREC FARED IN TACLOBAN

Tacloban was the first demonstration site used to pilot the experimental MEREC project effort. At this stage, learning through process was more valuable than learning through blueprint. Much information was gathered about Tacloban and participation by locals under the leadership of Obdulia Cinco, the mayor of Tacloban. The MEREC project showed great promise because Filipinos actively participated in the start-up and the planning phases but the real test of commitment would come during the Implementation phase when funding delays threatened some subproject activities and Filipinos were faced with a decision to accept or not to accept MEREC in the long-run. Long-term commitment to MEREC was implied because in order for MEREC-like systems to expand in the Philippines, local resources (human, financial, natural and institutional resources) would have to eventually replace outside resources. The Tacloban situation report reflected the perceptions and expectations of those who authored it -- local public and private institutional representatives of the city. The report reflects a wealth of ideas generated by local, regional and national officials reviewing municipal resource problems and opportunities. Less attention was paid to achievement of long-term results which were constrained by a limited budget. Innovative ideas and experimentation characterized much of the Tacloban experience.

How information on implementation was gathered

There was a rich amount of information gathered for the MEREC pre-test in Tacloban. Some of that information, not necessarily field-specific, was in the knowledge gained during the start-up and planning phases. The purpose of the pre-test was to set the ground rules for a core method (see Chapter 1) as a basis from which to start planning. A brainstorming session and then a focusing process helped to guide participants toward their own solutions to their own municipal management problems -- ultimately to turn these problems into strategies, and then to turn the strategies into action plans by urban sector. The lessons learned during the start-up and planning phases were of major significance but were not recorded in MEREC reports. The methods used in these phases to create an integrated decision-making body made up of local, regional and national officials were inherently participatory, and as such, decision-making was not an easy task. Some of the results of those two phases is reflected in the situation report. Yet the writers and editors of the reports may not have used all ideas which surfaced during the start-up and planning phases.

MEREC field reports by the Tennessee Valley Authority reflected information gathered for each subproject activity. Secondary sources were used to evaluate MEREC subprojects through TVA reports, review of administrative records (A.I.D. project documentation), final reports by TVA and project designer Avron Bendavid-Val, and situation reports. Ideally, direct observation should have been used to evaluate subprojects, but lack of funding made travel to the Philippines and Thailand to the project site an

impossible task for this study. Since MEREC in Tacloban was an experiment and the project has officially ended, questionnaires were used to evaluate the impact MEREC had on participants from the local, regional and national government. In the beginning, "participation" was not clearly a criterion for success, although a site was chosen, which at the time would be the most likely place for successful implementation of a MEREC project.

Tacloban chosen as the site for the MEREC pilot pre-test

In the early 1980s the Philippines was considered one of the more amicable places in Asia for the United States to conduct a pilot study because U.S. and Philippine relations had spanned nearly a century and Western values and ideas were accepted. English had been widely spoken for years, and Filipino values tended to be similar to those of the United States. During the energy crisis, the Philippines was just as concerned as the United States that energy resources were limited. The energy crisis threatened development efforts of the Philippines because "development" also meant intensifying the use of the country's energy resources. The MEREC project viewpoint was valuable because it was realistic, practical and ultimately participatory. It demonstrated targets could be achieved through the use of appropriate and indigenous technologies rather than through continued dependence on outside resources.

Tacloban was selected for the MEREC pilot pre-test with the help of the Asia bureau at the Agency for International Development and the Urban Development Office at the Bureau for Science and Technology after considering eight other cities in A.I.D.-assisted countries in Asia, the Near East and Latin America. The Asia bureau

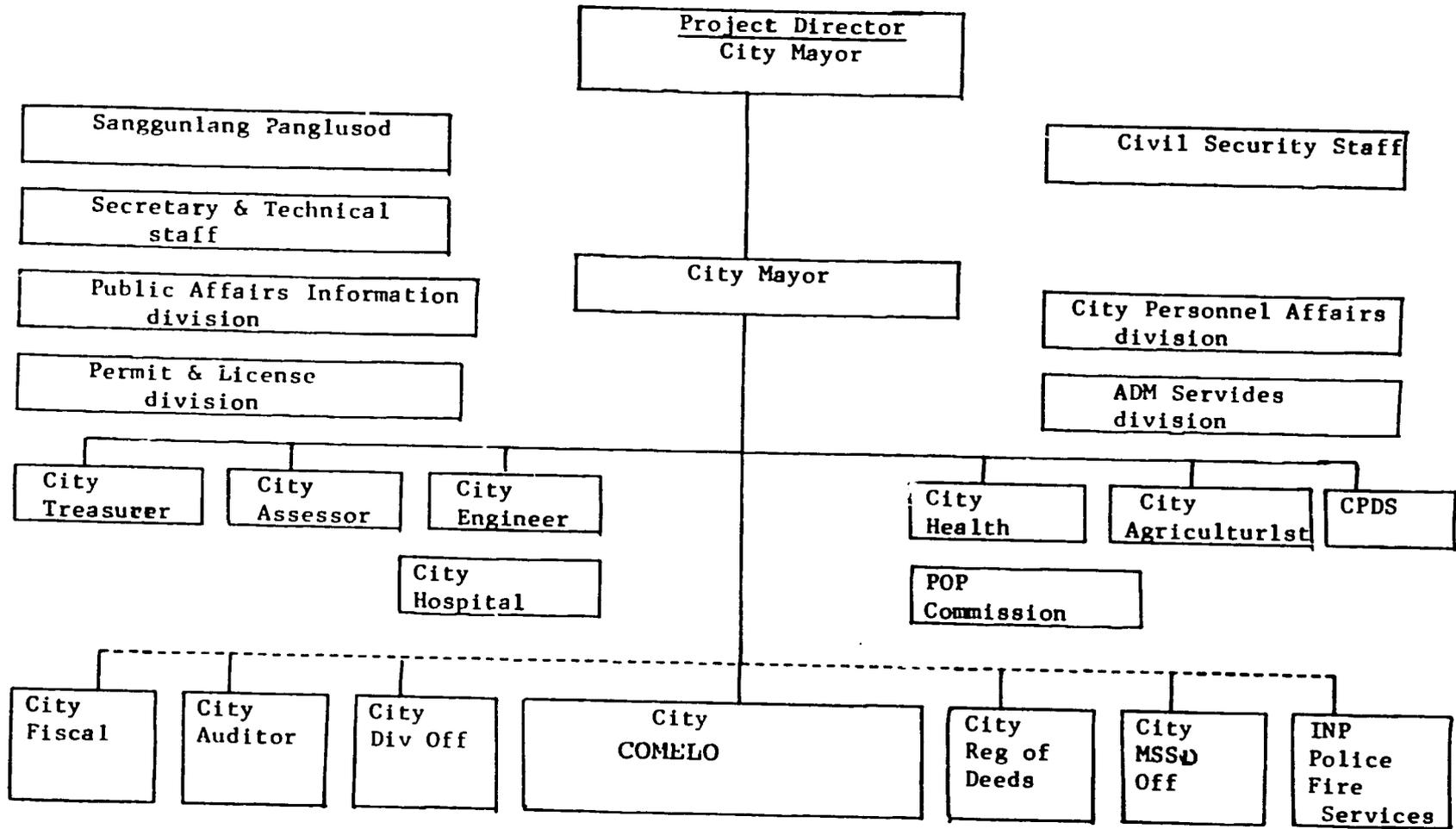
singled out Tacloban city in the Philippines, located in the middle of the archipelago in the Visayas region because it was one of the target regions in USAID/Philippines' Country Development Strategy Study (CDSS).⁴⁵ Tacloban is located in a relatively underdeveloped region and was given preference because it had a rapidly expanding population of just under one hundred thousand and a committed, energetic mayor, Obdulia Cinco. The Asia Bureau at A.I.D./W, the USAID mission in the Philippines, Obdulia Cinco all showed enthusiasm and support from the very start in 1981.

Tacloban is the administrative center of Leyte Island and a regional commercial center. The harbor and central business area is very busy and must deal with the demands of expanding trade activity, including boat, passenger and foot traffic, trucks, jeepneys, private vehicles, motorized tricycles and carts, all in a market- or bazaar-type atmosphere. Elegant small housing districts exist along with large tracts of squatter settlements and public housing projects and rural-style homes that have remained intact in the midst of urban sprawl.

The city of Tacloban is governed by an elected mayor, vice-mayor, and city council. It consists of municipal departments and offices, including a city assessor, engineer, agricultural officer, and development coordinator. The municipal government levies a property tax and a variety of fees and is responsible for waste management and sanitation, land-use planning, health services, local

⁴⁵U.S., Agency for International Development, 1983 Annual Report: MEREC (Washington, D.C.: A.I.D., 1983).

ORGANIZATIONAL CHART FOR TACLOBAN MUNICIPALITY



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roads, drainage, parks and recreation, building and construction permits, business licenses, public markets and depots.

Local offices of national agencies are responsible for traffic planning and control, water supply, harbor management, national roads that pass through the city, education, school construction and police. An electric cooperative linked to the National Transmission Authority is responsible for electricity distribution. There has also traditionally been a consultation and coordination among municipal authorities; and local branches of national authorities has been well established. Nevertheless, there were problems.

Municipal governments in the Philippines have more independence in authority and responsibility, and more revenue collection capability, than is usually the case in developing countries. It is therefore not unusual for a city like Tacloban to take the initiative in major improvement activities. Some of the municipal government's authority, however, is limited. Some operations require approval or endorsement of the central government, as in the case of land-use planning. The central government must approve the city's land-use plan for it to be a valid instrument.

While good communication exists among representatives of the municipal and other levels of government, there was no precedent for a sustained collective effort in 1980 that encompassed many aspects of city operations simultaneously, and which examined interrelationships among various sectors of municipal activity. The MEREC project offered Tacloban the opportunity to bring several levels of government together.

On October 22-23, 1981, the first workshop took place in Tacloban, bringing together Philippine expertise in the resource and conservation fields.⁴⁶ They reviewed the Tacloban situation report prepared by task force groups, and a preliminary "state-of-the-art" document prepared by Coopers & Lybrand. Various subcommittee chairmen presented their reports, then each subcommittee separately discussed their reports with their consultants. On October 23, the task force reconvened and all subcommittee workshop reports were discussed by the attendees in a plenary session. Upon approval of submitted reports, these were drafted to form part of the Tacloban Workshop Reports.

Social and cultural aspects of "participation" in the Philippines⁴⁷

The MEREC project offered an opportunity to bring several levels of government together for Tacloban through activities that required participation by government officials. The following is an explanation of how some social and cultural traits in the Philippines make participation almost a natural process in the country.

Participation -- full involvement in the decision-making process, outside the formal political and bureaucratic structure of local authority councils -- has only recently been considered as an integral part of the physical planning process in the Philippines. But the existence of a grassroots structure -- barangays -- provides a firm foundation for participation in planning, although this system has also tended to be used as a mechanism for social control, ensuring

⁴⁶Ibid.

⁴⁷This section relies on Alistair Blunt, "Community Participation, a Philippine Experience," Habitat International (Pergamon Press, 1977).

support for the government's programs. Within the barangay system, loyalties that are also developed have also been used to propagate the government's plans and propaganda.⁴⁸

The city of Tacloban, like all urban and rural areas, is subdivided into barangays, which are ill-defined (they were once based on village centers with populations of one hundred to five hundred families). These old divisions have since been absorbed by urban expansion and a different system of dividing the land.

The leaders of the barangays (captains or chairmen) are appointed. Barangays are given specific responsibilities and a limited budget which comes mainly from a share of local tax revenues. They have a limited right to raise additional funds and they are closely allied to the city, metropolitan or district administration. Barangay responsibilities include simple maintenance, special or intermittent traffic control, beautification of the area, peace and order. During martial law, peace and order was the highest priority, but priorities and effectiveness of the barangay organization varies depending on the leader in charge and his relationship to the mayor or provincial or regional governor.

As loyalty is a deep-rooted tradition in Philippine culture and affects the likelihood of participation, all employees are expected to show loyalty to their employers as one favored by another. Since jobs are limited, no matter how low the wage, a great favor demands reciprocal loyalty. The barangay captain can dispense favors by finding jobs for people in the city administration or by using his

⁴⁸Blunt, p. 179.

influence to resolve disputes and maintain tight control over residents of the barangay. Comments or criticism during community meetings are therefore uncommon because it is feared that they put future favors in jeopardy.

A possible constraint to active participation in the planning process is the apparent passivity of the Philippine people.⁴⁹ But this is possibly a myth fostered by years of control by the Spanish and Americans. Actually, active resistance has existed against all colonialist and oppressive governments and displeasure has been shown in very subtle ways, such as through the church. With a population that is 85 percent Roman Catholic, the church is more closely associated with the opposition and has been active in assisting the development of local groups within some squatter areas.

A favorable condition to participation has been the value placed on higher education in the Philippines. Even in slum areas about 90 percent of the population has received some formal education.

Participatory planning in practice has been tried several times. In the Tondo case, an overall plan was presented at a mass meeting to which all residents were invited -- but there was actually little opportunity for discussion and participation tended to be superficial.⁵⁰ The level of discussion and freedom of opinion varied from one block to another according to barangay leader.

In order for participation in provincial cities to be meaningful, both planners and sponsoring agencies have had to learn to

⁴⁹Blunt, p. 180.

⁵⁰Blunt, p. 182.

appreciate the positive advantages of participation; and residents have had to overcome their apathy or skepticism and believe that they could affect the proposals or add their own.

Philippines' past experience with participatory projects

In Manila, in a project called the SIR Project, the coordinating committee recognized the need for representatives of the community to work with the committee, so they formalized the liaison between the agencies and the community. The committee also requested that relevant barangay representatives sit on the committee. This did not automatically bring about true participation or involvement in the planning process. It was only a political move. More work had to be done in the way of getting the community representatives to participate actively in the decision-making processes.

In some areas the barangay organization is weak and barangay boundaries are not appropriate or relevant to a project. It has been difficult to get some barangay leaders to participate in the activities of a coordinating committee. Participation was initiated by the committees and they proposed that barangay boundaries be redrawn and that new councilmen be elected or the existing ones "educated" into involvement.

The barangay council in some places became an important medium through which the community could be involved in coordinating plans affecting a specific area. The members of the highly motivated subcommittees are ultimately more effective because they are mainly leaders of formal and informal groups that were formed in their areas before this barangay council project was implemented.

The chairman of each subcommittee was later able to become a

member of the coordinating committee responsible for the social and economic support program. These subcommittees supposedly now work closely with local offices and agencies which supply the necessary support to the barangay councils.

Piloting participation in the MEREC project and finding a balance between blueprint and process

Like the SIR project, MEREC had a grassroots element in Tacloban. The MEREC project, however, is urban-based as opposed to the SIR project which is rural-based. Both urban or rural public entities have the same basic responsibility -- to serve the needs of the public through availability of resources and access to public services. The public needs to have its needs known through a political decision-making process, whether on the national level or the local level. The SIR project is an example of a system which seems to have worked in the Philippine context on the local level. The system drew on certain values, goals and objectives that are inherent in the Philippine style of participation through an institutional process.

The SIR project, however, did not specifically develop out of a promotion of the idea of "participation." Participation seems to have been a characteristic element in several other types of institutional developments in Philippine organizations. Through experimentation of MEREC activities, it became increasingly evident that participation had to be factored into the project; and the participation effort that occurred during the set-up and planning phases of the MEREC project made the difference between success and failure of a demonstration. If there had been no interest by Tacloban

officials in doing a certain project or in managing a certain subproject, then there would have been no incentive among participants to maintain the project. The demonstration would fail if it were not valued by those responsible for maintaining it.

Discovering Philippine officials' strong need to participate in order to become more motivated was part of the learning process between agencies working together. The decision-making processes to choose types of demonstrations and the method of demonstration was not only complicated on the technical level, but also on the cultural level. MEREC subproject demonstrations were being formulated at the international level in A.I.D./Washington by contracting organizations who were very distant from the actual problems. The overall MEREC project design as well as the demonstrations and subprojects to be designed on the local level depended on the participation of local officials and residents to spell out the problems that had to be dealt with.

On the international level at A.I.D./Washington, the MEREC project, in order to be approved for funding, had to be credible to viewers who believed that results should be expected from the investment of \$250,000. A major controversy over MEREC would be the evaluation of the proposed outcome. MEREC was also controversial merely because it was a pilot project.⁵¹ Pilot projects are experiments that are based on a learning curve rather than a blueprint. A.I.D./Washington's view is mostly based on the

⁵¹A.I.D., "AID/PPC/CDIE Document #PD-WAH212(Washington,D.C.: A.I.D., 1982).

expectation that development projects should be somewhat sustainable in one way or another.

The MEREC project cycle was promoted as a guaranteed success story because energy resources worldwide were believed to be limited and secondary cities like Tacloban and Phuket were in a position to influence the pattern of growth and development. The MEREC project offered a blueprint that was theoretically sound, if not necessarily financially feasible⁵². The blueprint model was general enough to account for local differences. It was also described as more involved and complicated than the project eventually became. The MEREC consultant realized that subprojects had to be more simplified if participation was going to occur. This was part of the learning process. The MEREC project evolved into a juggling act between the blueprint expectations of A.I.D./Washington's accountability requirements and the learning process that is necessary in the field when the blueprint does not fit real-life situations. The blueprint had to be modified so that the MEREC model could fit into the unique culture in the Philippines, where participation is often a criterion for motivating Filipinos.⁵³

MEREC activities found their value in a "balancing act" in the Philippines, where the lessons to be learned would be taken into consideration before implementation in the next demonstration city of Phuket, Thailand.

Implementation of MEREC subprojects

⁵²Ibid

⁵³AID/PPC/CDIE Document #PD-AAR035 (Washington, D.C.: A.I.D., 1981).

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The MEREC Approach

Sectors	Resources					
	Urban Land	Transport Fuel	Electricity (and other energy)	Urban Waste	Local Bldg. Materials	Water
Land use	Achieve more efficient land use for all purposes	Reduce fuel consumption through better land-use patterns	Provide alternate energy sources through urban agriculture	Identify future sites for waste disposal	Produce local building materials and furniture through urban agriculture	
Housing and construction			Create housing designs that conserve and create energy	Use common biogas digesters	Employ local building materials and improve local building materials	Utilize rain water instead of city water
Water, sewerage, drainage	Increase usable urban land	Increase fuel efficiency through better road access and maintenance				Reduce water losses Reduce bay water pollution
Waste management	Establish reclaimable landfill site Provide fertilizer for urban agriculture	Reduce fuel consumption via push carts, centralized containers, and new landfill	Convert waste to fuel	Increase the percentage of resources recovered		Reduce water pollution (both ground and bay water)
Electricity (and other energy)			Increase efficiency of electricity distribution and consumption			
Transportation	Coordinate traffic patterns with desired land use	Conserve fuel through transportation planning Promote alternate transport fuels	Utilize local alternative energy sources			
Summary strategy for each resource	Achieve more efficient use for all purposes	Increase transportation fuel efficiency	Increase efficiency of existing sources and utilize alternate energy sources	Promote efficient utilization of urban waste for energy use and other purposes	Promote the efficient use of local building materials and designs	Conserve water and water sources

Opposite: Graphic representation of a MEREC Strategy matrix, from a MEREC orientation booklet. Symbols representing the resources of solar energy, land, trees, water, minerals, and fossil fuels are shown along the top of the matrix. Symbols representing urban sectors, such as housing, sewage and drainage, energy supply, water supply, urban

planting, and transportation are shown along the side. The shaded boxes represent major resource/sector interactions, for which specific resource-efficiency objectives are formulated.

{ Above: A MEREC Strategy matrix developed in Tacloban,

Philippines. The strategy matrix serves as the basis for a MEREC Action Plan, which translates the objectives, appearing at the intersections of resources (columns) and sectors (rows) into specific local resource-efficiency projects.

MEREC in Tacloban was ambitiously attempted, as it is reflected in the Tacloban Situation Report. After at least six areas of resource concern were chosen, a preliminary matrix was created for each sector.

The land-use matrix reflected a thorough understanding of the land-use composition. Over a period of three years there had already been a significant increase in urban growth in Tacloban City. In 1977 9.4 percent of the land was urban; by 1980, 18.9 percent was. The pattern of residential and commercial zones in Tacloban proper illustrates that traffic density will be problematic during peak commuting hours. Much of the development (commercial, residential, light and heavy industrial) is located in the piedmont area of Tacloban City and it is obvious that further growth in population will result in higher population density per area, unless the residential zone is extended into other surrounding barangays in the more mountainous areas. In an effort to balance the commuting and traffic patterns of the different types of vehicles that exist, a preliminary matrix on transportation was developed. Clearly, there was lack of an integrated transportation plan. It was also clear that there were many courses of action for each of the problems that were perceived. But this would require several governmental organizations taking responsibility and action. Ultimately, the major concerns became "how to achieve more efficient use of urban land for all purposes and how to increase transportation fuel efficiency," as illustrated in the Strategy Matrix for Tacloban.

Energy wastage in the electric power system was a problem in Tacloban. The electricity in the city of Tacloban has been provided by

the Leyte II Electric Cooperative (LEYECO II) which also begun to serve other barrios and barangays. Expansion of the electrification began in 1972 with the "Countryside Electrification Program," which aimed at bringing energy to the rural areas to accelerate economic activity. In 1975, after LEYECO II registered with the National Electrification Administration (NEA), expansion began in rural areas based on area coverage. For its initial operating capital, LEYECO II was granted a loan of 27.3 million pesos by the NEA payable in thirty years with a five-year grace period. The interest rate is 3 percent per annum. Initially, LEYECO was a franchise of a private electric cooperative called DORELCO but in 1978 the NEA granted LEYECO a certificate of franchise to operate for a period of fifty years.

As a franchise holder, LEYECO II is empowered to:

- a) generate, manufacture, purchase, acquire, accumulate and transmit electric power and energy and to distribute, sell, supply and dispose of electric energy to persons who are its members and to other persons not in excess of 10 percent of its members.
- b) construct, maintain and operate electric transmission and distribution lines across publicly-owned lands and public thoroughfares, including all roads and highways; and
- c) fix, maintain, implement and collect charges and terms and conditions for services.⁵⁴

LEYECO II coordinates and cooperates with other

⁵⁴City of Tacloban, Situation Report: Managing Energy and Resource Efficient Cities (A.I.D./Washington, December 1981).

agencies and offices. Electric cooperatives, as private institutions, operate independently. The system is not regionalized. The cooperative reports directly to the National Electrification Administration.

