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# LAMPANG HEALTH DEVELOPMENT PROJECT

## SIXTH QUARTERLY PROGRESS REPORT

**(January 1 to March 31, 1976)**

### Introduction

The sixth quarter of Project implementation was a busy period which resulted in considerable Project progress. Concurrently, a large amount of senior staff time was devoted to assessing Project experience to date, strengthening Project management, developing plans for the second ($E_2$) phase of Project implementation, and determining the resource requirements for the two-year $E_2$ implementation phase (1976-78).

### Thai/U.S. Inputs

A. The first week of January brought the arrival of Dr. William Reinke, Professor, The Johns Hopkins University School of Hygiene and Public Health, who had been invited to consult with Project staff to review evaluation plans, assess current evaluation activities, and review $E_2$ implementation plans. The areas to which he initially focussed his attention were the cost and task analyses, the setting of Project targets and the selection of appropriate indicators, the plans for data analyses, and the plans for $E_2$ implementation. Dr. Reinke's long experience with the Project enabled him to look at the components of evaluation and offer useful suggestions in problem areas. Dr. Reinke's final report (attached) emphasized four potential problem areas which deserve attention: (1) the need to improve the general system for recording service and health statistics, (2) a need to streamline the information system, giving attention to completeness and accuracy of data and the rapid feedback of selected information, (3) a need to address the problems of data processing, which has accounted for the relatively delayed output of data to date, and (4) the need to give careful thought to monitoring and coordinating the various components of evaluation, which have been separated into diverse responsibilities, both within and outside of the Project.

Partly in response to Dr. Reinke's recommendations, and also as a result of the evaluation staff's review, several actions have been taken towards the resolution of these problems. The former inadequate service statistics and general information systems, long recognized to be a major constraint for health administration in Thailand, will be modified through the development of a replicable Management Information System for the Project. The Management Information System will be an innovative approach to providing data for management decision-making, and for rapid information feedback and assessment of program activities. Secondly, in order to resolve the bottleneck in data processing, the Division of Evaluation and Research staff have sought data processing assistance from commercial facilities outside of NIDA. These facilities will supplement the limited computer capacity at NIDA, and will be closely coordinated with the NIDA evaluation activities.

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B. Shortly after the completion of Dr. Keinke's visit, senior Project staff gathered to complete final plans for implementation in the $E_2$ implementation period (1976-1978). At this time, a final decision was made to expand the size of the second implementation area ($E_2$) by incorporating Muang District into the original $E_2$ implementation area. This decision was based upon both technical and logistical rationale. Technically, a critical reassessment of the original proposed plans and "logical framework" indicated that an adequate population (for evaluation purposes) would not be "covered" until the final year of implementation, not permitting enough time lapse to detect significant differences in many of the indicators used for impact evaluation: If impact evaluation is important, it is considered essential to increase the size of population under coverage at the earliest feasible time in order to provide an adequate observation period to permit detection of statistically significant difference in impact indicators. Logistically, the original plans provided four years to cover the first half of the population but only one year to cover the remaining half of the provincial population (who also live in the most difficult - sometimes inaccessible - mountainous areas of the province, creating severe logistical problems) - the decision to expand the size of $E_2$ permits a more orderly and logistically feasible implementation process. By adding Muang District, the population within the $E_2$ area will be doubled and, as a result, the major portion of Project activity will occur in this second phase (rather than the third phase as had been originally planned). Given the greatly increased population and expanded area of $E_2$ implementation (in contrast to the $E_1$ implementation in Hang Chat District), a substantial increase of resource input will be required for these next two years.

C. From January 22-24, a group of high-level Ministry of Public Health officials and members of the Lampang Project Staff assembled in Lampang to discuss current issues and problems of importance for continued Project progress. The meeting was organized by Project staff in an attempt to resolve some lingering problems which were recognized as current or potential impediments to achievement of Project goals. The Ministry officials attending the meeting included representatives from all departments and divisions who have crucial roles in supporting health services in Lampang, and who will have an important role in replication of the key features of the Project. Senior representatives from the Department of Health, the Provincial Hospital Division, the Rural Health Division, the Health Planning Division, and the Division of Finance attended. Some of the major problems considered and the suggested solutions were as follows:

1. MOPH and Provincial Hospital Support. The Ministry Representatives confirmed their support for the Project and assured budget and personnel support for the expanded second-phase project implementation. Also some hospital staff members who did not clearly understand that the Lampang Project is a Ministry of Health Project, enjoying the ministry's full support, learned that hospital cooperation was not only highly desirable but imperative.

