



 VECTOR BIOLOGY & CONTROL

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EVALUATION REPORT

Increased Productivity for Better Health (Project 505-0018)

by

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I. EXECUTIVE SUMMARY

- A. Purpose of Evaluation - The purpose of the evaluation is to assess progress in project implementation since the Project Agreement was signed (March 26, 1985). Specific components of the evaluation include comment on: (1) Government of Belize (GOB) compliance with the Conditions Precedent and Covenants outlined in the Project Agreement; (2) existing management practices conducted by USAID, the GOB, and Pragma/MCD which directly relate to project implementation; (3) implementation actions taken to date and level, quality and timeliness of specific inputs (staff, commodities, technical assistance, operational research, training); (4) technical aspects of major components (vector control, water and sanitation, health education); and, (5) actions necessary to maintain and improve project implementation schedules and continue toward the goals and objectives stated in the project paper.
- B. Methodology Used -- The methodology used was formal and informal interviews with GOB Officials, USAID staff and Pragma/MCD personnel. Field trips were made to each district with ongoing project activities. Observations and interviews were conducted by the team members jointly and individually. A concerted effort was made to expose the team to all project components in order to gain a deeper understanding of technical, administrative and logistic issues associated with project implementation. Report writing was shared by the team and the format of the report was jointly developed. An interim briefing was conducted on February 27, 1987 in order to share preliminary findings with principal officers of the GOB, USAID, and Pragma/MCD. A draft report was submitted to USAID on March 6, 1987. A debriefing of the findings and recommendations was held on March 6, 1987 with the GOB and USAID. A final report was submitted to USAID on April 8, 1987.
- C. Findings - Based on discussions with project personnel and USAID staff, the team found that some important trends exist which, if not altered, could compromise the success of the project in the long-term. The team generally feels that the technical approach towards project targets is sound, and that both Belizean and Pragma/MCD personnel are enthusiastic about the opportunities to promote rural development and improve the general welfare of Belizeans. A number of management and logistic issues were identified which have somewhat impeded project implementation. Recent events, however, indicate that a more effective pursuit of project objectives will be possible in BZ FY 1987. The specific findings of the team are described below.

1. National Plans of Action - Submission of National Plans of Action have been tardy and FY 1987 submission may be delayed due to increased WS/S responsibilities by the MNR and the need for integrated fiscal and logistic planning between the MOH and the MNR.
2. Conditions and Covenants - Most Conditions and Covenants contained in the Project Agreement have been met, however delays in the construction of the vehicle maintenance workshop and storage facilities have the potential to create problems. The use of ESF funds construction is under consideration and it is anticipated that these funds will be used.
3. MOH - MNR Responsibilities for WS/S - To date no specific plans for administrative responsibilities have been prepared. Problems may be encountered in fiscal allocations and use of vehicles. All parties agree that continued MOH involvement in WS/S is critical. There apparently is open communication between the MNR and the MOH at the P3 level. The MNR appears to view the increase in responsibility positively and is eager to meet the challenge.
4. Delegation of Authority - The lack of appropriate delegation of authority in NMCS has caused serious problems concerning efficient project implementation. A Deputy Director position apparently has been created and soon will be approved. This position probably will be filled by BZ FY 1987.
5. Community Participation - There has been lack of sufficient attention to, and experience with, community participation throughout the project. No individual with authority has assumed primary leadership in promoting community participation in project activities. However, all project personnel recognize the importance of this component and the opportunity for lasting developmental impact.
6. Health Education - Health education requirements of the project are not being met due to an overloaded and undersupplied HECOPAB. Unchanneled requests from various clients make coordinated planning extremely difficult. As a result, production of materials is delayed, and follow-up is improbable.

7. Project Integration - The potential for the Pragma/MCD Management Support Unit to integrate project components fully has not been fully realized. Poor coordination and communication between project components may compromise the achievement of project goals.
8. Strategic Approach to Project Goals - Implementation strategies are not entirely compatible with the fundamental goals of the project, particularly concerning community participation and local institutional strengthening capacity. There is ample room for reformulating strategic approaches towards broader project goals.
9. Internal Monitoring - A more effective internal indicator system needs to be in place for the project in order to plan, monitor, and evaluate project progress.
10. Data Management - A stronger data management system is needed within the project to support decision-making processes. Existing data is neither well organized nor readily available to district personnel for support of field operations.
11. Technical Issues and Assistance - Technical elements of the project are basically sound and important opportunities exist to improve procedures, strengthen local technical competence and explore alternative methodologies.
12. Training Needs - Training needs are being met in vector control, and future plans in this area appear adequate. Significant training needs exist in WS/S and community development, beginning in BZ FY 87.
13. Procurement Schedules - Most major commodities have been delivered and are being used. Delays in procurement due to slow submission of manifests by project personnel and administrative delays in USAID have been experienced. It is anticipated that delivery of commodities for BZ FY 87 also will be delayed and that this may cause slow-downs in project implementation.
14. Inventory - There is an inadequate inventory and supply system to support the project. Plans are in progress to expand and decentralize storage facilities. A national inventory of project-related delivered and ordered items is anticipated in early BZ FY 1987.

15. Maintenance Advisor - The Maintenance Advisor role is important to project operations. There is a need for coordination of transportation and logistics which are now limiting integration and implementation of project components.
 16. Reports Deliverable - Project annual plans, activities and accomplishments are not properly documented.
 17. Assessment of Progress - There is a need to act quickly on the recommendations contained within this progress assessment report.
- D. Conclusions - The team concluded that the IPTBH project should be continued and that the progress concerning the implementation of the recommendations contained in this report should be closely monitored. More effort should be spent on project process rather than on setting and achieving technical targets. The Pragma/MCD team needs to work more on developing integrated strategies which complement each other and emphasize community involvement in decision-making and maintenance. The Management Support Unit needs to work more as a team; more frequent contact with USAID is necessary before the functional capabilities of the Management Unit are fully realized. The improved performance of the Pragma/MCD unit is critical to project success and is the direct responsibility of the Chief of Party.
- E. Recommendations - The recommendations presented in this evaluation correspond directly with the findings. The major recommendation concerns the need for greater project integration of its components and more tangible emphasis on community development, community participation, and health education in both WS/S and vector control activities. The more expedient submission and approval of National Plans of Action (inclusive of detailed procurement schedules) is also of outstanding concern.

It is recommended that the transition of responsibilities for sanitation and rural water supply to the Ministry of Natural Resources be documented and described in a detailed management plan and in an interministerial cooperative agreement.

The delegation of authority by the Project Director for the National Malaria Control Service is critical to project success. The expeditious appointment and assumption of duties of a Deputy Director for Vector-Borne Disease Control is strongly endorsed. Decentralized operational decision-

making at the district level should be explored by both the MOH and MNR.

The team found a lack of strategy development in relation to project goals and management. More energy should be devoted to planning interactive efforts and to incorporating these efforts into project operations. Pragma/MCD should assist the GOB in more detailed strategic development. The need for internal monitoring and better data management was recognized and it is recommended that technical and management benchmarks for project success be developed. Technical recommendations concerning WS/S, water quality sampling, vector control, operations research and community participation are presented. More training efforts should be directed in the area of WS/S, with special attention given to district level personnel.

It is recommended that the GOB establish a national inventory system for project-associated commodities and supplies. This inventory may be coordinated through the MNR. WASA should strengthen its capability to coordinate logistic and transport requirements and, towards this end, the role and responsibilities of the Pragma/MCD Vehicle Maintenance Advisor should be expanded.

The project needs a more detailed reporting system for quarterly and annual activities. This reporting system should be developed and described by USAID. Pragma/MCD needs to provide more emphasis on project integration and coordination of technical activities, particularly in relation to community development. The Pragma/MCD Chief of Party should broaden his role in initiating the interchange of ideas and collaborative field work. It is recommended that an in-house review of the Pragma/MCD and GOB response to these recommendations be conducted within nine months of acceptance of this document by USAID.

II. DESCRIPTION OF PROJECT

- A. **OVERVIEW** - There are four major components within the Improved Productivity Through Better Health (IPTBH) project: (1) malaria control; (2) Aedes aegypti control; (3) potable water delivery; and (4) sanitation. Health education and community participation are underlying themes for the implementation of these components. The project was initiated in March 1985; the PACD for the project is March 1989. The level of effort (LOE) is \$1.886 million for vector control, \$3.008 million for water and sanitation, and \$1.892 million for technical management support. Contingency and fiscal adjustments result in a total level of effort of \$7.0 million.

Community participation and health education are central to the achievement of project goals. Participant and in-country training are emphasized to enhance the indigenous technical and managerial capability of Belize. The project has established a Management Support Unit (MSU) which includes a full-time Project Manager, Health Educator, Water Supply and Sanitation Advisor, and Vehicle Maintenance Specialist. Respective duty tours are: 39 months; 36 months; 39 months; 24 months.

- B. **BACKGROUND** - Although the Project Agreement was signed in March 1985, the Pragma/MCD team did not arrive in country until January 21, 1986. Start-up has been sluggish due to procurement delays, poor coordination with GOB officials (particularly the Project Director), delays in preparation and submission of procurement manifests, tardy presentation of National Action Plans, insufficient delegation of authority within the NMCS, delays in vehicle delivery, equipment failure, and increased transport requirements. Numerous professionals and para-professionals are associated with the project. This simultaneously encourages strong national interest and gives rise to frequent administrative bottlenecks. The IPTBH project is entering its third Belizean fiscal year in April 1987, and the Pragma/MCD MSU entered its second calendar year as of January 1987.
- C. **HIGHLIGHTS/ACCOMPLISHMENTS** - Important progress has been made since the Project Agreement was signed in 1985 and the Management Support Unit Contract was awarded to Pragma/MCD. District and local staff (DHE, DC, VC, Carpenter-Foremen) met by the team appeared technically competent and enthusiastic. In the anticipated shift of responsibility and authority for WS/S from the MOH to the MNR, there appears to be a supportive and encouraging climate at the

high ministerial levels. The Pragma/MCD team has established a temporary base of operations in Belize City. Metal "Butler Buildings" for administrative managers (GOB and Pragma/MCD) have been procured and are in the final stages of construction. It is expected that these permanent headquarters will be occupied by the beginning of EZ FY 1987 (April 1, 1987). It is anticipated that this will enhance the potential for project integration.

The team observed that project activities have been initiated in priority villages, albeit slowly. The network of village collaborators is in place and functioning. Preliminary selection criteria and targeting of priority villages have begun. Training workshops have been organized and implemented for vector control, and water supply and sanitation personnel. Plans for future in-service training activities are being developed.

Participant training has been actively pursued. Technical assistance for the AACP, NMCS, and WS/S has been recently provided. The recommendations of the STC technical advisors are under consideration. Good relationships appear to exist between Pragma/MCD and GOB counterparts. Community participation is acknowledged by all project participants as a critical project objective, and initial efforts have been made to orient district staff, villagers and their leaders. Contacts made by project staff with other MOH and NGO programs have resulted in some innovations, and opportunities for further coordination have been identified.

Improved productivity through better health appears to be achievable in Belize based on GOB interest, perceived commitment, and potential opportunities identified in the recommendations of this evaluation.

- D. POTENTIAL PROBLEMS - There are significant barriers to the full attainment of project goals and objectives. Overcoming these barriers will require prompt attention and creative responses by the GOB, USAID and Pragma/MCD.

The team observed a lack of attention to project integration and community participation in project implementation. The holistic approach has apparently been abandoned in favor of technical accomplishments. Opportunities still exist to redirect the project away from a strictly technical intervention approach and towards a more innovative, self-sufficient approach.

The problem now confronting the GOB, USAID, and Pragma/MCD is how to take advantage of existing opportunities and resources through creative planning, implementation and project monitoring. For example, it was the team's perception that the number of wells and latrines in place, the number of houses sprayed, or the number of educational tools developed were more valued benchmarks than community awareness of, and participation in, project activities.

The evaluation team fully recognizes that outcomes from investments into community awareness and/or integrated project planning are difficult to quantify. Our consensus, however, is that a greater effort should be made to reorient project processes towards strengthening community involvement, both at the central and district levels in BZ FY 1987. This may be pursued through stronger coordination with district offices and other health and community development programs in Belize.

It is also the team's impression that day-to-day activities take precedence over the development of long-term project objectives (strategies). This is particularly evident in the format and content of GOB's National Plan of Action and Pragma/MCD's Annual Work Plan. Areas of complementarity are apparently often overlooked, resulting in isolated, uncoordinated efforts among and between project personnel. The isolation of effort(s) is particularly evident in the Pragma/MCD team. The evaluation team perceived that interaction between Pragma/MCD team members is infrequent, and that opportunities for joint field trips and project integration are sometimes missed. The team feels that it is within the scope of the Pragma/MCD contract, through the Chief of Party, to promote more unified direction(s) within the project. If a more unified, complementary approach is not in place within the next twelve months, the long-term impact of the project may be compromised.

III. DEVELOPMENT BENEFITS TO DATE

The project has been in place almost two years. Much effort has been directed at establishing field operations, developing Pragma/MCD's base of operations, building counterpart relationships, and in expanding working relationships with district staff and local leaders. Specific, long-term development benefits to date include:

- o the introduction of an innovative VIP latrine, collaboratively designed by the WS/S specialist and the Public Health Inspectorate;
- o the posting of partially trained but enthusiastic District Health Educators, District Coordinators and Carpenter-Foremen (thus strengthening the capability of the district health teams to implement fully primary health care and health education, WS/S activities, and other village level health programs);
- o the opening of a dialogue about the project in priority villages, and the establishment of Village Health Committees in several of them;
- o the construction and rehabilitation of some rural water supply and sanitation facilities;
- o the identification and training of Voluntary Collaborators in the Malaria Control program, and their acceptance and participation at the village level;
- o the placement of trained and experienced Malaria Control and Aedes field teams in the districts;
- o the procurement and storage of up to one year's supply of insecticide;
- o the procurement and delivery of all vehicles and approximately half of the motorcycles called for in the project agreement;
- o the supply of one new cable drill rig and truck and two rehabilitated cable rigs with a new chassis;
- o the supply of a partially complete set of motor vehicle maintenance tools;
- o the development of training materials, and some media materials in support of project goals in the field;

- o the establishment of a Water Quality Laboratory in Belize City;
- o the posting and training of an MOH laboratory technician;
- o initiation of a rural water supply sampling scheme to test all rural water systems annually;
- o the selection and completion of some participant and in-service training, particularly in vector control;
- o the use of a TA for the training of NMR drilling crews in both percussion and rotary drilling techniques.

