

CLASSIFICATION PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-4.1

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| 1. PROJECT TITLE WATER MANAGEMENT SYNTHESIS II DOC #0005 | 2. PROJECT NUMBER 936-4127 | 3. MISSION/AID/W OFFICE S&T/AGR |
| | 4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) <input checked="" type="checkbox"/> REGULAR EVALUATION <input type="checkbox"/> SPECIAL EVALUATION | |

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|---|------------------------------|---------------------------------|
| 5. KEY PROJECT IMPLEMENTATION DATES | 6. ESTIMATED PROJECT FUNDING | 7. PERIOD COVERED BY EVALUATION |
| A. First PRO-AG or Equivalent FY <u>82</u> | A. Total \$ <u>20m</u> | From (month/yr.) <u>9/29/82</u> |
| B. Final Obligation Expected FY <u>86</u> | B. U.S. \$ <u>20m</u> | To (month/yr.) <u>6/30/85</u> |
| C. Final Input Delivery FY <u>87</u> | | Date of Evaluation Review |

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

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.)

B. NAME OF OFFICER RESPONSIBLE FOR ACTION
C. DATE ACTION TO BE COMPLETED

Take necessary steps to transfer greater responsibility for day-to-day project operations to contractor.
status: Contractor opened Washington Liaison Office staffed by Program Coordinator.

Reorganize AID Project Management to focus on management by objectives. Contractor to provide AID with clear set of EOP objectives to be included in final version of FY 86-87 Workplan.
status: AID has altered its management mode and focus; EOP objectives to be included in final version of FY 86-87 Workplan.

Contractor to prepare comprehensive progress report for internal reporting and external distribution.
status: Report in preparation.

Establish Inter-Bureau Working Group on Irrigation and Water Management to develop PO follow-on project to WMS II.
status: Follow-on Project PID completed 4/86.

Develop better procedures for both determining and reporting, on an activity-by-activity basis, the financial and programmatic status of the project, as well as closing out completed activities and reprogramming unused funds.
status: Contractor revamping its financial tracking and reporting system to achieve the above.

Related to 5 (above), utilize the scheduled (routine) audit of the WMS II Project in FY 1987 by the S&T Program Office to examine more closely the cost-effectiveness issues that have

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|---------------|------|
| PO/Contractor | 1/86 |
| PO/Contractor | 1/86 |
| Contractor | 9/86 |
| PO | 8/86 |
| Contractor | 6/86 |
| PO | 6/87 |

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

| | | |
|--|--|--|
| <input type="checkbox"/> Project Paper | <input type="checkbox"/> Implementation Plan e.g., CPI Network | <input type="checkbox"/> Other (Specify) |
| <input type="checkbox"/> Financial Plan | <input type="checkbox"/> PIO/T | _____ |
| <input type="checkbox"/> Logical Framework | <input checked="" type="checkbox"/> PIO/C | <input type="checkbox"/> Other (Specify) |
| <input type="checkbox"/> Project Agreement | <input type="checkbox"/> PIO/P | _____ |

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

A. Continue Project Without Change

B. Change Project Design and/or Change Implementation Plan

C. Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

S&T/AGR/RNR: W. Fitzgerald *W Fitzgerald* S&T/RD/RRD, E. Chetwynd *E Chetwynd*

S&T/AGR: T. Gill *T Gill* S&T/RD/RRD, H. Plunkett *H Plunkett*

S&T/AGR: F. Li *F Li*

12. Mission/AID/W Office Director Approval

Signature *Anson Bertrand*

Typed Name
S&T/FA, Anson Bertrand

Date

Water Management Synthesis II
(936-4127)

PROJECT EVALUATION SUMMARY (PES) - PART I Continuation Sheet

| <u>Action Decisions</u> | <u>Officer(s) Responsible</u> | <u>Date</u> |
|--|-------------------------------|-------------|
| been identified. <u>Status:</u> Audit team will be asked to include attention to the respective items of interest. | | |
| 7. Institute procedures for strengthening efforts in: synthesis of lessons learned; contractor's use of professional roster; use of telecommunications links among sub-contractors; between sub- and prime contractors and AID: <u>Status:</u> Procedures now in daily use. | PO/Contractor | 1/86 |

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PROJECT EVALUATION SUMMARY - PART II: WATER MANAGEMENT SYNTHESIS II

13. SUMMARY

The Water Management Synthesis II project (936-4127) has as its goal improvement of the technical efficiency, and consequently the increased productivity and overall economic performance of irrigated agriculture. The project is world-wide in scope and is managed by the Office of Agriculture, Bureau for Science and Technology, in collaboration with the Office of Rural and Institutional Development of S&T and the Technical Resources Office of the Asis/Near East Bureau. The project is implemented through a contract with the Consortium for International Development (CID), with subcontracts to Cornell University, Colorado State University, and Utah State University, who are responsible for day to day operations. The project began in September 1982 and is scheduled to terminate September 1987. Core funding is provided by both the S&T and ANE Bureaus, with additional support coming through mission "buy-ins" which fund specific technical assistance, training and research activities they have requested.

