

**EVALUATION OF THE IRRIGATION SUPPORT
PROJECT FOR ASIA AND THE NEAR EAST**

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LIST OF ACRONYMS AND ABBREVIATIONS

ADO	Agriculture Development Officer
A.I.D.	Agency for International Development
A.I.D./W	Agency for International Development, Washington,D.C.
ANE	Asia Near East Bureau of A.I.D.
ARD	Agriculture and Rural Development Office
ARDO	Agriculture and Rural Development Officer
AS	Applied Studies
BWDB	Bangladesh Water Development Board
CCN	Cooperating Country Nationals
CDM	Camp, Dresser and McKee International Inc.
COP	Chief of Party
CWM	Command Water Management
DAI	Development Alternatives, Inc.
EDI	Economic Development Institute
EEC	European Economic Community
EIS	Environmental Impact Statement
EOPS	End of Project Status
EWI	Eastern Waters Initiative
EWS	Eastern Waters Study
F&A	Financial and Administrative
FAO	Food and Agriculture Organization, United Nations
FAP	Flood Action Plan
FPCO	Flood Plan Coordination Organization
G-7	Group of Seven
GIS	Geographic Information System
GOB	Government of Bangladesh
GOE	Government of Egypt
GOI	Government of India
GSL	Government of Sri Lanka
HCN	Host Country Nationals
HRD	Human Resources Development
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association

IIMI
IIP

International Irrigation Management Institute
Irrigation Improvement Project

IMP	Irrigation Management Project
IMPSA	Irrigation Management Policy Support Activity
IMS	Irrigation Management Systems
IQC	Indefinite Quantity Contract
IRRI	International Rice Research Institute
ISA	Irrigation Sector Assessment
ISM-I	Irrigation Systems Management Project I
ISMP	Irrigation Systems Management Project
ISPAN	Irrigation Support Project for Asia and the Near East
ISTI	International Science and Technology Institute, Inc.
MIS	Management Information System
MIWDFC	Ministry of Irrigation, Water Development and Flood Control
MMIP	Maharashtra Minor Irrigation Project
MOA	Ministry of Agriculture
MPIMP	Madhya Pradesh Minor Irrigation Project
MPWWR	Ministry of Public Works and Water Resources
NESSI	Northeast Thailand Small Scale Irrigation
NGO	Non-Governmental Organization
PACD	Project Activity Completion Date
PD	Project Director
PD&R	Project Design and Redesigns
PE	Project Evaluations
PF	Policy Formulations
PIOT	Project Implementation Order/Technical Assistance
PO	Project Officer
POE	Panel of Experts
PP	Project Paper
PSC	Project Steering Committee
PVO	Private Voluntary Organization
RFP	Request for Proposals
SAGEs	Senior Advisory Group of Experts
SARPAM Management	Support for Agriculture Resources Policy Planning and Management
S&T	Science and Technology Bureau
SOW	Scope of Work

SPARSO Space Research and Remote Sensing Organization

SSIMP	Small Scale Irrigation Management Project
TA	Technical Assistance
TDY	Temporary Duty
TOR	Terms of Reference
TOT	Training of Trainers
TPM	Team Planning Meeting
TR	Technical Resources
TRG	Training Resources Group
TS	Technical Services
TSC	Technical Support Center
TTT	Training and Technology Transfer
USAID	United States Agency for International Development (Overseas Mission)
USDA	United States Department of Agriculture
WASH	Water and Sanitation for Health Project
WMSII	Water Management Synthesis II
WRSP	Water Resources Support Project
WUA	Water User Association

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The team, however, reserves the caveat of responsibility for the findings, conclusions, recommendations, and lessons learned that are presented in this document, as well as for any errors of fact or representation.

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EXECUTIVE SUMMARY

A. Context, Purpose and Procedures of the Evaluation

The context for the evaluation of the Irrigation Support Project for Asia and the Near East (ISPAN) is the rapidly evolving set of water resources needs and strategies within the United States Agency for International Development (A.I.D.). This report assesses the project by looking at irrigation support within the greater emphasis on water as a natural resource with many non-agricultural uses as well as in the production of food and fiber. Deputy Administrators of both the newly structured Asia and Near East Bureaus strongly support the centrality of water resources development in the mandate of the agency. These leaders noted the growing political significance of water resources in the Asian and Near Eastern (ANE) regions and recognize the potential for conflicts within and between nations and sectors as water resources become increasingly scarce. ISPAN has effectively responded to these changing environmental and political emphases and has evolved as a regional water resource project of increasing significance within this broad context.

The Scope of Work (SOW) defines five purposes for the ISPAN evaluation in this the fifth year of implementation. These purposes are as follows:

- o Determine ISPAN's effectiveness to date;
- o Assess the continuing validity and relevance of ISPAN;
- o Assess the effects of external and unanticipated actions and events;
- o Assess the extent the contractor has fulfilled the scope of work; and
- o Determine the advisability of extending the current technical contract.

The procedures for the evaluation included:

- o Team building, establishing assignments and planning the evaluation process;
- o Data collection by Mission site visits, interviews, document and financial statement review and questionnaires;
- o Data tabulation, analysis, interpretation, synthesis of concepts and consensus on conclusions, recommendations and lessons learned; and
- o Drafting, editing, review of document, finalizing the report and debriefing on the findings and results with appropriate officials.

B. Conclusions

The conclusions of this evaluation directly follow the five purposes of the evaluation stated in the SOW.

- o **ISPAN is an effective water resources and irrigation support project.**
- o **ISPAN is a valid support to irrigation projects and is increasingly relevant to the water resources and environmental needs of Missions.**
- o **ISPAN is responsive to the needs of Missions in the management of their irrigation, water resources and water-related environmental portfolios despite the reduction of core funds.**
- o **The contractor is effective and timely, but is lacking in some important management aspects including Technical Support Center (TSC) organization, work planning, reporting results, answering communications from abroad, support for personnel abroad, developing a management information system, and distribution of reports.**
- o **It is in the interest of A.I.D. to extend the contract to the Project Paper (PP) PACD.**

C. Recommendations

The conclusions lead to the following recommendations which are presented in three categories: global, administrative and technical.

1. Global recommendations:
 - o Extend the ISPAN contract with the current contractor to the original PP determined PACD.
 - o Increase core funding for the TSC to finish lessons learned, address regional issues and trends, farmer irrigation participation, turnover of portions of irrigation systems and irrigation system privatization applied studies and use of the Senior Advisory Group of Experts (SAGES);
 - o Raise the spending ceiling to reflect the entire cost of the Eastern Waters Initiative and the Water Resources Strategy development, which were not part of the initial scope or budget;

- o Fund the TSC core staff to avoid work on other projects for their parent firms to cover salary shortfalls;
- o Develop the Project Identification Document (PID) or concept paper for a future water resources follow-on support project to the current project for the Asia Bureau, the Near East Bureau and/or the Bureau of Science and Technology (S&T); and
- o Change the name from ISPAN to the Water Resources Support Project (WRSP) to reflect the current reality of broadened activities and provide for future demands.

2. Administrative recommendations:

- o Change the TSC organizational structure to one project director and hire an administrative manager;
- o Establish a Policies and Procedures Manual for TSC operations;
- o Improve the MIS by installing project management software;
- o Develop an effective fax log, tracking and progress reply system for communications from the field staff and Missions;
- o Enhance management the of field team in Dhaka with more TDY administrative assistance for the duration of the FAP supporting studies; and
- o Expand scope and breadth of the consultant roster to reflect the needs of environmental studies and water resources management and planning and make it user friendly.

3. Technical recommendations:

- o Add a water resources economist to the TSC core staff to supply capability and capacity to conduct water resources, economic and policy analysis;
- o Reactivate an enhanced version of the SAGEs as the brain trust of the TSC to guide the development of lessons learned component of the original PP design;
- o Market the successful workshop facilitation component in the context of the broader scope of water resources management;

- o Pursue an expansion from irrigation support to broader water resources and environmental support;
- o Continue irrigation support through those Missions and countries which have major irrigation systems and developing irrigation needs;
- o Emphasize irrigation management enhancement in collaboration with other agency and international development bank financed rehabilitation and improvement projects through cost-sharing arrangements;
- o Broaden the distribution of publications to more Asian and Near Eastern libraries and agencies as well as to American land grant university libraries;
- o Establish a newsletter to review ISPAN activities and to share results and lessons learned;
- o Conduct biennial regional workshops on water resources and water related environmental concerns, issues and ISPAN results and findings from the Missions; and
- o Announce the broadened scope of the project and the name change in a widely distributed new brochure.

I. PURPOSE OF THE EVALUATION

The ISPAN Project was evaluated in the context of evolving needs and strategies in A.I.D. This report, therefore, examines the project by looking at irrigation support within A.I.D.'s move to give greater emphasis to water as a natural resource. This new emphasis considers water with respect to its many non-agricultural uses as well as its continued importance in the production of food and fiber. The leadership of the newly structured Asia Bureau and Near East Bureau strongly supports the emphasis on water resources management in each region. Moreover, Deputy Administrators in both bureaus noted the growing political significance of water resources in the Near Eastern and Asian regions. ISPAN has evolved as a project within this broad context and has responded to the changing environmental and political emphases by adjusting its activity portfolio in technical assistance (TA), training and technology transfer (TTT) and applied studies (AS).

This evaluation consists of seven sections:

- o Purpose of the Evaluation
- o Background of the Project
- o Team Composition, Responsibilities and Study Methods
- o ISPAN Project Performance and Accomplishments
- o Conclusions
- o Recommendations
- o Lessons Learned

The evaluation SOW (provided in Annex 1) defines five purposes for this evaluation:

- o Determine ISPAN effectiveness to date;
- o Assess the continuing validity and relevance of ISPAN;
- o Assess the effects of external and unanticipated actions and events;
- o Assess the extent the contractor has fulfilled the scope of work; and
- o Determine the advisability of extending the current contract.

II. BACKGROUND OF THE PROJECT

ISPAN was designed as an Asia Near East (ANE) Bureau, follow-on to the Water Management Synthesis I and II projects of the late 1970's and the early 1980's. It was intended to build on the experience of the Synthesis projects and to establish a core funded center of irrigation expertise and rapid technical service response in close proximity to A.I.D. The services offered by ISPAN were to include 1) technical assistance (TA), 2) training and technology transfer (TTT), 3) applied studies (AS) and 4) support for building capability in ANE regional irrigation institutions.

ISPAN was designed to support Missions with irrigation activities and to assist the improvement of performance of the irrigation portfolios. These activities were to directly support ANE Missions and were to be funded through buy-ins under criteria established to enhance complementarity and avoid duplication of bi-lateral efforts.

The seven and a half year project was approved by A.I.D. on September 16, 1986. In August 1987, A.I.D. contracted with Camp, Dresser and McKee International Inc. (CDM) as the lead firm in a consortium of 8 firms and universities to implement the project. The contract had an initial spending ceiling of \$15.1 million for five years with core and buy-in funding nearly equally divided. If the first five year period were completed satisfactorily, an option period of two and a half years with a spending limit of an additional \$7.9 million would be implemented to complete the project.

The ISPAN scope expanded in 1988. A major study was commissioned to examine the broad context of floods in Bangladesh. With ISPAN support, three noted experts produced the Eastern Waters Study (EWS) in 1989. This was the beginning of the A.I.D. commitment, with a number of other countries, to support the Bangladesh Flood Action Plan (FAP). To date, \$7.9 million has been committed to the Eastern Waters Initiative (EWI) under ISPAN implementation. As a result of EWI, the initial contract period spending ceiling was raised by \$5.0 million to \$20.1 million in 1990.

ISPAN has embarked on 116 activities, arranged more than 480 person months of TA, TTT and AS effort costing more than \$5.2 million. It has completed 69 activities and currently has 39 active projects in 11 countries in the ANE region.

This evaluation takes the place of the two previously scheduled evaluations which were not undertaken for lack of Bureau funds. The evaluation design, defined in the Project Paper (PP) was related to delivery of services. "If the services delivered were of a high quality, appropriate level and timely, then any performance improvements in irrigation observed in the project affected areas or irrigation systems would be at least partially attributable to the ISPAN project".

III. TEAM COMPOSITION, RESPONSIBILITIES AND STUDY METHODS

The four person ISPAN evaluation team was comprised of a Water Resources Planner/Manager/Team Leader, a Human Resources Specialist, a Sociologist and a Project Manager/Financial Analyst. The Water Resources Team Leader was responsible for managing team activities and for production of the final team report. He was responsible for the review of planning and management of ISPAN by the contractor and A.I.D. and the effect of changing funding scenarios on the overall management of ISPAN. The Human Resources Specialist focused on determining the effectiveness and impact of the numerous workshops carried out under the project. He also focused on the issues of training, newsletter establishment, and dissemination of information. The Sociologist was responsible for defining the impact of ISPAN activities in the concerned countries including the applied studies program, distribution of research results and determination of lessons learned. The Project Manager/Financial Analyst analyzed the effectiveness of the ISPAN team in responding to changing priorities and funding scenarios, scrutinized the accounting and tracking systems, and determined the effects of delayed funding on the project.

