

REPORT ON CONSULTATIVE VISIT

BANGKOK

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William A. Reinke

The purpose of the visit was to consider evaluation and research requirements associated with the Rural Primary Health Care Expansion Project. In order to gain the necessary background to prepare a recommended evaluation and research plan, I was provided with numerous relevant documents and met with the following individuals. Their staff members and others with whom I met briefly were also helpful but are not included in this list of principal sources of information.

Dr. Amorn Nondhasutra, MOPH
Dr. T. Bennett, Columbia Univ.
Dr. Boonlert Leoprapai, Mahidol Univ.
Dr. Chalermsook Boonthai, MOPH
Dr. Cherdsak Ratanajarn, MOPH
Dr. Damrong Bunyuen, MOPH
Dr. Debhanom Muangman, Mahidol Univ.
Mr. W. Machann, WHO
Mr. E. Muniak, AID
Dr. M. Sathianathan, WHO
Mr. V. Scott, AID

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M. K. Skansing, WHO

Dr. D. Stern, WHO

Dr. Uthai Sudsuk, MOPH

Dr. Yuttana Suksmitti, MOPH

The enclosed report, which also serves as my trip report, was drafted in advance of my departure from Thailand in order that interested parties might have the opportunity to discuss it and respond to it before submission in its present form for consideration in the preparation of the AID Project Plan document.

100

Accelerated Family Planning and Health (AFPH) Project
Considerations and Recommendations in Evaluation and Research

BACKGROUND CONSIDERATIONS

AFPH Project in Relation to Five-Year Plan

In its participation in the development of Thailand's Fourth Five-Year Plan (1977-1981), the Ministry of Public Health (MOPH) has employed the concept of Country Health Programming and Project Formulation. As a result, sixteen individual projects have been identified for special attention and implementation.

The AFPH Project focuses upon selected activities to be undertaken in 20 provinces during three years of the Plan Period for the purpose of accelerating the expansion of services in those provinces. The ultimate effect is expected to be an improvement in health status and a reduction in population growth.

While the AFPH Project has a set of separately defined objectives and activities to be evaluated, these are closely inter-related with many of the RTG/MOPH Plan projects. In the evaluation and research area, the RTG/MOPH project to develop and implement a Planning Management Information System (PMIS) is worthy of special comment. PMIS, with support from WHO, is designed to provide a mechanism for ongoing information gathering and dissemination under the direction of a Central Information Center (CIC) within the Planning and Evaluation unit in the Ministry.

Viewed independently, the World Bank Project obviously requires a centrally coordinated evaluation unit. If this were to be established totally independent of PMIS and CIC, however, intolerable duplication and confusion would result.

A corollary consideration is that effective planning world-wide has been seriously hampered by lack of a corresponding commitment to implementation and the information system needed to bring planning and implementation together. Appreciation in Thailand for the value of the PMIS concept is therefore encouraging. The time-limited AFPH Project should foster and utilize such an ongoing system rather than to introduce one which could be viewed as a substitute, only to be lost when Project support is terminated. Furthermore, Project evaluation should be conducted insofar as possible within the broader framework of evaluation of national health programs being developed in Thailand.

Factors of Relevance to an Evaluation and Research Strategy

The ultimate objective of the Fourth Five-Year Plan is the lowering of the population growth rate from 2.5 to 2.1 percent annually and the reduction of maternal and infant mortality by 20 percent. While the time frame and nature of AFPH input make unlikely measurable contribution to these objectives, they nevertheless serve as useful guidelines of emphasis.

Of more direct relevance is the associated target of three million new family planning acceptors and 1.6 million new continuing users. These targets are especially noteworthy in view of the general feeling that the practice of family planning is more constrained by supply than demand.

The situation in the health field is less clear. There has not been an increased utilization of public health services in recent years to parallel the increase in family planning acceptance. As a result, peripheral health services (in contrast to provincial hospitals) continue to be clearly under-utilized. There is a danger, therefore, that an increase in the number of service points and personnel will simply lead to large-scale under-utilization of available resources. On the other hand, mere improvement in the quality and acceptance of existing services would still leave rural areas underserved overall. In short, both supply and demand are important with regard to health services, and important elements of the AFPH Project evaluation must be to determine the relative significance of each and to assess the effectiveness of measures addressed to them.

At present village midwives and tambol doctors are important providers of care; yet they are outside the formal health and family planning services system. Village level volunteers are to be added, and they too will be less subject to supervision and control than paramedical workers and others who are more integrally tied to the system. These circumstances must be recognized in any program of management and evaluation.