IV. PREVIOUS EVALUATIONS/REPORTS

There have been no previous evaluations of this project. Technical consultants have been invited and have submitted reports which contain technical appraisals of program efficiency and problems. The evaluation team reviewed numerous documents concerning project development and implementation (see Annex III). A number of the technical consultants' observations have been considered in the preparation of this document.

V. FINDINGS AND RECOMMENDED ACTIONS

RECOMMENDATION 1: NATIONAL PLANS OF ACTION - It is recommended that clear National Plans of Action be formally submitted in a more timely manner (NLT BZ FY 87-88, March 15, 1987) in order to fulfill the Conditions Precedent set forth in the Project Agreement and obtain approval by March 31st. Clear statements concerning annual implementation targets for the water supply and sanitation (WS/S) vector control (VC), and health education (HE) should be included. Action plans also should present targets for community participation, and perceived responsibilities of the GOB, USAID and Pragma/MCD.

ISSUE 1A: Submission and format of national plans of action

Delays in the submission of National Plans of Action for the WS/S, NMCS and AACP have slowed project implementation. A unified format is necessary to streamline preparation and coordination of action plans. Interministerial cooperation is critical among the Permanent Secretaries and at all other levels. The GOB should begin to develop action plans in November of each fiscal year and should submit them to USAID for preliminary review no later than the following February. The final document should be submitted by April 15th, and USAID approval should be secured by April 31st of each fiscal year. The GOB, USAID and Pragma/MCD should develop a format for preparation of National Plans of Action and a timetable for specific actions by MNR, MOH and USAID. The format suggested by Mr. Sam Dowding (letter to MOH, 8/20/86) could serve as a basis for the GOB format.

Recommended Actions

GOB - An approved format for National Plans of Action should be developed jointly by the MNR and the MOH. The responsible GOB officers should be considered counterparts and should work closely with the USAID Project Manager and Pragma/MCD Chief of Party to develop a standard format for the National Plans of Action. Coordination of the statements by the WS/S, NMCS, AACP is critical. The Project Director should ensure the timely and accurate presentation of technical and budgetary information from the WS/S, NMCS, AACP, and HE components of the project. The GOB should pay particular attention to the role of the community in the decision-making process as stated in Annex I of the Project Agreement. Specific action plans for placement of voluntary collaborators in priority villages should be included in the

National Plans of Action. The WS/S portion should include a clear statement on the use of, and responsibility for, the Water Quality Laboratory.

USAID - In cooperation with the GOB and Pragma/MCD, the IPTBH Project Manager should prepare a time-line and format analyses for preparation and submission of National Plans of Action. These analyses should be transmitted in the form of a "Memorandum of Understanding" from the USAID Representative to the Permanent Secretaries of Health and Natural Resources. Pragma/MCD Chief of Party should receive a copy with an attached memorandum from the USAID Project Manager stating specific assistance responsibilities of the Pragma/MCD Management Support Unit in developing and submitting all future National Plans of Action. These two memoranda should be prepared and sent as soon as possible (preferably no later than March 31, 1987). All administrative activities concerning the development and approval of National Plans of Action should be clearly documented by the USAID Project Manager.

PRAGMA/MCD - The responsibilities of Pragma/MCD are to work closely with appropriate GOB officers in the development of specific components (NMCS, RACP, WS/S, HE) of the National Plans. Pragma/MCD staff should assist the GOB in the development of technically feasible targets and identification of priority field sites for the coming year. Pragma/MCD also should help develop and review budgets including commodities, personnel, transport, logistics, training, salaries, operational research, and other critical project components.

Prospective planning and integration of components (particularly community participation) should highlight Pragma/MCD input into GOB IPTBH project National Plans. Anticipation of future targets and estimation of procurement and operation costs should be clearly identified by Pragma/MCD staff. Pragma/MCD input into National Action Plans should be documented by memoranda from the Chief of Party to the Project Director in a timely and detailed fashion. USAID should receive copies of all transmitted memoranda on this subject. The primary responsibility for assistance with the development of GOB National Plans of Action rests with the Pragma/MCD Chief of Party.

RECOMMENDATION 2: CONDITIONS & COVENANTS/PROJECT AGREEMENT- It is recommended that the GOB closely review the Conditions Precedent in, and Annexes to, the Project Agreement to ensure satisfactory compliance. Particular attention should

be given to disbursement procedures, construction schedules (including office and storage facilities), salary schedules, operations research, applied field research (entomology and epidemiology), community participation, and integration of project activities.

ISSUE 2A: Project coordination - Integration of activities and responsibilities

The apparent increase in responsibility for the Ministry of Natural Resources (MNR) to include both water and sanitation necessitates close administrative, logistic and technical cooperation between the MOH and the MNR. Every opportunity to discuss implementation issues should be explored. Forums include the Inter Ministerial Committee Committee (IMC), IMC Subcommittees, the National WS/S Coordinating Committee, monthly technical meetings of project officers, and informal discussions with central and district level personnel.

Recommended Actions

GOB - The Permanent Secretaries for the MNR and MOH should establish routine IMC meetings specifically to discuss project integration and complementarity. Issues should be brought to the Permanent Secretaries' attention by the Project Director, PPHI, Deputy Director for Vector Control, WASA, and Health Educators. Issues concerning officers below the Permanent Secretary level should be discussed informally or in standing committees. The Office of the Project Director should inform all concerned parties (including USAID and Pragma/MCD) of major issues by formal memoranda. Monthly meetings should be arranged between GOB operational heads and contractor personnel to address implementation issues concerning the project.

USAID - The USAID Representative should convey a memorandum to the MOH and MNR stressing the need for close cooperation and coordination of effort. The Project Manager should monitor progress in the transition of additional responsibilities to the MNR, and periodically assess progress via discussions with GOB officials. When problems arise, USAID should take the lead in pursuing corrective actions through its own offices and those of Pragma/MCD. USAID should request in writing that the Pragma/MCD Chief of Party provide USAID with written synopses of major issues and recommended courses of action for all involved parties.

PRAGMA/MCD - The Chief of Party should follow progress on project integration and keep USAID and GOB officials up-to-date on recent developments. Daily interaction with MOH

staff in the new quarters is encouraged and semi-monthly staff meetings with Pragma/MCD and GOB officers is recommended. Pragma/MCD should institute weekly meetings with the USAID Project Manager to discuss problematic issues according to a pre-arranged agenda. These meetings should be formalized with USAID by the Chief of Party via written transmittal of the weekly agenda at least 48 hours before the meeting.

ISSUE 2B: Equitability of salary schedule

Staffing patterns are becoming increasingly problematic in the IPTBH project. This is partially due to the lack of skilled person-power, and low salary scales within the MOH and MNR. The Project Agreement states that in BZ FY 1985, the GOB will initiate a study of the "equitability of salary schedules" (p. 7) in order to retain adequate staff necessary for project implementation, particularly for the public health inspectorate. To the best of our knowledge, this has yet to be done.

Recommended Actions

GOB - The GOB should include in the FY 1987 National Plan a study to examine equitability of salary schedules, nominate the responsible officer to coordinate activities, and establish an in-house commission to examine this problem. The PPHI would be an excellent candidate to head this commission.

USAID - USAID should endorse the formation of the commission and strongly encourage its incorporation into the FY 1987 National Plan. USAID input should be available as required, especially for organizational review. USAID may request a seat on the commission if appropriate.

PRAGMA/MCD - Pragma/MCD should play an active role in the design and conduct of this study. The Management Unit is well aware of the problems concerning salaries from an operational standpoint. Pragma/MCD services should be coordinated by the Chief of Party, who could serve on the commission. Pragma/MCD may also serve as rapporteur for the commission; findings should be prepared formally and submitted to the GOB and USAID.

ISSUE 2C: Joint evaluations

The Project Agreement states that "an annual Grantee/PAHO/A.I.D. evaluation for the NMCS and AACP" (p. 6) should be conducted. The team believes that this should be expanded to

include the entire project. The team believes that a Belizean team member would have been valuable for the initial evaluation, described in this document, and should be included on all future evaluation teams. The role of PAHO in evaluations (and in the project) should be better defined.

Recommended Actions

GOB - The GOB should consider participating as a member of the team in the next project evaluation, and should nominate a suitable candidate who can objectively judge project progress.

USAID - USAID should express its views on this issue in writing to the GOB. Concurrence or disagreement should be explained. USAID should obtain more detailed information on the future role of PAHO in this project.

PRAGMA/MCD - Pragma should organize an information package in order to assist future evaluators and conserve time. The team found it cumbersome at times to sift through much of the information that was provided. A concise and directed written and verbal package would have saved time. Pragma should contribute to the identification of issues for evaluators to address as appropriate. These actions should be coordinated by the Chief of Party.

ISSUE 2D: Construction/renovation

The Project Agreement clearly states that a vehicle repair facility will be constructed, and that three storage facilities with office units (Corozal, Cayo, Dangriga) will be provided (p. 14). To date, these facilities are not in place. A related issue is the use of Economic Support Funds (ESF) for the construction of the facilities.

Recommended Actions

GOB - Funding for renovation and construction of warehouse, storage and office space should be included and specifically described in the National Plan of Action. GOB approval for use of ESF monies for these facilities should be attached to the National Plan. Construction/renovation of the vehicle repair facility, storage areas, and office space should begin by April 15, 1987. All planned construction and renovation should be completed by September 30, 1987. The GOB should make a particular effort to provide office space and supplies to the district NMCS and AACP offices. There is a tremendous shortage of working and filing space; this

situation compromises the efficiency of the programs and may be creating morale problems.

USAID - USAID should provide written endorsement of the construction/renovation proposed by the GOB, and should facilitate approval. Site inspection should be conducted by the Project Manager to ensure appropriate progress and provision of supplies and equipment. USAID should strongly promote the decision to use ESF monies and if necessary, should prepare a written memorandum to that effect.

PRAGMA/MCD - Pragma/MCD should work closely with the NMCS and the AACP to design and equip the new maintenance, office and storage facilities. Supply manifests should be provided by the Management Unit and procurement schedules should be facilitated.

ISSUE 2E: Alternative control - Operations and applied field research

The Project Agreement calls for operations research and applied field research for vector control throughout the project. Very little entomological or epidemiological research has been conducted. It is doubtful that short-term efforts will significantly improve the operational impact of the program.

Recommended Actions

GOB - The GOB should assign priorities to project needs in applied field and operations research. Particular attention might be given to insecticide susceptibility tests and selective spraying of villages. A detailed long-term plan for exploring the operational utility of alternative approaches to vector control should be developed by GOB personnel. Operations research in WS/S also is critical in terms of use and appropriateness of well-sites within a community. Officers of WASA, NMCS, and AACP should develop priorities in view of the problems in their respective programs. They should work closely with their Pragma/MCD counterparts in the development and design of these activities.

USAID - USAID should endorse the idea of improved operations through research and project monitoring. When Technical Assistance (TA) is required, USAID should critically review the proposed scopes of work and credentials of proposed candidates. Recurrent TA is suggested, since one-time efforts usually have little enduring impact.

PRAGMA/MCD - Pragma/MCD should work closely with the COB to develop a prioritized, time-phased list of operational and applied field research activities. Research areas include insecticide resistance monitoring, local compliance with residual spraying, entomological investigations, epidemiological evaluations, source reduction activities, feasibility of larval control, local water use practices, water quality/potability indicators, biological control of vectors, the role of the community in maintenance of water supply, and others as appropriate.

The team cannot emphasize enough the need for prioritized and directed efforts. Complementarity of investigations should be explored at all times. The Chief of Party should spearhead the development of these research efforts within the MOH and MNR, and provide detailed written documentation to the GOB and USAID on their purpose, rationale, design, priority, link to other project activities, and expected outcomes. Expert technical assistance should be recommended as appropriate.

RECOMMENDATION 3: MNR-MOH TRANSITION RESPONSIBILITIES AND ADMINISTRATIVE RELATIONSHIPS - It is recommended that MNR and MOH develop an organizational structure and a management plan which fully integrates all components of a rural water supply and sanitation project. It is recommended that the MNR incorporate its community development strategies into its methods of operation. The MNR, in cooperation with the MOH, should develop a community development plan which will be used in all rural water supply and sanitation projects.

ISSUE 3A: MNR and MOH integration and cooperation

The complexities and institutional burdens normally experienced by ministries in development projects have been magnified by the impending switch in portfolios of rural water supply and sanitation from the Ministry of Health (MOH) to the Ministry of Natural Resources (MNR). It is critical that this transition period be viewed as an opportunity to redefine ministerial roles, build on interministerial relationships, and focus the project on community participation and institutional self-sufficiency.

Incorporation of rural water supply and sanitation into the Water and Sewage Authority (WASA) will require a broadening of WASA's strategies and responsibilities to include community participation and rural development. The MOH should continue to have major responsibilities in the rural

water supply and sanitation program through the Public Health Inspectorate (PHI) and district health teams (DHT).

The PHI and DHT should continue to participate in the identification and selection of priority project villages, based on environmental health criteria, epidemiological data and social conditions. The PHI should continue to assist in developing the annual rural water supply status report. He should ensure sampling and analysis of well water and rural water supplies the Water Quality Laboratory in Belize City. Community participation and health education components of the project should continue to be spearheaded by the MOH's District Health Educators and Public Health Inspectors.

Recommended Actions

GOB - The MOH with the MNR should develop an organizational structure and management plan which fully integrates WASA, the MOH's health education functions, the Public Health Inspectorate, and MOH's rural water quality function. This plan should include new scopes of work, the identification of project team counterparts, and necessary management control systems to promote the implementation of the project.

USAID - USAID should assist and support the GOB in defining the organizational management needs for the project. USAID should serve in an advisory role during the MOH-MNR transition to enable Pragma/MCD and the GOB to move together into the rural communities in an organized and integrated fashion.

PRAGMA/MCD - The project team should actively cooperate with GOB in developing these plans by assisting in the development of program status reports, project plans of action, and project strategies.

ISSUE 3B: MNR incorporation of community development strategies and MOH/MNR/WASA community development orientation

The implementation of rural water supply and sanitation projects is highly dependent on community participation. Responsibility for community participation components of the project will now lie in both MNR/WASA and MOH. Presently there is not an integrated approach to community participation. Lessons learned from other projects have not been analyzed and shared between these two implementing agencies nor by the Pragma/MCD team. The need exists for MNR/WASA and MOH to share information on community development

approaches and to design an orientation program for field staff and management level personnel.