The methods for evaluation included:

- o Data collection by site visits, interviews, report review, document and financial statement review and questionnaires;
- o Data tabulation, analysis, and interpretation;
- o Synthesis of concepts and building consensus on conclusions, recommendations and lessons learned;
- o Drafting, editing, review of document, finalizing the report and summary and debriefings on the findings.

A list of the documents reviewed is presented in Annex 2. A list of the people met or interviewed by telephone is presented in Annex 3. The evaluation team developed two questionnaires which were sent to Missions by facsimile transmission. The first generic questionnaire (Annex 4) was sent to all 12 Missions that have received ISPAN services. Eleven Missions responded. A second, country specific workshop questionnaire (Annex 5) was customized to the type of workshop. These questionnaires went to four Missions. Two Missions responded. The team leader attended the APRE Conference in Colombo and the team visited Missions in Cairo, Colombo, Dhaka and Jakarta to interview TTT and AS participants and TA recipients. The evaluation covered the 9 week period from September 1 to November 1, 1991.

IV. ISPAN PROJECT PERFORMANCE AND ACTIVITIES

A. ISPAN Performance and Management

ISPAN has initiated 116 activities in Regional or Bureau activities and in 12 ANE countries (please see Annex 6). Of the total 39 are active, 69 are complete, 2 are inactive and 6 were terminated. (The explanation for terminated projects is provided in Annex 7 and causes of delays are detailed in Annexes 8 and 9). ISPAN has provided 10,478 days or nearly 480 person months of personnel and associated TA, TTT and AS services at a cost of \$5,239,445 (see annex 6). These figures are dated as of July 31, 1991 due to the lack of performance of the Management Information System (MIS) specified in the contract.

CDM was contracted as the lead institution of an eight member Consortium to perform 22 specific tasks all leading to the achievement of the implementation targets set out in the logical framework of the PP (Annex 10). With the addition of the EWI and the changed funding situation, the implementation targets were changed, but the 22 specific tasks remained the same. A discussion of CDM performance on each of the 22 tasks follows accompanied by a discussion of the contractual reporting requirements. (The contractor's perspective on the performance of these tasks as well as a discussion of the fulfillment of reporting requirements are provided in Annex 7). The ratings are categorized in 5 types as very well, well, average, poorly and not performed.

1. Technical Support Center (TSC) performance

a. Establish and maintain the ISPAN TSC

The TSC was established within the time frame specified in the contract. This was within four weeks from August 14, 1987, the effective date of the contract. All but one of the key personnel started work in this period and office space was provided from September 11, 1987. The TSC has been maintained ever since. The original plan was that the TSC was to be staffed and fully funded from core funds. With the cutback in core funds, this has not been possible. Only by using TSC staff extensively on buy-in activities has it been possible to sustain the TSC. **This task was performed very well.**

b. Select and appoint core staff to the TSC

Key appointments to the TSC were made as follows:

- | | | |
|---|---|---------|
| o | Project Director | 8/14/87 |
| o | Program Manager (Technical) & Deputy Director | 8/14/87 |
| o | Communication Specialist | 8/14/87 |
| o | Program Support Manager | 9/ 4/87 |

- o Secretary 10/26/87
- o Program Manager (Social Science & Research) 11/16/87

In addition, several support posts shared with the WASH project were staffed from the project inception date, 8/14/87.

Since the start of the project there have been a number of changes in personnel and responsibilities. These replacement appointments as well as the gaps between appointments and shared personnel with the Water and Sanitation for Health (WASH) Project are detailed in Annex 11. **TSC performed the technical staff provision task very well. The high turnover rate and the administrative performance of the people in the project director post and the turnover in the secretary position has caused this task to be rated as performed poorly.**

c. Negotiate and prepare subcontracts

Suitable subcontracts with members of the consortium were negotiated and signed soon after the start of the project. Since then numerous other subcontracts have been negotiated and prepared for services provided by other firms and individual consultants. A total of 70 subcontracts have been signed to date.

The summary of planned and actual major subcontracts amounts with consortium members indicates major discrepancies for the Private Voluntary Organization (PVO) CARE, Inc., Cornell University and the University of Arizona and the minority firm consortium member, ISTI and the associate member, IDEC. As of September 28, 1991, the amount spent through each of the consortium members as compared to the contracted amount is as follows:

CONSORTIUM MEMBER	CONTRACTED <u>AMOUNT</u>	SPENT TO <u>9/28/91</u>
Care, Inc.	\$374,942	0
Cornell University	\$1,385,246	\$272,969
Dev. Alternates, Inc.	\$1,208,220	\$698,080
Harza Engineering, Inc.	\$1,479,067	\$1,031,579
IDEC	no amount specified	\$79,881
ISTI	\$1,050,761	\$332,443
TRG	\$1,123,659	\$736,845
U. of Arizona	\$743,187	\$110,562

Telephone interviews were conducted with the principal contact person of the seven major subcontractors. Most of the entities had initial problems with the invoicing detail required and providing approved overhead rates. The University of Arizona reports two outstanding invoices totaling nearly \$15,000 for more than 12 months. None of the subcontractors complained about routine delays in payment, due perhaps to their own delays in invoicing. Several interviewees reported excessive rigidity

in accounting requirements and attributed delays in having to adapt to the ISPAN requirements. Both Cornell University and the University of Arizona contacts reported their strong disappointment with their level of participation in the project, especially in the AS component. **This subcontracting task performance is rated as average.**

d. Survey, select and subcontract with institutions in ANE region

Institutions in the region were surveyed and evaluated and two were eventually selected for subcontracting under the Regional Institution component of the project. However when core funding was restricted in 1990, this program was suspended. **This task is therefore rated as not performed.**

e. Develop, maintain and update annual plans

Performance of the annual plan preparation, maintenance and updating task has been sporadic for a variety of reasons. Firstly, the MIS, which is discussed in some detail later in this report, did not provide the expected framework for preparing and updating the annual plan. Secondly, the uncertainty of core funding made it difficult to know what level of funding to prepare for. Details of the core funding uncertainty are provided in Annex 8. Thirdly, the shortage of core funds prevented the assignment of resources to the task of preparing annual plans. The result has been that formal plans were prepared for 1988 and 1989 and for the period from June 1991 to August 1992. This is not to say that planning has not been carried out. In all probability more planning has been carried out because of the vagaries of the funding than was originally conceived in the contract. However, plans have not been formally prepared on a regular basis nor have they been incorporated into a constantly updated system. Planning has been ad hoc as funding opportunities arose. Another type of uncertainty was caused by the travel moratorium imposed due to the Persian Gulf War as documented in Annex 9. **In performing this annual planning task, ISPAN is rated as having performed poorly.**

f. Develop, maintain and update a fiscal and technical Management Information System

This task is dealt with in more detail under the MIS sub-section of Project Performance and Accomplishments later in this report. Suffice it to say here that the MIS as contemplated in the Project Paper (PP), in CDM's proposal and in the contract has not been developed. What exists is a fiscal reporting system which handles invoicing to AID but little else. **This task is rated as performed poorly by ISPAN.**

g. Provide technical assistance and other services

ISPAN has started 116 activities as detailed in Annex 6. These are categorized as follows:

Technical Assistance	43
Training & Technology Transfer	42
Applied Studies	20
Regional Institutions	3

This summary is missing the 2 TA activities listed as inactive, the 3 AS studies that were terminated and the 3 TTT activities that were terminated. The AS and TTT activities were terminated for lack of core funds as shown in Figure 1. The shortage of core funds for AS and TTT was most evident in years 3 and 4 of the Project.

The following table shows a comparison of the person months of professional technical assistance specialists foreseen in the logical framework, (see Annex 10) in the contract for the project, presently planned and actually accomplished through July 31, 1991:

		<u>Person Months</u>
Total foreseen in the logical framework		944
Contracted:	Basic period	511.5
	Option period	<u>277.5</u>
	Total to be contracted	789
Actual: planned for 5 year current contract		
	Core funded	116
	Mission buy-ins	<u>837</u>
	Total currently planned	953
Actual: executed in four years		
	Core funded	108
	Mission buy-ins	<u>368</u>
	Total actually executed	476

With the sizeable Mission buy-ins, particularly for the EWI, ISPAN will exceed the person month targets of the PP in the current basic contract. In fact the person month utilization in the four years to date are only 35.5 person months short of the contracted levels of the basic period. This represents the basis for raising the spending ceiling to account for the unforeseen water resources activities that have been addressed by ISPAN.

A further detailed assessment of ISPAN performance to date versus the logical framework is provided in Annex 12 as an annotated logical framework. Narrative statements, objectively verifiable indicators, means of verification and assumptions of the project goals, purposes, outputs and inputs are addressed in brief assessments of the current status of the ISPAN Project. **ISPAN is rated as having performed this technical services task very well.**

h. Provide specialists

For each activity ISPAN has 1) established the scope of work, 2) identified team members, 3) negotiated levels of effort with consortium members and individual consultants, 4)

prepared and briefed the team either at the TSC, in the field, or in both locations, 5) monitored field work, 6) held debriefings for A.I.D. and TSC personnel, 7)

Figure 1. Bureau Funding of ISPAN

reviewed and edited the final report and 8) distributed the reports. With a few notable exceptions, the project has generally met implementation schedules often under tight deadlines and with little advance notice. Response time of a random sample of short term project efforts has been addressed. The results as presented in Annex 13 indicate a generally short response time in initiating activities. The completion of activities was not systematically investigated due to lack of performance of the MIS.

In a few isolated cases, specialists have not performed up to expectations, however the failure rate has been less than 1% in terms of total person months provided by ISPAN. These shortcomings have sometimes not been wholly attributable to the specialist. In some cases the problems arose in recruitment and selection of the specialists. Two of fourteen evaluation team members were criticized in Egypt as was a sector assessment team. In addition, the ISPAN evaluation team received scientific and management criticisms of two of the long term personnel assigned to the EWI. **With these few exceptions, ISPAN performed the specialist provision task very well.**

i. Establish and maintain a roster of technical personnel

A "Progress" relational database was developed in February 1987 and data on 160 experts was included. The ISPAN Project Officer (PO) at the time asked that the information be made available in computer form to the missions. However, the hardware and software used for the database were incompatible with those available at Missions, so a simplified database using Lotus software was prepared at the request of the PO. Unfortunately, when the results were delivered, the PO decided that they were unsuitable and ultimately nothing was sent to the missions.

The roster on the "Progress" database is currently being updated. However the utility of this exercise is questionable since the roster is not normally used in the process of selecting personnel to staff activities. Instead of using the database, the personal knowledge or "old boy" network seems to be the preferred method. Limitations of the database in making simultaneous searches on multiple characteristics of potential consultants has been stated by the TSC staff. The frequency and duration of utilization of TSC core staff, consortium member personnel and outside consultants has been investigated. The wide dispersion of personnel utilized and low frequency of persons used in repeat assignments indicates a wide use of many experts. A small number of individuals are apparently used repeatedly by the TSC, for excellent performance reasons. **This task of developing and using a computerized data base for the expert roster is rated as performed poorly by the contractor.**

j. Provide briefings on ISPAN

The AID Project Officer (PO) is briefed at least weekly on ISPAN activities. In addition, briefings of other AID officials and guests are provided as needed or requested. The ISPAN Evaluation Team received a detailed briefing that was accompanied by the ISPAN Briefing Paper in Annex 7. **This task is performed very well.**

k. Brief and debrief specialists

Specialists are normally briefed in the ISPAN offices before departure to the field for an assignment using the Team Planning Meeting (TPM) model developed by the Water and Sanitation for Health Project (WASH). In some cases these briefings are repeated or entirely completed in the field to allow for participation of local experts who are part of the teams. Debriefings are also carried out in a similar way. **This task is performed very well.**

l. Provide travel arrangements

TSC personnel have made travel arrangements and provided more than 440 airline tickets for contractor, subcontractor and consultant personnel. The arrangements made and service provided to travelers have been opportune, complete, and efficient. **This task is performed very well.**

m. Provide per diem advances

CDM provides advances to all ISPAN Project travelers in an amount equivalent to 85% of estimated per diem and other costs. It also settles any balances owed promptly after the return of personnel and their submission of expense reports. **This task is performed very well.**

n. Provide support for consultants and contractor/subcontractor personnel while in the TSC