Within the system, responsibilities are considerably dispersed. Family planning and malaria control are two of the more obvious examples. Although the delivery of family planning services is integrated with health at the local level, the Family Health Division (FHD) at the national level undertakes substantial technical and monitoring functions.

In some places malaria control operates as a vertical program whereas in others it is integrated with health services delivery. In either case the Malaria Eradication Division of the Department of Communicable Diseases Control plays a significant role. Although additional examples could be cited, they are not needed to make the point that a large number of participants are involved in program planning, management, and supervision. If one accepts the principle that evaluation is meaningful only to the extent that it influences decision making, it becomes clear that evaluation in the present context must be a very diversified, yet highly coordinated, effort.

A final Plan feature of direct relevance to the scheme of evaluation is the decentralization and strengthening of planning, supervision, and evaluation responsibilities to provincial and district levels. Indeed, one might go further and consider the effect of Village Committees on the planning and decision process. The decentralization feature adds a staffing and training dimension to the evaluation process. Both the vertical/technical and horizontal/decentralization aspects underscore the need for a carefully developed evaluation scheme which clearly specifies information flows and delineates responsibilities.

Evaluation and Research: Present Status and Future Implications

A number of evaluation and research activities are already underway in several units of the MOPH. For purposes of this report, two endeavors merit special consideration.

First, the FHD has a well-established E and R unit with a wealth of experience. Quite naturally, however, this experience is primarily in the population field, and it relates largely to special studies. Secondly, reference is made again to the PMIS effort, particularly the development of a Central Information Center within the Planning and Evaluation unit. While this effort is broadly-based and is more closely associated with ongoing evaluation than with research, it is not yet operational.

This poses a dilemma. If one were to capitalize on existing strengths, the FHD would presumably play the dominant role in the AFPH Project E and R. This would lead to a biased emphasis inappropriately placed organizationally. On the other hand, if a new unit were developed within Planning and Evaluation it would in large measure duplicate PMIS and would further dissipate already limited staff.

An obvious compromise would be to form a small core group within the Project organization to coordinate relevant FHD and PMIS endeavors in evaluation and to oversee the special research studies contemplated. The main problem with this seemingly attractive possibility is that the potential contribution of PMIS within the Project time frame is rather problematical. When PMIS will become meaningfully operational is uncertain. Moreover, plans for operationalization do not provide adequate assurance of the relevance for Project purposes of the information generated or of the quality control over that which is relevant.

Hence the modified compromise spelled out in the recommendations which follow calls for the central Project E and R unit to contribute to the development of PMIS and in addition to undertake highly selective

studies to both (1) insure the availability of information for Project evaluation; and (2) to help validate the ultimate performance of PMIS.

The need for a central Project E and R unit has already been implied if the multiplicity of evaluation requirements and interests are to be properly coordinated. Centralized, timely information analysis is also necessary as a basis for identifying priority problems for operations research. Finally this central unit must provide well-staffed oversight for these special studies.

It is inevitable, and indeed desirable, that agencies outside the MOPH play a major role in undertaking special studies. MOPH staff cannot be expected to have the time or the range of expertise required. Moreover, previous experience has proven the value of universities, such as Mahidol and Chulalongkorn in such endeavors. However, this does not negate the importance of Ministry personnel in this regard. In general, the most successful operational studies are likely to be limited in scope to highly focussed issues. If they are to be other than a set of unrelated, independent investigations of little practical value, MOPH staff must be prepared to construct a meaningful mosaic from them. The Ministry has prime responsibility for stating the specific problems, placing them in their broader context, specifying what is needed for their solution, and acting upon forthcoming recommendations. Though the role of the outside agencies is crucial, it is largely limited to the development of technical means to problem-solving, the actual conduct of the studies, and the synthesis of findings.