Recommended Actions

GOB - First, MOH and MNR/WASA ministry and management personnel should participate in a two-day, in-service orientation and training course on community participation in water supply and sanitation projects. This orientation session should pre-date the development of the community participation plan, and should occur within the first eight weeks of the new BZ Fiscal Year (i.e., by May 1, 1987).

Second, the GOB (through MNR/WASA) and the MOH should develop a community development plan for rural water supply and sanitation. This plan should specify how WASA will mobilize the communities and how it will work with village leaders in implementing a self-sufficient program in rural water supply and sanitation. The plan should follow the recommended national community development workshop in Fall 1987.

USAID - USAID should assist in the design and implementation of the orientation session and in the community development plan by assisting in the identification of resources (e.g., Belizean and expatriate community development expertise, appropriate field demonstration sites, etc.). USAID also may assist in the coordination of visits as appropriate.

PRAGMA/MCD - Pragma/MCD should develop an in-service orientation and training program in community development for MOH and MNR/WASA, to be held within the first eight weeks of the new fiscal year (BZ FY 1987). (A more comprehensive national community development workshop and the preparation of a community development field manual are recommended for later in the year. The project team should assist the GOB in developing the community development plan by providing technical assistance and support staff as appropriate.

RECOMMENDATION 4: DELEGATION OF AUTHORITY AND DECENTRALIZATION OF ACTIVITIES - It is recommended that increased delegation of authority be considered throughout the IPTBH project. The team strongly endorses the creation of a Deputy Director Position for vector-borne disease control. This individual should assume his/her duties prior to the beginning of BZ FY 1987. Increased decision-making at the district level should be considered by both the MNR and MOH in the course of FY 1987 and related directives concerning

National Action Plans submitted over the life of the project.

ISSUE 4A: Participation of National Project Coordinator/Malaria Program Director in project implementation

The amount of attention devoted to the IPTBH Project by the Project Director/Malaria Control Service Director has been insufficient. The Project Director, due to an overburden of responsibilities at the MOH, has been unable to participate actively in critical project management decisions. This has significantly impeded project progress. In discussions with the Project Director and the Permanent Secretary for Health, the position of an Administrative Assistant for the Project Director has been identified within the MOH management structure. The team believes that this position is critical. The team strongly encourages the MOH to assign this additional position to the Project Director.

The team also understands that a Deputy Director position for vector control has been created and will be filled by the beginning of FY 1987. The team believes that this is a very positive step because it is impossible for the Project Director to function effectively as NMCS Director in addition to his other governmental duties. The expedient assumption of duties by this individual is highly endorsed.

Recommended Actions

GOB - The GOB should rapidly approve the position of Deputy Director for Vector-Borne Disease Control. A detailed job description should be developed which includes explicit descriptions of responsibilities, day-to-day authority in the area of vector control, identification of counterparts in other Ministries (and in Pragma/MCD and USAID), and enumeration of actions which require specific clearance by superiors. The choice of the individual and the detailed job description should be transmitted to the USAID Representative in the form of a memorandum from the Permanent Secretary, Ministry of Health, before the beginning of BZ FY 1987.

USAID - USAID should stand ready to provide technical and administrative assistance to the GOB in the development of the job description for the Deputy Director position. USAID should pay particular attention to the delegation of authority contained in the position description and should judge whether the responsibilities are broad enough to avoid bottlenecks in administrative clearances. USAID's reaction

to the job description should be transmitted to the GOB in writing immediately after receipt of the job description memorandum. If official notification of the position is not received by the beginning of the fiscal year, every effort should be made by USAID to encourage swift GOB action. The team believes that this position, with appropriate delegation of authority, is critical to successful project implementation.

PRAGMA/MCD - The Pragma/MCD Management Unit should provide support to the GOB in development of the job description. The Chief of Party should assume the initiative and transmit to the Project Director a memorandum which provides Pragma/MCD's suggestions concerning the Deputy Director position. This memorandum also should explain the Pragma/MCD relationship to the new Deputy Director. A copy of this memorandum should be sent to USAID. Pragma/MCD should provide as much orientation as possible to the new Deputy Director.

ISSUE 4B: Decentralization of activities and authority (district level emphasis)

The issue of decentralized decision-making at the district level was raised repeatedly in the field, particularly in relation to vector control activities. The team was concerned with an apparent separation between district and central activities. The team feels that day-to-day decisions do not require central approval in many cases, and that some degree of decentralization in vector control, and in WS/S activities should be explored.

Recommended Actions

GOB - Both the NMCS and the AACP should explore the decentralization of decision-making at the district level. Compliance, especially in Mennonite communities, has been problematic, and decisions for spraying could be made in the field. The new Deputy Director should consider looking into the decentralization of decision-making and development of some district-specific activities as trials. Similar trials in decentralization should be considered within the MNR and WASA.

USAID - USAID should offer technical information as appropriate. Experiences from other A.I.D.-supported projects might be provided to encourage workable decentralization strategies.

PRAGMA/MCD - Pragma/MCD should develop specific guidelines for decentralization in VC, WS/S, and HE. All material transmitted to the GOB should be copied to USAID.

ISSUE 4C: Logistic and material support

Decentralization encompasses a great many issues, including logistic and material support at the district level. The team acknowledges that Belizean administrative systems cannot be expected to change overnight. The team feels it is important, however, that the GOB consider increased support to its field units.

Recommended Actions

GOB - The GOB should begin to develop a functional plan for improved supply and distribution at the district level. The distribution of supplies and coordination of activities is frequently slow due to delayed approval from central offices. Coordination of transport is important and initial plans should be developed to allow District Supervisors to plan their activities on a monthly basis, with the flexibility to change plans because of local circumstances. The GOB should also develop training strategies for district personnel for both in-country and participant training as appropriate.

USAID - USAID should endorse the decentralization of supply and distribution decisions and should request that the GOB develop tentative strategies by mid 1987.

PRAGMA/MCD - Pragma/MCD should assist the GOB in developing these strategies and should share its first-hand experience. These issues could be discussed in staff meetings and monthly coordination meetings. Pragma/MCD staff should work closely with their counterparts to foster project integration and improve the efficiency of district offices.

RECOMMENDATION 5: COMMUNITY DEVELOPMENT AND PARTICIPATION - It is recommended that greater attention be paid to community development and local involvement in project implementation. Improved training and increased outreach is necessary to maintain an active commitment to this project goal. Community participation and self-sufficiency should be emphasized and actively sought by all project technical and administrative personnel.

ISSUE 5A: Villager awareness of project

Team members visited selected priority villages and district headquarters in all six districts. The team found moderate-to-high levels of understanding about the project in both vector control, and water supply and sanitation. Villager awareness and enthusiasm is most evident in WS/S but some problems exist in incorporating local involvement into technical planning and the approach to building local self-sufficiency over the long run. Less understanding of the project appears to occur among women and children. Mayan Indians appear to understand the project least.

Recommended Actions

GOB - Close collaboration with Pragma/MCD in planning community development and awareness strategies is essential. It is important to develop integrated and coordinated plans of action to increase villager awareness of the project significantly and for health education and community involvement generally. Every opportunity should be taken to coordinate village awareness plans with other projects in Belize. A representative should be appointed who will be responsible for promotion and management of community participation.

USAID - USAID should endorse the efforts to raise community awareness and inform the GOB of successful community development activities occurring in other current and previous A.I.D.-funded development projects.

PRAGMA/MCD - Pragma/MCD should assist the GOB in developing integrated plans of action for community awareness and involvement in both vector control and WS/S. This must become a coordinated team effort. Vigorous attention must be paid to operational strategies to overcome socio-cultural barriers, and to redefine constraints to effective project implementation. The HE/CD Specialist should assist the GOB in developing social indicators for villager awareness and participation. These indicators should be used as guides for future planning, specifically in BZ FY 88 and thereafter, and for future project monitoring and evaluation functions.

ISSUE 5B: Attention to local knowledge, attitudes and practices (KAP) and to available socio-cultural information and resources

The team noted more attention to socio-cultural variables (both as constraints and opportunities) necessary to generate creative and appropriate community involvement strategies is warranted.

Recommended Actions

GOB - The GOB should encourage the flow of socio-cultural information from the Ministry of Social Development (MSD) and other resources to the project personnel as appropriate. The GOB should also encourage sensitivity of its staff to the constraints and opportunities of local knowledge, attitudes and practices also should be emphasized by supervisory personnel. The participation in workshops and seminars noted elsewhere in this report also should be considered.

USAID - USAID should endorse the development of a central information repository for community development for use in this and other projects. An appropriate location is at the PAHO offices or at the University Center (University of the West Indies, Belize Campus) in Belize City. USAID should also encourage the use of the social science expertise available in Belize for the conceptualization, planning, training, implementation and evaluation of IPTBH project activities. Such expertise is readily available at the University of West Indies in Belize City.

PRAGMA/MCD - Pragma/MCD staff members, particularly the HE/CD Specialist, should carefully review locally available written materials and become more closely acquainted with local resource persons. Spanish language lessons should be continued by appropriate Pragma/MCD staff.

ISSUE 5C: Timing of local involvement activities

The team has observed that the timing of local involvement is problematic from the standpoint of staff-initiated activities and for maintaining villager interest and enthusiasm over the long run. Awareness of socio-economic and ecological factors (e.g., times when laborers are at home and available, times of intense farm work) is critical to planning staff activities in the field and in maintaining their efficiency and effectiveness. Likewise, lag-time between the raising of villagers' expectations and

enthusiasm and the delivery of technical benefits (e.g., latrines, improved water supply) merits direct attention.

Recommended Actions

GOB - The GOB should be sensitive and responsive to the use of a Project Timing and Scheduling (PTS) system for planning, implementation and monitoring, as a means to ensure staff attention to community participation and self-sufficiency. The development and use of a PTS system should be encouraged. GOB staff job descriptions and work requirements should be modified to accommodate weekend work schedules and holidays where appropriate.

USAID - USAID should monitor project activity plans to ensure that project supplies and procurement schedules are coordinated with the PTS management system.

PRAGMA/MCD - The Pragma/MCD team should develop step-by-step procedures for implementing both the socio-educational and technical components of the project. Maximum attention should be devoted to timing and to coordination of efforts. This requires particularly close coordination among the HE/CD Specialist, DHEs, WS/S Specialist/ DCs, and their associated staffs. Thus, Pragma/MCD should assume an active role in helping the GOB encourage for local villager input into IPTBH activities. Pragma/MCD should assume major responsibility for the development and use of a Project Timing and Scheduling (PTS) system (including wall charts for tracking progress, at both the central and district levels). It is the responsibility of the Chief of Party to coordinate the development of the PTS system and charts and their use as a tool for planning, implementation and monitoring.

ISSUE 5D: Using villager opinion and local health indicators for determining priority project villages

The team observed insufficient opportunities for active and meaningful villager involvement in choosing the sites for water system inputs (wells and handpumps). Similarly, it is felt, information on local health status (incidence of disease, epidemics, etc.) is not being adequately used in choosing priority villages and in siting water systems.

Recommended Actions

GOB - MNR/WASA, MOH and Pragma/MSD staff should attend project-relevant community development and health education

workshops, training courses, and seminars. The GOB should request the services of an experienced community development consultant to assist the HE/CD Specialist in the task of implementing such opportunities.

USAID - USAID should endorse villager participation and staff training opportunities. USAID should advise Pragma/MCD on potential participant training opportunities for a qualified Belizean to study community development.

PRAGMA/MCD - Pragma/MCD should help develop and share new criteria for village selection with A.I.D. and GOB staff, and especially with village leaders. A more functional methodology and system of village selection should be developed by Pragma/MCD in the near future. Pragma/MCD staff should take the lead in soliciting villager participation in the field for the planning project activities. Health education and community development are particularly important, as are rural water supply and sanitation efforts, i.e., siting wells and handpumps. Pragma/MCD should design workshops to include more information on community participation in development.

ISSUE 5E: Formation and role of the village health committees (VHCs)

By definition, the VHC is a sub-committee of the Village Council which, in turn, is represented by the Village Chairman on the District Board. Organization of the Council and the Board are the responsibility of the Ministry of Social Development (MSD) through the district level Community Development Officer (CDO). The team has observed that considerably more attention should be paid to improving coordination of the IPTBH project activities with those of the MSD and CDO in the districts and villages. Likewise, members of the VHCs should be encouraged to share information with their counterparts in other villages, to encourage the spread of successful health education and community participation practices.

Recommended Actions

GOB - MOH and MNR staff should try to coordinate more closely with the CDOs in the districts to promote better information sharing. Careful attention should be paid to the formation and functions of the VHC, taking into account such things as encouraging more female participation, ensuring a close link between the VHC and the Village Council. The VHC should have an active voice in decisions regarding the timing and siting of project technical inputs,

especially in rural water supply. The VHC should become the local forum for integrating all related health services in the community. The GOB should encourage VHCs to take an active part in exchanging ideas between villages. Villages in which successful activities have occurred should be visited by neighboring villagers and VHC members. Village leaders and spokespersons should be encouraged to visit new project communities to discuss and demonstrate the benefits of project activities.

USAID - USAID should serve as a linking agency between the IPTBH project, other donors and NGO community development and health projects, to strengthen the role of the VHC in project implementation.

PRAGMA/MCD - Pragma/MCD should take the lead in encouraging and strengthening the involvement of VHCs in project activities (with due consideration for socio-cultural and economic differences between communities). The Pragma/MCD Chief of Party should oversee and guide this effort, and the project staff should work as a team to support and encourage greater interaction with VHCs.

ISSUE 5F: Utilizing District Boards (Councils) for community development

Each district has a council of Village Chairmen, called a District Board, that meets monthly. The formation and definition of the District Board falls under the jurisdiction of district-level Community Development Officers, from the Ministry of Social Development. The District Board is an ideal forum to introduce the IPTBH project and to create awareness among village leaders. The team feels that District Boards represent an opportunity that should be explored.

Recommended Actions

GOB - The MSD should encourage the Community Development Officer (CDO) to establish and maintain reciprocal contact with MOH, MNR/WASA and Pragma/MCD personnel at the district level.

USAID - USAID should provide encouragement at the central level to utilize the District Board forum as effectively as possible. Joint trips to Board meetings by MOH, MNR/WASA and Pragma/MCD and USAID staff may be considered.