Support is provided as needed, however there have been few instances in which such personnel have worked in the TSC. **This task has been performed very well.**

o. Provide detailed coordination and facilitation for technical assistance

The TSC staff have not spent as much time at the TSC as envisioned. Frequent absences from the TSC on ISPAN and other assignments to cover gaps in their salary coverage have definitely hindered the effectiveness of the TSC. The day-to-day coordination and facilitation of technical assistance to the field has been hindered by reported poor communication. The long term personnel in Dhaka and USAID Mission personnel in several countries report difficulty in getting responses from the TSC to fax requests. In one notable case a team of consultants arrived in a country without notifying the Mission or gaining Mission clearance. Due to these types of episodes and examples, the management of day-to-day technical assistance, training, technology transfer and applied studies activities has been strongly criticized. **This task has been performed in an average manner.**

p. Develop and maintain country boxes

Country boxes have been established for 17 countries although because of funding restrictions, they have not been developed to the extent envisioned in the project design. Specialists are provided with selected items in the boxes as needed before departure on project travel. Investigation of a sample of country boxes provides the impression of a minimal effort. Debriefings of TSC staff and consultants, collection of more recent information on the country from recent travelers and requests from cultural affairs officers of embassies and consulates in the Washington, D.C. area could significantly improve these country boxes as tools to prepare consultants. **This task has been performed in an average manner.**

q. Provide accounting and time reporting for all personnel and expenses

The MIS currently collects information on all time and expenses for personnel assigned to the project and for expenses of the project as the information is received from each member of the Consortium. For CDM the information is input into the system weekly and is kept current. For other consortium members information is at least one month behind and in some cases as much as three months behind. Since the system makes no provision for accruals or for commitment accounting, the information it provides for management purposes is not much use. Surprisingly, little effort seems to have been made to use the system's capability to account for all Consortium members' time and expenses or alternatively to obtain information from them on a more timely basis. The "Estimated Cost at Completion" system was apparently never systematically used. The MIS system provides a variety of reports which, if the input of data were more complete, would provide useful information for fiscal and other managers. For more information and comments on the MIS the reader should refer to the specific section on the system later in this report under the MIS subsection of Project Performance and Accomplishments. **This task is still performed poorly.**

r. Provide billing or invoicing of project expenditures

Initially, when there were problems with the MIS, invoicing was late and incomplete. Now that the system is at least performing its fiscal functions properly, invoices are prepared and delivered according to AID's requirements and with the necessary detail and documentation. A sample invoice is provided in Annex 14. **This task is performed well.**

s. Provide records and information for audits and investigations

ISPAN was included in a 1988 Price Waterhouse review of regional projects requested by the ANE Bureau. A number of recommendations were made for improvement and correction of ISPAN's records. CDM reports that it has for the most part put these improvements and corrections into effect. Future audits and reviews will indicate whether records are kept properly. **This task has been performed well.**

t. Establish on-line telecommunication links with the A.I.D. Project Officer

Hardware and software problems in establishing a telecommunications link between the PO and the MIS were never satisfactorily resolved. As a result the link to the MIS has never worked. Now the MIS is no longer on the ISPAN office network. The PO does have access to the network for accessing document files. **This task has not been performed.**

u. Provide or procure equipment

Equipment costing more than \$150,000 has been provided. This included office furniture and equipment, personal computers, including laptop models for field teams, photocopiers, fax machines, etc. In addition, field offices associated with the EWI have been equipped. Some reported delays have occurred in delivery of the Geographic Information System (GIS) equipment to Dhaka. **Nevertheless, this task has been performed well.**

v. Develop cooperating country and third country nationals capability

Most field teams include local experts and there is one instance of a third country national leading an evaluation assignment. However, the roster, discussed above, does not contain nationality information so, if it were to be used for selecting staff, it would not help in satisfying this requirement. **This task has been performed well.**

w. Reporting requirements

The contract for the ISPAN Project specifies certain reporting requirements. Some of these have not been met, sometimes because of funding shortfalls and sometimes because of other factors. These are discussed below:

- o The MIS, which is discussed in several other parts of this report, has not provided the information or the access by the A.I.D. PO and Contracting Officer which the contract envisioned.
- o Some of the quarterly progress and annual reports have not been produced.
- o The project brochure was produced in the Spring of 1988 rather than within 60 days of the effective date of the contract - August 14, 1987.
- o All TSC professional core staff, who leave the project, are required to prepare a final report. The first project director, who was terminated, has not submitted his report.

This task of reporting has been performed in an average manner.

Of the 23 tasks, seven were performed very well, four were rated as performed well, five were performed in an average manner, five were performed poorly and two were not performed.

The twenty three tasks can be referred to as routine project and office management. These routine management tasks should all be performed well or very well.

The following six subsections cover the topics of timeliness, quality of personnel, quality of performance, quality of reports and newsletters, MIS, and TSC organization and communications.

2. Timeliness of ISPAN responses

In the majority of reports from the field, the work of the ISPAN team was deemed to be timely in delivery of services. Mitigating circumstances were often cited by the TSC as the reason for delays in actions. The most common factor in 1990 was the lack of core funding (see Annex 8). In early to mid-1991, the modal cause was the interference of the Persian Gulf War (see Annex 9).

The AS activities, of which six have been completed and three are in progress, has received the greatest number of complaints for lack of timeliness. The reasons offered by one Mission for delays in the performance of one AS were the over-commitment of TSC core staff and difficulties associated with the TSC attempt to manage consultants, contractors and personnel across global distances. Other more pertinent factors were the inappropriate design methods of data collection, the unrealistic timetable of the study and a contractor that was unable to manage the study. **The delegation of responsibilities to local professionals in a firm that was selected by the Mission solely on the basis of cost rather than capability had a role in the delay of one critical project report by one year. Active involvement through frequent visits to the site by the AS program manager saved the research activity and resulted in an excellent report.**

The timely response of the TSC in initiating project activities has been documented through a manual survey of the files (see Annex 13). The completion of project activities according to the target date of completion deserves attention. This project completion information is not available due to the lack of an effective MIS. **Direct pro-active involvement of the activity manager with suitable time and cost tracking tools and salary coverage from core funding may bring activities to a more rapid and successful conclusion.**

3. Quality of ISPAN technical personnel

ISPAN employs personnel in three categories:

- o Full time staff who work for the TSC in Arlington, Virginia;
- o Consultants who work on temporary duty assignments (TDY) in the United States or abroad; and

- o Long term expatriate staff and host country national staff employed in Bangladesh and long term host country nationals in Sri Lanka.

Evaluation team members met with all of the TSC staff, all of the expatriates in Dhaka and most of the host country national staff in Dhaka and Colombo. The team also met several consultants who were on TDY in Dhaka and Jakarta. The team also carefully reviewed the roster of technical personnel available for consultancies and the job descriptions and resumes of the TSC staff in Arlington.

A list of all personnel who have worked with ISPAN TSC is provided in Annex 11. The review of these personnel records indicates that ISPAN has had three project directors and an acting director in a four year period. This high turnover is a reflection of both the project and the people involved. This turnover has resulted in ineffective project administrative leadership and management in ISPAN. It must be stated that the technical direction of ISPAN has not had excessive turnover and has had excellent direction.

A review of the resumes and job descriptions for the four core professionals indicates that the training and experience of TSC staff are well matched to their current positions (see resumes and job descriptions for TSC positions in Annex 15). Professional technical staff hold appropriate graduate degrees and the program managers have extensive international experience in irrigation and water resources development. Program managers display a high level of professionalism and are generally well regarded by Mission ADOs, host country professionals, and other consumers of ISPAN services. The technical staff are supported by a Financial and Administrative (F&A) professional staff consisting of an office manager, financial officer, executive secretary. This F&A staff is supported part time by employees of the adjacent WASH Project, which is also led by CDM. The F&A staff was assessed as very good, capable and industrious. The administrative management of the project was lacking sufficient input to successfully cover the 22 tasks described earlier.

Consultants fielded by ISPAN have been favorably reviewed by the Missions and host country counterparts. **With only few exceptions, the TDY consultants have been perceived as well suited to their assignment and to have performed well in the field. Several of the consultants who are called on frequently by ISPAN have outstanding international reputations.**

The method by which consultants are selected was of concern to the evaluation team. One of the original functions of the MIS was to provide a computer database consultant roster of personnel by which background, academic training, technical skills, country, and language experience could be matched to a specific project activity. This partial (160 of 500 names in the paper files) computer database was established early in the project and is still not used by activity managers. It is currently being updated. **At present, the TSC staff has a paper file of about 500 consultants, but the activity managers still use their own network of contacts to recruit consultants. A review of frequency and duration of all consultants used in the first four years of the Project revealed that a large number and a broad spectrum of individuals are utilized by ISPAN. Most of the consultants are individuals or are from agencies outside the eight member consortium.**

4. Quality of ISPAN performance

Interviews in the field have generally indicated a very good to excellent output and performance of the ISPAN consultants and teams. This includes the ISPAN core staff from the TSC, as well as, the consultants fielded by the TSC.

People who have worked with ISPAN core staff and ISPAN consultants in the field activities have reported very good to extraordinary outputs. There have been three consultant exceptions to this. An ISPAN report on the Flood Action Plan (FAP) Environmental Workshop in Dhaka was deemed inadequate by the Mission. Two components of an IMS evaluation in Egypt were questioned. The training portion had to be rewritten by the team leaders and a second hydraulic modeling team had to be hired to reassess that portion of the evaluation. An energy and irrigation study in Egypt was rejected and no further action was taken. These cases are from one small activity and two small components of two much larger activities. **The frequency of disappointing results is less than 1 percent. ISPAN has performed in an exceptional manner in the first four years of the Project.**

5. Quality of ISPAN reports and newsletters

As part of the evaluation, the team reviewed numerous technical reports, workshop reports, evaluation studies, progress reports, work plans, strategy papers, handbooks, monographs and related documents produced by ISPAN. Several, such as the Eastern Waters Study, the A.I.D. Water Resources Strategy Draft, and the Sederhana Privatization and Sustainability Study, were examined in detail. **With only a few exceptions, the quality of published material generated by the ISPAN Project has been high. The Eastern Waters Study, the North East Small Scale Irrigation Project (NESSI) and the Sederhana studies have been outstanding.** The distribution of this published material has been circumscribed by inadequate core funding. Too few documents have been produced which have broad regional significance or address lessons learned. Yet the overall technical report quality has been high both in content and in support of Mission irrigation portfolios (see Annex 16 for a listing of numbered ISPAN publications).

At its inception there was an aborted effort by ISPAN to establish and distribute a newsletter. An issue was written, distributed and reviewed. It was described succinctly by an ADO as "too long and too short". Shortly thereafter, ISPAN started making regular contributions to the ANE/TR/ARD's Networking ARDO's in Asia and the Near East, a house organ of USAID. This continued until late 1990. Since that time there has been no effort on the part of ISPAN to find an alternative voice for its general activities.

In February 1991 ISPAN initiated a weekly EWI Newsletter which has continued to the present. It is circulated to more than 50 engineers, administrators, consultants and others with EWI interest. A sample of the EWI Newsletter is provided in Annex 17. **This newsletter is well done**

and is well received among the recipients.

ISPAN does not regularly provide the USAID library with copies of any of its reports. To date, the Library has but 12 ISPAN publications, while ISPAN has generated more than 110 reports and publications. **Given that the USAID library is on the ground floor in an adjacent building, delivery of copies of their reports to the library would not require much effort. When queried about this deficiency, the mailing was verified to have occurred to an incorrect address.**

6. Management Information System

This section is comprised of four topics dealing with the Management Information System (MIS). These include the proposed activities, the actual performance and adjustments, the current situation and the capabilities in project and financial management.

a. Proposed activities

The PP and Request for Proposals (RFP) specified an ambitious MIS which, in addition to collecting budget, expenditure and other fiscal data for the project, would also provide information on agricultural production, farm incomes, income distribution, Missions' performance and services provided by regional support organizations.

CDM's proposal for the ISPAN project involved two separate systems to provide the information required from the MIS. The first, building on their experience under the WASH project, was a fiscal information system to be developed by the CDM in-house software development group. The second was to be an "Experience Database" which would be used to provide all the information not covered by the fiscal system. At the start of the project CDM proposed that the development of the "Experience Database" be the subject of an applied study. This was not accepted by A.I.D.'s PO. The Progress Consultant Roster was ultimately prepared using CDM funding. At present it contains 160 of the 500 resumes in the paper file.

Thereafter, work was concentrated on development of the fiscal MIS. However, the following events and problems caused considerable delays and resulted in the MIS not providing the information needed:

- o Expectations and requirements of certain individuals were overly ambitious;
- o Personnel assigned to the work did not perform as expected;
- o Users' requirements were not clearly stated or understood; and

- o There was incompatibility between the MIS application software (Progress) and the network software and hardware.

- b. Actual performance and adjustments

From the start of the project, in August 1987 and throughout 1988, project invoicing was frequently late and activity managers could not obtain the information they needed and were not able to use the system to manage their activities. As a result, CDM decided to bring in outside consultants to resolve the problems. Hanson-Smith, Ltd. was contracted.

Hanson - Smith concentrated on working closely with all users of the system to ensure that their needs were clearly understood and considered in the re-design of the system. Work on the re-design was completed in February 1989 and meetings were held with all interested parties to ensure that the proposals were acceptable. A six week period was allowed for comments, but none were received and the changes were implemented.