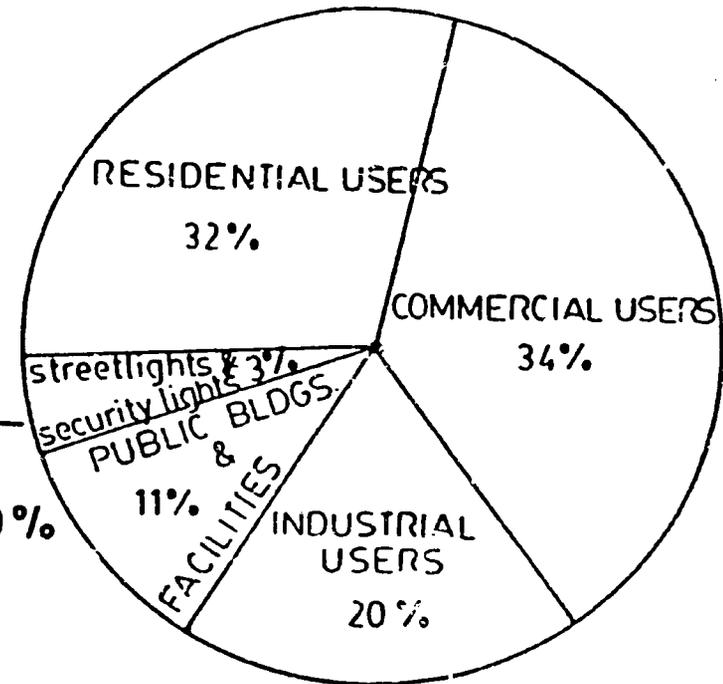
The major source of power for LEYECO II is the power plant at DORELCO located at San Roque, Tolosa, Leyte. This power plant is equipped with eight generators with a rated capacity of 10,250 kilowatts but the actual generating capacity is only 6,450 kilowatts. LEYECO has its own power plant equipped with four generators but it is old and overused and has a generating capacity of only 2000 kilowatts. DORELCO and LEYECO II have a combined power capability of 8,450 kilowatts which is barely enough to meet the demand for electric power in the LEYECO II service area. With barely enough power base to support the demand for electric power of these four electric cooperatives, it is significant to note that there is no back-up power. When DORELCO undertakes maintenance and repair work on its generators, power interruptions frequently occur, affecting all service areas.

Trend analysis of the consumption patterns of commercial and residential users illustrate how power interruptions have disrupted service. Industrial use has increased dramatically between 1975 and 1981, yet analysis shows that consumption figures may be misleading. Revenues collected by residential users have increased yearly, which may be attributed to higher power interruptions. Revenue derived from commercial use has also increased due to increase in power

1980 DISTRIBUTION OF ELECTRICITY SOLD

Exhibit 2

A. RESIDENTIAL	4,098,151	32%
B. COMMERCIAL	4,480,520	34%
C. INDUSTRIAL	2,658,225	20%
D. PUBLIC BLDGS. & FACILITIES	1,390,604	11%
E. STREETLIGHTS & SECURITY LIGHTS	349,271	3%
<hr/>		
TOTAL ENERGY USED	12,976,771	100%



rates. Revenue collected from industrial users decreased in 1976, 1977 and 1979 but increased by 69 percent in 1980. The number of connections to public buildings and facilities increased at an average yearly rate of 10 percent, from 117 in 1975 to 190 in 1981. Since there have been brownouts and power losses, much of the power has been unaccounted for. The average yearly system loss is 24 percent. The maximum percentage of loss occurred in the year 1977. No statistics are available to pinpoint where illegal connections are suspected to be a major contributor to the losses. Consumption figures may also be misleading because the cooperative has been experiencing decreases in revenues collected. The high cost of living has prevented many consumers from settling their accounts on time.

The power capability of DORELCO is barely enough to provide for the ever-increasing demand for electric power within the service areas of the four electric cooperatives. To compensate for the deficiencies in power generating capacity, these electric cooperatives will eventually link with the power grid of the NPC. In the immediate future, NPC is considering the transferral of a power barge from Naga, Cebu to Isabel, Leyte. Owned by the NPC, the 32-megawatt power barge would serve as an interim source of power pending the completion and operationalization of at least one unit of the Tongonan Geothermal plant. The power barge, once installed in Isabel, has more than enough power capability to serve Leyte and southern Leyte.

In the Situation Report, the proposed strategy for

more efficient usage of electric power and energy was as follows:

- 1) Improve electric power supply and distribution system.
- 2) Develop and promote utilization of indigenous energy sources.
- 3) Implement energy conservation measures in various sectors.

But ultimately, the following strategies were proposed in the MEREC strategy matrix for Tacloban's economic sectors:

1. Provide alternate energy sources through urban agriculture.
2. Create housing designs that conserve and create energy.
3. Convert waste to fuel.
4. Increase efficiency of electricity distribution and consumption.
5. Utilize local alternative energy sources.

The Leyte Metropolitan Waterworks (LMW) provided services to portions of Tacloban City and to four other municipalities. The system was initially constructed in 1937 and became operational in the same year. From its inception until 1955 it was under the control and administration of the provincial government which served as owner and operator of the system. When the National Waterworks and Sewerage Administration (NAWASA) was created by Republic Act 1383 in 1955, the provincial government transferred control and administration of LMW to the NAWASA. Ownership of the system, however, was retained by the Leyte Provincial Government.⁵⁵

The old water utilities system degenerated for two reasons:

1. Key elements of the old system were deteriorating faster than they were being maintained or replaced.
2. Expansion of delivery capacity was not keeping pace with the demands of a growing population. The old system inhibited economic growth, threatened public health, and affected negatively the spirit and well-being of the citizenry.

Created under the same charter was the Local Water Utilities Administration (LWUA), a specialized lending institution empowered to grant loans to eligible water districts. LWUA is the source of LMWD's loan funds used to improve and expand programs. From its creation in 1975 to the present, the LMWD has received loans used to expand and upgrade the entire system.⁵⁶

The service area covered by the Water District in Tacloban

⁵⁵City of Tacloban, *ibid.*

⁵⁶*Ibid.*

City depicted on the map (see insert) includes the city proper and seven barrios out of 121 barangays. Although Tacloban City had a population of 103,433 as of the 1980 census, only 88,729 reside in the service area and only about 49,400 are actually served.⁵⁷

The Leyte Metropolitan Water District acquires revenues mainly from collection of water sales bills. The office operates under the concept of self-reliance and viability and thus does not receive any subsidy from the government. Revenues that the office does receive are used for operations, capital outlay and debt servicing. The Water District passes on to the customer, in the form of rate increases, whatever expenses are incurred.⁵⁸

The Water District employs a cyclical system for monthly meter reading, billing and collection. The entire service area of the Water District is divided into twenty zones, with Tacloban City area covering twelve zones. Each zone is assigned a working day of the month for meter reading, billing and collection. This system utilizes most efficiently the manpower available in the commercial division.⁵⁹

There are also other existing water sources classified as point sources outside the service area of LMWD. Over the past forty years, open wells have been the common source of drinking water. Open well water may or may not be potable. Even with the introduction of pump wells in recent years, an average of 50 percent of the population still depend on open wells as their source of drinking water, except in those areas where spring water is available. Pump wells have not

⁵⁷Ibid.

⁵⁸Ibid.

⁵⁹Ibid.

been more widely adopted because of the following reasons:

1. The wells dry up during the dry season.
2. Pump wells are permanent and they may not easily be transferred if minerals or other water impurities are encountered.
3. Corrosion of pump wells themselves can render the water passing through undrinkable.
4. Lack of maintenance know-how.
5. Indifference of attitude by people/community towards scientific advancement. People use the facilities but do not accept responsibility for maintenance and upkeep.
6. Scarcity of potable point sources.
7. Ownership constraint -- sources located on private land may not be used.
8. Inconvenience in terms of time and effort required.
9. Expense of the pump well makes it unaffordable to many individuals.

Several problems were confronting the Water District, foremost of which is the large quantity of unaccounted-for water. A great deal of potential revenue is lost because of unaccounted-for water attributed to: 1) illegal connection; 2) leakages through service connections and along old transmission and distribution lines; 3) erroneous registration of flow meters at the source and at reservoir overflows; 4) wastage due to improper use of fire hydrants; and 5) inaccurate registration of water consumed because of water meters obstructed due to sediment accumulated in the distribution system. Another problem is the water supply shortage during rainy season and during shutdowns of one of the filters during periodic

cleaning. Financial viability is also a major problem confronting the Water District. Contributing to the financial strain is the high fuel consumption of service and support vehicles and equipment which is necessary in the operation and maintenance of the water system. Finally, necessary funds and support like audio-visual aids and instruction manuals are lacking in order to implement the drive on water conservation full-scale.⁶⁰

The sanitary sewer system for Tacloban is not separate from the present storm drainage. The effluent coming from septic tanks and domestic sewage is allowed to flow into the storm or drainage pipes provided it passes through a leaching chamber, then to a catch basin before entering the drainage pipes. No charges are imposed for tapping or connecting with the drainage pipelines. Direct connections to pipelines from buildings, however, are prohibited.

In the Situation Report, the following conservation problems and opportunities were identified:

The marine life in the receiving waters of nearby Cancabato Bay and Tacloban Harbor are adversely affected by the outflow of waste water from the city. Cancabato Bay is a natural habitat of fish, shrimp, and crabs and it has been a fishing ground for small fisherman.

Houses near the rivers and streams discharge their sewage directly into the waterways. Likewise the houses along the shoreline dispose of their sewage directly into the sea waters of Cancabato Bay and Tacloban Harbor. This practice adversely affects marine life.

⁶⁰Ibid.

Strategies proposed for some MEREC subprojects

Heavy rains bring flooding to some areas of Tacloban City due to inadequate or nonexistent drainage facilities.

- A. For areas with inadequate drainage facilities, a possible course of action includes:
1. Regular maintenance of the drainage system. This can be carried out by the maintenance section of the Office of the City Engineer. Maintenance of the system is accomplished by removing obstructions in the system to prevent clogging during periods of heavy rains. Proper maintenance must be done year-round, but special efforts may be taken immediately prior to the rainy season.
 2. Installation of catch basins and curb inlets. To allow storm water to enter the drainage pipes, curb inlets and catch basins have so far been constructed, as the primary goal has been to lay out drainpipes to as wide an area as possible. This goal has now nearly been achieved, so future appropriations may be used to construct inlets and catch basins. This will remedy flooding problems in some areas.
 3. Clear waterways of squatters. Another cause of flooding is the presence of squatters along waterways. This prevents the rapid flow of storm water. The president issued a presidential decree outlawing squatters along waterways. This should be enforced immediately with the help and coordination of other government agencies particularly in relocating the squatters.
 4. Revetment or channelization of waterways. Another cause of flooding is that storm water cannot flow fast enough due to

vegetation and siltation in waterways. One solution to this problem is channelizing the waterways. This involves clearing the waterways of vegetation and construction of revetments to prevent erosion of the banks. Revetment of the waterways can be done by driving sheet piles and installing concrete lining or rubble concrete on the banks. This work entails a higher cost than the first three alternatives described above.

5. Increasing the gradient. For areas far from the outlets, landfill is recommended to prevent floods. The gradient or slope the water follows as it flows toward the outlet would thereby be increased. The greater the slope, the faster the water flows. This method is expensive.
6. Installation of pumps at appropriate points. This should be the last alternative to be considered to remedy the flooding of some areas in Tacloban City because of the prohibitive cost. This choice entails high initial cost as well as high operation and maintenance costs.

In areas lacking a drainage system:

1. Conduct topographic survey, design drainage system and construction
2. Reduce contamination of sea water and preserve marine life

Sewage treatment:

3. Prohibit inhabitants of houses situated along rivers, streams and shorelines from disposing of sewage directly into these waters. Relocate squatters.

The situation report for solid waste collection was comprehensive. The present system provides collection and disposal

services for residences, commercial establishments, and institutions like hospitals and schools. The area covered by the system contains a total population of seventy thousand and is divided into three collection areas. Two of the collection areas are designated as residential and one is classified as commercial. The system maintains a labor force consisting of one labor foreman, three drivers, twenty-four waste collectors and twenty street sweepers. There are only three open dump trucks for collection, two of which are old and owned by the city government and one which is temporarily on loan from the a regional office of the Ministry of Public Works and Highways. Other collection equipment includes fifteen buggies used by street sweepers. All this equipment is scheduled for daily collections throughout the year.

In addition, the situation report listed other conservation problems and opportunities:

1. Improvement of waste-collection efficiency. Inefficiency may be due to collection area's being too big for a single group to cover in eight hours. And due to the limited number of trucks, preventative maintenance is precluded by their constant usage. Two of the three trucks are old and in unreliable mechanical condition. Mechanical problems cause collection service interruptions.
2. There has not been effective public education on health and environmental consciousness. Solid wastes are consistently piled up in the open along the streets.
3. Resource recovery and reuse. All the solid waste collected is deposited at the designated dumping site and left as fill

material. Open sumps attract disease vectors and insects. The dump site at the man-made lagoon of Barrio San Jose is currently densely populated with such pests, and this may present a severe health threat to the area, although so far no serious health problems have been reported.

After saleable materials (such as corrugated cartons, plastics, scrap iron, empty bottles, and tin cans) have been recovered by scavengers, what remains serves as fill material. Plant wastes, which comprise 50 percent of the quantity of the original unscavenged waste material, can be converted into quality compost. City parks and plazas as well as city government-operated agricultural farms may advantageously replace costly chemical fertilizers with good quality compost. Land depressions which are presently used as dump sites can be adapted for methane gas recovery.⁶¹

4. Uncertainties of dump sites. The city government uses privately owned dump sites without any contractual agreement. Whim and caprice of private landowners can cause service interruptions.
5. Planning constraint. Effective planning is difficult due to inadequate data on factors such as actual quantities involved, percentage of major components, physical and chemical characteristics and seasonal variations.

The following strategies were listed in the Situation Report for Solid Waste:

1. Divide service area into four sectors and increase the number of

⁶¹Ibid.

- collection trucks from three to four.
2. Enforce existing ordinances and implement educational progress.
 3. Conversion of open dumps to sanitary landfill:
 - a) Composting pilot plant.
 - b) Establish a methane gas recovery system at the dump site.
 - c) Systematize scavenging
 - d) The city government must acquire its own dump site.
 - e) Need for survey. More data needed on waste materials to facilitate planning. Necessary information includes type of waste, composition (by major components), actual quantities involved, and physical and chemical characteristics.

The situation for building materials, industry, food distribution and utilization were also discussed in the situation report. (See the Tacloban Situation Report for further details.)

Tacloban's organizational structure and behavior

Tacloban's municipal structure was presented earlier but for additional information on the organizational behavioral aspects, I will use some organizational structure and behavior terms described by Robert Kreitner and Tosi and Carrol.⁶² The Tacloban municipality can be described in the following way:

1. Task definition. The Situation Report describes a municipality

⁶²Robert Kreitner, "Management: A Problem Solving Process" and Tosi and Carrol, "Contingencies, Structure and Process," both being unpublished papers written in 1988 and held by the School for International Training, Brattleboro, Vermont.

that is not very functional, as compared to that of Phuket. The mayor is the key decision-maker and the functional officer appear to serve the needs of the mayor at the time;

2. Relationship between individual contribution and organizational purpose. As Blunt Alstair observed about Filipino culture, often even the grassroots-level organizations and barangay levels tend to engage in political-favor exchanging in order to win the support of superiors, clientele, or kin. Favor exchanging, a form of "trust-building," however, can sometimes be used for personal gratification at the expense of the greater good of the people.
3. Task flexibility. Since the Philippines has a high tolerance for ambiguity, it very likely that tasks within the municipal government are somewhat flexible and not as rigid as tasks might be in the Phuket municipality. Another indication is that the MEREC pilot projects in Tacloban were experimental -- and the selection of such experimentation could only have occurred in an environment which could readily adapt to changing circumstances such as budget cutbacks and project delays. As John Cartwright of the Tennessee Valley Authority noted, the local officials that he worked with seemed to continue to have a high level of morale and commitment despite programmatic problems with the MEREC project.
4. Reliance on hierarchical control. Tacloban overall was not as hierarchical as Phuket because Tacloban City is not as closely tied to Manila as Phuket is to Bangkok. Decentralization efforts in one form or another had already been underway in the

Philippines, and as a result of MEREC, decentralization efforts were beginning to be made in Thailand. Although the cultural, social and political center of the Philippines is Manila, outlying and secondary cities like Tacloban do not necessarily exist to meet the needs of Manila, as Phuket would serve the needs of Bangkok. Tacloban municipality, however, tended to have friendly relations with the national government officials because of Mayor Obdulia Cinco's ties to the Marcos administration.

5. Primary direction of communication required. As the project manager for the MEREC project, John Cartwright of the Tennessee Valley Authority was too far away much of the time to keep a close eye on the ever-changing conditions and on outside factors that would affect subproject outcomes. Frequent monitoring, however, did exist for a short period of time when Doug Haladay was hired on location. A local Filipino engineer was later hired to maintain the monitoring process. To this day, little information exists on the progress made in this important area of the development of MEREC subprojects. Tennessee Vally Authority reports give some information about where communication problems existed during implementation but futher research is required.
6. Type of knowledge required. The willingness to participate and collaborate with other levels of government and public and private institutions to develop action plans for the municipality. That characteristic is inherent within the Filipino culture. A level of technical assistance, however, may

have been lacking in the area of management of information. When the Tennessee Valley Authority could no longer afford to take the position of project manager for MEREC projects worldwide (to manage the MEREC Management Information System -- MIS), an effort towards local management of information based in Tacloban or elsewhere in the Philippines might have been developed.

7. Objectives. The major objective in Tacloban was for the MEREC experience to be a "learning process."

MEREC in Tacloban must be seen in light of its emphasis on participation and local institutional development because the core of a project lies in its emphasis on participation of the members in initiating and implementing plans, and in exercising control over their lives. If MEREC subprojects continued to persist over time, there is a chance that local energy resource concerns would eventually translate into changes on the national or regional energy policy levels. In a country where control of resources is an important issue, much of the population has ended up challenging entrenched interests and inequitable structures. Elements of the MEREC project could conceivably become independent projects in their own right, under the auspices of the municipal government or regional power utilities or private firms. In this way the basic human needs described by the U.N's Covenant on Economic, Social and Cultural Rights, including the right to adequate food and housing, could be met.

CHAPTER 6

HOW MEREC FARED IN PHUKET

How Information on Implementation Was Gathered

Since the literature found appeared to be unconsciously biased because of source, more balance was sought through background research around issues related to the type of project MEREC proposed to be: a community development project or a participatory project. Background was done on similar projects, key informant interviews were conducted with questionnaires mailed out to participants, and personal and telephone interviews with key informants were done when possible. Responses from the questionnaire were studied and compared with other collected data.

The limitations of this research method must be kept in mind. All of the background and library research and interviews were limited to resources based in Washington, D.C. primarily through the use of mail and telephone interviews and a videotape produced by the Tennessee Valley Authority (TVA). All written materials from A.I.D. included evidence of the shift in goals from a "blueprint model" to that of a "participatory development" model. The reason for this shift in goals may have been that more benefits could be found that would support the participatory-planning model as a success. To offset biases during the early stages of this study, background research was conducted, a questionnaire was developed, and different perspectives (e.g., cost-benefit, cost-effectiveness analysis) were

explored, but in most cases there were not sufficient data to be found in Washington for any economic analyses. The MEREC project was instead compared to similar case studies such as the CEB-TB, the DDMP, the NIA or other A.I.D. projects.

Some of the problems encountered in the implementation stages were documented by the TVA throughout monitoring, evaluation and annual reports. Information about field activities, however, tended to be brief and sometimes repetitious. More in-depth insights and assessments had to be gathered for documentation through key informant interviews with the TVA, the A.I.D., USAID missions and the municipal governments. Two key informants, Jim Gober and John Cartwright, who served as technical advisers in Thailand and the Philippines respectively, were interviewed for approximately sixty to ninety minutes each. A.I.D.'s Eric Chetwynd, director of the Office of Urban Development, and Daniel Dworkin, A.I.D.'s project manager for MEREC, were both interviewed in person for about thirty minutes each. Project consultant Avron Ben-davidval was interviewed by telephone for about thirty minutes. USAID/Manila official Conchita Silva and USAID/Bangkok official Jerry Donnelly were both contacted by mail and fax messages to Tacloban and Phuket, as were central-government officials in the Philippines and Thailand. A list of key informants in the MEREC administrations for both Tacloban and Phuket was forwarded from the USAID missions and then questionnaires were sent back to the USAID/Mission to be sent on to participants.

Participation Potential in Phuket, Thailand

Thailand was a natural country of choice for MEREC since successful dissemination of the MEREC project became important after

the pre-test in Tacloban, Philippines. Generalizations could now be made about the progress expected in the set-up and planning stages. The early 1980s was a productive time for energy conservation projects and Thailand had already begun experimenting with participatory-type projects in other regions of the country. The Thai government was confident about the success of MEREC activities early on, because of Thailand's past project experience and because of MEREC's proven success in Tacloban.

Even though the Thais were optimistic about the prospects that could be made through the MEREC project, Thailand's geopolitical situation offered a several challenges to MEREC's participatory elements. Conflicts of interest about development and national priorities, and differences in perception about the different levels of government, created a lively sense of give-and-take in the well-attended MEREC workshops and conferences.

Phuket is a provincial capital and regional administrative center for Thailand's national government agencies but it is located in a part of Thailand that has not been targeted for development by donors during the last decade. The major economic activities are: tourism, fishing and fish processing, tin mining, and rubber plantations. Today many of the tin mines are useless, whereas tourism is growing, if anything, too rapidly. Phuket's rapidly growing population was estimated at about 45,000 with another 90,000 in the surrounding area in 1983. Outlying areas are closely linked to Phuket

economically.⁶³

An A.I.D. consultant re-creates the scene: "There still exist the remains of formerly elegant residences in Phuket belonging to tin-mine and plantation managers. But most of the residences are low-income, with houses built in a rural style. Ownership of mopeds seem as common as the sound of engines throughout the city all day long."⁶⁴

Participation in a project in Phuket has to involve the support of local interest groups from the local community. As in the case with the Philippines, political and economic control of resources was centralized in the major municipality of Bangkok. Centralization was much stronger in Thailand than in the Philippines because Thailand (formerly Siam) was a British colony and continued to accept its hierarchically distributed power.

Phuket's local-level political structure has inherent difficulties for physical planners. For one thing, Phuket is much more incorporated into the national society, being a major tin- and rubber-producing island connected by a short causeway and an airport to the mainland. The island is more effectively controlled by national authorities while rural Thai society has been more deeply penetrated by urban forces. The dominating elite on the island are the rich families of Chinese origin concentrated in the town of Phuket, who having prospered in the past on tin and rubber, presently

⁶³Agency for International Development, Country Development Strategy Statements for Thailand (CDSS), Fiscal Years 1983-1986 (Washington, D.C., January 1981-85).

⁶⁴Bendavid-Val, 1987.