RECOMMENDATIONS

General Framework

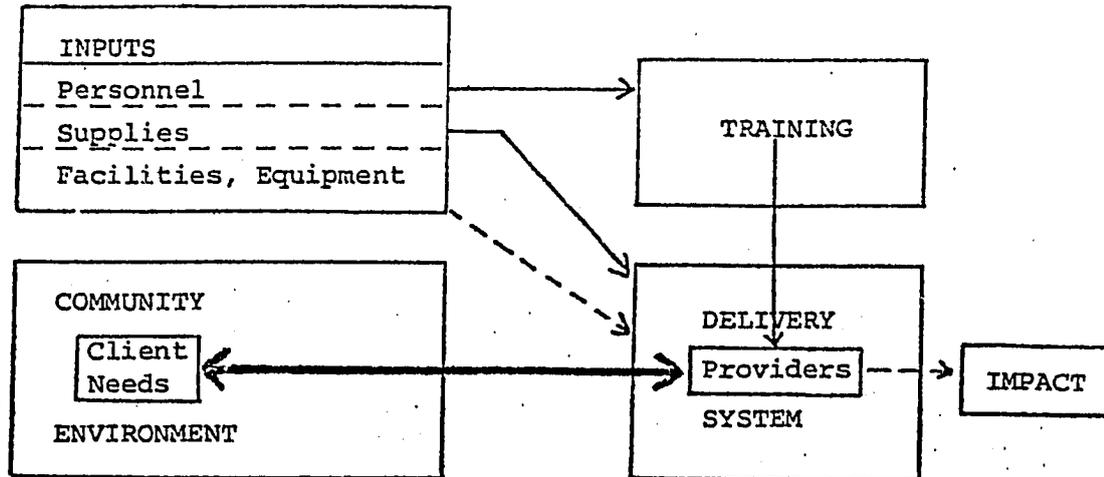
The preceding discussion has stressed organizational relationships and research. This is not the most useful basis for developing specific elements of the E and R framework, however.

First, we separate the evaluation and research components for consideration. Under evaluation we outline the information requirements stemming from the Project proposal. This leads to the specification of mechanisms for the generation and analysis of requisite data. Only then is it appropriate to identify the structure within which these mechanisms can be employed most productively.

With respect to research we suggest some studies of already apparent value, along with procedures for identifying and selecting others. Again, the organizational structure falls into place as a means of conducting research productively, rather than as an end in itself.

Conceptualization

Conceptually, the system to be evaluated appears as diagrammed. Within the overall model, the provision of facilities and equipment on schedule is a problem of Project management and is not included explicitly in the evaluation plan sketched out below. Furthermore, within the Project time frame impact upon health status and population growth is likely to be marginal at best, and thus is not emphasized in the evaluation plan. The plan does provide indicators, however, which can serve as the base for re-survey and comparison some years hence.



The main emphasis in evaluation is therefore on the changing relationship between clients in their community context and service providers within the delivery system, as affected by training and other inputs. Moreover, the resulting heavy line for emphasis contains arrows in both directions to indicate the importance of reaching out to meet needs as well as responding to effective demand.

Information Requirements

This leads to five categories of information as shown in the accompanying table: client-based, community-based, provider-based, service point, and training.

INFORMATION REQUIREMENTS FOR ROUTINE EVALUATION

1. Client

Family Composition

Age

Sex

Relation to Head of Household

1. Client (Continued)

Exposure to Health Hazards

Source of Drinking Water

Method of Waste Disposal

Weight of Pre-School Children

Height of Pre-School Children

Any Illness in Preceding Two Weeks? If so--

Who

Nature

Duration

Action Taken

Who

Where

Nature of Treatment

Death in Preceding Year? If so--

Who

Nature

Action Taken

Who

Where

Nature of Treatment

Pregnancy in Previous Year? If so--

Source of Pre-natal Care

Assistance at Delivery

Outcome

Source of Post-Partum Care

1. Client (Continued)

Practicing Family Planning? If so--

Method

Duration

Health System Contacts in Past Month

Prevention by Type

Education by Type

Child Nutrition Center

Normal Source of Health Care

Where

Why

Nearest Service Point

Distance

Awareness

Attitude

2. Community Profile

Service Configuration

Unusual Socio-economic Characteristics

3. Provider by Type

Direct Services

Number by Purpose

Treatment

Referrals

3. Provider by Type (Continued)

Non-Service Time

Collecting, Compiling Information

Giving Information

Use of IE&C Materials

Supervision

Being Supervised

In-service Training

Maintenance

Other

Outreach

Services by Purpose

Time Spent

4. Service Point by Type

Services by Appropriateness

Bed Use by Appropriateness

Drug Supply

Contraceptive Supply

Transport Availability

Supervision Contacts

Costs

5. Training

Content

Method

Time

In-service Component

The client-based information is that typically obtained by community surveys and requires little elaboration except to emphasize two points. First, it is purposely streamlined; for example, no mention is made of occupation, income education, or housing conditions. This is because the evaluation is aimed at prompt processing of data for establishment of more global trends. More detailed analyses could be conducted as special studies to meet specific needs. Secondly, the morbidity-mortality information is not intended to secure detailed medical diagnoses, which are difficult to obtain and are of questionable validity. Instead, they are more oriented toward community perceptions of illness in relation to actions taken.