At that stage the MIS was apparently performing as needed, although it was a very much reduced system in terms of scope and outputs. However, as early as the end of August 1989 the A.I.D. PO was reportedly dissatisfied with the way the system was performing. **The system was often "down" and did not provide access to data. More recently, the system seems to be limited to generating the monthly billings to A.I.D. and as a source of expense data for a variety of ad hoc activity management systems.** Two samples of inadequate project time tracking outputs of the MIS are provided in Annex 18. A sample of the adequate financial MIS based reports including a history of contract amendments is provided in a sample quarterly invoicing statement in Annex 14. The contrast in detail and utility demonstrated in these two Annexes reveals the limited time tracking capability of the MIS to date.

- c. Current situation

Information is now being gathered with a view to updating the existing system. Plans are well advanced for obtaining a MacIntosh computer and "MacProject" software to augment the MIS in tracking and scheduling, accounting for level of effort and "Estimated Cost at Completion." These new components of the MIS will be immediately implemented in the EWI activity and gradually introduced to other activities.

Considerable effort has gone into developing the present MIS. In addition, CDM has spent much of its own funds and assigned its support personnel to develop the system. Despite this, the present MIS is not an adequate project management tool and is far from what was envisioned in the PP and contract.

One of the primary problems with cost information generated by the MIS is that cost data are obtained from many different sources, many of which lag by several months. The Hanson - Smith

solution to this problem was to maintain "Estimated Cost at Completion" data as the principal data element for budget control and planning purposes. This requires that activity managers constantly update this information as they authorize and incur expenditures. Unfortunately this has not been done. Cost data from consortium members and other subcontractors are often several months late. In addition, with the EWI, which was not contemplated when the MIS was developed, overseas offices are responsible for substantial expenditures which are only reported when imprest account reimbursements are received in the TSC. Insufficient effort has apparently been made to work with subcontractors and overseas offices to establish rigid timetables for delivery of invoices and imprest reports. **The result is that neither the MIS cost data nor the "Estimated Cost at Completion" data provides useful information for activity and project management purposes.**

d. Project and financial management

The financial management of the project has suffered from two major impediments: the failure of the MIS to provide much more than historical expenditure data and the uncertainty and inconsistency of core funding.

The goals of the MIS, in terms of country and Mission data, were unduly ambitious and probably more than could be expected from a project. However, the needs and expectations from the MIS on the fiscal aspects of the project were by no means onerous. In fact, because of the consortium approach to the project, a sophisticated system for reporting and projecting expenditures is indispensable to the effective financial management of the project. Many of the elements of such a system are apparently incorporated into the MIS as it now exists. However, the system is not being used in the ways it was designed to be. Specifically lacking are:

- o The direct input of time and other data for subcontractors' personnel; and
- o The maintenance of "Estimated Cost at Completion" data for each activity.

In addition, insufficient effort seems to be made to get all relevant expense data into the system at the end of each month. A rigorous timetable for gathering and entering data at the end of each month from subcontractors, consultants, suppliers, and field offices would enhance the provision of up-to-date expense data which could be used by activity managers and others in controlling budgets and making plans and projections for the future.

The financial area lacks overall direction. There are many players involved, but no one person, other than the Project Director (PD), who is not a financial person, is responsible for the performance of the MIS or the information generated. The Financial Administrator, Office Manager and Administrative Manager all apparently perform their respective responsibilities for different aspects of the MIS efficiently and effectively, but none of them is responsible for the total picture.

Activity managers are called upon to prepare budget projections for their respective activities using a variety of spreadsheets which they have developed and which use expenditure data from the MIS. As discussed earlier, this MIS-based information is incomplete and is therefore not a useful departure point. Stronger leadership in the financial area would increase the quality of data activity managers have to work with to update and prepare budgets and projections.

7. Technical Support Center (TSC) organization

ISPAN's small number of technical staff (4 people for five technical positions) allows it to function as an informal team with no direct chain of command as in the organizational chart of Figure 2. Each individual covers for and supports the other during field visits, times of excessive work loads or when they must return to a project of their parent firm to assure complete salary coverage. Such an organization can be highly effective, achieving through close informal communications, what many organizations with formal channels of communication, job descriptions and organization charts cannot. The risk of this type of organization is that with no clear areas of accountability and with no one to perform the managerial functions of making work assignments and monitoring performance, the cracks through which tasks may slip become rather wide. This appears to be the case with the ISPAN TSC.

Interviews revealed that there is little supervisory follow-up on tasks. This accounts for the repeated complaints heard from Missions and contractors in the field that "ISPAN can be a black hole for communications". In Bangladesh and Sri Lanka, where ISPAN has significant activities and long term staff working, there were numerous complaints that faxes go unanswered. Examples were cited of requests for information that had been sent, with follow-up inquiries not responded to. In several instances, respondents stated that courtesy messages, partial responses or "the problem is being addressed" message would be helpful, but are not received. **This is a serious problem and it stems in part from the informal non-supervisory nature of the ISPAN TSC team. While the professionals state that they cover for each other, responses to activity specific faxes do not support this. With the extensive travel required of the activity managers, the problem of ISPAN being a "black hole" has grown and become more serious.**

An omission that has contributed to the problem of unanswered communications is the lack of any written policies or procedures. Again, the small number of the staff and the close collegial atmosphere in which they work has apparently obviated the need for extensive written guidelines. However, this absence of written directions inhibits the support staff's ability to provide responses themselves or to forward requests to travelling activity managers.

The A.I.D. PO communicates directly with each team member as required. This is efficient and the absence of excessive bureaucracy is commendable. **The problem arises when the question of responsibility is raised. No one has the total picture or is accountable for what is going on at ISPAN. If communications are direct between the A.I.D. PO and an activity manager, then there is no one who is aware of all of the problems, actions and results.**

When asked how ISPAN was organized after the decisions reached in the 1991 ISPAN Labor Day Retreat, two TSC professionals drew two very different organizational charts for ISPAN, but both show ISPAN having two Directors of essentially equivalent status. **One might ask why a project that has only four technical professionals in the TSC and that prides itself on not needing formal structure or supervision requires two people with the title of Director.** The addition of a second position with the title of Director appears to be excessive. The result is a situation in which the two directors are responsible to each other on different topics. This can become a problem when questions of accountability arise. At present no one is solely accountable for the operation of ISPAN. Having two directors, rather than clarifying the roles and establishing accountability, promises only to make matters worse.

An effective and responsive organization operates with a minimum of red tape and with as free a flow of information as is possible. **Free-flowing communication includes the assignment of tasks and reporting on how they are carried out. In this area ISPAN has not performed well. Communications from the field to the home office are sometimes not responded to. An effective organization, particularly one as small as ISPAN, needs a person who knows what is going on internally, can speak for the organization, and is accountable for the organization's performance. The bifurcated leadership does not meet this criterion.** A recommended alternative organization is in Figure 3.

ISPAN should have a Director with the technical and administrative skills required by an organization that is entering the field of water resources. S/he would be assisted by a full time administrative manager, who would have overall responsibility for accounting, personnel, office management, budgeting, and inter-office communications and contract administration. The program managers would be accountable to the ISPAN Director who would in turn be accountable for the project's performance. Responsibility for tracking communications between the TSC and the field would remain with the administrative manager, but each program manager would be accountable for the communications in his/her respective area.

An economist should be hired as an additional staff professional to work on water resources planning and management, and to complement the existing professional skills. This person should have a specific technical area of responsibility in policy analysis and water resources strategy development. S/he would also serve to support all three technical areas.

For this new structure to work, there must be a fundamental change in the attitudes of the current staff. The collegial and informal atmosphere and approach to their work should be maintained. However, there is a fundamental need to establish a structure through which communications flow, responsibilities are assigned, work is monitored, and individuals are given the opportunity to account for the work they have done.

Figure 2: Current ISPAN TSC Organization

Figure 3: Proposed ISPAN TSC Organization

B. ISPAN Project Outputs

1. Technical assistance, evaluations, designs and re-designs and irrigation sector assessments

TA provided by ISPAN is in four forms as shown in Annex 6: irrigation TA, project evaluations (PE), project designs and redesigns (PD&R) and irrigation sector assessments (ISA). These categories of TA are addressed in the following sections:

a. Technical assistance

TA, according to the activity list of ISPAN (Annex 6), was concentrated in Bangladesh with 2,728 person days used and \$632,884 expended by July 31, 1991. The resources have been focused on flood control, the water sector and supporting activities in agriculture.

Major current TA activities (72% of the TA to date) have been concentrated in the EWI to assist the Government of Bangladesh (GOB). Three long term expatriates provided by ISPAN comprise the primary leadership for four of the Flood Action Plan (FAP) supporting studies in Bangladesh.

In response to the floods of 1988 in Bangladesh, the US Congress requested that A.I.D. commission a study which would formulate an appropriate set of recommendations for flood prevention, control and relief. A.I.D. contracted this activity through ISPAN which recruited three eminent consultants to conduct the study in the Ganges and Brahmaputra River Basins. The consultants produced the Eastern Waters Study (EWS) in April 1989. **EWS has a non-traditional multi-disciplinary outlook and an insightful set of findings and recommendations. The EWS recommendations, which are contrary to the traditional, mono-disciplinary and costly structural interventions for flood control, serve as a guide for US foreign assistance.**

The EWI has a budget (partially TA and the remainder management) to date of \$7.474 million. EWI, which grew out of the EWS and the G-7 meeting in London in 1989, is an effort to provide A.I.D. with a means of addressing flooding in Bangladesh. **Although ISPAN was initially conceived as an irrigation support project, by virtue of its capacity to quickly mobilize experts in water resources, it became the contractual mechanism for EWI.** This is currently ISPAN's single largest activity.

The objectives of the Eastern Waters Initiative are to:

- o Provide a team to conceptualize, plan, implement and manage the EWI Program;
- o Develop the EWI Program cooperatively with the regional governments' own activities in the Ganges and Brahmaputra River Basins;

- o Provide a mechanism for A.I.D. to implement its policy initiatives for water and agricultural development in the region; and
- o Ensure continued communication and cooperation with the World Bank and other multilateral and bilateral donors working in the EWI region.

The EWI program manager in the TSC oversees the Indian activity (\$0.358 million), the Nepal activity (\$0.098 million) and the substantial activity in Bangladesh (\$5.206 million). The primary activities of EWI are four components of the international Flood Action Plan (FAP) for Bangladesh which are supported by the United States: FAP 14 Flood Response Study, FAP 16 Environmental Study, FAP 19 Geographic Information Systems and FAP 23 Flood Proofing Pilot Project. These activities are supporting studies in the larger FAP developed by the World Bank which consists of a total of 26 components.

ISPAN maintains an office in Dhaka directed by a Resident Manager and Coordinator, who oversees the work of four FAP team leaders, consultants and host country national employees.

The following is the status of the four flood action plan activities:

- o FAP 14 - Flood Response is led by a HCN social scientist and backstopped with TDY support from a U.S. anthropologist and a political scientist. It involves a two stage research project to study human responses to flooding and the effects of flooding on families, businesses and communities with an eye to extrapolating lessons learned to reduce future flood related losses. The first stage of the project involves a field survey of 24 villages and almost 2000 respondents. This major activity employs 48 enumerators and two full time anthropologists. The second stage will be a wider study based on a revised survey instrument. **One reason this FAP is behind schedule is due to a delay in hiring expatriate consultants and local professionals and a lack of strong leadership. Data analysis is being carried out at the University of Texas-Dallas causing delays in the development of needed statistical results.** A TDY data analyst is planned for later this year in hopes of transferring the technology for data analysis to Dhaka. With additional TDY support this FAP could be on track and completed by August 1992.
- o FAP 16 - Environmental Study is coordinated by an ecologist and involves a multi-disciplinary study aimed at developing regionally appropriate environmental impact guidelines for the Flood Action Plan. The team held a workshop on environmental guidelines in July 1991 with uncertain results. The workshop report was judged to be of poor quality by USAID/Dhaka. This FAP study does not have strong support from the Flood Plan Coordinating Organization (FPCO) under the Bangladesh Water Development Board (BWDB), but is making progress in attuning other FAP studies to environmental impacts. **The Director General of Environment has expressed**

strong support for this FAP as being one which will set environmental guidelines for the overall action plan as well as the country as a whole. This activity is on schedule.

- o FAP 19 - Geographic Information Systems (GIS) is led by a GIS specialist. He is also coordinating this FAP with existing GIS work done by the local Space and Remote Sensing Organization to avoid duplication of effort. Aimed at establishing a GIS to serve the information needs of other FAP activities, this activity has received strong support from other FAP contractors and the FPCO. Some delays associated with the arrival and installation of equipment will have an effect on the original timetable, but the first two GIS projects should be completed by December 1991. **This FAP shows strong potential for sustainability within Bangladesh beyond the project completion date in part because of local support and also because this FAP will be supported by Mission funding to September 1993, beyond the life of the EWI activity.**

- o FAP 23 - Flood Proofing had a part time coordinator who is an engineer, based in Singapore on another CDM project. The Bangladesh Government did not approve a full time coordinator for this FAP. Four host country professionals staff the team which is supported by expatriate TDYs. This activity, concerned with the many small scale activities undertaken by people to reduce losses associated with flooding, was behind schedule in part because the coordinator divided his time for CDM between Dhaka and Singapore. A FAP 23 workshop was held in Dhaka and attended by the evaluation team. **It was well organized and stimulated positive responses from participants even though there is a strong bias within the FPCO against "soft" or organizational approaches to flood action planning.** The ISPAN COP has recently taken over as the coordinator of this activity and it appears to be on schedule once again.