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2. Revision of Record and Reporting Forms. The Division of Research and Evaluation proposed that the Ministry collaborate with the Project in redesigning and revising record and reporting forms. The Ministry's Rural Health and Health Planning Divisions agreed to assist through consultations, and agreed that the Project would be free (from regular MOPH procedures) to make changes deemed necessary.

3. Prospective Status of Wechakorn. Project staff requested the Ministry to consider the appropriate proposal for the wechakorn's ultimate status classification within the Civil Service System.

In general, the problem solving sessions were very useful and helped to clarify roles and responsibilities and needed support for the Project. It was the first of what will be a continuing series of meetings to sustain interest, support and participation from Ministry leadership.

D. The Chief of the Division of Personnel Development and several of his staff travelled to Ayuthaya Province to observe training methods and activities of the Bang-Pa-In Project, an earlier approach to integrated health care delivery developed cooperatively by the Ramathibodi Faculty of Medicine and the MOPH. Of particular interest was the training and role of the nurse practitioners and health volunteers.

E. The fourth, fifth, and sixth groups of service personnel (including 19, 20, and 20 trainees respectively) completed the one-week orientation and training course during the quarter. Also, the first group of 10 Child Nutrition Center attendants underwent two weeks of training. They will staff newly-planned Child Nutrition Centers (CNCs), along with six government midwives who will supervise their work and 12 Health Post Volunteers in the villages where the CNCs are located.

F. The survey team from the MOPH's Nutrition Division, assisted by Project staff, completed baseline data collection for the Nutrition and Dental Health Surveys in the two control areas (Mae Tha and Mae Tah Districts) during the last two weeks of January.

G. During January 26-30, a UNICEF team travelled to Lampang to film Project activities related to UNICEF-assisted health activities in the Province. The Lampang Project activities filmed will become part of the larger production called "Basic Services for Children". Mr. Mike Clarke, a production specialist from UNICEF Headquarters, led the production team.

H. The Division of Planning and Programming staff met with local health coordinating committees in four villages of Nang Chat to work out final plans for new Child Nutrition Centers and to secure local support for construction and operation.

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I. On February 3-4, Mr. Curtis Farrar, Assistant Administrator of the Technical Assistance Bureau, AID/Washington, accompanied by Mr. Roger Ernst, Director of USOM/Thailand, visited Lampang for an indepth review of the Project. Mr. Farrar was briefed on all Project aspects, and senior staff explained some of the major issues involved in planning for the next two-year implementation phase. Mr. Farrar's comments and recommendations were useful, and he outlined a number of steps that he and the Project staff should take to maintain adequate support and progress of the Project with particular reference to the next implementation phase.

J. During February 3-9, Dr. Choomnoom Promkutkao, Chief of the Personnel Development Division, travelled to New Delhi as a participant in a WHO seminar on rural primary health care delivery.

K. During the 12th Evaluation Board meeting, the members discussed the sample size for the Community Health Survey in the $E_2$ implementation area. Using data prepared by the Division of Evaluation and Research staff, Dr. Prachoom Suwathi, Dean of NIDA's Faculty of Applied Statistics, proposed a sample size of about 3000 households (5% of the universe) to be drawn from the five districts included in $E_2$.