PRAGMA/MCD - The Pragma/MCD staff should take the initiative in utilizing the District Board forum to enhance communications and local awareness of the project. Pragma/MCD should keep the District Board members, and the CDOs, fully informed of local project activities. It should try to ensure that the District Board members are given every opportunity for involvement, particularly in local level planning and implementation.

ISSUE 5G: Community development assistance,
workshop and training manual

The team observed the need for increased awareness of health education and community development skills among the technical personnel. Given the anticipated shift of the WS/S component from MOH to MNR/WASA, and the relative inexperience of the latter in rural development techniques, the need for sensitivity to and conceptual tools for community involvement is evident. A workshop for MNR personnel should be developed to strengthen WASA's district level capability in community health and participation. Health educators, community development advisors, and technical staff from other donor and NGO projects in Belize should be invited to participate.

Recommended Actions

GOB - The GOB should support the participant training of at least one Belizean associated with MNR/WASA in social science and rural community development. This individual, on posting to WASA after training, would be responsible for coordination of rural community development strategies with the technical rural water supply and sanitation activities of WASA over the long term. The MNR, MOH and MSD should ensure that all appropriate staff at the central and district levels attend the community development workshop proposed in this recommendation. This workshop could also include vector control and HECOPAB participants.

USAID - USAID should assist the GOB and Pragma/MCD in identifying participant training opportunities for at least one MNR/WASA candidate in social science and rural community development. USAID should recommend the services of a short-term social science/community development consultant to assist in organizing the workshop and to provide general guidance in community development (Annex IV).

PRAGMA/MCD - Pragma/MCD should assist the GOB in planning and conducting a rural community development workshop. Key MNR/WASA, MOH and MSD staff from the district and national

levels should participate, as should other Belizean professionals where appropriate. Principal health education and community development staff also should be invited from other NGO and donor projects. The responsibility for workshop coordination should be shared by the HE/CD Specialist and a short-term consultant (Annex IV). The workshop should be organized before October 1987, and should be no less than four days in length, with at least one full day for field excursions and observations of exemplary community participation, particularly in the CARE project area. Pragma/MCD is encouraged to assist the GOB in developing a field manual for community participation based in part on the workshop experience, and on general principles of community development. In the near future, Pragma/MCD should identify a suitable candidate for the technical consultancy (Annex IV).

ISSUE 5H: Linkage with Peace Corps/Belize

In discussions with the Peace Corps/Belize Country Director, the team was encouraged by the opportunities that exist in linking community development and health education project activities with Peace Corps Volunteers in rural villages. The Peace Corps appears eager to place its volunteers in traditional settings (initially in Corozal, Orange Walk and Toledo Districts, but by Summer 1988 in Stann Creek, Cayo and Belize Rural).

Recommended Actions

GOB - The GOB should consider requesting volunteers specifically for community development and health education positions in support of IPTBH project goals and activities in rural communities.

USAID - USAID should explore endorsing Peace Corps involvement in the IPTBH project, if requested by the GOB, particularly concerning health education and community development aspects of the WS/S component.

PRAGMA/MCD - Pragma/MCD should consider exploring the potential relationship between Peace Corps and the IPTBH project if requested by the GOB. If all parties are in favor of Peace Corps participation, the project staff should consider preparing brief training materials for use in PCV orientations.

RECOMMENDATION 6: HEALTH EDUCATION - It is recommended that the design, production, dissemination and use of health education materials be speeded up and expanded throughout the project. HECOPAB should be given a higher priority and visibility in this activity. Health education staff workshops, training and outreach activities, and coordination with other health projects in Belize should be given greater attention.

ISSUE 6A: Educational materials

The team observed little evidence of structured planning for the production, distribution and use of printed materials pertaining to health education or encouraging villager participation in community development. It was not clear how frequent and effective radio programming for health and project awareness may be. More planning and use of media materials should be explored. The role of HECOPAB in the production and distribution of these materials is essential.

Recommended Actions

GOB - HECOPAB is the key institution for the production of media materials for health education in support of both the rural WS/S and VC components of the project. MOH, MNR/WASA and Pragma/MCD staff are recognized as the principal groups to disseminate materials in the villages. HECOPAB activities should be coordinated with project planning and staff activities in the communities. These materials must be sensitive to rural socio-cultural attitudes, beliefs and understanding, and must be field-tested prior to their use.

Support for HECOPAB's media production operations should be sought from all possible sources. Advice and assistance from allied health and community development projects nationwide should be solicited. The GOB, through the appropriate ministries, is also encouraged to broaden the job descriptions of MOH and MNR field and district staff (e.g., DHE, Carpenter-Foremen, DC, vector control teams, WASA field teams, etc.) to include the dissemination of health education materials in the villages.

District staff should be encouraged to take advantage of all opportunities to disseminate health education materials and information in the villages. (One suggestion, following the example of the CARE project, is to encourage villagers to attach health education posters and flyers to the inside doors of the VIP latrines where they are likely to receive considerable attention.)

USAID - USAID should encourage the use and support of HECOPAB in all on-going and future A.I.D.-funded health related projects in Belize. The use of Special Activity Funds, (through the Peace Corps), for HECOPAB materials production is endorsed.

PRAGMA/MCD - The HE/CD Specialist should continue to take the lead in working closely with the HECOPAB director and staff. A sequential plan for materials production and dissemination should be designed based on needs of the project and the socio-cultural circumstances of the country. The HE/CD Specialist should design a strategy for improving the dissemination and use of media materials. The social identity pre-existing local, social and religious organizations, i.e., women's groups, cooperatives, schools and churches, Peace Corps Volunteers and should prepare a list of such organizations by district and village. Key contact persons and the time and scope of activities with which health education and community development activities may be linked. Frequent contact and coordination with these individuals is encouraged. Pragma/MCD is encouraged to institutionalize this sort of integration and coordination in all districts.

ISSUE 6B: Enhanced HECOPAB outreach

The impact of HECOPAB outreach in the districts and villages can be enhanced substantially by paying more attention to staffing, staff training, transport, communications and coordinated plans of action. This requires close association and coordination between the IPTBH project and other projects involved in health and community development.

Recommended Actions

GOB - The GOB should provide one additional position at HECOPAB, for outreach, coordination, and staff assignments. The HECOPAB should prepare semi-annual plans for production and outreach in direct association with the IPTBH and other projects (NGOs). HECOPAB may wish to consider developing a simple, bi-monthly newsletter on health education and community development which incorporates comment on IPTBH project and other NGO health and community development activities.

USAID - USAID should support requests for additional equipment through the Special Activity Fund. It should endorse the recommended additional position at HECOPAB, through the IPTBH project.

PRAGMA/MCD - Pragma/MCD should make every effort to coordinate project transportation to the districts to better accommodate HECOPAB outreach goals and needs. The HE/CD Specialist should assist the HECOPAB director and staff in obtaining training and direction from all available sources. Pragma/MCD should coordinate its planning with that of HECOPAB to integrate all project activities with the production, dissemination and use of media materials.

ISSUE 6C: HECOPAB equipment, supplies and workspace

The team observed the need for more equipment and supplies in support of the HECOPAB media production operations. The team also noted that the MOH should consider devoting health education materials and equipment directly to HECOPAB. HECOPAB should become more autonomous in its provision of services and should not be viewed as a technical extension of divisions such as the NMCS and the AACP.

Recommended Actions

GOB - The HECOPAB director and staff should develop a list of audio-visual equipment and supplies. The list should be circulated to all associated donor agencies and NGOs for potential funding. Requests for support should also be solicited from other sources (e.g., PVOs, service organizations, business and industry, and multilateral organizations, etc.) in and outside of Belize. The GOB should make a larger workplace available to HECOPAB; office space should be chosen which is well lighted, well-ventilated, and safe for the sophisticated equipment that is used.

USAID - USAID should endorse the need for additional equipment and space for HECOPAB and provide written support as appropriate.

PRAGMA/MCD - The project team should encourage HECOPAB expansion and assist in the identification and budgeting of equipment and supplies needed by HECOPAB, and should aid HECOPAB in seeking other outside sources of assistance.

ISSUE 6D: National health education workshops

The team observed the need for annual national health education workshops as a forum for interaction and information exchange between the IPTBH project and other donor and NGO health projects. The need for annual forums

should be determined by the parties concerned. Other forums, such as monthly and/or quarterly meeting should also be considered.

Recommended Actions

GOB - The GOB should require appropriate staff, particularly the District Health Educators and other MOH and MNR/WASA staff on the project, to attend annual health education workshops and to participate as their experience suggests in giving papers, discussing innovative activities or leading tours and discussion sessions.

USAID - USAID should assist in development of the annual health education workshops as appropriate. The monthly meeting at USAID should become a forum to express issues of concern and plan annual health education workshops.

PRAGMA/MCD - The HE/CD Specialist should take the lead in organizing an annual health education workshop. Pragma should invite health educators from throughout the country, the MOH, MNR and other projects, to participate in the planning, implementation and evaluation of the annual workshops. Plans for this activity should be carefully prepared in association with HECOPAB. Pragma/MCD staff should target the objectives of the workshop to DHEs and other field based health educators. The experiences, successes, frustrations and lessons learned of these field staff should become a part of the workshop agenda. The workshop should structure formal presentations on current issues in health education, with direct application reference to the Belize system.

RECOMMENDATION 7: PROJECT INTEGRATION - It is recommended that more attention be paid to project communication, coordination of activities and integration of components. More sector-wide involvement should be pursued and the role of the Pragma/MCD Chief of Party in these functions should be strengthened.

ISSUE 7A: Communications and project coordination

The team feels that communications within the project are weak (between team members, staff and counterparts, and between the districts and the center). This results in less than optimal project planning and coordination. Considerable attention to improve communications and coordination at all levels is essential for improved efficiency and the long range achievement of implementation targets. Improved

Recommended Actions

GOB - The GOB should encourage PAHO to become more involved in the project by invitation to Monthly Project Coordination meetings, staff seminars, workshops, and field trips. PAHO staff should be regularly advised of project activities, and should be included in the normal routing of project planning and implementation memoranda, plans and reports, as appropriate.

USAID - USAID should encourage PAHO involvement as appropriate.

PRAGMA/MCD - The Pragma/MCD Chief of Party should seek closer association with PAHO staff. The HE/CD Specialist should make more frequent use of the PAHO library.

ISSUE 7C: Integration of policy and strategies for implementation

The development of a project integration strategy should be pursued in the near term. This strategy should enunciate areas of technical overlap and the opportunities to enhance project technical and community development coordination.

Recommended Actions

GOB - With the anticipated shift of the WS/S responsibility from MOH to MNR/WASA, the GOB should act quickly to develop and implement strategies for integration of WS/S technical and community development and health education inputs. It should actively encourage and promote the further integration of all components of the project, i.e., vector control and WS/S with health education and participatory community development.

USAID - USAID should monitor project activity reports and plans to ensure integration of technical, health education and community development components.

PRAGM7/MCD - The Chief of Party should enunciate areas of technical overlap and act on the opportunities to meld functions and activities in all components of the project. He should facilitate the design and use of Project Timing and Scheduling (PTS) charts.

**ISSUE 7D: The critical role of the Pragma/MCD
Chief of Party**

The Chief of Party has perhaps the most important role to play in facilitating a more complete integration between all component parts of the IPTBH project. He should proceed to do so within the mandate of the project and in the spirit of achieving implementation targets and project goals.

Recommended Actions

GOB - Open channels of communication.

USAID - Endorse project integration.

PRAGMA/MCD - The Pragma/MCD Chief of Party should monitor and coordinate community development and participatory activities across the range of project components. He should encourage more attention to integrative factors and responsibilities throughout the development and presentation of the Pragma/MCD annual work plan and coordinate with USAID on the development of a suitable work plan format and contents. The Chief of Party should actively promote closer coordination within the IPTBH project and with other health-related project activities and NGOs in Belize.

**ISSUE 7E: Rural water supply self-sufficiency and
linkage with health education and
sanitation**

The policy regarding the relative self-sufficiency of rural water supply at the village level needs to be clarified. Clearer policy linkages concerning project components WS/S and health education/community development need to be established.

Recommended Actions

GOB - The GOB should move quickly to develop policy and plans so as to facilitate the smooth transition of WS/S activities from MOH to MNR/WASA. It should ensure that WASA follows an established policy which encourages villager participation and self-sufficiency.

USAID - USAID should promote WASA involvement in rural water supply self-sufficiency and health education/community participation.

PRAGMA/MCD - Pragma/MCD staff should work closely with MNR/WASA officers and staff to develop a strategic plan for activities in the rural sector which combines water, sanitation, health education and community participation. This plan of operations should be available by January 1988.

RECOMMENDATION 8: STRATEGIC APPROACH TO PROJECT GOALS - It is recommended that the project staff members incorporate a problem-solving approach to their management style and assist in developing appropriate long-term strategies for community involvement in water supply and sanitation, and in vector control. The project staff should develop a strategic approach which is not limited by any one external factor. The strategies should emphasize alternative resources, processes, and schedules.

ISSUE 8A: Strategic planning

The environment in which the IPTBH project is implemented is constantly changing. Certain factors such as late procurements, changes in ministry portfolios, and lack of transport appear to have impeded the Pragma/MCD management team's activities. These same factors, however, could also be viewed as opportunities to focus on community mobilization and development of locally accepted health education materials and community participation methodologies.

The Pragma/MCD project team needs to capitalize on community action opportunities over the life of the project. It needs to identify specific goals, objectives, problems and develop practical solutions which can be implemented at the local level. This strategy can be best achieved by encouraging communication and information sharing among project officers.

Recommended Actions

GOB - The GOB should incorporate strategic planning into their National Plan of action and into the Five-Year Health Plan to better emphasize community participation, self-sufficiency, and field-oriented problem solving.

USAID - USAID should assist in promoting creative problem-solving and emphasize stronger efforts in the field and smoother technical and administrative operations.

PRAGMA/MCD - Pragma/MCD should institute a team approach to assist the GOB. It should develop a strategy to avoid constraints and maximize opportunities for project implementation.