EWI confronts some unique difficulties. The United States portion of the overall FAP effort emphasizes organizations, information, environments and people rather than structural solutions to flood control. As such, the US effort involves the difficult task of promoting a new paradigm in an environment dominated by a narrower civil engineering world view. EWI is performing very well under these circumstances and the evaluators particularly noted the leadership and diplomacy of the ESI activity manager in the TSC. These four studies are important parts of the overall FAP and merit continuing support from A.I.D.

EWI is administered by ISPAN as if it were a consultancy rather than as a long term overseas project. ISPAN began as an organization primarily serving Mission, region, bureau and host country needs through short term activities and supported only a few long term expatriate positions. Long term U.S. overseas personnel in Dhaka complained of limited backstopping by the TSC, little support from USAID/Dhaka, contracts that extend few benefits normally associated with long term postings abroad,

slow procurement, and poor response times on fax traffic. It was also evident that the leadership within the Dhaka EWI office does not interface effectively with Bangladeshi officials nor display strong diplomatic and promotional skills for the EWI FAPs. This activity involves much more than TA and research. The leader of the field office should be a person skilled in diplomacy, public relations, negotiation and conflict management.

The field office and host country national counterparts commented that TDY's identified by the TSC were good to superior and that workshop facilitation by the TSC was excellent.

EWI reflects the evolution of ISPAN from an irrigation support project into one serving a larger need in water resources development generally. In terms of expenditures and impact on numbers of people, it is the single most important activity within ISPAN and considerable effort must be directed to assuring that this activity reaches its objectives fully and with the maximum possible support of the Bangladesh government.

The second major TA activity was conducted in India totaling 1073 person days and \$658,664 in expenditures (as categorized by ISPAN in Annex 6). The TA was carried out in three categories of work. They are:

- o Support to the Mission in New Delhi, in management of the irrigation portfolio;
- o Support of the Madhya Pradesh Minor Irrigation Project (MPMIP); and
- o Support for the Maharashtra Minor Irrigation Project (MMIP).

A long term irrigation advisor worked in support of the Mission's Water Resources Management and Training Project. This activity was for 298 person days and cost \$141,992. This advisor was instrumental in management of the MPMIP, MMIP as well as a project in Himachal Pradesh. **This is a major example of ISPAN's contribution to the improved management of a Mission's irrigation portfolio.**

Support of the MPMIP totaled 353 days and cost \$200,766. Activities included limited U.S. engineering but major Philippine TA. The Filipino expert worked primarily in the area of farmer organization for irrigation management. **This is an excellent example of ISPAN's use of a third country national in a technology not common in the United States. This experience in farmer participation must be included in the lessons learned from ISPAN.**

Support for the MMIP totaled 442 days and cost \$300,948. The activities focused on TTT in microcomputer applications to irrigation. The long term advisor was instrumental in introducing microcomputers into the Irrigation Department for modelling and irrigation scheduling. A large amount of training accompanied this technology transfer. **This is a good example of TTT by ISPAN in developing the capability of a client to utilize modern irrigation techniques.**

The USAID Mission in India did not respond to the evaluation team's questionnaire. The team did not visit India. A former ADO was interviewed and reports were reviewed as input to the evaluation. **These sources provided a strong favorable impression of the quality of personnel and their work, and the timeliness of ISPAN's response to India's needs. The only problem reported was poor response by the TSC to communications from the Mission and poor communications to the Mission from the TSC.**

b. Irrigation project evaluations

Project Evaluation (PE) teams were fielded by ISPAN in seven countries. Questions on the PE's performance were included in the questionnaires sent to the Missions. Respondents rated positive statements about the PE using a scale including, strongly agree, agree, neither agree or disagree, disagree, and strongly disagree. The responses are summarized by country below:

- o In Egypt, an ISPAN team evaluated the IMS Project. The evaluation took 121 person days and cost \$82,862 (Annex 6). The Mission agreed that the two PE were well staffed, and prepared and performed well. **The evaluation was well received and precipitated management improvements to one of the major components of the IMS Project.**
- o In Indonesia, ISPAN evaluated the Small Scale Irrigation Management Project (SSIMP). The evaluation took 141 person days and cost \$90,084. The Mission reported strong agreement that the PE was well staffed, agreed that it was well prepared but disagreed with the statement that the PE performed well. **This evaluation caused a major reassessment of the scale and target outputs of the project and led to major management improvements of the SSIMP Project.**
- o In Nepal, an ISPAN team evaluated the Irrigation Management Project (IMP). This activity took 120 person days and cost \$59,151. The Mission strongly agreed that the PE was well staffed, and prepared and that it had performed well. **The evaluation led to the replacement of the TA contractor and to the redesign of the IMP Project.**
- o In the Philippines, ISPAN evaluated the Accelerated Agricultural Productivity Project. The evaluation took 65 person days and cost \$47,963. The Mission strongly agreed that the PE was well staffed, and prepared and that it had performed well. **The evaluation verified that the project was well managed and on track toward the completion of target outputs.**
- o In Sri Lanka, ISPAN evaluated the Irrigation System Management Project (ISMP). The evaluation took 122 person days and cost \$102,085. The Mission strongly agreed

that the PE was well staffed and performed well. It agreed that the PE was well prepared. **The evaluation caused the reassignment of TA resources and re-emphasized the importance of the monitoring, evaluation and feedback component of the ISMP Project.**

- o ISPAN provided three teams for three projects in India. . The India activities took 185 person days and cost \$135,435. The Indian Mission did not respond to the questionnaire, so the PE could not be evaluated from that source. The long term ISPAN advisor to the Indian Mission reported that the evaluation teams preformed very well. **The evaluations performed by ISPAN provided mid-project corrections for the three projects.**
- o ISPAN provided teams for PE in two major projects in Pakistan. The Pakistan activities required 373 days and cost \$255,166. The questionnaire responses were in strong agreement with the quality of the teams, their preparedness for the task and the quality of the work performed. **One of the evaluations precipitated major changes in the TA leadership and the implementation of the ISM Project.**

The responses of the Missions can be interpreted as saying the quality of the evaluations were generally rated by Missions as good to very good. One recurring comment by Mission personnel was that the evaluation teams sometimes did not go far enough in evaluation to meet local and Mission expectations. Several past and present Mission representatives expressed the wish that the evaluation teams had been tougher on some of the projects, so that the Missions would have had reason to in turn be tougher on the TA contractors implementing the contracts.

c. Project designs and redesigns

Project design and redesign (PD&R) teams worked under ISPAN management in seven countries. In Tunisia, the three activities were for a PID design, a Special Studies Scope of Work and for a National Water Users Association Strategy Design all conducted for under \$20,000. In India, the design was an ISPAN Activity Investigation costing just over \$8,000. In Morocco, a major irrigation project was designed. The Supplemental Irrigation PP preparation activity cost just under \$70,000. In Thailand, the NESSI Policy Workshop design activity was completed for approximately \$33,000. This design led to the European Economic Community (EEC) adopting the NESSI design and implementing a similar irrigation intervention exceeding \$200 million in magnitude. In Egypt, a small activity called Mobilizing Resources was completed for just over \$2,500. A National Irrigation Administration Training Assessment design was prepared for just over \$40,000. A region EWI activity in Nepal prepared a preliminary design for studies that was later curtailed at the request of His Majesty's Government. The single redesign was for the Irrigation Management Project in Nepal. It was conducted with 6 person months of TA for approximately \$45,000. The total set of 12 PD&Rs were performed for under \$200,000. This is considerably less than the PP forecast for 35 new irrigation PD&Rs. These statistics reflect the gross overestimation of design work for ISPAN.

The PD&R activities appear to have been well executed according to the questionnaire responses from Missions. The Missions in Tunisia, Thailand, Philippines and Nepal all responded in strong agreement with the quality of the team fielded and the work completed. Only one Mission, Tunisia, agreed with the statement that design of irrigation projects in the country had improved as a result of ISPAN involvement. All other Missions had no response or lacked sufficient information to make a judgement.

d. Irrigation sector assessments

Irrigation Sector Assessments (ISA) were conducted in only two countries. The Egypt Energy Action Program was strongly criticized by Mission and TSC professionals. When asked for a copy of the report, neither group could locate a copy for the team to review. The reason reported for the poor ISA was based on the team's inability to relate to the Egyptian counterpart's perceived needs for the assessment. The report was apparently never published.

The only other two sector assessments were prepared in Bangladesh. The three months of work was performed by ISPAN for just under \$60,000. After submission the EWI came forth and nothing further transpired on the sector assessments. There was no implied cause and effect relationship between the sector assessment and the EWI. **The scope of actual ISA was less than forecast by the PP.**

2. Training and technology transfer and implementation assistance

Training and technology transfer (TTT) and implementation assistance (IA) summaries are provided in Annex 6. TTT has involved 358 person days and cost \$214,454 to date, of which 93% has been from core funds and 7% from buy-ins. IA has totalled 840 person days at a cost of \$581,819, which was 11% from core funds and 89% from Mission buy-ins.

Workshops, sponsored by ISPAN, became an important part of the project's outputs in 1989 when a full time Human Resource Development (HRD) Specialist was added to the TSC. The workshops (21 in number at the present time), are a buy-in product of ISPAN and have varied in type and intent from country to country.

Workshops have been based on a project start-up workshop model developed by the WASH project, which has been utilized in Egypt, Indonesia, and Pakistan. Project monitoring and review workshops have been conducted in Egypt, Indonesia, and Sri Lanka. A project closing workshop was conducted in Thailand. Concept development workshops have been conducted in Bangladesh. A series of policy development workshops is currently underway in Sri Lanka.

This evaluation involved visits to Egypt, Indonesia, Bangladesh, and Sri Lanka to assess the quality and impact of the workshops. Time did not allow in-depth interviews with participants from each workshop. Rather, selected Chairmen, Department Directors, and staff who had participated in the workshops were interviewed. The approach taken was to examine four different types of workshops, project start-up workshops in Egypt, concept development workshops in Bangladesh, policy formulation workshops in Sri Lanka, and implementation workshops in Indonesia. The number, purpose and stage of completion of the workshop activities all contribute to the nature and detail of the responses of those interviewed. For instance, the ten start-up workshops in Egypt are past and their impact is being demonstrated in projects now underway. In Bangladesh and Sri Lanka the workshops are now in process and their impacts will be felt at sometime in the future. This results in a diverse group of responses to the, more or less, standard interview questions.

a. Egypt workshops

There were eight project start-up workshops conducted between January 1989 and June 1990 to assist in initiating the various components of the IMS Project. The workshop topics were:

- o Professional Development;
- o Regional Irrigation Improvement;
- o Water Research Center;
- o Planning Studies and Models;
- o Preventive Maintenance;
- o Surveying and Mapping;
- o Main System Management;
- o IMS Steering Committee.

From May 1990 to April, 1991 review and monitoring workshops were conducted on:

- o Structural Replacement;
- o Irrigation Improvement;
- o Main systems Management;
- o Planning Studies/Models;

- o Water Research Center.

In general, the start-up workshops shared common goals, though there were variations according to the needs of each project. The shared goals can be summarized as:

- o To achieve a common understanding of and agreement on the project, its objectives, and resources;
- o To identify the roles of the participants in the project, and to generate understanding of those roles and commitment to them;
- o To allow the participants to get acquainted, exchange ideas and develop professional relationships that support the implementation of the project;
- o To air and resolve issues that may impact the project;
- o To develop strategies for achieving the project's goals;
- o To identify and develop managerial roles and procedures;
- o To develop work plans for the project.

Interviews with participants from the Government of Egypt (GOE) and USAID on the start-up workshops yielded the following observations.

- o The GOE and USAID were unanimous in their commendation of the quality of the workshop facilitation. Virtually all of those interviewed praised the ISPAN team for the quality of work done in preparing for and conducting the workshops. In retrospect, participants felt that the team had conducted effective interviews and had identified most of the key issues needing attention in the workshop.
- o The benefits of the workshops were immediate. They served as a forum for defining and assigning roles, increasing the efficiency with which the projects were implemented. Further, the workshops were conducted in such a manner that the participants understood and accepted their roles in the project. An air of collegiality was established among the host nationals. This was considered a major contribution by both Egyptians and expatriates as opportunities for establishing professional relationships among the participants is limited outside the workshops. Work plans were generated, reviewed and adopted that integrated the work of the various involved agencies.
- o The benefits listed above have long term impacts. These impacts, however, work themselves out through various channels and over long periods of time. It

was not possible, in the time allowed, to trace the evolution of the aforementioned benefits. Each workshop did produce a list of recommendations that have the potential of demonstrating long term impacts. For the recommendations generated in the workshops to have demonstrable impacts several conditions must exist. The recommendations must be realistic. They must be accepted by those assigned to carry them out and that individual must have the resources and liberty to act. A person or organization must have the responsibility and authority to follow-up and report on the progress of those implementing the recommendations. These conditions were not met consistently for all of the workshops.