L. The third week of February was devoted to a Project Management Seminar. The purpose of this seminar was to train both Project and cooperating officials in new techniques for project planning and management. The workshop was organized and carried out by a faculty team from the National Institute of Development Administration: Assistant Professor Nit Sammapan, Assistant Professor Chitpong Sayamnet, Doctor Pravit Nilsuwanakul, and Assistant Professor Vinit Songpratoom. The NIDA faculty team had completed an extended training course with consultants from Practical Concepts Incorporated (PCI), and much of the management seminar was based on techniques developed by PCI and appropriately modified by NIDA for use in Thailand and/or the Project. About 30 Project staff and other officials attended the seminar. Half of this group were members of the Lampang Project staff, and the other half came from the Provincial Chief Medical Office, the Provincial Hospital, and some from the Key Ministry Divisions. Also attending as observers were representatives from the University of Hawaii, international assistance organizations, and relevant Thai organizations. The major areas covered by the seminar were: (1) Management by objectives, (2) Use of logical frameworks in the planning process, (3) Project evaluation and reporting, (4) Research allocation management, and (5) Administrative communications. At the same time, the seminar allowed the various participants to outline specific problem areas which they have observed in project operations, and these were reported back to the group for discussion and resolution. Overall, the meeting was very productive and the participants were introduced to a variety of new planning and management techniques. One direct result was the rewriting of the original Project logical framework. The development of a performance network was begun during the seminar and scheduled for completion at later staff meetings.

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M. Dr. Emmanuel Voulgaropoulos, Associate Dean from the University of Hawaii School of Public Health and Dr. David Heenan, Dean of the University of Hawaii College of Business Administration, rescheduled a previously-planned visit to the project to permit their visit to coincide with the Project Management Seminar. Dr. Voulgaropoulos and Dr. Heenan are interested in the management of the Project and are available to provide managerial assistance to the Project as requested by Project staff.

N. Training of Trainers: In anticipation of the greatly expanded training activities which must be undertaken during the next period of Project operations (1976-1978), Project staff realized that existing project training personnel would not be sufficient to carry on all the training activities, which will now be more broadly conducted geographically. The number of people trained in the next phase of Project operations will increase more than ten fold and, because it seems clear that adequate numbers of new Project training staff cannot be hired to carry out all of the training tasks required, the Project staff decided that the best way to expand training capacity is to utilize local health staff. As a result, 37 senior health staff from the Province were chosen to attend a two-week training program at the Pitsanuloke College of Education. This training course was designed specifically for the training of trainers who will carry out assignments in the various Project training programs. The purpose of this training was to develop skills in teaching methods and materials preparation for new training programs.

O. On-the-job training for community health volunteers in the field continued, with Personnel Development Division staff and supervisors from the Provincial Chief Medical Office travelling out to meet with groups of previously trained volunteers to refresh their knowledge and deal with problems encountered.

P. Dr. Suporn Koetsawang, Professor of Obstetrics and Gynecology at Siriraj Faculty of Medicine, and one of Thailand's outstanding researchers in family planning, visited Lampang to review and improve female sterilization services available in the Provincial Hospital. The Project Director has secured a laparoscope from Ramathibodi Faculty of Medicine and, in late April, Dr. Suporn will return to Lampang to teach the laparoscopy procedure to hospital clinical staff.

Q. Two new additions to Project nutrition activities were proposed and accepted during the quarter: Infant Feeding Stations and a Mobile Food Demonstration Team.

1. Infant Feeding Stations have been proposed as one means of supplementing the Child Nutrition Centers (CNC). Child Nutrition Centers require considerable capital to construct and maintenance of operating funds for attendants' salaries, supplies, etc. The government can only support their development on a one-per-tambol basis. Another concern was that CNC's accept pre-school children only from age 2½ years, and do not reach the children at highest risk for nutritional problems.

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The Infant Feeding Stations may resolve some of these difficulties. They will be installed in each village at the home of the Health Post Volunteer (on a trial basis first, in several villages of Muang Chai District). The HPV will serve a daily high-protein nutrition supplement (provided by the MOPH's Nutrition Division) to children from age 6 months upward. Mothers will be invited to bring their children to the HPV and actually do the feeding, and this will provide an opportunity for nutrition education. Of noteworthy importance is the fact that there is little operational expense, the provider is a local villager (who will be permitted to collect a small monthly fee as an incentive), and the service is easily accessible to a difficult-to-reach target group.

2. A Mobile Food Demonstration Team, including an experienced Nutritionist and Nutrition Educator, equipped with a food demonstration/education van, will be supplied to the Project by the Nutrition Division of the MOPH. This van will travel throughout the intervention areas, visiting each tambol about twice a month. Groups of mothers will be assembled, with cooperation of local health workers and community health volunteers, to take part in the food preparation demonstrations and nutrition education activities.