ISSUE 8B: Follow-through strategies at the local level

The team observed that more direction towards building self-sufficiency in the communities and/or strengthening local institutional capabilities is required. It appears to the evaluators that "project philosophy" is being molded more by the constraints and limitations than by challenges and opportunities. A major factor in developing creative strategies approach is continued follow-up in the villages. This requires teamwork and advance planning. (For example, problems presently exist in the latrine component of the project, where the individual home owners are not constructing the top structures over the latrines. Interest in the program begins to wane when the Carpenter-Foremen leave the villages after assisting in the technical construction of the collars, slabs and risers. VIP latrines are not functional and should not be considered an appropriate solution until an adequate top structure is in place. This requires a longer term perspective, i.e., plans of action for continued follow-up by the PHI, DC, DHE and the Carpenter-Foreman. Obviously, the more latrines started, the more effort must go into follow-through. Therein lies the challenge: How to incorporate Village Health Committees into the follow-up activities.)

Recommended Actions

GOB - The GOB should encourage staff awareness of the long-term benefits of alternative methodologies and technologies in design and follow through for community development.

USAID - USAID should assist in obtaining resources and facilitate follow through strategies at the village as appropriate.

PRAGMA/MCD - Pragma/MCD should set in place mechanisms and strategies to institutionalize alternative methodologies and follow-up activities. Pragma/MCD should encourage the GOB to explore the CARE model for continuous reinforcement of village health committees by district training workshops and seminars.

ISSUE 8C: Attention to incomplete projects and activities

The team observed several examples of incomplete past water and sanitation projects within the project area. Completion of these projects could have positive implications for the project and for community involvement.

Recommended Actions

GOB - The GOB should inventory past water supply and sanitation projects and determine which of them are not presently being used and/or which need rehabilitation. An analysis should be undertaken to determine the reasons why some failed and some succeeded. A list of these projects with an accompanied "lessons learned" statement should be made available. These projects should be prioritized using the same criteria as used for prioritizing new projects.

USAID - USAID should assist in acquiring this information for GOB as appropriate.

PRAGMA/MCD - The Pragma/MCD project team members should incorporate prioritized projects into their action plans and make project resources available for the implementation of rehabilitation/completion efforts.

ISSUE 8D: Information sharing

Many opportunities exist to involve field office and management level staff in training programs and seminars. Consultants involved with a wide range of activities associated with water supply and sanitation, social, health, and development research frequently visit Belize. Local Belizean scholars and researchers are continually available to provide information formally and informally to the project.

Recommended Actions

GOB - MNR and MOH should assist in the coordination of seminars and sharing of reports by technical consultants working in all sectors of the project.

USAID - USAID should request that all A.I.D.-funded technical consultants present seminars when appropriate to GOB, the IPTBH and other donor-assisted project staff. A copy of all final reports and evaluations should be routed to various interested GOB and project personnel.

PRAGMA/MCD - Pragma/MCD should use the professional resources and consultant activities associated with specific technical assistance to conduct seminars and in-service training. The Pragma/MCD project team should assist in coordinating transport and costs for project counterparts to attend these in-service training programs, seminars, etc. Pragma/MCD should also encourage and support the formal publication of innovative findings and techniques by its own and staff and by counterpart staff, based on project activities.

RECOMMENDATION 9: INTERNAL MONITORING AND PROJECT TRACKING-
It is recommended that project monitoring indicators be developed for NMCS, AACP, WS/S, Health Education, and Community Participation components of the project. It is recommended that a project management system be developed using this information.

ISSUE 9A: Project monitoring and tracking

A need for coordination of activities within the IPTBH project has been observed by the evaluation team. The team also observed the lack of a framework for monitoring and evaluating project progress. A management tool needs to be developed to coordinate actions and interventions at the central, district, and village levels. The team feels that activities should be tracked on a daily basis to monitor progress and coordinate logistics.

All project personnel should have reporting responsibilities to ensure their mechanisms for current internal monitoring and tracking of impact(s) are in place. No specific plan for internal monitoring exists. The many project component activities (i.e., community participation, health education, site selection, construction, operation, and follow-through) need to be integrated and ordered.

The team observed that considerable variation exists in implementation strategies and local cultural conditions within the project areas. It is recognized that some flexibility in this PTS system will need to be incorporated into its design and implementation.

Recommended Actions

GOB - The GOB should coordinate the development of monitoring indicators for the NMCS, AACP, rural WS/S, Health Education and Community Participation components. MOH and

WASA in particular should coordinate with Pragma/MCD in the development of this project tracking and monitoring system, and should encourage all staff members to use it as a project planning and monitoring tool.

USAID - USAID should provide assistance in the development of project monitoring indicators and a project tracking system, and should request that Pragma/MCD develop a PTS system as part of its annual plan of action.

PRAGMA/MCD - The Pragma/MCD team members, through the Chief of Party, should be responsible for the development and implementation of the PTS system. They will be responsible for updating and tracking project information and for identifying opportunities to use this information in the management of the project. Pragma/MCD should consider the use of a technical consultant to assist in this task. The PTS system should be in place shortly after the start of BZ FY 87; the use of the PTS system as a planning and monitoring tool should be evident in all future activity reports.

RECOMMENDATION 10: DATA MANAGEMENT AND DECISION-MAKING - It is recommended that greater attention be paid to the collection, analysis and use of data collected in project-related activities. The use of data in decision-making should be standardized and selection of priority villages should be based on specific sets of information. Geographical reconnaissance is important to decision-making and every effort should be made to expand it within project activities.

ISSUE 10A: Streamlined data collection for decision-making

Management information has a critical role in the development process for decision-making in planning, implementation, monitoring and evaluation. Adequate sources, constructive analysis and timely application of information are critical to progress and success. The team observed that considerable time is spent in generating data, but that the process is cumbersome and could be streamlined. This observation covers the village level household surveys and the village profiles in the WS/S component, as well as the number of forms used in the vector control component.

It was observed that the collection, tabulation and use of data from household surveys and village profiles needs to be more closely integrated and coordinated by the project

staff. In particular, the team feels that much more attention should be paid to the categories of data collected and to their ultimate use in decision-making. More information on village health, and on socio-economic and ecological conditions should be used to select priority villages.

A critical element in information management is its use in decision-making. Ultimately, the formats adopted, the rationale for data collection, and the analysis and use of data must be amenable to institutionalization long after termination of the project.

Recommended Actions

GOB - The GOB should encourage feedback through the system, from village and district levels to central offices. The utility and reliability of data should be examined closely by central staff. Operational information should be sent out to district supervisors. Supervisory personnel should continue to conduct periodic or spot data reality checks and to confirm the adequacy of the data collection process. More attention should be paid to tracking the operational aspects of malaria and Aedes control such as seasonality of positive localities and compliance with insecticide spraying. All information should be collected for the purposes of future decision-making, monitoring and project evaluation.

USAID - USAID should facilitate access of Pragma/MCD staff to socio-cultural, health and technical data collected on previous or other current projects in Belize. Some sort of simple, indexed data storage and retrieval system in the USAID offices in Belize should be implemented for easy access. USAID may consider assigning one microcomputer to Pragma/MCD in order to expedite data storage and retrieval.

PRAGMA/MCD - The Chief of Party (COP) and Pragma/MCD team members should initiate a review of the overall decision-making process and information management systems. Efforts to streamline data collection forms should be given a high priority. Exploration of options for future computerization is encouraged. Use of other sources, such as socio-economic data in the villages and districts of data should be encouraged. The Chief of Party should facilitate the timely transmittal of tabulated data from the central office to the district staff and to the villages, in appropriate formats. Pragma/MCD should assist the GOB in the prioritization of intervention strategies and choice of villagers in the WS/S component. Special attention should be paid to specific

data on village health conditions, ecological constraints, socio-economic factors, and villager opinion and practice. The HE/CD Specialist should continue to streamline household survey forms. Less formal methods of obtaining information, such as direct observation and selective interviews, should be explored. Information based on villager opinion or judgement should be verified by direct observation. Pragma/MCD should make every effort to train DHEs in both formal and informal styles of data collection.

ISSUE 10B: Geographical reconnaissance

Geographical reconnaissance (GR) concerns the collection of information in specific locales and collation of the information for use in decision-making at district and central levels. Although some GR is done within the project, much more is necessary to improve the efficiency of the NMCS, AACP, and WS/S. Information should be shared within the project components and with other projects within Belize (i.e., CARE, UNICEF, PAHO).

Recommended Actions

GOB - The GOB should make every effort to promote geographical reconnaissance, especially in Corozal District. For example, maps should be prepared which indicate malaria prevalence, priority localities for WS/S, and non-compliance with project interventions. Detailed maps are being prepared of towns and villages, and this effort should be expanded. The GOB should encourage sharing of information and experience among MOH and MNR field personnel and should develop a system through which unified GR can be pursued. The GOB should have most priority areas for WS/S and problematic malaria areas well mapped by the end of FY 1987.

USAID - USAID should endorse GR as a means of improving project efficiency and achieving implementation targets. USAID should provide information of GR as appropriate and should utilize A.I.D./W information centers when feasible.

PRAGMA/MCD - Pragma/MCD should assist the GOB in prioritizing its efforts in GR and should provide technical advice in the collection and analysis of information. Pragma/MCD may wish to invite a technical expert to assist in the design and implementation of a GR system. Pragma/MCD should encourage the GOB and USAID to give GR a very high priority in FY 1987.

RECOMMENDATION 11: TECHNICAL ISSUES AND ASSISTANCE - It is recommended that technical issues be defined and ranked in order of priority, and that appropriate technical consultants be identified. The function of the water quality laboratory should be strengthened and integrated into the project; alternative water supply and sanitation technologies should be considered; more efficient vector control activities should be initiated in order of priority.

ISSUE 11A: Water quality laboratory

The team notes that the role of the water quality laboratory in the rural water supply and sanitation program is critical to the implementation of the project. This laboratory will supply information concerning the existing condition of boreholes systems, surface water, and cistern supplies presently used in the rural region. Target testing results can be used in the planning phase to select villages for rehabilitation and new water supply systems. Specifically, these data can be used to determine whether wells are being contaminated from poorly constructed, damaged, and poorly drained well pads. Similarly, field testing data, iron and hardness can be used to prioritize wells considered for rehabilitation.

The PHIs have the responsibility for ensuring that rural water supplies are safe sources of water in terms of public health. The Public Health Inspectorate is also responsible for an annual report on the condition and quality of the rural water supplies in the country. This responsibility is spelled out in the policies of the MOH. The team found that the need exists to determine the sampling frequency, sampling routes, parameters to be analyzed, procedures and protocols, and reporting requirements. The one laboratory technician presently being trained will need assistance when the program is in full operation. The critical nature of the laboratory's role in implementing the rural water program requires that a trained backup technician be available as soon as possible.

Recommended Actions

GOB - The GOB should continue to support the development of the Rural Water Quality Laboratory by posting a second water quality laboratory technician. This second technician will be trained by the existing technician. GOB should begin to budget expendable supplies to ensure that adequate resources exist to support the laboratory function at the end of the project.

USAID - USAID should continue to support the laboratory function of the project by endorsing the training of another technician and facilitating the procurement of supplies.

PRAGMA/MCD - A short-term water quality laboratory consultant (STC) should develop a monitoring and surveillance program which will result in sufficient information to allow preparation of an annual report by March 1988. The STC should incorporate a plan of action for testing existing and proposed water supplies in coordination with the district's PHIs. The STC should attempt to design a program which takes into consideration the realistic travel requirements and the minimum necessary information to ensure potable water to the rural populations.

ISSUE 11B: Technologies for water supply and sanitation

The team found that the technical alternatives historically used and presently planned for rural water supply and sanitation in the project areas need to be expanded and tested in a Belizean context. The team observed a lack of appreciation for alternative solutions in a number of instances. While the choice of alternatives in water supply and sanitation appears limited to those historically implemented by the GOB, further exploration of alternative and combined approaches is strongly encouraged.

For example: the use of gravity systems in areas where springs exist has not been fully explored. Certain villages (observed in Stann Creek and Cayo) could be likely candidates for gravity systems; however, there is little experience within MNR/WASA and MOH in spring capturing. This results in lost opportunity for alternative interventions. Conditions also exist to utilize hand-dug shallow wells with handpumps (observed in Toledo District, but applicable in some other locales within the project area). The use of photo-voltaic solar cells to drive submersible pumps should be considered as a technical solution in areas of undependable fuel supply (such as in Stann Creek). The study of the combined use of rainwater catchment systems and other sources of water should be encouraged (the popular view is that rainwater in cisterns is more desirable for drinking and washing clothes than water from other sources).

Recommended Actions

GOB - MNR/WASA should encourage their field personnel to participate in in-service technical training programs. They should develop a handbook for technical design

specifications and construction techniques which relate to conventional and alternative solutions. WASA should also fully explore and implement alternative technical solutions in appropriate villages and as an operational research activity, should closely monitor their success.

USAID - USAID should assist Pragma/MCD in acquiring information on alternative solutions and in identifying and acquiring technical assistance in this area. Central project assistance (e.g., WASH) should be considered as an information source. USAID should also encourage Pragma/MCD and GOB to apply a wider range of technical solutions, when appropriate, within the project. USAID could assist in coordinating a seminar or site visits by other NGO water supply and sanitation technical advisors.

PRAGMA/MCD - Pragma/MCD should develop and implement a workshop in alternative technical solutions for water supply and sanitation, in coordination with GOB, USAID, and other donor and NGO projects. Pragma/MCD should also consider conditions at the village level which are favorable for various alternative solutions, and then actively seek communities in which alternative solutions will be appropriate. It is suggested that a technical consultant be identified to work on alternative intervention opportunities and problems.

ISSUE 11C: Well drilling

An issue arose concerning the rationale and utility of cable drilling equipment in light of the fact that the existing rotary drilling equipment is faster and can be used in a wider range of conditions. The project design called for the pooling of drilling resources throughout the country in supplying handpumps and water supplies to the rural population. The USAID project is based on existing GOB capabilities for operation of cable drilling equipment. It had been demonstrated that this type of equipment could be operated and maintained over a long period of time. The rotary drill supplied by UNICEF in Toledo District was to be used under certain conditions, such as deeper wells, hard geological formations, and sealed aquifers.

The team observed that the rotary drill has a high frequency of down time. There is a trained mechanic, but lack of money for purchasing parts and long delivery times contribute significantly to this down time. The rotary drill, for example, has not drilled a well since October 30, 1986, and has only drilled a total of 57 wells to date in the UNICEF project. There was some evidence to suggest that the UNICEF

rig is being scheduled to drill wells associated with agricultural activities.