The community profiles are brief and largely descriptive. They serve to help interpret the quantitative findings concerning clients in the communities of interest.

Like the client information, that on providers is quite unsophisticated. More detailed activity or task analyses may be needed, but these should be organized as special studies to answer specific questions. Their incorporation into the general evaluation plan would add excessive complexity not merited by the value of results produced. The recommended information falls into two categories. Direct service information is for the purpose of ascertaining the number and type of services rendered. The second category is meant to provide insight into the allocation of non-service time and the extent to which it supports service activities.

Information obtained by service point is designed to provide the contextual framework and capabilities within which services are provided. Within this framework the appropriateness of care is judged. The appropriateness issue is a sensitive one and requires technical assessment of the client-provider interaction. It is a critical element of evaluation, however, based upon the thesis that not only does gross underutilization exist, but much of what current utilization there is, is costly, inappropriate, and indicative of a malfunctioning referral system.

Information on training is descriptive as well as quantitative and is designed to form a basis for comparing job performance with teaching content and method. Many of the training issues will undoubtedly be subject to research studies, some coming from the general evaluation. Especially important in this regard are questions of training duration, extent of practical field experience necessary, and the role of in-service training. Experience suggests that the best results are frequently obtained from a brief program of formal training, followed by continuing, targeted supervision and in-service training. The format and content of such in-service training will undoubtedly be the subject of constant Project appraisal.

Mechanisms

Community (Household Survey and Community Profile)

Client data are most suitably obtained from household surveys. If it is imperative to evaluate annually all 20 Project provinces plus one control in each of the four regions, the recommendation is to sample

20 households in each of three tambol in each of two districts per province. Preferable in terms of cost and administrative simplicity, however, would be the selection of eight different provinces per year so that the 24 provinces would each be covered by the end of the three-year project period. In this case, the recommendation is for the selection of 40 households in each of three tambol in each of three districts per province. In either case a total of 2,880 households, or approximately 15,000 individuals would be included in each annual survey. For the purpose of district selection, reference should be made to the report "Comparative Social and Health Statistics for Thailand by Amphoe (District): 1975," published in November, 1977 by the Institute for Population and Social Research of Mahidol University. This report contains profiles for every district in Thailand and includes district indices of health service availability and family planning performance. Thus for purposes of the recommended study, districts could be stratified according to these indices. Within each selected district, tambol and households would be chosen according to principles of randomness.

The second alternative sampling scheme would be especially attractive if PMIS data were being compiled routinely. Under these circumstances basic vital statistics and morbidity data would be available from all provinces. The community survey would serve to validate the performance of PMIS and would provide additional information from selected communities relative to service activity in those communities.

It should also be noted that the community survey data on family planning could be cross-checked against results from the more detailed Client Continuation Survey. The community survey would have the added advantage of analyzing family planning use in relation to health service utilization.

It is proposed that community profiles be constructed for those areas included in the household survey and that the two sets of information be obtained concurrently.

Delivery System (Provider and Service Point)

Routine service statistics should be able to provide some of the required data on utilization. However, information on provider activity and appropriateness of utilization can best be obtained through direct observation. During the period of observation service statistics and information on drug supply, transport, and referrals can also be collected and cross-checked against the routine reporting system to determine the value of the latter as a broader, continuous data base.

Approximately 100 service points should be selected for two days of observation each. A third day would be devoted to a review of health post volunteer and communicator activity in the same area. The service points should be chosen from among those covering the areas included in the community surveys.

As much information as possible should be obtained concerning the activities of traditional midwives, tambol doctors, the private practice of government health workers, health activities of monks and

teachers, etc., in the service areas studied. Since such activities are beyond the direct control of the public sector, however, precise procedures in this regard will have to evolve through trial. Experience elsewhere suggests that non-health professionals are much more effective than health professionals in eliciting such information.

Training

Evaluation information regarding training programs is obtained from a brief, but systematic, documentation of curricula, teaching methods, and teacher qualifications. In effect, this is largely a compilation of teaching syllabi, supplemented by brief observations of the teaching process to aid in interpreting written materials.