R. During March, the Evaluation and Research Division and Evaluation Board members continued work on the Evaluation Plan for the Project. This plan, after several reviews, should be complete in early April.

S. On March 20-22, representatives from the Ministry of Public Health, the University of Hawaii School of Public Health, APHA, and USOM/Thailand, met in Chiengmai to discuss Project plans for the expanded $E_2$ implementation, resource requirements, and related matters of interest.

Problems Encountered and Anticipated

While no major problems have been encountered during this quarter, the Project anticipates potentially-serious logistical problems during the coming $E_2$ implementation phase if an adequate number of vehicles are not made available to the Project, in a timely manner, for the intensive demonstration and research activities required to operate in $E_2$ which has a ten-fold increase in population and five-fold increase in geographic area.

Conclusion

The sixth quarter of Project implementation has been characterized generally by the following: Project initiatives to make indicated Project adjustments and modifications (as a result of the review and assessment of the former quarter);

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sustained monitoring and management of activities in the first implementation area; further development of plans and determination of resource requirements for the next - expanded - implementation phase; refinement of the logical framework, with particular reference to population coverage and output targets; strengthening of Project Management; and final drafting of the Evaluation Plan.

Signed:

Dr. Pricha Desakadi, Field Director

Dr. Ronald G. Wilson, Associate Field Director and U.S. Counterpart

Dr. Somboon Vachrotai, Project Director

Encl: Consultant Report of Dr. William Reinke

TRIP REPORT DRAFT

LAMPANG-BANGKOK, THAILAND

5-13 January, 1976

Dr. William A. Reinke

Relative to the terms of reference, my discussions with Lampang Project personnel and consultants proceeded through three separate phases. First, meetings were held with representation from each of the project divisions in order to consider the overall organization of evaluation indicators and to ensure the adequacy of data collection and analysis for program management and evaluation relative to the concerns of each division. Second, intensive small group discussions were held on the task and cost analyses in view of present bottlenecks in these areas and their importance to diverse aspects of program management and evaluation. Finally, I attended meetings of the Evaluation Board to consider several specific issues of current critical interest to the evaluation plan.

Within the above framework much of the discussion centered on specific topics, for example the precise specification of individual indicators. Since the results of these discussions will be incorporated into the protocol soon to be submitted by the Lampang Project to APHA, they will not be recited in detail here. Rather, this report will be limited to a number of broader observations.

Intervention Schedule

The first concerns the timing of program interventions in other areas of the province, in particular the prospects for accelerating the intervention schedule. In principle this is both possible and desirable. In practice, however, two major concerns must be satisfied. First is the

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concern over the ability to recruit and train the personnel needed in an accelerated intervention program. For example, if prospective wechakorn are to be recruited from present health personnel, their replacements must be found. In addition, it may be necessary to schedule training in a way which requires over-lapping classes. Second concern is the ability to apply effectively the experience gained from both training and service experience in Hang Chat to the new experimental areas. Such experience should indeed permit more rapid and smooth intervention subsequently, but only if such experience is analyzed systematically and if the necessary data for analysis are made available. Furthermore, accelerated intervention would be foolish if it did not avoid earlier mistakes. It is of little value to increase the speed of a vehicle which is proceeding down the wrong road from its intended destination.

Evaluation Framework

From the discussion aimed at ensuring the completeness of the elements of evaluation covered by the indicators, a further elaboration of the conceptual framework for evaluation emerged. While not incompatible with the notions of coverage, outputs, impact, etc. enunciated earlier, the refined framework seems to provide further clarification for the designation of specific indicators. This framework logically begins with input targets. These would include such things as the preparation of staff and facilities, organizing logistical support, and scheduling the availability of supplies and equipment. The targets would presumably be presented in a PERT-type format. The next logical category of targets deals with service capability, i.e., the readiness of the project to deliver specified service packages

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to a defined population. A parallel set of indicators would deal with clients potential for utilizing this service capability. Such indicators would relate to knowledge and attitudes about illness and health care providers, food practices, pregnancy and other potential case loads, etc. The next logical category in the sequence deals with services utilization targets, i.e., the extent to which service capability and case load potential are fulfilled. Finally, services utilization targets lead to impact, or outcome, targets.