TABLE 5 CHARACTERISTICS OF CHANGWAT PHUKET

88a

Area	538	Km ²
Population (1980)	133,669	
GPP (1979)	5,142	mil.฿
GPP per capita	38,470	฿
Population Density	248	persons/Km ²
Share of Municipality population	33.8	%
Annual Telephone Calls (1979)	17.5	per person
Cars (1979)	38.9	per 1,000 persons
Cars & Motorcycles (1979)	174.7	per 1,000 persons
Registered Commercials (1980)	31.0	per person
Manufactures (1980)	2.1	per 1,000 persons
Average Capital of Manufacture	906,000	฿

Share in	GPP(%)	Employment(%)
Agricultural Sector	8.9	29.5
Mining Sector	14.9	11.6
Manufacturing Sector	30.6	10.5
Others	45.5	48.4

Deposit/Loan Ratio of commercial banks (1970)	0.6
Deposit/Loan Ratio of commercial Banks (1980)	1.1

Source : Statistics of Changwat and NESDB

control most of the island's economy, including tourism.⁶⁵

Like other municipal governments in Thailand, Phuket adopted a Western model of self-government whereby reforms were established to create a degree of local self-government within what remains a highly centralized and unitary national political administrative structure. The underlying intent was to achieve:

1. Local democracy, through the election of key local officials
2. Competent administration of urban services through close supervision by the national and provincial government.⁶⁶

Overall, central administrators have few contacts with the day-to-day activities of municipal governments or their local municipalities. Their provincial responsibilities preclude close supervision of municipal officials and they primarily process the municipal orders and documents required by central officials. The decision-making process at the municipal level is broken down in the following way:

- 1) The municipal government delivers street-level services that are daily, visible and location-specific such as street paving, garbage collection, street lighting and market cleaning.
- 2) The mayors are continuously bombarded by criticisms, complaints, and demands for improved service delivery.
- 3) Street-level services are delivered by two categories of personnel:

⁶⁵Eric Cohen, "Insiders and Outsiders: The Dynamics of the Development of Bungalow Tourism on the Islands of Southern Thailand," Human Organization: Journal of the Society for Applied Anthropology, vol. 42 (Summer, 1983).

⁶⁶Ronald Krannich, "The Dilemmas of Local Administration in Thailand," p. 77.

- A. Central government appointed management officers -- municipal clerks, assistant municipal clerks, a chief accountant and municipal engineers.
 - B. Locally recruited personnel of the municipal and administrative organization.
- 4) Action on most service delivery demands and complaints depends upon resources and cooperation from provincial and central administrative units.⁶⁷

The interrelated nature of the street-level services and the fragmented nature of authority over them created problems. For example, municipalities are responsible for maintaining law and order, but they don't have their own police forces. Enforcement is performed by a special provincial unit. The municipal police force is relatively autonomous of the provincial governor and the Ministry of the Interior (Thai government). Since many municipal services depend on law enforcement (particularly traffic control and enforcement of building and sanitation codes) a mayor must have the cooperation of the provincial police. Unless a mayor has a close personal relationship with the police chief, he or she seldom receives cooperation from the police⁶⁸

As with police services, water and electricity are not provided by municipal governments like Phuket. They are the responsibility of provincial authorities. Few citizens know that the provincial government lays the water mains and is responsible for

⁶⁷Prince of Songkla University, MEREC Situation Report for the City of Phuket, Thailand (Washington, D.C.: A.I.D., 1983).

⁶⁸Ibid.

extensions of the power lines which affect traffic flow and may disrupt garbage collection and street maintenance services in certain neighborhoods. The result of these incongruent responsibilities is that citizens complain to the mayor about inconveniences caused. In response, the mayor may try to explain that the municipality is not responsible for these problems. Meanwhile, the mayor is applying political pressure to officials in other administrative units to correct problems that are causing complaints. In this manner, the mayor becomes involved in administrative politics with the chief of the police, governor, or heads of provincial water or electrical authorities. Central administration subjected to pressure from the mayor sometimes feels that the mayor is playing politics by interfering with normal channels of communication and authority. Yet such lobbying efforts by a publicly influential mayor often result in action.⁶⁹

The MEREC project may have benefited from some of the problems that existed, but economic trends which were well beyond the control of the MEREC project may have had a tendency to influence the outcome.

Locals in Phuket were late in entering the tourist business and played only a minor role in its development. A powerful and farsighted economic elite on Phuket had foreseen the touristic potential of Phuket's Sabai Beach and decided to buy up and rent the land from the locals to initiate development of tourism long before the locals even became aware of the beach as a potential resource. The expected outcome was that a growing penetration of locals into

⁶⁹Ibid.

auxiliary services would speed up development because an increasing demand would occur through outsider-initiated major tourist establishments.⁷⁰

The Nature of Participation in Thailand

The dynamics of the participation of locals in outsider-initiated tourist development can be conceived of in terms of a relationship between the rate in which new opportunities for expansion are created through original outsider initiative, and the ability of locals to avail themselves of these opportunities in the face of competition. In order to safeguard continued participation of the locals in Phuket, development would either have to be slowed down or steps would have to be taken to protect them from outside competition.⁷¹

Foreigners represent a threat mainly to locals who own auxiliary services, rather than to the islander proprietors even though the national government has created policies to increase outside initiation of touristic development. The 1979 development plan favors tourist enterprises and has invited investments by outsiders -- mainlanders or foreigners who possess the means and know-how to undertake large projects.⁷²

Lack of policing of planning goals is a threat to locally initiated development. On the busiest beaches, hotels are pumping untreated sewage into the sea, though the effects so far are minimal.

⁷⁰Paul Handley, "Treasure Island: Developers Cash In on Phuket's Tourist Potential," Far Eastern Economic Review, vol. 60, June 14, 1988.

⁷¹Ibid.

⁷²Ibid.

Another example is that building codes are being ignored and at the same time open-air bars with prostitutes are spreading vice to other areas as well.⁷³

The Organizational Structure of Phuket's Municipality

Phuket has an executive council composed of a lord mayor, three councillors (vice-mayors), and a municipal assembly. The eighteen members of the municipal assembly are elected for five-year terms, and the executive committee is elected from among these to oversee day-to-day functions of the municipality.⁷⁴

Yet the municipality is composed of operating departments which function as a part of either the local or national government. Those concerned with the national government are less concerned with the problems directly involving only Phuket. The municipal departments include: engineering and civil works, public health, municipal treasurer, education, water supply, and the city clerk's office. Provincial departments include industry, commerce, agriculture, public health, transport, community development, and a police force. Most other functions, including the development of water and energy resources, are the direct responsibility of the national government.

To some extent, the provincial departments have responsibilities not given to municipalities; but some of the responsibilities of the provincial departments are the same as the municipal departments for nonmunicipal areas of the province. In some

⁷³Ibid.

⁷⁴Phuket Songlka University, MEREC Situation Report for the City of Phuket, U.S., FPC/CDIE microfiched document (Washington, D.C.: A.I.D., 1983).

ways provincial departments are effective regional offices of national agencies and all authority for matters through the province, whether within municipalities or in rural areas, is delegated to these provincial departments. The provincial governor is appointed by the central government, and provincial staff are employees of the Ministry of Interior (MOI).

Phuket city municipality is run by a council of eighteen municipal council members who each have a five-year office term. The municipality council is responsible for enforcing the municipal laws, directing and controlling the municipal administration, approving and allotting funds to the municipality through the annual budget.⁷⁵

Within each major division, there are sections of offices which are functionally supportive. The responsibilities are divided as follows:

- o The deputy mayor's office includes population registration, the law section, public relations section, social work and consultation section, and hazards/disasters prevention and abatement section, and lastly, policy and planning.
- o The Finance Division is headed by a Head Accountant who oversees financial matters and receipt of payments in accordance with government regulations.
- o The Welfare Division includes health-care services and sanitation, responsible for collecting, transporting and disposing of garbage and manure, street and gutter cleaning.
- o The Engineering Division, headed by an engineer divisional director, is responsible for construction and maintenance of

⁷⁵Prince of Songkla University, 1983.

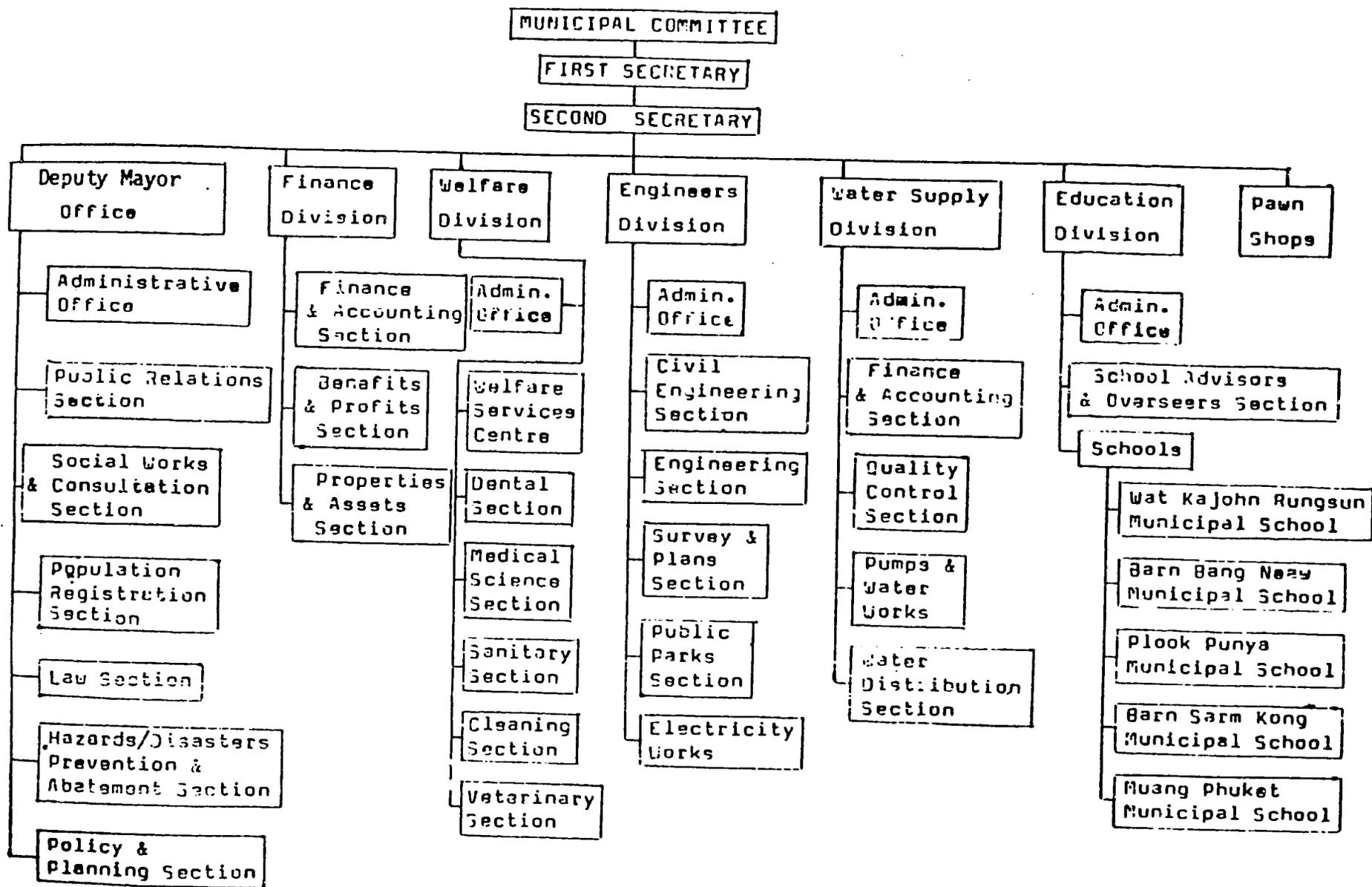


Table 2 Present Organization Chart of Phuket Municipality

roads, bridges, machinery, town planning and architecture, cost estimating, plant growing, public parks and electricity distribution.

- o The Water Supply Division is headed by a water supply specialist and includes its own finance and accounting office.
- o The Education Division is responsible for overseeing educational matters and school administration.
- o The Pawnshop Division was established to assist people who have problems on financial circulation when it is urgent.

Overview of Thailand's National Planning and Finance System

Aside from the split responsibilities of Phuket's municipal and provincial departments which make up Phuket's municipal government, Thailand's planning bodies compete with traditional budget and organization for a decisive role in resource management.⁷⁶ In the organizational dichotomy, planners differ in their goals from budgeters (budgetary balance vs. economic development); perspectives (short- vs. long-term); attitudes (skeptical vs. optimistic); scopes (public sector vs. entire economy); tools (fiscal vs. all policy instruments including monetary and regulatory policy); orientations (administration and control vs. economics); skills (procedures and rules vs. econometric and input-output models); and focuses (project costs vs. project benefits). The organizational structure results in interdepartmental rivalries, poor communication and insufficient cooperation at the top of the fiscal process. And in addition to the two features in its fiscal system, there is a Ministry of Finance,

⁷⁶Sopchackchai and Pillai, p. 34.

suggesting a trichotomous fiscal process. These national level problems overflow into local politics because cities like Phuket are partially made up of national entities.

Historically, Thailand's Bureau of Budget (BOB), the Ministry of Finance, and the National Economic and Social Development Board (NESDB) had different and potentially conflicting missions; the present system is in part the reflection of past failures of a single fiscal organization and the laws governing the operations of the BOB, the Ministry of Finance, and the NESDB to allow overlapping jurisdictions and flexible procedural requirements that have given ample room to competition allowing the organizations greater control.⁷⁷ Thailand's planning agency, the National Economic and Social Development Board, was established in 1959 because of:

- 1) a massive flow of foreign capital from aid programs, tourism and private investment
- 2) an increased role of the government in the economy following the 1932 revolution
- 3) demands by some Thai officials for coordinated policies; and
- 4) the pressure from donor countries and organizations to improve the methods of project application, implementation and evaluation

Even though the NESDB prepares a five-year development plan, it is housed in the office of the prime minister and includes the representatives of the BOB, the Bank of Thailand, the Civil Service Commission and the MOF. Fiscal decisions have been challenged by the spending agencies as well as the BOB and the MOF.

⁷⁷ Sopchackchai and Pillai, p. 35.

However, the NESDB has formal and informal linkages to help it coordinate and cooperate with the BOB and the MOF. They are:

1. Fixing the overall budget ceilings.
2. Projections of revenues.
3. Debt policy and management.
4. Incorporation of planning projects into annual budgets.

Unfortunately, the fiscal system suffers from problems of polarization at the apex. Inelasticity of the nation's revenue system, growth in public debt, increased dependence on external resources, and the imbalances between capital and recurrent costs are some of the readily identifiable outcomes.⁷⁸ Also, a large part of the fiscal activity financed by external assistance is kept out of the budget and hence is not covered by all the procedures according to some sources. The effect that this can have on a municipal project like MEREC is bring into question its sustainability and the financial and economic sustainability of the subprojects. Because of Thailand's tremendous bureaucratic complexity, some development finance institutions may have tried to bypass certain departments in order to implement a project. If this were the case for MEREC, then the assistance to Phuket to finance the MEREC project would have been kept out of the budget and not covered by all procedures. If there is a great deal of interest to disseminate such a project, the national government would not have the financial capacity or possibly even the interest to invest in it. Financial sustainability for such a project would then either have to come out of the municipal pot or through

⁷⁸Ibid., p. 40.

pressure of a (regional) provincial representative to support the local MEPEC efforts and to disseminate it to other provinces, municipalities or localities. The political footwork to support such a project would have had to come first.

The author of Phuket/MEREC's mid-term evaluation effort was a Thai resident and citizen and as such tried to illustrate the conflicting interests not described in the TVA evaluation reports of the MEREC project. Her perspective is important because as a Thai with an objective interest in development, she did not seem to have a preference for any particular regional issue. She seemed to be most concerned with how the MEREC process was experienced by Thai officials and participants as opposed to how it was perceived by expatriates who were not Thai. Her perspective was as an objective Thai observer who did not have a stake in the benefits or outcome of the MEREC project.

Favorable Conditions for MEREC

The situation report developed during the set-up stages of MEREC reflected a high level of professionalism and knowledge about Phuket's resource problems. Base-level data were carefully chosen and focused on specific action plans to be pursued through the MEREC project. A review of other A.I.D. projects reveals that Thailand is not a newcomer to energy conservation efforts. In fact, other A.I.D. and donor projects have been tried, with considerable progress made, in terms of documentation. Unfortunately, a review of articles in the Bangkok Post reveals that development efforts have been complicated by political battles at the higher levels of government as well as at the grassroots level. Thailand's desire to modernize rapidly has been led by officials who believe that their perspective of development is the only correct one. The MEREC project, while theoretically in line with many of Thailand's national energy policies, was not a priority by virtue of the level of funding it required. Small projects do not have large impact. And projects which are not financially self-sustaining are not considered sustainable. Despite MEREC's relative insignificance compared with the multiple development efforts which worked in line or out of line with Thailand's energy and development policies, MEREC had the support of USAID/Bangkok from the beginning.

The Tendency Towards Centralization Not Enough

In the midst of Thailand's growing economy, the MEREC project offered an opportunity for the municipality to save energy and money through the use of its own resources. A glance at Phuket's organizational structure reveals that municipal activities are

primarily carried out in a functional manner. In fact, the Situation Report written during the set-up stage reveals that each of the major functions are carried out by a division specializing in a major function or responsibility, e.g., finance, engineering, water supply, or education.

It appears that since these functions are separate activities, then any effort to integrate responsibilities between departments within the government would be difficult because each department is headed by a specialist who sees that problems should be solved from his or her perspective.

Earlier, we mentioned the administrative structure of Phuket province which makes clear that activities are carried out by and large in a functional manner.

Thailand has grown rapidly and has created a diversified economic and social structure because the transformation of the economy from agriculture to manufacturing industries allowed this to happen. In the agricultural sector, cash-crop farming of luxury crops like tapioca, maize and rubber has begun to displace rice farming.

Growth and change in Thailand coupled with changes in the world economic situation have helped to create increasing regional income disparities and low productivity along with high unemployment rates in the rural areas. The Phuket region previously thrived as a prosperous mining industry which brought a large population of Chinese laborers to the region.

The MEREC project probably appealed to residents and politicians from this particular area because it promised to help bring balance to an area that has begun to develop and which has

tremendous potential.

A study conducted by the National Economic and Social Development Board (NESDB) and the Japan International Cooperation Agency (JICA) shows that Phuket's share of Thailand's regional gross product has drastically decreased compared to with ten years ago. Economically, the majority of the people in Phuket fall into the medium living standard bracket.

The tourism industry depends on the investors, businessmen and others to take advantage of the beautiful environment by increasing the investments to larger-scale projects.

Implementation of MEREC Subprojects in Phuket

Currently Phuket is expanding both economically and socially as a result of government policy to develop the area. However, the shortage of water is a major impediment. The water demand in 1882 was estimated at about 9095 cubic meters for a population of 45,473. By 1984 the Public Works Department estimated that demand will be 12,600 cubic meters per day. To satisfy this demand, water is drawn from shallow wells, mined ponds and a reticulation system.

Water resources came from:

Surface water, e.g., water is stored in old mined ponds which receive water from rainfall and seepage. Underground water is from Phuket's water table and is easily available for domestic consumption. Groundwater is found in weathered rock and in crack formations in hard rocks such as granite, shale and sedimentary rock. The problem, however, is that groundwater is expensive and requires extensive exploration.

The Royal Irrigation Department (RID) has developed water

MEREK Resource Strategy Matrix
Phuket, Thailand

Sectors	Resources					
	Water	Urban waste	Economic development	Land	Food	Energy
Water supply	Increase efficiency of water supply system					
Waste disposal				Use rubbish to improve marginal	Convert manure to fertilizer	Improve waste collection system
Industrial development			Increase finished rubber product production			
Energy						Economize on all energy forms. Encourage alternative energy forms.
Land use				Redevelop abandoned mine land; increase areas for recreation; increase transportation efficiency; make use of local materials		
Agriculture		Utilize waste material				Use existing resources for food production and grasses
SUMMARY STRATEGY for each resource	Increase municipal water supply and distribution capacity	Promote efficient use of urban waste	Increase value of byproducts and make use of local crops	Make more efficient use of land	Increase production from existing sources	Use energy efficiently

Phuket took an approach to project implementation that was different from that adopted in Tacloban or Guarda. With the launching of the implementation phase of Phuket's MEREK demonstration, the Steering Committee was replaced with a Project Management Committee. Again, the committee was headed by the mayor, the vice-mayor served as MEREK management coordinator, and the city clerk continued in her role as MEREK Secretary. Other members included only the relevant municipal department heads. This committee was established specifically to support, coordinate, supervise, and monitor implementation of local resource-efficiency projects. Representatives of other agencies continued to attend occasional meetings to review overall MEREK progress, alterations in project plans, and resource-efficiency achievements of implemented projects, but these meetings were no longer constituted as MEREK Steering Committee workshops.

One of Phuket's MEREK Strategy matrices. Resources of major concern are shown along the top; key urban sectors are shown along the sides.

Considerable time was spent expanding, refining, altering, and detailing Phuket's MEREK Strategy.

is no report whatsoever about local charcoal production in the province 10/b
wood.

2.2.7 Total Cost of Energy

To get an idea about how much money is spent on energy out of the total GPP of the province, the figures of 1982 are used with some price approximation for each type of the fuel to facilitate calculation. The details are shown in Table 7.

Table 7. 1982 Energy Cost

Energy Source	Gasoline (litre)	Diesel (litre)	Kerosene (litre)	Fuel Oil (litre)	LPG (kg)	Coal (kg)	Electricity (kwh)	Fire wood (m ³)	Char (kg)
Consumption (x 10 ⁶)	17.377	80.499	1.060	5.334	2.590	9.047	110.900	0.000	10.
Average Price Per Unit (baht)	12.795	7.760	6.490	5.000	11.000	4.000	1.700	40.000	3.
Total Cost of Energy (Million Bahts)	222.34	624.64	6.88	26.67	28.53	36.19	188.99	15.99	30.

It will be seen from the Table that the total expenditure for energy in the province in 1982 amounts to 1,180.04 million bahts. 96.08% of the amount or 1,133.83 million bahts are for commercial energy. A comparison of the energy expenditure and the GPP of the province would yield a figure of 21.67%.

resources by constructing wells in villages which are only used in agriculture. Phuket's municipal water supply started in 1956 and was originally operated by the Provincial Water Works Authority (PWWA) of the Department of Public Works.

The initial capacity was forty meters (to third power) per hour before 1965 and is now producing water at a capacity of six thousand meters (to third power) per day.

According to the Situation Report, it is difficult to accurately calculate the cost of production of clean water because of unknown factors such as plant and equipment depreciation, as they must also be factored in.

The Public Works Department estimated that under the new system, the average cost of water production which includes operation and maintenance costs will come to 4.03 baht per cubic meter (see table on operation and maintenance costs).⁷⁹

As raw water is an important factor in rapidly expanding Phuket, the following projects have been ongoing:

- o extension of pipe network of streets and lanes
- o maintenance of water manes
- o increasing number of personal surveying water????
- o increasing efficiency of water checking procedures

The following projects have been proposed as a result:

- o Construction and expansion of the municipal water supply
- o Promotion of raw water storage for household consumption

⁷⁹Dr. Pichai Taneerananon, Technical Adviser et al., Situation Report: Water (Phuket, Thailand: Agency for International Development PFC/CDIE Document 1983).