Subjects of Research

Many special studies in the population and health services research fields have already been conducted in Thailand and a number of research committees are active in the field or under development. A systematic review of previous findings is needed in collaboration with relevant researchers and groups. Critical to this review is an appraisal of generalizability and relevance to the AFPH Project. Pending this early review and the uncovering of specific problems during the course of Project implementation, it is difficult to construct a definitive and detailed list of priority research projects to be undertaken. Nevertheless a number of topics are already apparent as highly likely candidates for fruitful investigation.

Before considering these possibilities, three introductory points are in order. First, the aforementioned review of previous research efforts could have an important secondary effect in stimulating communication and understanding among Thai professionals with an interest in health services research. A substantial increase in such interest in action-oriented research is evident, so that the proposed effort is especially timely. Moreover, the participation of these professionals in Project and other national efforts is essential, and anything which encourages dedication to relevant, coordinated, and practical efforts would be most helpful. The second noteworthy point is that, recognizing that special studies will inevitably be undertaken by professionals with multiple commitments outside the Project, it is important that individual studies be limited in size and time. Together, however, they must fit together into a meaningful whole. A third, related, point is that for the most part special studies to be manageable should be conducted within a limited geographical area. Yet, because of their national relevance the area selected and the research design must give adequate attention to generalizability.

With these considerations in mind, the following topics are suggested for possible research investigation.

1. Community Preparation and Participation

The process of community preparation and participation, the formation of village health committees, and selection of volunteers and communicators would be examined in relation to subsequent performance. An important corollary question is the extent to which the public sector should be identified with the training and direction of volunteers and communicators. In short, how can volunteers become effective participants

in the delivery system without losing their community identification and affiliation?

2. Training Process

Trainers must be knowledgeable and training materials must be relevant and informative. Standard operating procedures and other working guides and audio-visual materials must be clearly oriented to worker perceptions, yet technically sound. It is difficult to avoid excessive sophistication without sacrificing substance. It is likewise difficult to find trainers who are expert enough but not unduly theoretical. Studies designed to evolve a constantly improved balance in all these respects will undoubtedly be needed and will require a keenly analytical appraisal of experience.

3. Training Innovations

Once a nucleus of newly trained or re-trained field workers is in place, there will be an opportunity to orient further training more directly toward field conditions. In particular, preceptor arrangements under experienced workers, coupled with periodic continuing education under base supervisors offer promising possibilities.

4. Special Assessments of Performance

Even though health workers may receive further training in order to expand job responsibilities, there is a strong tendency to revert to earlier activity patterns. Moreover, when paramedical workers are given certain responsibilities for diagnosis and treatment they tend to behave like doctors in overlooking supervisory and preventive functions. Close supervision is needed to forestall these possibilities. In addition,

however, the need for special studies of conditions affecting job performance will probably emerge.

5. Conflicts between Public and Private Practice

Although we speak of under-utilization of public services, the fact remains that substantial private curative care is provided by poorly qualified private practitioners and by government health workers on their own time. While this is a sensitive issue, it must be recognized and either the thrust of public programs changed or circumstances modified to minimize conflicts of interest. Schemes to test such changes could be a subject for research.

6. Catchment Areas and Referral Systems

The "bypass phenomenon" in seeking care is well-known. Special studies to determine the effective catchment areas of various types of service points could be useful, along with detailed analyses of changing referral patterns. What types of referrals are made by whom where? Are they appropriate? Do patients actually receive care at the referral sites? Does information flow back to the primary care site for follow-up?

7. Evaluation of Supervisory and Evaluation Training

Planning, management, and evaluation are to be enhanced and decentralized through the training of a new cadre of staff and the re-training of existing staff. It is likely that problems will arise in practice with respect to patterns of supervision and evaluation and with the associated information system. These activities must

be closely monitored, problem areas promptly identified, and special studies conducted as necessary to produce solutions.

8. Personnel Mix

The Project calls for specified contingents of workers of various types. There is no assurance, however, that this represents an optimum balance which will insure adequate coverage without exceeding effective limits of supervisory span of control. What, in fact, is the ideal number of communicators relative to village health volunteers? How many volunteers can be realistically supervised by one service point? What is the best staffing pattern at each service point? What are the most effective supervisory arrangements at district and provincial levels? Survey information on worker activity patterns and actual supervision experience should provide the basis for targeted investigation of these important questions.

9. Cooperation of Providers outside the System

Traditional birth attendants and tambol doctors will continue to function, though hopefully more effectively. Since their position outside the public health system makes the regulation of their activities difficult, innovative incentives are needed to solicit their cooperation with the formal system. Trials of some of these unique approaches might be undertaken.