Among other things, the above classification scheme helps to clarify the concept of coverage. In one sense coverage is the capability of serving a defined population, as exhibited by the presence of family folders in target households. In another sense coverage is represented by the actual utilization of specific services. Both aspects of coverage merit consideration.

While evaluation interests ultimately focus upon impact targets, it is probably more sensible to begin at the other end of the scale in establishing targets, and then to proceed toward impact targets in a manner which ensures compatible linkages between categories. The aggregation of individual service utilization targets, for example, should not exceed overall service capabilities.

Service Statistics

It is clear to all that existing service records are not satisfactory for evaluation purposes. They are inadequate because of inaccuracies, incompleteness, and their failure to provide all of the items of information needed. In spite of this clear recognition of inadequacy, however, there is a real danger that corrective action will not be given the priority it

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deserves. The reasons are two-fold. First, the presence of any records, however inadequate, tends to breed a false sense of security. Second, effective improvement is difficult to achieve.

The first consideration in information system modification is the distinction between aggregate service statistics and patient-linked statistics. Is it sufficient to know the total number of pre-natal visits in a year, or is it necessary to know which pregnancies resulted in any pre-natal care ? The latter information is certainly preferable for evaluation purposes. Moreover, it seems necessary for successful patient management to have access to an accurate recapitulation of services rendered to a particular client. However, this would require an effective family folder system, probably client retained. While such systems have been successfully employed elsewhere, the project staff does not appear optimistic about the prospects for success in Thailand. Therefore, it may be somewhat unrealistic to rely heavily on services utilization indicators that are client-linked. This does not reduce the importance, however, of making every effort to implement a successful family folder system.

The second consideration in system modification is improvement in clinic records for the generation of aggregate service statistics. Essentially this requires four things. First, provision must be made for the addition of items of information needed for the Lampang Project. Second, the recording of all project-relevant data should be simplified and organized to facilitate summarization and coding. Prompt determination of evaluation indicators is important here. This will identify a finite number of specific services of interest. These can then be easily recorded in a coded or checklist fashion for rapid aggregation. Third, quality

control procedures should be initiated on a sampling basis to check on the completeness and accuracy of recording, especially of services provided at locations other than the one in which records are kept. This should be coupled with rapid feedback of errors to the health personnel in order to stimulate interest in accurate recording. Finally, the referral recording system must be carefully monitored in order to ensure accurate accounting for referrals made and those completed.

Task and Cost Analysis

Although the task and cost analysis aspect of the project continues to be behind schedule, this reporter is presently more comfortable with the progress being made than he was at the time of the annual review.

Data requirements in the task analysis are such that careful attention must be paid to the efficient sampling and meaningful recording of activities in a pre-coded or checklist format which facilitates rapid and simplified data processing. At present it appears that the project may have too much data and not enough useful information. The most recent round of work sampling involved, if anything, an excessive number of days of observation and individual workers. On the other hand, data were collected in a relatively unstructured format, so that coding and computer programming delays can be anticipated. More attention needs to be paid to previous work sampling experiences in the interest of substantially streamlining the recording effort. Again, the detailed specification of relevant indicators should lead to the identification of a limited checklist of activities of concern. A streamlined recording of services provided in the course of work sampling would also be helpful in supplementing and

checking the routine service statistics. Appropriate recording of data would permit the use of an extremely simple computer program for rapid summarization and anlysis.

As the number of experimental districts is expanded, the task analysis sampling scheme will take on added importance. Determination of the workers and days to be sampled should be based upon a careful analysis of variability in work patterns found in Hang Chat.

The task analysis will be useful for both program management and evaluation purposes. The former requires prompt feedback of results to other project divisions, thus underscoring the need for streamlined data collection and processing procedures. With respect to evaluation, it is important to recognize that activity patterns are likely to change as the service program matures. This calls for continued periodic collection of large quantities of activity data, again suggesting the need for a streamlining of the procedure.

The cost analysis will be used primarily in evaluation. Moreover, costs within the various categories - such as salaries, depreciation, etc. - are not expected to change dramatically over time. The critical concern in cost analysis, therefore, is not the data collection effort over time, but the initial identification of data sources and development of the model for allocation of the categorical cost data among workers, services, and functions. Fortunately this initial effort is progressing quite well, although it has not yet been reported in writing.