- o Calibration of water meters
- o Acquisition of land around Ban Tak Dad Pond
- o Pumping of water for Klag Pand Pa

Urban Waste

This section of the Situation Report focused on the collection of rubbish and excrement from residential areas and waste-water treatment on which the cleaning service office has been operating in the municipal area.

Rubbish in Phuket City is collected from six regions and amounts to 148.82 cubic meters per day. Of this quantity, 136.22 meters per day comes from an area which is residential and commercial.⁸⁰

The composition of rubbish is broken down in the following way:

- o Each of the six areas has a 6.7 cubic meter capacity truck. In total there are twelve trucks and sixty workers and personnel in this operation. Each group of scavengers and trucks collect rubbish from baskets in homes or curbsides in assigned areas. The rubbish is then transmitted to disposal sites. The route is retraveled to complete the tasks depending on the volume picked up.
- o Excrement is also collected. Each house has a water closet with an underground concrete tank for storage of excrement. From October 1982 to September 1983, the municipality serviced 1,233 houses with 733,800 liters of excrement.

⁸⁰Veerassak Thonglimp, Technical Adviser, et al, Situation Report: Urban Wastes in Phuket City (Phuket, Thailand: Agency for International Development PPC/CDIE Document 1983).

- o One slaughterhouse exists where excrement can also be collected. The total volume of animal excrement is about 30 liters per day. Ten liters per day from killed animals and 20 liters per day from animals prepared to be killed.

The recommendation that was under consideration in the situation report is summarized as follows:

- o That wastes be covered or buried immediately after being dumped
- o That rubbish collection trucks be designed to avoid falling rubbish
- o That pick-up points be redesigned so that the collection operation is more effective and cost reduced.
- o That the treatment plant for rubbish and excrement be efficient with little environmental impact.

Possibilities for future development:

- o The sanitary landfill for the old mining sites can be used as mangroves or recreation areas.
- o Solid waste can be converted to fertilizer by microbial action to replace chemical fertilizers used.
- o Excrement collection can be used and converted by anaerobic process to yield natural fertilizer and methane gas -- a fuel.
- o Aa waste-water treatment plant can be built with the plant designed and sized according to properties and quantity of waste water.
- o Animal excrement can be converted by biogas process to methane gas for use as fuel in the slaughterhouse.

Challenge to Organizational Structure

The Phuket experience represented much more of a challenge to the organizational structure of Phuket than did the experience of Tacloban in the Philippines. This is so because Thailand has a low tolerance for ambiguity and a high element of rigidity and conformance to rules and regulations. Hence, the idea of changing the structure would have to be detailed, labor-intensive, and task-oriented.

To examine more closely the specific mechanistic and organic characteristics of MEREC in Phuket, I will use seven elements to describe the organizational structure and behavior of the Phuket Municipality: (see p. 105i, 105ii)

1. Task Definition for Individuals
2. Relationship between individual contribution and organizational purpose
3. Task Flexibility
4. Reliance on hierarchical control
- 5 Primary direction of communication
6. Type of knowledge required
7. Objectives⁸¹

After the project ended, hopefully the experience with with MEREC helped Phuket and other municipalities in Thailand to build up on economic infrastructure and an internal market, create a network of social services and rules for the country's integration into the world economy.

⁸¹Robert Kreitner, "Management: A Problem Solving Process"; and Tosi & Carrol, "Management: Contingencies, Structure and Process" (School of International Training, Brattleboro, Vermont, Organizational Structure and Behavior course papers, 1988).

Phuket's Organizational Structure

1. Task definition. Phuket's Situation Report describes a municipality that is very functional - where a municipal committee is the key decision-maker. Each major function of the municipality constitutes a division and each division is vertically oriented by function as well.
2. Relationship between individual contribution and organizational purpose. In general, in Thailand, project implementation has to involve support of local interest groups from the local community. Special interest groups, as research suggests, appear to have as much or more political influence than individuals in Thailand.
3. Task flexibility. In MEREC, tasks were more clearly laid out in Phuket because of the functional structure of Phuket's municipal organization and because of previous experimentation in Tacloban.
4. Reliance on hierarchical control. On the national level, Phuket is controlled by Bangkok, politically and economically. That is why decentralization has been an area of great interest. Urbanization patterns reflect a strong pull of resources into and out of Bangkok. Hence, there is a pattern of economic dependence on Bangkok. Phuket was targetted as a "tourist site" - again allowing depletion of its resources for the benefit of primarily Bangkok residents or international visitors.

5. Primary direction of communication. As with Tacloban, little information exists on the progress made on this area of development - except that organizational conflicts were apparent in the set-up and planning stages of MEREC in Phuket.
6. Type of knowledge required. There is a strong willingness to participate and collaborate with other government agencies, public and private institutions. Like Filipinos, this may be inherent within Asian cultures.
7. Objectives. Phuket's major objective was to establish a structure that was originally envisioned in Tacloban. Fortunately, the Thais greatly benefitted from the experiential successes and failures in Tacloban.

CHAPTER 7

THE LESSONS LEARNED

The goals and objectives of MEREC changed during the lifetime (LOP) or during the time in which funding was taking place. The change in goals significantly changed the original justifications and the evaluation criteria for the project. MEREC, with the small amount of funding allotted per city of \$250,000 per demonstration site could not have changed the thinking of the energy users simply by demonstrating more energy conservative techniques in energy use and distribution. The broad range of activities sold under the label MEREC had ultimately to depend on the acceptance or non-acceptance of the end-users. End-users of energy resources would have to change their thinking in order for broad economic impact to take place on the entire municipality. Energy conservation in the name of economic development was perceived as the goal of MEREC within a designated period of time. The project paper implied that economic development was to be achieved within the lifetime of the project, or else MEREC would not be considered a success.

Success of MEREC at the beginning was perceived differently from success of MEREC after the project ended. The definition of success changed when the goals changed. From the point of view of the major actors primarily interested in the design of MEREC, the project was not successful. It was seen as a failure. But to the project managers who monitored the MEREC project more closely, and who

participated actively in the changes which took place in the field, MEREC outcomes at the implementation level were seen as a success. In essence, the perception of the MEREC project at the design level was seen as a separate process from the project at the implementation level. Hence, the MEREC design was a failure but MEREC implementation was a success, according to administrators.

As was mentioned by Avrom Bendavid-Val in his publication More With Less, the MEREC project eventually became a "capacity building" project that sought to strengthen the administrative and technical links between local and central government units. However, as evidence in the key informant interviews reveals, there is much controversy over whether or not the project was a success or failure. Differences of opinion have much to do with varying expectations, opinions and definitions of successful versus unsuccessful projects.

The MEREC project sought to develop the municipalities and the existing institutions, yet the use of the word "to institutionalize" in the project paper is somewhat vague. In organizational psychology, "to institutionalize" is not the same thing as "organizational development." "Organizational development" means "to develop the currently existing organization," which would ultimately lead to changed energy resource usage habits and savings, and is much more closely related to the outputs that were described in the project paper. "Institutionalizing MEREC" (as an autonomous organization) is different from developing the municipalities' capacities as organizations. Use of the phrase "MEREC methods" rather than just "MEREC" implies that MEREC (as a system of beliefs) was not definitive -- but more conceptual. "MEREC methods" meant encompassing all the methods of energy conservation that were used in the

subprojects.

Unlike another participatory project, the National Irrigation Association (NIA) in the Philippines, MEREC is not political. NIA advocated control for a disadvantaged group of residents who sought access to water resources. NIA is often described of as an institution-building project, however, not in the same sense as MEREC. Ambiguous definitions of words like "institution" in A.I.D. project proposals are commonplace. Although both the NIA and the MEREC project are both characterized as institution-building or capacity-building types, the outcomes in reality are fundamentally different. The NIA is an organization which evolved into an autonomous local institution. and was created as a collaborative effort to produce one major output: irrigation to Filipino industries and farmers so that they could develop their resources and become more self-reliant. The goal -- irrigation service -- needed to be distributed more equitably, and would have to be owned and controlled by the users -- or the "end-users."

MEREC was not a public utility either. It did not involve one easily tangible resource like water. It involved several resources and the consciousness, thoughts and actions of the residents of Tacloban and Phuket with regard to how they use energy. As the project paper was worded, grandiose and unrealistic outcomes were implied. MEREC is best described as a "catalyst" or a "catalytic organization."

MEREC designers proposed that the MEREC project would eventually become an international network of cities in the developing world that would grow through an exchange of information, expertise and replication (like an association). Yet, they were not able to

foresee what the project eventually became. Also, the chances of MEREC resembling a cohesive international or national network of cities were low because that would have implied that MEREC was an autonomous organization capable of being sustained (politically, economically, socially, culturally and financially). An organization that can be sustained in a developing country should become either wholly owned or operated by the end-users, not just the beneficiaries; otherwise, it should be only temporary. If the MEREC project had been sustained, it by definition would have become an "indigenous organization" or an autonomous entity. If MEREC had been intended to be only temporary, then that should have been more clearly spelled out in the project paper. The goal of MEREC would therefore not be to "institutionalize the project," but to educate and train professionals in the municipalities so that the local officials and the local residents would buy into the entire concept of the MEREC system.

Ultimately the organizational form that should develop as a result of the implementation of MEREC would be based on the purpose and objectives of the current municipality, the activities and strategies it adopts and the processes which it will use to foster changes in its own system. The processes which would foster organizational changes within the municipality are: communication processes between municipal local, public and private entity officials; human resource development capacity; performance evaluation; decision-making processes; and motivation processes. The task environment and the structure of the municipality in Phuket before MEREC tended to have a strong horizontal differentiation based on functional specialization, although each department was vertically

differentiated with the lines of authority top-down. Tacloban's organizational structure before MEREC was less rigid by specialization and more ambiguous. However, the Tacloban organizational chart illustrates that the mayor had much leverage in the decision-making process before MEREC was implemented, and this was very likely to be the case when taking into consideration the task environment in the Philippines. In both Tacloban and Phuket, emphasis through design of MEREC was placed on formal and open channels of communication via training workshops, conferences and project evaluations conducted by the T.V.A. All subprojects were encouraged to become self-sustaining to some extent.

If the goal of MEREC was to manage energy- and resource-efficient cities, the structure (according to the project paper) should tend towards a centralization of information-exchange processes. While the nature of MEREC was to encourage decentralization of municipal activities via subprojects, centralization needed to occur to monitor the overall progress and to maintain the proposed MEREC Management Information System (MIS). Assuming the changes in administration did not prevent progress made in local energy policy, a more responsive municipal organization, which is usually envisioned during the planning stages, should have developed. The short-term energy savings were likely to translate into local energy policy changes -- to set an example for other secondary cities.

Assessment of Selected Subprojects

- 1) Urban Farming Findings: The urban farming project was initiated in Tacloban to make use of idle urban land for food and fuelwood production. Vegetable gardening was undertaken in ten

neighborhoods on demonstration plots of one thousand square meters each; livestock production was undertaken in ten neighborhoods involving an average of fifteen pigs and four thousand kilograms of chickens each; fast-growing ipil-ipil trees were also planted for fuelwood in ten neighborhoods, on plots of one thousand square meters each.

Accomplishments: In the first eighteen months of the project, an estimated \$10,500 worth of vegetables were harvested, \$263,000 worth of livestock went to market, and 1,500 bundles of firewood valued at a total of \$850 were produced.

Significance: There were important nutritional benefits for low-income families who participated. Expansion of this project has been supported entirely by the city with help by civic organizations. Urban farming in twenty-five of the schools aimed at instilling the value of urban farming in schoolchildren through hands-on experience. To some extent the program is now self-sustaining. (Further research on this subproject is suggested.)

- 2) Economic Crops Findings: In Phuket a need was found to do research and development of economic development projects through greater use and processing of rubber, coconut, and cashew trees. Studies were made of such things as manufacture of finished products from locally produced latex, the processing of coconut wood into construction materials, and expansion of cashew nut production. Several private sector opportunities were documented.

Accomplishments: After the studies were done, seminars were then held for local businesspeople, investors and bankers to expose them

to opportunities and supporting data. Reports were sent to the National Board of Investment and the Ministry of Industry for circulation to potential investors in Thailand.

Significance: This project is worthy of continuation perhaps on a cyclical basis (annually or biannually) but it would need a financial commitment to continue such activities as seminars and conferences from local or outside business interests who have the well-being of the municipality in mind.

- 3) Demonstration Houses Findings: Eight units were designed and built, forming a MEREC Demonstration Community within a public housing area in Tacloban. The objective in this project was to demonstrate siting and design principles that maximize comfort and functionality with minimum use of public utilities, that utilize higher proportions of local building materials, and that are more self-sufficient and less expensive than equivalent conventional housing. The housing units were designed for the lower-middle-income market, where habits of energy and resource waste usually begin.

Accomplishments: Monitoring data show that the MEREC demonstration houses are two to five degrees Celsius cooler than conventional counterpart units, partly accounting for the 30 percent average savings on electric bills that occupants experience relative to their neighbors in conventional housing. Rainwater collection systems save occupants an average of 40 percent on water bills. The estimated value of the water stored and utilized from the storage tanks is \$213 per year for the eight houses.

Each family raises an average of five pigs and 150 broilers, at a profit of \$20 per month. The estimated value of

backyard vegetable production is \$3,344 per year for eight housing units. The methane gas produced by each biogas digester is the equivalent of two to three small bundles of firewood daily, adequate for all cooking requirements, with an annual value of about \$550. Experimental modifications continue in component designs, materials, layouts, and backyard farming in attempts to further improve comfort, convenience, resource efficiency, performance, or durability.

Significance: Some of the demonstration principles concerning use of local building materials have already been adopted elsewhere in Tacloban in both housing and commercial establishments. Energy-efficiency principles have been incorporated into the design of a new primary school. There are now local contractors, producers, and traders with experience in various elements of the demonstration houses who are to supply services and goods for application elsewhere. In both Tacloban and Phuket, the projects demonstrated use of local construction materials and energy- and resource-efficient designs for low-income but high-quality urban housing. They cost less to construct than conventional counterpart units and they save occupants' money through resource-efficiency features. (Further research suggested possibly in conjunction with other housing and urban development programs in the country affiliated with the World Bank or A.I.D.'s Office of Housing and Urban Development.)

- 4) Water Distribution System Findings: Nearly half the water that entered Tacloban's distribution system, according to meter readings, disappeared before reaching users. Some was lost

through leaks in distribution, some went unrecorded owing to faulty meters, and some perhaps was lost through meter tampering and illegal connections to water lines. This represented a serious financial problem for Tacloban's water utility (the Leyte Metropolitan Water District or LMWD), as well as a problem of serious resource waste. The objective was to raise water system efficiency by at least 5 percent in the first year.

Accomplishments: Savings accruing to LMWD as a consequence of actions taken in the first two years alone amounted to nearly \$140,000. This represents savings that will continue to accrue or losses that will not occur each year.

Significance: Since activities under the MEREC project are now part of LMWD operations, this component of MEREC has been institutionalized. (Research on further progress suggested to measure expansion experienced.)

- 5) Rainwater Storage Findings: Phuket gets 2,290 mm of rainfall per year, yet has a shortage of water supplies. The objective, therefore, was to demonstrate and publicize methods of storing rainwater.

Accomplishments: Fifteen ceramic urns and ten ferro-cement tanks were constructed to capture rainwater from rooftop collection systems. The city designed and supervised construction of urns and installed them along with the tanks at its own expense. Each urn has a capacity of 1,600 liters, and tanks were made in 2,000- and 5,000-liter sizes. The urns have been placed at preschool centers and rural community centers. The tanks have been placed at MEREC demonstration houses, public schools and at a mosque.

Significance: This system is financially beneficial to the city.

Documents were updated to encourage commercial manufacture and adoption of the systems by households, rural public agencies, and neighborhood organizations. Guidance and assistance will be provided by small enterprises to manufacture urns and tanks.

(Further research is suggested to find out if ceramic urns have been produced, marketed and utilized by the growing population.)

- 6) Solid Waste Management: In both Tacloban and Phuket, solid waste management was part of the action plans of the municipal governments. The report from which the solid waste project developed came out of an integrated perspective that took both urban land and transportation fuel into account. The aim was to reduce the cost of solid waste collection and to convert solid waste into a usable urban resource.

Findings: Three subprojects of the solid waste management project aimed at reducing the cost, extending and improving the solid waste collection process, and converting the waste into an urban resource in Phuket. First, large centralized solid waste containers in the main commercial areas were designed, constructed and installed. Second, push carts were used to collect refuse house by house instead of by using trucks. Third, a sanitary landfill was added to replace an open dump. This was all done to reduce the fuel consumed in the formerly used collection routes by reducing the number of stops for collection vehicles. Solid waste management was improved by providing an alternative to the placement of piles of waste collected and by reducing the number of stops for collection vehicles. The second subproject made better use of collection

trucks by diverting their routes to truck pick-up points. Push carts were used for pick-up house-to-house. A sanitary landfill was replaced by an open dump. The landfill design and site would improve sanitation, facilitate separation of waste for recycling, and reduce fuel consumption in waste management.

Accomplishments: Data show that containers reduced fuel use by 12.4 percent per cubic meter of solid waste collected, and additional savings associated with more efficient vehicle and manpower use. Sanitation nearby areas serviced by containers improved. The design of containers has since been improved and ten more have been installed in Tacloban. Push carts were used to collect refuse on a house-to-house basis to save transportation costs. Eleven workers were added to the city staff. Data collected by the Tennessee Valley Authority show that push carts accounted for 17.4 percent decline in fuel consumption per cubic meter of waste collected. Push carts and centralized waste containers account for 30 percent fuel consumption per cubic meter of waste collected.

Significance: The solid waste studies conducted in Phuket were not conducted in Tacloban. In both cases, the project was comprised of three components: design and installation, composting at the city dump, and design and development of a landfill. However, before the implementation stage, Phuket carried out an overall review and analysis of its solid waste management operations, which resulted in substantial alterations in the original design and timing.

Composting, since it was found to be feasible at the city dump in Phuket, was designed in connection with the landfill

development. Implementation of this component exceeded the amount immediately available from MEREC or municipal funds. Funding proposals were submitted to the International Board for Soil Research and Development at its regional seminar in Thailand.

It was found that a new landfill, as was done in Tacloban, was not necessary in Phuket. Redevelopment of the existing site in Phuket, in addition to a continuation of disposal procedures, would extend the life of the disposal site, make disposal operations more sanitary and efficient, and create usable urban land. (Further research is suggested with adaption process relative to the city and country where this system has been implemented.)

Overall Project Comparison:

The leadership of Tacloban has been said to be a major influence in the success of the MEREC project. At the beginning stages of MEREC, Tacloban had the benefit of a supportive and dynamic mayor, Obdulia Cinco -- who was able to lobby for support in other levels of governmental decision-making. The Tacloban experience proved to the Philippines that urban life could be improved and that local government need not be restricted by limited central government budget allocations or local revenues. Tacloban showed that progress does not necessarily mean big, expensive construction projects. Relatively modest efforts can count for much, if they are well-planned and undertaken in the context of a larger local planning process.

MEREC in both Tacloban and Phuket was successful in its early stages because adaptation was a priority. Participation was also a

priority in that local officials participated in both the planning and implementation stages. Even though local participation was not an objective in the initial design, when the project progressed, the participatory element became a necessary element. The questionnaire, designed to give the participants a voice, shows that the locals in Tacloban believed that the following types of projects were beneficial: energy, water supply, construction, transportation and improvement of urban life. Those who responded believed that participation was necessary.

In Phuket, outsiders overwhelmingly felt that results of the subprojects were impressive. As was the case with Tacloban, Phuket brought together several levels of Thai government bureaucracy in a cooperative effort to strengthen local government to improve municipal services and the quality of urban life.

In Phuket, local and regional educational institutions played a role by providing technical assistance and material continuously, at cost or at no cost. Phuket's community college, for example, took advantage of the fact that hands-on municipal decision-making and project implementation experience strengthened their programs and capabilities. Not only were educational institutions benefiting through these training efforts, but the Phuket region, and Thailand as a whole, benefited because dissemination was actively spread to other places. The way Phuket carried out MEREC activities illustrated how major energy and resource efficiency efforts readily serve as sources of municipal pride, and how that pride leads to an interest in sharing achievements while providing the means for accomplishing them with other cities.

As an experiment, the MEREC project in Tacloban must be

judged and analyzed with caution. An "experiment" cannot be compared by definition. However, if some parts of the activity are similar, then those parts are comparable, rather than the whole.

MEREC subprojects were chosen by the municipal government based on certain these activities: setting up of MEREC, planning the system, implementing it, and putting conferences, workshops and training sessions together to initiate collaboration between the different levels of government.

Comparison may best be seen in terms of the way participatory methods in setting up and planning between officials, departments and agencies was done, and in terms of how implementation of the actions plans were done in order to achieve some level of energy efficiency and resource efficiency awareness. In the Philippines, progress occurred because the city of Tacloban had a clear understanding of governmental structure and the active involvement of all relevant national, regional and local government levels. Mayor Obdulia Cinco enthusiastically supported MEREC and put in much time and effort to make the MEREC project a municipal priority. It was primarily through her support, and Mayor Kasem Srinian's support in Phuket, that MEREC was able to move forward.

Findings

1. Participatory planning approaches are a necessary part of the "institution-building" process.
2. Institutionalization is a prerequisite to the replication and adaption of the MEREC planning process.
3. The success of the pilot projects in Tacloban and Phuket initially depended on strong commitment by the municipal leaders.

4. There are certain types of political and economic climates that encourage participant planning and commercialization of energy projects at the local level.
5. The MEREC project paper did not completely reflect the expected outcomes of the project.
6. Not all intended outputs or results were achieved.
7. Financial problems leading to project delays were encountered in the design and implementation processes of the MEREC project in Tacloban and Phuket. Delays and budget changes were expected -- and changes tend to happen slowly.
8. The lessons that could have been learned from applying the MEREC project to a secondary-city development like Tacloban were not thoroughly evaluated, due to the budget changes and lack of interest in A.I.D. for continued research and and support for MEREC.
9. Sustainability of the MEREC project is dependent on the amount of funding which includes the continuation of the MIS (MEREC information system) set up to collect and disseminate information to the field and to the public.

Organizational Effectiveness Impacted Participation in MEREC

The MEREC project was an experiment, and as such, activities of the MEREC project must be judged and analyzed with caution. On the one hand, an "experiment" cannot be compared if it is a pioneer effort. If activities have been conducted for the first time, they can not be compared. However, if some parts of an activity are similar, then those parts of the project can be compared.

In the MEREC project, Tacloban was where the pioneer efforts took place. MEREC subprojects were chosen by the municipal government based on certain actions: setting up of the MEREC system, planning, implementing, putting a conference together and evaluating and monitoring the subprojects.

"Institutionalization" of the MEREC project took place as was documented by Avrom Bendavid-Val. However, indications for the extent of institutionalization were never defined. Therefore, there is no way of knowing in the future if a MEREC project has been institutionalized. Baseline data on institutionalization were never established.