- o A review of the recommendations coming from the workshops indicates that the recommendations may be, as one respondent put it, forced. "Participants feel that they are supposed to come up with recommendation so they do," one respondent stated. The recommendations may not be based on sound project analysis, nor may they reflect the kind of activity to which the participants are willing to commit themselves after the workshop. In only one instance, the Water Research Center, was an office assigned the responsibility for following up on agreements and recommendations made in a workshop. In all other cases there was no indication, other than vague statements, that the recommendations were being implemented. Several of those interviewed stated that there had been no follow-up and that to their knowledge the recommendations were not being implemented.
- o The most significant long term impact that the workshops can have is for the GOE to adopt them as a management tool. ISPAN, the GOE, and USAID/Cairo have gone through several iterations of the institutionalization process of the workshops. Upon seeing how well the workshops were received, a local firm, Team Misr, was employed to participate in the workshop facilitation process. The aim was to provide, through participatory training, a local firm capable of providing facilitating services to the GOE. The firm was not able to develop the skills necessary to facilitate workshops in the first trial and this approach was abandoned. Next, a group of trainers were trained as workshop facilitator. These have been used to facilitate workshops in the Water Research Center. Several respondents expressed concerns about the ability of the Egyptian facilitator. They were concerned that without continued training and supervised facilitation by the ISPAN team that the local facilitator would not develop the skills necessary to serve effectively in this area. "Bad facilitator will kill the workshops," stated one official.

b. Bangladesh workshops

The four A.I.D. supported FAP projects of the EWI have utilized a workshop approach to disseminate information and gain consensus about issues and methods. To date workshops have been conducted on environment (July 6-7, 1991), flood response (August 13-14, 1991), and flood proofing (September 25-26, 1991). In each subject area a draft working paper was written by the responsible EWI team. This draft laid out the direction the study was going, the methodology used, and, where appropriate, to present preliminary findings. Participants were then asked to work in groups to generate guidelines for the completion of the project reports. The workshops each had different facilitator.

Attendance at the workshops is an indication of the interest in the topics under discussion. Representatives from the concerned Bangladeshi organizations including the FPCO, the BWDB and the international Panel of Experts (POE) as well as representatives of other national donors and the World Bank attended.

Because the workshops were a new concept to the Bangladesh bureaucracy they were resisted and were not fully utilized. However, by the end of the third workshop the Bangladeshis were becoming educated to the value of open discussions of ideas that were previously developed internally without input from outsiders. They began to see the advantage of external peer review of new ideas. This educative process resulted in a decision by the Director of the BWDB to ask other donors in the FAP to conduct similar workshops for their activities. This promises to have a far reaching impact on the development of the total FAP.

c. Sri Lanka workshops

In Sri Lanka, ISPAN has conducted two very different types of workshop activities. It has conducted a monitoring procedures workshop and a mid-term review workshop pertaining to the Irrigation Systems Management Project. These are similar in nature to workshops done in other countries. What is unique in Sri Lanka is the Irrigation Management Policy Support Activity (IMPSA), an ISPAN sponsored activity, which uses the workshop model demonstrated and taught to the staff by the ISPAN team.

The Government of Sri Lanka (GSL), International Irrigation Management Institute (IIMI) and USAID are collaborating to establish a policy generating mechanism to look toward Sri Lanka's needs to the year 2000 and beyond. The GSL has committed itself to cooperate, through the relevant ministries, in developing broad based irrigation management policies. IMPSA has the task of systematically analyzing and assessing the Sri Lankan experience and formulating broad based policy recommendations to implement the new irrigation management policy. IMPSA does this by bringing together the public and private organizations and interest groups who have an interest in the new participatory irrigation management policy and of generating unified policy recommendations based on

studies and consultative workshops. The workshops are designed to bring together the diverse interest groups and to have them forge a series of agreed upon policy recommendations. The workshop participants extend from farmer organizations to the representatives of the GSL ministries dealing with irrigation and agriculture.

IMPSA is responsible for developing 10 policy topics using consultative workshops. To date six policy papers have been developed. The remaining four are in process. All are based upon inputs of concerned individuals who attended the workshops. It is most likely that, of all of the ISPAN activities based on workshops, these policy papers will have the most significant long term impacts.

d. Indonesia workshops

ISPAN conducted two workshops in Indonesia in support of the SSIMP. These were the second and third implementation workshops (the first was conducted by another organization). The goals of the workshops were:

- o To build a common understanding of and exchange information on SSIMP;
- o To provide participants an opportunity to get acquainted;
- o To identify and assign roles in the project and clarify expectations for working together;
- o To develop strategies for addressing critical issues and to create work plans.

The workshops were held in February of 1988 and 1990, providing time for the results of each to be brought to fruition. An example of this is that a goal of the 1990 workshop was to build on the outcome of the 1988 workshop. The 1990 workshop developed plans to the year 1993. This indicates that the workshops were properly scheduled to support the completion of the project. Comments of some of the participants are summarized below.

- o By clarifying roles and responsibilities, and developing operational procedures the workshops got the project on track and moving.
- o A high turnover in the Indonesian players in the SSIMP made the workshops particularly effective by introducing the new people to the overall project, how it is organized and operates and by identifying all roles and responsibilities.
- o The workshops provide a valuable opportunity to resolve festering problems.
- o Having an opportunity for all the participants to get acquainted contributed to the smooth functioning of the project.

- o The first workshop did not produce recommendations and assignments of responsibilities for who was to carry them out or an implementation schedule. The second workshop produced a table of recommendations, work assignments and due dates. USAID took on the role of following up to see that the recommendations are implemented.
- o One of the facilitator in the second workshop was an Indonesian. Since the workshop he has utilized the skills gained in the workshop and now provides facilitation services through a private sector, non-profit, Non-Governmental Organization (NGO).

e. Workshop impacts

To estimate the impact of the workshops, questionnaires (Annex 5) were developed and distributed in countries in which project specific workshops were held. Questionnaires were sent to Missions in Egypt, Indonesia, Sri Lanka and Bangladesh. Each Mission was supplied with a participant list from its workshop and was asked to distribute the questionnaire to five participants from each workshop. Responses were received from Bangladesh and Egypt, though not five from each workshop.

Eight project start-up workshops were conducted in Egypt in support of the IMS Project. Five review/monitoring workshops were also conducted. To provide for consistency of results a single questionnaire was designed that focused on the project start-up workshops. Thirteen questionnaires were returned. The results are summarized below.

- o Ten of the respondents had attended one of the start-up workshops and three reported attending more than one. While all of the workshops were held within a single project, participation across project activity lines was not common.
- o There was some division expressed on the timing of the workshops. Eight respondents indicated that they were at the appropriate time but four indicated that they should have been conducted earlier in the project. Given that the purpose of the workshop was to start the project on the right foot, perhaps more attention should have been paid to the workshop's timing. At the same time it is recognized that many external factors influence the scheduling of any developmental activity. The team did not have an opportunity to explore if such externalities did exist.
- o There was general agreement that the right persons had been invited to participate and that no major persons were omitted. This supports statements made in interviews that getting all of the players together was a major benefit of the workshops.

- o To assess the impact of the workshops, participants were asked to indicate contributions made by the workshop from a list provided in the questionnaire. The choices and the number of responses in the order of their frequency are:
 - Those involved understand the project's goals and purpose: 11;
 - Recommendations made will expedite implementation: 10;
 - Participants understand project's organization and procedure: 9;
 - Subsequent non-ISPAN workshops were held: 8;
 - Participants understand and accept roles in the project: 8;
 - Participants understand the strategies to reach the goals: 6; and
 - A strong interdisciplinary spirit was generated: 5.

- o Respondents were asked to indicate what had happened to the recommendations generated by the workshops. The choices and responses were that recommendations have been:
 - Evaluated, prioritized and are being implemented: 2;
 - Implemented but not with set priorities: 3;
 - Implemented unevenly: 4;
 - Not implemented: 1; and
 - Do not know: 3.

- o All but one of the respondents indicated that they had received a copy of the workshop report. This distribution of materials is a commendable achievement on ISPAN's part.

These results indicate that while ten respondents saw the recommendations generated in the workshops as being useful, there is no consistent indication of the degree to which they have been implemented.

Of the four issues related to increasing the understanding of the project, three were marked by a majority of the respondents as being impacts of the workshops. It may be concluded that the workshops contributed to project comprehension by those who must implement it. This type of a contribution cannot be quantified, but those experienced in the field of development realize how crucial

this understanding is to an effective and efficient project.

Ten participants indicated that the recommendations generated by the workshop would be useful in implementing the project. While this must be considered a positive contribution, as noted below the recommendations have not been implemented uniformly.

Eight respondents indicated that workshops based on the ISPAN model were being conducted in their areas of responsibility. This is a heartening indication of technology transfer and of the sustainability of workshops as a management tool.

Only five respondents indicated that the workshops generated interdisciplinary team spirit. One might have expected more responses to this given the value assigned to the "get acquainted" nature of the workshops.

In Bangladesh the workshops have been used to introduce new concepts and gain consensus in the FAP through EWI. To date, three workshops have been conducted, on flood proofing, flood response and the environment. The workshops included representatives of the GOB, PVOs, USAID, Bangladeshi universities, other FAP contractors and other donors. The purposes of the workshops were to present preliminary findings of the studies, to provide the opportunity for others to contribute in setting the direction of the study, and to inform others of the nature of the study and its role in the total FAP.

Questionnaires designed for the EWI workshops were distributed and nine responses submitted. In looking at these responses it must be kept in mind that the third workshop was conducted while this evaluation was in progress, leaving no time for impacts to be manifested. Discretion must be used when interpreting the data due to the small number of responses. A number of questions had responses that were meaningless, that is the division was five to four making it impossible to assign meaning to them. The results of those responses that could be interpreted are summarized below.

- o To assess the impact of the workshops, respondents were asked to indicate which of the following statements applied. The responses were:
 - The study topic was introduced and explained in a clear and comprehensible manner: 7;
 - Recommendations were developed to strengthen the study topic: 8;
 - The application of the study topic to the Flood Action Plan was explained and discussed: 4.
- o **Virtually all respondents found the workshops useful by increasing their understanding of the study topic. This increased understanding in such a complex project as EWI, is an invaluable contribution to the total FAP.**

- o When asked what would keep the respondents from utilizing what they learned in the workshops, the results were inconclusive. However, the range of responses is interesting and is presented below:
 - My TOR does not involve the study topic: 3;
 - I do not have a staff with the necessary training: 2;
 - Insufficient time to use the study in my FAP work: 1;
 - I still do not have sufficient understanding of the topic: 1;
 - I lack adequate budgeting to consider the study topic: 1;
 - I am not involved in a part of FAP using the study: 1; and
 - I am not involved in FAP: 1.
- o **Perhaps the most interesting finding was in response to the question, "Do you feel workshops of this type are useful planning and management tools in Bangladesh?" Every respondent said yes. This was further supported by a statement by the Chairman of the Water Development Board that he would like to see this workshop approach utilized by the Water Development Board. This is, perhaps, the most significant indication of ISPAN technology transfer in Bangladesh to date.**

It may be concluded, from this small sample, that the workshops are useful in introducing the EWI studies to the balance of those involved in FAP. It was not made clear to the participants, however, where these studies fit in the total planning activity. While the participants saw the recommendations coming out of the workshops as beneficial it is too soon to comment on their impact.

f. Training design and implementation

ISPAN has conducted eleven training activities (Annex 6) including planning meetings, training of trainers (TOT), training needs assessments, strategy development, strategy follow-up training, and strategy workshops. An evaluation of training was conducted in India and a training assessment was designed for the Philippines, which appear under the evaluation and design categories, respectively.

ISPAN publications dealing directly with training are:

- o Evaluation of the Irrigation Management Component of the Water Resources Management and Training Project: conducted in India;
- o Public Sector Irrigation Training: Guidelines for Preparing Strategies and Programs: a cost shared publication with the World Bank; and
- o Accelerated Agriculture Productivity Training Program Review of the National Irrigation Administration: conducted in the Philippines.

Other training reports were presented as field reports, trip reports working papers and training guidelines. The introduction of microcomputers in India's MMIP involved a large training component, but was not listed as such. ISPAN has conducted two TOT activities in the Philippines and one in Egypt.