The cable drilling equipment, supported by the IPTBH project, includes two rehabilitated drilling rigs mounted on new chassis and one new drilling rig and chassis. Based upon experience, this would provide 150 wells a year (one week/well/rig). Other cable drilling equipment within WASA would provide extra capacity in other project districts (Corazal, Orange Walk and Toledo).

Use of the various types of drill rigs should be carefully coordinated with the readiness of each community for this intervention.

It appears to the evaluation team that the project staff, in most cases, believes that the drilling of wells is the limiting factor in the project. Very little consideration is given to long-term indicators of project success such as proper use of safe water, construction and use of latrines, and functioning Village Health Committees. The need exists to ensure that the project is not driven by technical factors but rather by community participation and self-sufficiency, and by the identification of opportunities to increase MOH and MNR/WASA capabilities to implement rural water supply and sanitation projects.

It was found by the evaluation team that the present mix of drilling equipment, if properly operating, will meet the targeted borehole requirements for the GOB rural water supply program. This suggests a need to pool all drilling resources and to pool maintenance funds to enable all drilling equipment to be operable.

A need exists for WASA drilling crews to be trained in the use of both cable and rotary drills to seal off interim groundwater levels which are unacceptable as potable sources. Conditions exist where saltwater intrusion and high levels of calcium with magnesium hardness requires sealing off aquifers to reach more acceptable sources at greater depths.

A need exists to develop subsurface geology and groundwater maps in those areas where project activities occur. Drilling logs from past operations plus those proposed in the project could serve as an immediate source of data for developing these maps. In turn, these maps could be valuable planning tools for future activities.

Recommended Actions

GOB - MNR should coordinate the drilling rigs within the various project areas based upon readiness of community, logistical factors, climatological factors, and subsurface geological considerations.

USAID - USAID should encourage the sharing of project drilling equipment, based upon well-defined planning needs, and should endorse continued training effects in well drilling.

PRAGMA/MCD - Pragma/MCD should consider scheduling a follow-up well driller technical consultant approximately one year from this evaluation. This consultant should review and evaluate the work of the drilling crews and should make recommendations for further training, if necessary. Pragma/MCD should assist the GOB in the coordination of the appropriate drilling equipment in those communities ready for well drilling. Pragma/MCD should respond in a timely manner to the technical consultant report and should initiate the procurement of necessary parts.

ISSUE 11D: Vector control

The approaches to vector control taken by the GOB for Anopheline and Aedes control are sufficient and in some instances go beyond the epidemiological needs. Aedes control is a well-organized approach of house-to-house investigations and is efficiently conducted. The prospects for the introduction of Aedes albopictus into Belize are sufficiently strong to warrant some form of surveillance at both border and port areas. It is unlikely, however, that introduction of Ae. albopictus can be prevented; some back-up actions merit consideration.

The National Malaria Control Service has promoted the control of malaria throughout Belize, but has operated the program in a malaria eradication mode. It is important that more streamlined activities, based on sound operational research and effective spray coverage, be initiated. Compliance is often a problem in Belize, especially in the Corozal and Orange Walk districts. Operations research is nonexistent, and accurate epidemiological data are lacking in many areas. Alternative interventions have been discussed but not implemented. Eradication objectives of case follow-up and a high percentage of spray coverage often waste time and money.

More effective operations are warranted to control malaria, and more applied field research is necessary to provide operational information needed to make sound decisions. The dimensions of insecticide susceptibility are unclear, and a standardized monitoring system for resistance should be considered. The use of alternative control methods, especially screens in the Mennonite communities, should be explored.

Recommended Actions

GOB - The GOB should endorse the concept of malaria control and should conduct its operations accordingly. The recommendations of Smith and Stokes regarding malaria and Aedes control respectively should be heeded, and the GOB should explore with Pragma/MCD the most productive mechanisms available to implement selectively the consultants' suggestions. Both consultants note what needs to be done for more efficient control. The GOB must decide how to implement the recommendations. The services of another STC may be utilized to help implement some of the suggestions. Administratively, the new Deputy Director for Vector-Borne Diseases should assume the lead in redirecting the NMCS toward control. Crude malaria prevalence rates were approximately 13% in 1986. With improved surveillance and treatment, this level of malaria can be maintained and/or reduced. The GOB should make every effort to identify areas of relatively high malaria and to focus efforts in those problem areas. Although Smith recommended stratification, much needs to be learned in Belize prior to the effective implementation of a sound stratification program. Investment into operational entomology and epidemiology is critical to successful stratification and improved efficiency.

USAID - USAID should encourage the GOB to endorse stratification concepts and should begin to move operationally towards more selective control and sound implementation strategies. Focal control should be emphasized by USAID as a means for more effect programming. USAID should encourage the recommendations of Smith and Stokes, and should request that the GOB incorporate these recommended approaches into its National Plans of Action. USAID should stress the need for cooperation between the NMCS and the AACP as a means to reduce recurrent costs and expand outreach.

PRAGMA/MCD - Pragma/MCD should assist the GOB and USAID in the preparation of specific control strategies, including of operational and applied field research. The Chief of Party

should focus his efforts on the strategic approaches and coordinate his efforts closely with those of the Deputy Director. One of the primary responsibilities of Pragma/MCD is to assist the GOB in the efficient operation of the NMCS and the AACP. These efforts should be reflected in Pragma/MCD reports to USAID, in Pragma/MCD annual work plans, and in the GOB's National Plans of Action. These efforts should begin in BZ FY 1987 and should be documented in the reports deliverable which USAID directs Pragma/MCD to submit.

RECOMMENDATION 12: TRAINING NEEDS - It is recommended that participant and in-country training be continued and that more emphasis be placed on WS/S and HE. Training in epidemiological and entomological surveillance also is critical. Special attention should be given to improving operational skills of district level field personnel in all project areas via workshops and specially developed short courses. Foremen and carpenters should be given high priority for training opportunities in health education and community participation.

ISSUE 12A: Training needs

The team observed that training activities are progressing well and that plans for FY 1987 apparently are on track. There have been a number of workshops and short courses for vector control support personnel and in health education. Less emphasis has been placed on training district level personnel in operational WS/S. Orientation workshops in WS/S have been recommended to strengthen linkages between WS/S, and it is the team's impression that operational training is important.

Recommended Actions

GOB - The GOB should encourage additional training opportunities and provide training schedules for central and district level personnel. GOB counterparts should work closely with Pragma/MCD to prioritize training needs and identify appropriate candidates.

USAID - USAID should endorse additional training in operations and in improved community awareness. It should facilitate participant training requests as much as possible and provide encouragement for in-country workshops and training courses.

PRAGMA/MCD - Pragma/MCD team members should work closely with their GOB counterparts to develop a training schedule by the beginning of each fiscal year. The team should insure that technical consultants share their knowledge as much as possible with appropriate GOB personnel. Pragma may consider inviting consultants to assist the GOB in the development of in-country training programs for WS/S district personnel and for enhanced community development outreach.

RECOMMENDATION 13: PROCUREMENT SCHEDULES - It is recommended that more efficient procurement procedures be established between USAID and the GOB. The Pragma/MCD Chief of Party should assist USAID and the GOB in development of procurement manifests, and in the preparation of complete submission packages for USAID (Contract, p. 10). It is further recommended that a comprehensive annual procurement, rather than many small commodity requests, be submitted.

ISSUE 13A: Development and timely submission of procurement schedules

The start-up time for the project has been significantly extended due to problems of procurement of vehicles, tools and other commodities. These delays are due to sluggish responses of the procurement system, and tardy submission and approval of procurement manifests. The process should be streamlined as much as possible by USAID and the GOB. It will be very difficult, if not impossible, to justify "urgent need" for items in the latter years of the project because of the stronger planning capabilities being developed in the GOB. Thus, all procurement will take at least six months to process.

Recommended Actions

GOB - The GOB should prepare annual procurement manifests for the upcoming fiscal year and submit them in draft to USAID by June 30th. These manifests should be comprehensive for all commodities required for the IPTBH project. The Project Director should establish a list of administrative responsibilities, and a timeframe and submission deadline (preferably May 15th) for in-house commodity and budget statements from the responsible GOB officers (WS/S, NMCS, AACP, HE). This would give the Project Director's office ample time to prepare a draft submission to USAID (by June 30th) for review and comment. The GOB/Project Director should work closely with Pragma/MCD in the development of these procurement schedules. The GOB should make every

effort to prepare and submit procurement schedules for FY 1986, FY 1987 and FY 1988 within the next six months.

USAID - USAID should make every effort to expedite the processing of procurement schedules and manifests. USAID should prepare clear guidelines for the preparation of procurements and explain delivery time lags (up to nine months from USAID approval), administrative requirements, and need for a high degree of advance time (i.e., draft submission almost 12 months in advance of expected delivery). This information should be transmitted from USAID to the GOB with copies to Pragma/MCD. USAID should specifically direct the Pragma/MCD Chief of Party to increase his participation in the development of procurement scheduling by a memorandum of understanding.

PRAGMA/MCD - Pragma/MCD should assume greater initiative for procurement scheduling and should work closely with USAID to develop the guidelines. The Chief of Party should assume major responsibility for Pragma/MCD's participation in expediting procurements. He should maintain close contact with GOB counterparts in vector control, water and sanitation, and health education and should assist in organizing the entire IPTBH project annual procurement schedule.

RECOMMENDATION 14: NATIONAL IPTBH PROJECT INVENTORY FOR EQUIPMENT, MATERIALS AND SUPPLIES IN-COUNTRY AND ORDERED- It is recommended that the GOB establish an annual inventory review of all project-associated commodities and supplies. The inventory should be coordinated by representatives of the MOH and the MNR. It should include a list of all project activities at central, district and village levels. Particular emphasis should be placed on maintenance system inventories (i.e., spare parts, tools, general logistic/supply problems).

**ISSUE 14A: Inventory and storage systems-
transportation and supply**

The team found that there was a general need to improve coordination of commodity storage, supply, and distribution between the central and district levels. More decision-making authority should be delegated to district supervisors. Monthly plans for commodity delivery and prospective use of vehicles should be developed from the district level and submitted for approval to the central offices. Monitoring of equipment use (drilling rigs and

vehicles) requires increased attention and clearer lines of authority for central and district level personnel.

Recommended Actions

GOB - The GOB should conduct an inventory of project-related commodities and supplies presently in Belize City and at the District/Village level by June 30, 1987. This inventory should include statements concerning deliveries expected FY 1987. Clear plans for storage and distribution should be developed as a result of the inventory. The MNR, because of its increased responsibilities for sanitation, should take the lead on the inventory analysis. The MNR and the MOH should coordinate their efforts by assigning the inventory task to specific administrators within their ministries. The MOH should appoint a manager for the Belize City warehouse, and the manager should reorganize the warehouse as soon as possible. District storage systems should be in place and functioning by October 31, 1987.

USAID - USAID should request that the MNR coordinate an inventory for project-related commodities. USAID should provide all information concerning procurement schedules and deliverables which are associated with the project. USAID should request that the GOB furnish a report of the inventory, and how it plans to use the information. USAID should assist with revised GOB storage and distribution plans as appropriate.

PRAGMA/MCD - Pragma/MCD should provide technical advice for the inventory and should assist in the development of the storage/distribution plan. Technical advice on equipment use, storage system design and distribution of commodities should be provided by Pragma/MCD staff as appropriate. The Chief of Party should work closely with MOH and MNR officials to ensure that the inventory is conducted in a timely and appropriate fashion.

RECOMMENDATION 15: VEHICLE MAINTENANCE ADVISOR FUNCTION- It is recommended that the WASA strengthen its capability to coordinate the logistic and transport requirements of the water supply and sanitation component of the project. The role of the Vehicle Maintenance Advisor should be expanded to include development and implementation of this system. A counterpart should be identified in WASA to be trained by the Vehicle Maintenance Advisor.

ISSUE 15A: Transport logistics and support

This project has significant transport, logistic and village contact requirements. As the water supply and sanitation projects are developed in the priority communities, a constant stream of project-related personnel pass through them. The need therefore exists to coordinate the transportation and logistic requirements throughout the entire project. The team feels that a significant amount of inefficiency and lack of coordination exists in the project due to this problem. A secondary factor in this analysis is the need to integrate field activities between the project's technical, education and community development, administrative, and laboratory components. Considerable benefits to GOB and Pragma/MCD personnel and operations could be derived from this integration of field activities.

Recommended Actions

GOB - MOH and MNR must cooperate in this activity by assigning a counterpart to assist in transport/logistic coordination and should encourage cooperation between the component parts of the project.

USAID - USAID should encourage Pragma to expand its influence in coordinating transportation and logistics associated with the project. The present SOW for the Vehicle Maintenance Specialist is adequate and USAID emphasize the need to broaden his duties to address coordination issues.

PRAGMA/MCD - The project team should encourage the Vehicle Maintenance Specialist to coordinate transport logistic support to the villages for project activities.

RECOMMENDATION 16: REPORTS DELIVERABLE - It is recommended that USAID provide clear direction to the Pragma/MCD Chief of Party concerning reporting on IPTBH project activities.

ISSUE 16A: Lack of detailed reports concerning project activities, general direction towards project goals, and quarterly progress

The reporting system between USAID and Pragma/MCD should be formalized. USAID has not provided Pragma/MCD with clear guidelines for reporting, which has resulted in sketchy reports. A more useful reporting system for the project

should be established, with attention to statement of progress and accomplishments rather than problems.

Recommended Actions

GOB - The GOB should provide information upon request regarding project progress and problems. It should request copies of appropriate reports from USAID and should hold discussions with appropriate project personnel as needed.

USAID - USAID should prepare a "Reports Deliverable" memorandum for Pragma/MCD which outlines the format and content of a suitable reporting system. USAID also may wish to comment on the role of the GOB in the reporting system. USAID should emphasize reports as a means of project monitoring. Clear presentation of issues, progress, and action plans should be contained in semi-annual reports. USAID should emphasize the importance of annual work plans for Pragma/MCD and should provide a detailed format and timetable for work plan submission to USAID. Annual work plans should provide clear statements of Pragma/MCD activities and overall directions for the upcoming BZ fiscal year. Annual work plans should be submitted by Pragma on February 1st of each year.

PRAGMA/MCD - Pragma/MCD should provide USAID with the documentation requested and in the prescribed format. Pragma/MCD should work closely with USAID to develop the number, format and content of reports desired.