Ultimately, the organizational design or form that will have been created by the implementation of MEREC will be based on the defined purpose of the municipality, the activities, and strategies that municipal officials feel are necessary to achieve the goals and a series of processes which will assist in fostering these changes in the system. The processes which would foster these changes within the municipality are: communication processes between municipal and local private and public government officials, human resource development capacity, performance evaluation, decision-making and motivation. Given the task environment of MEREC and the structure of

the municipalities of both Tacloban and Phuket (before MEREC), both were horizontally differentiated with a high level of specialization and formal channels of communication which took place through the continuation of training workshops and conferences as well as formal evaluations.

The organizational culture for MEREC in Phuket was essentially unfavorable; whereas for MEREC in Tacloban, it was favorable.

Different Perceptions of MEREC's Purpose Impacted Participation in MEREC

Reports produced by both the Agency for International Development and the Tennessee Valley Authority did not address this question. The implication seemed to be that the beneficiaries were the residents of Tacloban and Phuket. In the project paper, MEREC activities would supposedly spread to other municipalities, in the region or elsewhere in the country. The management of resources in secondary cities like Tacloban or Phuket which have not yet reached a high stage of urbanization could influence the nature of development through an influence on local officials, who would support and maintain MEREC subprojects. Local officials had to continuously promote the idea of conservation to residents so that they would accept and apply the idea through their own conventional means or organizational procedures.

If the goal of MEREC is to manage energy- and resource-efficient cities, the organizational structure (according to the project paper) should tend towards a centralization of the information processes either nationally or regionally. While the nature of MEREC was to encourage a decentralization of municipal

activities through the creation of subprojects (as implied in the questionnaire), as the municipal government develops, it will become a more responsive municipal organization which will also begin to form short-term energy savings targets which may eventually translate into energy policy changes on the local and perhaps on the national level.

The perceptions of the beneficiaries about the organizations' roles and responsibilities were generally favorable for both Phuket and Tacloban with regards to equity in participation. Roles and responsibilities seemed to have been appropriately assigned to each of the participating organizations.

The National Political Situation Impacted Participation in MEREC

The questionnaire also addressed this issue, which was not addressed by the T.V.A. or A.I.D. However, my personal assumption is that political conditions impinge on development efforts when political figures take actions to support projects because of pressure from a special-interest group or the constituents of a region or if local citizens participate in the decision-making process at any level or in any form, as is probably the case in both the Philippines and Thailand. This makes the MEREC project particularly sensitive to potential influences even though a municipality is relatively autonomous, as in Tacloban, which was not considered a high priority in the Philippines.

The political situation in both Thailand and the Philippines reflects the quality of life of the people in a broad and rigid way. For example, during the years of MEREC implementation, the Philippine government was under the rule of the Marcos regime.

The national political situation was favorable in the beginning phases for MEREC in Tacloban with regards to participation,

but towards the end of the life of the project the overthrow of the Marcos administration had some bearing on local level municipal leadership. Change in leadership on the national level also meant a change in leadership and priorities on the municipal level.

The political situation in Thailand seemed to have been favorable for the development of the MEREC project, but accounts from the Bangkok Post and the Far Eastern Economic Review pointed to a politically volatile situation -- with political pressure boosting the tourism industry at the expense of the quality of life in Phuket.

Socio-Economic Conditions Impacted Participation in MEREC

The results of the questionnaire reveal that participants did feel that there were some links between social and economic development and the development outcome and efforts in the Philippines.

As is the case with the political conditions, the social and economic conditions defined by an area are prone to influence the outcome of a project because those conditions impact the perceptions of local officials and local outcomes. Participation towards an effort to conserve energy cannot take place if both government officials and citizens believe that it is more important to progress through modern means of technology at the expense of the development of a nation's greatest resource -- its people.

Socioeconomic conditions favorably impacted participation in MEREC in both Phuket and Tacloban. The "More With Less" concept of MEREC was very much in line with the similar social and economic Asian philosophies of resource use which existed in both Tacloban and Phuket with regards to a collective effort to reduce dependence on outside energy resources and to get the most out of local human and technical

resources. The value placed on resourcefulness may very well make the MEREC project appropriate for adaption in most of the Third World, where energy resources are in any case limited.

Cultural Innuendos Affected Participation in MEREC Subprojects

The questionnaire results show that, overall, participants did not think that there were any significant links between the cultural innuendos of either the Philippines or Thailand or in the outcome of the MEREC project in those countries.

However, information found through background reading does reveal that cultural innuendos may have had some influence on the progress made on development projects. Hence any stage of the MEREC process, e.g. the set-up, planning or implementation stages, were likely to be affected by cultural innuendos, particularly when inter-organizational, interagency, international or interdepartmental decisions had to be made. Decision-making process of any group are affected by the beliefs and values and cultural ways of the individuals who make up the group.

Cultural innuendos impacted participation of local officials and residents in all phases of the decision-making process from the set-up to the implementation stages in both Tacloban and Phuket. In Tacloban, even though an inherent conflict in cultural innuendos existed in the municipal decision-making process, between top-down demands and grassroots participatory elements within the culture MEREC seemed to be favored during the life of project funding. In Phuket, the overriding cultural influences seemed to have come from the national political arena. The major conflict of interest between the administration that was in power when MEREC began versus the one which came in toward the end of the implementation phase seemed to have been

about national development issues -- creation of a conducive environment for the tourism industry or continuing to focus on basic needs and the agricultural industry in Thailand. Phuket and other parts of southern Thailand became a main target for the tourism industry boom.

Need For Further Research

Since the MEREC project ended, there was no question that all of the things MEREC was set out to do were not accomplished. Project funding delays led to project procurement and or project implementation delays. The project manager for the Tennessee Valley Authority, John Cartwright, took a flexible approach to project monitoring in the field and held local officials accountable for monitoring the progress of their own projects. The object of Cartwright's job increasingly became to simplify the procedures and to keep in mind "the idea that MEREC subprojects must be institutionalized" in order to be maintained.

Elements of the subprojects might also be institutionalized but with regard to the last evaluation study completed by Avrom Bendavidval on the MEREC project the following areas of research are suggested:

Urban farming. As we last heard, further expansion of urban farming was being supported by the city of Tacloban and civic organizations. Twenty-five percent of the schools in Tacloban aimed at institutionalizing urban farming as their hands-on experience activities. More research can be done in this area to determine whether the school programs are still in effect and are self-sustaining.

Economic Crops. Interest in this area was high among local

business people, investors and bankers as well as the Thailand's National Board of Investment and the Ministry of Industry. In Thailand, proposals were being sent to the National Board and the Ministry to be circulated among other professionals and investors. Additional research can be done in this area in Phuket to see if interest in economic crops is still a priority on the local and national levels. In Phuket, as in most other rapidly urbanizing areas, priorities need to be set about how much of the municipal land should be utilized for highly demanded export crops versus local staple crops; primary agricultural products versus manufactured or processed products; and for the technical agricultural versus manufacturing versus marketing capabilities of local businessmen with regards to economic crops.

Demonstration Houses. At the time of the last evaluation, these were still in existence and being maintained for original purposes. Further research in this area is recommended because changes in the houses may have been made through expansions, additions or replication of various elements of the house to other local units or to other houses in the region or even in the country. Research might also be valuable if it includes the marketability and the financial sustainability assessments possibly with assistance from the World Bank or A.I.D.'s Housing and Urban Development Office.

Water Distribution System. This aspect of the NEREC project seems to have been widely accepted and institutionalized in both Tacloban and Phuket. However, further research on the changes in the utilities' organization or pricing schemes may be valuable as populations have increased in the municipalities.

Ceramic Urns. In Phuket, the collection and storage of rain

water through ceramic urns was an innovative method of the use of a locally designed and produced product. More research can be done in this area with regards to the extent to which its been used; the marketability of the product; the possible problems in the original design of the urns and the additional costs for continuous market research and production.

Solid Waste Management and Sanitation. Additional research in this area can be done because the problem of waste is a reality of urbanization. Both in Tacloban and Phuket, the collection and sanitary storage of solid wastes were done through a reorganization of the pick-up system in order to save fuel costs and hire additional persons for pick-up. While this subproject was highly accepted and institutionalized in Tacloban and Phuket, it was further expanded in Phuket to include the conversion of landfill to a usable resource. Further research is recommended on this subproject to find out if the plans to use the landfill in Phuket are still in effect and to find out if the entire solid waste management and sanitation problems in both Tacloban and Phuket are still being studied and new solutions applied.

Towards the end of the project, reporting of MEREC projects seems to have become less detailed, more routine and overall less challenging. MEREC funding delays meant that operational costs had to be cut and TVA would have to project the costs of different variations of their work plan for each anticipated level of funding for each fiscal year.

Unfortunately, in the process of cutting back subproject funds to break even, the TVA had to cut out some aspects of the MEREC project. The Merrec Information System (MIS) database was one part of

the project that was not continued. The MIS system would have ultimately helped to institutionalize the MEREC project years after the project ended. But besides the computer equipment needed to maintain such a system, manpower would have also been needed to continue to update the system. In the MEREC literature, no discussion seems to have been made regarding efforts to making the MIS system more financially sustainable. Some energy specialists have said that that is a major flaw in the MEREC design.

Several years after MEREC, interest in it endures because the idea of saving energy is tied to the continual interests of the world and its political conditions -- and also to the realization that a country's energy resource supply and applications determine its material wealth and development potential. The MEREC project is a realistic approach to much of the Third World's resource problems and can be simplified to solicit the interest of a broad spectrum of professionals across cultural boundaries and towards a common goal -- energy conservation through more creative uses of indigenous resources.

The use of indigenous resources might have also meant the use of the currently existing organizational structure and professionals working for the cities of Tacloban or Phuket. As was mentioned in earlier chapters, since MEREC was not implemented to create any autonomous organizations, some reorganization of the current system was done. Ideas on how to save energy were adapted by various private or public organizations through conferences, the media, training and collaborative efforts by local and national organizations. All of these subproject activities were under the guidance and auspices of the municipal organization. Hence, the

structure of the local municipal organizations had some impact on the overall municipal management of the MEREC projects as well as on the management of each of the subprojects.

The documentation on MEREC for desk-top research has been exhausted. Much more in the way of field interviews, data collection and analysis needs to be done in both Tacloban, Philippines and Phuket, Thailand. Field research is an essential part of an evaluation of any development project because it would not be realistic to assume that all bases have been covered or all significant questions have been asked with regards to success versus failure or the institutionalization of a development project and its several components. For an accountability system to serve the needs of an evaluator, a beneficiary also needs to be more clearly defined. Baseline data need to be established and if documentation does not reflect a standardized set of parameters from which to measure success or failure, then additional research can be done in that area as well.

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APPENDICES

APPENDIX 1

SCHEDULE

- November 1988: Review of MEREC final evaluations and public information from the Tennessee Valley Authority
- Preliminary interviews with: Avrom Bendavid-Val, Washington, D.C.
John Cartwright, Knoxville, Tenn.
Bob Ichord, Washington, D.C.
- January 27, 1989: Phone interview with Doug Haladay, Washington to New York
(1300-1400 hours)
- January 30, 1989: Personal interview with Dan Dworkin, A.I.D./Washington
(1500 to 1530 hours)
Letter sent to USAID/Manila William T. Oliver
- February 28, 1989: Phone interview with Jim Ober, Washington to Knoxville, Tenn.
(1800-1900 hours)
- March 1989: Personal interview with Eric Chetwynd, A.I.D./Washington
(1400-1500 hours)
Response from USAID/Manila, W.T. Oliver
" " USAID/Manila, Conchita Silva
- April 14, 1989: Phone interview with Nancy Brown, Washington to Knoxville, Tenn., (1400-1430 hours)
- April 25, 1989: Ogibe interview with Bob McKloskey, Washington
(1630-1700 hours)
Research Proposal sent to the School for International Training
- May 4 - May 14, 1989: Review of A.I.D.'s case files for MEREC authorized by Dan Dworkin
- May 5, 1989: Phone interview with John Cartwright, Washington to Knoxville, Tenn.
(1900-2100 hours)

- May 9, 1989: Phone interview with Ninez Ponce, Washington to San Francisco, Calif.
(2100-2130 hours)
- May 11, 1989: Phone interview with Jim Gober, Washington to Knoxville, Tenn.
(1900-2100 hours)
- May 15, 1989: Review of back issues of the Bangkok Post (1987)
- May 19, 1989: Review of back issues of the Far Eastern Economic Review (1988)
- May 21-24, 1989: Review of back issues of the Bangkok Post (1987-88)
- May 24, 1989: Phone interview with Professor Maria Floro, economist at American University, Washington, D.C.
- June, 1989: Decision to gather information from the field by mailing out questionnaires to city officials or making phone calls when appropriate
- June, 1989: Continued to receive data from Tacloban and Phuket
- July, 1989: Continued to edit and clarify methodology and statement of purpose.

APPENDIX 2

**MEREC PROJECT QUESTIONNAIRE ON LOCAL
INSTITUTIONS AND PARTICIPATION
IN TACLOBAN AND PHUKET**

(This questionnaire was distributed to local participants of the MEREC projects in Tacloban, Philippines and Phuket, Thailand).

1. Do you feel that local institutions were well represented in the following areas?

Activity	Yes	No
<input type="radio"/> Project Planning		
<input type="radio"/> Project Implementation		
<input type="radio"/> National Workshops/Conferences		
<input type="radio"/> Regional Workshops/Conferences		
<input type="radio"/> Local Workshops/Conferences		
<input type="radio"/> International Workshops/Conferences		
<input type="radio"/> Writing of Reports/Evaluations		
 <u>Response</u>	 Yes	 No
Project Planning	9	2
Project Implementation	11	
National Workshops/Conferences	n/a & 8	2
Regional Workshops/Conferences	10	1
Local Workshops/Conferences	11	
International Workshops/Conferences	10	2
Writing of reports/Evaluations	7	4

2. In percentage terms, how influential do you feel these organizations were in the following decision-making activities?

Response

	100%	75-99%	50-74%	Below 50%
Agency for International Dev/Washington				
o Project Design	5	4	2	1
o Project Planning	4	3	4	1
o Project Implementation	4		4	4
o International Workshops/Conferences	3	5	1	3
o Budget Allocations	3	7	1	
USAID MISSION				
o Project Planning	2	6	2	2
o Project Implementation	1	7	2	2
o National Workshops/Conferences	1	8	1	2
Tennessee Valley Authority				
o Project Implementation	1	7	1	3
o International Workshops/Conferences	1	8	2	2
o Local Workshops/Conferences	2	8	3	2
o Writing of Reports/Evaluations		10	1	1
Local Public or Municipal Entities				
o Project Design	1	4	6	1
o Project Planning	1	5	5	1
o Project Implementation	1	6	5	
o Workshops/Conferences	2	5	5	
o Writing of Reports/Evaluations	1	3	4	4
Local Private Entities				
o Project Design		4	1	7
o Project Planning		4	1	7
o Project Implementation		4	2	7
o Workshops/Conferences		4	2	6
o Writing of Reports/Evaluations		5	1	6

3. Of the organizations listed in the previous question, which do you feel valued the MEREC project?

Response

Five said A.I.D. Washington, two said the USAID Mission, two said the Tennessee Valley Authority, six said local public entities, one said local private entities and two said the municipality valued the MEREC project.

4. What group do you feel were the ultimate stakeholders?

Response

Five said A.I.D. Washington, none said the USAID Mission, two said the Tennessee Valley Authority, one said local public entities, none said local private entities and two said the municipality was the ultimate stakeholder.

5. What group of people do you feel were the ultimate beneficiaries?

Response

None said A.I.D. Washington or the USAID Mission, one said the Tennessee Valley Authority, five said local private entities, two said local private entities and three said the municipality ultimately benefitted.

6. Were there political conditions that influenced the outcome of the MEREC project when funding ended? If so, what are they?

Response

Three respondents said yes; five said no.

7. Were there economic conditions that influenced the outcome of the MEREC project when funding ended? If so, what were they?

Response

Four respondents said yes; six said no.

8. Were there social conditions that influenced the outcome of the MEREC project when funding ended? If so, what were they?

Response

Three Respondents said yes; five said no.

9. Were there cultural conditions that influenced the outcome of the MEREC project when funding ended? If so, what are they?

Response

Either no respondents answered this question or completely understood

it.

10. How could the MEREC project have been designed to be more sustainable?

Response

Responses and personal lessons learned by respondents were as follows:

- o Lack of field experience or prejudice of TVA lead to failures.
- o Personal commitment and sincerity of people involved lead to success
- o More time was needed to explain MEREC to the local officials at the beginning phases.
- o A result of MEREC was the cooperation & effective use of indigenous resources.
- o With motivation & direction, results thru community self-reliance with the use of local materials, ultimately helped saved energy.
- o There is a need for sincerity & commitment of all involved.
- o The people learned to plan & work with public & private institutions.
- o The MEREC process works.
- o In order for MEREC to work, the people & the institutions must see the potential benefits.
- o Did not understand the question.
- o MEREC worked on a wider scope of the environment, but lacked sufficient funding and eventually strayed.

Participants and Perspectives in MEREC

Participant	Connection w/ Program	Perspective and Major Objective	Sense of Urgency
AID/WASHINGTON	Designed the overall MEREC Project Funded MEREC project Selected Consultants Selected TVA as contractors Hosted Wkshps/Conf Disseminated MEREC info	Completion of Project Cycle Replication	High in early stages
USAID/Missions	Assisted as Liaison for natl/local govt & AID/W Drafted ProAg Contract betw govermtns Helped to select sites Disseminates MEREC info	Feasibility of municipality sustainability of institutionaliz.	Ambiguous but cooperative
TENNESSEE VALLY AUTHORITY	Implemented MEREC Managed MEREC in the field Consistently monitored & evaluated projects Reported to AID/W Close liaison w/ municipality Conducted training wkshps Disseminates MEREC info	Pilot or demos Local adaptability Feasibility	High though
MUNICIPALITY	Implemented MEREC Managed implementation at earliest stages & thru out Adm procurement of tech resources & services Reported to TVA & USAID Mission Requested additional funding from natl govt and USAID	Desire for economic development & better quality of life/energy savings	High at early stages (not suff info)
LOCAL PUBLIC INSTITUTIONS	Participated in set-up, planning & implement stages & in situation report	Desire for economic development & better services for the public/cost effectiveness of MEREC	(No suff data avail)
LOCAL PRIVATE INSTITUTIONS	Participation in set-up, planning, implementation, & situation reports	Desire for economic development & better quality of life and lower operating costs thru conservation of energy resources	(No suff data avail)

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NUMBER OF TIMES RESPONDENTS MENTIONED EACH ORGANIZATION

Questions to Participants	AID/W	USAID MISSION	TVA	LOCAL PUBLIC ENTITY	LOCAL PRIVATE ENTITY	MUNICIPALITY
Which organizations valued the MEREC project?	5	2	2	6	1	
Who were the ultimate stakeholders?	5	0	2	1	0	
Who ultimately benefitted?	0	0	1	5	2	

NUMBER OF TIMES RESPONDENTS ANSWERED

Questions to Participants	YES	NO	COMMENTS
Were there external political conditions that affected the outcome of MEREC?	3	5	This question appeared to be well understood by respondents.
Were there external economic conditions that affected the outcome of MEREC?	4	6	Question was understood by 3/4 of respondents.
Were there existing social conditions that affected the outcome of MEREC?	3	5	Question was understood by 1/2 of respondents.
Were there any cultural characteristics that affected the ultimate outcome of MEREC?	0	0	It seems that participants might feel that it is not the place to discuss cultural impedos. But cultural factors do have an important influence.

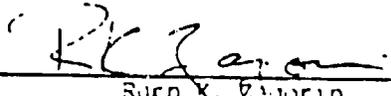
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PROJECT AUTHORIZATION
Amendment

Name of Country/Entity: Worldwide
Name of Project: Managing Energy and Resource
Efficient Cities
Number of Project: 936-5402

1. Pursuant to Section 106 of the Foreign Assistance Act of 1961, as amended, the Managing Energy and Resource Efficient Cities project was authorized on July 1, 1982. That authorization is hereby amended as follows:

- a. The authorized final year of obligation is extended to FY 1986.
 - b. The life of project cost is increased from \$1,530,000 to \$1,650,000.
2. The authorization cited above remains in force except as hereby amended.



Ruth K. Morin
Agency Director for Human Resources
Bureau for Science and Technology

Date: 5/27/85

S&T/PO, George T. Eaton 5/28/85 Date: 5/27/85

5/29/85:08081

b21(a) determination

Name of Project: Managing Energy and Resource Efficient Cities
(MEREC)

Number of Project: 936-5402

I hereby determine in accordance with the factors described in the project paper that the PASA with the Tennessee Valley Authority qualifies under Section 621(a) of the FAA because:

- (1) it is for technical assistance,
- (2) the TVA is particularly suited for this scope of work,
- (3) this action is not competitive with the private sector, and
- (4) the work will not interfere with TVA's domestic program



Ruth K. Eubank
Agency Director for Human Resources
Bureau for Science and Technology

Date: 11/31/85

Dratted: Abendaavid-Val/EChetwynd: da: 5/3/85: W14 Lin: 859506

ACTION MEMORANDUM FOR THE AGENCY DIRECTOR FOR HUMAN RESOURCES

FROM: S&T/RD, Christopher Russell

SUBJECT: Managing Energy and Resource Efficient Cities
(936-5402)

Problem. We request that you authorize the amended Managing Energy and Resource Efficient Cities project by signing the attached PAF. This project will be extended for one year ending in FY 1986. S&T life of project funding for this project will total \$1,650,000, including an additional \$120,000 being added for the extension period.

Discussion: This project was originally scheduled to terminate in FY 85, as per the Project Paper Facesheet. However, field implementation activities will be completed in FY 86, rather than FY 85 as originally planned. As such, time does not remain for collecting, processing, and disseminating data concerning institutional innovations and energy and resource efficiencies achieved during operation of NEKEC subprojects in each demonstration city. Although Tennessee Valley Authority's (TVA) general responsibility for this task is included to in the PMSA, it is not discussed in detail nor accounted for in TVA's budget. Moreover, the original PAF shows a PACD of September 30, 1985. TVA is now developing a detailed information and dissemination plan.

The attached PAF will bring the PP and PAF into agreement, and allows an additional year costing \$50,000 for TVA to perform the desired work.

Also, development of prototype evaluation handbook and procedural guidance by SES, Inc. took far more resources than originally anticipated. As a consequence, the originally authorized LOP cost falls \$70,000 short of the planned obligation to TVA in FY 1986.

The attached PAF also will add \$70,000 to the LOP cost and TVA budget to cover this shortfall. The total increase in S&T funding to the life of project cost is \$120,000.

No modification of the PP text is necessary.

Recommendation: That you authorize the amended Managing Energy and Resource Efficient Cities project, for the period and funding levels stated above, by signing the attached PAF Revision and the attached b21(a) determination.