The hospital portion of the task and cost analysis has yet to be developed. This can be a difficult and complicated endeavor; yet the results will be of limited value in the overall project evaluation. There is a danger,

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therefore, that the hospital effort will consume more time and effort than it merits. It is important that hospital data be collected very selectively, constantly bearing in mind its relevance to project evaluation. Moreover, the hospital analysis will probably have to be developed relatively independently of other aspects of the task and cost analyses in view of the uniqueness of the hospital setting.

Data Processing

Data processing capabilities are severely limited at present, and the problem is likely to increase if corrective action is not taken soon. The limitations are of two kinds: insufficient number and competence of computer programmers; and limited capacity of the NIDA computer. Furthermore, these two factors are inter-related. Computer capacity limitations, for example, have caused the community survey data to be stored in a way that complicates the programming for analysis, thereby further taxing the limited programming staff.

Several possible solutions deserve consideration. First, alternative methods of data storage, based upon the organization of data sub-sets, appear feasible and should be investigated. Second, the programming staff should be increased. This action, however, will increase the need for supervision and control and will ultimately cause the computer itself to be a greater bottleneck. Third, the use of outside computer facilities should be investigated. This could not only accelerate the data processing effort, but it might make it more efficient through the use of library programs. On the other hand, this approach might produce further difficulties in coordination and control. Fourth, data processing priorities must be clearly

defined. The processing of community survey data, for example, is producing very little information of direct and immediate relevance to evaluation, even though it is producing a strain on the NIDA computer facility. It would seem to make more sense for the present to focus upon a limited number of factors -- such as population distribution, morbidity rates, patterns of health services utilization, and contraceptive use - rather than to generate a mass of cross-tabulations which are of less immediate interest.

Incidentally, the community survey cross-tabulations already generated have been useful in highlighting the need for improved quality control. The reported level of contraceptive practice, for example, seems to be unrealistically high. Improved quality control during data collection is called for, along with greater attention to editing at the data processing stage. In the future it will also be both possible and necessary to cross-check services utilization and other statistics from the community survey task analysis, and the routine record system.

Data Synthesis

As additional data sets are created and require linked analysis, the data processing demands will increase substantially, both in quantity and complexity. This directs attention to the need for plans for data synthesis, which was one of the topics discussed by the Evaluation Board during my visit.

Activity and cost information obviously have to be linked. In addition, the task and cost analyses must be related to community survey data in order to understand overall patterns of public and private services utilization and cost. Certain elements of the task and cost analyses will

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also need to be incorporated into the administrative analysis. Physical examination, anthropometric, laboratory, food practices, and dental health information must be linked with community survey data. Finally, the analysis of vital rates will require information from the census and pregnancy history components of the community survey, the civil registration system, and indigenous midwife reports, as well as the ongoing vital events monitoring system of the project.

Distribution of Evaluation Responsibility

A final subject of concern deserving comment here is the distribution of responsibility for the various aspects of data collection and analysis. Apart from the multiple studies being carried out within the project staff there are a number of others which have been "farmed out." These include the task and cost analyses, the nutrition and oral health surveys, and the administrative analysis. From the local perspective there are distinct advantages to this approach. It extends the realm of interest in the project, broadens the capabilities of the project staff, and provides useful experience to varied individuals and agencies. However, this approach increases the difficulty of coordination and control and the adherence to a pre-determined schedule, because it involves individuals and groups with divided loyalties and responsibilities. The difficulty is likely to increase as other organizations, such as computer facilities, are brought in. While maximum effort in Thailand must be directed at effective coordination and control, responsible persons at APHA and AID should appreciate the implications of diversified responsibility. Its benefits should not be overlooked as a result of more narrowly defined project goals and interests.

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Summary

In summary, I continue to be impressed with the competence and motivation of project staff in progressing along several lines simultaneously within a large and complex project. Once again, however, it must be emphasized that such progress inevitably produces a number of problems. Of the several which have been cited here, four deserve special emphasis. These are: improvement of the system for recording service statistics; streamlining the information system generally, with greater attention to the quality and prompt feedback of the limited information gathered; breaking of the present data processing bottleneck; and implications of the diversification of evaluation responsibilities, both within and outside of project staff.

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