Missions spoke very favorably of the ISPAN training activities, seeing it as an area in which they performed consistently very well. **The Missions indicated that the training was of high quality, relevant and current.**

3. Applied studies and policy formulation

Applied studies (AS) and policy formulation (PF) have totalled 1590 person days arranged by ISPAN (Annex 6). The cost to date of these activities has been \$533,846, of which 29% has been from core funds and 71% from Mission buy-ins.

a. Applied studies

As a follow on project to Water Management Synthesis II (WMSII), ISPAN was to develop an AS component which would produce original research, designs, strategies and studies that were to serve Mission and host government needs, address broader regional goals and identify future directions and issues. In essence, the AS program and its corollary, the policy formulation activity, were to generate new knowledge and synthesize lessons learned in irrigation and water management in the Asia and Near East regions as well as provide the basis for identifying new issues, trends and strategies. In this way, ISPAN would carry on in the tradition of WMSII by providing an institutional memory for A.I.D. in the area of water resource development. The PP identified several issues to be considered:

- o Ways to support private irrigation development through public sector organizations;
- o Lower cost methods for system construction and rehabilitation;
- o Effective conjunctive management of public canal water and private tube well water;

- o Economic implications of regional food grain self-sufficiency for irrigation system construction and management;

- o Problems and potential for crop diversification under existing irrigation schemes;
- o Farmer participation in the management of government-operated irrigation schemes;
- o Impact of past salinity control programs and implications for the future; and
- o Means for balancing irrigation system operating costs and revenues.

Research conducted under the AS program was to be funded primarily with core funds and supported by Mission buy-ins based on specific Mission needs or requests. As originally envisioned, the AS program would be a key element within ISPAN and would be supported by a full time program manager at the TSC. University members of the consortium were to develop proposals for studies based on an applied study agenda that grew out of the above issues identified in the PP.

The reduction of core funding by A.I.D. had a major negative impact on the ability of ISPAN to carry out the AS program as originally envisioned. A key input to design of the AS and the lessons learned component was to be provided by the SAGEs. The SAGEs were to act as the brain trust of the TSC and provide input and feedback on AS, and regional issues and trends. **TSC stopped calling on the SAGEs after the core funding was cut. The impact of this loss was to start the move of ISPAN away from being a center for creativity and being a proactive force in the fields of irrigation and water resources, and toward being a consulting company which it resembles today.**

Several major studies addressing issues identified in the PP were designed, approved and funded and then subsequently canceled in 1990 by ANE because of a shift in policy away from support of irrigation-related activities toward open markets and open societies. Ironically, two of the studies canceled were to deal directly with issues of irrigation system privatization and local participation in water management. The lessons learned paper on the relationship between farmers and agencies was canceled as was the proposed study of system turnover and local participation.

With the reduction in core funding and change in ANE policy, the AS program came to rely on Mission buy-ins for funding and in large part for the identification of research topics. While this has the advantage of being demand-driven and therefore providing research of relevance to Mission portfolios, it has the drawback of not addressing regional issues, synthesis of lessons learned, or future issues, developments and strategies. The fact that the AS program has continued to function at all reflects its continuing relevance and value to Missions, but the lack of significant bureau level core funding made it difficult, if not impossible, to grapple meaningfully with regional concerns until additional funding became available to support a water resources strategy paper.

The following activities were completed under the AS program:

- o Private Tube Well Development (Pakistan) - Jointly supported with core and IIMI funds. This study looked at both the organizational and technical arrangements associated with groundwater utilization in the Punjab. The results are to be jointly published with IIMI.
- o Northeast Thailand Small Scale Irrigation (NESSI) - This study analyzed the NESSI Project after completion with an eye to identifying successful elements (particularly in the area of privatization) that are transferable to other sites and countries.
- o Privatization and Sustainability of Small Scale Irrigation in Indonesia - This Mission funded study identified factors that supported the long term sustainability of projects in Indonesia and the degree to which farmers have assumed operation and maintenance of the systems in Sederhana.
- o Basin Management Study Design (Thailand) - Funded by the Bangkok Mission, this paper addressed the need for a river basin management authority in Northeast Thailand as a consequence of water allocation and management conflicts uncovered in the earlier NESSI study.
- o Irrigation and Drainage Research (United States) - One of the initial AS to survive the core funding cuts, this research report, which was supported by Science and Technology (S&T) Bureau, was undertaken at the request of the World Bank in an effort to review irrigation research globally. The authors drew conclusions with some applicability to the developing country context.
- o Morocco Water Policy Study - A strongly interdisciplinary paper, this study examined Moroccan watershed management and made recommendations for improved and sustainable practices in water and soil conservation.

Three AS are still underway or in the initial stages:

- o National Pump Irrigation Policy Study (Indonesia) - Using a combination of Mission funding and Ford Foundation funding for local TA, this ongoing study is investigating groundwater utilization in Indonesia.
- o Improved Irrigation Scheduling (Sri Lanka) - This study was delayed and is now in the data collection phase.
- o Water Cost Recovery Study (Egypt) - USAID/Cairo has agreed to fund two ISPAN AS (one is underway) to determine costs of water use for irrigation and other user

sectors as well as identify primary and secondary beneficiaries. Using the counterpart resources of the Water Research Center in Cairo, the study will also suggest possible ways of allocating costs among sectors. This study has strong Mission support and may have the potential of being very significant (although it will be controversial) to future water development in Egypt.

b. Policy formulation

Two major policy formulation (PF) activities are under way at the present time. A major effort is being undertaken in Sri Lanka with the GSL to develop policy for irrigation management. The IMPSA project has the leadership of a former director of irrigation and a competent staff of professionals. The IMPSA staff are on the ISPAN payroll as a long term overseas activity. **IMPSA is generating policy guidelines for the ministers dealing with water, land and land development through workshops on individual topics as discussed earlier. If these policies are adopted by the GSL, major changes in the Ministry of Mahaweli, Lands and Land Development will take place. IMPSA is potentially the most important output of ISPAN and in close competition to the FAP supporting studies of EWI.**

Currently, ISPAN is preparing a Water Resources Strategy for the Asia Bureau and the Near East Bureau. **This strategy is core funded and has substantial potential of lasting policy impact throughout the region if it is adopted as an A.I.D. strategy paper.** Initially requested by the former ANE bureau, the paper is to address the Agency's concern with broadening its efforts in water development beyond the agricultural emphasis. The first draft has been circulated for review and was the topic of animated discussion at meetings of ADOs in Annapolis, Maryland and Colombo, Sri Lanka.

The draft water resources strategy paper for Asia sets out a framework for understanding water policy and water resources development in a much broader natural resources context. It attempts to deal with the issues of sustainable water use and initiates the dialogue on intersectoral allocation, water pricing and water markets. Although quite preliminary and receiving initial criticism from ADO's, the draft strategy reflects most of the current issues in water development in an integrated manner. Finally, developing the water resources strategy is fully consistent with the initial goals of ISPAN to develop materials of regional significance and reflects ISPAN's evolution from an irrigation technical support and research project to a more timely and significant actor in the international water development scene. This activity enjoys continued support and is viewed as relevant by the leadership of both the Asia Bureau and the Near East Bureau.

Mission responses to the AS program and to the policy formulation activity have been favorable. Both in-country interviews and fax questionnaire data support the view that the AS program has generated high quality work. Some Missions noted that the work was not always timely. More studies were envisioned than could be produced with the core funding available. Although ISPAN effectively used Mission buy-ins to replace reduced core funds,

the cost of this has been that the regional significance of these studies was correspondingly limited. **ISPAN Evaluation Team reviews of the published AS corroborates the view that the research generated under the program has been of high quality.**

The reduction of core funding was unfortunate and had a strong negative effect on the ability of ISPAN to carry out this significant part of its mandate. Apart from the limitation in the number and scope of studies conducted, there has been insufficient support for the dissemination of research results and lessons learned. With respect to the former, the TSC has not been able to produce and mail as many of the reports as had been anticipated. In an effort to economize, mailing lists were reviewed and circumscribed. For example, reports do not routinely go to all US land grant university libraries, water research centers, regional water institutions or to host and third country research libraries. **A rather limited scope lessons learned paper is anticipated at the end of the project focusing on ISPAN's evaluations of A.I.D. irrigation management projects. Additional papers on lessons learned in ISPAN start up and review workshops and on lessons learned from A.I.D.'s experience with water users associations were identified in the forward work plan, but will not be conducted in the absence of new core funding.**

C. Project Goal and Purpose Achievement

1. Project goals and purpose

The goal of ISPAN is to increase food production and real farm income within the ANE Region. The sub-goal is to improve the efficiency of delivery and use of water and increase its irrigation distributional equity in the region's agriculture. Project impact cannot usually be ascertained within the project implementation period in most cases. The impact of the project may be experienced only after decades have passed or after a new generation of irrigators inherit the land.

The purpose of the ISPAN project is to improve the quality and performance of the Mission's irrigation portfolios. The end of project status (EOPS) is directly related to the purpose achievement. The EOPS is stated as four objectively identifiable indicators in the logical framework as:

- o Improved management of irrigation systems in participating nations;
- o Improved project designs;
- o Improved understanding of irrigation issues and problems; and
- o Regional irrigation trends and issues addressed.

ISPAN project performance and accomplishments can only be partially assessed at this mid-point in the project life. Progress toward the goals identified in the logical framework are identified in Annex 12, the annotated logical framework.

Evidence of purpose achievement includes:

- o AS results that significantly influence the policies for irrigation investment in individual countries as evidenced by the NESSI study in Thailand and the Sederhana study in Indonesia;
- o Training policy guidelines published with the IBRD;
- o The major shift that is taking place in Bangladesh in the attitude toward non-structural means of Flood Response and Flood Proofing due to the EWS and the FAP supporting studies;
- o Major input to the Bangladesh flood control efforts as represented by the Environmental and GIS contributions across all of the 26 FAPs;
- o The technology transfer achieved by the Workshop Technology introduced in Egypt, Bangladesh, Sri Lanka and Indonesia that brings about a management dialogue, project awareness, improved team work and enhanced project implementation; and
- o The improved project designs and implementation that result from policy formulation and water resources strategy development in Asia and the Near East.

These six areas represent significant evidence that project purpose achievement is well under way for the first three EOPS indicators as a result of successful implementation of the ISPAN Project. In the case of the fourth indicator regarding regional trends and issues, ISPAN has not demonstrated effort in this area.

2. Monitoring and evaluation assumptions

As stated in the ISPAN PP, the indirect nature of the project poses difficult problems for the evaluation effort. Attributing any or all of the indicators of purpose achievement as improvements due to ISPAN would be difficult and lacking hard data. The key feature of the ISPAN monitoring and evaluation design was the assumption that "if the services called for in the technical analysis are provided in a timely way, then any performance improvements that may occur are at least partially due to the provision of those services". Due to the ambiguous linkage between the service performed and its impact, the most rigorous attention must be paid to delivery of services.

The quality, level and timeliness of the irrigation support services has been assessed in the evaluation of ISPAN. A summary of the level of ISPAN support services is shown in Table 1. ISPAN is delivering services despite severe limitations imposed relative to the source of funds. ISPAN is a demand driven project. Proof is given in the percentage of total expenditures and diversity of buy-ins from Missions shown in Annex 6.

Table 1: Summary of ISPAN Personnel Use in Mission Assistance Activities

	<u>Project</u> <u>Paper</u> (PMs)	<u>Prorated</u> <u>Contract by</u> (PMs)	<u>Achieved</u> <u>7/91 by</u> (PMs)	<u>Forecast</u> <u>8/92</u> (PMs)
Technical assistance	430	307	353	602
Training & Technology Transfer	123	88	55	73
Applied Studies	219	156	73	124
Regional Institutions	172	123	3	3
Total	<u>944</u>	<u>674</u>	<u>484</u>	<u>802</u>

Source: Annotated log frame (Annex 12) and ISPAN log frame (Annex 10).

In terms of the projected, contracted, actual and forecasted person months of ISPAN professional services, the project deviates most in the regional institutions category. In the other categories respectable achievements have been made.

Given the assumption above and the data available, ISPAN is determined to be an effective irrigation support project.

3. S&T cross-cutting themes in evaluation

ISPAN has demonstrated exceptional performance in terms of Cost-sharing, Buy-ins and Sustainability (see Annex 19) for results of the Cross-cutting Themes Analysis). The buy-ins by Missions have significantly contributed to the viability of ISPAN as both an irrigation support project as well as an emerging broader-based water resources management and planning project.

A lesser effort has been demonstrated by ISPAN on Women in Development, Peer Review and Information Collection and Dissemination. ISPAN deficiencies in these areas have been identified and recommendations for future corrections have been addressed.

D. Performance of A.I.D.

1. Project steering committee

The Project Steering Committee (PSC) was formed to provide participation in planning and oversight of ISPAN, to review evaluation reports, and to serve a forum for expressing the interests of the bureaus. It was also to be a mechanism for the involvement of Missions. Because ISPAN was primarily a product of the Office of Agriculture and Rural Development (ARD) of the ANE bureau, a strong committee, whose members were located at key decision points, was needed. A committee was created that met these criteria. The PSC met only twice.