This PES consolidates the results of several external, as well as internal assessment efforts which collectively constitute the mid-term evaluation called for in both the project paper and the implementation contract. Overall, the project is progressing satisfactorily toward achievement of its stated purpose of helping increase host-country capabilities to plan and carry out effective irrigation/water management programs. Mission reports and a greater-than-anticipated level of buy-ins attest to this favorable assessment, indicating particularly high levels of satisfaction with the field support component of the project (technical assistance and training). The other two program components - technology transfer and special studies - have by their nature required more time to get underway and to yield tangible results. However, their performance has also been generally satisfactory, although somewhat harder to document at this stage.

However, despite this generally favorable overall evaluation, a somewhat less satisfactory assessment emerges when focusing more narrowly on how the project has been organizationally structured and administratively carried out. Management of the the multiplicity of activities involved (technical assistance, training, technical transfer and special studies), located overseas and/or on campus, requiring coordination between several contracting entities, and involving a variety of funding arrangements, has proven extremely complicated. While the process of planning and carrying out such activities seems to have improved with experience, management performance by both AID and the contractor has not always been as efficient as desired. Further adjustments are needed over the project's remaining years, if a satisfactory level of internal performance is to be achieved.

Communication and cooperation among the three universities has also been less than anticipated. And, one major theme of the project, that of achieving a synthesis of the experiences and lessons-learned, leading to the development of new approaches to the problems of water management and a better basis for strategic planning, policy formulation, technology transfer and institutional development, has been only partially addressed by the project to date.

Cost effectiveness is an additional issue. Not only have administrative and program-support costs (in total) been seemingly high, although it is difficult to judge as there are few projects of this nature with which to compare, but there is also evidence to suggest that the personal services component of a number of activities have not been closely enough managed. Actual person-months utilized under these have greatly exceeded their authorized levels-of-effort, resulting in higher than warranted costs, even though total expenditures may not have violated approved budget levels. There have also been significant cost over-runs on several activities, likewise reflecting lax operational management.

The project is now scheduled to terminate in September 1987. The ceiling for Mission buy-ins is likely to be reached some months before this termination date, and this will, in turn, mean that the scope of project activities will become increasingly limited during the period. Two parallel follow-on projects are now being designed by ANE and S&T, both of which are scheduled to become operational in early FY1987. Thus, given the late stage of project implementation, the reduced scope of project activities, and the complex nature of the management changes required, it is not appropriate, or efficient, to make extensive revisions in the implementation relationships and responsibilities within Water Management Synthesis II. The problems which have surfaced in implementation of WMS-II are better corrected through improved design of the follow-on projects now planned.

14. EVALUATION METHODOLOGY

The purpose of the mid-term evaluation was to assess progress to date, identify problems affecting project implementation, and recommend steps for remedying deficiencies in these areas, recognizing that a major concern at this stage is to insure that activities undertaken during the remaining period of the project are aimed primarily at achieving a satisfactory end-of-project status. Problem identification was focused heavily on management aspects and experiences to date. The aim being to improve current operations where needed and to develop an organizational and administrative structure for the planned follow-on projects, which would continue efforts in irrigation/water management after the present project terminates.

While the overall evaluation relied heavily upon the findings of our external evaluation team, the action decisions set forth in Block 8, Part I of this PES are also based on the following:

- An internal evaluation by the Project Manager's Office;
- An inhouse review by an Inter-Bureau Committee composed of representatives from the S&T Offices of Agriculture and Rural Development and the Asia Bureau (now Asia and Near East Bureau);
- An assessment of questionnaire responses from missions regarding the project's field support performance;
- A review of documents and materials produced by the project.

15. EXTERNAL FACTORS

Not pertinent at this time.

16. INPUTS

Basic inputs (funds) are provided from two sources - core funding from both the Asia/Near East and Science and Technology Bureaus; and Mission support in the form of "buy-ins" and direct "contributions." Core funding levels have been pretty much on target, maintaining an approximate one-year, forward-funding buffer that has avoided any serious cash-flow problems. Buy-in levels have also been more than adequate, actually running substantially higher than anticipated. The latter may, in fact, cause future difficulties as the project's funding ceiling will, as noted earlier, likely be reached early in FY 1987, leaving little ability to service mission requests beyond that point. Possibilities for raising the project's overall funding ceiling are limited; and, given the short period remaining before project termination, efforts to do so are probably not justified.