Attachment: PAF Revision

Clearances: S&T/RD/RKD, Eric Chetwynd: (in draft) Date: 3/21/85
S&T/RD, Bob McClusky : [Signature] Date: 5/12/85
S&T/PO, George Eaton : [Signature] Date: 5/12/85

Drafted: Abengavid-Val/EChetwynd: da: 3/25/85: W1411n: X59506
Revised: 5/3/85

PROJECT PAPER FACESHEET

MANAGEMENT CODE

A ADD
B CHANGE
C DELETE

PP

1 COUNTRY ENTITY: S&T/RD 4 DOCUMENT REVISION NUMBER: 1

5 PROJECT NUMBER: 936-5402 6 BUREAU OFFICE: S&T/RD 7 PROJECT TITLE: Managing Energy and Resource Efficient Cities

8 ESTIMATED FIRST FULLYER COMPLETION: 8/7 9 ESTIMATED DATE OF OBLIGATION: INITIAL FY 812, QUARTER 1, FINAL FY 817

10 ESTIMATED COST, \$000 OR EQUIVALENT \$1

A FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B GRANT	C LOAN	D TOTAL	E GRANT	F LOAN	G TOTAL
AID APPROPRIATED TOTAL	550		550	1,650		1,650
GRANT	550		550	1,650		1,650
LOAN						
OTHER						
U.S.						
HOST COUNTRY						
OTHER DONORS						
TOTALS	550		550	1,650		1,650

11 PROPOSED BUDGET APPROPRIATED FUNDS \$000

A APPROPRIATION	B PRIMARY PURPOSE CODE	PRIMARY TECH CODE		E 1ST FY 82		H 2ND FY 83		K 3RD FY 84	
		C GRANT	D LOAN	F GRANT	G LOAN	I GRANT	J LOAN	L GRANT	M LOAN
SD	720	550		550		470		400	
2									
3									
4									
TOTALS		550		550		470		400	

A APPROPRIATION	N 4TH FY 85		O 5TH FY 86		LIFE OF PROJECT		12 MONTHS REALIZATION SCHEDULE
	P GRANT	Q LOAN	R GRANT	S LOAN	T GRANT	U LOAN	
	80		100		1,650		
2							
3							
4							
TOTALS	80		100		1,650		

13 DATA CHANGE INDICATOR: IF CHANGES MADE IN THIS PAPER FACESHEET DATA BLOCKS 12, 13, 14 OR 15 OR IN DRP FACESHEET DATA BLOCK 12, PLEASE ATTACH CHANGED PFD FACESHEET

1 NO CHANGES

14 ORIGINATING OFFICE CLEARANCE

SIGNATURE: Christopher H. Russell

TITLE: Director, Office of Rural & Institutional Dev.

DATE SIGNED: 6/15/81

15 DATE DOCUMENT RECEIVED IN AID # OR FOR AID # 00 MEN'S DATE OF DISTRIB: MM/YY

PD-WAH 424

LIMITED SCOPE GRANT PROJECT AGREEMENT

Between the United States of America,
acting through the Agency for International
Development (AID)

AND THE

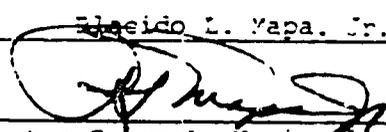
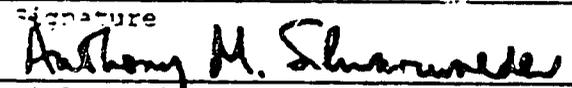
Government of the Republic of the Philippines
(Grantee)

1. Project Title Pre-Test for Managing Energy and Resource Efficient Cities: Tacloban City, Leyte	2. AID Project Number 936-1406
---	---------------------------------------

The above-named parties hereby mutually agree to carry out the Project described in this Agreement in accordance with (1) the terms of this Agreement, including any annexes attached hereto, and (2) any general agreement between the two governments regarding economic or technical cooperation.

3. Amount of AID Grant \$94,000	4. Grantee Contribution to the Project \$45,000*	5. Project Assistance Completion Date April 30, 1982
--	--	--

6. This Agreement consists of this title page, project description, special provision, budget, and Standard Provisions Annex.

7. For the Grantee Typed Name Eusebio L. Yapa, Jr.	8. For the Agency for International Development Typed Name Anthony M. Schwarzwald
Signature 	Signature 
Title Director General, National Economic and Development Authority	Title Director, U.S. Agency for International Development
Date September 8, 1981	Date 11 07 1981

Signature: 
Cecilia R. Cinco
Title : Mayor, Tacloban City
Date : July 31, 1981

*Based on 78:51 conversion rate.

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PDWA 1014

BEST AVAILABLE DOCUMENT

Republika ng Pilipinas
Lungsod ng Tacloban
TANGGAPIN NG AKAALDE

September 25, 1981

TO : All Tacloban Task Force Members
Tacloban City

Emergency Meeting

In view of the arrival from the United States of Lawrence Revzan and Andrew Goddard who are consultants from Coopers & Lybrand, Washington, D.C., a Dinner-Conference of the Tacloban Task Force Committee will be held at six o'clock this evening (Sept. 25) at the Village Inn Function Room.

Considering that the Chief Consultant Mr. Revzan will leave immediately for Manila tomorrow and Mr. Goddard will be staying in Tacloban until Wednesday only, your presence is necessary.

If you are a Chairman or Co-Chairman of a Sub-Committee, kindly bring all papers and/or documents and prepare a report to the Task Force Committee of your work.

Please favor us with your personal presence.

ANTONIO A. ESTA
Chairman
Tacloban Task Force
Committee

TASK FORCE REPORT

Statement of Area of Responsibility

Data : Historical & Trends

- description
- energy consumption
- other data

Analysis of Data and Problems Identified

Preliminary Program/Strategy to deal with Problems

Appendices: List of Task Force Members

Minutes of Meeting

Detailed tables/data, etc.

*Institutional
relationships*

DRAP - WORKSHOP OUTLINE

DAY 1

8:30 -- 9:00 Mayor Circo
9:00 - 9:30 Governor's Representative
9:30 - 10:15 USMC Schwarzwald, Ervin, Chatwynd
Coffee Break
10:45 - 11:30 or Zeta/C & L
12:00
L u n c h
1:30 - 3:00 Chairmen - 5 groups
Coffee Break
3:30 - 5:00 Task Force Groups) 30 - 5 task force groups

DAY 2

A.M. Task Force Groups prepare reports
P.M. Present reports/wrap up
Zeta/C & L where we proceed.
↓
How to proceed from here
Wash. D.C. Workshop

Preparation of Materials:

1. Name Plates
2. Agenda

MINUTES OF THE MEETING BY THE TACLOBAN TASK FORCE HELD AT VILLAGE INN AT 6:00 IN THE EVENING ON SEPTEMBER 25, 1981

PRESENT:

- | | |
|-------------------------|-------------------------------------|
| Mr. Lawrence Revzan | USAID Consultant |
| Mr. Andrew Goddard | USAID Consultant |
| Hon. Abdulla R. Cinco | City Mayor |
| Atty. Antonio A. Zeta | City Administrator |
| Mrs. Eufemia E. Saac | Representing Director Mate |
| Engr. Juan Sabulao Jr. | NMYC, Representing Mr. Escartin |
| Engr. Carlos Cordero | City Assessor's Office |
| Engr. Evelito Elento | Gen. Manager, LEYECO II |
| Mr. Francisco Brigoli | CPDS, Representing Engr. Crisostomo |
| Engr. Ranulfo Feliciano | Gen. Manager, LMWD |
| Engr. Rodolfo Creeer | LMWD |
| Engr. Apolonio Lotayro | LMWD |
| Engr. Rodolfo Cadavis | CEO, Representing Engr. D. Nadera |
| P/Col. Lucas de Guzman | Station Commander, Tacloban Police |
| | Station, IIP |
| Mr. Renc Amano | Leyeco II |

ABSENT:

- | | |
|------------------------|---------------------------------------|
| Engr. Romeo Crisostomo | City Development Coordinator, CPDS |
| Engr. Damiano Nadera | Actg. City Engineer (Official Travel) |
| Mr. Vicente Mate, Jr. | Director, BLT |
| Mrs. Heraclea Segovia | City Budget Officer (Official Travel) |

The meeting started at 6:00 o'clock in the evening.

1.0 Two consultants from Coppers & Lybrand, Messrs. Lawrence Revzan and Andrew Goddard who arrived from Manila attended the meeting and were introduced by Atty. Zeta to the members of the Tacloban Task Force.

Atty. Zeta then gave a brief background of the project "Pre-Test for Managing Energy and Resource Efficient Cities" in Tacloban City of which there are five areas of concern:

1. Water : Chairman - Engr. Ranulfo Feliciano, General Manager, LMWD
2. Energy : Chairman - Engr. Evelito Elento, General Manager, Leyeco II
3. Land Use : Chairman - Engr. Romeo Crisostomo, City Development Coordinator
4. Building Materials : Chairman - Engr. Damiano Nadera, Actg. City Engineer
5. Transportation : Chairman - Director Vicente Mate, Bureau of Land Transportation, Region 8

Atty. Zeta informed the body that Mr. Revzan would be leaving for Manila the next day (Saturday) while Mr. Goddard would be staying in Tacloban City until Wednesday. On Monday, Ms. Conchita Silva of the Office of the Senior Energy Advisor, Lawrence Ervin, USAID, will

U

be arriving on Monday with the first release of \$30,000.00 from USAID for this project. On October 22 & 23, 1961 the first workshop will be held in Tacloban City at the Leyte Park Hotel. Attending will be 20 people from Tacloban; 10 from Manila; and 4 to 6 from USAID, Washington, D.C.

As for the reports of the sub-committees, only the Sub-Committee on Building Materials, Food Production, Industrial Development & Manpower has not submitted their report.

- 2.0 Mr. Revzan made some observation on the reports of the different sub-committees which were furnished him and which he had gone over. He informed the group that they came to Tacloban to help the sub-committees work on their State of the Art. These reports should be ready by October when the first workshop will be held in Tacloban.

The Task Force Report should include:

1. Statement of Area of Responsibility
2. Data: Historical & Trends
Description
Energy Consumption
Other Data
3. Analysis of Data & Problems Identified
4. Preliminary Program/Strategy to deal with problems
5. Appendices : List of Task Force Members, Minutes of Meeting, Detailed tables/data, etc.

3.0 Reports:

3.1 Land Use - Since Chairman Engr. Romeo Crisostomo was absent report was made by Co-Chairman Mr. Francisco Brigoli. With the use of Zoning Maps, Land Use Maps and Topo Maps Arch. Brigoli presented a brief report of the Sub-Committee on Land Use. He pointed out urban, residential, industrial and commercial areas in the city; expansion areas and development projects of Tacloban.

3.2 Water, Sewer & Solid Waste - Engr. Feliciano read the brief outline of the report of his sub-committee. The report started with the historical background of the system to the present set-up, organization and operation. The problem faced by the system is the unaccounted for water. One of the causes is leakage due to the existence of old pipelines. Suggested solutions included the getting of a grant from the national government or local government to enable the district to replace the old pipes. At present, the district has to resort to repairs of these old pipes as it is not financially capable to replace these old pipes. Engr. Feliciano mentioned that his collection efficiency is from 92-98% with a reduction to 85% during the opening of classes and after the Christmas season. Billing and collection is a cycle system. For Tacloban there are 4,940 household connections within the service area. There are 3 public faucets payment for water consumption of which are subsidized by the city government for the first minimum consumption and the rest to be paid by the barangay assembly using the stand pipe.

In answer to the query of Mayor Cinco as to the possible solutions to the problem facing the district, Engr. Feliciano said that replacement of the pipes would be the solution but this requires a bigger investment which the district cannot afford at present. However, all these pipelines have already been identified and proper recommendations have been included in the report of his sub-committee.

Mayor Cinco also inquired as to the consumption of water in Tacloban City. According to Engr. Feliciano water consumption is tied to price of water. If the people feel that the price will drain their pockets they will use water properly.

On conservation of water, Engr. Feliciano informed the group that the district has launched a water conservation drive and they have a program called "Project Water" which is at its experimental stage yet.

4.0 Atty. Zeta informed the group of the meeting schedules were consultants will be present, as agreed are as follows:

Monday, September 28, 1981

7:30 A.M. - Sub-Committee on Water, Sewer & Solid Waste at the LMD Office of Engr. Feliciano

2:30 P.M. - Sub-Committee on Building Materials, etc. at the City Engineer's Office.

Tuesday, September 29, 1981

2:00 P.M. - Sub-Committee on Energy & Electric Power at Leyaco II Office of Manager Elento

6:00 P.M. - Sub-Committee on Transportation at a place to be determined by Director Vicente Mata

Wednesday, September 30, 1981

8:00 A.M. - Sub-Committee on Land Use at the City Mayor's Office

5.0 Energy - Engr. Elento read the report of his sub-committee. His report included areas serviced by Leyaco II, operations, maintenance, barriers/parangays/ which are already 100% energized.

The problem of his cooperative identified in the report submitted to the Task Force Secretariat is systems loss caused by pilferage among others. He informed the Task Force Committee that his percentage of collection is about 38% only.

6.0 Since it was already late the Sub-Committees on Building Materials and Transportation will give their reports during their respective meetings on September 28 and September 29, respectively.

The meeting was adjourned at 6:30 in the evening.

Prepared by:

F. L. C.
FLORENCIA B. COLABA
ARLINE G. CABILLAN

NOTED:

ATTY. ANTONIO A. ZETA
City Administrator
Chairman, Tacloban Task Force

6

**MINUTES OF THE MEETING OF THE TACLOBAN TASK FORCE HELD AT THE CITY
MAYOR'S OFFICE ON SEPTEMBER 11, 1981**

PRESENT:

Mayor Odalía R. Cinco	City Mayor
Atty. Antonio A. Zeta	City Administrator
Hon. Virgilio A. Astilla	Pres. Protampore, SP
Engr. Ramalfo Feliciano	General Manager, LEWD
Engr. Rodolfo Creer	LEWD
Engr. Apolonio Loteyro	LEWD
Engr. Ewalito Elento	General Manager, Leyeco II
Engr. Damiano Nadera	Actg. City Engineer
Mr. Jose Escartin	Regional Director, NREYC
Mr. Francisco Brigoli	City Planning & Dev. Staff
Mrs. Rufenia Saac	Bureau of Land Transportation
P/Col. Lucas de Guzman	Station Commander, Tac. Police Station
Lt. Eduardo Jaro	Tacloban Police Station

ABSENT:

Engr. Romeo Crisostomo	City Development Coordinator
Mr. Vicente Mate	Regional Director, BIT
Mrs. Heracles Segovia	City Budget Officer, (Official Travel)

The meeting started at 2:00 in the afternoon.

1.0 Mayor Cinco presented some methods for Greater Efficiency in the Consumption of Resources:

- I. Identify and Quantify Resources Consumption
- II. Identify Areas in which Efficiencies are Possible
- III. Appropriate Technologies and Approaches for Resource Conservation

2.0 Reports of Sub-Committees:

- 2.1 Land Use - Mr. Brigoli read the draft of the report of the sub-committee which covered mainly the land area of the city.
- 2.2 Transportation - Mrs. Saac read the Resume of Activities of the Transportation Sub-Committee.
- 2.3 Energy - Engr. Elento informed the other Task Force members that he has the data gathered from a survey of electric power consumers.
- 2.4 Building Materials - Engr. Nadera informed the group that since his committee is composed of several sub-committees, they have divided the work among themselves. Mr. Escartin for Manpower; Mr. S. de la Cruz for Industrial Development; Mr. Alvarez for Agriculture; Engr. Reposar for Building Materials. They are now finalizing their reports.
- 2.5 Water, Sewer & Solid Waste - Engr. Loteyro read the draft of the Report on Water. Engr. Feliciano read the report of Solid Waste submitted by Engr. Gonzales.

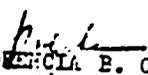
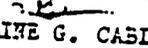
3.0 Atty. Zeta informed the group that he was not able to get the funds from USAID as he had to come back to Tacloban before NEDA Executive Director could sign the check.

All sub-committees were reminded to submit their reports as the Cooper & Lybrands team will be arriving in Tacloban on the last week of September and will stay here for three weeks to sit down with the sub-committees in the preparation of the State of the Art.

He further informed the group that one of the major needs for the project is an aerial photograph of the city. Certaza is asking for P23,000 for a copy of the aerial photograph which does not include certain portion of the city like the airport, some barrios, like Sta. Elena; diversion road, etc. Since this was taken in 1970 there are major changes in land use.

Meeting was adjourned at 4:00 p.m.

Prepared by:


PROFESSOR E. COLABA

ARLINE G. CABILLAN

NOTED:

ATTY. ANTONIO A. ZETA
City Administrator
Chairman, Tacloban Task Force

8

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MINUTES OF THE MEETING BY THE TACLOBAN TASK FORCE HELD AT THE CITY
MAYOR'S OFFICE , TACLOBAN CITY, AT 2:30 P.M., ON SEPTEMBER 3, 1981

PRESENT:

Hon. Uldarico E. Mate	- - - -	Acting City Mayor
Hon. Virginio Astilla	- - - -	Pres. Protempore, Sangguniang Panglungsod
Atty. Antonio A. Zeta	- - - -	City Administrator
Engr. Raulfo Peliciano	- - - -	General Manager, LEWD
Engr. Apolonio Loteyro	- - - -	E M T D
Engr. Rodolfo Greer	- - - -	E M T D
Engr. Evelito Elento	- - - -	General Manager, Leyeco II
Mr. Rene Amans	- - - -	Leyeco II
Engr. Damiano Madero	- - - -	City Engineer

ABSENT:

Mrs. Heraclea A. Segovia	- - - -	City Budget Officer (in Manila on official business)
Mr. Vicente Mate, Jr.	- - - -	Regional Director, BLT

The meeting started at 2:30 P.M.

- 1.0 Atty. Zeta related that he was in Manila a week ago to get the subsidy from USAID. There he was informed by Lawrence Ervin of USAID-Manila that the papers had been sent to NEDA and Manila NEDA had sent it to Region 8 NEDA, a follow up in Tacloban disclosed that the acting City Mayor had wrote NEDA-Manila relative to their requirements.
- 1.1 Atty. Zeta further informed the group that the first release would be about \$30,000 which he is going to get from Manila. Upon release of the subsidy funding of all projects will start.
- 2.0 Reports of the Tacloban Task Force:
 - 2.1 Water - Engr. Peliciano reported that his committee conducted two meetings and identified sub-groups which will undertake the writing of the State of the Art on Water, Sewer and Solid Waste System.

The committee was able to draft reports and recommendations which were read to the group.

What transpired during the two meeting were read by Engr. Loteyro.

Engr. Peliciano read the draft of the report of the sub-group on Solid Waste, headed by Engr. Gonzales.

The City Engineer's Office representative was present during the second meeting only while the City Agriculturist was not able to attend both meetings. He was however furnished a copy of the minutes for his guidance.

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- 2 -

2.2 Atty. Zeta informed the group that the USAID consultants will be coming to Tacloban by the second week of September so that all committee reports should be in by that time. The same may be submitted to the Secretariat at the City Mayor's Office for reproduction and distribution to committees.

2.3 Engr. Feliciano suggested that the Task Force come up with only one survey report for population in all areas to reduce cost.

Atty. Zeta said that Certiza is willing to furnish the City of Tacloban an aerial photography of the city taken in 1970 for \$15,000 and this will be helpful for historical purposes.

2.4 Engr. Feliciano informed the members that his committee will be meeting for the third time on September 15, 1981.

3.0 Building Materials, etc.:

3.1 Engr. Nadera's problem was that his committee comprises four big areas. As of the present, he was still gathering data for his reports.

4.0 Energy & Electric Power:

4.1 Engr. Elento informed the members that he is in the process of gathering data through a survey of the municipalities of Palo and Babatagan and Tacloban City. They choose to have 30% of consumers in Tacloban; 20% in Babatagan; and 30% in Palo to get a cross-section of commercial, residential and industrial users of electric power. The survey is being undertaken by Fire Inspector of the Station Commander of the Tacloban Fire Station. As soon as the data are in their committee will start the write up of their reports.

5.0 Land Use:

5.1 Engr. Crisostomo will be ready by next week. He agreed that the aerial photography would be of great help.

6.0 Problems:

6.1 Engr. Nadera - Committee member Pol Alvarez has other projects to attend to like Pagbairan ng Bayan. ✓

6.2 Engr. Crisostomo - Engr. Bagan has not made any contact with the Chairman of the committee. ✓

6.3 Some committee members have other priority projects to attend to making them unable to attend committee meetings. ✓

Meeting was adjourned at 4:00 P.M.

NOTED:

ATTY. ANTONIO A. ZETA
City Administrator
Chairman, Tac. Task Force

Prepared by:

FLORENCIA B. OJEDA
MARIE G. CAPILLAN

155

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MINUTES OF THE MEETING BY THE TACLOBAN TASK FORCE HELD AT THE CITY
MAYOR'S OFFICE, TACLOBAN CITY, AT 2:30 P.M., ON AUGUST 12, 1981

Present:

Uldarico S. Mate - - - - - Acting City Mayor
Antonio A. Zeta - - - - - City Administrator
Hon. Virginio Astilla - - - - - Member, Sangguniang Panglungsod
Engr. Romeo Crisostomo - - - - - City Development Coordinator, CPDS
Engr. Felix Ripalda - - - - - Sr. Civil Engineer, CEC
Mr. Vicente Mate, Jr. - - - - - Director, ECT
Mr. Rene Amano - - - - - LEYECO II
Engr. Evelito Elento - - - - - Manager, LEYECO II
Engr. Ranulfo Feliciano - - - - - Manager, LMWD
Mrs. Heraclea Segovia - - - - - City Budget Officer

- 1.0 The meeting started at 2:30 in the afternoon, presided over by Atty. Antonio A. Zeta, Chairman of the Task Force.
- 1.1 Atty. Zeta read the letter of Mayor Obdulia R. Cinco to Mr. Lawrence Ervin, Sr. Energy Advisor, USAID, relative to the organization of the Tacloban Task Force for this project. The contract agreement for this project was signed by Mayor Cinco in Manila.
- 1.2 The budget for this project is \$94,000. The city's (grantee) contribution is \$45,000. Atty. Zeta read the breakdown of the budget.
- 1.3 Temporary office will be the building formerly occupied by the Tacloban City Division Office.
- 1.4 Organization of sub-committee;

I. WATER, SEWER AND SOLID WASTE:

Chairman - - - - - Engr. Ranulfo Feliciano
Members - - - - - Mr. Cristino del Pilar
Mr. Carlos Cinco
Dr. Hermilo U. Quintero
Engr. Felix Ripalda
Engr. Apolonio Loteyro
Engr. Rodolfo Greer

II. ENERGY AND ELECTRICAL POWER SYSTEM:

Chairman - - - - - Engr. Evelito Elento
Members - - - - - Mr. Rene Amano
Engr. Cresencio Gonzales
Engr. Federico Silvano
P/Col. Lucas de Guzman
Atty. Bernardo Agustin, Jr.