RECOMMENDATION 17: ASSESSMENT OF PROGRESS/FOLLOW-UP EVALUATION - It is recommended that a follow-up assessment be conducted. If deemed appropriate by the USAID Project Manager, the follow-up assessment team should include one member of current team. This "in-house" assessment of progress should occur within nine months. The assessment should review progress in a checklist fashion and should include an executive summary report.

Recommended Actions

GOB - The GOB should consider this recommendation positively and should assign a counterpart (preferably the Deputy Director) to work with the consultant. The GOB should prepare a brief synopsis of actions taken and accomplishments associated with this evaluation. The follow-up assessment should be used as a benchmark of GOB progress in implementing the recommendations of this evaluation team.

USAID - USAID should review the appropriateness of the follow-up assessment and confer with the GOB to decide if and when it should occur. USAID should participate in the preparation of a brief project accomplishment synopsis which describes actions taken on the recommendations put forth in this evaluation. USAID may explore support for the follow-up assessment through centrally funded projects or may fund the consultant through project funds.

PRAGMA/MCD - Pragma/MCD should discuss the need and appropriateness of the follow-up assessment. Pragma/MCD should assist the GOB in the preparation of a project summary report which specifically deals with the recommendations presented in this evaluation. It may consider suggesting having one of the Home Office project backstop officers participate.

ANNEX I

SCOPE OF WORK AND SUPPORTING DOCUMENTATION

Annex I contains copies of the Scope of Work received by S&T/H from USAID/Belize and SOWs adapted by the Vector Biology & Control Project for the Sanitary Engineer and Social Scientist/Anthropologist.

Annex I includes the following:

1. SOW received in PIO/T from USAID/Belize
2. USAID standard guidelines for preparing evaluations
3. Project Evaluation Summary (PES) Part 1, Factsheet
4. VBC SOWs for Donald Messerschmidt and Robert Gearheart
5. Guidelines for the preparation of VBC field reports

INCREASED PRODUCTIVITY THROUGH BETTER HEALTH
PROJECT 505-0018

PROJECT EVALUATION - FEBRUARY 1987

STATEMENT OF WORK

Objective: This first interim evaluation is to review the project design, determine whether implementation to date has favorably impacted on the attainment of the project's objectives, and provide recommendations for improving project performance.

Scope of Work

The Evaluation team will:

- a) Review project implementation actions taken to date by USAID, MOH, and the technical assistance contractor, PRAGMA.
- b) Review the level, quality, and timeliness of the inputs (staff, commodities, technical assistance, operational research, training) to the project.
- c) Assess the impact of the inputs provided to date on the attainment of the project's goals in Vector Control, Water and Sanitation, Community Development and the improvement of planning and management of these programs.
- d) Recommend changes to the project implementation schedule with a view to enhancing goal attainment, and
- e) Recommend and highlight specific actions that need to be taken within the next year, which are critical to the project's success.

Within the above scope, the following specific questions should be addressed:

1. Has project management - USAID, MOH and PRAGMA - been adequate?
2. Is the MOH support, covenanted in the Project Agreement, being provided?
3. What is the likely impact of the health education/ community development strategy on the attainment of project goals in the longer term, given experience to date?
4. To what extent has this strategy been effective so far?
5. What have been the reasons for success or failure in meeting implementation targets?
6. In what areas of implementation and management can greater efficiencies, including cost efficiencies, be realized?

7. What impact has the transfer of responsibility for water supply to the Ministry of Natural Resources had on implementation of the Water Supply/Sanitation component?

Methodology

The team will meet and interview personnel at MOH, USAID, and the contractor's Field and Head Offices on all aspects of project implementation and management and their own roles. Project documentation and files at all locations will be examined. Field trips to locations throughout the country to meet with community members, village councils, MOH field personnel, local (district) government and community development personnel will be arranged.

Level of Effort and Timing

The evaluation is to be completed over a three-week (15 work days) period from February 9-27, 1987. An additional day on February 6, 1987 to interview PRAGMA/MCD Home office personnel is provided for.

Resources Required

The project has two major components - Vector Control and Water and Sanitation. Project Management and Health Education/Community Development are support areas common to both components which also require special skills.

The evaluation team will therefore comprise:

1. A vector control specialist with extensive experience and formal qualifications in malariology/entomology.
2. A sanitary engineer with extensive developing country experience in water supply and sanitation projects utilizing VIP latrines, shallow wells capped with handpumps, and maintenance systems for handpump projects. It is critical that the engineer have management experience.
3. A social scientist/anthropologist with health education skills and at least five years experience in a developing country at the village level.

It would be very useful if one or more of these specialists have AID project management experience or familiarity with AID procedures for procurement of services and commodities.

Report: A final report on the team's findings, conclusions, and recommendations will be submitted within four weeks of the completion of the field study. The teams' recommendations and

summary findings will be discussed in debriefing meetings with MOH and USAID prior to departure from Belize.

GUIDANCE FOR PREPARING EVALUATIONS
(For both contractor and AID
prepared evaluations)

I. Contractor-produced Evaluations

Evaluations in this category will consist of the contractor's evaluation and PES [Part I and an abbreviated Part II - see I.B below] prepared by the Mission.

A. The contractor evaluation report will include the following:

1. An executive summary, including purpose of the evaluation, methodology used, findings, conclusions and recommendations. It will also include comments on development impact and lessons learned. It should be complete enough so that the reader can understand the evaluation without having to read the entire document, i.e., the summary should be a self-contained document.
2. A copy of the scope of work under which the evaluation was carried out. The methodology used will be explicitly outlined and each scope will contain the requirement to assess how [and how successfully] the project or program being evaluated fits into the Mission's overall strategy. Any deviation from the scope will be explained.
3. A listing of the evaluation team, including host country personnel, their field of expertise and the role they played on the team.
4. A clear presentation of the evaluation recommendations, in a separate section of the report if convenient, so that the reader can easily locate them.
5. A discussion of any previous evaluation[s] reviewed with a brief description of conclusions and recommendations made in the earlier report[s]. The evaluators will discuss briefly what use was made of the previous evaluation[s] in their review of the project.
6. A separate section on development impact of the project, particularly for end-of-project or ex-post evaluations. This section should clearly present the development benefits resulting from the project.

7. The project's Lessons Learned should be clearly presented. These should describe the casual relationship factors that proved critical to project success or failure, including necessary political, policy, economic, social and bureaucratic preconditions within the host country and AID. These should also include a discussion of the techniques or approaches which proved most effective or had to be changed and why. Lessons relating to replicability and sustainability will be discussed.

8. A paginated table of contents.

B. Project Evaluation Summary [PES]

The PES accompanying an evaluation report prepared by a contractor will include a complete Part I and an abbreviated Part II.

1. Part I of the PES [Factsheet] will include:

- all actions to be taken written as clear, actionable statements.
- specific action officers and a specific date by which action will be completed.
- an indication of which actions result from recommendations made by the contractor.

PROJECT EVALUATION SUMMARY (PES) - PART I

Report Control
Symbol U-447

| | | | |
|------------------|--|---|-------------------------|
| 1. PROJECT TITLE | | 2. PROJECT NUMBER | 3. MISSION/AID/W OFFICE |
| | | 4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) | |
| | | <input type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION | |

| | | | | | |
|--|---------------------------------------|----------------------------------|---|---------------------------------|----------------------|
| 5. KEY PROJECT IMPLEMENTATION DATES | | | 6. ESTIMATED PROJECT FUNDING A. Total \$ _____ B. U.S. \$ _____ | 7. PERIOD COVERED BY EVALUATION | |
| A. First PRO-AG or Equivalent FY _____ | B. Final Obligation Expected FY _____ | C. Final Input Delivery FY _____ | | From (month/yr.) _____ | To (month/yr.) _____ |

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

| A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, PIO, which will present detailed request.) | B. NAME OF OFFICER RESPONSIBLE FOR ACTION | C. DATE ACTION TO BE COMPLETED |
|--|---|--------------------------------|
| | | |

| | | | | |
|---|--|--|--|--|
| 9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS | | | 10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT | |
| <input type="checkbox"/> Project Paper | <input type="checkbox"/> Implementation Plan e.g., CPI Network | <input type="checkbox"/> Other (Specify) _____ | A. <input type="checkbox"/> Continue Project Without Change | |
| <input type="checkbox"/> Financial Plan | <input type="checkbox"/> PIO/T | <input type="checkbox"/> Other (Specify) _____ | B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan | |
| <input type="checkbox"/> Logical Framework | <input type="checkbox"/> PIO/C | | C. <input type="checkbox"/> Discontinue Project | |
| <input type="checkbox"/> Project Agreement | <input type="checkbox"/> PIO/P | | | |

| | | |
|--|--|--|
| 11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles) | 12. Mission AID/W Office Director Approval | |
| | Signature _____ | |
| | Typed Name _____ | |
| | Date _____ | |

VBC SOWs for Donald Messerschmidt and Robert Gearheart

1. Review project implementation actions taken to date by USAID, MOH, and the technical assistance contractor, Pragma.
2. Review the level, quality, and timeliness of the inputs (staff, commodities, technical assistance, operational research, training to the project.
3. Assess the impact of the inputs provided to date on the attainment of the project's goals in vector control, water and sanitation, community development and the improvement of planning and management of these programs.
4. Recommend changes to the project implementation schedule with a view to enhancing goal attainment.
5. Recommend and highlight specific actions that need to be taken within the next year, which are critical to the project's success.
6. Submission of an acceptable report. The report should include the following acknowledgement:

"Preparation of this document was sponsored by the Vector Biology & Control Project under Contract No. DPE-5948-C-00-5044-00 to Medical Service Corporation, Int., Arlington, Virginia, U.S.A., for the Agency for International Development, Office of Health, Bureau for Science and Technology."

**GUIDELINES FOR THE PREPARATION
OF VBC FIELD REPORTS**

Guidelines for Preparing the Report

In order for VBC field reports to be as useful as possible to the Project and the clients requesting them, the VBC Project suggests the following guidelines for preparing the report.

The submitted final report is to be typed, double-spaced and complete according to the author and the scope of work. The author is responsible for correct spelling of all locations, names, and titles. Simplicity of language and presentation will increase the report's capacity to influence planning and future activities.

Guidelines for Report Organization

The preferred VBC style is the traditional Roman outline style. Usually a report will contain six major sections, preceded by a title page and table of contents.

- Title Page
- Acknowledgements
- Table of Contents
- I. EXECUTIVE SUMMARY
- II. INTRODUCTORY CHAPTER
- III. CHAPTER DESCRIBING THE FINDINGS
- IV. RECOMMENDATIONS
- V. ANNEXES

These sections are described briefly below.

All final reports submitted to the VBC Project must include the following acknowledgement:

Preparation of this document was sponsored by the Vector Biology & Control Project under Contract No. DPE-5948-C-00-5044-00 to Medical Service Corporation, Int., Arlington, Virginia, U.S.A., for the Agency for International Development, Office of Health, Bureau of Science and Technology.

Reports written in collaboration with other agencies should include the above acknowledgement. If this is not possible, at a minimum, the report should mention the sponsorship and participation of the A.I.D./VBC Project. If appropriate, the title page should indicate that the author is acting as a representative of the A.I.D./VBC Project. (See sample title and acknowledgement pages.)

Executive Summary

The executive summary should concisely describe the Project, including the outcome. The summary should be no longer than two pages (See sample).

Please follow this outline:

1. Begin with a paragraph that states:
 - o the name of the entity requesting the work
 - o the authorizing agency
 - o the overall goal of the activity
 - o the date of the activity
 - o the general approach
 - o what the report contains
2. Summarize key recommendations
3. List the key recommendations

Introductory Chapter

This should include the rationale for the activity, the scope of work, the dates of the activity and the general chronology of the visit, and any pertinent background information. If it is necessary to include a lot of background information about topics such as the country, the conditions, or the project, you may wish to devote a whole chapter (chapter 2) to it.

NOTE: Chapters covering the findings will follow the natural logic imposed by the task. The following are general guidelines.

Recommendations Chapter

There are two options for presenting the recommendations. The first is to present all recommendations in a single chapter at the end of the report. The second is to present the recommendations at the end of the chapters covering specific findings. This second option keeps the recommendations closer to the findings upon which they are based. If the second option is chosen, you still may wish to list all recommendations in a single summary chapter at the end of the report. In either case, please keep the following points in mind when writing the recommendations:

- o All recommendations should be based on findings, and the rationale behind them should be clear;
- o State the recommendations so that it is clear who specifically is responsible for carrying them out;
- o Present the recommendations in order of their importance. Indicate which recommendations are major, and which are secondary;
- o Highlight the recommendations by underlining them, numbering them, or marking them with bullets.

Appendices and Annexes

The VBC Project would like to limit supplementary material to that which is clearly necessary to the completeness of the report. Please include appendices or attachments only if they are important and useful, but are difficult to assimilate within the text. Where appendices are necessary, it may be sufficient to include an excerpt of the appendix, rather than a complete report.

When appendices are included in a report, each must be referred to within the text. Whenever possible, Annex A should be the list of persons contacted.

Particulars of VBC Style

Date Notation: Dates are written as Month Day, Year. For example, November 2, 1986. Where a range of dates is indicated, it would be:

November 16-18, 1986 or November 2 - December 4, 1986.

This style applies to letters as well as other publications.

USAID

The abbreviation for the Agency for International Development is A.I.D. The U.S. Agency for International Development (the overseas offices) are abbreviated USAID. When referring to a USAID Mission, Mission is always capitalized. As a general rule, when referring to a specific mission, it should be identified by the host city rather than the host country capital. For example, USAID/Cairo rather than USAID/Egypt.

Weights and Measures

The metric system is the preferred notation for VBC documents, particularly technical and field reports.

Report Production

Format: VBC reports in draft are to be typed double-spaced. Final copies are single spaced. Master (permanent file) copies are single sided, but final reports for distribution are printed on both sides.

VBC authors are encouraged to follow a standard outline format in producing their reports. Footnotes should appear on the page on which they are mentioned.

Photographs

Consultants to the VBC Project are strongly encouraged to take photographs that may be used to illustrate subsequent descriptions of the activity. Photographs of people are always good (both of the consultants and people experiencing a problem related to vector-borne disease or helping to control it). Images of the implicated vector and its habitat, of course, are always welcome. We will happily reimburse expenses relating to such photographs. Or, the Project will copy your photographs or slides, and return them to you promptly.