As would be expected, personal services (salaries), travel and per diem costs constitute the biggest input items, operationally, with technical assistance and training/technology transfer being the largest input users, followed by administration/program support and special studies. Overall, only about 75% of the project's resources go into program activities, as slightly over 25% are absorbed by administration and program support. While these costs seem high, it is difficult to judge on this matter; administration and program support costs can be expected to be high in a project of this nature. The cost of personal services are also thought to be higher than they should be under a number of activities, given the tasks involved, with the problem centering on the excessive amount of on-campus person-months. In any case, continued efforts are needed to render project management as cost effective as possible.

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Overhead charges also seem high. While the levying of a reduced overhead charge on all direct costs (as is currently done under the present contract terms) is an acceptable and perhaps appropriate practice for most types of projects, it does not seem to be well-suited to one such as this, where there is an unusually large amount of international travel and per diem involved on which a fifty percent overhead charge is applied. The external Midterm Evaluation team agreed that a separate analysis of overhead rates and bases for charges is required (Report: 37). This will be an important issue for the follow-on projects, and should be carefully examined in the project design phase, as part of both their overall development and their implementation plans.

17. OUTPUTS

While overall output performance has been good (see Section 13, above), there have been weaknesses in some areas, most notably with special studies where the program has been slow in getting underway and has difficulty experienced in achieving the desired integration of the various components into a commonly focused effort. Training has also been limited almost exclusively to Diagnostic Analysis Workshops, with little effort to develop and present new courses and materials. TA reports have too often been slow in being finalized and submitted, with publications, although generally adequate in number, also not always having been handled in a completely satisfactory manner.

Regarding program management, the external evaluation report noted that guidance for planning, organizing and carrying-out project activities, which was to be achieved through the development and use of acceptable and timely annual workplans has been a continuing problem. Because of inadequacies in this area during the project's early life, especially in the face of rising demands for technical assistance from Missions, AID was forced into the role of providing direct oversight, conducting technical reviews and carrying out administrative tasks (such as logistic arrangements for TA personnel), which should have been assumed by the contractor. Consequently, though the project's outputs have been satisfactory and in some instances outstanding, they have come at a relatively high transaction cost to the Agency. This issue has become more pressing with the prospect of severe staff cuts in the offices collaborating under the project and will require that responsibility for more of these administrative functions be assumed by the contractor during the remainder of the project.

18. PURPOSE

The purpose of WMS II is to increase host-country capabilities to plan and implement irrigation/water management projects and programs, as well as the general development and improvement of their irrigated subsectors.

The evaluation found that significant progress is being made toward achievement of this purpose, with the project providing direct technical assistance in diagnostic analysis, project design, monitoring, trouble-shooting, irrigation sector analyses, and training to all geographic regions. More importantly, the project has served as a

vehicle for carrying forward a long-term irrigation development initiative, with significant spin-off effects in generating research, enhanced technical capability, and human resource development in this field.

19. GOAL AND SUBGOAL

The project's goal of increased food/agricultural production and higher farm incomes, along with its stated subgoal of increasing economic efficiency of irrigation-water use, are long-term objectives, the progress toward whose achievement is difficult to measure. Nonetheless, there is ample evidence to suggest that project activities to date have contributed toward the attainment of both. However, what is becoming increasingly clear is that ensuring productivity gains within any given scheme requires not only better water use but also improved reliability in water delivery, more equitable distribution throughout the system and greater participation by farmers in systems operation and maintenance. Toward these ends WMS II's efforts have also contributed.

20. BENEFICIARIES

This centrally funded project aims at improving the overall conditions under which its ultimate beneficiaries -- farmers in irrigated areas of the world -- must operate. It seeks to examine complex environmental, technical, and institutional as well as sociocultural interrelationships and to determine appropriate cost-effective interventions which might be made by host-country organizations in order to improve irrigation efficiency and equity as well as productivity and output. Its initial beneficiaries, however, are the LDC agencies responsible for irrigation development and these countries. And, it includes research professionals in both the LDCs and the United States as well as LDC policymakers. Based on Missions' evaluations of WMS II activities in their cooperating countries, and an assessment of the research outputs that have been generated, it appears that the project's intended long-term impact upon beneficiaries will likely be achieved.

The review also points out that, given nearly two decades of accumulated experience with Asian irrigation development, including the the creation of a substantial pool of Asian professional talent to supplement that available within the U.S., AID has played an important role in providing a "leading edge" in the exploration of problems in irrigation and water management, as well as addressing them through directed research and technical assistance. Its efforts in Asia should be to continue to support the generation and dissemination of knowledge, and the preparation of professional talent through assistance to regional centers, through linkages to U.S. institutions, and the utilization of personnel and resources from those centers in technical assistance activities. This will now be accomplished through the

follow-on project now being designed by ANE. The companion follow-on project being designed by S&T will apply current theory, research and technical assistance, using the approach tested and proved under Water Management Synthesis II, to the Africa and Latin America/Caribbean regions, where potential benefits from improved irrigation and water management to farmers and the overall economy are needed.