III. TRANSPORTATION:

Chairman - - - - - Director Vicente Mate, Jr.
Members - - - - - P/Lt. Eduardo Jaro or
P/Lt. Fortunato Catindoy
Engr. Dorotheo Batar
Mr. Francisco Brigoli
Mrs. Lourdes Znaga
Mrs. Eufemia Isaac

IV. LAND USE:

Chairman	- - - - -	Engr. Romeo Crisostomo
Members	- - - - -	Hon. Virginio Astilla
		Engr. Nemesio Costibelo
		Engr. Rodolfo Cadavis
		Mr. Leopoldo Alvarez
		Mr. Francisco Brigoli

V. BUILDING MATERIALS:

Chairman	- - - - -	Engr. Damian Madera
Members	- - - - -	Leopoldo Alvarez
		Mr. Jose Escartin
		Engr. Alberto Reposar
		Mr. Serviliano de la Cruz

1.) Atty. Zeta mentioned the schedules of the work to be done for this project.

August 17 - organization of plans for the Tacloban Workshop. Preparation of sectoral reports which should be finished by October 9.

August 17 - C & L, a consulting firm contracted by AID-Washington, will start the Statement of the Art Review. Between 14 September and 9 October, they will start writing the areas of responsibility.

Sept. 14 - Start of field work which should be finished by October 9. The Tacloban Sectoral Report will be prepared by the C & L and the draft of the Field Guide Preliminary Report* turned over to the Tacloban Workshop.

Oct. 22-
23 - Tentative schedule of Tacloban Workshop. Not more than 30 participants will attend the Tacloban Workshop. Five to Six Americans and some AID consultants - 10 from Manila and 20 from the locality.

Dec. 10-
11 - Workshop will be organized in the States and this will be a replication of the workshop undertaken in Tacloban but with the arrangement that between 4 to 6 local participants will attend. This will be attended by many Americans and tentatively scheduled at the Philippine Embassy or any other place to be determined by the C & L. 2 or 3 people will stay for 2 weeks to follow up arrangements which will be undertaken there. The group will then comeback to prepare the final Tacloban Sectoral report and the final Field Guide and the Strategy Outline. So three things will come out of these workshops in Tacloban and Washington:

1. Preparation of the Tacloban Sectoral Report
2. Strategy Outline for each area of responsibility
3. Final Field Guide

Jan. 30,
1982 - Task Force will meet to discuss strategies taken up in the States.

April 30,
1962

- Phase I shall have been finished. By this time, a Standard Facilities Situation Report and Standard Final Field Guide and Strategy Outline shall have been finished and implementation of Phase II of the project will be undertaken.

Phase I - August 3, 1961 to April 30, 1962

Phase II - April 30, 1962 until such time that maybe determined later on.

1.6 Atty. Zeta asked for suggestions/remarks from the members of the Task Force.

- Engr. Feliciano of the Committee on Water, Sewer and Solid Waste, suggested to concentrate on the populated areas insofar as residential, commercial and industrial areas are concerned because sewer nature and the kind and magnitude of work to be done depends on the areas defined.
- For aerial photography the most important is to have a sewer system that will eliminate if not minimize cost of power. If it could be done by gravity it would be better. We could have a topo map of the commercial, proposed industrial areas and the residential areas.
- Insofar as the industrial state is concerned Engr. Feliciano wants to know the nature of the industries contemplated there as it has something to do with the kind of treatment used for solid waste.
- Engr. Feliciano requested for a copy of the zoning ordinance and a topo map of the city.

1.7 It was decided by the group that meetings be held every Tuesday and Thursday of the week at 2:00 p.m.

The meeting was adjourned at 4:00 p.m.

BIBLIOGRAPHY

WATER AND SEWER

- 1) Feachen, Richard; McGarry, Michael; Maria, Duncan (eds.)
Water, Wastes and Health in Hot Climates. John Wiley
and Sons, London 1977.

A collection of papers presenting information on diseases and control measures. Useful as a reference guide for water resource development planners addressing topics related to social, political and economic aspects of health programs in the tropics.

- 2) Lanson-Scriber, Jr.; Frank, E. and Huang, Jr. (eds.)
Municipal Water Supply Project Analysis: Case Study
World Bank (Educational Development Institute) 1977

Eight case studies and fourteen exercises dealing with water and wastewater disposal. The collection includes topics in reference to general case studies, sector studies, master plans and demand forecasting, water rate structures and pricing, economic analysis and project management.

SOLID WASTE

- 3) Feachen, Richard and others
Sanitation and disease: Health Aspects of Excreta and Wastewater Management. World Bank studies in Water Supply and Sanitation, Number 3. The Johns Hopkins University Press, 1980.

Intended for engineers and planners, the book provides information on the interaction between excreta and sillage and health, the health effects of waste treatment, reuse, and efficient discharge systems. In addition, contains information concerning the epidemiology of sanitation-related diseases and the ways in which particular excreta-disposal and reuse technologies affect the survival and dissemination of the agents of these diseases.

COOKING FUEL

- 4) Hughart, David P.
Prospects for Traditional and Non-conventional Energy Sources in Developing Countries. Paper Number 346. World Bank Publications. 1979.

(2)

Presents a survey on non-conventional energy technologies and suggests that many developing countries could usefully consider programs to increase fuelwood charcoal production, improve the efficiency of cooking stoves, exploit wind and small hydro resources, and make greater use of combustible residuals from agroindustrial and forest-industrial plants.

- 5) Volunteers in Technical Assistance (VITA)
Wood Conserving Stoves. Two Stove Designs and Construction Techniques. 1979.

Presents fully illustrated complete instructions for building a Lorena Stove and a double-drain sawdust fueled heating stove.

- 6) -----
Making Charcoal: The Retort Method. 1979

Presents instructions for making low-cost charcoal with a charcoal retort using discarded petrol drums and which provides high quality charcoal and tar by-products with less fuel required than other methods.

TRANSPORTATION

- 7) Adler, Hans A.
Sector and Project Planning in Transportation. World Bank Staff Occasional Papers, Number 4. The Johns Hopkins University Press, 1967, 3rd printing 1973.

Presents basic steps in methodology and economic evaluation of transportation projects, emphasizing the need to deal not only with new investments, but with measures to make the optimum use of existing ones.

- 8) Holland, Edward and Watson, P.
Traffic Restraint in Singapore. In: Traffic Engineering and Control. 19 (Jan. 1978): 14-22.

Reports on the results of a project conducted by the World Bank to evaluate the effects of Singapore's traffic restraint scheme on the transportation system and the urban environment in the specific areas of traffic performance. Also investigates the potential for similar schemes for other cities.

(3)

- 9) World Bank
Urban Transport. Sector Policy Paper. 1975.

Presents an analysis of long-term implications of alternative urban transport strategies and investments in the context of accelerated urban growth in developing countries.

LAND USE

- 10) Dunkerley, Harold B.; et. al.
Urban Land Policy Issues and Opportunities. Paper Number 283, World Bank Publications, 1978.

Presents a general overview on urban land issues in developing countries, especially those dealing with value of urban land, urban land tenure, land taxation and government participation in urban land markets, and urban land use regulation and control.

- 11) Richardson, Harry W.
City Size and National Spatial Strategies in Developing Countries. Paper Number 252. World Bank Publications, 1977.

Presents a review of current theories on urban size and economic activity and discusses the range of policy options and factors to be considered in making choices.

URBAN DEVELOPMENT

- 12) Linn, Johannes F.
Policies for Efficient and Equitable Growth of Cities in Developing Countries. Paper Number 362. World Bank Publications, 1979.

Discusses major policy issues arising from urban growth in developing countries with particular reference to employment income redistribution through the fiscal system, transportation, housing and social services.

- 13) Mohan, Rakesh
Urban Economic and Planning Models: Assessing the Potential for Cities in Developing Countries. World Bank Staff Occasional papers, Number 25, The Johns Hopkins University Press, 1979.

Presents an assessment of the possibilities of applying current urban modeling techniques to cities in developing countries.

AWAIDD

GRANT PROJECT AGREEMENT

Between the United States of America, acting through
the Agency for International Development (AID)

AND

Kingdom of Thailand, acting through
Department of Local Administration (DOLA), Ministry of Interior (MOI)
(Grantee)

and the Municipality of Phuket

1. Project Title Managing Energy and Resource Efficient Cities	2. AID Project Number 936-5402
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The above-named parties hereby mutually agree to carry out the Project described in this Agreement in accordance with (1) the terms of this Agreement, including any annexes attached hereto, and (2) any general agreement between the two governments regarding economic or technical cooperation.

3. Amount of AID Grant \$ 250,000	4. Grantee Contribution to the Project \$ 60,700	5. Project Assistance Completion Date December 1, 1986
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6. This Agreement consists of this title page and
Annex A - Project Description
Annex B - Roles and Responsibilities
Annex C - Standard Provisions. Annex
Attachment - Summary Budget

7. For the Grantee Typed Name Vallop Jayapipat Signature <i>Vallop Jayapipat</i> Title Director General Dept. of Local Administration Date December 1, 1983	Kasem Suttankul <i>Kasem Suttankul</i> Mayor Phuket Municipality December 1, 1983	8. For the Agency for International Development Typed Name John Gunther Dean Signature <i>John Gunther Dean</i> Title Ambassador, United States of America Date December 1, 1983
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1/ In addition, U.S. Technical Assistance valued at approximately \$200,000 will be provided to the Project through a separate Participating Agency Service Agreement (PASA) with the Tennessee Valley Authority (TVA).

PROJECT AGREEMENT
PROJECT DESCRIPTION

1.0 Project Title: Managing Energy and Resource Efficient Cities (MERECE)

2.0 AID Project Number: 936-5402

3.0 This Project consists of:

3.1 Project Purpose and Anticipated Results

Managing Energy and Resource Efficient Cities (MERECE) is a world-wide demonstration project. MERECE is carried out in one city in each of several countries.

The purposes of the MERECE project are: (1) to lay a foundation for more efficient energy and resource management by small and medium-sized cities and (2) to demonstrate and promote greater municipal planning and implementation capacity.

In Thailand, the Municipality of Phuket will carry out a MERECE project. The above purposes will be accomplished through (1) a structured planning process in which municipal officials take the lead in identifying and prioritizing local energy and resource-based development problems and (2) implementation by the Municipality, with assistance from the Office of Regional Cities Development (ORCD) and the Local Government Affairs Division of the Department of Local Administration (DOLA), the Tennessee Valley Authority (TVA), and consultants, of a number of specific sectoral activities identified in the planning process.

The Project should produce:

- (1) An updated development strategy for the Municipality of Phuket which is based on efficient use of energy and resources and which contributes to the Municipality's on-going planning process;
- (2) An Action Plan, based on the above strategy, of specific short and long term activities to be implemented principally by the Municipality;
- (3) Documentation of the MEREC planning process used in the Municipality of Phuket, plus information on how this process may be more widely applied in Thailand;
- (4) Studies, training, technology demonstrations, or other projects actually implemented in Phase II of MEREC;
- (5) A project evaluation covering quantitative impacts and the institutionalization of the MEREC process.

3.2 Phase I - Planning

In Phase I the Municipality of Phuket will engage in a planning process consisting of (1) a review of the Municipality's existing development plans and programs and (2) preparation of an updated development strategy based on efficient management of energy and resources. This strategy will include an "Action Plan" consisting of specific implementation activities such as studies, training, technology demonstrations, or other projects related to energy and resource management and conservation. Several Action Plan activities will be funded by this Grant. Others will require financing by the Thai Government, the Municipality, the private sector, or other donor agencies. The Planning Phase will be carried out

according to a process which puts primary emphasis on the concerns and priorities of the Municipality and provides a framework for greater municipal initiative and efficient use of energy and resources in the future.

3.3 Phase II - Implementation

With the advice of DOLA, TVA, and any locally contracted consultants, the Municipality of Phuket will be the final authority to decide on and carry out those activities in the Action Plan that are capable of being funded under this Grant as well as the activities for which other funding is immediately available.

4.0 Special Provisions

4.1 The Grantee agrees to provide or cause to be provided all the resources, apart from this Grant, required to carry out the Project effectively and in a timely manner.

4.2 Payment

All disbursements will be made in accordance with approved work plans, financial plans, and line item budgets prepared prior to Phase I and II of the project (see Section 4.4 Conditions Precedent). Approval of these planning and budget documents will authorize annual expenditures and the first quarterly advance will be prepared in accordance with the approved budget. Additional approval from AID will only be required when expenses exceed an established budget line item by more than 15% of the line item amount.

An initial advance of funds will be made to the grantee based upon the submission of an SF (1034) voucher form to the OFIN/USAID/Thailand requesting payment of three months anticipated expenses based on the

approved line item budget. The voucher will be submitted in an original and three copies.

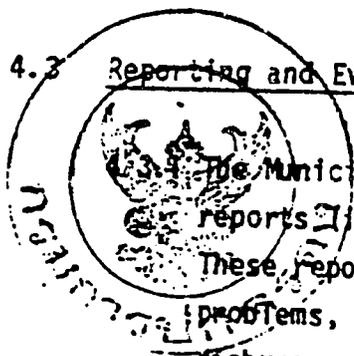
As soon as possible after the first two months expenses have been incurred the grantee will submit an accounting report plus an SF 1034 requesting the next advance of funds. The accounting report will show the expenses incurred during the previous two month period against the amount advanced and the balance remaining, if any, compared to the budget approved for the year. It will also show the funding required for the next two month period less the amount on hand. By filing these reports the grantee will have adequate funds to meet anticipated operating needs.

The Tennessee Valley Authority and DOLA will jointly monitor the use of MEREC grant funds by reviewing and approving each request for an advance. TVA will review and approve each actual expense voucher before submission to USAID/Thailand.

TVA will retain full responsibility for procurement utilizing AID Project funds including any procurement undertaken by DOLA or Phuket Municipality.

Grant funds under this project may be used to cover foreign exchange or local currency costs.

4.3 Reporting and Evaluation

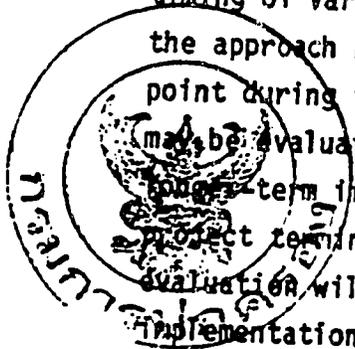


The Municipality of Phuket will submit quarterly progress reports (in English) to DOLA, TVA and USAID/Thailand.

These reports will cover activities carried out, major problems, and the status of expenditures and disbursements.

4.3.2 The Parties agree to perform annual joint assessments of project status. The purpose of these assessments is to review project progress, discuss problems, and initiate corrective action if necessary. The assessments will consist of (1) a meeting of all agencies connected with project execution and (2) joint preparation of an assessment report which will be circulated within the assessment group.

4.3.3 The Parties agree to perform a MEREC project evaluation. This evaluation will be learning-based in that it will be carried out mainly by the Municipality of Phuket with the assistance of TVA, ORCD, Division of Local Government Affairs, and AID. The Parties may select an outside organization to participate in the evaluation. The evaluation will cover (1) selected quantifiable impacts of the project, especially efficiencies in energy or resource use, and (2) the institutionalization of the MEREC process. Specific evaluation techniques will be determined jointly by the Municipality, TVA, ORCD, and AID. TVA will provide guidelines for the quantitative aspect of the evaluation and technical advice on methodologies. The timing of various aspects of the evaluation will depend on the approach being used. Data collection may occur at any point during the life of the project. Immediate impacts may be evaluated by the end of the implementation phase; longer-term impacts may be evaluated some time after project termination. Funding required for the project evaluation will be provided in the financial plan for the implementation phase of the project.



4.4 Conditions Precedent to Disbursement

Prior to the first disbursement the Grantee will furnish to USAID/Thailand, in form and substance acceptable to AID.

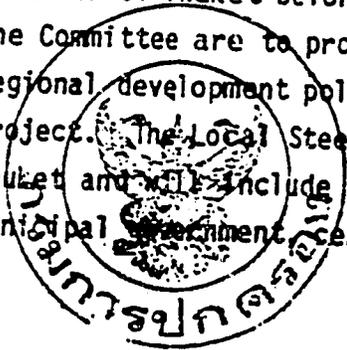
4.4.1 Statements naming and certifying the availability of the ORCD project counterpart(s) (see Annex B, 4.8) and the Municipality of Phuket Project Manager and Project Coordinator (see Annex B, 3.6) to carry out the Project.

4.4.2 An approved work plan, financial plan, and itemized budget for the Planning Phase (Phase I) of the project.

Prior to any disbursement for the Implementation Phase (Phase II), the Grantee will submit to USAID/Thailand the approved work plan, financial plan and itemized budget for this Phase.

4.5 Local Steering Committee

A Local Steering Committee will be appointed by the provincial governor of Phuket before the first MEREC workshop. The main functions of the Committee are to provide guidance to the Municipality on city and regional development policy and to facilitate the execution of the MEREC project. The Local Steering Committee will be chaired by the Mayor of Phuket and will include representatives of the provincial government, the municipal government, central agencies, and the private sector.



ROLES AND RESPONSIBILITIES

1.0 Responsibilities of AID

- 1.1 Provide a grant of up to \$250,000 to the Kingdom of Thailand for a MEREC project in the Municipality of Phuket.
- 1.2 Provide technical assistance through the Tennessee Valley Authority (TVA), whose services are valued at approximately \$200,000.

2.0 Responsibilities of TVA

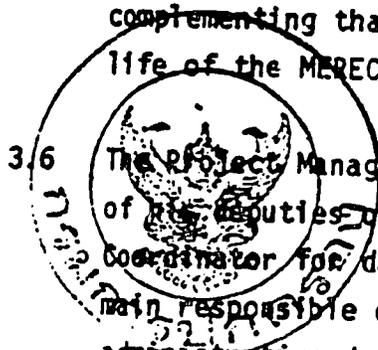
- 2.1 Provide technical support to the Municipality of Phuket in all phases of the MEREC project.
- 2.2 Travel to Phuket at approximately three month intervals during the Planning (Phase I) and at appropriate intervals, based on the project work plan, during the Implementation (Phase II).
- 2.3 Help the Municipality prepare and, together with DOLA, approve work plans, financial plans, and budgets for Phases I and II of the MEREC project prior to submission to USAID/Thailand (see Annex A, Section 4.4 - Conditions Precedent).
- 2.4 Assist in designing and leading workshops during the Planning Phase.
- 2.5 Provide field review of project progress for USAID/Thailand in support of quarterly budget advances.



- 2.6 Review and certify quarterly vouchers before submission to USAID/Thailand.
- 2.7 Assist in carrying out an evaluation of the MEREC project.
- 2.8 Provide documentation on the MEREC planning process and its wide application in Thailand.

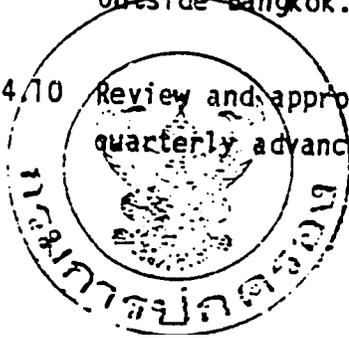
3.0 Responsibilities of the Municipality of Phuket

- 3.1 Prepare the Municipality development strategy based on efficient use of energy and resources.
- 3.2 Prepare an Action Plan of specific sectoral activities to be implemented. Receive and account for project grant funds in accordance with approved work plans and budgets.
- 3.3 Carry out those activities in the Action Plan which can be financed through this Grant or other available funds.
- 3.4 Prepare work plans, financial plans, and itemized budgets for Phases I and II of the MEREC project (see Annex A, Section 4.4 - Conditions Precedent).
- 3.5 Establish linkages with institutions which may provide support to the municipality on energy and resource conservation complementing that provided by TVA but extending beyond the life of the MEREC project.
- 3.6 The Project Manager will be the Mayor who will designate one of his deputies or a senior municipal official as Project Coordinator for day to day activities. The P.M. will be the main responsible officials for the project; the P.C. will handle administrative duties required by the project.



- 3.7 Provide temporary office space for TVA and consultants' visits and minor clerical support.
 - 3.8 Contract as needed, subject to DOLA and TVA approval with local consultants or universities for technical support or implementation of specific activities.
 - 3.9 Prepare quarterly progress reports for TVA and USAID/Thailand.
 - 3.10 Participate in carrying out an evaluation of the MEREC project.
- 4.0 Responsibilities of the Office of Regional Cities Development and Division of Local Government Affairs, Department of Local Administration, Ministry of the Interior
- 4.1 Assist the Municipality of Phuket in carrying out all phases of the MEREC project.
 - 4.2 Participate in the preparation of work plan, financial plans, and itemized budgets for Phases I and II of the project.
 - 4.3 Participate in workshop during the planning phase.
 - 4.4 Coordinate the participation of other organizations, particularly central government agencies, which may provide technical support for MEREC; keep the appropriate central government agencies informed of the project and insure that MEREC is consistent with national policies and programs.
 - 4.5 Participate in preparing documentation of the MEREC process and information on its wider application in Thailand.

- 4.6 Disseminate the experiences and results of MEREC through seminars, reports, and other means.
- 4.7 Participate in the evaluation of MEREC.
- 4.8 Provide one full-time project counterpart (or the equivalent staff time) from the permanent ORCD staff.
- 4.9 Provide per diem for ORCD staff on all MEREC-related trips outside Bangkok.
- 4.10 Review and approve, together with TVA, documentation for quarterly advances.



PROJECT AGREEMENT

STANDARD PROVISIONS ANNEX

A. Reference to 'this Agreement' means the original Project Agreement as modified by any revisions which have entered into effect. Reference to 'cooperating country' means the country or territory of the Grantee.

B. (1) AID will make available the amount specified in Block 3 of this Agreement, as necessary for the Project, as may be further described in Annex A.

(2) The Grantee will make available the amount specified in Block 4 of this Agreement, as necessary for the Project, as may further be described in Annex A. The Grantee will also make, or arrange to have made, additional contributions of property, services, facilities and funds required for carrying out the Project as specified in Annex A.

C. AID and the Grantee may obtain the assistance of other public and private agencies in carrying out their respective obligations under this Agreement. The two parties may agree to accept contributions of property, services, facilities and funds for purposes of this Agreement from other public and private agencies, and may agree upon the participation of any such third party in carrying out activities under this Agreement.

D. Except as otherwise specified herein or subsequently agreed by the parties, all contributions of the parties pursuant to this Agreement shall be made on or before the Project Assistance Completion Date, or amended date. A contribution of goods or services shall be considered to have been made when the services have been performed and the goods furnished as contemplated in this Agreement. Disbursement of funds may take place after

final contributions have been made, but AID shall not be required to disburse funds hereunder after the expiration of nine months following the estimated Project Assistance Completion Date (Block 5 of this Agreement) or any amended Project Assistance Completion Date specified.

E. The procurement of commodities and services to be financed in whole or in part by AID may (where so required by AID procedures) be undertaken only pursuant to Project Implementation Orders (PIOs) issued by AID.

F. Unless otherwise specified in the applicable PIO or Project Implementation Letter (PIL), the procurement of commodities imported specifically for the Project and financed with the AID contribution referred to in Block 3 of this Agreement shall be subject to the provisions of AID Regulation 1.

G. Unless otherwise agreed by the parties or otherwise specified in the applicable PIO, title to all property procured through financing by AID pursuant to Block 3 of this Agreement shall be in the Grantee, or such public or private agency as it may authorize.