10. Health Education

The use of IEC materials is already built into the general evaluation plan. More detailed studies may be needed in addition to determine how the materials are used and with what effect. The role

of monks and school teachers in health education is also worthy of further investigation which could lead to new suggestions for their inclusion in the IEC program.

11. Nutrition

Malnutrition is undoubtedly a major problem in Project areas. How effective is nutrition surveillance and treatment? What is the contribution of Child Nutrition Centers with respect to nutrition and health generally? A study focussed on the prevention, identification and treatment of nutritional problems could lead to extremely cost-effective program changes.

12. Cost-effectiveness Generally

Because of the limited Project impact expected within a three-year time frame, cost-effectiveness determinations are generally not of high or immediate priority. Specialized investigation of selected program areas (as in the case of nutrition above) will probably be found to be warranted, however. In undertaking such specialized investigations, cognizance must be taken of multiple program effects. . . . In evaluating Child Nutrition Centers, for example, their effect on health education and health services utilization must be borne in mind, along with effects on nutritional status.

Cost-effectiveness appraisals of training are particularly noteworthy. It is hypothesized that minimal formal training, coupled with effective supervision and continuing education can be considerably more cost-effective than larger expenditures on initial formal training.

Not only does the former approach result in earlier productivity, but the training is more integrally related to on-the-job problems and performance. The testing of this hypothesis could be a most rewarding endeavor, especially in view of the large training component in the AFPH Project.

E and R Organization and Budget

Having formulated a recommended evaluation plan and outlined possible research studies, we return to the point that evaluation activities will be varied and carried out under many auspices for a wide audience. Likewise, operational studies will be numerous and varied and will undoubtedly require substantial participation of outside agencies such as Mahidol and Chulalongkorn Universities. Thus, the need exists for a strong coordinating unit to work closely with other national and provincial evaluation units, AFPH Project administration, and to the Central Information Center. The core unit would have oversight responsibilities for evaluation and research and would supervise data processing and report preparation and dissemination. For this purpose access to computer and supporting data processing facilities is essential.

Note is taken of the Project organizational structure (Annex 7, Appendix 5 of the proposal) and the provision for an operations researcher, a management specialist, and a provinces coordinator in the Health Planning Division, as well as section chiefs, epidemiological workers, and statisticians in the Planning and Evaluation units at provincial level. In addition, on the USAID

side a full-time evaluation and research coordinator, a research assistant, and a secretary are needed.

Within the Project organization, mechanisms for both technical and administrative review of research activities are recommended. The technical group would include the operations researcher and management specialist and would be responsible for review of earlier research efforts, development of technical guidelines for new studies, and appraisal of the technical merit of proposals. The administrative review group would represent the consumers of research findings and would judge the potential practical value of proposals. In effect, the administrative group would prioritize research objectives, while the technical group would assess the means proposed for obtaining key objectives. It is hoped that both groups would interrelate effectively with other Health Services Research committees in and outside the MOPH.

Under evaluation, the community field studies are estimated to require approximately 600 man-days of effort annually at \$30/man-day. The delivery system studies are estimated to require 300 man-days of field work per year. Adding time for the development and testing of instruments and quality control procedures, a total of 1,300 man-days at a cost of \$39,000 annually is budgeted. Since three annual sets of surveys are proposed, the evaluation field work amounts to \$117,000 in total. Another \$50,000 is included for analysis and dissemination of results.

Approximately 60 days of consultant time is budgeted at \$175 per day plus travel. Because of the nature of the studies, at

least two consultants may be needed, one for the community aspects and one for the services delivery aspects. As a result, \$6,500 has been included for travel, bringing the total consultant budget for evaluation to \$17,000.

Because of the focussed nature of research studies, they are expected to be quite numerous but never to exceed \$25,000 per study. Overall 20 studies are budgeted at an average cost of \$18,000 each. Consultant costs of \$3,500 per study are also included.

In summary, the following Budget estimates are given. They exclude the cost of national evaluation and research studies (outlined in Annex 6, Appendix 4 of the proposal), as well as the cost of the additional staff alluded to earlier as an integral part of the project.

| | | |
|-----------------------------|-----------|----------------|
| Evaluation: | | \$184,000 |
| Field Studies | \$117,000 | |
| Analysis | 50,000 | |
| Consultants | 17,000 | |
| Research: | | 430,000 |
| 20 Projects @ \$18,000 each | 360,000 | |
| Consultants | 70,000 | |
| E & R Technical Assistance | | <u>240,000</u> |
| | | \$854,000 |