21. UNPLANNED EFFECTS

Because project activities in AID assisted countries are generally short-term in nature and limited primarily to TDY assignments of 4-6 weeks or less, it is difficult to assess whether certain side effects are attributable to WMS II or other activities. However, it might be worthwhile mentioning that where repeated visits to a country by WMS II personnel have occurred, there appears to be a broader recognition by Missions as well as host-country officials of the multi-disciplinary nature of most of the critical irrigation development/improvement problems and constraints and more willingness to address these problems from an interdisciplinary perspective.

22. LESSONS LEARNED

While both the Review Committee and the External Evaluation Team agreed that activities under WMS II are generally in accord with AID priorities and are proceeding in an acceptable fashion, several significant lessons can be learned from experiences to date, in terms of project design features and the manner in which the project has been implemented.

A. Use of Annual Workplan Questioned: The Annual Workplan formulation/approval process being used has proven to be a time consuming and costly way of developing and carrying out an operational scope of work for the project. While some sort of periodic, if not routine, planning/review procedure for selecting and scheduling activities seems preferable to a LOP Workplan, an annual cycle may not be the most advantageous. Alternative arrangements should be carefully examined and considered in designing any follow-on project.

B. Computer-Based Tracking System Needed: Because of the large number of activities involved (between 60-80 distinct activities are carried out under the project each year), and because implementation responsibility for them is not centralized but individually assigned to one of the three major-participating universities, it is essential that an effective computer-based tracking system be developed and employed to both monitor and periodically report on project status, both financially and programmatically on an activity-by-activity basis.

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C. Stronger Guidelines Needed: While contractor technical expertise should be exploited to the fullest in designing and developing programs of work, leaving this too much to the discretion of the contractor runs the risk of its failing to fit AID's needs and priorities. AID needs to provide strong and adequate guidelines based on an analysis of its own program objectives regarding the types of activities it wants to see carried out. AID must also monitor contractor compliance and responsiveness carefully. Program activities, whether in technical assistance, research, or training, must be based on clearly defined operational objectives relevant to the Bureaus' and Missions' interests and programs. Otherwise universities and other participating institutions will view AID resources simply as means toward fulfilling their own needs and program priorities. Projects such as Water Management Synthesis II, and its proposed follow-ons, are not designed principally to strengthen the U.S. institutions which may be involved, but to assist Missions and host countries to develop their potential for irrigation/water management, and consequently greater productivity from their irrigated agriculture.

D. External Review Panel Required: Reliance upon an internal (contractor) review procedure to help AID judge the merits of individual activity proposals, including how they will be carried out, has not proven to be effective for reasons inherent to the interrelationships among the universities and personalities involved. AID should consider the establishment of an independent (external) peer-review panel to serve this purpose.

E. Only Limited Collaboration Feasible: Greater collaboration and interaction between the various contractor entities has been encouraged, and attained to some degree. However, the costs of doing so, in terms of time and money, have been greater than anticipated. While this should still be striven for, there appears to be a limit to how far it can be pushed without incurring costs that more than offset the benefits gained. Other ways of achieving the desired interaction and exchange need to be explored.

F. Contractual Arrangement Unclear: Although a contract is the instrument used to secure the necessary services for implementing the project, the manner by which workplans are developed and carried out reflects more the procedures of a Cooperative Agreement. This has resulted in considerable confusion and misunderstanding and has been a basic cause of many management problems and constraints. Future projects should be designed to utilize implementation modes which clearly reflect AID's interests and concerns, and which all parties involved may understand and act upon with a minimum of confusion and difficulty.

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G. Need for Clear Guidelines for Mission Buy-in Procedures: Water Management Synthesis II has been well received by Missions. The level of Mission participation in the project through buy-ins for technical assistance has been high. While this is gratifying, it has posed administrative problems. AAM and FM have expressed concern regarding the accountability and attribution of project bilateral funds used for such buy-ins. Guidelines for buy-in procedures and fiscal tracking are now reportedly in preparation. The follow-on projects now in preparation should look carefully at these guidelines, and design Mission buy-in procedures should be designed to reflect these.

23. SPECIAL COMMENTS OR REMARKS

Midterm Evaluation Report is available in S&T/AGR for review as required.

Drafted by:S&T/AGR/RNR:WFitzgerald:michelle:4/18/86:Wang PC

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