H. (1) Any property furnished to either party through financing by the other party pursuant to this Agreement shall, unless otherwise agreed by the party which financed the procurement, be used effectively for the purposes of the Project in accordance with this Agreement, and upon completion of the Project, will be used so as to further the objectives sought in carrying out the Project. Either party shall offer to return to the other, or to reimburse the other for, any property which it obtains through financing by the other party pursuant to this Agreement which is not used in accordance with the preceding sentence.

(2) Any funds provided to either party pursuant to this Agreement which are not used in accordance with this Agreement, shall be refunded to the party providing the funds.

(3) Any interest or other earnings on funds provided by AID to the Grantee under this Agreement will be returned to AID by the Grantee.

I. (1) If AID and any public or private organization furnishing commodities through AID financing for operations hereunder in the cooperating country, is, under the laws, regulations or administrative procedures of the cooperating country, liable for customs, duties and import taxes on commodities imported into the cooperating country for purposes of carrying out this Agreement, the Grantee will pay such duties and taxes unless exemption is otherwise provided by any applicable international agreement.

(2) If any personnel (other than citizens and residents of the cooperating country), whether United States Government employees, or employees of public or private organizations under contract with, or individuals under contract with AID, the Grantee or any agency authorized by the Grantee, who are present in the cooperating country to provide services which AID has agreed to furnish or finance under this Agreement, are under the laws, regulations or administrative procedures of the cooperative country, liable for income and social security taxes with respect to income which they are obligated to pay income or social security taxes to the Government of the United States of America, for property taxes on personal property intended for their own use, or for the payment of any tariff or duty upon personal or household goods brought into the cooperating country for the personal use of themselves and members of their families (not including such personal or household goods as may be sold by any such personnel in the cooperating country) or if any firm, not normally resident in the cooperating country, is liable for income, receipts, or other taxes on work financed by AID hereunder, the Grantee will pay such taxes, tariff, or duty unless exemption is otherwise provided by any applicable international agreement.

J. If funds provided by AID are introduced into the cooperating country by AID or any public or private agency for purposes of carrying out obligations of AID hereunder, the Grantee will make such arrangements as may be necessary so that such funds shall be convertible into currency of the cooperating country at the highest rate which, at the time the conversion is made, is not unlawful in the cooperating country.

K. AID shall expend funds and carry on operations pursuant to this Agreement only in accordance with the applicable laws and regulations of the United States Government.

L. The two parties shall have the right at any time to observe operations carried out under this Agreement. Either party during the term of the Project and for three years after the completion of the Project shall further have the right (1) to examine any property procured through financing by that party under this Agreement, wherever such property is located, and (2) to inspect and audit any records and accounts with respect to funds provided by, or any properties and contract services procured through financing by, that party under this Agreement, wherever such records may be located and maintained. Each party, in arranging for any disposition of any property procured through financing by the other party under this Agreement, shall assure that the rights of examination, inspection and audit described in the preceding sentence are reserved to the party which did the financing.

M. AID and the Grantee shall each furnish the other with such information as may be needed to determine the nature and scope of operations under this Agreement and to evaluate the effectiveness of such operations.

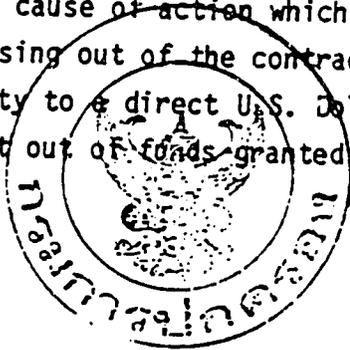
N. The present Agreement shall enter into force when signed. Either party may terminate this Agreement by giving the other party thirty (30) days written notice of intention to terminate it. Termination of this Agreement shall terminate any obligations of the two parties to make contributions

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pursuant to Blocks 3 and 4 of this Agreement, except for payments which they are committed to make pursuant to noncancellable commitments entered into with third parties prior to the termination of the Agreement. It is expressly understood that the obligations under paragraph H relating to the use of property or funds shall remain in force after such termination. In addition, upon such termination AID may, at AID's expense, direct that title to goods financed under the Grant be transferred to AID if the goods are from a source outside the Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of the Grantee's country.

O. To assist in the implementation of the Project, AID, from time to time, may issue Project Implementation Letters (PILs) that will furnish additional information about matters stated in this Agreement. The parties may also use jointly agreed-upon PILs to confirm and record their mutual understanding on aspects of the implementation of this Agreement.

P. The Grantee agrees, upon request, to execute an assignment to AID of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. Dollar contract with AID financed in whole or in part out of funds granted by AID under this Agreement.



ATTACHMENT

Summary Budget - Life of Project
(in U.S. Dollars)

ITEM	AID <u>1/</u>	RTG	
		DOLA <u>2/</u>	MPK <u>3/</u>
I. Planning (Phase I)			
A. Logistic Support			
1. Salaries for DOLA and MPK staffs	-	1,000	6,500
2. Travel and Per Diem	3,000	5,600	-
3. Supplies and Materials	3,000	-	-
4. Clerical support	-	-	1,200
5. POL for vehicles of ORCD and MPK	1,800	-	1,000
6. Procurement of Typewriter (2 units)	3,000	-	-
B. Technical Support and Consultancies			
1. Attendance at Conference and Training Seminars	15,000	-	-
2. Consulting Contracts for technical assistance	40,000	-	-
3. Local Workshops and Seminars	5,200	-	-
4. Publication and dissemination of program information	2,000	-	-
Contingency	2,000	-	-
Sub-Total:	75,000	6,600	8,700
II. Implementation (Phase II)^{4/}	175,000	19,400	26,000
Grand Total:	250,000	26,000	34,700

- 1/ Grant funds may be used to cover foreign exchange costs
 2/ The Department of Local Administration
 3/ The Municipality of Phuket
 4/ Activities will be implemented in accordance with results of the Planning Phase.

GRANT PROJECT AGREEMENT

Between the United States of America, acting through
the Agency for International Development (AID)

AND

Kingdom of Thailand, acting through
Department of Local Administration (DOLA), Ministry of Interior (MOI)
(Grantee)

1. Project Title Managing Energy and Resource Efficient Cities	2. AID Project Number 936-5402
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The above-named parties hereby mutually agree to carry out the Project described in this Agreement in accordance with (1) the terms of this Agreement, including any annexes attached hereto, and (2) any general agreement between the two governments regarding economic or technical cooperation.

3. Amount of AID Grant \$ 250,000 ^{1/}	4. Grantee Contribution to the Project \$ _____	5. Project Assistance Completion Date March 30, 1987
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6. This Agreement consists of this title page and

- Annex A - Project Description
- Annex B - Roles and Responsibilities
- Annex C - ProAg Standard Provisions

7. For the Grantee Typed Name Mr. Chalong Kalayanamit Mr. Kasem Suttangkul Signature	8. For the Agency for International Development Typed Name Mr. Robert Halligan Signature
Title Director-General Lord Mayor Dept. of Local Administration Phuket Municipality Date	Title Director, USAID/Thailand Date

^{1/} An estimated \$200,000 of U.S. Technical Assistance will be provided to the Project through a separate Participating Agency Service Agreement (PASA) with the Tennessee Valley Authority (TVA).

PROJECT AGREEMENT
PROJECT DESCRIPTION

1.0 Project Title: Managing Energy and Resource Efficient Cities (MEREK)

2.0 AID Project Number: 936-5402

3.0 This Project consist of:

3.1 Project Purpose and Anticipated Results

Managing Energy and Resource Efficient Cities (MEREK) is a world-wide demonstration project. MEREK is carried out in one city in each of several countries.

The purposes of the MEREK project are: (1) to lay a foundation for more efficient energy and resource management by small and medium-sized cities and (2) to demonstrate and promote greater municipal planning and implementation capacity.

In Thailand, the Municipality of Phuket will carry out a MEREK project. The above purposes will be accomplished through (1) a structured planning process in which municipal officials take the lead in identifying and prioritizing local energy and resource-based development problems and (2) implementation by the Municipality, with assistance from the Office of Regional Cities Development (ORCD)^{1/}, the Tennessee Valley Authority, and consultants, of a number of specific sectoral activities identified in the planning process.

^{1/} ORCD is an office of the Department of Local Administration, Ministry of Interior

The Project should produce:

- (1) An updated development strategy for the Municipality of Phuket which is based on efficient use of energy and resources and which contributes to the Municipality's on-going planning process;
- (2) An Action Plan, based on the above strategy, of specific short and long term activities to be implemented principally by the Municipality;
- (3) Documentation of the MEREC planning process used in the Municipality of Phuket, plus information on how this process may be more widely applied in Thailand;
- (4) Studies, training, technology demonstrations, or other projects actually implemented in Phase II of MEREC;
- (5) A project evaluation covering quantitative impacts and the institutionalization of the MEREC process.

3.2 Phase I - Planning

In Phase I the Municipality of Phuket will engage in a planning process consisting of (1) a review of the Municipality's existing development plans and programs and (2) preparation of an updated development strategy based on efficient management of energy and resources. This strategy will include an "Action Plan" consisting of specific implementation activities such as studies, training, technology demonstrations, or other projects related to energy and resource management and conservation. Several Action Plan activities will be funded by this Grant. Others will require financing by the Thai Government, the Municipality, the private sector, or other donor agencies. The Planning Phase will be carried out according to a process which puts primary emphasis on the concerns and

priorities of the Municipality and provides a framework for greater municipal initiative and efficient use of energy and resources in the future.

3.3 Phase II - Implementation

In Phase II the Municipality of Phuket will carry out those activities in the Action Plan that are capable of being funded under this Grant as well as the activities for which other funding is immediately available.

4.0 Special Provisions

4.1 The Grantee agrees to provide or cause to be provided all the resources, apart from this Grant, required to carry out the Project effectively and in a timely manner.

4.2 Payment

All disbursements of project grant funds will be made in accordance with the approved work plans, financial plans, and itemized budgets prepared prior to Phases I and II of the project (see Section 4.4 Conditions Precedent). Approval of these planning and budget documents will simultaneously authorize global annual expenditures and permit the establishment of an initial quarterly advance, in accordance with annual budget planning. Proposed or actual expenditures will require additional AID authorization only if they deviate more than 15% from established budget line items. An initial release of funds may be made to the Grantee based upon the submission of AID Form SF-1034 (Voucher Form) to USAID/Thailand requesting an advance of anticipated expenses during the first three months of the Project. At the end of the first three months the Grantee shall prepare and submit to USAID/Thailand a voucher listing the actual expenses incurred during the previous three months. After the previous advance has been liquidated, replenishment of the next three months' advance would depend upon estimated project needs.

The Tennessee Valley Authority will monitor the use of MEREC grant funds by reviewing and approving each request for an advance and each actual expense voucher before submission to USAID/Thailand.

TVA will retain responsibility for procurement utilizing AID Project funds including any procurement undertaken by DCLA or Phuket Municipality. All procurement will be in accordance with procedures approved by AID. Procurement items will be reflected in the work plan. TVA will monitor the project to insure that procurement procedures are being followed.

Grant funds under this project may be used to cover foreign exchange or local currency costs.

4.3 Reporting and Evaluation

- 4.3.1 The Municipality of Phuket will submit quarterly progress reports to TVA and USAID/Thailand. These reports will cover activities carried out, major problems, and the status of expenditures and disbursements.
- 4.3.2 The Parties agree to perform annual joint assessments of project status. The purpose of these assessments is to review project progress, discuss problems, and initiate corrective action if necessary. The assessments will consist of (1) a meeting of all agencies connected with project execution and (2) joint preparation of an assessment report which will be circulated within the assessment group.
- 4.3.3 The Parties agree to perform a MEREC project evaluation. This evaluation will be learning-based in that it will be carried out mainly by the Municipality of Phuket with the assistance of TVA, ORCD, and AID. The Parties may select

an outside organization to participate in the evaluation. The evaluation will cover (1) selected quantifiable impacts of the project, especially efficiencies in energy or resource use, and (2) the institutionalization of the MEREC process. Specific evaluation techniques will be determined jointly by the Municipality, TVA, ORCD, and AID. TVA will provide guidelines for the quantitative aspect of the evaluation and technical advice on methodologies. The timing of various aspects of the evaluation will depend on the approach being used. Data collection may occur at any point during the life of the project. Immediate impacts may be evaluated by the end of the implementation phase; longer-term impacts may be evaluated some time after project termination.

4.4 Conditions Precedent to Disbursement

Prior to the first disbursement the Grantee will furnish to USAID/Thailand, in form and substance acceptable to AID.

4.4.1 Statements naming and certifying the availability of the ORCD project coordinator(s) (see Annex B, 4.8) and the Municipality of Phuket project manager and/or coordinator (see Annex B, 3.6) to carry out the Project.

4.4.2 An approved work plan, financial plan, and itemized budget for the Planning Phase (Phase I) of the project.

Prior to any disbursement for the Implementation Phase (Phase II), the Grantee will submit to USAID/Thailand the approved work plan, financial plan and itemized budget for this Phase.

4.5 Local Steering Committee

The Municipality of Phuket will establish a Local Steering Committee before the first MEREC workshop. The main functions of the Committee are to provide guidance to the Municipality on city and regional development policy and to facilitate the execution of the MEREC project. The Local Steering Committee will be chaired by the Mayor of Phuket and will include representatives of the provincial government, the municipal government, central agencies, and the private sector.

ROLES AND RESPONSIBILITIES

1.0 Responsibilities of AID

- 1.1 Provide a grant of up to \$250,000 to the Kingdom of Thailand for a MEREC project in the Municipality of Phuket.
- 1.2 Provide technical assistance through the Tennessee Valley Authority (TVA), whose services are valued at approximately \$200,000.

2.0 Responsibilities of TVA

- 2.1 Provide technical support to the Municipality of Phuket in all phases of the MEREC project.
- 2.2 Travel to Phuket at approximately three month intervals during the Planning (Phase I) and at appropriate intervals, based on the project work plan, during the Implementation (Phase II).
- 2.3 Help the Municipality prepare and approve work plans, financial plans, and budgets for Phases I and II of the MEREC project prior to submission to USAID/Thailand (see Annex A, Section 4.4 Conditions Precedent).
- 2.4 Assist in designing and leading workshops during the Planning Phase.
- 2.5 Provide field review of project progress for USAID/Thailand in support of quarterly budget advances.

- 2.6 Review and approve quarterly vouchers before submission to USAID/Thailand.
 - 2.7 Assist in carrying out an evaluation of the MEREC project.
 - 2.8 Provide documentation on the MEREC planning process and its wide application in Thailand.
- 3.0 Responsibilities of the Municipality of Phuket
- 3.1 Prepare the Municipality development strategy based on efficient use of energy and resources.
 - 3.2 Prepare an Action Plan of specific sectoral activities to be implemented. Receive and account for project grant funds in accordance with approved work plans and budgets.
 - 3.3 Carry out those activities in the Action Plan which can be financed through this Grant or other available funds.
 - 3.4 Prepare work plans, financial plans, and itemized budgets for Phases I and II of the MEREC project (see Annex A, Section 4.4 - Conditions Precedent).
 - 3.5 Establish linkages with institutions which may provide support to the municipality on energy and resource conservation complementing that provided by TVA but extending beyond the life of the MEREC project.
 - 3.6 The Project manager will be the Mayor who will designate one of his deputies as project coordinator for day to day activities. The P.M. will be the main responsible officials for the project; the P.C. will handle administrative duties required by the project.

- 3.7 Provide temporary office space for TVA and consultants' visits, vehicles for local transport connected with the project during office hours, and minor clerical support.
 - 3.8 Contract as needed, subject to MOI and TVA approval with local consultants or universities for technical support or implementation of specific activities.
 - 3.9 Prepare quarterly progress reports for TVA and USAID/Thailand.
 - 3.10 participate in carrying out an evaluation of the MEREC project.
- 4.0 Responsibilities of the Office of Regional Cities Development, Ministry of the Interior
- 4.1 Assist the Municipality of Phuket in carrying out all phases of the MEREC project.
 - 4.2 Participate in the preparation of work plan, financial plans, and itemized budgets for Phases I and II of the project.
 - 4.3 Participate in workshop during the planning phase.
 - 4.4 Coordinate the participation of other organizations, particularly central government agencies, which may provide technical support for MEREC; keep the appropriate central government agencies informed of the project and insure that MEREC is consistent with national policies and programs.
 - 4.5 Participate in preparing documentation of the MEREC process and information on its wider application in Thailand.

- 4.6 Disseminate the experiences and results of MEREC through seminars, reports, and other means.
- 4.7 Participate in the evaluation of MEREC.
- 4.8 Provide one full-time counterpart staff (or the equivalent staff time) from the permanent ORCD staff.
- 4.9 Provide per diem for ORCD staff on all MEREC-related trips outside Bangkok.
- 4.10 Review and clear documentation for quarterly advances.

PROJECT AGREEMENT

PROAG STANDARD PROVISIONS ANNEX

- A. Reference to 'this Agreement' means the original Project Agreement as modified by any revisions which have entered into effect. Reference to 'cooperating country' means the country or territory of the Grantee.
- B. (1) AID will make available the amount specified in Block 3 of this Agreement, as necessary for the Project, as may be further described in Annex A.
- (2) The Grantee will make available the amount specified in Block 4 of this Agreement, as necessary for the Project, as may further be described in Annex A. The Grantee will also make, or arrange to have made, additional contributions of property, services, facilities and funds required for carrying out the Project as specified in Annex A.
- C. AID and the Grantee may obtain the assistance of other public and private agencies in carrying out their respective obligations under this Agreement. The two parties may agree to accept contributions of property, services, facilities and funds for purposes of this Agreement from other public and private agencies, and may agree upon the participation of any such third party in carrying out activities under this Agreement.
- D. Except as otherwise specified herein or subsequently agreed by the parties, all contributions of the parties pursuant to this Agreement shall be made on or before the Project Assistance Completion Date, or amended date. A contribution of goods or services shall be considered to have been made when the services have been performed and the goods furnished as contemplated in this Agreement. Disbursement of funds may take place after

final contributions have been made, but AID shall not be required to disburse funds hereunder after the expiration of nine months following the estimated Project Assistance Completion Date (Block 5 of this Agreement) or any amended Project Assistance Completion Date specified.

E. The procurement of commodities and services to be financed in whole or in part by AID may (where so required by AID procedures) be undertaken only pursuant to Project Implementation Orders (PIOs) issued by AID.

F. Unless otherwise specified in the applicable PIO or Project Implementation Letter (PIL), the procurement of commodities imported specifically for the Project and financed with the AID contribution referred to in Block 3 of this Agreement shall be subject to the provisions of AID Regulation 1.

G. Unless otherwise agreed by the parties or otherwise specified in the applicable PIO, title to all property procured through financing by AID pursuant to Block 3 of this Agreement shall be in the Grantee, or such public or private agency as it may authorize.

H. (1) Any property furnished to either party through financing by the other party pursuant to this Agreement shall, unless otherwise agreed by the party which financed the procurement, be used effectively for the purposes of the Project in accordance with this Agreement, and upon completion of the Project, will be used so as to further the objectives sought in carrying out the Project. Either party shall offer to return to the other, or to reimburse the other for, any property which it obtains through financing by the other party pursuant to this Agreement which is not used in accordance with the preceding sentence.

(2) Any funds provided to either party pursuant to this Agreement which are not used in accordance with this Agreement, shall be refunded to the party providing the funds.

(3) Any interest or other earnings on funds provided by AID to the Grantee under this Agreement will be returned to AID by the Grantee.

I. (1) If AID and any public or private organization furnishing commodities through AID financing for operations hereunder in the cooperating country, is, under the laws, regulations or administrative procedures of the cooperating country, liable for customs, duties and import taxes on commodities imported into the cooperating country for purposes of carrying out this Agreement, the Grantee will pay such duties and taxes unless exemption is otherwise provided by any applicable international agreement.

(2) If any personnel (other than citizens and residents of the cooperating country), whether United States Government employees, or employees of public or private organizations under contract with, or individuals under contract with AID, the Grantee or any agency authorized by the Grantee, who are present in the cooperating country to provide services which AID has agreed to furnish or finance under this Agreement, are under the laws, regulations or administrative procedures of the cooperative country, liable for income and social security taxes with respect to income which they are obligated to pay income or social security taxes to the Government of the United States of America, for property taxes on personal property intended for their own use, or for the payment of any tariff or duty upon personal or household goods brought into the cooperating country for the personal use of themselves and members of their families (not including such personal or household goods as may be sold by any such personnel in the cooperating country) or if any firm, not normally resident in the cooperating country, is liable for income, receipts, or other taxes on work financed by AID hereunder, the Grantee will pay such taxes, tariff, or duty unless exemption is otherwise provided by any applicable international agreement.

- J. If funds provided by AID are introduced into the cooperating country by AID or any public or private agency for purposes of carrying out obligations of AID hereunder, the Grantee will make such arrangements as may be necessary so that such funds shall be convertible into currency of the cooperating country at the highest rate which, at the time the conversion is made, is not unlawful in the cooperating country.
- K. AID shall expend funds and carry on operations pursuant to this Agreement only in accordance with the applicable laws and regulations of the United States Government.
- L. The two parties shall have the right at any time to observe operations carried out under this Agreement. Either party during the term of the Project and for three years after the completion of the Project shall further have the right (1) to examine any property procured through financing by that party under this Agreement, wherever such property is located, and (2) to inspect and audit any records and accounts with respect to funds provided by, or any properties and contract services procured through financing by, that party under this Agreement, wherever such records may be located and maintained. Each party, in arranging for any disposition of any property procured through financing by the other party under this Agreement, shall assure that the rights of examination, inspection and audit described in the preceding sentence are reserved to the party which did the financing.
- M. AID and the Grantee shall each furnish the other with such information as may be needed to determine the nature and scope of operations under this Agreement and to evaluate the effectiveness of such operations.
- N. The present Agreement shall enter into force when signed. Either party may terminate this Agreement by giving the other party thirty (30) days written notice of intention to terminate it. Termination of this Agreement shall terminate any obligations of the two parties to make contributions pursuant to Blocks 3 and 4 of this Agreement, except for payments which they

are committed to make pursuant to noncancellable commitments entered into with third parties prior to the termination of the Agreement. It is expressly understood that the obligations under paragraph H relating to the use of property or funds shall remain in force after such termination. In addition, upon such termination AID may, at AID's expense, direct that title to goods financed under the Grant be transferred to AID if the goods are from a source outside the Grantee's country, are in a deliverable state and have not been offloaded in ports of entry of the Grantee's country.

O. To assist in the implementation of the Project, AID, from time to time, may issue Project Implementation Letters (PILs) that will furnish additional information about matters stated in this Agreement. The parties may also use jointly agreed-upon PILs to confirm and record their mutual understanding on aspects of the implementation of this Agreement.

P. The Grantee agrees, upon request, to execute an assignment to AID of any cause of action which may accrue to the Grantee in connection with or arising out of the contractual performance or breach of performance by a party to a direct U.S. Dollar contract with AID financed in whole or in part out of funds granted by AID under this Agreement.

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