In January, 1990, an edict from a high ANE bureau office drastically cut ISPAN's core funding. In the unsettled time that followed the PSC ceased to function. It did not, at this critical time, come forward to be a champion or voice in support of the project. Thus, while a role for the PSC as lobbyist or champion was conceptualized and required of the committee, it was in this role that the committee failed to perform.

2. Funding expectations and realities

The ISPAN PP authorized a grant of \$11,473,476 from the ANE Bureau and the S&T Bureau. The corresponding Mission funding was anticipated as \$11,522,857. As of July 31, 1991, the expenditures for TA, TTT and AS were \$980,231 in Regional Bureau funding and \$5,239,445 from Mission buy-ins. Rather than an approximate 50% to 50% match as envisioned, the core to buy-in ratio has been approximately 16% to 84%. Details of the actual funding are illustrated in Figure 1,

discussed previously.

A listing of TA, TTT and AS planned and actual expenditures as provided by the TSC is attached as Annex 6. In this annex, TA includes not only TA, but also irrigation sector assessments, project evaluations, project designs and project redesigns. TTT includes implementation assistance and the regional institutions and the AS includes the water policy formulations. ISPAN's current expenditure status is shown in Table 2. TA (80%) and TTT (87%) are lower than projected by the PP. AS (111%) and support for the TSC (135%) are ahead of schedule as determined by the rate of Mission buy-ins and the EWI management needs, respectively.

Table 2 shows that ISPAN expenditures in TA, TTT, and AS are close to the target totals in the PP. **With all of the external factors that have affected ISPAN, the scale of expenditures has remained near those forecast.**

3. A.I.D. and the Management Information System

The expectations of the USAID PP and the first Project Officer for a fully interactive, instantaneous tracking and accounting of project activity, personnel and financial records were not fulfilled. Such a system, if it did exist would only arise as a custom designed, elaborate, esoteric and expensive piece of software that would most likely require costly and constant staff support.

Part of the responsibility for the current state of the MIS rests with the USAID PP and the former Project Officer. Details on the history of the MIS problem are presented in the section on ISPAN Project outputs.

4. Mechanisms for Mission buy-ins

Buy-ins were expected to be a key component of the project representing an estimated 50% of project funding. In fact, because of the scarcity of core funding and the enthusiastic response of Missions and Bureaus, buy-ins have represented more than 84% of project funding.

The mechanism for buy-ins, as described in the contract is rarely if ever followed. Instead, Missions usually contact the TSC and discuss their requirements directly before preparing their formal request to the A.I.D. Project Officer. This approach appears to work well and results in a quicker meeting of the minds than might be possible if the more formal procedure described in the contract were used.

ISPAN has responded quickly and effectively to requests from Missions. Delays, when they have occurred, have usually been caused by scheduling difficulties rather than poor performance by ISPAN. Sometimes, there have been difficulties in getting Contract Officer approval as quickly as desired. In the past, when core funding was more plentiful, such delays could be covered out of core

funds and the activity went ahead as planned.

Table 2: Current ISPAN Expenditure Status

LOG FRAME STATEMENT IN PROJECT PAPER =====	CURRENT STATUS =====		
NARRATIVE SUMMARY OF INPUTS: PAPER	PROJECT	PRORATED*	ACTUAL
Technical Assistance	\$6,054,864	\$3,229,261	\$2,587,280 = 80%
Training & Technology Transfer	\$1,724,096	\$919,518	\$796,273 = 87%
Applied Studies	\$3,072,256	\$1,638,537	\$1,819,858 =111%
Regional Institutions	\$2,392,740	\$1,276,128	\$36,034 = 3%
Technical Support Center	\$5,222,207	\$2,785,177	\$3,750,000=135%
Evaluation	\$ 265,000		no current data.
Inflation	\$ 879,553		no current data.
Contingency	\$2,010,616		no current data.
Special Support Activity	\$1,375,000		no current data.
Total	\$22,996,332		no current data.
		Obligated-27/4/91	\$14,932,930
		Programmed-27/4/91	\$13,112,000
		Expended-27/4/91	\$7,967,736
		Invoiced-27/7/91	\$8,989,000

Source: (Annexes 10 and 12)

* Prorating based on 4 years of a total 7.5 year project duration.

Reporting of expenditures on buy-ins is included along with all other expenditures under the project and is reported to the A.I.D. Office of Financial Management. It appears that the mechanism within A.I.D. for this information to be fed to the Missions does not provide them with what they need in a timely manner. As a result, some Missions request ISPAN to supply expenditure information on their buy-ins and some have expressed dissatisfaction with the response, or lack thereof, that they have received. **ISPAN should keep Missions informed about expenditures on their buy-ins even though it is not a contractual requirement.**

E. Relevance of the Project

1. Irrigation importance globally

Irrigation continues to be important in the production of food and fiber throughout the world and especially in Asia and the Near East. Statements about irrigation made by the designers of ISPAN in the PP remain true today. Irrigation systems are in poor condition and are poorly managed throughout the world. Distributional equity, adequacy of supply, reliability, timeliness of water delivery and operational efficiency are lacking and substantially less than designed in most systems.

The only systems that appear to be performing well and meeting farmers' needs are those that are owned, operated and maintained by farmers. Government irrigation systems do not perform as well as private systems. Thus, AS are needed to investigate privatization of bureaucratically-run irrigation systems and the empowerment of farmers for inclusion in the management teams of government-managed irrigation systems.

ISPAN was designed to pursue the topics of system privatization and farmer empowerment, but was cut short of its potential due to shifts of interest in A.I.D.. Irrigation fell from favor as other areas were given greater priority. Nonetheless, irrigation development continues to be relevant.

2. Growing numbers of water resources requests

It has become clear to the evaluation team that water resources in the broader perspective are becoming more important to Missions. Urban and industrial water users are competing with agriculture for finite quantities of water. Rapid expansion of populations in many developing countries cause the discerning observer to become alarmed at the future of this potential conflict not only within Asian and Near East countries but in the relations between and among countries that share the major rivers of Asia and the Near East regions.

3. Emerging water environmental concerns

The team was impressed with the frequency of concern expressed by interviewees for the future of water quality in irrigation projects as well as in urban locations. Third World planners and decision makers are becoming more concerned with the consequences of excessive chemical use in agriculture and the impact that this will have on surface and ground water supplies for human and animal consumption. Likewise, the rapid concentration of people in urban areas and the impact of incipient industrialization near cities have caused serious concern for water quality and the environment for human habitation. These problems and concerns will become worse with time.

V. CONCLUSIONS

The conclusions of this evaluation follow the five purposes of the evaluation stated in the Scope of Work.

A. Determination of Project Effectiveness

ISPAN is an effective water resources and irrigation support project.

This conclusion is based on the observed quality of irrigation, flood control and water strategy work performed, the quality of personnel fielded, the quality of reports delivered, the timeliness of actions by the ISPAN TSC and filling the needs of Missions in managing their irrigation portfolios.

B. Assessment of Continuing Project Validity and Relevance

ISPAN continues to be a valid support to irrigation projects and is increasingly relevant to the water resources and environmental needs of Missions.

This conclusion is based on the favorable reports from Missions in questionnaires and in interviews from nine of twelve Missions served by ISPAN. It also arises from the relevance of the ongoing ISPAN activities and continuing expressed needs of USAID Missions and host country irrigation support users of ISPAN services. ISPAN has a role that is evolving to become a more general support project in water resources planning and management and environmental concerns relating to water.

C. Assessment of Effects of External and Anticipated Actions

ISPAN is responsive to the needs of Missions in the management of their irrigation, water resources and water-related environmental portfolios despite the reduction of core funds, the funding uncertainties and other unanticipated events.

The contractor has experienced many adverse circumstances including changing program priorities, curtailment of core funds, delays due to the Persian Gulf War and having to exist on Mission buy-ins. Based on the flexibility and resilience demonstrated by the professionals of the ISPAN, it has responded remarkably to remain viable.

D. Assessment of Extent of Contractor Scope of Work Fulfillment

The contractor's work is effective and timely, but is lacking in some important management aspects including TSC organization, work planning, reporting results, answering communications from abroad, provision of support to long term personnel abroad, developing

a management information system, and distribution of reports.

These limitations are of a management nature, but are also a byproduct of reduced core funding. The TSC is neither organized nor administered in such a way as to resolve these deficiencies. The TSC lacks adequate leadership and organization.

E. Determination of Advisability of Extension

It is in the interest of A.I.D. that the contract be extended.

This determination is based on the expressed needs of Missions for support services in the broader arena of irrigation, water resources and water-related environmental endeavors that reflect the broad range of conditions and set of water resources assistance needs expressed in the Asian and Near East Regions.

VI. RECOMMENDATIONS

The conclusions of Chapter VI lead to the following recommendations which are presented in three categories: global, administrative and technical.

A. Global Recommendations:

- o Extend the ISPAN contract with the current contractor to the PP determined PACD;
- o Increase core funding for the TSC to finish lessons learned, regional issues and trends determination, farmer irrigation participation and privatization of irrigation systems studies;
- o Raise the spending ceiling to reflect the full cost of the Eastern Waters Initiative and the Water Resources Strategy initiative which were not part of the initial scope of work or budget;
- o Fund the TSC core staff to a level to avoid their return to parent organizations on other projects to cover their salary shortages;
- o Develop a PID or concept paper for a future A & NE water resources follow-on support project to serve the Asia Bureau, the Near East Bureau and/or the S&T Bureau; and
- o Change the name of ISPAN to WRSP for Water Resources Support Project to reflect the current reality of broadened activities and to provide a basis for future demands.

B. Administrative Recommendations:

- o Change the TSC organizational structure to one project director and hire a full time administrative manager;
- o Develop a Policies and Procedures Manual for TSC operations;
- o Implement improved project management by adding commercial project management software;
- o Develop an effective fax log, tracking and progress reply system for

communications from the field staff and Missions;

- o Enhance the management of the field team in Dhaka with high caliber TDY administrative and communications professionals for the duration of the FAP supporting studies; and
- o Expand the scope and breadth of the consultant roster to reflect current environmental studies needs and the changing role of ISPAN and make it easier to use;

C. Technical Recommendations:

- o Add a water resources economist to the TSC core staff to supply capability and capacity to conduct economic and policy analysis in support of the Water Resources Strategy and the environmental consequences of irrigation;
- o Reactivate an enhanced version of the SAGEs as the brain trust of the TSC to guide the development of lessons learned component of the original PP;
- o Market the successful workshop facilitation component in the context of water resources management and planning;
- o Pursue a change from irrigation support to broader water resources and environmental support of Asia and Near East Mission projects;
- o Continue irrigation support to those Missions and countries which have major irrigation systems;
- o Emphasize irrigation management enhancement in support of other agency and bank-financed rehabilitation and improvement projects through cost-sharing arrangements;
- o Broaden the distribution of publications to more libraries and agencies in the Asian and Near East Regions as well as to U.S. university libraries;
- o Establish a newsletter to review ISPAN activities and to share results and the lessons learned;
- o Conduct a regional workshop in alternate years on water resources and water-related environmental concerns, issues and ISPAN results and findings from the Missions;
- o Announce broadened scope of the project and the name change in a widely distributed new brochure.

VII. LESSONS LEARNED

- o Water must be conceptualized broadly as a natural resource affecting multiple user constituencies. A.I.D. activities and portfolios at the bureau and Mission levels cannot reasonably address one component such as irrigation without due consideration of the total water sector.
- o Never underestimate the power of a negative opinion or administrative determination by a high official in A.I.D. on the thrust and viability of a project as witnessed by the impact of the decision to cut core funds to ISPAN in early 1990. Project Officers and implementation contractors must persevere in the face of adversity.
- o A.I.D. cannot reasonably expect a project to fully attain its goals and objectives when core project funds are reduced after inception or when A.I.D. does not comply with its contractual obligations.
- o If an A.I.D. support project is to be successful, innovative and skillful champions and a effective project steering committee for that cause are needed as witnessed by the vacuum left when the designers of ISPAN left the agency or left Washington for Mission assignments and the PSC failed to act. Many individual efforts and external circumstances can save a project.
- o Mission buy-ins are an efficient mechanism for fielding TA teams in a timely manner, conducting TTT for sustainability and AS to guide policy formulation.
- o Consortium proposals involving PVOs, minority owned firms and universities may be more likely to win a contract, but are not necessarily better at providing a product nor of guaranteeing that those other members of the consortium will provide the services contracted. Using these entities as window dressing for a project proposal with follow-up is basically false and dishonest advertising.
- o A.I.D.'s comparative advantage in water resources development is not in building infrastructure, but is in management, environmental issues, sustainability, and training. This is evidenced by NESSI, SSIMP, EWI, IMPSA and other ISPAN activities. Decreasing real U.S. foreign assistance funding can be leveraged with other donor contributions to support environmental quality, open societies and open markets.