ANNEX II

EVALUATION TEAM MEMBERS

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Public Health Advisor
Office of Health
Room 709, SA-18
A.I.D.,
Washington, D.C. 20523
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Donald A. Messerschmidt, Ph.D. (Social Scientist)
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Pullman, WA 99164-4910
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Environmental Engineering Department
Humboldt State University
Arcata, CA 95521
(707) 826-3135

ANNEX III

LIST OF DOCUMENTS REVIEWED

- Anonymous. n.d. Priority Health Needs - Aedes aegypti Eradication programme. Belize, Central America.
- Belize, GIS/PAHO. 1985. Priority Health Needs/Belize. Belize City: Government Information Service and the Pan American Health Organization.
- Bowles, Ed. n.d. A Biological Mosquito Management Plan for Belize. Xerox.
- Chen, Wan I. 1980. Final Report of the Consultantship to the Ministry of Home Affairs and Health of Belize in the Malaria Eradication program, 21 July - 18 August. Belize: Pan American Health organization.
- Donovan, Richard Z. 1985. CARE-Belize Water Supply and Sanitation Baseline Survey. WASH Field Report No.147. Prepared for the AID Mission to Belize by Water and Sanitation for Health Project. Washington DC: U.S. Agency for International Development.
- Harry, Claudette. 1984. Preparation of the Final Draft of the 5-Year Health Plan of Belize. Consultant Report. Belize City: Pan American Health Organization and the World Health Organization.
- IPTBH Project. 1986-87. Miscellaneous field forms and surveys in vector control and water supply and sanitation. Xerox.
- PAHO/USAID. 1982. Belize Health Sector Assessment. Working Document. Report of a Visit to Belize, 26 August - 10 September. Belize City: Pan American Health Organization and the U.S. Agency for International Development.
- PAHO/WHO. 1985. Priority Health Needs in Central America and Panama. Malaria Component. Work Plan, First Year. Belize City: Pan American Health Organization and the World Health Organization.
- Pragma/MCD. 1985. Belize, Increased Productivity through Better Health. Project 505-0018, Technical Proposal. October 11. Falls Church, VA: The Pragma Corporation and Medical Care Development, Inc.
- Pragma/MCD. 1986. Semi-Annual Activity Report: Increased Productivity through Better Health, January-September. Falls Church, VA: The Pragma Corporation and Medical Care Development, Inc.
- Pragma/MCD. 1986. Monthly Activity Reports, Increased Productivity through Better Health, Belize.
- Pragma/MCD. 1986. National Malaria Control Program, Belize. Detailed Plan of Action, 1986/87.
- Pragma/MCD. 1986-87. Miscellaneous IPTBH project correspondence and working files, forms and surveys.

- Pragma/MCD. 1986-87. Trip Reports (HE/CD Specialist, and WS/S Specialist). Xerox.
- Pragma/MCD. 1987. Annual Work Plans for Malaria Control Program, and for Water Supply and Sanitation Program. Working drafts.
- Smith, Edgar A. 1987. Review of Surveillance Activities, National Malaria Control Program, Belize, Central America, January 13 - February 13. Consultant Report, draft. Falls Church, VA: Pragma/MCD.
- Stokes, Glenn M. 1984. Recommended Improvements for the Aedes aegypti Control Program in Belize. Consultant Report. Prepared by the American Public Health Association, International Health Program for the Bureau of Latin America and the Caribbean. Washington DC: U.S. Agency for International Development.
- Stokes, Glenn M. 1987. Assessment of Belize Aedes aegypti Control Program: Findings and Recommendations. Draft. Falls Church, VA: Pragma/MCD.
- Turner, J. Ellis. 1986. Reports on Technical Assistance to the Village-Level Water and Sanitation Project, CARE/Belize. Wash Field Report No.193. Prepared for the USAID Mission to Belize by the Water and Sanitation for Health Project. Washington DC: U.S. Agency for International Development, Belize.
- USAID. 1984. Increased Productivity through Better Health/Belize. Project Paper. AID/LAC/P-224. Washington DC: U.S. Agency for International Development.
- USAID. 1984. Miscellaneous data base information on Belize. AID/Belize files. Diskette and Xerox.
- USAID. 1985. Project Contract between the USAID and Pragma/MCD for Increased Productivity through Better Health, Belize. Contract No. LAC-0018-C-00-6005-00; Effective date: 1/1/86. Washington DC: U.S. Agency for International Development.
- USAID. 1985. Project Grant Agreement Between the United States of America, acting through the Agency for International Development, for Increased Productivity through Better Health. Project No.505-0018; March 26. Belize: U.S. Agency for International Development.
- USAID. 1986. Increased Productivity through Better Health. Project Retreat, Proceedings. Caye Chapel, Jan. 30-31. Belize: U.S. Agency for International Development. Xerox.
- USAID. Miscellaneous IPTBH project correspondence and working files.
- Wilk, Richard. n.d.(1984?). Social soundness analysis, Belize, Roads Project. Draft document. AID/Belize files.

ANNEX IV

**SUGGESTED SCOPE OF WORK
FOR A SOCIAL SCIENTIST/COMMUNITY DEVELOPMENT SPECIALIST
(RECURRENT SHORT-TERM CONSULTANCY)**

Credentials and Experience: Experienced community development specialist, preferably with prior work in people's participation activities and in training and workshop design and implementation, social science M.A. or Ph.D. (in anthropology or rural sociology); long-term multi-disciplinary team experience on a development project is recommended with a minimum of five years experience in developing countries. Experience in health sector is helpful, but not mandatory. Prior experience in Central America is helpful, but not mandatory. (The principal qualifications of this individual is demonstrated competence, confidence and recognition in community development.)

Length of Consultancy: Eight weeks.

Time of Consultancy: To begin on or before October 1, 1987; and recurrent annually for a minimum of three weeks each time during the remainder of the life of the project.

SCOPE OF WORK

1. Initially familiarize himself/herself with the mandate of the IPTBH Project, its structure, functions, accomplishments to date and activity plans for the future, paying particular attention to the community development and health education components and their real and potential integration project-wide.
2. Tour project sites in the rural areas, in the company of the HE/CD Specialist and associated DHE's and other district staff, and to the degree possible with the Chief of Party and the WS/S Specialist and their counterparts. Visit CARE and UNICEF project areas, paying particular attention to their community development/health activities, and the lessons to be learned from their experience, as well as those of the IPTBH and other related GOB and NGO projects.
3. Assist the HE/CD Specialist in locating, perusing and evaluating the quality and usefulness of Belizean social science, community development and health education information sources (e.g., libraries, project and donor agency files, documentation centers, etc., at A.I.D., PAHO, the University of the West Indies Center Library, CARE and UNICEF offices, etc.). Seek out and meet Belizean and

resident expatriate social science researchers and community development advisors and health educators. Prepare a brief source review on community development and related health education topics for Belize, with attention to material and professional sources of greatest relevance and utility to Pragma/MCD and GOB project personnel.

4. Prepare a community development workshop (as described in Recommendation 6G), to involve community developers and health educators nation-wide, from the project and from other related donor-assisted, GOB funded and NGO projects, including the American Peace Corps. This particular activity should draw upon local Belizean and resident expatriate community development and social science expertise to the greatest degree possible. A principal target audience for this workshop will be the technical field staff and the central staff of MNR/WASA (Ministry of Natural Resources, Water and Sanitation Authority) to whom the project's WS/S (Water Supply and Sanitation) responsibilities will be transferred early in BZ FY 87 (Spring 1987). The length of this workshop should be no less than four full days, and possible as long as seven days.
5. Prepare a comprehensive Community Development Field Manual for use by technical staff throughout the project but principally the MNR/WASA staff for Water Supply and Sanitation, detailing step-by-step suggestions for heightening rural Belizean community awareness and participation in the conceptualization, planning, resource mobilization (social, economic and physical resources), implementation, benefit-sharing, evaluation, and control/self-sufficiency of local project activities in the villages. (This manual should be completed in draft form prior to the departure of the consultant from Belize and should be published immediately through A.I.D. contractual funds.)
6. Assist the HE/CD Specialist, together with the WS/S Specialist, the Chief of Party, and GOB counterpart staff, in developing a set of realistic and attainable social indicators from which to design annual project HE/CD activity plans, and by which to monitor and evaluate the attainment of project goals in future.
7. During the annual follow-up consultancies, of a minimum of three weeks duration each (a) assist the HE/CD Specialist in association with counterpart GOB staff and the larger Pragma/MCD team, in problem, identification and suggested solutions in the area of the community development, through the medium of a staff seminar or retreat; this activity will

serve as an informal monitoring tool for project assessment and planning as well; (b) evaluate the social indicators of the project, previously established as well as community development planning targets and accomplishments, and modify or change the indicators as appropriate to the project mandate and in the spirit and philosophy of people-centered development; and (c) prepare a short consultant report and debrief project staff, counterparts and A.I.D. staff prior to departure each time.

ANNEX V

PERSONS CONTACTED

Government and Citizens of Belize

Village Level

Villagers
 Village Collaborators
 Village Health Committee members
 Village Council leaders
 School teachers

District Level

Aedes aegypti Control Program field teams
 Carpenter-Foremen and Drill Mechanics
 District Coordinators (DC)
 Herman Joseph (Stann Creek)
 Charles Selgado (Toledo)
 Anthony Loff (Cayo)
 District Health Educators (DHE)
 George Garcia (Cayo)
 Mateo Salam (Stann Creek)
 Thomas Teul (Toledo)
 District Medical officers (DMO)
 Dr. Mora Reddy, MD (Stann Creek)
 Dr. Oscar Rodas, MD (Corozal)
 Dr. Raju, MD (Toledo)
 Malaria Control Program
 Angel Arzu, Evaluator (Corozal, Orange Walk)
 Doninger Duheany, Evaluator (Corozal)
 Filipe Magana, Evaluator (Orange Walk)
 Timothy Westby, Supervisor (Stann Creek)
 John McDougal, Supervisor (Cayo)
 Public Health Inspectors (PHI)
 Lorraine Thompson (Corozal)
 Godswell Flores (Cayo)
 Cherrymae Caddle (Stann Creek)
 Mark Bernard (Toledo)
 Public Health Nurses
 Moria Hunt, RN (VSO)

Central Level

Aedes aegypti Control Program
 Hilbert Lenares, Director
 Doreen Gabourel, Deputy Director
 Malaria Control Program
 Dr. Errol Vanzie, Chief, and Chief Health Officer
 Rafael Guerra, Chief of Operations
 Francis Westby, Malaria Control Program Manager
 Public Health Inspectorate
 Fred Smith, Principal Public Health Inspector
 Sylburn Arthurs, Sr. Public Health Inspector
 Water and Sewage Authority
 Dorla Bowman, Public Health Technician
 Water Quality Lab
 Beverly Clare, Lab Technician
 Health Education & Community Participation Bureau
 (HECOPAB)
 Anthony Nicasio, Director
 Betsy Gleckler, Visual Aids Officer (PCV)
 Margaret Clark, Health Educator (VSO)
 Ministry of Natural Resources
 Eleanor Hall, Permanent Secretary
 Ministry of Health
 Douglas Fairweather, Permanent Secretary

U.S. Agency for International Development

Belize

Neboysha Brashich, Representative
 Mellen Tanamly, General Development Officer
 Samuel Dowding, Project Manager
 Arturo Villanueva, Project Development Specialist

Washington, DC

Lawrence Cowper, Sr. Malaria Adviser, Health
 Division/S&T
 Pragma/Medical Care Development

Belize Country Team

Merrill Wood, Chief of Party
 Harry Philippeaux, Water Supply and Sanitation
 Specialist
 Terri McLean, Health Educ./Community Development
 Specialist
 Ray Robertson, Vehicle Maintenance Specialist

Short-Term Consultants, Belize

Edgar A. Smith, Malaria Control Program
 Richard Burgoine, Drilling Instructor
 Patsy Allen, Water Quality Lab

Headquarters, Washington, DC

Jacques Defay, President (Pragma)
 Richard Killian, Health Div. Chief, & Proj. Co-Dir.
 (Pragma)

Barbara Kennely, Assistant to Health Div. Chief
 (Pragma)
 Joseph Carter, Project Co-Director (MCD)

Other Persons Met

U.S. Peace Corps, Belize
 Edmund Hughes, Country Director, and Mrs. Hughes
 CARE, Belize
 Estelito Loria, Project Manager (Corozal, Orange Walk)
 Howard Kolb, Water Engineer (Corozal, Orange Walk)
 Douglas Walker, Water Engineer (Corozal, Orange Walk)
 Health Talents International (Stann Creek)
 Jeffrey Jackson, RN
 Becky Amole, Volunteer
 Project Concern International (Toledo)
 Bob Tucker, Director
 Social Scientists, Belizean and Expatriate
 Joseph Palacio, Ph.D., Sociologist, Univ. West Indies
 Carolyn McCommon, Ph.D., Anthropologist, Community
 Development Specialist, Cocoa Project
 Nancie L. Gonzales, Ph.D., Anthropologist, Center for
 International Development and Conflict Management,
 University of Maryland

ANNEX VI

LIST OF ABBREVIATIONS/ACRONYMS

| | |
|---------|---|
| AACP | <u>Aedes aegypti</u> Control Program |
| CD | Community Development |
| CDO | Community Development Officer |
| COP | Chief of Party |
| DC | District Coordinators |
| DHE | District Health Educators |
| DHT | District Health Team |
| DMO | District Medical Officers |
| ESF | Economics Support Funds |
| GOB | Government of Belize |
| HE | Health Education |
| HECOPAB | Health Education & Community Participation Bureau |
| IMC | Inter-Ministerial Council |
| IPTBH | Improving Productivity through Better Health |
| KAP | Knowledge, Attitudes, Practices |
| LOE | Level of Effort |
| MOH | Ministry of Health |
| MNR | Ministry of Natural Resources |
| MSD | Ministry of Social Development |
| MSU | Management Support Unit |
| NGO | Non-Governmental Organization |
| NMCS | National Malaria Control Service |
| PACD | Project Assistance Completion Date |
| PCV | Peace Corps Volunteer |
| PHI | Public Health Inspector |
| PPHI | Principal Public Health Inspector |
| PTS | Project Timing and Scheduling |
| PS | Permanent Secretary |
| STC | Short-term Consultancy |
| TA | Technical Assistance |
| VHC | Village Health Committee |
| VC | Vector Control |
| WASA | Water and Sewage Authority |
| WS/S | Water Supply and Sanitation |